



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

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South
Environmental Planning Branch

**FINDING OF NO SIGNIFICANT IMPACT
(FONSI)**

**INSTALLATION OF PERMANENT PUMPS AT THE
HARVEY CANAL SECTOR GATE
Jefferson Parish, Louisiana
Supplemental Environmental Assessment (SEA) #306C**

Description of Proposed Action: The U.S. Army Corps of Engineers, New Orleans District (CEMVN), proposes to replace the seven existing temporary pumps with seven permanent pumps in order to maintain water levels in the basin between the Harvey Lock and the Harvey Sector Gate below EI+2.3 NAVD88.

Additionally, construction would include replacing the existing platform, with a new platform to hold the hydraulic units that drive the hydraulic pumps. An emergency shelter/safe house with a finished floor elevation of EI+13 would also be constructed in order to house pump station operators during tropical events. New submersible electric pumps, discharge piping and associated controls would be installed to replace the temporary hydraulic pumps and discharge pipes currently in place. Rip rap would be re-graded on the protected side of the sector gate and rip rap would be added downstream of the sector gate to prevent scouring of the foundation.

A complete description of the proposed action is found in Section 1.2 of SEA #306C, which is attached hereto and is incorporated by reference.

The construction of the Harvey Canal Sector Gate was originally evaluated in the 1994 WBV East of Harvey Canal Feasibility Report and Environmental Impact Statement (EIS). SEA #306C was prepared to supplement proposed project modifications to the Government's approved plan analyzed in EA #306, SEA #306A, SEA #306B and IER #12 and the approved FONSI and decision records associated with these documents. EAs #306, #306A, #306B and IER #12 and their corresponding decision records/FONSIs are hereby incorporated by reference into this document. The 1994 Feasibility Report, EIS and Decision Record and 404(b)(1) evaluation are also incorporated by reference.

Factors Considered in Determination: CEMVN assessed the impacts of the proposed action on important resources and found no significant impacts on those resources, including water quality, wildlife and fisheries, threatened and endangered species, noise, socio-economic resources, cultural resources, recreation, aesthetics, air quality and transportation. The “no action” alternative was also assessed. No adverse permanent impacts to ecological resources are anticipated. Minimal and temporary impacts during the construction period to water quality, noise, socio-economic resources, air quality and transportation are expected. This office has concluded that the proposed action is environmentally preferable as it will provide a means to maintain safe water levels in the basin between the Harvey Lock and the Harvey Sector Gate and it will provide shelter for pump station operators during tropical events.

David Walter, of the United States Fish and Wildlife Service (USFWS), in an email dated July 25, 2014 stated that USFWS has no comment under Section 2(a) of the Fish and Wildlife Coordination Act.

CEMVN determined that the action would have no effect on any threatened or endangered species or on designated critical habitat. Consequently, Endangered Species Act Section 7 consultation with the USFWS and with the National Marine Fisheries Service (NMFS) is not required. The USFWS stated in an email dated 28 March 2014 that it has no concerns regarding the proposed action. (Appendix D)

The Louisiana Department of Natural Resources (LDNR) reviewed the proposed action for consistency with the Louisiana Coastal Resource Program (LCRP). The proposed action was found to be consistent with the LCRP, as per letters dated 2 May 2014 and 1 August 2014. (Appendix D).

The USACE coordinated with the Louisiana State Historic Preservation Officer (SHPO) and federally-recognized Tribes on July 7, 2008 regarding earlier construction at this site as part of the Hurricane and Storm Damage Risk Reduction System process, which is documented in Appendix D of IER #12. In a letter dated August 1, 2008, the Louisiana SHPO concurred with a recommendation of no effect on historic properties for work at this site. By letter dated July 21, 2014, the Louisiana Historic Preservation Officer concluded the proposed action would not affect any known historic properties.

CEMVN received a Water Quality Certificate (WQC) from the Louisiana Department of Environmental Quality on 11 December 2013 stating that the Department made a determination that the requirements for a WQC have been met and concluding that the placement of fill would not violate water quality standards of Louisiana as provided by LAC 33:IX.Chapter 11.

Public review of the EA began June 27, 2014 and was completed on July 27, 2014. All comments received during the public comment period for EA#306C were resolved.

Final SEA #306C has been changed subsequent to public review to include a change in the location of the rip rap repair (Figure 3a and Figure 3b in SEA306C) and the inclusion of possible jetting of silt material from a submerged concrete platform. The placement

of the riprap at the Harvey Sector Gate was previously covered in EA 306C, EIS 94-08 West Bank of the Mississippi River in the Vicinity of New Orleans, Louisiana (East of the Harvey Canal) Hurricane Protection Study and the 404(b)(1) dated August 19, 1994 associated with these documents.

Environmental Design Commitments. The following commitments are an integral part of the proposed action:

- 1.) If the proposed action is changed significantly or is not implemented within one year, the CEMVN will reinitiate coordination with the USFWS and/or NMFS to ensure that the proposed action would not adversely affect any Federally-listed threatened or endangered species, or their habitat.

- 2.) 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 staff archeologist has been notified and final coordination with the Louisiana SHPO has been completed.

Public Involvement. The proposed action has been coordinated with appropriate Federal, state, and local agencies and organizations, and individuals through distribution of draft SEA #306C for their review and comment. SEA #306C is attached hereto and made a part of this FONSI.

Conclusion. This office has assessed the potential environmental impacts of the proposed action. Based on this assessment, which is attached hereto and made a part hereof, a review of the comments made on SEA #306C, and the implementation of the environmental design commitments listed above, a determination has been made that the proposed action would have no significant impact on the human environment. Therefore, a Supplemental Environmental Impact Statement will not be prepared.

4 August 2014
Date

Richard L. Hansen
Richard L. Hansen
Colonel, U.S. Army
District Commander

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

INSTALLATION OF PERMANENT PUMPS AT THE HARVEY CANAL SECTOR GATE

Jefferson Parish, Louisiana
SEA #306C



**US Army Corps
of Engineers®**

June, 2014

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SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

INSTALLATION OF PERMANENT PUMPS AT THE HARVEY CANAL SECTOR GATE,

JEFFERSON PARISH, LOUISIANA

SEA 306C

1. INTRODUCTION

The U.S. Army Corps of Engineers, New Orleans District, (CEMVN) Regional Planning and Environmental Division South, has prepared this Supplemental Environmental Assessment (SEA) for the New Orleans District to evaluate the potential impacts associated with replacing the 7 existing temporary Harvey Canal sector gate pumps with 7 permanent pumps, adding a safe house and replacing existing rip rap within the canal.

This SEA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's Regulations (40 CFR 1500-1508), as reflected in the U.S. Army Corps of Engineers Engineering Regulations ER 200-2-2. This SEA provides sufficient information on the potential adverse and beneficial environmental effects to allow the District Commander, U.S. Army Corps of Engineers, New Orleans District, to make an informed decision on the appropriateness of an Environmental Impact Statement or a Finding of No Significant Impact (FONSI).

On February 19, 2009, the District Commander signed the Decision record (DR) for Individual Environmental Report #12 (IER #12), GIWW, Harvey, And Algiers Levees and Floodwalls, Jefferson, Orleans, And Plaquemines Parishes, Louisiana. On September 21, 2006, the District Commander signed a FONSI for SEA 306B, West Bank of the Mississippi River in the Vicinity of New Orleans – East of the Harvey Canal, Final Floodwall Alignment which discussed the final assessment of impacts related to the relocation of a proposed floodwall moved because of the aforementioned sector gate, as authorized by the WBV Project. On February 22, 2005, the District Commander signed the FONSI for SEA #306A, East of the Harvey Canal, Floodwall Realignment and Change in Method of Sector Gate, Jefferson Parish, Louisiana. On May 16, 2002, the District Commander signed the FONSI for Environmental Assessment (EA) #306, Harvey Canal Sector Gate Site Relocation and Construction Method Change, Jefferson Parish, Louisiana. The construction of the Harvey Canal Sector Gate was originally evaluated in the 1994 WBV East of Harvey Canal Feasibility Report and Environmental Impact Statement (EIS), which is listed in Prior Reports.

Copies of the previously mentioned documents and other supporting information are available upon request or at www.nolaenvironmental.gov. This SEA has been prepared to supplement proposed project modifications to the Government's approved plan analyzed in EA #306, SEA #306A, SEA 306B and IER #12 and the approved FONSI and DR and associated with these

documents. EAs #306, #306A, #306B and IER #12 and their corresponding decision records/FONSI are hereby incorporated by reference into this document. The 1994 Feasibility Report, EIS and Decision Record and 404(b)(1) evaluation are also incorporated by reference.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of this SEA is to assess potential environmental impacts that could result from replacing the 7 temporary 42 inch (in) hydraulic pumps (with a pumping capacity of 110-cubic feet per second (cfs)) located at the Harvey Canal Sector Gate with 7 permanent 48-in submersible electric hydraulic pumps (with a pumping capacity of 110-cfs.)

1.2 PROPOSED ACTION

The proposed action consists of replacing the existing temporary pumps installed at the Harvey Sector Gate during construction of the gate with permanent pumps in order to maintain water levels in the basin between the Harvey Lock and the Harvey Sector Gate below El+2.3 NAVD88.

Construction would include replacing the existing platform, which measures 40 feet (ft) by 70-ft that has settlement and corrosion issues, with a new platform to hold the hydraulic units that drive the hydraulic pumps. The platform would be constructed of reinforced concrete supported by 14-in pipe piles. An emergency shelter/safe house with a finished floor elevation of El+13 would be constructed in order to house pump station operators during tropical events. New submersible electric pumps, discharge piping and associated controls would be installed to replace the temporary hydraulic pumps and discharge pipes currently in place. Rip rap would be added downstream of the southwest enclosure wall to prevent scouring of the foundation.

The construction sequence is expected to include the following main stages:

- 1) Remove and salvage the existing diesel engines and fuel tanks.
- 2) Remove the existing hydraulic pumps, discharge pipes, and all hydraulic equipment.
- 3) If silt is present on sector gate base slab, remove sediment and silt build up. Install 7 new electric submersible pumps and associated discharge pipes on sector gate base slab.
- 4) Construct a new concrete platform just to the north of the existing platform.
- 5) Construct a safe house, including new generators, and a fuel tank on top of the new platform.
- 6) Demolish the existing platform.
- 7) Replace rip-rap on the flood side of the discharge pipes. Add more rip-rap to eastern bank of protected side.

If silt has accumulated on the sector gate base slab where the pumps are located (on the east side of the Harvey Canal), that silt would need to be removed before the new pumps are installed. The slab is underwater at an elevation of -16.8. The contractor may use jetting or may use another method to remove the silt. Whether silt is present and the potential amount of silt is unknown. Some areas may have up to 2 feet of silt and others areas may have none. It is estimated that 1-ft of thick silt with an area of about 750 sq ft (total for all 7 pumps) would be removed for a total of 28 CY of material. It is possible to turn on the existing pumps for about an hour and that quantity would probably be cut in half.

The construction footprint would primarily include the area around the sector gate and the east bank of the Harvey Canal off of Peters Road. (Figure 1) A temporary construction footprint would include nearby yards to stage cranes, store piles, and setup trailers and parking area for equipment and vehicles. (Figure 2) Construction work would be completed by utilizing land-based and marine-based equipment. Land-based equipment could include, but would not be limited to, cranes, bulldozers, excavators, and dump trucks. Marine-based equipment could include, but would not be limited to, barge cranes, barges, and work boats.



Figure 1: Project location at the Harvey Canal Sector Gate

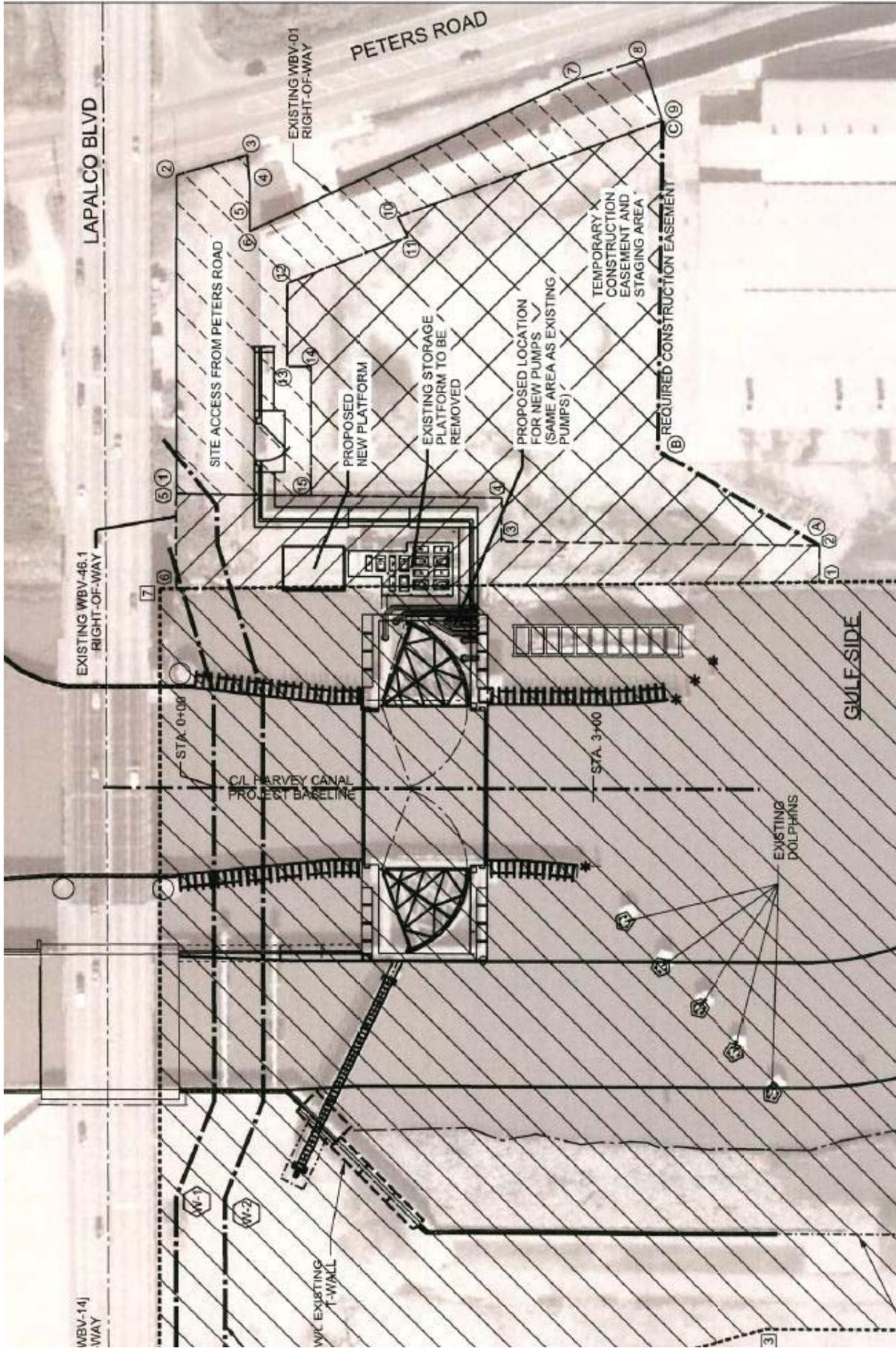


Figure 2: Temporary construction footprint

Work would include site work (water line tie-ins and security fence removal and installation), excavation (the existing rip-rap and gravel parking area), pile driving, pouring concrete, intake/discharge pipe installation, associated electrical and control installation. The marine-based work would be planned to minimize any effects on navigation, but partial closure periods from dusk to dawn may take place for several weeks during construction to allow the contractor to complete the project sooner and minimize effects on daytime traffic in the Harvey Canal.

At this stage of design, it is anticipated that most construction activity will not affect canal navigation for long periods as most activities will occur from land. When canal closures are required, they will occur for short periods not to exceed 48 hours.

The canal closures are only expected for two types of construction activity: pump removal and installation, and rip-rap placement. During the pump activities, temporary closures may be required depending on the contractor's means and methods. During rip-rap activities, it is presumed only partial canal closure will be required. The contractor could park a barge near the east side of the gate and perform the work. This would limit the canal width, but not completely close it.

At this time, it is not expected that there will be more than 4 closures per month over the course of construction, which is expected to last approximately 1 year. All closures require the contractor to obtain approval from the Corps Contracting Officer and would have to be coordinated with United States Coast Guard (USCG) 2-weeks in advance of the proposed closure. All affected marine traffic could be diverted through Algiers Lock via navigation bulletins during canal closures. Maritime businesses along the Harvey Canal would not lose the ability to access their businesses, but access to those facilities may require a longer route during a canal closure.

The new rip-rap section would measure 26 linear feet and would have a thickness of 48 inches. (Figure 3a and b) Placement of the rock would begin at the top of the eastern bank of the canal, at the existing sheet pile wall), traverse down the canal slope into the water, and terminate approximately 50-ft into the water. Additionally, the rip-rap on the eastern bank on the protected side will be re-graded. Some of the existing rip-rap has settled and some has slipped off of the bank. Rip-rap will be added and positioned to prevent future erosion.

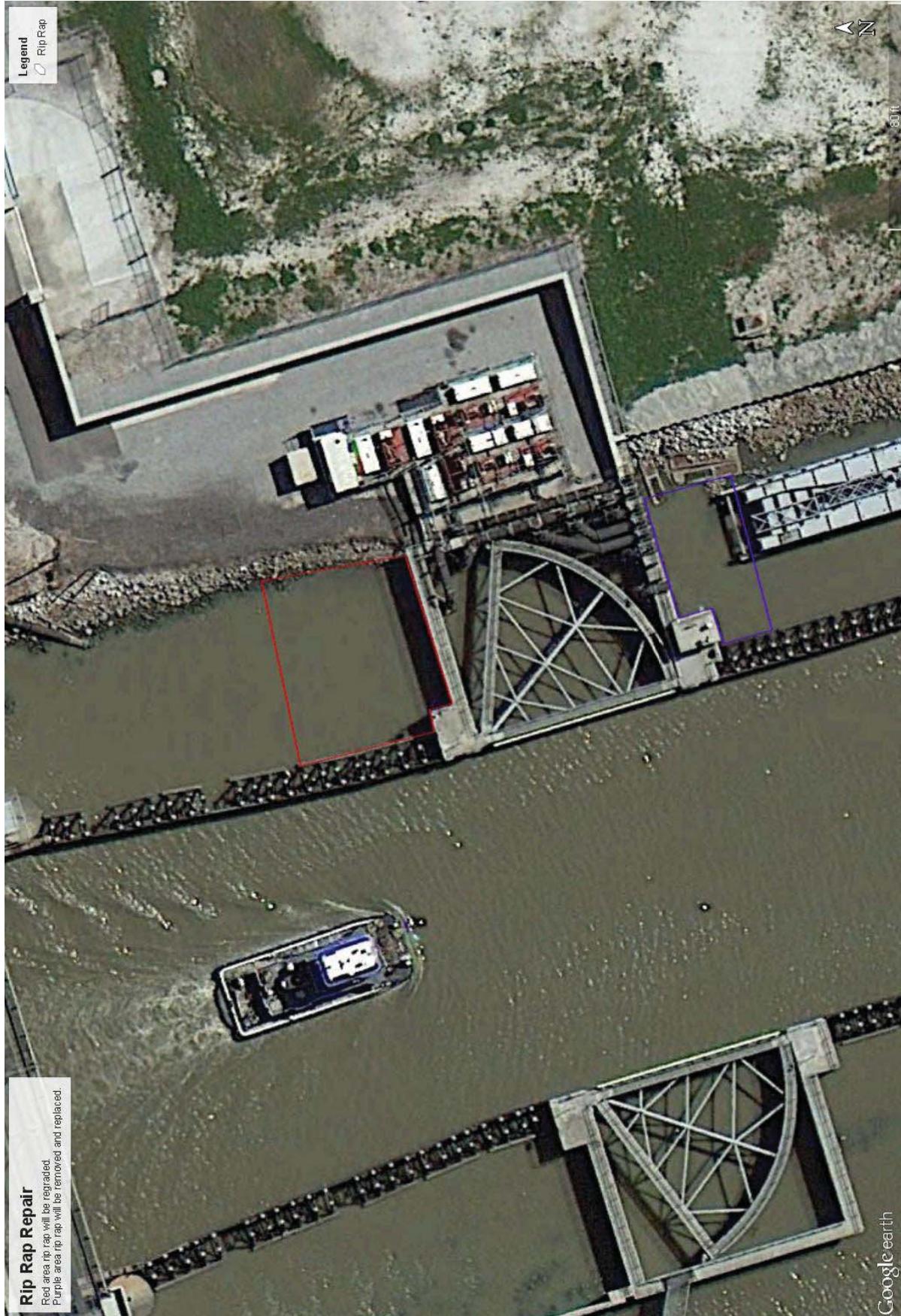
Two methods would be utilized during the placement of rip-rap. In one method, the contractor would load the material onto barges located within the canal. Equipment access to the canal for placement of the rock would be via one of two routes. The first route would be from the Mississippi River through the Harvey Lock and down the Harvey Canal. The second route would be via the Harvey canal from the south through the Hero or Algiers Canals. Once the barges are in position, the material would be placed along the bankline using a crane located on the barge.

The second rip-rap placement method would involve utilizing a crane on the eastern side of the canal to place the rock along the bankline and into the canal. The crane would be located in the adjacent staging area.

One staging area would be utilized during the construction period. The proposed staging area is located on the east side of the Harvey Sector Gate, between the canal and Peters Road. (Figure 4)

Trucks delivering rock to the staging location would access the site via Peters Road and leave via the delivery route once the load is delivered. Use of this lot could include, but not be limited to staging of construction equipment and materials, the placement of construction trailers, access to the canal, loading and unloading of equipment and materials into and out of the canal.

It is estimated that approximately 3-4 trucks carrying rock material would be used during the duration of the contract. Best Management Practices, (BMPs), would be utilized at the construction entrances and around the site, as required, in compliance with the National Pollutant Discharge Elimination System (NPDES) storm water permit. BMPs may consist of, but not be limited to silt fencing, fiber rolls, drain inlet protection, and stabilized construction entrances. Appropriate traffic control measures would be installed in compliance with the project approved Maintenance of Traffic (MOT) plan including, construction entrance and trucks entering roadway signage. In the event a lane closure is necessary, all applicable guidelines would be coordinated with the LADOTD and followed per the approved MOT plan. Hours of operation for construction activities would adhere to local parish ordinances for Jefferson Parishes.



Rip Rap Repair

Red area rip rap will be regraded.
Purple area rip rap will be removed and replaced.

Legend
○ Rip Rap

Google earth

50ft

Figure 3a: Rip-rap repair Harvey Canal

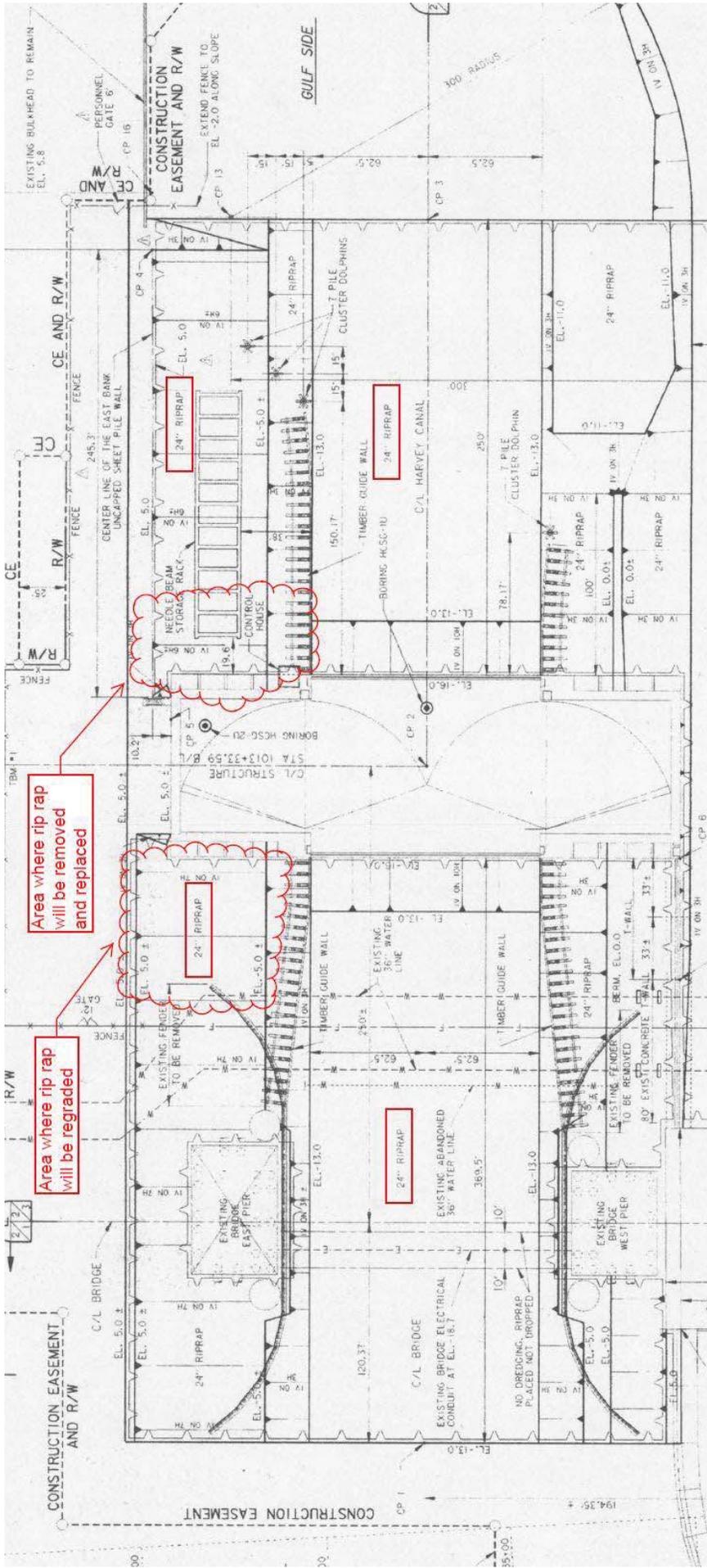


Figure 4b: Rip-rap repair Harvey Canal



Figure 5: Proposed Staging Area off Peters Road

1.3 AUTHORITY FOR THE PROPOSED ACTION

The Water Resources Development Act (WRDA) of 1986 (Public Law 99-662, Section 401(b)), as amended by WRDA 1996 (Public Law 104-303, Sections 101(a)(17) and 101(b)(11)), WRDA 1999 (Public Law 106-53, Section 328), and WRDA 2007 (Public Law 110-114, Section 3084) authorized the construction of the West Bank and Vicinity, Louisiana project (WBV) for hurricane and storm damage risk reduction.

Congress passed a series of supplemental appropriations acts following Hurricanes Katrina and Rita to repair and upgrade the project systems damaged by the storms. The supplemental appropriations acts gave additional authority to the USACE to construct Hurricane and Storm Damage Risk Reduction System (HSDRRS) projects.

The Flood Control and Coastal Emergencies (FCCE) heading for the 3rd Supplement (Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act of 2006, P.L. 109-148, Chapter 3) authorized the Secretary of the Army to restore the level of risk reduction for which WBV was designed at full federal expense.

The FCCE headings for the 3rd Supplement and the 6th Supplement (Public Law 110-252) authorized and appropriated funds for the Corps of Engineers to accelerate completion of unconstructed portions of the original WBV project.

The 4th Supplement (Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery Act of 2006, P.L. 109-234, Title II, Chapter 3, Construction), authorized the Secretary of the Army to raise levee heights where necessary and otherwise enhance WBV to provide the level of protection necessary to achieve the certification required for participation in the National Flood Insurance Program.

Under the FCCE heading, Chapter 3 of the 4th Supplement authorized the Secretary of the Army at full federal expense to reinforce or replace existing floodwalls as necessary to improve the performance of the original WBV project and to armor critical elements.

1.4 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:

West Bank and Vicinity Relevant Reports:

IERS 12, GIWW, Harvey, and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes Louisiana (2010) IERS 12 addressed a proposal to utilize the West Bank Site N borrow area as an alternative disposal site for levee material removed during the construction of the West Closure Complex eastern floodwall and road realignment, as well as the Hero Canal Levee. IERS 12 also addressed anticipated impacts associated with the construction

of floodwalls, in addition to the relocation of the Barriere Golf Course access road in the vicinity of the Belle Chasse Tunnel, and included temporary closures of the tunnel. The CEMVN Commander signed a decision record on November 20, 2010.

IER 16.a, Western Tie-In, Jefferson and St. Charles Parishes, Louisiana (2010) The document evaluates the potential impacts associated with utility relocations, replacing the Highway 90 pump station, adding bank stabilization to some areas, retaining the detour roads as permanent access for Highway 90 and the construction of a ramp at Highway 18 instead of a floodgate. The CEMVN Commander signed a Decision Record on August 24, 2010.

IER 14.a entitled Westwego to Harvey Levee, Jefferson Parish, Louisiana (2010) The document evaluates the potential environmental impacts associated with construction of a larger levee footprint for the WBV-14.c.2 reach and revisions to fronting protection and floodwall construction at the Ames and Mt. Kennedy Pump Stations. The CEMVN District Commander signed a Decision Record on February 9, 2010.

IER 28, Government-Furnished Borrow Material # 4, Plaquemines, St. Bernard, and Jefferson Parishes, Louisiana (2009) The document evaluates the potential environmental impacts associated with approving government-furnished borrow areas and an access route for use in construction of the HSDRRS. The CEMNV District Commander signed a Decision Record on July 31, 2009.

IER 16, Western Tie-In, Jefferson and St. Charles Parishes, Louisiana (2009) The document describes the potential impacts associated with constructing a new levee to provide 100-year level of risk reduction for the project vicinity. The CEMVN Commander signed a Decision Record on June 12, 2009.

IER 12, GIWW, Harvey, and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana (2009) This document was prepared to evaluate the potential environmental impacts associated with raising and/or constructing levees, floodwalls, and other structures to meet the 100-year level of risk reduction for Harvey-Westwego, Gretna-Algiers, and Belle Chase areas. The CEMVN District Commander signed a Decision Record on February 18, 2009.

IER 25, Government Furnished Borrow Material, Orleans, Jefferson, and Plaquemines Parishes, Louisiana (2009) The document was prepared to evaluate the potential environmental impacts associated with the actions taken by the CEMVN as a result of excavating borrow areas for use in the construction of the HSDRRS. The CEMVN District Commander signed a Decision Record on February 3, 2009.

IER 26, Pre-Approved Contractor Furnished Borrow Material # 3, Jefferson, Plaquemines, and St. John the Baptist Parishes, Louisiana, and Hancock County, Mississippi (2008) The document was prepared to evaluate the potential environmental impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS. The CEMVN District Commander signed a Decision Record on 20 October 2008.

IER 14, Westwego to Harvey Levee, Jefferson Parish, Louisiana (2008) The document was prepared to examine the potential environmental impacts associated with the proposed construction and maintenance of 100-year level of risk reduction in the project area. The CEMVN District Commander signed a Decision Record on August 26, 2008.

IER 22, Government Furnished Borrow Material, Plaquemines and Jefferson Parishes, Louisiana (2008) The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS. The CEMVN District Commander signed a Decision Record on May 30, 2008.

IER 18, Government Furnished Borrow Material, Jefferson, Orleans, Plaquemines, St. Charles, and St. Bernard Parishes, Louisiana (2008) The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS. The CEMVN District Commander signed a Decision Record on February 21, 2008.

EA 433, USACE Response to Hurricanes Katrina & Rita in Louisiana (2006) 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. The CEMVN District Commander signed a FONSI on July 24, 2006.

EA 422, Mississippi River Levees – West Bank Gaps, Concrete Slope Pavement Borrow Area Designation, St. Charles and Jefferson Parishes, Louisiana (2005) The report investigates the impacts of obtaining borrow material from various areas in Louisiana. The CEMVN District Commander signed a FONSI on August 23, 2005.

EA 306B, West Bank of the Mississippi River in the Vicinity of New Orleans – East of the Harvey Canal, Final Floodwall Alignment (2006) The report discussed the final assessment of impacts related to the relocation of a proposed floodwall moved because of the aforementioned sector gate, as authorized by the LPV Project. The CEMVN District Commander signed a FONSI on September 21, 2006.

EA 306A, West Bank Hurricane Protection Project – East of the Harvey Canal, Floodwall Realignment and Change in Method of Sector Gate (2005) The report discussed the impacts related to the relocation of a proposed floodwall moved because of the aforementioned sector gate, as authorized by the LPV Project. The CEMVN District Commander signed a FONSI on February 22, 2005.

EA 337, Algiers Canal Alternative Borrow Site (2003) The CEMVN District Commander signed a FONSI on May 5, 2003.

EA 373, Lake Cataouatche Levee Enlargement (2003) The report discusses the impacts related to improvements to a levee from Bayou Segnette State Park to Lake Cataouatche. The CEMVN District Commander signed a FONSI on June 19, 2003.

EA 306, West Bank Hurricane Protection Project - Harvey Canal Sector Gate Site Relocation and Construction Method Change (2002) The report discusses the impacts related to the relocation of a proposed sector gate within the Harvey Canal, as authorized by the LPV Project. The CEMVN District Commander signed a FONSI on May 16, 2002.

EA 320 entitled “West Bank Hurricane Protection Features (2000) The report evaluates the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Project. The CEMVN District Commander signed a FONSI on August 30, 2000.

EA 258, Mississippi River Levee Maintenance - Plaquemines West Bank Second Lift, Fort Jackson Borrow Site (1998) The CEMVN District Commander signed a FONSI on August 18, 1998.

Final EIS, Supplement No: 1 to the Final Environmental Impact Statement, Mississippi River and Tributaries Project, Mississippi River Levees and Channel Improvement (1998) Based on additional environmental laws and regulations enacted after 1976, information from other Federal agencies, and litigation by environmental groups, this EIS supplemented the 1976 Final EIS and addressed remaining construction of the mainline Mississippi River levees, including and seepage control features. The record of decision was signed by the President of the Mississippi River Commission on October 5, 1998.

Post-authorization Change Study, Westwego to Harvey Canal, Louisiana Hurricane Protection Project Lake Cataouatche Area (1998) In December 1996, the USACE completed a study investigating the feasibility of providing hurricane and storm damage risk reduction to that portion of the west bank of the Mississippi River in Jefferson Parish between Bayou Segnette and the St. Charles Parish line and included an EIS. A Standard Project Hurricane (SPH) level of risk reduction was recommended along the alignment followed by the existing non-Federal levee. The project was authorized by Section 101 (b) of the WRDA of 1996; (P. L. 104-303) subject to the completion of a final report of the Chief of Engineers, which was signed on December 23, 1996. A record of decision for the EIS was signed by the Director of Civil Works on September 28, 1998.

EA 198, West Bank of the Mississippi River in the Vicinity of New Orleans, LA, Hurricane Protection Project, Westwego to Harvey Canal, Jefferson Parish, Louisiana, Proposed Alternate Borrow Sources and Construction Options (1994) The report evaluates the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Levee. A FONSI was signed by the CEMVN District Commander on January 12, 1994.

Feasibility Report, WBV (East of the Harvey Canal) (1994) This study investigated the feasibility of providing hurricane and storm damage risk reduction to that portion of the west bank of metropolitan New Orleans from the Harvey Canal eastwards to the Mississippi River, and included an EIS. 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 and storm damage risk

reduction east of the Harvey Canal. The report also recommends that the level of risk reduction for the area east of the Algiers Canal deviate from the National Economic Development Plan's level of risk reduction and provide risk reduction for the SPH. The Division Engineer's Notice was issued on September 1, 1994. The Chief of Engineer's report was issued on May 1, 1995. The WRDA of 1996 authorized the project. The record of decision for the EIS was signed by the Director of Civil Works on September 28, 1998.

EA 165, Westwego to Harvey Canal Disposal Site (1992) A FONSI was signed by the CEMVN District Commander on March 20, 1992.

EA 136, West Bank Additional Borrow Site between Hwy 45 and Estelle Pump Station (1991) a FONSI was signed by the CEMVN District Commander on June 3, 1991.

EA 121, West Bank Westwego to Harvey, Changes to EIS (1990) The report addresses the impacts associated with the addition of the Westwego tie-in, replacing some levees with floodwalls, and expanding the width of some levees. A FONSI was signed by the CEMVN District Commander on March 15, 1990.

Feasibility Report and Environmental Impact Statement, West Bank of the Mississippi River in the Vicinity of New Orleans, LA (1986) The report investigated the feasibility of providing hurricane and storm damage risk reduction to that portion of the west bank of the Mississippi River in Jefferson Parish between the Harvey Canal and Westwego, and down to the vicinity of Crown Point, Louisiana. The report recommended implementing a plan that would provide standard project hurricane level of risk reduction to an area on the west bank between Westwego and the Harvey Canal north of Crown Point. The project was authorized by the WRDA of 1986 (P.L. 99-662). The record of decision for the EIS was signed by the Assistant Secretary of the Army, Civil Works on March 28, 1989. Construction of the project was initiated in early 1991.

Final Environmental Impact Statement, Mississippi River and Tributaries, Mississippi River Levees and Channel Improvement (1976) This study evaluated alternatives for the Mississippi River and Channel Improvement Project and related projects on more than 900 miles of river between Cairo, Illinois and Venice, Louisiana. The projects were designed to make the Mississippi River more navigable and prevent flooding by utilizing channel training devices such as dikes and revetments, levees, and maintenance and construction dredging to maintain the existing project features and complete those previously authorized. The Statement of Findings for the EIS was signed by the Director of Civil Works on April 4, 1976.

Flood Control, Mississippi River and Tributaries (1927). This report 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.

1.5 DATA GAPS AND UNCERTAINTIES

Data gaps could affect the impacts analysis of some resource areas, including traffic and transportation, aesthetics, air and noise, land use and socioeconomics. These resource areas cannot be precisely analyzed without knowledge of specific engineering details; therefore, the impacts analysis was completed utilizing information currently available. Substantial changes to the proposed action as identified in this document that are relevant to environmental concerns would be addressed in additional supplements to the EA.

2. ALTERNATIVES TO THE PROPOSED ACTION

NEPA requires that a “No Action” alternative be analyzed to determine the environmental consequences of not undertaking the action(s) or project(s) proposed, and thereby providing a framework for measuring the benefits and adverse effects of other alternatives. Likewise, Section 73 of the WRDA of 1974 (PL 93-251) requires Federal agencies to give consideration to nonstructural measures to reduce or prevent flood damage. The Westbank and Vicinity project development team (PDT) considered the following alternatives in its decision process; no action alternative and non-structural measures. Cost engineers studied these alternatives and due to cost constraints, the non-structural measures were dismissed immediately and the PDT moved forward with an evaluation of the replacement alternative. This report includes an assessment of the environmental impacts associated with this action alternative and the “no action” alternative.

2.1 NO ACTION ALTERNATIVE

Under the no-action alternative, the proposed replacement of the temporary pumps with a permanent set of pumps would not take place, the rip rap along the Harvey Canal would not be replaced and the safe house would not be constructed. The existing pumps, which have deteriorated over time and require excessive maintenance and funding to ensure continued operation, would remain in place. This would place the surrounding area at risk for high water levels during tropical events as the aging pumps continue to deteriorate.

3. AFFECTED ENVIRONMENT

3.1 ENVIRONMENTAL SETTING

The project area is located within the Westbank and Vicinity (WBV) study area and includes the area bounded by Lapalco Blvd to the north, Peters Road to the east, and Destrehan Avenue to the west. The proposed action takes place just south of the Lapalco Blvd bridge within the Harvey Canal.

3.1.1 Geological Setting

The portion of the study area where the work will take place is located west of the Mississippi River, within the Harvey Canal. Natural ground elevations are near sea level. For more detailed information about the dominant physiographic features in the area, please refer to EA #306, SEA #306A, SEA #306B and IER #12.

3.1.2 General

The project area, which is located in Jefferson Parish, experiences a gulf coast regional climate characterized as hot, humid, and subtropical (Ning et al. 2003). The maritime tropical air masses associated with the Gulf of Mexico significantly influence the local climate. Summers are long, humid, and hot. The summer average daily temperature is 81° F, with the average daily high temperature around 90° F. During winter, cooler, dry, polar air masses move southward from Canada, often influencing the project area. Winter average daily temperature is 54°F and the average daily minimum is 44° F. The area receives approximately 65 in of precipitation annually.

Tropical storms and hurricanes frequent the region, specifically between August and October. These storms bring high winds (capable of exceeding 155 mph), heavy precipitation, and storm surges that cause extensive flooding, property damage, environmental devastation, and loss of life (National Hurricane Center 2007).

Regional climate trends show that over the past decade Louisiana has been subject to increasing temperatures and humidity, increasing precipitation, more intense precipitation events, stronger tropical storms, and rising sea levels (Ning et al. 2003). Climate projections predicting increasing hurricane frequency are currently inconclusive; however, the currently supported climatic trends listed previously are generally agreed to result in future increases in flooding, erosion, and subsidence, specifically to coastal areas (Ning et al. 2003).

3.2 RELEVANT RESOURCES

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

Cumulative impacts considers the effects on the resource that result from the incremental impact of the action being considered when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taken place over a period of time (40 CFR §1508.7). A complete description of the known projects considered for the cumulative impacts analysis is provided in Section 4.

The relevant resources (Table 1) described in this section are those recognized by laws, executive orders, regulations, and other standards of National, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public.

The following resources have been considered and found to not be affected by the alternative under consideration and as such, they will not be discussed further in this document: estuarine water bodies; Gulf water bottoms; beaches; estuarine or marine fisheries resources, including essential fish habitat; upland resources, including prime and/or unique farmlands; socio-economic resources; and environmental justice.

Table 1: Relevant Resources

Resource	Institutionally Important	Technically Important	Publicly Important	Impacted	Not Impacted
Waters of the United States	Fish and Wildlife Coordination Act of 1958, as amended. State policies may apply as well.	They are a critical element of many valuable freshwater and marine habitats; they are an indicator of the health of the various freshwater and marine habitats; and many species are important commercial resources.	The high priority that the public places on their esthetic, recreational, and commercial value.		X
Wildlife and Fisheries	Fish and Wildlife Coordination Act of 1958, as amended and the Migratory Bird Treaty Act of 1918	They are a critical element of many valuable aquatic and terrestrial habitats; they are an indicator of the health of various aquatic and terrestrial habitats; and many species are important commercial resources.	The high priority that the public places on their esthetic, recreational, and commercial value.		X
Threatened and Endangered Species	The Endangered Species Act of 1973, as amended; the Marine Mammal Protection Act of 1972; and the Bald Eagle Protection Act of 1940.	USACE, USFWS, NMFS, NRCS, USEPA, LDWF, and LADNR cooperate to protect these species. The status of such species provides an indication of the overall health of an ecosystem.	The public supports the preservation of rare or declining species and their habitats.		X
Cultural Resources	National Historic Preservation Act of 1966, as amended; the Native American Graves Protection and Repatriation Act of 1990; and the Archeological Resources Protection Act of 1979; as well as other statutes	State and Federal agencies document and protect sites. Their association or linkage to past events, to historically important persons, and to design and construction values; and for their ability to yield important information about prehistory and history.	Preservation groups and private individuals support protection a restoration, enhancement, or recovery of historical resources.		X
Recreation Resources	Federal Water Project Recreation Act of 1965 as amended and Land and Water Conservation Fund Act of 1965 as amended	Provide high economic value of to local, state, and national economies.	Public makes high demands on recreational areas. There is a high value that the public places on fishing, hunting, and boating, as measured by the large number of fishing and hunting licenses sold in Louisiana; and the large per-capita number of recreational boat registrations in Louisiana.		X
Aesthetics	USACE ER 1105-2-100, and National Environmental Policy Act of 1969, the Coastal Barrier Resources Act of 1990, Louisiana's National and Scenic River's Act of 1988, and the National and Local Scenic Byway Program.	Visual accessibility to unique combinations of geological, botanical, and cultural features that may be an asset to a study area. State and Federal agencies recognize the value of beaches and shore dunes.	Environmental organizations and the public support the preservation of natural pleasing vistas.		X
Socio-Economic Resources	River and Harbor Flood Control Act of 1970 (PL 91-611).	N/A	Social concerns and items affecting area economy are of significant interest to community.		X

Resource	Institutionally Important	Technically Important	Publicly Important	Impacted	Not Impacted
Environmental Justice	Executive Order 12898 and the Department of Defense's Strategy on Environmental Justice of 1995	The social and economic welfare of minority and low-income populations may be positively or disproportionately impacted by the tentatively selected plans.	Public concerns about the fair and equitable treatment (fair treatment and meaningful involvement) of all people with respect to environmental and human health consequences of federal laws, regulations, policies, and actions.		X
Air Quality	Clean Air Act of 1963, Louisiana Environmental Quality Act of 1983.	State and Federal agencies recognize the status of ambient air quality in relation to the NAAQS.	Virtually all citizens express a desire for clean air.	X	
Hydrology and Water Quality	Clean Water Act of 1977, Fish and Wildlife Coordination Act, Coastal Zone Mgt Act of 1972, and La State & Local Coastal Resources Act of 1978.	USACE, USFWS, NMFS, NRCS, USEPA, and State DNR and wildlife/fishery offices recognize value of fisheries and good water quality. the national and state standards established to assess water quality	Environmental organizations and the public support the preservation of water quality and fishery resources and the desire for clean drinking water.	X	

3.2.5 Wildlife and Fisheries

3.2.5.1 Existing Conditions

The diversity and abundance of wildlife inhabiting the project area is largely dependent on the quality and extent of suitable habitat present. The proposed project area is covered industrial and commercial use. There are numerous dredged canals that traverse the study area. In addition, levees and floodwalls line the existing waterways.

A variety of wading birds such as egrets and herons utilize the nearby canals and roost in nearby trees. Other wildlife species found in the study area include squirrels, rabbits, deer, mink, muskrat, alligator, and various songbirds.

Migratory and resident waterfowl and other wetland game birds make minimal use of the study-area wetlands. Wetland game birds that may occur in the study area are the wood duck, common snipe, and American woodcock.

Non-game birds in the study area include many species of wading birds, shorebirds, and songbirds (both migratory and non-migratory). Wading birds include the little blue heron, great blue heron, great egret, snowy egret, cattle egret, and green heron. The killdeer is a common shorebird in the project area.

Various species of frogs, turtles, and snakes are common in the project area. Representative species include the pig frog, bronze frog, green tree frog, red-eared slider, Mississippi mud turtle, speckled king snake, broad-banded water snake, and western cottonmouth.

The canals in the study area provide low to moderate habitat value for fish and aquatic organisms. The larger canals, such as the Harvey Canal, offer only minimal habitat diversity and the smaller canals can become choked with vegetation during the summer. The Harvey Canal is an alternate GIWW, route that affords navigation interests access to the Mississippi River via the

Harvey Lock. Proceeding north on the east side of the canal, land is primarily in industrial uses, with barge and tow boat repair and storage predominating.

Urban expansion has led to increased eutrophication of many waterways within the project area. Important factors in that process include increased volume of nutrient-laden urban runoff, decreased acreage of wetlands that serve to filter nutrients emanating from developed urban areas, and increased structural flood control and drainage measures which directly bypass adjacent wetlands and shunt urban runoff into downstream aquatic systems.

3.2.6 Threatened and Endangered and Other Protected Species

3.2.6.1 Existing Conditions

Although several Federal listed threatened and endangered (T&E) species are dependent on the habitat types present in the study area, no Federally-listed endangered, threatened, or candidate species under USFWS jurisdiction presently occur in the project area. No critical habitat for any T&E species is located in the project area. Table 2 list the possible T&E species found in the study area but not in the project area.

Table 2: Federally Listed Threatened and Endangered Species for Plaquemines and Jefferson Parishes

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

Numerous rare migratory birds utilize project area habitats as stop-over points during migration (e.g., peregrine falcon). Other species specifically utilize the habitat for breeding and raising young (e.g., bald eagle). The bald eagle was removed from the List of T&E Species but recommendations to minimize potential project impacts to the bird and its nest are provided by the USFWS in their National Bald Eagle Management Guidelines publication.

The bald eagle continues to be protected under the Bald and Golden Eagle Protection Act and by the Migratory Bird Treaty Act.

3.2.7 Cultural Resources

3.2.7.1 Existing Conditions

This project area was most recently addressed by the report titled *Cultural Resources Survey and Testing of Items Related to the West Bank and Vicinity Hurricane Protection Levees* (Wells et al. 2009; Louisiana Report 22-3560). This Report summarized the numerous Individual Environmental Reports (IER) that were produced after Hurricane Katrina, including IER #12 referenced within this EA. A conclusion of no historic properties affected for this project area was coordinated with the Louisiana State Historic Preservation Officer (SHPO) and with federally-recognized Tribes, with the letter dated July 7, 2008 in reference to IER #12. The SHPO responded with agreement to this conclusion in a letter dated August 1, 2008.

3.2.8 Recreational Resources

3.2.8.1 Existing Conditions

Recreational resources in the area include Martin Luther King Jr. Park, Harvey Park, Woodland West Park, Woodmere Neighborhood Park, and Stonebridge Golf Club of New Orleans.

Martin Luther King Jr. Park is located approximately .60 miles northeast of the project site and includes a gymnasium and community center, playground, 1 ball field, and a large playing field. Access to the park can be found from Lester Street via Peters Road.

Harvey Park and Playground is located approximately .45 miles northeast of the project site and includes 3 ball fields, 2 tennis courts, a playground, concessions, and what appear to be multiple gymnasiums and community centers.

Woodland West Park is located .50 miles due east of the project site and includes an asphalt walking trail, abundant green and playing space, 2 ball fields (in disrepair), a playground, and swimming facilities.

Woodmere Neighborhood Park is located approximately 1.50 miles southwest of the project site and includes 2 ball fields, a large playing field, a playground, and a gymnasium and community center.

Stonebridge Golf Club of New Orleans is located approximately 2 miles southeast of the project site and includes a 27 hole golf course, chipping and putting green practice facilities, and a club house.

The Harvey Canal is not used by recreational boaters. There are no known public boat launching facilities in the vicinity of the project site. There are no other known recreational features near the project site such as walking trails, state parks, state or federally protected lands or scenic streams and rivers.

3.2.9 Aesthetics (Visual Resources)

3.2.9.1 Existing Conditions

Water resources in the area include the Harvey Canal. These water resources have no scenic value to them. There are no scenic streams, either state or federally recognized, anywhere near the vicinity of the project area.

Vegetation in the area is sparse with the exception of a large swath of forest on the western bank of the Harvey Canal, just south of and west of the existing Harvey Sector Gates. The landscape is flat terrain with minimal to non-existent vertical features and topography. Land uses include industrial and vacant urban lands along the canal itself, with low and medium density residential located southwest and northwest of the project site. These residential areas are well out of the view shed of the sector gates and the canal. Two small community parks and ball fields are located to the northeast of the project site; but, well away from the view shed of the project site. Primary thoroughfares include Lapalco Blvd which runs in an east/ west direction adjacent to the project site, L.A. Highway 3017 which runs parallel to Harvey Canal, and Destrehan Ave which also runs parallel to the Canal. Destrehan Ave is set back, and screened by vegetation to the point that view sheds to the project site cannot be had from any point along that roadway. Highway 3017 does have view sheds to the project site, but the area adjacent to that roadway has no intrinsic scenic value or quality.

User activity in the area is moderate with much commercial, industrial and residential traffic traversing Lapalco Blvd to and from the outlying residential areas.

There are no state protected lands with institutional or public value in the vicinity of the project area. There is no real technical significance or scenic quality to the area as a whole.

3.2.10 Noise

3.2.10.1 Existing Conditions

Noise can be identified as unwanted sound. Noise in the study area is sourced from various forms of traffic on LA 23 Lapalco Boulevard, Engineers Road, Peters Road, and other local roads. Heavy equipment and manufacturing operations at the many industrial sites in the study area contribute to noise levels.

Noises can be evaluated either objectively or subjectively. Objective noise measurements are used by the Federal Highway Administration (FHWA), among others, and usually involve a logarithmic scale with a unit of decibels. Noise is normally computed over a 24-hour period and adjusted for night time when noise can be more of an annoyance to produce a day-night sound level (DNL).

Subjective noise can be judged by a person, a group or a community and consists of a noise level that becomes an “annoyance.” Subjective evaluation seems appropriate since, except during the construction period and periodic maintenance, levees and floodwalls are not sound generators.

Ambient noise in the project area can be subjectively judged as moderate.

The GIWW area is primarily made up of vacant land with very low noise levels, punctuated periodically with high levels of jet noise sourced from aircraft taking off and landing at the nearby Naval Air Station at Belle Chasse. Boat traffic in the GIWW, Algiers Canal, and Harvey Canal is another intermittent source of noise, mostly low-level.

The section on the west bank south of LA 23 to the end of the canal, bounded on the east by the canal and the west by Engineers Road, is heavily industrialized, with most oriented toward the maritime industry serving Mississippi River and Gulf of Mexico businesses. Noise of heavy machinery and metal working is common. Again, periodic high noise from the nearby Naval Air Station at Belle Chasse is also common. Similar conditions (and industry) are found along the east side of the Harvey Canal. The west side is nearly all vacant land containing few noise generators.

Table 3: Common Sounds and Their Levels

Outdoor	Sound level (dBA)	Indoor
Snowmobile	100	Subway train
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Ringling telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet residential area	40	Library

Source: Harris 1998

Existing sources of noise near the project area is from various forms of traffic on LA 23, General De Gaulle Drive, Lapalco Boulevard, Engineers Road, Peters Road, and other local roads. Heavy equipment and manufacturing operations at the many industrial sites in the study area contribute to noise levels. Periodic high noise levels are generated and impact a large zone around the study area by aircraft as they approach and depart the U.S. Naval Air Station at Belle Chasse. Boat traffic on the GIWW, Algiers Canal, and Harvey Canal is another source of noise.

Noise in the Harvey Canal includes shipping and boating activity, local road traffic, high-altitude aircraft overflights, and natural noises such as water, leaves rustling, and bird vocalizations. The noise environment is heavily industrialized, with most oriented toward the maritime industry serving Mississippi River and Gulf of Mexico businesses. On the east side of the Harvey canal, noise from heavy machinery and metal working is common. Again, periodic high noise from the nearby Naval Air Station at Belle Chasse is also common. The west side is nearly all vacant land containing few noise generators.

Much of the Harvey Canal and Algiers Canal is industrial and construction noise would not significantly differ from noise generated by the commercial operations already present. Existing noise levels (Leq and DNL) were estimated for the Harvey Canal and surrounding areas using

the techniques specified in the *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present*, and are provided in Table 4 (ANSI 2003).

Table 4: Estimated Existing Noise Levels

Location	Existing Noise Levels (dBA)		
	Leq (daytime)	Leq (nighttime)	DNL
Harvey Canal	81	52	58

Source: ANSI 2003

Regulatory Review. The Noise Control Act of 1972 (P.L. 92-574) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. In 1974, the U.S. Environmental Protection Agency (USEPA) provided information suggesting that continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals.

Neither Louisiana, nor the LDEQ, has implemented noise regulations at the state level. However, Jefferson parish has local noise regulations. The maximum permissible sound levels by land use category are outlined in Table 5. In Jefferson Parish, industrial sound level limits apply to construction activity for all land use categories. In addition, the Jefferson Parish ordinance specifically prohibits the operating of any construction equipment within 300 feet of any residential or noise-sensitive area between 9:00 P.M. and 7:00 A.M. Monday through Saturday, and 9:00 P.M. and 8:00 A.M. on Sundays and holidays, except for emergency work (Section 20-102 Jefferson Parish Municipal Code). The nearest residences are more than 2,000 feet from the project site.

Table 5: Maximum Permissible Sound Levels by Receiving Land Use Category in Jefferson

Receiving Land Use Category	Time	Sound Level Limit (dBA)	
		Jefferson Parish	
		L ₁₀	L _{max}
Residential	7:00 A.M. - 10:00 P.M.	60	60
	10:00 P.M. - 7:00 A.M.	55	55
Commercial	7:00 A.M. - 10:00 P.M.	65	65
	10:00 P.M. - 7:00 A.M.	60	60
Industrial	At all times	75	75

Sources: Chap 66 Article IV New Orleans Municipal Code; Section 20-102 Jefferson Parish Municipal Code

1 L10 = sound pressure level that is exceeded ten percent of the time

3.2.11 Air Quality

3.2.11.1 Existing Conditions

EPA and LDEQ regulate air quality in Louisiana. The Clean Air Act (CAA) (42 U.S.C. 7401-7671q), as amended, gives USEPA the responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR §50) that set acceptable concentration levels for six criteria pollutants: particulate matter (PM10 and PM2.5), sulfur dioxide (SO₂), carbon monoxide (CO), nitrous oxides (NO_x), ozone (O₃), and lead. Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health impacts, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health impacts. Each state has the authority to adopt standards stricter than those established under the Federal program; however, Louisiana accepts the Federal standards.

Existing ambient air quality conditions for the project area can be estimated from measurements conducted at an air quality monitoring station (located at City Park), approximately 2 miles from the project area. Recent air quality measurements are below the NAAQS for all criteria pollutants and are a conservative representation of the air quality conditions near the project area. (USEPA 2010a). At any given time, concentrations of criteria pollutants would be expected to be below those outlined in Table 6.

The east side of the Harvey Canal up to Lapalco Boulevard is heavily industrialized. While small emission sources are in evidence, none constitute a major air emissions source. The west side of the Harvey Canal is devoted entirely to open space uses. Lapalco Boulevard is a major highway that crosses the Harvey Canal, adding to vehicular emissions to ambient air quality.

Table 6: 2011 National Ambient Air Quality Standards

Pollutant [final rule cite]	Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]	primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead [73 FR 66964, Nov 12, 2008]	primary and secondary	Rolling 3 month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]	primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	primary and secondary	Annual	53 ppb ⁽²⁾	Annual Mean

Ozone [73 FR 16436, Mar 27, 2008]		primary and secondary	8-hour	0.075 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution Dec 14, 2012	PM _{2.5}	primary	Annual	12 µg/m ³	annual mean, averaged over 3 years
		secondary	Annual	15 µg/m ³	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24-hour	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010]		primary	1-hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
[38 FR 25678, Sept 14, 1973]		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

a - Source: 40 CFR 50.1-50.12.

b - Source: USEPA 2011

c - Not to be exceeded more than once per year.

d - The 3-year average of the fourth highest daily maximum 8-hour average ozone concentrations over each year must not exceed 0.08 ppm.

e - The 3-year average of the weighted annual mean PM_{2.5} concentrations from must not exceed 15.0 µg/m³.

f - The 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor must not exceed 65µg/m³.

ppm = parts per million

µg/m³ = micrograms per cubic meter

NO₂ = Nitrogen dioxide

3.2.12 Water Quality

3.2.12.1 Existing Conditions

The EPA Surf Your Watershed data places the project area within the East Central Louisiana Coastal Watershed, U.S. Geological Survey (USGS) Cataloging Unit 08090301 (USEPA 2008). This watershed includes project area channels such as Harvey Canal, Algiers Canal, and the GIWW (Barataria Bay Waterway).

Water quality within the watershed is evaluated throughout several riverine, estuarine, and wetlands/freshwater systems and is reported by the State of Louisiana for inclusion in the EPA's National Assessment Database. State water quality assessments are typically based on five types of monitoring data: biological integrity, chemical, physical, habitat, and toxicity. However, water quality in the Harvey Canal has not been assessed for the National Assessment Database. The areas around the canal are heavy and light industrial and commercial. Multiple businesses lining the canal possess discharge permits. The canal is primarily used for industrial and commercial traffic and is poor habitat for fish and wildlife.

3.2.13 Socioeconomic Resources

This section describes the social and economic environment that could be affected by the proposed action and alternative actions. The social and economic environment of the project area

is characterized by its demographic composition, the structure and size of its economy, and the types and levels of public service available to its citizens. Accordingly, this potential effects of USACE actions on the region’s population growth, employment and income levels, business activities, housing stock, public services, and community and regional growth post-Katrina.

3.2.13.1 Populations and Demographics

Existing Conditions

The study area for this socio economic analysis will focus on the business and residential community along both banks of the Harvey Canal from Harvey Canal Lock to the Harvey Canal sector gates which includes the primary beneficiaries of the proposed project. The socio economic analysis will also focus on U.S. Census tract 278.05 in Jefferson Parish as this community will likely experience the most direct impacts from the construction site where the temporary pumps will be replaced with permanent ones near the Harvey Sector gates. The northern side of this census tract is bordered by Lapalco Blvd. and Manhattan Blvd. on the western side. On the southern side this census track is bordered by Bayou Fatma and Harvey Canal on the eastern side. Census information for this census tract shows population levels in 2012 to be 9,214. In terms of race, demographics of this census tract shows that 51 percent of the population is comprised of Black or African American, 29 percent White, and the remaining population consisting of Asian and other races. The median age of the population is approximately 35 years of age.

Table 7: Census Population of the Project Area, 2000 through 2010

Location	2010	2000	2000-2010 % Change
Harvey	20,348	18,639	8.4
Louisiana Total	4,533,372	4,468,976	1.8

Source: U.S. Census Bureau, 2010 Population, Census 2000.

From the U.S. Census Bureau’s 2007 to 2011 American Community survey, the racial mix of Harvey was predominantly Caucasian (43.5 percent), followed by Black or African American (41.1 percent), and Hispanic or Latino (13.4 percent). The remaining 2 percent of the population was split between American Indian, Alaska Native, and other races.

3.2.13.2 Business and Economic Conditions

Existing Conditions

Business and economic conditions along the Harvey canal between the Harvey Lock and the sector gates primarily consists of businesses involved in the marine supply, service and repair industry. From 2009 - 2013, the Waterborne Commerce Statistics Center (WCSC) reported that an annual average of 3.8 million tons and 7,900 vessels used the Harvey Canal waterway some of which had origins and destinations along this protected side of the Harvey Canal.

3.2.13.3 Housing

Existing Conditions

U.S. Census data for Census block 278.05 showed in 2012 a five year average of about 3,100 housing units with approximately 90 percent of these being occupied. None of these housing units are within the immediate vicinity of the proposed construction site.

3.2.13.4 Health and Safety

Existing Conditions

No medical facilities or other public facilities related to safety, such as fire and police stations, are located immediately adjacent to the project area but related facilities are available within a 5 mile radius of the construction site. West Jefferson Medical Center is the largest nearby hospital located approximately 2 miles north east of the proposed construction site.

3.2.13.5 Employment, Income and Local Tax Base

Existing Conditions

As mentioned previously, the Harvey canal waterway predominantly supports a number of businesses involved in the marine supply, service and repair industry. According to the U.S. census, from 2008 – 2012 the median household income in the project area was around \$65,000 with per capita income being approximately \$24,000.

3.2.14 Transportation

Existing Conditions

For vehicle traffic the most heavily used thoroughfares within the project area and neighboring communities include Lapalco Blvd., Destrehan Ave., Manhattan Blvd., Gretna Blvd., Peters Road and U.S. Highway 90. Existing vehicular traffic congestion results from normal commuting levels and patterns. For marine traffic, from 2009 - 2013, the Waterborne Commerce Statistics Center (WCSC) reported that an average of 3.8 million tons and 7,900 vessels used the Harvey Canal waterway some of which had origins and destinations along the protected side of the Harvey Canal.

4. ENVIRONMENTAL CONSEQUENCES

4.2 WILDLIFE AND FISHERIES

No Action Alternative

Direct, Indirect and Cumulative Impacts

There would be no direct, indirect or cumulative impacts under the no action alternative. Without implementation of the proposed action, no direct or indirect impacts to wildlife would occur.

Proposed Action Alternative

Direct and Indirect Impacts

Construction activities in the project area could temporarily impact species located within the project footprint. There may be temporary and localized dispersal during construction, but any potentially impacted species should return after completion of the project.

Cumulative Impacts

Temporary impacts to fisheries, wildlife and some avian species, in the form of displacement, could occur as a result of construction activities during other HSDRRS projects. Fish and wildlife species would be expected to return to these areas upon completion of these projects. The proposed action could add a temporary incremental impact to fisheries.

4.3 THREATENED AND ENDANGERED AND OTHER PROTECTED SPECIES

No Action Alternative

Direct, Indirect and Cumulative Impacts

There would be no impacts associated with the no action alternative. Without implementation of the proposed action, no direct or indirect impacts to Threatened and Endangered Species would occur.

Proposed Action Alternative

Direct, Indirect and Cumulative Impacts

The project area contains no critical habitat and does not support any federally-listed endangered or threatened species; therefore CEMVN has determined that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat. Impacts to the bald eagle and brown pelican would not be anticipated with implementation of the proposed project features.

4.4 CULTURAL RESOURCES

No Action Alternative

Without implementation of the proposed action, the area will be unchanged as regards cultural resources. No recorded cultural resources exist within the project area or its immediate vicinity, and no known cultural resources would be impacted by the no action alternative.

Direct and Indirect Impacts

There will be no direct impacts to historic properties as result of the no action alternative.

Cumulative Impacts

The cumulative impact to historic properties as result of the no action alternative, will be the continued natural and mechanical processes that occur today and any result that is imparted to known or unknown cultural resources.

Proposed Action Alternative

With implementation of the proposed action, the area will be unchanged as regards cultural resources. No recorded cultural resources exist within the project area or its immediate vicinity, and no known cultural resources would be impacted by the proposed action alternative.

Direct and Indirect Impacts

There will be no direct impacts to historic properties as result of the proposed action alternative.

Cumulative Impacts

The cumulative impact to historic properties as result of the proposed action alternative, will be the continued natural and mechanical processes that occur today and any result that is imparted to known or unknown cultural resources.

4.5 RECREATIONAL RESOURCES

No Action Alternative

Direct Impacts

Under the no action alternative, there would be no direct impacts to recreational resources within the study area. Recreational resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices and policies.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to recreational resources within the study area. Recreational resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices and policies.

Cumulative Impacts

With the no action alternative, there are no foreseen cumulative impacts to recreational resources in the study area. Cumulative impacts would be the incremental direct and indirect impacts of not implementing the proposed action and the continued loss of wetland and habitats due to human development and conversion of existing forested wetlands and swamp habitats to marsh and open water. Any future changes or alterations to the study area would evolve in a natural process over the course of time, or by local land use patterns and maintenance practices. These incremental direct and indirect impacts would be in addition to the direct and indirect impacts of recreational resources in the region, Louisiana and the Nation.

Proposed Action Alternative

Direct Impacts

Under the future with project conditions, direct impacts to recreational resources would be minimal. There are no public or institutionally significant resources in the area. Facilities mentioned under existing conditions are far enough removed from the project site that impacts will be negligible.

Indirect Impacts

Temporary impacts could potentially occur due to construction efforts in the area. Increased traffic due to construction vehicles, dust, debris and increased noise volumes could affect Woodland West Park, Harvey Park and Playground, and the residential areas located around the project site. These temporary impacts should return to normal upon completion of the project.

Cumulative Impacts

There are no foreseen cumulative impacts to visual resources in the study area. Cumulative impacts would be the incremental direct and indirect impacts of implementing the proposed action combined with the continued activities of growth and development in the area. These incremental direct and indirect impacts would be in addition to the direct and indirect impacts of recreational resources in the region, Louisiana and the Nation.

4.6 AESTHETICS (VISUAL RESOURCES)

No Action Alternative

Direct Impacts

Under the no action alternative, there would no direct impacts to visual resources within the study area. Visual resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices and policies.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to visual resources within the study area. Visual resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices and policies.

Cumulative Impacts

With the no action alternative, there are no foreseen cumulative impacts to visual resources in the study area. Cumulative impacts would be the incremental direct and indirect impacts of not implementing the proposed action and the continued loss of wetland and habitats due to human development and conversion of existing forested wetlands and swamp habitats to marsh and open water. Any future changes or alterations to the study area would evolve in a natural process over the course of time, or by local land use patterns and maintenance practices. These incremental direct and indirect impacts would be in addition to the direct and indirect impacts of visual resources in the region, Louisiana and the Nation.

Proposed Action Alternative

Direct Impacts

Under the future with project conditions, direct impacts to visual resources would be minimal. There are no public or institutionally significant resources in the area. The industrial and commercial qualities of the area would remain unchanged. There is no scenic value that could be derived from technical significance.

Indirect Impacts

Temporary impacts could potentially occur due to construction efforts in the area. Increased traffic due to construction vehicles, dust, debris and increased noise volumes could affect the residential areas located around the project site. These temporary impacts should return to normal upon completion of the project.

Cumulative Impacts

There are no foreseen cumulative impacts to the few visual resources in the study area. Cumulative impacts would be the incremental direct and indirect impacts of implementing the proposed action combined with the continued activities of growth and development in the area. These incremental direct and indirect impacts would be in addition to the direct and indirect impacts of visual resources in the region, Louisiana and the Nation.

4.7 NOISE

This noise impact evaluation considered sound sources that could affect nearby sensitive receptors including residents, schools, churches, and hospitals. All significant sources of noise, their contribution to the overall noise environment, and maximum sound level were estimated for comparison to local noise control standards.

No Action Alternative

Direct, Indirect and Cumulative Impacts

Under the no action alternative, noise receptors near the project corridor would not experience additional noise associated with the proposed action construction activities as much of the project area is industrial; however, along selected areas of the project area, they would continue to experience ambient noise disturbances exceeding 65 dBA from trucks and cars traveling in the area, and normal operational noise disturbances from the industrial and commercial areas within the project area.

Proposed Action Alternative

Direct and Indirect Impacts

Short-term increases in noise due to construction activities including trucks and rock moving equipment would be expected. The specific impact of construction activities on the nearby receptors would vary depending on the type, number, and loudness of equipment in use. Individual pieces of heavy equipment typically generate noise levels of 80 dBA to 90 dBA at a distance of 50 feet. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. The zone of relatively high noise levels typically extends to distances of 400 feet to 800 feet from the site of major equipment operations. Locations more than 1,000 feet from construction sites seldom experience substantial levels (greater than 62 dBA) of noise. In this case, the nearest residences are more than 2,000 feet from the project site. Table 8 presents typical noise levels (dBA at 50 feet) that USEPA has estimated for the main phases of outdoor construction.

Table 8: Noise Levels Associated with Outdoor Construction

Construction Phase	L _{eq} (dBA) at 50 feet
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Structural	85
Finishing	89

Source: USEPA 1971

Sounds generated from heavy equipment would likely exceed the levels outlined in Sec. 20-102 of the Jefferson Parish noise ordinance (see Table 9). There are no residences within close proximity of the project area therefore special variances to the local noise ordinance or mitigation measures should not be required.

Table 9: Maximum Permissible Sound Levels by Receiving Land Use Category (Jefferson Parish)

Land Use Category	Time	Sound Level Limit (dB(A))
Residential, noise-sensitive area, public space	7:00 a.m.—9:59 p.m.	60
	10:00 p.m.—6:59 a.m.	55
Multifamily dwelling	7:00 a.m.—9:59 p.m.	50
	10:00 p.m.—6:59 a.m.	45
Commercial, convention	7:00 a.m.—9:59 p.m.	65
	10:00 p.m.—6:59 a.m.	60
Industrial	At all times	75

Source: Jefferson Parish code of Ordinances (<http://library.municode.com/index.aspx?clientId=14447>)

Work may be performed at any time during construction of this project, including nights, Saturdays, Sundays and holidays. When the contractor elects to work weekends and holidays, notice shall be given to the Contracting Officer, in writing, 36 hours in advance of commencement of such operations to permit suitable arrangements for inspections to be made. Adequate lighting for thorough inspection of night operations conducted shall be provided by the Contractor. Construction equipment mufflers would be properly maintained and in good working order.

To comply with local noise ordinance, sound generating equipment could be partially enclosed with noise barriers at some locations. The following mitigation measures could be used to address noise impacts identified at the construction sites, as necessary:

- Enclose construction power units
- Enclose generator sets
- Restrict the use of mobile equipment and trucks to daytime hours

- Use of noise barriers
- Place silencers on equipment
- Address individual landowner's impacts on a case-by-case basis

Construction noise would be expected to dominate the soundscape for all on-site personnel. Construction personnel, and particularly equipment operators, would don adequate personal hearing protection to limit exposure and ensure compliance with federal health and safety regulations.

There would be permanent sources of noise from the proposed action in the form of 7 permanent hydraulic pumps. Noise from operation of the pumps would be temporary and restricted to high water events related to tropical storms or for the purpose of standard maintenance. Noise levels would be within levels already found within the industrial nature of the project area.

Cumulative Impacts

There would be long-term cumulative impacts on the existing noise environment. During project construction, ongoing work within the project area would have a cumulative effect of combined noise with other HSDRRS projects as well as the industrial activities in the area. Upon completion of the project, cumulative noise impacts would occur periodically during maintenance periods.

4.8 AIR QUALITY

The Clean Air Act General Conformity rule applies to federal activities in non-attainment and maintenance areas. Orleans and Jefferson Parishes are in attainment for all National Ambient Air Quality Standards (NAAQS). Because the proposed action would be within an area designated by USEPA as in attainment for all criteria pollutants, the general conformity regulations do not apply. Nevertheless, the *de minimis* threshold values were used here as a standard against which to evaluate the level of effects under NEPA.

No Action Alternative

Direct, Indirect and Cumulative Impacts

There would be no adverse direct, indirect, or cumulative impacts to air quality within the project area under the no action alternative. Ambient air quality conditions would remain unchanged when compared to existing conditions.

Proposed Action Alternative

Direct and Indirect Impacts

During construction of the proposed action, temporary increases in air pollution would occur from the use of construction equipment and vehicles including: haul trucks, bull dozers, cranes, pile drivers, and excavators. Installation of the permanent pumps and rip-rap could temporarily be a source of fugitive dust including 10 and 2.5 micron particulate matter (PM). Local weather patterns and mandatory dust controls implemented during construction would determine the extent of this temporary condition. Construction equipment and vehicles could generate NO₂, CO, O₃, and SO₂ from combustion in diesel engines.

The east bank of the Harvey Canal up to Lapalco Boulevard is heavily industrialized. Cranes, trucks, and other diesel equipment are constantly in use in much of the area. The addition of minor amounts of air pollutants from the temporary construction that would be anticipated from the proposed action would not likely measurably degrade ambient air quality. Since the existing temporary pumps are being replaced with the same number of permanent pumps, no long term change would be expected to air quality. Regional air quality standards would not be violated. The proposed project would be in conformance with NAAQS.

Construction emissions were estimated for fugitive dust, heavy equipment and vehicles, delivery of supplies, and worker trips. There would be no ongoing operational sources of air emissions. The estimated emissions from the proposed action would be below the *de minimis* thresholds listed in Table 10.

Table 10: Annual Air Emissions Compared to Applicability Thresholds

Activity	Emissions (tons/year)						<i>De minimis</i> Threshold	Would Emissions Equal/Exceed <i>De minimis</i> Levels?
	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}		
Construction	13.3	12.4	2.5	<0.1	11.9	1.6	100	No
Operations	<none>							

For analysis purposes, it was assumed that all the construction activities would be compressed into a single 12-month period. Therefore, regardless of the ultimate implementation schedule, annual emission would be less than those shown herein because they would be spread out over a longer time period. Small changes in the ultimate design, and moderate changes in the quantity and types of equipment used would not have a substantial influence on the emission estimates and would not change the level of effects under NEPA.

BMPs/mitigation would be required for construction associated with the proposed action. The construction activities would be accomplished in full compliance with Louisiana Regulations for the Control and Abatement of Air Pollution, particularly Title 33 Part III. Chapters of relevance are as follows:

- Chapter 11, Control of Emissions of Smoke
- Chapter 13, Emission Standards for Particulate Matter
- Chapter 21, Control of Emissions of Organic Compounds

These requirements include the following:

- Reducing visible emissions and fugitive dust and emissions through watering
- Appropriate use of portable fuel containers
- Meeting new engine standards for nonroad vehicles

This list is not all inclusive; contractors would be required to comply with all applicable air pollution control regulations.

Cumulative Impacts

The State of Louisiana takes into account the effects of all past, present, and reasonably foreseeable emissions during the development of the State Implementation Plan. The State accounts for all significant stationary, area, and mobile emission sources in the development of this plan. This includes the ongoing HSDRRS work in the area, and the post-Katrina repairs and new construction. Estimated emissions generated by the proposed action would be *de minimis*. Therefore, the proposed action would not contribute significantly to adverse cumulative effects to air quality.

Cumulative temporary impacts due to the ongoing construction of WBV HSDRRS projects would occur, due to the activities described as having a direct effect on air quality. The principal air quality concern associated with the proposed action would be construction related emissions of priority pollutants and of fugitive dust near construction areas. These impacts would be temporary in nature, and would be expected to occur concurrently or near the same time as other projects for the HSDRRS. Post construction, temporary increases in emissions could result from operation of the pumps during tropical events as well as during periods of maintenance. These impacts upon air quality would be temporary in nature and would be expected to occur concurrently with other industrial activities in the area.

4.9 WATER QUALITY

No Action Alternative

Direct and Indirect Impacts

Without implementation of the proposed action, no direct and indirect impacts to water quality would be expected from wastewater and storm water runoff during storm events. Much of the area is industrial or residential. Any associated water quality impacts have already been considered. Long term, there would be no negative indirect or cumulative impacts from these temporary impacts.

Cumulative Impacts

Other past, present, and future projects are not expected to have a significant impact on the large scale water quality conditions in the project area. However, localized water quality degradation could occur during construction of these other projects. Concurrent construction of HSDRRS projects could cause short-term impacts to water quality that could exceed the LDEQ's water quality standards. The cumulative construction of projects in the area potentially impacted or will impact water quality. A temporary increase in concentration of fine sediments within the water column due to upland erosion or sediment disturbance in waterways that could arise under the no action alternative, would be additive to similar impacts caused by levee improvement projects as well as other projects in the area. This could lead to increased turbidity and possible reductions in dissolved oxygen (DO) levels in the vicinity and downstream of construction activities. These sediments could also act as a source of nutrients within the water column. These impacts would generally be localized to areas where construction would occur and would be expected to be temporary. Implementing BMPs and SWPPPs would decrease cumulative impacts from construction.

Continued industrial activities, urban wastewater discharges, and construction activities would lead to a continued decline in water quality. However, state and Federal programs that are in place to regulate and improve water quality could decrease cumulative impacts over time.

Proposed Action Alternative

Direct and Indirect Impacts

Both fill and excavation activities as described in the proposed action would be required to prepare the site for construction of the proposed structure. The construction and fill activities would result in localized, temporary turbidity impacts. During construction, these suspended sediments would be released into the surrounding waters. Release of sediment into the water column as part of these activities could temporarily decrease oxygen levels in the waters immediately surrounding the construction site by inhibiting photosynthesis or promoting solar heating. Also, some particles could contain chemically reduced substances (e.g., sulfides), which have a high chemical oxygen demand (COD), while other particles may have microorganisms attached, which could decompose organic matter and create a biological oxygen demand (BOD). Thus, a localized and temporary reduction in dissolved oxygen could occur in the immediate area of discharge. Oxygen levels would be expected to return to normal soon after construction.

Excessive turbidity can also lead to water body temperature increases. Increased suspended solids produced during construction could absorb incident solar radiation and slightly increase the temperatures of water bodies, especially near the surface. However, these effects would be temporary and would occur only during construction.

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

Cumulative Impacts

The incremental effects of the proposed action would not be expected to have a significant longterm effect on the large-scale water quality conditions in the study area since the water quality would continue to be influenced by industrial and commercial uses. Concurrent construction of other 100-year HSDRRS projects could cause short-term impacts to water quality that could exceed LADEQ's water quality standards. The cumulative construction impacts of the proposed action would be additive to similar impacts caused by other HSDRRS projects planned. This could lead to increased turbidity and possible reductions in dissolved oxygen levels in the vicinity and downstream of construction activities. These impacts would generally be localized to areas where construction would occur and are anticipated to be temporary. The implementation of BMPs and Stormwater Pollution Prevention Plans (SWPPPs) would minimize cumulative impacts from construction.

Continued industrial activities, urban wastewater discharges, and construction activities contribute to a continued decline in water quality within the study area. However, state and Federal programs are in place to regulate and improve water quality, so the net cumulative impact over time could be the improvement of water quality for the study area. The temporary impacts associated with this alternative would not be expected to detract from these projects and programs.

4.10 SOCIOECONOMIC RESOURCES

4.10.1 Populations and Demographics

No Action Alternative

Direct Impacts

Under the No-Action Alternative no direct impacts to population or demographics is expected and existing population levels and demographics would likely prevail.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps would continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, in the long run, there may be some detrimental, although minor affects, to population levels as the project area become less desirable to reside in.

Cumulative Impacts

Unless otherwise indicated, cumulative socioeconomic impacts to population or demographics consist of the sum of the direct and indirect impacts for this alternative and with all other activities associated with the construction of the WBV HSDRRS and other foreseeable projects in the area. The no action alternative would not be expected to contribute to cumulative impacts in the area.

Proposed Action Alternative

Direct Impacts

Under the Proposed Action Alternative there would be no direct impact on population or demographics as population centers lie outside the immediate construction site.

Indirect Impacts

If the pumps were not replaced, the existing temporary pumps would continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, replacing the temporary pumps with more reliable permanent pumps would, in the long-run, make the project area more desirable to reside in thereby causing some positive affects to population levels.

Cumulative Impacts

Due to the relatively small size of this project compared to the overall WBV HSDRRS, the replacement of the temporary pumps with permanent ones near the Harvey Canal sector gates would add very little to other larger impacts resulting from past, present and reasonably foreseeable projects in the WBV HSDRRS and therefore is not expected to contribute significantly to cumulative impacts to socio-economic resources in the larger project area.

4.10.2 Business and Economic Conditions

No Action Alternative

Direct Impacts

Under the No-Action Alternative there would be no immediate direct impact on business and economic conditions and existing conditions will likely prevail.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, in the long run, there is likely to be some deleterious effects to the local business community residing along the protected section of the Harvey Canal. A less reliable flood protection system could affect local business decision making overtime and in a competitive market, competing communities could convince businesses to relocate out of the area.

Cumulative Impacts

Unless otherwise indicated, cumulative socioeconomic impacts to population or demographics consist of the sum of the direct and indirect impacts for this alternative and with all other activities associated with the construction of the WBV HSDRRS and other foreseeable projects in the area. The no action alternative would not be expected to contribute to cumulative impacts in the area.

Proposed Action Alternative

Direct Impacts

The Proposed Action will require transportation of rocks and other material via truck along Peters road during the construction period possibly causing some minimal delays to vehicle traffic. Consequently, customers that normally frequent businesses along this stretch of the road may find it less desirable to do so. Marine-based work on Harvey canal near the sector gates would be planned to minimize any effects on navigation, but partial closure periods on the canal from dusk to dawn may take place for several weeks during construction to allow the contractor to complete the project sooner and minimize effects on daytime traffic in the Harvey Canal. However, there still may be some disruption to business activity along Harvey canal that normally takes place during the night time hours.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the Harvey canal area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, replacing the temporary pumps with more reliable permanent pumps may in the long-run make the project area and neighboring areas more desirable for businesses to operate here or locate to.

Cumulative Impacts

Due to the relatively small size of this project compared to the overall WBV HSDRRS, the replacement of the temporary pumps with permanent ones near the Harvey Canal sector gates would add very little to other larger impacts resulting from past, present and reasonably

foreseeable projects in the WBV HSDRRS and therefore is not expected to contribute significantly to cumulative impacts to socio-economic resources in the larger project area.

4.10.3 Housing

No Action Alternative

Direct Impacts

Under the No-Action Alternative there would be no immediate direct impact on housing and existing conditions will likely prevail.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, in the long run, there may be some deleterious, although minor affects, to housing levels as the area become less desirable to reside in.

Cumulative Impacts

Unless otherwise indicated, cumulative socioeconomic impacts to population or demographics consist of the sum of the direct and indirect impacts for this alternative and with all other activities associated with the construction of the WBV HSDRRS and other foreseeable projects in the area. The no action alternative would not be expected to contribute to cumulative impacts in the area.

Proposed Action Alternative

Direct Impacts

Under the proposed action there would be no immediate direct impact on housing since none of the existing housing units lie near the immediate vicinity of the proposed construction site.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, replacing the temporary pumps with more reliable permanent pumps may in the long-run make the project area more desirable to reside in thereby causing some positive affects to housing levels.

Cumulative Impacts

Due to the relatively small size of this project compared to the overall WBV HSDRRS, the replacement of the temporary pumps with permanent ones near the Harvey Canal sector gates would add very little to other larger impacts resulting from past, present and reasonably foreseeable projects in the WBV HSDRRS and therefore is not expected to contribute significantly to cumulative impacts to socio-economic resources in the larger project area.

4.10.4 Health and Safety

No Action Alternative

Direct Impacts

The No-Action Alternative will have no direct impact on the availability of health and safety services. Existing conditions will likely prevail.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, under these conditions, more frequent flooding in the project area could occur thereby possibly hindering safety services and access to nearby medical facilities during severe weather events.

Cumulative Impacts

Unless otherwise indicated, cumulative socioeconomic impacts to health and safety consist of the sum of the direct and indirect impacts for this alternative and with all other activities associated with the construction of the Hurricane Storm Damage Risk Reduction System in the West bank vicinity (HSDRRS-WBV) and other reasonably foreseeable projects. The no action alternative would not be expected to contribute to cumulative impacts in the area.

Proposed Action Alternative

Direct Impacts

As mentioned previously during the construction period, there will be some increase in vehicular traffic near the proposed construction site when land-side construction equipment is utilized and more frequent bridge openings on Lapalco blvd. may occur when marine equipment is needed to gain access to the construction site. Consequently, there may be an increase in vehicular traffic congestion in the nearby area thereby hindering to some minor extent safety services and access to nearby medical facilities during the construction period.

Indirect Impacts

Implementing the proposed action would allow pumping stations to operate more consistently and efficiently during adverse weather conditions. This would contribute to their continued operation, resulting in the long-term benefit of maintaining vital health and safety services by allowing a faster return to normal operations after a severe weather event.

Cumulative Impacts

Due to the relatively small size of this project compared to the overall HSDRRS-WBV, the replacement of the temporary pumps with permanent ones near the Harvey Canal sector gates would add very little to other larger impacts resulting from past, present and reasonably foreseeable projects in the HSDRRS-WBV and therefore is not expected to contribute significantly to cumulative impacts to socio-economic resources in the larger project area.

4.10.5 Employment, Income and Local Tax Base

No Action Alternative

Direct Impacts

Under the No-Action Alternative there would be no immediate direct impact on employment, income or the local tax base. Existing levels will likely prevail.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, in the long run, there is likely to be some deleterious effects to the local business community residing along the protected section of the Harvey canal. A less reliable flood protection system could affect local business decision making and in a competitive market, competing communities could convince businesses to relocate out of the area. If this occurs then a similar negative effect is likely to occur to the local employment, income and tax base levels.

Cumulative Impacts

Unless otherwise indicated, cumulative socioeconomic impacts to employment, income and tax base levels consist of the sum of the direct and indirect impacts for this alternative and with all other activities associated with the construction of the Hurricane Storm Damage Risk Reduction System in the West bank vicinity (HSDRRS-WBV) and other reasonably foreseeable projects. The no action alternative would not be expected to contribute to cumulative impacts in the area.

Proposed Action Alternative

Direct Impacts

Given the temporary nature of the proposed construction activity there is unlikely to be any significant direct impact on employment, income or local tax base levels.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the Harvey canal area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. Consequently, replacing the temporary pumps with more reliable permanent pumps will in the long-run make the project area more desirable for business to operate here or locate to. This in turn will likely produce some long-term beneficial effects to local levels of employment, income and tax base.

Cumulative Impacts

Due to the relatively small size of this project compared to the overall HSDRRS-WBV, the replacement of the temporary pumps with permanent ones near the Harvey Canal sector gates would add very little to other larger impacts resulting from past, present and reasonably foreseeable projects in the HSDRRS-WBV and therefore is not expected to contribute significantly to cumulative impacts to socio-economic resources in the larger project area.

4.11 TRANSPORTATION

No Action Alternative

Direct Impacts

Under the No-Action Alternative there would be no immediate direct impact on transportation and existing traffic conditions will likely prevail.

Indirect Impacts

By not replacing the pumps, the existing temporary pumps will continue to deteriorate and the area would experience an increased risk of flooding as the existing pumps would not be able to keep the water levels at a safe and manageable level. As mentioned previously, in the long run, the no-action alternative may cause some deleterious effects to population, housing and the local business community which in turn may cause a decrease in vehicular traffic in the project area. For marine traffic a similar case can be made in that marine traffic in the Harvey canal may lessen if business activity operating on the canal itself lessens.

Cumulative Impacts

Unless otherwise indicated, cumulative socioeconomic impacts to transportation consist of the sum of the direct and indirect impacts for this alternative and with all other activities associated with the construction of the Hurricane Storm Damage Risk Reduction System in the West bank vicinity (HSDRRS-WBV) and other projects in the area. The no action alternative would not be expected to contribute to cumulative impacts in the area.

Proposed Action Alternative

Direct Impacts

One staging area would be utilized during the construction period. The proposed staging area is located on the east side of the Harvey Sector Gate, between the canal and Peters Road. Trucks delivering rock to the staging location would access the site via Peters Road and leave via the delivery route once the load is delivered. Use of this lot could include, but not be limited to staging of construction equipment and materials, the placement of construction trailers, access to the canal, loading and unloading of equipment and materials into and out of the canal.

It is estimated that approximately 3-4 trucks carrying rock material would be used during the duration of the contract. Best Management Practices, (BMPs), would be utilized at the construction entrances and around the site, as required, in compliance with the National Pollutant Discharge Elimination System (NPDES) storm water permit. BMPs may consist of, but not be limited to silt fencing, fiber rolls, drain inlet protection, and stabilized construction entrances. Appropriate traffic control measures would be installed in compliance with the project approved Maintenance of Traffic (MOT) plan including, construction entrance and trucks entering roadway signage. In the event a lane closure is necessary, all applicable guidelines would be coordinated with the LADOTD and followed per the approved MOT plan. Hours of operation for construction activities would adhere to local parish ordinances for Jefferson Parishes. In addition, the Lapalco Blvd. Bridge may have to open more frequently during the construction period to allow construction equipment to pass under the bridge to access the construction site from the

canal. As a consequence the expectation is that roadways near the construction site, especially Peters Road, may experience some minor increase in vehicular traffic congestion during the construction period.

As mentioned previously, marine-based work on Harvey canal near the sector gates would be planned to minimize any effects on navigation, but minor disruptions to waterborne traffic may occur. During the evening hours of the construction period, the canal near the sector gates may be restricted to one-way transits for several weeks to allow the contractor to complete the project sooner and minimize effects on daytime traffic. The limited number of business operations that may take place at night along this section of the canal may also experience minor disruptions during the construction period. However, a complete closure of the waterway is not anticipated. Approximately 95 percent of Harvey Canal marine traffic is comprised of commercial barge, the majority of which is considered through traffic with no origins or destinations on the canal itself.

Indirect Impacts

As the proposed project may, in the long run, cause some positive effects to population, housing and the local business community this in turn may cause a modest increase in vehicular traffic in the project area. For marine traffic a similar case can be made in that marine traffic in the Harvey canal may also increase if business activity operating on the canal itself improves.

Cumulative Impacts

Due to the relatively small size of this project compared to the overall HSDRRS-WBV, the replacement of the temporary pumps with permanent ones near the Harvey Canal sector gates would add very little to other larger impacts resulting from past, present and reasonably foreseeable projects in the HSDRRS-WBV and therefore is not expected to contribute significantly to cumulative impacts to socio-economic resources in the larger project area.

4.12 HAZARDOUS, TOXIC AND RADIOACTIVE WASTE

The USACE is obligated under Engineer Regulation (ER) 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 proposed actions. ER 1165-2-132 identifies that HTRW policy is to avoid the use of project funds for HTRW removal and remediation activities. An ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA), HTRW 14-03 dated 17 April 2014, has been completed for the project area. A copy of Phase 1 ESA will be maintained on file at the U.S. Army Corps of Engineers, New Orleans District Headquarters. The probability of encountering HTRW for the proposed action is low based on the initial site assessment. If no recognized environmental conditions are identified in relation to the project site, the probability of encountering HTRW for this project will be considered low. If a recognized environmental condition is identified in relation to the project site, the U.S. Army Corps of Engineers, New Orleans District would take the necessary measures to avoid the recognized environmental condition so that the probability of encountering or disturbing HTRW would continue to be low.

4.13 SUMMARY OF CUMULATIVE IMPACTS

The Council on Environmental Quality's (CEQ) regulations (40 CFR 1500-1508) implementing the procedural provisions of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 et seq.) define cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7)". Cumulative Effects can result from individually minor but collectively significant actions taking place over a period of time."

This analysis establishes the magnitude and significance of cumulative impacts by comparing the existing environment with the expected impacts of the alternative considered in the proposed action when combined with the impacts of other proximate actions. The primary impact of the HSDRRS projects near the project area is that low-lying areas on the protected side of the HSDRRS would experience reduced storm surge flooding impacts. Those projects in combination with the SEA #306C proposed action would significantly reduce storm surge-induced flooding and protect the neighborhoods and commercial businesses in the vicinity of the Harvey canal. These HSDRRS projects would provide a 100-year level of risk reduction that has previously not existed in the area..

Short-term localized impacts to water quality in the Harvey Canal could occur during construction of this and other projects associated with the HSDRRS. A temporary increase in the concentration of fine sediments within the water column due to upland erosion or sediment disturbance could lead to increased turbidity and possible reductions in DO levels in the vicinity of the projects. Implementing construction BMPs and SWPPPs could help reduce these potential impacts. These impacts would be expected to cease after constructing this remediation and the HSDRRS features.

Temporary impacts to the local traffic and transportation network in the project area would be expected during construction of this and other projects associated with the HSDRRS. Impacts would include increased traffic due to construction vehicles and temporary detours and road closures. The impacts would be expected to be temporary and the traffic and transportation network would return to normal operation after constructing this remediation and the HSDRRS features. It should be noted that temporary impacts to the transportation network from other federal and non-federal projects, such as the submerged roads program, could continue after completion of this project.

Temporary impacts to noise and air quality would be expected during construction of this remediation and the HSDRRS projects. Because the area is primarily industrial, impacts to noise and air quality levels would be expected to have nominal contributions to existing levels.

While the proposed action would result in minor impacts as previously noted, it is expected that no significant adverse cumulative impacts would occur as a result of implementation of the project. The direct, indirect, and cumulative impacts from associated projects were previously addressed in the reports identified in the Prior Reports Section, above. These reports also provided an evaluation of the direct, indirect, and cumulative impacts associated with the

stability remediation construction in the project area. The discussions of potential cumulative impacts contained in the cited documents are incorporated herein by reference.

Overall, the proposed action, in comparison to past, present, and reasonably foreseeable future actions, would not incrementally contribute adversely to the general project area. This flood risk reduction feature is part of an overall comprehensive plan for the HSDRRS. The proposed action alternative would accomplish flood risk reduction objectives, which are of great importance in the Lower Mississippi Valley. Replacing the temporary pumps at the Harvey Pump station with a more permanent solution would aid in the ability of the station to maintain water levels in the canal and aid in reducing the risk of flood damage to the natural and human environment. The cumulative impacts of the proposed action are not expected to result in long-term adverse impacts.

5 COORDINATION

Preparation of this Environmental Assessment and Finding of No Significant Impact (FONSI) is being coordinated with appropriate Congressional, Federal, state, local interests, and Indian Tribes, as well as environmental groups and other interested parties. The following federal and state agencies, non-governmental organizations, as well as other interested parties will receive copies of this Environmental Assessment and the Finding of No Significant Impact:

- U.S. Department of the Interior, Fish and Wildlife Service
- U.S. Environmental Protection Agency, Region VI
- U.S. Department of Commerce, National Marine Fisheries Service
- U.S. Natural Resources Conservation Service, State Conservationist
- Louisiana Department of Wildlife and Fisheries
- Louisiana Department of Natural Resources (LADNR), Coastal Management Division
- Louisiana Department of Natural Resources, Coastal Restoration Division
- Louisiana Department of Environmental Quality
- Louisiana State Historic Preservation Officer

6 MITIGATION

No wetland impacts are anticipated from the proposed action.

7 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Environmental compliance for the Federal action would be achieved upon: coordination of this SEA and FONSI with appropriate agencies, organizations, and individuals for their review and comments; USFWS confirmation that the proposed action would not be likely to adversely affect any endangered or threatened species; LADNR concurrence with the LCRP; receipt of a Water Quality Certificate from the State of Louisiana Department of Environmental Quality (LADEQ); receipt of the Louisiana SHPO determination of No Affect on cultural resources; receipt and acceptance or resolution of all USFWS Coordination Act recommendations; and receipt and acceptance or resolution of all LADEQ comments on the air quality impact analysis documented

in the SEA. The FONSI will not be signed until the Federal action achieves environmental compliance with applicable laws and regulations, as described above.

Any change in the proposed project features, locations or plans would be coordinated in advance with the USFWS, National Marine Fishery Service, Louisiana Department of Wildlife and Fisheries, and Louisiana Department of Natural Resources. Finally, if the proposed project has not been constructed within 1 year or if changes are made to the proposed project, the Corps should re-initiate Endangered Species Act consultation with USFWS to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.

David Walter, of the United States Fish and Wildlife Service (USFWS), in an email dated July 25, 2014 stated that USFWS has no comment under Section 2(a) of the Fish and Wildlife Coordination Act. Service review of the NEPA document fulfills coordination requirement under Section 2(a) of the FWCA.

The USFWS reviewed the proposed action to see if it would affect any threatened and endangered species under its jurisdiction, or their critical habitat. The USFWS stated in an email dated 28 March 2014 that because the work appears to be primarily occurring in developed/disturbed areas, they have no concerns regarding the proposed action. (Appendix D)

Consultation with the NOAA National Marine Fisheries Service (NMFS) was not necessary for the proposed action due to its having no effect to any T&E species under their jurisdiction, or their critical habitat.

The Louisiana Department of Natural Resources (LDNR) reviewed the proposed action for consistency with the Louisiana Coastal Resource Program (LCRP). The proposed action was found to be consistent with the LCRP, as per letters dated 2 May 2014 and 1 August 2014. (Appendix D).

Section 106 of the National Historic Preservation Act, as amended, requires consultation with the Louisiana State Historic Preservation Officer (SHPO) and Native American tribes. The proposed additional Rights of Way are composed of lands previously studied for the HSDRRS, and IER #12. As part of this study, cultural resources records, soil records, and historic records were consulted to determine that no potential cultural resources exist within the currently proposed additional Rights of Way (Heller et al. 2012). The USACE coordinated with SHPO and federally-recognized Tribes on July 7, 2008 as part of the HSDRRS process and is documented in Appendix D of IER #12. In a letter dated August 1, 2008, the Louisiana SHPO concurred with a recommendation of no effect on historic properties. By letter dated July 21, 2014, the Louisiana Historic Preservation Officer concluded the proposed action would not affect any known historic properties.

CEMVN received a Water Quality Certificate (WQC) from the Louisiana Department of Environmental Quality on 11 December 2013 stating that the Department made a determination that the requirements for a WQC have been met and concluding that the placement of fill would

not violate water quality standards of Louisiana as provided by LAC 33:IX.Chapter 11. Placement of riprap was covered in the 404(b)(1) evaluation for the construction of the Harvey Canal Sector Gate contained in the 1994 WBV East of Harvey Canal Feasibility Report and Environmental Impact Statement (EIS), which is listed in Prior Reports. The 1994 Report, EIS and 404(b)(1) evaluation are incorporated by reference.

8 CONCLUSION

The proposed action consists of replacing the existing temporary pumps installed at the Harvey Sector Gate during construction of the gate with permanent pumps in order to keep the water in the basin between the Harvey Lock and the Harvey Sector Gate at a manageable level, approximately below El+2.3 NAVD88.

9 PREPARED BY

Supplemental Environmental Assessment #306C and the associated Finding of No Significant Impact were prepared by Ms. Patricia Leroux, Environmental Resource Specialist, with relevant sections and contributions prepared by: Mr. Joseph Musso (HTRW); Dr. Paul Hughbanks (Cultural Resources); Mr. Joseph Mann (Socioeconomics). The address of the preparers is: US Army Corps of Engineers, New Orleans District; CEMVN-PDN-CEP; P.O. Box 60267; New Orleans, Louisiana 70160-0267.

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APPENDIX A: LIST OF ACRONYMS AND DEFINITION OF COMMON TERMS

AQCR – Air Quality Control Region
ASA – Assistant Secretary of the Army
ASTM – American Society for Testing Materials
BGEPA – Bald and Golden Eagle Protection Act
BMPs – Best Management Practices
CAA – Clean Air Act
CEMVN – U.S. Army Corps of Engineers, New Orleans District
CEQ – Council on Environmental Quality
CFR – Code of Federal Regulations
CIAP – Coastal Impact Assistance Program
COCs – Constituents of Concern
CWA – Clean Water Act
CWPPRA Coastal Wetlands Planning Protection Restoration Act
dBA - Decibels
DNL – Day/Night Levels
EA – Environmental Assessment
EAR – Engineering Alternative Report
EIS – Environmental Impact Statement
EPA – Environmental Protection Agency
ESA – Environmental Site Assessment
ER – Engineering Regulation
FONSI – Finding of No Significant Impact
FR – Federal Register
Ft - Feet
GHG – Greenhouse Gases
GNODC – Greater New Orleans Community Data Center
HSDRRS – Hurricane and Storm Damage Risk Reduction
ICS – Interim Control Structure
IER – Individual Environmental Report
IERS – Supplemental Individual Environmental Report
Lb - Pounds
LPV – Lake Pontchartrain and Vicinity
LADNR – Louisiana Department of Natural Resources
LADOTD – Louisiana Department of Transportation and Development
LDEQ – Louisiana Department of Environmental Quality

LDHH – Louisiana Department of Health and Hospitals
LDWF – Louisiana Department of Wildlife and Fisheries
Leq – Equivalent sound level
MBTA – Migratory Bird Treaty Act
mi² – Square miles
MOT – Maintenance of Traffic
MSA – Metro Statistical Area
MVN – Mississippi Valley, New Orleans
NAAQS – National Air Quality Standards
NAVD88 – North American vertical Datum (2204/65)
NEPA – National Environmental Policy Act
NMFS – National Marine Fisheries
NOAA – National Oceanic and Atmospheric Administration
NPDES – National pollutant Discharge Elimination System
NRHP – National register of Historic Places
NWI – National Wetland Inventory
PS – Pump Station
RECs – Recognized Environmental Concerns
ROI – Region of Influence
RPC – Regional Planning Commission
SHPO – State Historic Preservation Officer
SLFPA-E – Southeast Louisiana Flood Protection Authority - East
SOCs – Sites of Concern
SWBNO – Sewerage and Water Board of New Orleans
SWPPP – Stormwater Pollution prevention Plan
USGS – U.S. Coast Guard
WRDA – Water Resources Development Act

APPENDIX B: PUBLIC COMMENT

No letters were received during the public comment period from June 27, 2014 - July 27, 2014.

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
Jamie Phillippe	Louisiana Dept. of Environmental Quality
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 AND TRIBAL GOVERNMENT
CORRESPONDENCE**

Leroux, Patricia S MVN

From: Walther, David [david_walther@fws.gov]
Sent: Friday, March 28, 2014 1:43 PM
To: Leroux, Patricia S MVN
Subject: [EXTERNAL] Re: Request for USFWS Coordination (UNCLASSIFIED)

Patricia,

I looked at our ESA screening map and we have no threatened or endangered species or critical habitat around the project area.. Because the work appears to be primarily occurring in developed/disturbed areas we have no further comments.

Thanks for coordinating.

On Fri, Mar 28, 2014 at 10:19 AM, Leroux, Patricia S MVN <patricia.leroux@usace.army.mil> wrote:

Classification: UNCLASSIFIED
Caveats: NONE

Dave -

Attached is a project description and pictures related to an EA that I am currently working on for the Harvey Canal Sector Gate. The sector gate was originally covered in the West Bank of the Mississippi River in the Vicinity of New Orleans, Louisiana (East of the Harvey Canal) Hurricane Protection Study Feasibility Report and EIS of August 1994. The description is as follows:

FLOODGATE STRUCTURE

The proposed floodgate structure would be a sector gate type structure, consisting of a pile supported reinforced concrete structure with structural steel sector gates. The floodgate would be constructed in the Harvey Canal, approximately 3,600 feet south of the Lapalco Bridge. The floodgate would provide a 110-foot opening, with a sill elevation of -16.0 feet NGVD to match the existing bottom elevation of the canal.

After Hurricanes Katrina and Rita, 7 temporary pumps were placed on the sector gate to ensure that the canal levels remained at an optimal level in relation to the work being done in the Algiers Detention Basin (Individual Environmental Report 12).

The pumps were not detailed in IER 12 and now the PDT wishes to exchange the 7 deteriorating temporary pumps with 7 updated permanent pumps.

I have attached a project description as well as some maps of the area in order to coordinate with USFWS. We do not believe this will have an impact on T&E in the area as the area is heavily industrialized, however there are some habitat sections nearby.

Please let me know if you have any questions or require additional information to make a determination.

Best regards,

Patricia S. Leroux
Environmental Resource Specialist

US Army Corps of Engineers, New Orleans District
(504) 862-1544

Classification: UNCLASSIFIED
Caveats: NONE

--

David Walther
Supervisory Fish and Wildlife Biologist

US Fish and Wildlife Service
Lafayette, LA 70508
Phone: 337.291.3122
Fax: 337.291.3139

<http://www.fws.gov/lafayette/>

BOBBY JINDAL
GOVERNOR



STEPHEN CHUSTZ
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

May 2, 2014

Patricia Leroux
Corps of Engineers- New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

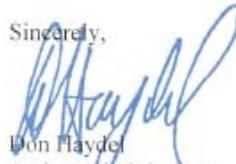
RE: **C20080483 mod 04**, Coastal Zone Consistency
New Orleans District, Corps of Engineers
Direct Federal Action
Install permanent pumps and construct safe house at Harvey Canal Sector Gate,
associated with IER 12
Jefferson Parish, Louisiana

Dear Ms. Leroux:

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

If you have any questions concerning this determination please contact Carol Crapanzano of the Consistency Section at (225) 342-9425 or 1-800-267-4019.

Sincerely,



Don Haydel
Acting Administrator
Interagency Affairs/Field Services Division

DH/JDH/cmc

cc: Dave Butler, LDWF
Frank Cole, OCM

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Leroux, Patricia S MVN

From: Sent: To: Subject:

Elizabeth Johnson (DEQ) [Elizabeth.Johnson@LA.GOV] Monday, June 23, 2014 8:34 AM Leroux, Patricia S MVN [EXTERNAL] RE: Status of WQC (UNCLASSIFIED)

This Water Quality Certification does not need to be updated and is adequate for the changes as there are no additional impacts. All the modifications have been filed.

-----Original Message----- From: Leroux, Patricia S MVN [mailto:patricia.leroux@usace.army.mil] Sent: Monday, June 23, 2014 7:41 AM To: Elizabeth Johnson (DEQ) Subject: Status of WQC (UNCLASSIFIED) Classification: UNCLASSIFIED Caveats: NONE Elizabeth - I understand that you replaced Jamie Phillipe as our point of contact on obtaining Water Quality Certificates. I am checking on the status of a certificate that I did not receive as well as checking to see if I need to have one updated. Jamie handled a WQC for work being performed on the Outfall Canals here in New Orleans. Since the certificate was issued, there have been changes and I need to know if we need to update the certificate as a result of these changes. The certificate I have not received is for the Harvey Canal Pumps where they are replacing existing pumps with new ones. There are no additional impacts beyond those that are already in place. I have attached the information for your review since I am sure that you are not familiar with the work as Jamie handled it for us. Should you require additional information, please do not hesitate to ask. Best regards, Patricia S. Leroux Environmental Resource Specialist US Army Corps of Engineers, New Orleans District (504) 862-1544 Classification: UNCLASSIFIED Caveats: NONE

1

**Louisiana Department of Natural Resources
INTERAGENCY AFFAIRS/FIELD SERVICES DIVISION
Federal Consistency Determination Statement and Recommendation Sheet**

Consistency Number C20080483 mod 04

Applicant/Agency Corps of Engineers

Project Title (If Applicable) Install permanent pumps at Harvey Canal Sector Gate;
associated with IER 12: West Bank and Vicinity, GIWW, Algiers, and Harvey Canals
Hurricane Protection, Jefferson Parish

Salient Points/Issues IER 12 provides flood protection for the Harvey, Westwego, Gretna, Algiers, and Belle Chasse areas. Existing temporary pumps in Harvey Canal at Lapalco Boulevard to be replaced with permanent submersible pumps. Project to also construct new platform on piles to support operator safe house, replace discharge piping and controls, and place 26 feet of riprap downstream. Land- and marine-based equipment to be used. Partial dusk-to-dawn closure of Harvey Canal possible during construction. Temporary staging area on industrial (east) side of canal.

Objections None, the area is mainly urban and built out. There is some deciduous forest southwest of project site. However, additional coastal effects are not anticipated from this activity.

Recommendation: Concurrence OCZ Denial Other

List and Discuss Pertinent Guidelines if Denial Recommended _____

Additional Action? _____

Recommendation By:
C Caparzano
(Coastal Resources Analyst)
5-1-14
(date)

Reviewed By:
[Signature]
5-1-14
(date)



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

REPLY TO
 ATTENTION OF

June 27, 2014

Regional Planning and
 Environment Division South

Ms. Pam Breaux
 State Historic Preservation Officer
 LA Office of Cultural Development
 P.O. Box 44247
 Baton Rouge, LA 70804-4247

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

Pam Breaux 7-21-14
 Pam Breaux Date
 State Historic Preservation Officer

Dear Ms. Breaux:

A draft environmental assessment (EA) for the Harvey Sector Gate Permanent Pumps, Louisiana, project prepared by the U.S. Army Corps of Engineers, New Orleans District.

EA #306C evaluates the proposed replacement of temporary pumps at the Harvey Canal Sector Gate with permanent pumps, replacement of the existing pump platform, construction of a safe house with new generators and the replacement of rip rap on the flood side of the discharge pipes. The work is being proposed as a means to maintain water levels in the basin between the Harvey Lock and the Harvey Sector Gate.

Please review the enclosed documents and provide comments within 30 days of the date of this letter. The FONSI will not be signed until all environmental review and compliance requirements have been completed. A copy of the signed FONSI will be provided upon request.

Comments should be mailed to the attention of Ms. Patricia S. Leroux; U.S. Army Corps of Engineers; Regional Planning and Environment Division South; New Orleans Environmental Branch; CEMVN-PDN-CEP; P.O. Box 60267; New Orleans, Louisiana 70160-0267.

Comments may also be provided by email to patricia.leroux@usace.army.mil, or by fax to (504) 862-2088. Ms. Patricia S. Leroux may be contacted at (504) 862-1544 if questions arise.

Joan M. Exnicios

Joan M. Exnicios
 Chief, Environmental Planning Branch

RECEIVED

JUN 30 2014

ARCHAEOLOGY

From: Walther, David [david_walther@fws.gov]

Sent: Friday, July 25, 2014 10:16 AM

To: Wright, Debra A MVN

Subject: [EXTERNAL] Re: FW: Harvey Sector Gate Pump Station Supplemental EA 306C (UNCLASSIFIED)

Debbie,

I have no comments on the Harvey Sector Gate Pump Station Supplemental Environmental Assessment 306C. The proposed work is in an area that experiences poor water quality at times and natural habitats in the area have been altered and/or impacted by navigation and flood control activities. The proposed activities should not result in any further permanent decline in fish and wildlife habitat quality.

Thank you for requesting our comments.

David Walther

Supervisory Fish and Wildlife Biologist

US Fish and Wildlife Service

Lafayette, LA 70508

Phone: 337.291.3122

Fax: 337.291.3139

<http://www.fws.gov/lafayette/>

On Fri, Jul 25, 2014 at 9:32 AM, Wright, Debra A MVN

<Debra.A.Wright@usace.army.mil> wrote:

Classification: UNCLASSIFIED

Caveats: NONE

David,

As recently discussed, the proposed action would not include dredging, but possibly jetting during construction. Here is more information on the subject:

The proposed action includes the possibility of jetting of silt material off of a concrete platform associated with the intake pump. Silt would be removed from an 8-ft thick slab from about EL -17 to EL -25. The contractor may use jetting or another method to remove the silt. The amount of silt is unknown. Some areas are estimated to have 2-ft of silt and others do not have any. It is estimated that 1-ft of thick silt with an area of about 750 sq ft (total for all 7 pumps) would be removed for a total of 28 CY of material. It is possible to turn on the existing pumps for about an hour and that quantity would probably be cut in half.

We are hoping to have a signed Finding of No Significant Impact next week. Please let me know if you will have recommendations under the Coordination Act Report.

Thanks,

Debbie Wright

Outdoor Recreation Planner

RPEDS, CEMVN-PDN-NCR

(504) 862-1732

debra.a.wright@usace.army.mil

Classification: UNCLASSIFIED

Caveats: NONE

From: Elizabeth Johnson (DEQ) [Elizabeth.Johnson@LA.GOV]
Sent: Monday, July 28, 2014 7:24 AM
To: Wright, Debra A MVN
Subject: [EXTERNAL] RE: Harvey Sector Gate Pump Station Supplemental EA 306c/WQC 080825-02/AI 160206/CER 20080001 (UNCLASSIFIED)

Debbie,

I apologize as I thought I had responded.

There is not expected to be any water quality issue related to the silt removal. Therefore, Water Quality Certification 080825-02 will not require modification.

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

From: Wright, Debra A MVN [mailto:Debra.A.Wright@usace.army.mil]
Sent: Friday, July 25, 2014 11:33 AM
To: Elizabeth Johnson (DEQ)
Cc: Stiles, Sandra E MVN
Subject: FW: Harvey Sector Gate Pump Station Supplemental EA 306c/WQC 080825-02/AI 160206/CER 20080001 (UNCLASSIFIED)
Importance: High

Classification: UNCLASSIFIED

Caveats: NONE

Elizabeth,

I apologize for the urgency in this matter, but this project is on the fast track for the Colonial's signature. I hate to do this to you, but I will need to assume that no modification is needed for the existing Water Quality Certificate if I do not receive a response by Monday morning, July 28. Again, I am sorry, but I have been asked to have a signed FONSI next week. Please contact me as soon as possible if there are water quality issues.

Thanks,

Debbie Wright

Outdoor Recreation Planner

RPEDS, CEMVN-PDN-NCR

(504) 862-1732

debra.a.wright@usace.army.mil

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

From: Wright, Debra A MVN

Sent: Tuesday, July 22, 2014 12:40 PM

To: 'Elizabeth.Johnson@LA.gov'

Cc: Stiles, Sandra E MVN

Subject: Harvey Sector Gate Pump Station Supplemental EA 306c/WQC 080825-02/AI

160206/CER 20080001 (UNCLASSIFIED)

Importance: High

Classification: UNCLASSIFIED

Caveats: NONE

Elizabeth,

I have recently been assigned to this project. Trish Leroux from our office previously contacted you about the Water Quality Certificate (WQC). Attached is the previous correspondence. When we initially contacted you, we were unaware that the proposed action includes the possibility of jetting of silt material off of a concrete platform associated with the intake pump. Please review the following addition to the proposed action and determine whether a modification to the WQC is needed.

Silt would be removed from an 8-ft thick slab from about EL -17 to EL -25. The contractor may use jetting or another method to remove the silt. The amount of silt is unknown. Some areas are estimated to have 2-ft of silt and others do not have any. It is estimated that 1-ft of thick silt with an area of about 750 sq ft (total for all 7 pumps) would be removed for a total of 28 CY of material. It is possible to turn on the existing pumps for about an hour and that quantity would probably be cut in half.

We are hoping to have a signed Finding of No Significant Impact next week. Do you believe this Water Quality Certification needs to be updated or is adequate for the changes as there are no additional impacts?

Debbie Wright

Outdoor Recreation Planner

RPEDS, CEMVN-PDN-NCR

(504) 862-1732

debra.a.wright@usace.army.mil

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

BOBBY JINDAL
GOVERNOR



STEPHEN CHUSTZ
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

August 1, 2014

Debra Wright
CEMVN-PDN-NCR
Corps of Engineers- New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

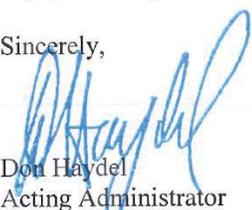
RE: C20080483 mod 05, Coastal Zone Consistency
New Orleans District, Corps of Engineers
Direct Federal Action
Jetting to remove sediment accumulation on a concrete platform at the Harvey Canal
Pump Station, associated with IER 12
Jefferson Parish, Louisiana

Dear Ms. Wright:

This office has received the above referenced negative consistency determination, in accordance with Section 307(c) of the Federal Coastal Zone Management Act of 1972, as amended. After careful review we have determined that the project does not demonstrate any reasonably foreseeable effects on coastal uses or resources. Therefore we concur with your negative determination, as described by NOAA regulations on federal consistency at 15 CFR §930.35.

Please refer to the above Consistency number when corresponding on this matter. If you have any questions please call Jeff Harris of the Consistency Section at (225) 342-7949.

Sincerely,



Don Haydel
Acting Administrator
Interagency Affairs/Field Services Division

DH/jdh

cc: Dave Butler, LDWF
Frank Cole, OCM

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