



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVE
NEW ORLEANS LA 70118-3651

REPLY TO
ATTENTION OF

Regional Planning and Environment
Division South
Environmental Planning Branch

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

NOV-NF-W-05a.1 – LA REUSSITE TO MYRTLE GROVE LEVEE PLAQUEMINES PARISH, LOUISIANA SEA #565

Description of the Proposed Action (Recommended Plan): The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has prepared a Supplemental Environmental Assessment (SEA) (NOV-NF-W-05a.1) SEA #565 for New Orleans District (MVN) to evaluate potential impacts associated with proposed modifications to the New Orleans to Venice Non-Federal Levees (NFL). The proposed project includes the realignment of the existing drainage canal and construction of three new floodwalls, a drainage structure, and a 6.3 mile long levee spanning from La Reussite to Myrtle Grove in Plaquemines Parish.

The impacts caused by NFL NOV projects were first assessed in "*Final Environmental Impact Statement New Orleans to Venice, Louisiana Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude, Plaquemines Parish, Louisiana*", and then supplemented by "*Supplemental Environmental Assessment #537 New Orleans To Venice Hurricane Risk Reduction Project: Changes To The Non-Federal Levees Project, Oakville To St. Jude, Plaquemines Parish, Louisiana*" with a FONSI signed March 25, 2016 and "*Environmental Assessment #543 New Right of Way and Mitigation For The New Orleans To Venice Hurricane Risk Reduction Project: Incorporation Of Non-Federal Levees From Oakville To St. Jude And New Orleans To Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana*" FONSI signed December 12, 2017. The SEA #537 and EA #543 are hereby incorporated into this document by reference. SEA #537 and EA #543 are being supplemented by this SEA "*NOV-NF-W-05a.1- La Reussite To Myrtle Grove Levee Plaquemines Parish, Louisiana SEA #565*".

proposed action represents the least environmentally damaging alternative to accomplish the needed risk reduction system modifications.

Clean Air Act of 1970: The Clean Air Act (CAA) sets goals and standards for the quality and purity of air. It requires the Environmental Protection Agency to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The proposed action project area is located in Plaquemines Parish which is currently in attainment of NAAQS. The Louisiana Department of Environmental Quality is not required by the CAA and Louisiana Administrative Code, Title 33 to grant a general conformity determination.

Clean Water Act Section 404(b)(1): A Clean Water Act Section 404(b)(1) evaluation and public notice were signed and mailed out for public and agency review and comment on March 4, 2019. The 404(b)(1) evaluation is in Appendix F of SEA #565.

Clean Water Act Section 401: Coordination with the Louisiana Department of Environmental Quality on October 30, 2018 determined that the State Water Quality Certification WQC 110520-01 issued on January 7, 2016 for EA #537 and EA #543 is still valid for the proposed action (Appendix B).

Coastal Zone Consistency: In accordance with Section 307, a Consistency Determination was prepared for the previously approved Project and was coordinated with the Louisiana Department of Natural Resources (LADNR) in a letter dated May 24, 2017. LADNR concurred by letter dated August 22, 2017 with the determination that the previously approved action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program; Consistency (*CZD C20100384 mod 11*). A modification to that consistency determination was prepared and submitted to LADNR on Oct 26, 2018 (Appendix B). *C20100384 Mod 12*, Consistency was received on December 13, 2018.

Endangered Species Act: The Endangered Species Act (ESA) is designed to protect and recover threatened and endangered (T&E) species. There are no known T&E species in the project area aside from the American alligator, which does not require Section 7 consultation because it is classified as "threatened due to similarity of appearance," and therefore coordination under the ESA is not necessary.

Fish and Wildlife Coordination Act: The Fish and Wildlife Coordination Act (FWCA) provides authority for the USFWS involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It requires that fish and wildlife resources receive equal consideration to other project features. It requires Federal agencies that construct, license or permit water resource development projects to first consult with the USFWS, NMFS and state resource agencies regarding the impacts on fish and wildlife resources and measures to mitigate these impacts. Section 2(b) requires the USFWS to produce a Coordination Act Report (FWCAR) that details existing fish and

birds from nesting within the aforementioned buffer zones of the Project footprint in order to avoid adverse impacts to these species. If a nesting prevention plan is necessary, it would be prepared in coordination with USFWS.

Bald and Golden Eagle Act

The Project area is known to support bald eagles. Based on review of existing data, site visits, and with the use of USFWS guidelines, CEMVN finds that implementation of the Proposed Action would have no effect on bald eagles. USFWS and USACE biologists will survey the proposed project area before construction to confirm no nesting activity as suitable habitat and the potential for nesting exist within the Project area. If active nesting exists within 660 feet of construction activities, CEMVN would coordinate with USFWS to develop avoidance measures. A permit under 50 CFR 22.26 or 22.27 will be required if the project cannot minimize or prevent disturbance of bald eagles.

National Historic Preservation Act: Section 106 of the National Historic Preservation Act of 1966, as amended, requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The procedures in 36 CFR Part 800 define how Federal agencies meet these statutory responsibilities. The Section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, including the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) and any Tribe that attaches religious or cultural significance to historic properties that may be affected by an undertaking. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. A finding of no historic properties affected was coordinated for the previous projects as presented in EA #537 and EA #543, with letters dated January 15, 2016 and August 15, 2017 respectively, to the SHPO, and responses dated February 15, 2016 and September 1, 2017. In a letter dated November 26, 2018, SHPO concurred that the actions of this Supplemental EA #565 are determined as having no additional potential to cause effect to any potential cultural resources (Appendix B).

Tribal Consultation:

NEPA, Section 106 of the National Historic Preservation Act, EO 13175 (Consultation and Coordination with Indian Tribal Governments), the American Indian Religious Freedom Act, and related statutes and policies have a consultation component. In accordance with CEMVN's responsibilities under NEPA, Section 106, and EO 13175, CEMVN offered the following federally-recognized Indian Tribes the opportunity to review and comment on the potential of the proposed action to significantly affect protected tribal resources, tribal rights, or Indian lands: Alabama-Coushatta Tribe of Texas, Caddo Nation


DECISION: The recommended plan would directly impact approximately 7 acres (2.3 AAHUs) of wet pasture. Details of these impacts and the mitigation plan were described in Environmental Assessment #543 which was developed to address mitigation for wetland impacts of the New Orleans to Venice and Non-Federal Levees projects as a large scale mitigation plan. EA #543 was signed on December 12, 2017.

Implementation of the recommended plan would result in minimal and insignificant loss of prime farmland soils as a result of levee and canal construction and related activities. The loss of soils resulting from levee and canal construction would not be significant to agricultural production locally or regionally, as those soils are not currently under cultivation.

I have reviewed the SEA #565 and have considered public and agency comments and recommendations. Based on the assessment conducted in SEA #565 which is attached hereto and made a part hereof, and the implementation of the environmental design commitments listed above, I have determined that the recommended plan would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

The plan is justified and in accordance with environmental statutes. It is in the public interest to implement the Proposed Action in Final SEA #565.

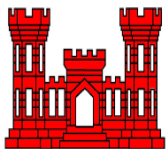
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MICHAEL N. CLANCY
COLONEL, U.S. ARMY
DISTRICT COMMANDER

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

NOV-NF-W-05a.1 – LA REUSSITE TO MYRTLE GROVE LEVEE PLAQUEMINES PARISH, LOUISIANA

SEA #565



**U.S. Army Corps of Engineers
Mississippi Valley Division
Regional Planning and Environment Division South
New Orleans District**

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1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has prepared this Supplemental Environmental Assessment (SEA) for New Orleans District (MVN) to evaluate potential impacts associated with proposed modifications to the New Orleans to Venice Non-Federal Levees (NFL). The proposed project, NOV-NF-W-05a.1, includes the realignment of the existing drainage canal and construction of three new floodwalls, a drainage structure, and a 6.3 mile long levee spanning from La Reussite to Myrtle Grove in Plaquemines Parish.

This SEA has been prepared in accordance with the National Environmental Policy Act of 1969 and the Council on Environmental Quality's Regulations (40 CFR 1500-1508), as reflected in the USACE Engineering Regulation 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 (CEMVN) to make an informed decision on the appropriateness of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

The NFL project was documented and assessed in the Final Environmental Impact Statement (FEIS) titled *"Final Environmental Impact Statement New Orleans to Venice, Louisiana Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude, Plaquemines Parish, Louisiana"* (NOV-NFL 2011) with a Record of Decision (ROD) signed October 31, 2011. The original design features, environmental impacts, and mitigation requirements as defined in the FEIS were supplemented by SEA #537, EA #543 and this SEA. The FEIS, SEA #537 and EA #543 are hereby incorporated into this document reference.

The SEA #537 authorized project includes additional work areas identified outside of the original project right-of-way (ROW) consisting of changes to the levee and floodwall alignments; additional access corridors, ramps, staging areas, and other temporary work easements; changes to the level of risk reduction (LORR) from the 50-year (2%) to the 25-year (4%) in several portions of the NFL; improvements to and enlargement of an existing drainage canal; and the construction of an earthen levee across the Jefferson Lake Canal Marina.

The EA #543 authorized project includes modifications to the ROW and impacts associated with completing compensatory mitigation for the impacts that would be incurred from construction of the NFL NOV.

This SEA #565 is supplementing all three of the previously mentioned documents. It supplements the FEIS as the No Action as described in that document; SEA #537 as it modifies the alignment approved with that project; and EA #543 as it reduces the mitigation needs discussed in that document.

The NOV-NF-W-05a.1 project, as described in this SEA, consists of the realignment and construction of approximately 6.3 miles of levee and the associated drainage canal,

construction of three new floodwalls, a drainage structure and all associated features along the west bank of the Mississippi River. Authorization was granted for incorporation of replacements and modifications into the New Orleans to Venice Federal project after the NFL received extensive damage from Hurricanes Katrina and Rita.

The NFL system is operated and maintained by private landowners and the Plaquemines Parish Government (PPG), as the governing authority of the Plaquemines Parish West Bank Levee District (PPWBLD). The PPWBLD is also responsible for some of the pump stations, floodgates, control structures, canals, and a number of freshwater siphons within the Plaquemines Parish protected area.

1.1 Proposed Action

The proposed NOV-NF-W-05a.1 project consists of the realignment of the existing drainage canal and construction of three new floodwalls, a drainage structure, and a 6.3 mile long levee spanning from La Reussite to Myrtle Grove in Plaquemines Parish (See Figure 3). The proposed construction would also consist of associated project features, such as access ramps, canal crossings, and culverts. Earthen material to be used for construction would come from an approved contractor furnished borrow site. The newly proposed levee alignment would provide better underlying foundation conditions for construction of the levee, result in a shorter overall levee length which would reduce the overall construction duration and cost, and reduce the real estate interest to be acquired for construction. The proposed levee alignment would impact approximately seven acres of wet pasture due to construction activities as part of the new levee alignment. See Section 2.1 for the detailed project description.

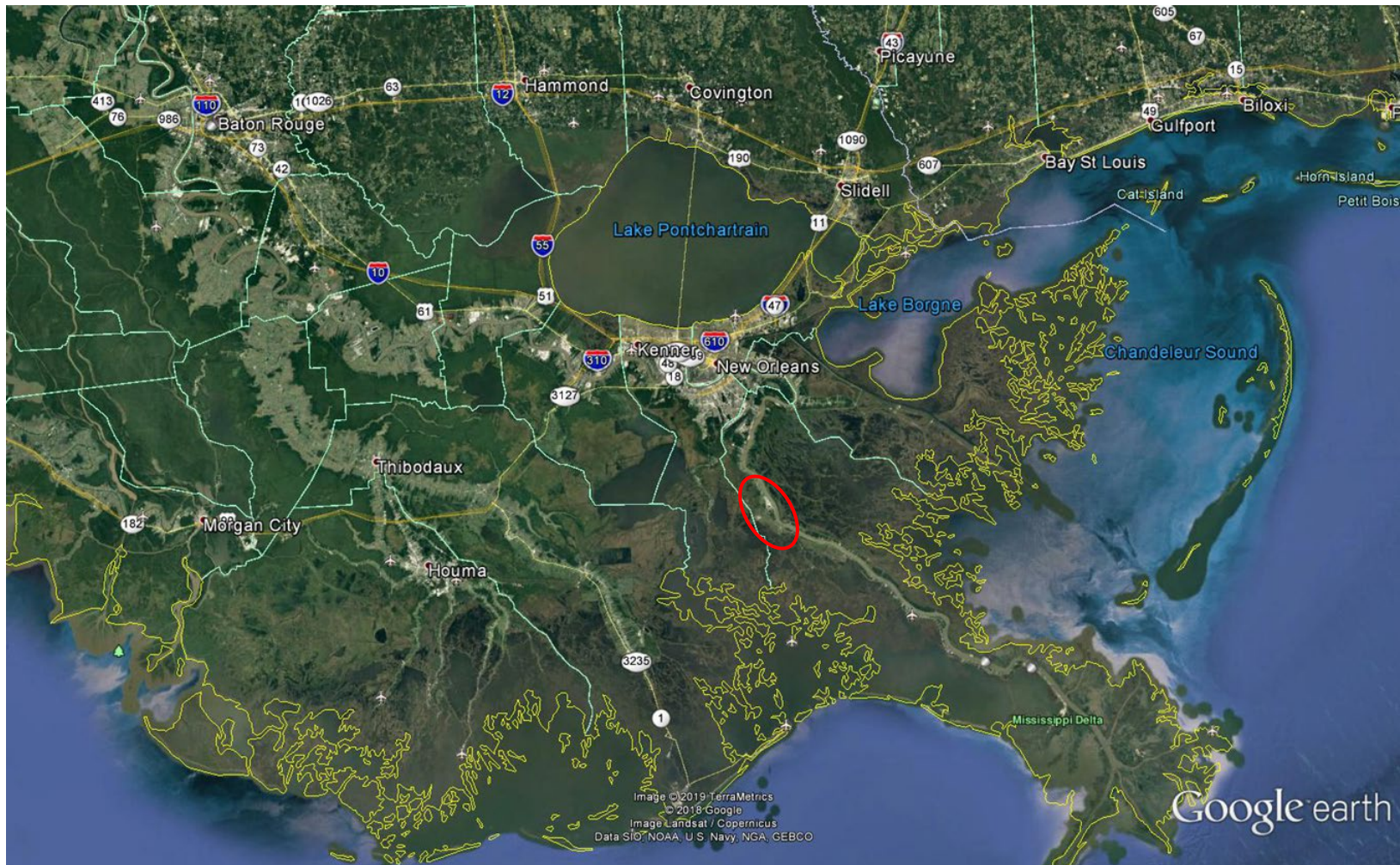


Figure 1: Project Location



Figure 2: Project Site

1.2 Authority

Congress approved a series of supplemental appropriations acts following Hurricanes Katrina and Rita to repair or improve federal and non-federal hurricane and storm damage reduction and flood damage reduction projects and related works in the affected area. USACE, New Orleans and Vicksburg Districts, conducted the study described in this document under the authorities described below.

Under these authorities, a total of \$671,000,000 was allocated for construction at full federal expense to replace or modify the NFL on the west bank in Plaquemines Parish from Oakville to St. Jude, and to incorporate the levees into the federal levee system for the purpose of providing enhanced storm surge risk reduction and protection of the evacuation route. The New Orleans to Venice, Louisiana Project is originally authorized in section 203, Title II, Flood Control, Lower Mississippi River Basin, P.L. 87-874, and was previously named “Mississippi River Delta At and Below New Orleans, Louisiana.”

The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery of 2006 (4th Supplemental - Public Law 109-234, Title II, Chapter 3, Flood Control and Coastal Emergencies [120 STAT. 454-455]) provides:

“For an additional amount for ‘Flood Control and Coastal Emergencies’, as authorized by section 5 of the Act of August 18, 1941 (33 U.S.C. 701n), for necessary expenses relating to the consequences of Hurricane Katrina and other hurricanes, \$3,145,024,000, to remain available until expended:

Provided, that the Secretary of the Army is directed to use the funds appropriated under this heading to modify, at full Federal expense, authorized projects in southeast Louisiana to provide hurricane and storm damage reduction and flood damage reduction in the greater New Orleans and surrounding areas; “. . . \$215,000,000 shall be used to replace or modify certain non- Federal levees in Plaquemines Parish to incorporate the levees into the existing New Orleans to Venice hurricane protection project;”

The Flood Control and Coastal Emergencies Section of Title II, Chapter 3, of the Joint Explanatory Statement of the Committee of Conference, page 115, states: “Funds totaling \$3,145,024,000 are recommended to continue repairs to flood and storm damage reduction projects . . . These projects are to be funded at full Federal expense . . . Additionally, the Conferees include: . . . \$215,000,000 for incorporation of non-Federal levees on the west bank of the Mississippi River in Plaquemines Parish in order to provide improved storm surge protection and to protect evacuations routes”

The U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (5th Supplemental - Public Law 110-28, Title IV, Chapter 3, Flood Control and Coastal Emergencies [121 STAT. 153-154]) provides: “For an additional amount for ‘Flood Control and Coastal Emergencies’, as authorized by Section 5 of the Act of August 18, 1941 (33 U.S.C. 701n), for

necessary expenses relating to the consequences of Hurricanes Katrina and Rita and for other purposes, \$1,407,700,000, to remain available until expended. . .”

The Secretary of the Army is . . . to prosecute these projects in a manner which promotes the goal of continuing work at an optimal pace, while maximizing, to the greatest extent practicable, levels of protection to reduce the risk of storm damage to people and property”

The Act Making Appropriations for Military Construction, the Department of Veterans Affairs, and Related Agencies for the Fiscal Year Ending September 30, 2008, and For Other Purposes (6th Supplemental – Public Law 110-252, Title III, Chapter 3, Flood Control and Coastal Emergencies [122 STAT. 2349-2350]) provides: “For an additional amount for ‘Flood Control and Coastal Emergencies,’ as authorized by Section 5 of the Act of August 18, 1941 (33 U.S.C. 701n), for necessary expenses relating to the consequences of Hurricane Katrina and other hurricanes of the 2005 season, \$2,926,000,000, to become available on October 1, 2008, and to remain available until expended: *Provided*, That funds provided herein shall be used to reduce the risk of hurricane and storm damages to the greater New Orleans metropolitan area, at full Federal expense, for the following: . . . *\$456,000,000 shall be used to replace or modify certain non-Federal levees in Plaquemines Parish to incorporate the levees into the existing New Orleans to Venice hurricane protection project*”

1.3 Purpose and Need for the Proposed Action

On August 29, 2005, Hurricane Katrina caused major damage to the federal and non-federal flood control projects in southeast Louisiana. Hurricane Rita followed this storm on September 24, 2005, made landfall on the Louisiana –Texas state border, and also caused damage to federal and non-federal flood control projects in southern Louisiana. Subsequent to the storms, the USACE, working with state and local officials, undertook emergency repairs to federal and non-federal flood control projects and related works in the affected area.

The existing back levee was constructed with non-federal funds on the west side of the Mississippi River to provide hurricane flood risk reduction to the communities from Oakville to St. Jude. The levee has settled and degraded to various degrees, with the northern portion in better condition and at higher elevations than the southern portion. The average grade elevations of the existing levee varies from approximately eight feet on the northern end to approximately three feet in some NFL Sections on the southern end. Because the grade elevation varies by as much as five feet and recent hurricanes have further degraded certain sections, the current level of risk reduction is of low reliability.

The NFL, as previously noted, has received only emergency repairs from hurricane related damages. This condition exposes residents and businesses in several west bank communities and the hurricane evacuations route (Louisiana Highway 23 (LA23)), to a higher potential for flooding in the event of a storm or hurricane. The majority of the existing NFL is below the authorized 50-year level of risk reduction (2% LORR). This

hurricane deficiency creates a 64 percent chance that homes would be inundated during a hurricane event that produces a 50-year flood level.

The adjacent levee reaches (Sections 1 and 3 of the FEIS) that fall within the NOV NFL project area have already been improved to offer increased levels of storm risk reduction within the study area. The NOV-NF-W-05a.1 reach has yet to be improved and therefore is a weak spot in the system. This proposed project would provide increased storm risk reduction within the area by properly incorporating this reach into the previously improved levee system.

1.4 Prior NEPA Documents

Information and data on previous and existing floodwall and levee conditions associated with the proposed action were derived from the following reports and are incorporated herein by reference:

1974, *Final EIS, New Orleans to Venice, Louisiana, Hurricane Protection, U.S. Army Engineer District, New Orleans*. This document discussed the enlargement of the west bank back levee from City Price to Venice (Reaches A, B1, and B2) and construction of a new levee from Phoenix to Bohemia on the east bank of the Mississippi River (Reach C). Barrier levees from Bohemia to 10 miles Above Head of Passes (AHP) on the east bank and Fort Jackson to Venice on the west bank were also discussed in the EIS. The ROD was signed on December 9, 1974.

1985, *Final Supplement I to the EIS, New Orleans to Venice Hurricane Protection Project*. This document discussed the deficiencies of the 1974 Final EIS and also the enlargement of the locally constructed west bank back levee from City Price to Venice, Reaches A (City Price to Tropical Bend), B1 (Tropical Bend to Fort Jackson), and B2 (Fort Jackson to Venice). The ROD was signed on June 27, 1985.

1985, *Mitigation Report, New Orleans to Venice Hurricane Protection Project*. This document discussed the mitigation for the levees from Tropical Bend to Venice – Reaches B1 and B2. This mitigation was accomplished with the creation of 300 acres of marsh in the Delta National Wildlife Refuge (NWR) by breaching the existing Main Pass bank resulting in accretion of marsh by natural deposition of sediments.

1987, *Final Supplement II to the EIS, New Orleans to Venice Hurricane Protection Project*. This document discussed additional impacts for the east bank (Reach C) and west bank Mississippi River Levee (MRL). The east bank barrier levee (1974 EIS, from Bohemia to 10 miles AHP) was dropped from further consideration. The ROD was signed on January 25, 1988.

2010, *Final SEIS, New Orleans to Venice (NOV SEIS), Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana*. This document discussed restoring, armoring, and accelerating completion of the NOV Federal levee system in Plaquemines Parish that would provide enhanced storm risk reduction. The ROD was signed on October 31, 2011.

2011, *Final EIS, New Orleans to Venice (NFL FEIS), Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude, Plaquemines Parish, Louisiana*. This document discussed the replacement or modification of the NFL system for incorporation into the NOV HPL in Plaquemines Parish. The Recommended Plan, Alternative C, included replacement or modification of 21 miles of existing nonfederal back levees on the west bank of the Mississippi River in Plaquemines Parish from Oakville to Citrus Lands (NFL Sections 1-3) for incorporation into the existing NOV federal levee system. The southern terminus of Section 3, at Myrtle Grove, was designed to turn 90 degrees to the east and tie into the existing MRL. Enhancement of Sections 1-3 of the NFL system included raising the levee to an authorized 2 percent design elevation, or approximately a 50-year LORR based on hurricane modeling techniques current at the time. The ROD was signed on October 31, 2011.

2012, *EA #508, New Orleans to Venice Hurricane Protection Project, West Bank River Levee, Staging Areas and Right-of-Way (ROW) Additions, Contracts P-14A and P-17A, Plaquemines Parish, Louisiana*. This document was prepared to evaluate the potential impacts associated with additional acreages for construction right-of-ways and staging areas for Contracts P-14a and P-17a, which are reaches located between the communities of Empire and Buras in Plaquemines Parish, Louisiana. The FONSI was signed on July 3, 2012.

2012, *EA #513, New Orleans to Venice Hurricane Protection Project, Federal Hurricane Protection Levee, Fronting Protection for Diamond and Ollie, Louisiana, Pump Stations Plaquemines Parish, Louisiana*. This document discussed the potential impacts of the expansion of construction right-of-way beyond the scope addressed in the NOV SEIS and NFL FEIS that were necessary to complete the fronting protection features at the Diamond and Ollie pump stations. The FONSI was signed on September 6, 2012.

2014, *EA #528, New Orleans to Venice Hurricane Protection Project, Federal Hurricane Protection Levee, Utilization of the Woodland North Borrow Area for Use at the Wilkinson Pump Station (Contract NF-05b), Plaquemines Parish, Louisiana*. This document discussed the utilization of the Woodlands North Borrow Area as a source of clay borrow material for use in construction of a new pump station, the levee tie-in features, and fronting protection features. The FONSI was signed on June 16, 2014.

2014, *EA #529, New Orleans to Venice Hurricane Protection Project, Federal Hurricane Protection Levee, Utilization of the Woodland North Borrow Area for Use on the Oakville to La Reussitte Levees, USACE Contract NF-04a (W912P8-13-C-0024), Plaquemines Parish, Louisiana*. This document discussed the utilization of the Woodlands North Borrow Area as a source of clay borrow material for modification of 8.2 miles of non-federal levees between Oakville and La Reussitte in Plaquemines Parish. The FONSI was signed on July 9, 2014.

2016, *SEA #537, New Orleans to Venice Hurricane Risk Reduction Project: Changes to the Non-Federal Levees Project, Oakville to St. Jude, Plaquemines Parish, Louisiana*. This document builds upon the 2011 NFL FEIS but reverts the NFL project design back to Alternative B with modifications related to additional project ROW as well as the

construction of an earthen levee across the Jefferson Lake Canal Marina, the relocation of a drainage canal and lateral ditches. The FONSI was signed on March 25, 2016.

2017, SEA #543, *New right of Way and Mitigation for the New Orleans to Venice Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude and New Orleans to Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana*. This project evaluates the potential impacts associated with proposed modifications to the right of way (ROW) of NFL NOV and the potential impacts associated with completing compensatory mitigation for the impacts that would be incurred from construction of the NFL NOV projects. The FONSI was signed on December 12, 2017.

1.5 Habitat Evaluation System

In order to assess wet pasture (formerly marsh or swamp soils that have been leveed and dewatered but still retain some wildlife value) the United States Fish and Wildlife Service (the Service) used the Corps' Habitat Evaluation System (HES 1980) for open lands to quantify impacts to that habitat type. The lack of fully suitable Habitat Evaluation Procedures (HEP) species models and time requirements for that analysis technique resulted in a mutual agreement that the HES community models would provide a better analysis of impacts to this habitat type.

HES uses functional curves for several variables to determine a Habitat Quality Index (HQI) or the value for the impacted area. Those variables include land use type, diversity of land use, distance to cover, distance to wooded areas, frequency of flooding, tract size, and the perimeter development index. Those variable values are entered into a formula that assigns a weight to each variable; those weighted values are then combined to produce the HQI for each target year. The HQIs are annualized over the period of analysis to produce Average Annual Habitat Units (AAHUs). A Geographic Information System (GIS) was used to determine variable values for diversity of land use, distance to cover and wooded areas, tract size and the perimeter development index. Site visits, aerial photography, soils maps, and water level gauge data (if available) were used to determine remaining variable values. Previous wet pasture impacts have been analyzed in other environmental documents, i.e., the Supplemental Environmental Impact Statement (SEIS) for the New Orleans to Venice, the EIS for the Plaquemine Non-Federal Levees (NFL) and Supplemental Environmental Assessment (SEA 537).

Because of time and work load constraints the Service utilized the latest AAHUs calculations for wet pasture in SEA 537 to determine a ratio needed to calculate AAHUs lost due to project changes in the NOV5a.1 levee segment. Approximately 7 acres of wet pasture were impacted by the project changes. In SEA 537 approximately 113.3 acres were impacted resulting in the loss of 36.9 AAHUs; that results in a ratio of 0.325 AAHUs lost per impacted acre. Using that ratio, the Service determined that from the proposed modification, approximately 2.3 AAHUs would be lost and would require mitigation.

2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Proposed Action Project Description

The previously approved alignment for NOV-NF-W-05a.1 in EA 537 was dismissed due to engineering considerations as well as other factors. The newly proposed levee alignment would provide better underlying foundation conditions for construction of the levee, result in a shorter overall levee length which would reduce the overall construction duration and cost, reduce the real estate interest to be acquired for construction and would minimize the overall impacts to the environment thus reducing the compensatory mitigation requirement. An integral part of this project is the maintenance of the existing lateral ditches connecting the proposed levee and the canal in order to encourage water drainage. The non-federal sponsor (NFS), Plaquemines Parish, has agreed to the responsibility for clearing, grubbing and re-grading the lateral ditches.

The levee would be constructed with compacted clay embankment from an approved contractor furnished borrow source. The levee, from start to finish, has eight different sections, which vary in elevation (from el 10.5 to el 14.0) and width (from 207 feet to 210 feet). Approximately 1,794,000 cubic yards of embankment would be used for construction of the levee and ramps. The ramps would be surfaced with a separator geotextile fabric and seven inches of crushed stone on top of the geotextile fabric. There would be eight ramps, which vary in width (from 14 feet to 25 feet). See Figure 3 for levee alignment and ramp locations.

There are 49 existing culverts within the existing lateral ditches that would be impacted by construction activities. These culverts would be replaced with 18-inch culverts and embankment to restore landowner access. The lateral ditches adjacent to the levee would be backfilled to match the existing grade of embankment within the 15-foot Vegetative Free Zone. This procedure would help prevent any additional ponding at the levee toe which could compromise the integrity of the levee.

The realignment of the drainage canal would run the length of the levee, totaling 6.3 miles. The canal would serve as storage for rainwater runoff while the pumps at the Wilkinson pump station are not running. The canal, from start to finish, would vary in width (from 80 feet to 113.78 feet) and depth (from el -7.0 to el -11.8). The estimated amount of material that would be excavated during construction of the new canal is approximately 53,000 cubic yards and would be used for backfilling the existing canal adjacent to the levee. The crossings and associated culverts would be constructed where the canal crosses existing access roads. Approximately 6,000 cubic yards of embankment would be used for construction of the canal crossings. The culvert requirements would vary throughout the alignment based on the canal width. The culverts would be placed on a bedding consisting of sand and crushed stone, with separator geotextile fabric separating the two layers. The culverts would include 12-inch thick stone scour protection at each end. The surface of the embankment would have separator geotextile fabric and crushed stone. See Figure 2 for canal alignment and crossing locations.

A Bypass Canal would be excavated to connect the existing back drainage canal to the new drainage structure and the Wilkinson Pump Station Canal. The eastern side of the bypass canal would connect to the Wilkinson Pump station Canal and the western side of the bypass canal would connect to the existing back drainage canal. The Bypass Canal would vary in width (from approximately 70 feet to 100 feet) and depth (from el. -11.42 to el. -11.73). Scour protection would be placed along the bends. The total length of the Bypass canal is 1,835 feet and excavation is estimated to generate 21,270 cubic yards of material. Suitable excavated material would be used for the levee construction and to backfill the existing canal and ditches adjacent to the levee.

A drainage structure consisting of four sluice gates and an associated floodwall would be constructed at the south end of the levee reach. The sluice gates would measure six feet by six feet each, with the entire drainage structure measuring 37 feet wide. The drainage structure would have a bottom base slab elevation of -14.5 NAVD88 and a top of wall elevation of 16.0 NAVD88. The sluice gates would be powered by a gas powered actuator, with a manual hand crank serving as a back-up. The drainage structure is designed to prevent storm surge from entering into the protected system during tropical and hurricane storm events. The sluice gates would remain open, except during storm events. To avoid additional flooding of Polder A, the protected side area inside of the proposed project (See Figure 5 of Appendix C for Polder locations), the maximum opening height of the gates should be two feet. With such a small opening, turbulence in the water column may increase the likelihood of scour. Therefore, scour protection would be needed in the vicinity of the gates. The scour protection would consist of approximately 2,100 square feet of riprap. The riprap would extend 20 feet on either side of the structure, and would be about 60 feet wide.

A floodwall would be constructed to tie the drainage structure into the earthen levee. The floodwall would consist of five monoliths on either side of the drainage structure, each spanning 190 feet, with a bottom of base slab elevation of -5 NAVD88 and a top of wall elevation at 16.0 NAVD88.

Two floodwalls would be constructed for the utility crossing areas, with one at the north reach and one at the south reach. The north floodwall utility crossing would contain seven t-wall monoliths, spanning 310 feet in length. The north floodwall would have two pipelines of the same size (six inches) running underneath the monoliths, with a bottom base slab elevation of -6.0 NAVD88 and a top of wall elevation of el 13.0 NAVD88. The south floodwall utility crossing would contain six t-wall monoliths spanning 294 feet in length. The south floodwall would have six pipelines of varying size (from 8 inches to 24 inches) running underneath the monoliths, with a bottom base slab elevation of -4.0 NAVD88 and a top of wall elevation of 14.0 NAVD88.

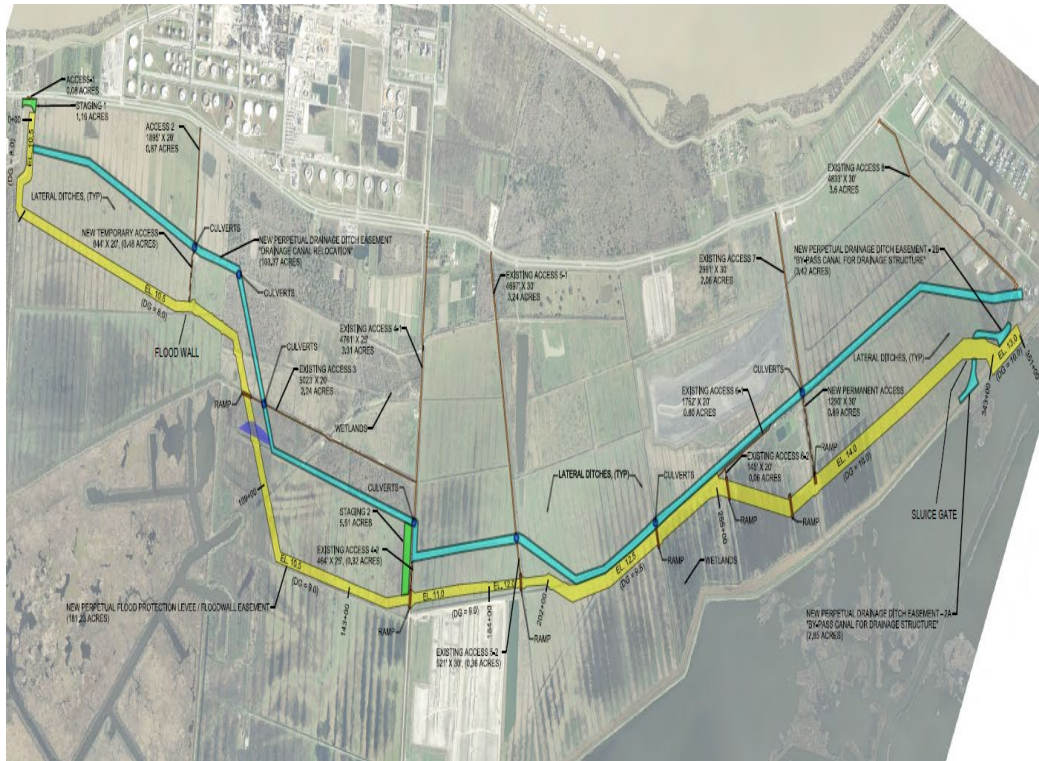
There are two existing staging areas that would be used for storage of equipment. The north staging area is listed as staging area 1, which consists of 1.16 acres near access road 1. The south staging area is listed as staging area two, which consists of 5.51 acres near the 100 foot buffer zone t-wall utility crossing. There are eight existing access roads throughout the length of the levee that would be used for hauling and repairs. See Figure 2 for locations of staging areas and access roads.

2.1.1 Operation and Maintenance

The sluice gates would be closed during a storm, but opened during non-storm conditions to allow drainage of the area between the old levee and new levee (Polder B). The goal of operating the gates is to drain Polder B quickly without overwhelming the pump-station and without increasing water levels in Polder A. According to the hydraulics and hydrology (H&H) model results, the maximum opening height that satisfies these conditions is approximately 2 feet. If the gate is fully open, the water level in Polder A increases roughly 4 feet, possibly increasing flooding in Polder A.

In addition to the activities necessary to construct these features, this proposed action includes all routine maintenance (e.g., mowing, inspections, re-paving, repairs to structures, in-kind replacements, and maintenance dredging) for both the local sponsor Operation Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) and USACE-related activities necessary to maintain the safety or integrity of the system.

OMRR&R would have minimal impact on the significant resources of the area. Activities would be conducted within the existing ROW and would be within previously disturbed areas. Temporary and localized construction-related effects (e.g., noise, emissions-air quality, temporary increase in traffic, etc.) could occur during OMRR&R.



Yellow - New Flood Protection Levee; Blue - New Drainage Ditch; Brown - Access Roads; Green - Staging

Figure 3: Project Features

2.2 No-Action Alternative (Future without Project (FWOP))

NEPA requires that in analyzing alternatives to a proposed action, a federal agency must consider an alternative of “No Action.” The No Action alternative evaluates the impacts associated with not implementing the proposed action and represents the Future without Project (FWOP) condition against which alternatives considered in detail are compared. The FWOP provides a baseline essential for impact assessment and alternative analysis.

This section presents the No Action Alternative which would be the same as the No Action Alternative as discussed in the Final Environmental Impact Statement *New Orleans to Venice, Louisiana Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude, Plaquemines Parish, Louisiana* signed October 31, 2011. The No Action Alternative consists of retaining and maintaining the existing NFL in its present form. This alternative is not expected to have any direct, long-term adverse effects on existing resources in the project area. However, the No-Action Alternative would result in the continued risk of the NFL overtopping in high-water events such as hurricane storm surge. A summary of the No Action Alternative for each resource is provided in the following section.

3 AFFECTED ENVIRONMENT

3.1 Description of the Project Area

3.1.1 Watershed

The proposed project is located on the west bank of the Mississippi River, within the East Central Louisiana Coastal Watershed, also known as the Barataria Basin watershed. A chain of barrier islands separates the Basin from the Gulf of Mexico. The southern half of the Basin consists of tidally influenced marshes connected to a large bay system behind the barrier islands.

3.1.2 Climate

The climate in the proposed project area is hot, humid, and subtropical. The climate is influenced by many water surfaces of the nearby wetlands, rivers, lakes, and the Gulf of Mexico. Throughout the year, these water areas modify relative humidity and temperature conditions, decreasing the range between the extremes. Summers are long and hot, with an average daily temperature of 82° Fahrenheit (°F), average daily maximum of 91°F, and high average humidity. Winters are influenced by cold, dry polar air masses moving southward from Canada, with an average daily temperature of 54°F and an average daily minimum of 44°F. Annual precipitation averages 54 inches.

3.1.3 Geology

The project area falls within the Central Gulf Coastal Plain. More specifically, the area is situated on the Deltaic Plain of the Mississippi River in a region of extremely low relief. Dominant physiographic features in the vicinity of the project area include the Gulf of Mexico, the Mississippi River and its natural levees and abandoned distributaries, and the marshlands and bodies of water that lie between the natural levees. The predominant soil types within the Woodland North borrow area consist of fat clays (CH) and lean clays

(CL) with some interbedded strata of organic clays (OH), silts (ML) and sands. None of the soil types within the proposed excavation area are listed as Prime and Unique Farmland.

3.2 Relevant Resources

Table 2 of this section contains a list of the relevant resources located in the project area of the NOV-NF-W-05a.1 and describes those resources that would be impacted, directly or indirectly, by construction. The following resources are not present in the project area and are therefore not discussed further in this document: Aesthetics, Essential Fish Habitat, Fisheries and aquatic resources, water quality, recreation and navigation.

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

Table 1: Relevant Resources and Their Institutional, Technical and Public Importance

Resource	Institutionally Important	Technically Important	Publicly Important
Wetlands	Clean Water Act of 1977, as amended; Executive Order 11990 of 1977, Protection of Wetlands; Coastal Zone Management Act of 1972, as amended; and the Estuary Protection Act of 1968., EO 11988, and Fish and Wildlife Coordination Act.	They provide necessary habitat for various species of plants, fish, and wildlife; they serve as ground water recharge areas; they provide storage areas for storm and flood waters; they serve as natural water filtration areas; they provide protection from wave action, erosion, and storm damage; and they provide various consumptive and non-consumptive recreational opportunities.	The high value the public places on the functions and values that wetlands provide. Environmental organizations and the public support the preservation of marshes.
Bottomland Hardwood Forest	Section 906 of the Water resources Development Act of 1986 and the Fish and Wildlife Coordination Act of 1958, as amended.	Provides necessary habitat for a variety of plant, fish, and wildlife species; it often provides a variety of wetland functions and values; it is an important source of lumber and other commercial forest products; and it provides various consumptive and non-consumptive recreational opportunities.	The high priority that the public places on its esthetic, recreational, and commercial value.
Aquatic Resources/ Fisheries	Fish and Wildlife Coordination Act of 1958, as amended; Clean Water Act of 1977, as amended; Coastal Zone Management Act of 1972, as amended; and the Estuary Protection Act of 1968.	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.
Soils and Water Bottoms	Fish and Wildlife Coordination Act, Marine Protection, Research, and Sanctuaries Act of 1990	State and Federal agencies recognize the value of water bottoms for the production of benthic organisms.	Environmental organizations and the public support the preservation of water quality and fishery resources.
Essential Fish Habitat (EFH)	Magnuson-Stevens Fishery Conservation and Management Act of 1996, Public Law 104-297	Federal and state agencies recognize the value of EFH. The Act states, EFH is "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."	Public places a high value on seafood and the recreational and commercial opportunities EFH provides.
Wildlife	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.
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, EPA, LDWF, and LDNR 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.

Resource	Institutionally Important	Technically Important	Publicly Important
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	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 and enhancement of historical resources.
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 the 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.
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 Rivers 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.
Air Quality	Clean Air Act of 1970, 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.
Water Quality	Clean Water Act of 1977, Fish and Wildlife Coordination Act, Coastal Zone Mgt Act of 1972, and Louisiana State & Local Coastal Resources Act of 1978.	USACE, USFWS, NMFS, NRCS, EPA, and State DNR and wildlife/fishery offices recognize value of fisheries and good water quality and 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.
Prime and unique Farmland	Farmland Protection Policy Act	State and Federal agencies recognize the value of farmland for the production of food, feed and forage.	Public places a high value on food and feed production.
Noise Quality	USACE ER 1105-2-100, and National Environmental Policy Act of 1969, Noise Control Act of 1972, Quiet Communities Act of 1978	Unwanted noise has an adverse effect on human beings and their environment, including land, structures, and domestic animals and can also disturb natural wildlife and ecological systems.	The EPA must promote an environment for all Americans free from noise that jeopardizes their health and welfare.
Socio-economics	USACE ER 1105-2-100, and National Environmental Policy Act of 1969	When an environmental document is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental document will discuss all of these effects on the human environment.	Government programs, policies and projects can cause potentially significant changes in many features of the socioeconomic environment.
Navigation	Rivers and Harbors Act of 1899 and River and Harbor Flood Control Act of 1970 (PL 91-611).	The Corps provides safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation.	Navigation concerns affect area economy and are of significant interest to community.

Table 2: Relevant Resources in the Project Area

Relevant Resource	Impacted	Not Impacted
Wetlands (Wet Pasture)	X	
Wildlife	X	
Threatened and Endangered Species		X
Air Quality		X
Cultural ¹		X
Socioeconomics	X	
Prime Farmlands	X	
Noise	X	
HTRW ²		X

¹Although not impacted, cultural resources are addressed to comply with the National Historic Preservation Act.

²Hazardous, Toxic, and Radioactive Waste. Although the area has been determined to have a low probability of containing HTRW, it is assessed in this document to comply with USACE policy.

3.2.1 Wetlands

Wetlands are semi-aquatic lands flooded or saturated with water for varying periods of time. For an area to be delineated as a wetland, it must exhibit appropriate hydrology, contain hydric soils, and support hydrophytic vegetation (USACE, 1987). The majority of the habitat within the immediate project area is considered wet pasture consisting of various species of grasses. Wet pasture, if left undisturbed, would transition to fresh marsh. Therefore, wet pasture impacts are being mitigated as fresh marsh impacts.

3.2.2 Wildlife

Wildlife that typically inhabits the project area includes a diverse assemblage of amphibians, reptiles, birds, and mammals such as frogs, turtles, alligators, snakes, colonial nesting wading birds, raptors, songbirds, ducks, nutria, deer, feral hogs, swamp rabbits, squirrels, raccoons, coyote and more. Because the majority of the project area is in agriculture or urban land cover, such areas provide relatively little quality habitat compared to the surrounding areas that are forested, scrub/shrub, or aquatic habitats.

3.2.3 Threatened, Endangered and other Protected Species

The national importance of endangered or threatened species is recognized by the Endangered Species Act of 1973, as amended and the Marine Mammal Protection Act of 1972. Endangered (E) or threatened (T) species are ecologically significant because the status of such species provides an indication of the overall health of an ecosystem. These species are publicly significant because of the desire of the public to protect them and their habitats.

Within the State of Louisiana there are 24 animal and three plant species (some with critical habitat) under the jurisdiction of the USFWS and/or the NMFS, presently classified as endangered or threatened. Of those 27 species, Table 3 identifies those that are known to occur in Plaquemines Parish. Other species that were listed on the Endangered Species List but have since been de-listed because population levels have improved are the Peregrine falcon, bald eagle and the brown pelican. Currently, American alligators

and shovelnose sturgeon are listed as threatened under the Similarity of Appearance clause in the Endangered Species Act (ESA) of 1973, as amended, and as such are not subject to ESA Section 7 consultation.

The Louisiana Natural Heritage Program (LNHP) of LDWF has developed lists and monitors the status of rare, threatened and endangered species, and natural communities for each parish of the state. The information includes state and global rank and state and Federal status for species and state and global rank for rare habitats. The species and habitats listed by the State of Louisiana may be found at <http://www.wlf.louisiana.gov/wildlife/species-parish-list>.

Of the federally listed species in Plaquemines Parish, only the American alligator and delisted bald eagle are known to inhabit the immediate project area. The immediate project area does not provide the appropriate habitat type for the remaining listed species.

Table 3: Federally Threatened (T) and Endangered (E) Species in Plaquemines Parish

Common Name	Scientific name	Federal Status	State Status
American Alligator	Alligator mississippiensis	T (S/A)	Not listed
Bald eagle	Haliaeetus leucocephalus	Delisted	E
Brown Pelican	Pelecanus occidentalis	Delisted	E
Pallid sturgeon	Scaphirynchus albus	E	E
Red Knot	Calidris canutus rufa	T	Not listed
Piping plover	Charadrius melodus	T	T/E
West Indian Manatee	Trichechus manatus	T	E

SOURCE: LDWF, 2008.

NOTE: S/A - Similarity of Appearance.

The American alligator is a secure species and not subject to Section 7 consultation. However, the Fish and Wildlife Service continues to protect the alligator under the ESA classification as "threatened due to similarity of appearance" to several listed species of crocodiles and caimans. The alligator is common in the project area.

The bald eagle was removed from the List of Endangered and Threatened Species in August 2007 but continues to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act of 1918, as amended (MBTA). Four bald eagle nests exist in close proximity to the project area but not within the USFWS declared buffer zone; three of the four were active in 2008 (FWS, 2009). Of the three visible nests, one produced two fledglings as late as April 2018 and the others had a pair of eagles that did not seem to produce eggs. The fourth nest is not visible from our ROW and is therefore undetermined. The closest known nest to the NOV-NF-W-05a.1 is over 10,000 feet away.

3.2.4 Air Quality

The U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards has set National Ambient Air Quality (NAAQS) Standards for six principal pollutants, called “criteria” pollutants. They are carbon monoxide, nitrogen dioxide, ozone, lead, particulates of 10 microns or less in size (PM-10 and PM-2.5), and sulfur dioxide. Ozone is the only parameter not directly emitted into the air but forms in the atmosphere when three atoms of oxygen are combined by a chemical reaction between oxides of nitrogen and volatile organic compounds in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents are some of the major sources of nitrogen and volatile organic compounds, also known as ozone precursors. Strong sunlight and hot weather can cause ground-level ozone to form in harmful concentrations in the air. The Clean Air Act General Conformity Rule (58 FR 63214, November 30, 1993, Final Rule, Determining Conformity of General Federal Actions to State or Federal Implementation Plans) dictates that a conformity review be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more National Ambient Air Quality Standards. A conformity assessment would require quantifying the direct and indirect emissions of criteria pollutants caused by the Federal action to determine whether the proposed action conforms to Clean Air Act requirements and any State Implementation Plan.

For Plaquemines Parish, all six parameters are currently in attainment of all NAAQS; therefore, no conformity review (under the Clean Air Act General Conformity Rule) is required for the proposed action because the project area is designated as an attainment area.

3.2.5 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended and codified in Title 54 of the United States Code; NEPA of 1969 (Public Law 91-190), as amended; and other applicable laws and regulations require Federal agencies to take into account the effects of their undertaking on the environment and any significant cultural resources within the project area of the proposed undertaking, as well as its area of potential effect (APE). Typically, these studies require archival searches and field surveys to identify any cultural resources. When significant sites are recorded, efforts are made to minimize adverse effects and preserve the site(s) in place. If any significant sites cannot be avoided and would be adversely impacted, an appropriate mitigation plan would be implemented to recover data that would be otherwise lost due to the undertaking.

Cultural resource investigations were conducted for the FEIS by New South Associates and URS from August, 2008 through September, 2009. These investigations involved a Phase I Archaeological Survey of proposed alignments and Phase II evaluative testing at several sites identified in the Phase I study. No significant sites were found within the current project area for NF05a.1.

The Louisiana State Historical Protection Office (SHPO) and consulting federally recognized Tribes were informed of the USACE finding of no adverse effect, as a result of the 2009 study, in a letter dated April 13, 2010. The SHPO concurred with USACE eligibility determinations and finding of no adverse effect in a letter dated May 11, 2010. Nine federally recognized Tribes were contacted during the consultation process; there were no objections to the USACE finding of no adverse effect.

In November and December 2014, and June 2015, additional cultural resources studies specifically for the PPG drainage canal relocation (SEA #537) were conducted. No previously undocumented cultural resources were identified within the project area during those investigations. A report detailing the findings of the cultural resources studies was submitted to the SHPO in January 2015 with an addendum to the report provided in May 2015. SHPO concurrence of no historic properties affected by these additional drainage canal surveys was received in letters dated January 30, 2015 and July 2, 2015.

In a letter dated January 15, 2016, to the SHPO, and January 22, 2016 to the federally-recognized Tribes, a conclusion of no historic properties affected was made for multiple areas of non-federal levee including the NF05a.1 project area. The conclusion of these letters was that, based upon personal observations and on the large swaths of completed cultural resources survey in the NFL area that had not located unknown cultural resources surveys, there was no historic or current data to suggest that unknown historic properties existed or would be affected.

The currently proposed project for NF05a.1 again makes slight adjustments to the alignment of levee and associated drainage canals. And again, USACE archaeologist Dr. Paul Hughbanks has reviewed the existing cultural resources survey data and made personal visit to the new proposed alignments. These shifts of alignment are not extensive, with much overlap to the previously coordinated portions. USACE has again concluded that no historic properties are affected by the current project, and coordination with SHPO and federally-recognized Tribes was completed November 26, 2018 (Appendix B).

3.2.6 Socioeconomics/Land Use, Environmental Justice, Transportation, Population and Housing, Business and Industry

3.2.6.1 Population and Housing

There is no population or housing within the boundaries of the realigned ROW of the levee and canal. The realigned ROWs are within Plaquemines Parish which has an estimated population of 23,599 (US Census Bureau, 2017).

Plaquemines Parish suffered significant damage from Hurricane Katrina. The population of Plaquemines Parish declined by nearly 4,000 people, or 14%, between the years 2000 and 2010. The Parish is still making efforts to rebuild (Plaquemines Parish, 2017). The population has recovered, but it is not yet back to its levels prior to Katrina.

3.2.6.2 Business and Industry

The Phillips 66 Alliance Refinery, built in 1971, is an oil and natural gas exploration and production company located along the Mississippi River just east of the proposed ROW alignment NOV-NFL-W-05a.1. The refinery processes mainly light, low-sulfur crude oil. Alliance receives domestic crude oil from the Gulf of Mexico by pipeline and U.S. tight oil by marine transport. The refinery can also receive foreign crude oil by pipeline connected to the Louisiana Offshore Oil Port. The refinery's facilities produce transportation fuels, such as gasoline, diesel fuel and jet fuel. According to their website, total employment at this refinery is 850, which includes on-site contractors.

The NOLA Oil terminal is proposed for construction just down river of the Alliance refinery. NOLA Oil is the first fully permitted major petrochemical facility in lower Plaquemines Parish since Alliance Refinery in 1971. NOLA Oil Terminal would be a five million barrel crude, heavy and finished oil blending and storage facility located at mile marker 59 on the Mississippi River.

Otherwise, seafood harvesting and exporting is one of the top employers of Plaquemines Parish residents, outside of Oil and Gas, Healthcare, and Education. The parish produces millions of pounds of shrimp, oysters, crabs, and fish every year (Plaquemines Parish, 2017).

3.2.6.3 Land Use

According to the USDA Census of Agriculture (2012), 18% of land in Plaquemines Parish was classified as farmland.

3.2.6.4 Environmental Justice

To characterize the environmental justice environment for NOV-NFL-W-05a.1, demographic data presented in Table 4 was collected from the 2013 American Community Survey (ACS) for Census Tract (CT) 504 and, more specifically, Census Tract 504, Block Group 1 (CT 504 BG 1). CT 504 extends geographically along the west bank of the Mississippi River from Belle Chasse to the Grand Terre Islands. BG 1 within CT 504 does not include the populated areas of Belle Chasse. CT 504 BG 1 does include Myrtle Grove and several smaller neighborhoods around the NOV-NFL-W-05a.1 new ROW project area. Table 4 compares the racial and ethnic characteristics of the populations in the vicinity of the proposed new alignment for NOV-NFL-W-05a.1 with those of the parish and state.

Table 4: Comparison of Racial and Ethnic Characteristics

		Louisiana	Plaquemines Parish	Census Tract 504	Block Group 1, Census Tract 504
Total Population		4,567,968	23,385	3,943	896
Hispanic or Latino		Total	202,145	1,239	14
		Percent	4.4%	5.3%	0.4%
Not Hispanic or Latino	White alone	Total	2,742,184	15,744	2,067
		Percent	60.0%	67.3%	52.4%
	Black or African American alone	Total	1,454,343	4,923	1,649
		Percent	31.8%	21.1%	41.8%
	American Indian and Alaska Native alone	Total	25,018	303	58
		Percent	0.5%	1.3%	1.5%
	Asian alone	Total	72,834	767	155
		Percent	1.6%	3.3%	3.9%
	Native Hawaiian and Other Pacific Islander alone	Total	1,939	-	-
		Percent	0.0%	0.0%	0.0%
Some other race alone	Total	6,891	20	-	
	Percent	0.2%	0.1%	0.0%	
Two or more races	Total	62,614	389	-	
	Percent	1.4%	1.7%	0.0%	

Source: American Community Survey 5-Year Estimates (2009-2013), Table B02001.

The populations within CT 504 BG 1 are estimated to be nearly 81 percent minority, twice the rate of the entire CT, and four times greater than the entire parish. As shown on Table 5, rates of poverty in Plaquemines Parish, CT 504, and CT 504 BG1 are much lower than the rate of poverty for the entire state.

Table 5: Rates of Poverty Compared

	Louisiana	Plaquemines Parish	Census Tract 504	Block Group 1, Census Tract 504
Total Households	1,717,852	8,615	1,363	240
Income in the past 12 months below the poverty level	313,990	1,243	135	12
Percent Below the poverty level	18.3%	14.4%	9.9%	5.0%

Source: American Community Survey 5-Year Estimates (2009-2013), Tables B17001, B17017.

3.2.6.5 Transportation

The west bank of the Mississippi River parallels LA Hwy 23 which connects New Orleans to the NOV-NFL project area communities and the communities of Port Sulphur, Empire, Buras, and Venice south of the project area. Additionally, the highway is critically important in the transport of residents for hurricane evacuation, as well as the transport of goods and services. The Union-Pacific Rail Company which operates a short spur as far south as the Conoco-Philips refinery, also provides important rail access to area industries.

3.2.7 Prime and Unique Farmlands

Farmland classification data provided by NRCS in September 2014 and updated in July 2015 determined that no unique farmland is located within the project area. Approximately 30.0 percent of the total project area acres are classified as prime farmland. Prime farmland within the project area consists of the following soil associations: Cancienne silt loam, Cancienne silty clay loam, and Schriever clay. The prime farmland in the project areas is dedicated to pasture and hay crops. No other agricultural activities are currently taking place.

3.2.8 Noise Quality

Sources of noise and vibration that have the potential to affect wildlife include human voices, aircraft, motorboats, automobile traffic, and heavy machinery and equipment. The study of animal response to noise is a function of many variables, including characteristics of the noise and duration, life history characteristics of the species, habitat type, season and current activity of the animal, sex and age, previous exposure, and whether there are other physical stressors. Responses vary among species of animals and birds and among individuals of a particular species.

Loud noise sources common to the project area are all-terrain vehicles, people's voices, recreational boating noise from outboard motors, and traffic on local streets and state highways. Because of the close proximity to the Mississippi River, commercial ship noises, tug boats and fleeting operations could also be sources of noise as well.

3.3 Hydrology

A hydraulic model (HEC-RAS) (Appendix C) was conducted to evaluate the potential for induced flooding between the existing non-federal levee and the proposed project; this area is considered Polder B. The area inside of the proposed project (protected side) is considered Polder A. See Figure 5 of Appendix C for Polder locations. RAS simulations were completed using the “with project” and “without project” geometries.

The existing 05a.1 interior drainage is handled by the new Wilkinson pump station. The new pump station is capable of removing approximately 1000 cubic feet per second (cfs) of water from the polder. An existing drainage ditch running along the back levee is approximately 100 feet wide with depths ranging from 6 to 8 feet. The main drainage ditch is fed by a complex network of agricultural ditches that drain the upper portions of the polder. The interior water surface elevation near the pump station is maintained by the pump station at approximately -6 feet NAVD88. The pump station is capable of removing volume associated with higher frequency two to five year precipitation events. The pump station may not be able to handle less frequent precipitation events (> 5YR) without an additional rise in the interior water surface elevation. The existing back levee has low spots that may overtop during a relatively minor storm surge event (3 to 5 feet NAVD88). During an overtopping event, it is likely the existing levee will be completely overwhelmed, flooding the interior polder completely.

3.4 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 update to ASTM 1527-05 Phase I Environmental Site Assessment was completed on January 11, 2019. The probability of encountering HTRW is low.

4 ENVIRONMENTAL CONSEQUENCES

In addition to the proposed alternative, this section presents the No Action Alternative which would be the same as the No Action Alternative as discussed in the *Final Environmental Impact Statement New Orleans to Venice, Louisiana Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude, Plaquemines Parish, Louisiana* signed October 31, 2011 (NOV-NFL 2011). This alternative is not expected to have any direct, long-term adverse effects on existing resources in the project area. A discussion for each resource is provided in the section below. For further detail please see aforementioned EIS.

4.1 Wetlands (Wet Pasture)

Future Conditions with No-Action

The No-Action Alternative would have no effect on wet pasture habitat in the area as no construction would take place. For further detail see NOV-NFL 2011.

Future Conditions with Proposed Action

As a result of the proposed action there would be a reduction in wet pasture impacts over the alignment cleared in EA 537. Construction of the new ditch and the levee would directly impact approximately seven acres of noncontiguous wet pasture. These impacts would require mitigation of 2.3 AAHUs which would be discussed in chapter 6. There are no anticipated indirect impacts to wet pasture.

4.2 Wildlife

Future Conditions with No-Action

The No-Action Alternative would have no effect on wildlife. For further detail see NOV-NFL 2011.

Future Conditions with the Proposed Action

Direct impacts to mammals or reptiles that inhabit the area would be the temporary relocation of these species to adjacent areas due to construction activities. Birds, including migratory birds, that might use adjacent marsh for resting, foraging, or loafing, could be temporarily displaced but would have ample alternative locations available for use. There are no anticipated indirect impacts to wildlife.

4.3 Threatened, Endangered and other Protected Species

Future Conditions with No-Action

The No-Action Alternative would have no effect on threatened, endangered or other protected species. For further detail see NOV-NFL 2011.

Future Conditions with the Proposed Action

The only federally listed species within the project area is the American alligator which does not require Section 7 consultation because it is classified as "threatened due to similarity of appearance." Therefore, no further T&E coordination under the ESA is required.

Through careful design of project features, timing of construction and the implementation of best management practices, adverse impacts to nesting bald eagles and/or wading bird nesting colonies would be avoided. No known eagle's nests or wading bird colonies exist within 1,000 feet of the proposed project activities. However, a qualified biologist would inspect the proposed worksite for the presence of undocumented nests during the nesting seasons (i.e., October through May for eagles and February 15 through September 1 for wading birds). To minimize disturbance to colonies containing nesting wading birds (if present) all activity occurring within 1,000 feet of a rookery would be restricted to the non-nesting period (i.e., September 1 through February 15, exact dates may vary within this window depending on species present). To minimize disturbance to nesting eagles (if present), all activities occurring within 660 feet of a nest would be restricted to non-nesting season (October through May).

4.4 Air Quality

Future Conditions with No-Action

The No-Action Alternative would not result in any impacts to air quality. For further detail see NOV-NFL 2011.

Future Conditions with the Proposed Action

Plaquemines Parish is classified as attainment for all of the (NAAQS). The attainment status for the parish is the result of area-wide air quality modeling studies. Direct impacts would include emissions from equipment and dump trucks associated with those activities. These impacts would contribute a temporary adverse effect to the overall air quality of the project area. While small to moderate emission sources are in evidence,

none constitute a major air emissions source. Thus, no Conformity Determination or other effort is required of the proposed action. There are no anticipated indirect impacts to air quality.

4.5 Cultural Resources

Future Conditions with No Action

The No-Action Alternative would not result in any impacts to historic properties. However, without a replaced or modified NFL system, identified historic properties under Section 106 would be at greater risk of damage from a storm event. For further detail see NOV-NFL 2011.

Future Conditions with the Proposed Action

Cultural resources surveys have been completed for the majority of the proposed action area. For areas that have not been previously surveyed, a site visit has observed no signatures of undiscovered cultural resources. The high percentage of area previously discussed by cultural resources surveys, and with no historic properties located by these surveys, leads USACE to conclude that no historic properties would be affected by the proposed action. This conclusion with SHPO and federally-recognized Tribes was completed November 26, 2018 (Appendix B).

4.6 Socioeconomics/Land Use, Environmental Justice, Transportation, Population and Housing, Business and Industry

Future Conditions with No-Action

The No-Action Alternative is not expected to have any direct, long-term adverse effects in the project area. However, no action would result in the continued risk of overtopping by hurricane storm surge. All resources in the project area would be subject to resulting damages or losses in the event of a levee breach. For further detail see NOV-NFL 2011.

Future Conditions with the Proposed Action

Construction of NOV-NF-W-05a.1 would have no direct impacts on population and housing near the project site. During the construction phase, Parish residents or those travelling along Highway 23 may experience temporary, minor, indirect impacts, such as large dump trucks, noise and dust. Indirect benefits include increased flood protection to homes and business in the area and to Highway 23. Implementation of the Proposed Action would enhance federal hurricane risk reduction in an area with existing lower level risk reduction.

Title VI of the Civil Rights Act (42 United States Code [USC] 2000) and EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations mandate that Federal agencies identify and address, as appropriate,

disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Socioeconomic and demographic data for the project vicinity were reviewed to determine whether the Proposed Action would have a disproportionately high and adverse impact on minority or low-income people.

NOV-NFL-W-05a.1 is located within Block Group 504.1 which stretches from LA Hwy 23 to the Levee Road. According to Census 2013 data, 81 percent of the population is minority while only 5 percent are low-income. The minority percentage is substantially higher than state or parish figures while the low-income percentage is substantially lower.

Implementation of the Proposed Action would enhance Federal hurricane risk reduction in an area with existing lower level risk reduction. The proposed project would provide 4% (25-year) Level of Risk Reduction. In the event that a storm with less than a 4% chance of happening every year (for instance a 1% storm) takes place, there is risk for overtopping of the proposed levee. In this case, socio-economic resources could be affected, including the facilities located along the river.

Implementation of the proposed alignment would benefit all residents of these areas alike. Direct adverse impacts from construction activities include temporary impacts to air quality, noise, and traffic. Indirect impacts from this action may include residential and commercial growth within the protected area due to increased flood risk reduction provided by the levee. The direct and indirect impacts of noise and other associated construction activities are not anticipated to exert disproportionately high indirect, adverse human health, and environmental impacts on minority and/or low-income communities.

LA Hwy 23 would be used to transport materials for construction of the levee alignment. West Ravenna and Windmill Roads and other access roads off of Highway 23 would most likely be used to access NOV-NFL-W-05a.1 all of which pass through agricultural lands, and no housing is located in the vicinity. Additionally, the number of trips expected for transport of borrow material for the levee construction is expected to have minimal direct and indirect impacts on traffic in the area.

4.7 Prime and Unique Farmlands

Future Conditions with No-Action

Without construction of the proposed action there would be no direct impact to the Prime and Unique Farmlands. For further detail see NOV-NFL 2011.

Future Conditions with the Proposed Action

Direct impacts include the loss of prime soils that are present within the levee and canal footprint. The loss of soils resulting from the construction NOV-NF-W-05a.1 would not be significant to agricultural production locally or regionally, as those soils are not currently under cultivation. The majority of the area that would be impacted by the construction of NOV-NF-W-05a.1 is currently dedicated to open pasture and hay crops, and those areas would remain available for those uses. No indirect impacts would occur to Prime Farmlands.

4.8 Noise

Future Conditions with No-Action

No adverse noise effects have been identified that would occur as a result of without project conditions. Ambient noise levels are likely to continue proportionate to community growth.

Future Conditions with the Proposed Action

The direct noise impacts to the project area would be localized and temporary and would likely be below the 115 dBA threshold established as the upper limit for unprotected hearing by the OSHA. Noise from construction equipment and other construction related activities would have a temporary impact on the residents of local communities. Noise from activities associated with the proposed action would likely be below upper limit thresholds as established by OSHA, and would be consistent with noise from other construction projects that are occurring in the area. While tolerance of unnatural disturbance varies among wildlife, the increase in noise levels during construction would likely result in various wildlife resources temporarily leaving or avoiding project area during construction activities. Any indirect impacts due to noise are expected to be localized, temporary, and minor in nature.

No adverse impacts related to NOV-NF-W-05a.1 have been identified with respect to noise. During construction, noise levels would be similar to other construction related projects and industrial uses occurring in the project area. No indirect impacts are expected.

4.9 Hydrology

Future Conditions with No-Action

Impacts to hydrology from the no action alternative would likely be the complete flooding of the entire interior polder as the pump station and existing drainage ditches and canal are not sufficient for handling waters due to precipitation events greater than the five year event.

Future Conditions with the Proposed Action

No direct impacts are expected to occur during construction. The hydraulic model shows that for storm surge events that overtop the existing back levee, a scenario is possible where Polder B would be completely inundated, requiring unwatering. If the sluice gates can be operated to drain Polder B, the area would still be subject to higher water levels for an extended period of time. HEC-RAS simulations of this overtopping scenario show it would take approximately one to three weeks to drain Polder B if all water is routed through the pump-station. See Appendix C for further details.

4.10 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. The proposed project area was previously included as part of a larger ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA) that was completed in July 2009. An update to ASTM 1527-05 Phase I Environmental Site Assessment was completed on January 11, 2019. The probability of encountering HTRW is low. A copy of the updated Phase 1 ESA is being maintained on file at the U.S. Army Corps of Engineers, New Orleans District Headquarters. 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.

5 CUMULATIVE IMPACTS ANALYSIS

The Council on Environmental Quality regulations (40 CFR §1500-1508) implementing the procedural provisions of 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 impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

Potential positive and negative impacts from the proposed project consist of impacts to wetlands (wet pasture), wildlife, threatened and endangered species, air quality, cultural resources, socioeconomics, noise quality, and prime and unique farmlands. Cumulative adverse impacts to wetlands, wildlife, air quality, socioeconomics, noise quality, and prime and unique farmland due to the inclusion of proposed action would likely be temporary or insignificant as the NOV-NF-W-05a.1 is such a small project. For example, temporarily displaced wildlife would return to their habitat post-construction, no major air emissions sources would be released, and only approximately seven acres of wet pasture would be impacted.

Additionally, cumulative impacts due to the proposed actions would be similar to the cumulative impacts discussed in SEA #537. In summary, other levee projects currently underway in Plaquemines Parish include the New Orleans to Venice and the West Bank

and Vicinity - Mississippi River Levee. Future work associated with these levee projects would include planned lifts, armoring, and other required repairs and maintenance to the levee systems. These future actions would contribute to short term temporary transportation, air quality and noise quality impacts, and combined would contribute cumulatively to the overall impact on the environment. See SEA #537 for further detail.

Overall, the proposed action would provide 4% (25-year) Level of Risk Reduction to the project area. Cumulative positive impacts of the proposed action would provide levee stability. The proposed action would improve a levee reach that would provide increased storm risk reduction within the Plaquemines Parish area by properly incorporating this reach into the previously improved levee system.

6 MITIGATION

An assessment of the potential environmental impacts to important resources found that the proposed project is expected to have only minimal and insignificant impacts to resources in the Project Area. These impacts would be mainly related to the loss of seven acres (2.3 AAHUs) of wet pasture due to construction activities as part of the proposed action. The selected mitigation project for wet pasture impacts, including the NOV-NF-W-05a.1 alignment, in EA #543 was the purchase of fresh marsh mitigation bank credits. Since the wet pasture impacts in NOV-NF-W-5a.1 alignment have been reduced and are within the total for this reach as addressed in EA #543, fresh marsh mitigation bank credits would be purchased for these impacts.

7 COORDINATION AND PUBLIC INVOLVEMENT

A Public Notice and Notice of Availability for SEA #565 was published in the Baton Rouge and New Orleans Advocate for 30 days beginning March 4, 2019 and ending April 3, 2019.

Preparation of this draft EA and FONSI is being coordinated with appropriate Congressional, federal, Tribal, state, and local interests, as well as environmental groups and other interested parties. The following agencies, as well as other interested parties, received copies of the draft EA and draft FONSI:

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
U.S. Coast Guard Sector New Orleans
U.S. Coast Guard Marine Safety Unit Baton Rouge
Maritime Navigation Safety Association
The Associated Branch (Bar) Pilots
Crescent River Port Pilots Association
New Orleans Baton Rouge Steamship Pilot Association
Associated Federal Pilots
Big River Coalition

Lower Mississippi River Committee (LOMRC)
Coastal Protection and Restoration Authority Board of Louisiana
Advisory Council on Historic Preservation
Governor's Executive Assistant for Coastal Activities
Louisiana Department of Wildlife and Fisheries
Louisiana Department of Natural Resources, Coastal Management Division
Louisiana Department of Natural Resources, Coastal Restoration Division
Louisiana Department of Environmental Quality
Louisiana State Historic Preservation Officer
Plaquemines Parish Government
Alabama-Coushatta Tribe of Texas
Caddo Nation of Oklahoma
Chitimacha Tribe of Louisiana
Choctaw Nation of Oklahoma
Coushatta Tribe of Louisiana
Mississippi Band of Choctaw Indians
Jena Band of Choctaw Indians
Seminole Tribe of Florida
Seminole Nation of Oklahoma
Tunica-Biloxi Tribe of Louisiana

7.1 Compliance with Environmental Laws and Regulations

There are many Federal and state laws pertaining to the enhancement, management and protection of the environment. Federal projects must comply with environmental laws, regulations, policies, rules and guidance. Compliance with laws will be accomplished upon 30-day public and agency review of this SEA #565 and associated Finding of No Significant Impact.

Executive Order (E.O.) 11988 Floodplain Management

Executive Order 11988 directs federal agencies to reduce flood loss risk; minimize flood impacts on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by flood plains. Agencies must consider alternatives to avoid adverse and incompatible development in the flood plain. If the only practical alternative requires action in the flood plain, agencies must design or modify their action to minimize adverse impacts. The proposed action represents the least environmentally damaging alternative to accomplish the needed risk reduction system modifications.

Clean Air Act of 1970

The Clean Air Act (CAA) sets goals and standards for the quality and purity of air. It requires the Environmental Protection Agency to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Project Area is in Plaquemines Parish, which is currently in attainment of NAAQS. The Louisiana Department of Environmental Quality is not required by the CAA and Louisiana Administrative Code, Title 33 to grant a general conformity determination.

Clean Water Act of 1972 – Section 401 and Section 404

The Clean Water Act (CWA) sets and maintains goals and standards for water quality and purity. Section 401 requires a Water Quality Certification from the Louisiana Department of Environmental Quality (LDEQ) that a proposed project does not violate established effluent limitations and water quality standards. Coordination with the Louisiana Department of Environmental Quality determined that the State Water Quality Certification WQC 110520-01 issued for EA #537 and EA #543 is still valid for the proposed action (Appendix B).

As required by Section 404(b)(1) of the Clean Water Act (CWA), an evaluation to assess the short- and long-term impacts associated with the discharge of dredged and fill materials into waters of the United States resulting from this Project has been completed (Appendix F). Section 404(b)(1) public notice was mailed out for public review comment period beginning *March 4, 2019* and ending *April 3, 2019*.

Coastal Zone Management Act of 1972

The Coastal Zone Management Act (CZMA) requires that "each federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs." In accordance with Section 307, a Consistency Determination was prepared for the previously approved Project and was coordinated with the Louisiana Department of Natural Resources (LADNR) in a letter dated *May 24, 2017*. LADNR concurred by letter dated *August 22, 2017* with the determination that the previously approved action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program; Consistency (CZD C20100384 mod 11). A modification to that consistency determination was prepared and submitted to LADNR on Oct 26, 2018 (Appendix B). C20100384 Mod 12, Consistency was received on December 13, 2018.

Endangered Species Act of 1973

The Endangered Species Act (ESA) is designed to protect and recover threatened and endangered (T&E) species of fish, wildlife and plants. The only federally listed species within the project area is the American alligator which does not require Section 7 consultation because it is only classified as "threatened due to similarity of appearance." There are no known T&E species in the project area and therefore Section 7 consultation under the ESA is not necessary.

Fish and Wildlife Coordination Act of 1934

The Fish and Wildlife Coordination Act (FWCA) provides authority for the USFWS involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It requires that fish and wildlife resources receive equal consideration to other project features. It requires Federal agencies that construct, license or permit water resource development projects to first consult with the USFWS, NMFS and state resource agencies regarding the impacts on fish and wildlife resources and measures to mitigate these impacts. Section 2(b) requires the USFWS to produce a Coordination Act Report (FWCAR) that details existing fish and wildlife resources in a

project area, potential impacts due to a proposed project and recommendations for a project. Coordination with the USFWS regarding a FWCAR is currently ongoing.

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. The proposed project area was previously included as part of a larger ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA) that was completed in July 2009. An update to ASTM 1527-05 Phase I Environmental Site Assessment was completed on January 11, 2019 and a copy of the updated Phase 1 ESA is being 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. 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.

Magnuson-Stevens Fisheries Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act, as amended, Public Law 104-208, addresses the authorized responsibilities for the protection of Essential Fish Habitat (EFH) by NMFS in association with regional fishery management councils. The NMFS has a “findings” with the CEMVN on the fulfillment of coordination requirements under provisions of the Magnuson-Stevens Fishery Conservation and Management Act. In those findings, the CEMVN and NMFS have agreed to complete EFH coordination requirements for federal civil works projects through the review and comment on National Environmental Policy Act documents prepared for those projects. There is no EFH within the project area and therefore CEMVN expects no effect to EFH.

Migratory Bird Treaty Act

The Project area is known to support colonial nesting wading/water birds (e.g., herons, egrets, ibis, night-herons and roseate spoonbills) and shorebirds (terns and gulls). Based on review of existing data, site visits, and with the use of USFWS guidelines, CEMVN finds that implementation of the Proposed Actions would have no effect on colonial nesting water/wading birds or shorebirds. USFWS and USACE biologists will survey the proposed project area before construction to confirm no nesting activity as suitable habitat and the potential for nesting exist within the Project area. If active nesting exists within 1,000 feet (water birds) or 1,300 feet (shorebirds) of construction activities then USACE, in coordination with USFWS, would develop specific measures to avoid adverse impacts to those species. A detailed nesting prevention plan may be necessary in order to deter birds from nesting within the aforementioned buffer zones of the Project footprint in order to avoid adverse impacts to these species. If a nesting prevention plan is necessary, it would be prepared in coordination with USFWS.

Bald and Golden Eagle Act

The Project area is known to support bald eagles. Based on review of existing data, site visits, and with the use of USFWS guidelines, CEMVN finds that implementation of the Proposed Actions would have no effect on bald eagles. USFWS and USACE biologists will survey the proposed project area before construction to confirm no nesting activity as suitable habitat and the potential for nesting exist within the Project area. If active nesting exists within 660 feet of construction activities, CEMVN would coordinate with USFWS to develop avoidance measures. A permit under 50 CFR 22.26 or 22.27 will be required if the project cannot minimize or prevent disturbance of bald eagles.

E.O. 12898 Environmental Justice

USACE is obligated under E.O. 12898 of 1994 and the Department of Defense's Strategy on Environmental Justice of 1995, which direct federal agencies to identify and address any disproportionately high adverse human health or environmental effects of federal actions to minority and/or low-income populations. Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, Pacific Islander, or some other race or a combination of two or more races. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations are those whose income is the Census Bureau's statistical poverty threshold for a family of four. The Census Bureau defines a "poverty area" as a census tract or block numbering area with 20 percent or more of its residents below the poverty threshold level and an "extreme poverty area" as one with 40 percent or more below the poverty threshold level. Because the population within the study area exceeds the threshold for being a minority population, environmental justice considerations were given additional evaluation in Section 4.6 and it was concluded that the proposed action would not have disproportionately high adverse human health or environmental effects. Instead, there would likely be beneficial effects resulting from enhanced hurricane risk reduction.

National Historic Preservation Act of 1966

Section 106 of the National Historic Preservation Act of 1966, as amended, requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The procedures in 36 CFR Part 800 define how Federal agencies meet these statutory responsibilities. The Section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, including the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) and any Tribe that attaches religious or cultural significance to historic properties that may be affected by an undertaking. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. A finding of no historic properties affected was coordinated for the previous projects as presented in SEA #537 and EA #543, with letters dated January 15, 2016 and August 15, 2017 respectively, to the SHPO, and responses dated February 15, 2016 and September 1, 2017. With a response letter dated November 26, 2018 SHPO coordination is complete (Appendix B).

Tribal Consultation

NEPA, Section 106 of the National Historic Preservation Act, EO 13175 (Consultation and Coordination with Indian Tribal Governments), the American Indian Religious Freedom Act, and related statutes and policies have a consultation component. In accordance with CEMVN's responsibilities under NEPA, Section 106, and EO 13175, CEMVN would offer the following federally-recognized Indian Tribes the opportunity to review and comment on the potential of the proposed action to significantly affect protected tribal resources, tribal rights, or Indian lands: Alabama-Coushatta Tribe of Texas, Caddo Nation of Oklahoma, Chitimacha Tribe of Louisiana, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and Tunica-Biloxi Tribe of Louisiana. On October 26, 2018 letters were mailed to the tribal leaders requesting input regarding the proposed action. A letter of concurrence was received from the Choctaw Nation of Oklahoma dated December 10, 2018. No other responses were received.

Prime and Unique Farmland

The Farmland Protection Policy Act of 1981 was enacted to minimize the extent that Federal programs contribute to the unnecessary and irreversible conversion of prime or unique farmland to non-agricultural uses. The USDA-NRCS is responsible for designating prime or unique farmland protected by the act. Prime farmland, as defined by the act, is land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops that is available for these uses. It can be cultivated land, pastureland, forestland, or other land, but is not urban or built-up land or water areas. Unique farmland is defined by the act as land other than prime farmland that is used for the production of specific high value food and fiber crops, such as citrus, tree nuts, olives, and vegetables. There are no unique farmlands in the project area and the loss of prime soils would be insignificant.

8 CONCLUSION

The proposed action would provide 4% (25-year) Level of Risk Reduction to the project area. CEMVN has assessed the environmental impacts of the proposed action on relevant resources. The project, as proposed, is expected to have temporary short term impacts to adjacent areas from construction noise; temporary transportation impacts from transporting of construction equipment and hauling of borrow materials to/from the construction site. The proposed action has only minimal impacts to wildlife, wetlands, air quality, prime and unique farmland, noise, and socioeconomics. There would be no impacts to cultural resources or threatened, endangered and other protected species.

The proposed action would directly impact approximately 7 acres (2.3 AAHUs) of wet pasture resulting from the relocation of the levee and drainage canal. This is a decrease in impacts from what was previously approved in EA #543. Details of this mitigation are described in EA #543.

This office has assessed the environmental impacts of the proposed action and has determined that the proposed action would have no significant adverse impact on the human and natural environment.

9 PREPARED BY

SEA #565 and the associated FONSI were prepared by Michael Morris, Biologist, U.S. Army Corps of Engineers, New Orleans District; Regional Division South, Environmental Planning Branch, MVN-PDS-C; 7400 Leake Avenue; New Orleans, Louisiana 70118

Table 6: List of Preparers and Team Members

Title/Topic	Team Member
Senior Environmental Manager Team Lead	Elizabeth Behrens, CEMVN
Environmental Manager, Lead	Tammy Gilmore, CEMVN
Environmental Manager	Michael Morris, CEMVN
Senior Project Manager	Kevin Wagner, CEMVN
Project Manager	Korey Clement, CEMVN
Cultural Resources	Paul Hughbanks, CEMVN
HTRW	Joseph Musso, CEMVN

10 REFERENCES

2016, SEA #537, New Orleans to Venice Hurricane Risk Reduction Project: Changes to the Non-Federal Levees Project, Oakville to St. Jude, Plaquemines Parish, Louisiana. With a signed FONSI dated March 25, 2016.

2016, SEA #543, New right of Way and Mitigation for the New Orleans to Venice Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oakville to St. Jude and New Orleans to Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana. With a signed FONSI dated December 12, 2017.