



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS, LOUISIANA 70118

Regional Planning and
Environment Division South
Environmental Planning Branch

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (570)

West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations St. Charles and St. John the Baptist Parishes, Louisiana

Description of the Proposed Action. The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, prepared Supplemental Environmental Assessment (SEA) 570 for the New Orleans District (CEMVN) to evaluate potential impacts of surveys and borings, and related activities necessary to investigate potential changes to the structural alignment levee footprint in St. John the Baptist and St. Charles Parishes, Louisiana, as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS; <http://www.mvn.usace.army.mil/About/Projects/West-Shore-Lake-Pontchartrain/>). Additionally, SEA 570 evaluates adding five stockpile/staging areas for construction related activities as well as the addition of a mitigation bank credit purchase option into the mitigation plan approved in the 2016 WSLP EIS. The mitigation bank credit purchase option may be used for compensating bottomland hardwoods (BLH) impacts resulting from the WSLP project. These actions would occur outside of the levee alignment right of way (ROW) discussed in the 2016 WSLP EIS. The 2016 WSLP EIS and SEA 570 are incorporated herein by reference.

In addition to the option to purchase BLH mitigation bank credits for BLH impacts, there are five distinct activities in the Proposed Action. Those activities are: creating and improving access routes, clearing and grubbing, stockpiling and staging in new stockpiling/staging areas, soil borings and cone penetration testings (CPTs), and other surveys.

The duration for the Proposed Action's activities would be approximately 9 months. The access roads and stockpiling/staging areas would continue to be used throughout construction of the WSLP project. The entire survey ROW would be approximately 600 feet wide, with the clearing and grubbing necessary for the soil borings and CPT's occurring within a 100-foot corridor within the 600-foot ROW. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. Tree felling would be performed to minimize danger to trees left standing, existing structures

and installations, and employees and other persons. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and Hazardous, Toxic and Radioactive Waste assessments would be within the approximately 600-foot ROW encompassing the 100-foot clearing and grubbing corridor. The temporary stockpile/staging areas may be used for various activities during the investigative and construction phases of the WSLP project. Under the current construction schedule, use of these areas is expected to end in 2023.

The Proposed Action would have approximately 166 acres of direct, negative impacts to swamp habitat (approximately 91 Average Annual Habitat Units (AAHUs)), and would have approximately 46 acres of direct, negative impacts to BLH habitat (approximately 36 AAHUs). The total impacts to wetlands associated with the Proposed Action is approximately 213 acres and 127 AAHUs. The No-Action Alternative would be the environmentally preferable plan.

If the results of the proposed surveys and investigations suggest that the WSLP levee alignment should be shifted, a supplemental National Environmental Policy Act (NEPA) document will be prepared to evaluate the alternatives to and impacts of such a potential alignment shift. Additional mitigation beyond what was already identified in the 2016 WSLP EIS may be needed due to impacts associated with the Proposed Action or if a shift in alignment occurs. If it is determined that the previously-approved WSLP project mitigation plan is not sufficient to offset the habitat losses to be incurred, the mitigation plan from the 2016 WSLP EIS would be revisited and additionally augmented to ensure all impacts from the WSLP project are fully mitigated, including the impacts identified in SEA 570 and if the alignment is shifted.

Factors Considered in Determination. CEMVN has assessed the impacts of the No-Action and the Proposed Action alternatives on important resources, including wetlands, wildlife, aquatic resources/fisheries, threatened and endangered species, water quality, cultural resources, soils and prime and unique farmlands, visual resources (aesthetics), recreational resources, environmental justice, air quality, noise, and transportation. No significant adverse impacts were identified for any of these important resources. All practical means of avoiding adverse environmental effects have been adopted. All unavoidable habitat impacts would be fully mitigated.

In correspondence dated May 6, 2019, (CZD 20140059 mod03), the Louisiana Department of Natural Resources (LDNR) stated that the Proposed Action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program. The Louisiana Department of Environmental Quality (LDEQ) issued a State Water Quality Certification (WQC 190424-02) on April 24, 2019 and the Section 404(b)(1) evaluation was signed on April 22, 2019 after a 15 day public review and comment period. Through correspondence dated March 27, 2019, the USFWS concurred that the Proposed Action would not likely adversely affect any threatened or endangered species in the Project Area. CEMVN has concurred with, or resolved, all final Fish and Wildlife Coordination Act recommendations contained in a letter from the U.S. Fish and Wildlife Service (USFWS) dated May 6, 2019.

The CEMVN would implement and comply with the stipulations identified in the National Historic Preservation Act (NHPA) Programmatic Agreement regarding the WSLP Hurricane Storm Damage Risk Reduction System, as executed on May 16, 2014.

Environmental Design Commitments. The following commitments, as recommended by the USFWS are an integral part of the Proposed Action:

1) Consideration will be given in the design of project features and timing of construction in an effort to avoid adverse impacts to wading bird colonies. A qualified biologist will inspect the proposed work site for the presence of undocumented nesting colonies during the nesting season.

2) For areas containing nesting wading birds (i.e., herons, egrets, night-herons, ibises, roseate spoonbills, anhingas, and/or cormorants), all activity occurring within 1,000 feet of a nesting colony will be restricted to the non-nesting period.

3) Consideration will be given in the design of project features and timing of construction in an effort to avoid adverse impacts to nesting bald eagles. A qualified biologist will inspect the proposed work site for the presence of undocumented nesting colonies during the nesting season.

4) If a bald eagle's nest is discovered within 1,500 feet of the proposed action, an evaluation and coordination with USFWS will be performed.

5) All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). All work, equipment, and vessel operation should cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the buffer zone of its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s).

6) Authorizations and permissions will be obtained from Louisiana Department of Wildlife and Fisheries prior to any work on the Maurepas Swamp Wildlife Management Area.

Public Involvement. Public Notice of the release and availability of the draft SEA and FONSI for public comment was published in the New Orleans Advocate on April 3, 2019. They were also mailed to persons and entities on the public mailing list for a 15 day public review and comment period that started April 3, 2019, and it was made available for download at <https://www.mvn.usace.army.mil/Missions/Environmental/NEPA-Compliance-Documents/Civil-Works-Projects/2019-Civil-Works-Projects/West-Shore-Lake-Pontchartrain/>.

The Proposed Action has been coordinated with appropriate Federal, state, and local agencies and businesses, organizations, and individuals. Eight comments were received. Two comments were received from individual members of the public. One

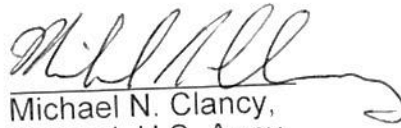
expressed concern regarding wetland impacts due to construction of access roads. Both expressed concern regarding the location of the WSLP Project levee alignment. The Federal Emergency Management Association Region VI requested we coordinate with the community floodplain administrators for St. John the Baptist and St. Charles Parishes. CEMVN contacted the floodplain administrators for both parishes. The administrator for St. John the Baptist Parish responded with concerns about potential flood impacts from those 5 stockpile/staging locations and access roads proposed to be located either partially or entirely within Special Flood Hazard Areas. CEMVN considered these concerns and concluded that there would be no significant adverse impacts to the floodplain from implementation of the proposed action. If any impacts to the floodplain occur, they are expected to be negligible to minor and would be only temporary. CEMVN will provide a written response and will continue coordination with both floodplain administrators. The Louisiana State Historic Preservation Officer commented that no known historic properties will be affected by and the office has no objections to implementing the Proposed Action. The USFWS, National Marine Fisheries Service, and the Louisiana State Department of Health and Hospitals all expressed their support of the Proposed Action. All public comments are located in Appendix F of SEA 570.

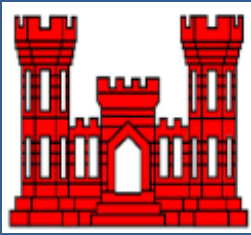
Conclusion. CEMVN has assessed the potential environmental impacts of the Proposed Action, responded to all public comments received during the public review period, and has determined that the action, if implemented, would cause no significant environmental impacts. Any habitat impacts will be mitigated through implementation of the previously-approved mitigation plan outlined in the 2016 WSLP EIS, as supplemented by the option to purchase mitigation bank credits in the Proposed Action, or if that plan is determined to be insufficient to mitigate all impacts of the WSLP project, additional mitigation alternatives will be evaluated to ensure that lost habitats are replaced in accordance with applicable law.

I have reviewed the SEA 570 and have considered public and agency comments and recommendations. Based on the assessment conducted in SEA #570 and the implementation of the environmental design commitments listed previously, I have determined that the Proposed Action will not have significant impacts and does not require the preparation of a Supplemental Environmental Impact Statement.

In accordance with the environmental considerations discussed previously, the public interest will be best served by implementing the Proposed Action in Final SEA 570. The plan is justified and in accordance with environmental statutes.

13 May 19
Date


Michael N. Clancy,
Colonel, U.S. Army
District Commander



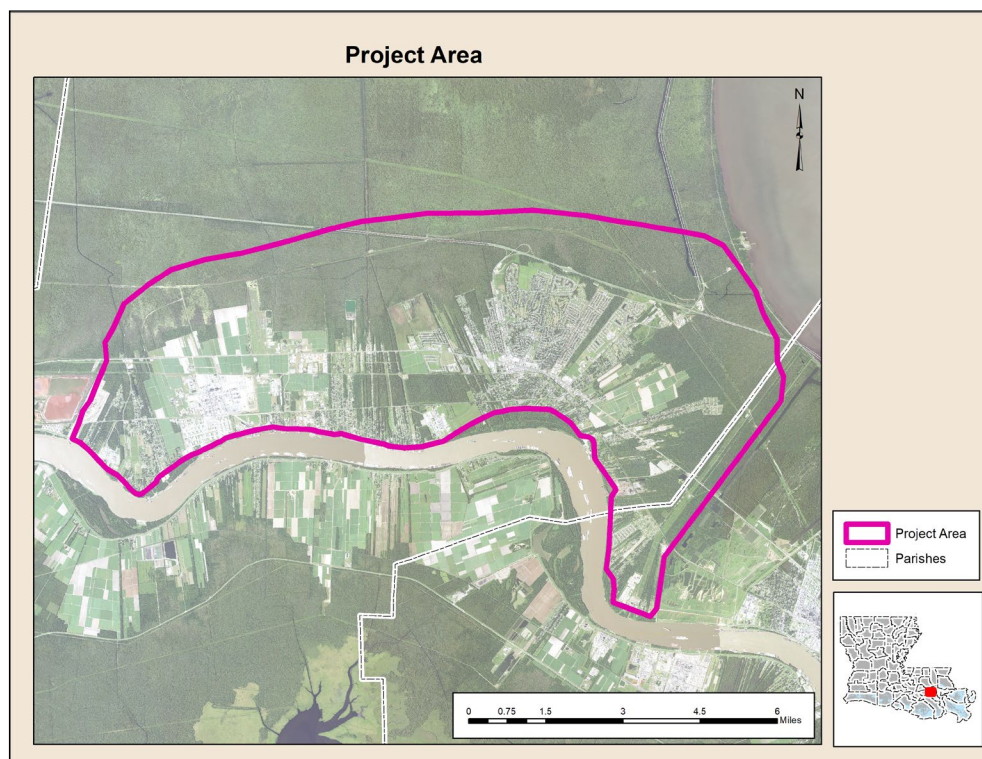
Prepared by/for:
U.S Army Corps of Engineers
Regional Planning and Environment Division South
New Orleans District

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations

St. Charles and St. John the Baptist Parishes, Louisiana

SEA #570



U.S. Army Corps of Engineers
Mississippi Valley Division
Regional Planning and Environment Division South
New Orleans District
May 2019

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1. Introduction

The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division (MVD), Regional Planning and Environment Division South (RPEDS), has prepared this Supplemental Environmental Assessment (SEA) for the New Orleans District (CEMVN) to evaluate potential impacts of surveys, borings, and related activities necessary to investigate geophysical and environmental conditions in areas being considered for potential changes to the structural alignment levee footprint in St. John the Baptist and St. Charles Parishes, Louisiana, as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS; <http://www.mvn.usace.army.mil/About/Projects/West-Shore-Lake-Pontchartrain/>).

Additionally, the SEA evaluates adding five stockpile/staging areas for WSLP construction related activities and the addition of a mitigation bank credit purchase option into the mitigation plan approved in the 2016 WSLP EIS for compensating bottomland hardwoods (BLH) impacts.

The Record of Decision (ROD) for the 2016 WSLP EIS was signed by the Assistant Secretary of the Army on September 14, 2016. The 2016 WSLP EIS and ROD are hereby incorporated by reference. This SEA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's Regulations (40 CFR 1500-1508), as reflected in 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, and CEMVN District, to make an informed decision on the appropriateness of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

Potential changes to the WSLP levee alignment in St. John the Baptist and St. Charles Parishes and the addition of the five stockpile/staging areas being considered would occur outside of the Right of Way (ROW) described in the 2016 WSLP EIS. The proposed stockpile and staging areas would provide the ROW necessary for construction related activities approved in the 2016 WSLP EIS. The proposed surveys and borings would obtain the data necessary to further investigate potential alignment changes and would aid in the engineering and design of the levee. Presently, three potential levee alignment shifts are being considered that could aid in the constructability, improve the engineering, and decrease the utility relocations needed for the alignment. One of the shifts being considered would aid in constructability and construction safety at interstate crossings. Another shift would accommodate the River Reintroduction into Maurepas Swamp Project (PO-0029). If the results of the investigations discussed in this SEA and further engineering and design of the WSLP levee suggests an alignment shift is warranted, evaluation of the impacts associated with potential changes to the structural alignment identified in the 2016 WSLP EIS and any other construction related changes would be discussed in subsequent NEPA documentation.

1.1 Proposed Action

The proposed action consists of conducting surveys and borings required to investigate geophysical and environmental conditions in areas where CEMVN is considering potential changes to and to further refine engineering and design of the 2016 WSLP EIS's levee alignment in St. John the Baptist and St. Charles Parishes as well as adding five stockpile/staging locations and access roads for construction related activities. Cross-sectional surveys, soil borings and cone penetration testings (CPTs), environmental and cultural resources investigations, and Hazardous, Toxic, and Radioactive Waste (HTRW) assessments would be conducted outside of the levee alignment ROW discussed in the 2016 WSLP EIS.

Additionally, the ability to purchase mitigation bank credits as an option to mitigate BLH impacts from construction of the levee is being added to the mitigation plan discussed in the 2016 WSLP EIS. The Project Area of the proposed action is shown in Figure 1.

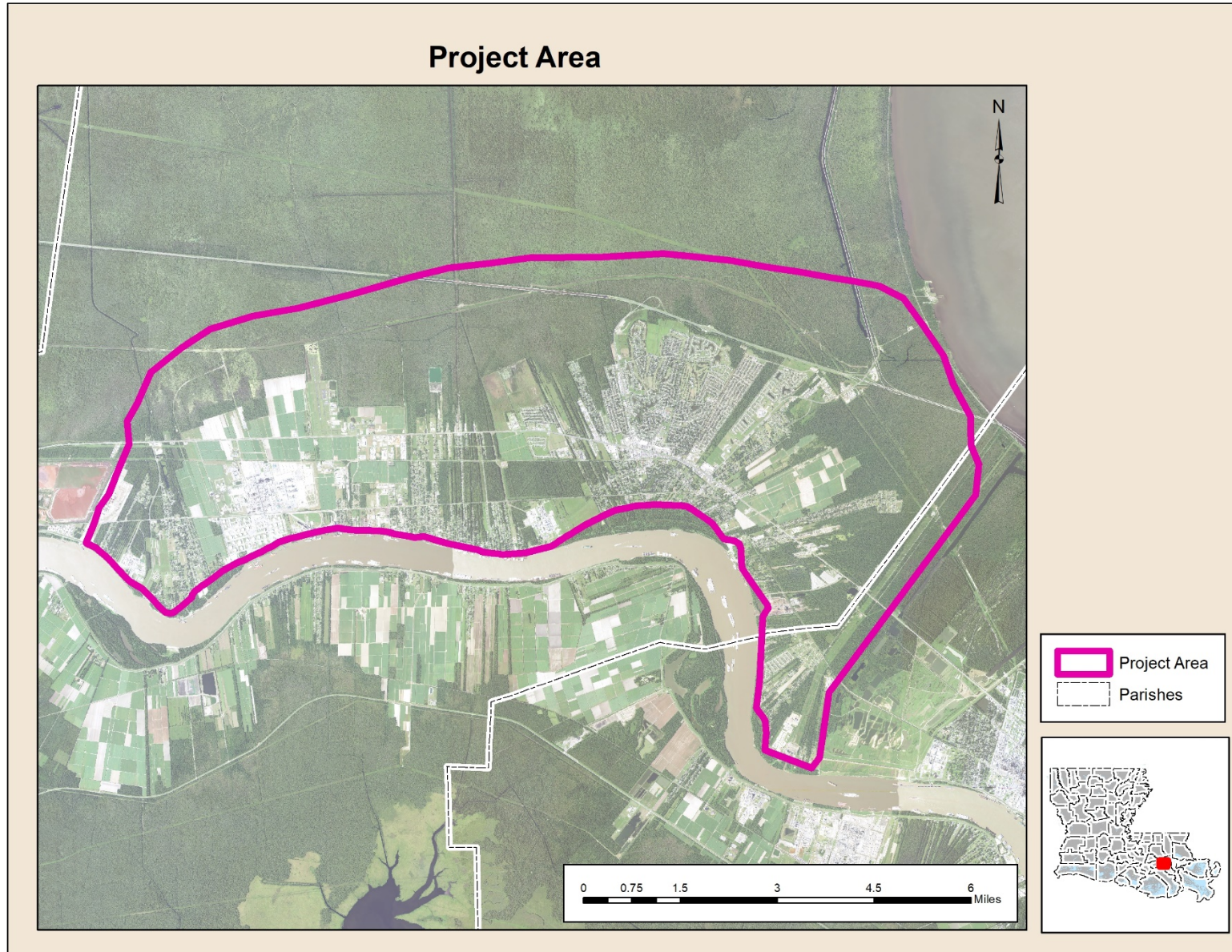


Figure 1: Project Area

1.2 Authority

Construction of the WSLP Hurricane and Storm Damage Risk Reduction Project (WSLP Project) was authorized as part of the Water Infrastructure Improvement for the Nation Act (WIIN Act, Public Law 114-322) in 2016. Construction of the WSLP Project was funded by the Bipartisan Budget Act of 2018 (BBA 2018, Public Law 115-123).

1.3 Purpose and Need for the Proposed Action

The purpose of the proposed action is to collect the data and information necessary for further engineering design of the 2016 WSLP EIS levee alignment, including information that would be used to determine whether a levee alignment shift is preferable to the current alignment. The stockpile and staging areas are needed for construction related activities whether the 2016 WSLP EIS alignment is built or a shift occurs in the future. The location of the proposed action is in St. John the Baptist and St. Charles Parishes, near the communities of Montz in St. Charles Parish, and Laplace, Reserve, and Grayville in St. John the Baptist Parish, Louisiana. The addition of the option to purchase mitigation bank credits into the mitigation plan approved in the 2016 WSLP EIS also provides greater flexibility and potential time savings in satisfying the BLH mitigation requirements for this project. Under this option, in-kind BLH credits could be purchased from any bank with released credits in the Lake Pontchartrain Basin watershed.

1.4 Prior Studies

A number of studies, reports, and environmental documents on water resources development in the project area have been prepared by USACE, other Federal, state, and local agencies, research institutes, and individuals. The most relevant prior studies, reports, and projects are described in Table 1.

Table 1: Relevant Prior Reports and Studies

Comprehensive Planning Studies		Relevance to Proposed Action			
		Data Source	Consistency	Structural Measures	FWOP Conditions
1980	LA Coastal Resources Program	X	X	X	X
1999	Coast 2050: Toward a Sustainable Coastal LA	X	X	X	X
2004	LA Coastal Area (LCA), LA Ecosystem Restoration Study	X	X	X	X
2017	LA's Comprehensive Master Plan for a Sustainable Coast	X	X	X	X
Related Hurricane and Flood Damage Risk Reduction Projects and Reports					
1927	"Flood Control, Mississippi River and Tributaries" Published as House Document 90, 70 th Congress 1 st Session	X	X	X	X
1965	Chief of Engineers Report on Lake Pontchartrain and Vicinity, LA Hurricane Protection Project	X	X	X	X
1967	Amite River and Tributaries, Comite River Basin, LA	X	X	X	X
1984	Chief of Engineers Report on Lake Pontchartrain and Vicinity, LA Hurricane Protection Project	X	X	X	X
1990	LA Coastal Area Mississippi River Delta Study	X	X	X	X
1994	LA Coastal Wetlands Restoration Plan	X	X	X	X
1994	Southeast LA Hurricane Preparedness Study	X	X	X	X
2010	LCA Ecosystem Restoration Study, Volume II of VI, Final Integrated Feasibility Study and Supplemental Environmental Impact Statement for the Amite River Diversion Canal Modification Ascension and Livingston Parishes, LA	X	X	X	X
2010	LCA Ecosystem Restoration Study, Volume IV of VI, Final Integrated Feasibility Study & Supplemental Environmental Impact Statement for the Small Diversion at Convent/Blind River St. James Parish, LA	X	X	X	X
Previous West Shore Lake Pontchartrain Reports					
1985	West Shore Lake Pontchartrain Initial Evaluation Report	X	X	X	X
1987	Lake Pontchartrain West Shore, LA Hurricane Protection Reconnaissance	X	X	X	X
1997	West Shore Lake Pontchartrain, LA Hurricane Protection Project, Reconnaissance	X	X	X	X
2003	St. John the Baptist Parish, LA East Bank Urban Flood Control Reconnaissance Report	X	X	X	X
2016	West Shore lake Pontchartrain Hurricane and Storm Damage Risk Reduction Study	X	X	X	X

*Future without project (FWOP)

1.5 Public Concerns

Many public concerns were raised during the scoping and public review process of the 2016 WSLP EIS. Those public comments and USACE responses can be found in Appendix A, Annex P of the 2016 WSLP EIS. Those comments covered a broad range of topics including concerns about project design, impacts to property and infrastructure, potential induced flooding impacts, and adverse environmental impacts.

1.6 Wetland Value Assessment

During coordination with the U.S. Fish and Wildlife Service (USFWS) for the 2016 WSLP EIS, evaluations of the effects of the alternatives to fish and wildlife resources were conducted using the Wetland Value Assessment (WVA) methodology (2016 WSLP EIS, Appendix A, Annexes G and R). These evaluations were used to estimate the effects of the alternatives to fish and wildlife services for SEA 570. Coordination with USFWS occurred during WVA re-evaluations for SEA 570.

Calculation of the WVA requires that habitat quality and quantity (acreage) are measured for baseline conditions, and predicted for future without-project and future with-project conditions. Each WVA model utilizes an assemblage of variables considered important to the suitability of that habitat type to support a diversity of fish and wildlife species.

The WVA provides a quantitative estimate of project-related impacts to fish and wildlife resources; however, the WVA is based on separate models for BLH, swamp, chenier/coastal ridge, fresh/intermediate marsh, brackish marsh, and saline marsh. Although the WVA may not include every environmental or behavioral variable that could limit populations below their habitat potential, the WVA is widely acknowledged to provide a cost-effective means of assessing restoration measures in coastal wetland communities.

The WVA models assume that optimal conditions for fish and wildlife habitat within a given coastal wetland type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated and expressed through the use of a mathematical model developed specifically for each wetland type. Each model consists of: (1) a list of variables that are considered important in characterizing community-level fish and wildlife habitat values; (2) a Suitability Index (SI) graph for each variable, which defines the assumed relationship between habitat quality (SI) and different variable values; and, (3) a mathematical formula that combines the SI for each variable into a single value for wetland habitat quality, termed the Habitat Suitability Index (HSI).

The product of an HSI value and the acreage of available habitat for a given target year is known as the Habitat Unit (HU) and is the basic unit for measuring project effects on fish and wildlife habitat. HUs are annualized over the project life to determine the Average Annual Habitat Units (AAHUs) available for each habitat type. The change (increase or decrease) in AAHUs for each future with-project scenario, compared to future without-project conditions, provides a measure of anticipated impacts. A net gain in AAHUs indicates that the project is beneficial to the fish and wildlife community within that habitat type; a net loss of AAHUs indicates that the project would adversely impact fish and wildlife resources.

Swamp and BLH WVAs performed for the 2016 WSLP EIS were used to estimate impacts for the proposed action. In the 2016 WSLP EIS, estimated impacts to wetlands from the WSLP structural alignment were geographically divided into eight different categories, based on existing conditions. Direct impacts, where habitats would be directly converted from wetland to upland, were distinguished from indirect impacts, where there would be potential negative impacts not caused by direct habitat conversion. Impacts were also categorized by habitat type (i.e., swamp and BLH) and swamp habitats were further categorized by habitat quality based on field investigations and available data.

Wetland impacts for SEA 570 were estimated by applying the impacts categories calculated in the 2016 WSLP EIS to potential impacts from the proposed action. AAHUs/acre were calculated

using information from the 2016 WSLP EIS for each impacts category. Each location of impacts in the proposed action was matched to an impacts category from the 2016 WSLP EIS. Then the matching AAHUs/acre value was applied to estimate impacts for the proposed action. For information on how these impacts categories were initially calculated and how WVAs were implemented, see the 2016 WSLP EIS and its appendices, which are incorporated herein by reference.

2 Alternatives Including the Proposed Action

Because the Proposed Action consists of actions necessary to obtain the required data to investigate potential levee shifts, includes all viable stockpile/staging locations in the vicinity of the project area, and only adds an additional option for mitigating BLH impacts into the original mitigation plan, only the No-Action Alternative (Future without Project Action) and the proposed action were considered.

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

NEPA requires that in analyzing alternatives to a proposed action, a Federal agency 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.

In the FWOP condition (No-Action), the Proposed Action would not occur. As such, surveys and borings data would not be available outside of the 2016 WSLP EIS ROW, new staging and stockpiling areas would not be available, and the mitigation plan would remain unchanged from the 2016 WSLP EIS. However, similar activities consistent with the 2016 WSLP EIS would occur in the vicinity to the proposed action. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur adjacent to the proposed action, but within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). Approximately 89.8 acres of swamp habitat would be impacted by the clearing and grubbing of a 100-foot corridor adjacent to the Proposed Action.

A levee approximately 18 miles in length would be constructed as part of the WSLP Project in St. John the Baptist and St. Charles Parishes, Louisiana. Approximately 1,235 acres of direct (595.3 AAHUs swamp and 95.5 AAHUs BLH), and 8,432 acres of indirect (494.5 AAHUs swamp and 3.1 AAHUs BLH) negative impacts to forested wetlands would occur. See the 2016 WSLP EIS for more information on construction of the structural alignment.

2.2 Proposed Action

A map indicating where the Proposed Action activities would occur is provided in Figure 2. As shown on Figure 2, there are 15 proposed access routes, with 1 access route bifurcating into two roads near the surveys and boring/CPT area. “Clearing & Grubbing” indicates the extent to which tree felling, borings/CPTs, and stockpiling would occur. “ROW Extent” refers to the extent to which other surveys would occur.

There are five distinct activities in the Proposed Action, in addition to the option to purchase Mitigation Bank credits for BLH impacts. They are: creation of approximately 15 access routes, clearing and grubbing, creation of stockpiling and staging areas, soil borings and CPTs, and other surveys. Each activity is discussed in sections 2.2.1 through 2.2.6.

The duration for the Proposed Action’s activities would be approximately 9 months. Some or all of the stockpile/staging areas and access roads would continue to be used throughout construction of the WSLP Project. The entire survey ROW would be approximately 600 feet wide, with the clearing and grubbing necessary for the soil borings and CPT’s occurring within a 100-foot corridor within the 600-foot ROW. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. All tree felling would be performed in a manner intended to avoid damage to trees left standing, existing structures, and installations,

and with due regard for the safety of employees and others. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and HTRW assessments would be conducted within the approximately 600-foot ROW surrounding the 100-foot clearing and grubbing corridor. A typical survey ROW plan view is shown in Figure 3.

The proposed action includes areas outside of the 2016 WSLP EIS. A comparison between the proposed action and the 2016 WSLP EIS can be seen in Figure 4.

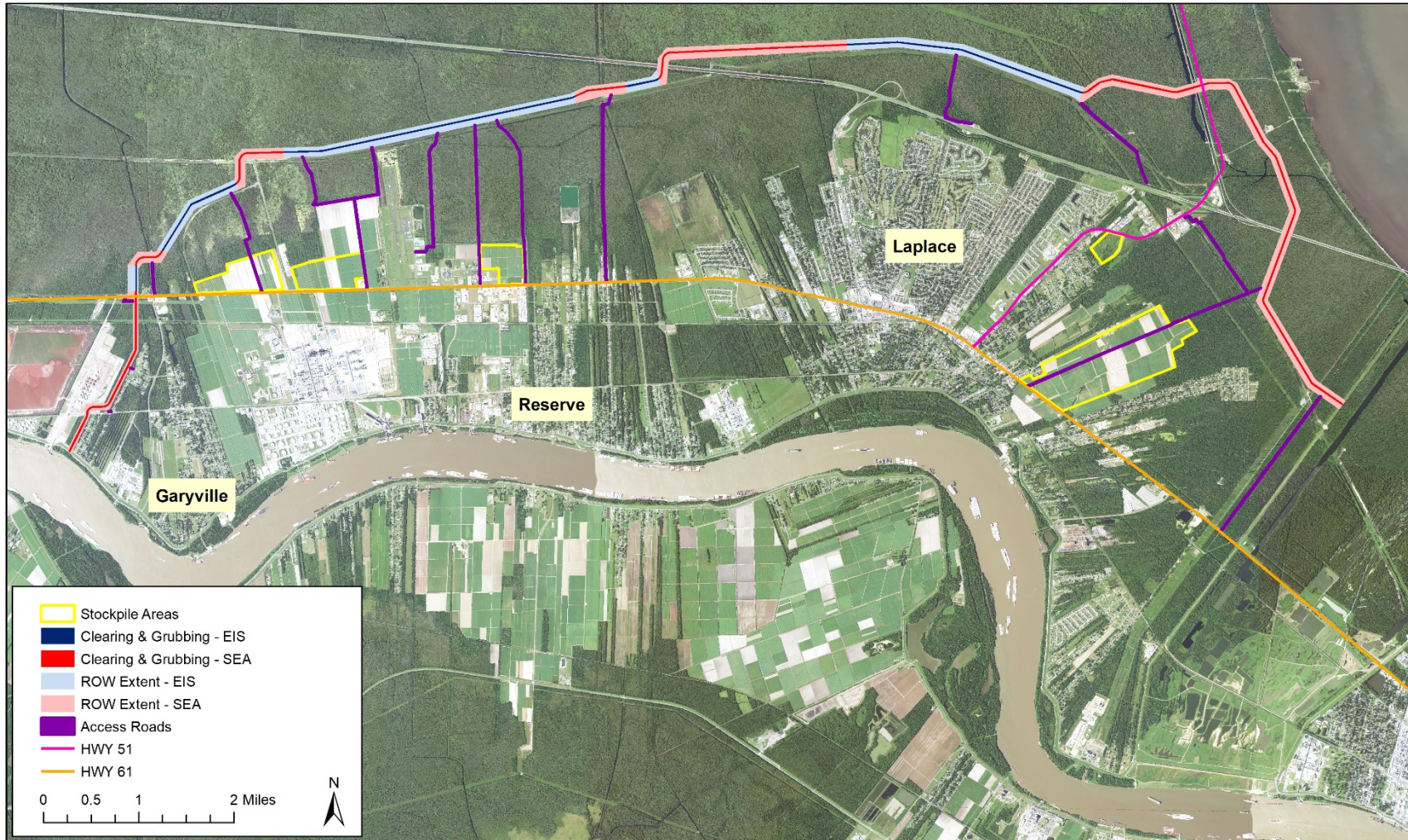


Figure 2: Map showing the Proposed Action.

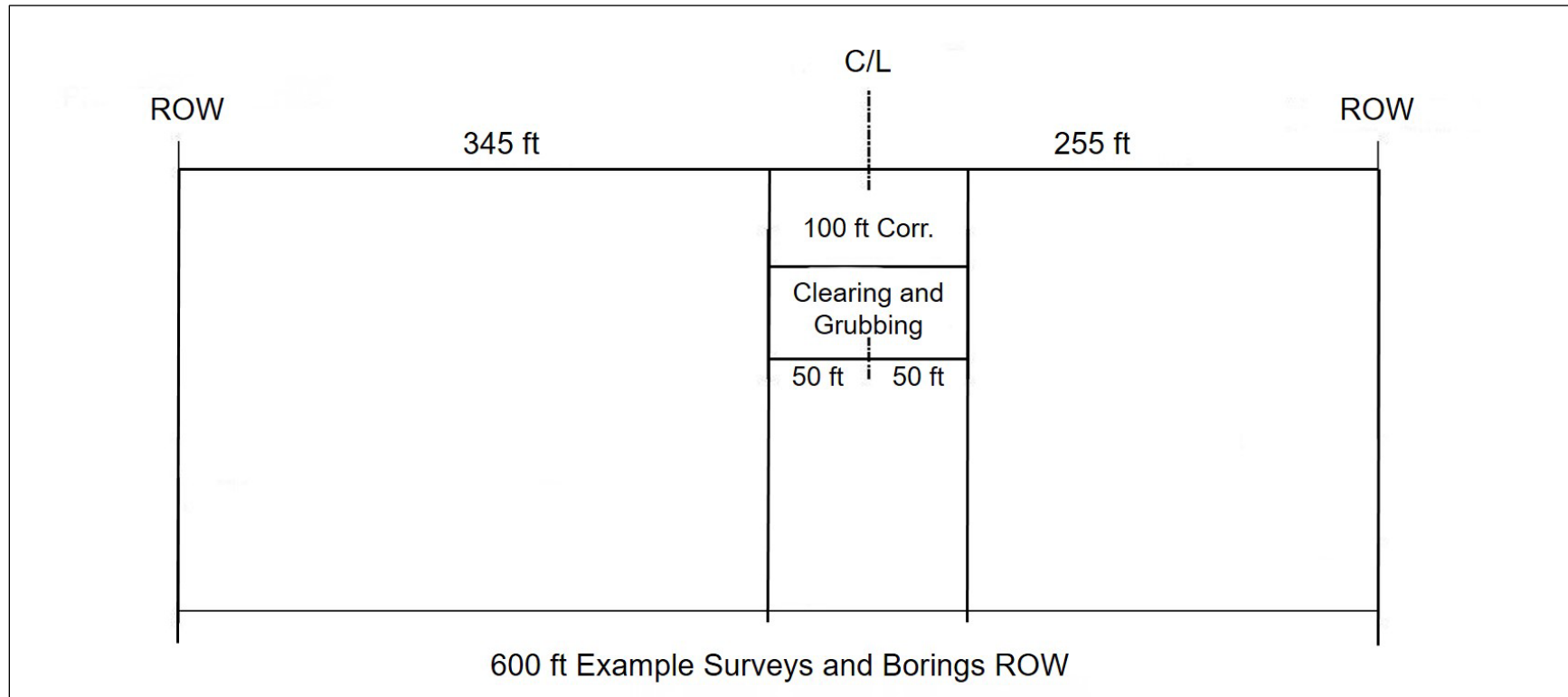


Figure 3: Plan view drawing of a typical ROW for the Proposed Action.

2.2.1 Access

Access routes would be created to allow access to the WSLP Project, the proposed staging/stockpile areas, and the proposed new corridors from existing roads when feasible. In some areas, new roads would be built and in others areas existing roads would be improved by adding material to allow passage of equipment and trucks. Access for clearing and grubbing of the 100-foot corridor, cross-sectional surveys, soil borings/CPTs, environmental and cultural resources investigations, and HTRW assessments would be from U.S. Highway 61 (Airline Hwy), LA Hwy 44, LA Hwy 54, 1-10 Service Road, Old US HWY 51, Frenier Road, Prescott Road, other existing roads, trails, pipeline corridors, and along Reserve Canal leading to the alignment (Figure 1). These 15 proposed access routes would be utilized for the delivery of survey, tree clearing, and boring/CPT equipment. Any and all access roads to be used for surveys, borings, and stockpiling could be used to haul materials to the levee construction sites. Some, but not all, of the access roads could be made permanent. Some of the proposed access routes would require the clearing of vegetation for the movement of this equipment. Culverts would be added to maintain existing hydrologic conditions when constructing new roads. Improvements to existing culverts would be considered when improving existing roads for access. Clearing and grubbing for access routes would be limited to a 40-foot width, which is the minimum width necessary for the passage of surveys and borings/CPTs equipment. A 60-foot road width would be allowed for access roads within pipeline ROWs to allow for pipeline protection. The extra width would accommodate for special construction considerations to minimize impacts to infrastructure. Coordination with pipeline companies is ongoing to determine the best method to accommodate pipeline infrastructure and minimize environmental impacts. For instance, timber matting or similar measures may be required across some pipeline corridors. Clearing would consist of the complete removal of all trees, stumps, downed timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris within access route corridors. Debris resulting from access road clearing and grubbing operations could be stockpiled in temporary windrows within access corridors, or within the stockpile and staging areas described below. Felled timber may be chipped on-site prior to hauling and disposal, and other cleared debris and timber would be hauled offsite and disposed of according to applicable laws and regulations. Approximately 91 acres have been identified as access routes, with a maximum impact to coastal swamp habitat of approximately 78 acres. All equipment to be utilized for the surveys are described in the subsequent sections. Best management practices for dust abatement would be used, including maintaining a water truck onsite to water down areas when hauling along access roads.

2.2.2 Clearing and Grubbing

Clearing and grubbing would occur within a 100-foot corridor and would provide the necessary work area for the completion of soil boring/CPT activities. The corridor is broken into six distinct segments, shown in red on Figure 2, totaling approximately 138 acres and 11.4 linear miles. Approximately 135 of these 138 acres are forested wetlands, with approximately 115 acres of swamp and approximately 20 acres of BLH. A width of 100 feet is needed for operation of equipment and for stockpiling of cut trees and undergrowth. All trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris would be cleared within the clearing and grubbing corridor. Trees on dry land would be cut flush with the natural ground, while trees in water would be cut flush with the natural ground or mud line underwater. In limited circumstances, the removal of tree stumps and rootballs below the ground surface may be necessary to provide unobstructed and safe access for equipment. Rootball removal is not expected to exceed 20 percent of the corridor.

Trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations could be stockpiled in temporary windrows within the clearing and grubbing corridor, spaced approximately every 300 feet. Windrows would alternate between land side and flood side of the project centerline. Debris may be placed in neat windrows or piles with the tree limbs trimmed sufficiently to make the windrow as small as practicable. No windrowed debris or cleared material shall extend beyond the 100-foot clearing and grubbing limit. Debris could also be stockpiled in the stockpile and staging areas described in Section 2.2.3. Debris removal would occur during the levee construction phase.

2.2.3 Stockpiling and Staging

Two options for temporary stockpiling trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations would be available to the contractor. Material could be stockpiled within any of the five stockpile areas shown in Figure 2 or material could be temporarily stockpiled within the 100-foot clearing and grubbing corridor or access roads ROWs. Descriptions of how material could be stockpiled within the clearing and grubbing corridor and access roads are discussed in Sections 2.2.2 and 2.2.1, respectively.

The five temporary stockpile/staging areas total approximately 1,020 acres (583 acres, 40 acres, 98 acres, 143 acres, and 156 acres respectively from east to west) and are shown in Figure 2. Originally, nine stockpile/staging areas were considered, but four were eliminated from further consideration due to potential impacts to wetlands, cultural resources, Environmental Justice communities, or local development plans. The five remaining stockpile areas are larger than what is estimated to be necessary to stockpile this material.

These temporary stockpile/staging areas may be used for various activities during the investigative and construction phases of the WSLP Project. Use of these areas is expected to continue as long as construction of the WSLP Project is ongoing, which is currently anticipated to be 2023. The sites may be used for the storage of felled trees, staging of investigative and construction equipment (such as drilling rigs, small boats, bulldozers, excavators, pile driving equipment), and/ or storage of construction materials (such as steel sheet piling, steel piles, and other materials and items for construction of pump stations and drainage structures). The construction contractor or USACE may also set up trailers to serve as office space during construction within one or more of the stockpile/staging areas.

Some of the stockpile/staging areas would also be used for the temporary stockpiling of clay and sand for levee or floodwall construction. Up to 5,000,000 cubic yards of clay material and approximately 1,000,000 cubic yards of sand would be used to construct the WSLP Project levee. These materials could be transported to the stockpile areas from the Bonnet Carré Spillway (BCS) borrow pits, as approved in the 2016 WSLP EIS, using dump trucks. Sand could be obtained from commercially available sources or within the BCS. Approximately 338,000 truck trips would be required to haul 6,000,000 cubic yards of material. All stockpile/staging areas are located along major highways. Material would be hauled from BCS to five stockpile/staging areas exclusively via Highway 61 for the four stockpile areas located adjacent to Highway 61, and via Highways 61 and 51 for the northernmost stockpile area that is adjacent to Highway 51.

Working hours in the stockpiling areas would be limited to weekday, daylight hours. Best management practices for dust abatement would be used, including maintaining a water truck

onsite to water down areas within stockpiles and when hauling along access roads. Final layout of stockpile area configurations at one or more of the potential stockpile areas would locate stockpiles and staging sites as far as feasibly possible from residences and recreational areas.

2.2.4 Soil Borings and Cone Penetration Testing (CPTs)

Soil borings and CPTs would be conducted within the clearing and grubbing corridor at intervals of 500 feet. The borings would consist of undisturbed type borings. Borings and CPTs would be taken with truck and track mounted equipment. The boring holes would be backfilled in accordance with standard criteria.

Two and four wheel drive vehicles, standard boring and land surveying equipment, machetes, chainsaws, small boat and trailer (as required), and marsh buggies would be used.

2.2.5 Other Surveys

Other surveys include topographical surveys to locate features and utilities, define the project baseline alignment, and define ROW extent; as well as those necessary to complete cross-sections, HTRW assessments, cultural resource investigations, and environmental surveys. Small vehicles (such as all-terrain vehicles or similar small 4x4s), small boats, air boats, and marsh buggies would be allowed to operate within the approximately 600 foot ROW surrounding the clearing and grubbing corridor (see other surveys area in Figure 2). Foot traffic would also be permitted. Cross-sectional surveys would occur at intervals between 50 and 300 feet.

Environmental surveys would include vegetative surveys, such as plant identification and measurements. HTRW assessments would include traversing the area to identify potential HTRW concerns. If any suspected HTRW concerns are noticed, soil and/or water samples may be taken. Environmental surveys and HTRW assessments would be performed by two- to four-person crews that would traverse the area.

Similarly, cultural resources investigations would be completed with two- to four-person crews. Some cultural resources subsurface investigations may be required to determine if buried cultural remains exist within the site limits. The subsurface investigations would be accomplished by hand auger or shovel. If items of seeming cultural significance are discovered during the initial traverse of the site, the cultural resources investigations would be expanded to include, at the most, a series of 6.6 feet by 6.6 feet holes or 3.3 feet wide trenches evacuated to depths of 3.3 to 6.6 meters. Excavation would be accomplished by hand augers and/or shovels. All excavations would be held to the absolute minimum required to determine the apparent existence or non-existence of significant cultural remains. All excavations would be backfilled upon completion of the excavations. Artifacts discovered during the survey would be marked for identification and removed from the site for analysis and examination to determine historical significance. Permission to remove the items from the site would be obtained through personal contact with the landowner. All objects removed from the site would be returned to the landowner, if required, upon completion of the analysis and report. If the landowner does not require the return of the objects discovered, they would be donated to the State Historic Preservation Officer (SHPO) for permanent curation. If the investigations reveal the existence of cultural remains significant enough to render the site eligible for the National Register, additional right-of-entry (ROE) for more extensive excavations and mitigation would be required.

No roads, fences, buildings, or other improvements within the area would be disturbed. No trees would be felled outside of the access routes and the 100 foot clearing and grubbing

corridor in Figure 2. Branch cutting would be allowed for small vehicle passage, if necessary within the 600-foot ROW.

2.2.6 Purchase of Mitigation Bank Credits

In addition to the mitigation plan approved in the 2016 WSLP EIS, USACE-approved mitigation banks with a service area that encompasses the WSLP Project impacts, with perpetual conservation servitudes and that are currently in compliance with their mitigation bank instrument, and with BLH credits would be an option for mitigating BLH impacts incurred from the WSLP project. If the BLH impacts are wetlands and/or incurred within the coastal zone, the purchase of mitigation bank credits would also have to meet these requirements in kind. Mitigation banks would be required to run the same version of the WVA model as was used to assess the impacts from constructing the WSLP project, to ensure that the assessment of the functions and services provided by the mitigation bank match the assessment of the lost functions and services at the impacted site.

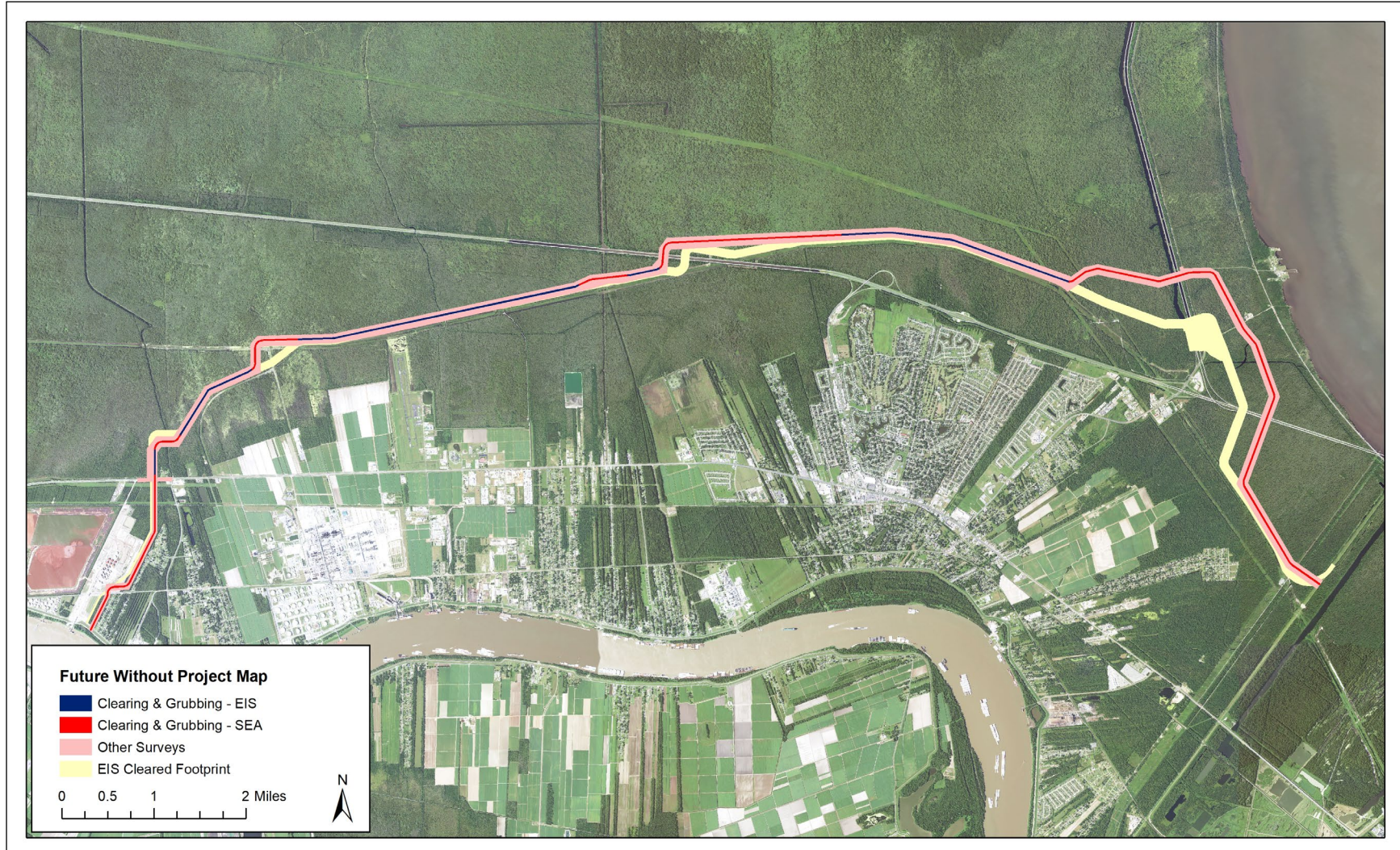


Figure 4: Map comparing features of the Proposed Action with the 2016 WSLP EIS levee footprint. Areas with “EIS” are within the ROW from the 2016 WSLP EIS and are shown for reference as they are not part of the Proposed Action. Areas with “SEA” refer to the Proposed Action.

3 Affected Environment

3.1 Description of the Project Area

The Project Area is located within St. John the Baptist and St. Charles Parishes in southeastern Louisiana, between the Mississippi River and Lakes Maurepas and Pontchartrain. The towns of Montz, Laplace, Reserve, and Garyville are communities found within the Project Area (Figure 2). The Project Area occupies a portion of one of the oldest delta complexes in the Mississippi River Deltaic Plain. It is in the lower Mississippi River alluvial plain in the Pontchartrain Basin and includes residential and commercial developments south of Interstate 10 (I-10). West of Laplace, a majority of the developed areas in the Project Area are found between U.S. Highway 61 (US-61) and the Mississippi River levee. Much of the undeveloped area consists of forested wetlands, including swamp and bottomland hardwood forests. The State of Louisiana's Maurepas Swamp Wildlife Management Area (MSWMA) lies north of I-10, within the Project Area.

3.1.1 Climate, Climate Change, Sea-level Rise, and Subsidence

The climate is subtropical, marine with long humid summers and short moderate winters. The seasonal rainy period occurs from mid-December to mid-March with dry periods in May, October and November. Average annual rainfall is 60 inches with a monthly maximum of 20 inches. The heaviest rainfalls usually occur during the summer, with July being the wettest month, averaging 6.42 inches. October is usually the driest month, averaging 3.01 inches of rain.

The 2014 USACE Climate and Resiliency Policy Statement states: "USACE shall continue to consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affecting its resources, programs, policies, and operations."

Climate change was considered for the 2016 WSLP EIS and will be used in further engineering and design. Habitat impacts analysis for the Proposed Action was based on analyses that considered climate change impacts.

The area has one of the highest land subsidence rates in the country, estimated at 0.4 inch annually. The rate is variable along the coast (Couvillon et al., 2017). Coastal Louisiana is more prone than other areas to subsidence and land loss. Human actions have exacerbated the problem.

Shoreline erosion along Lake Maurepas, measured by the USGS Coastal and Marine Geology Program since 1899, shows an average shoreline loss between 1899 and 1995 of approximately 3.25 feet per year (Zganjar et al. 2002). Erosion may be attributed to storm surge, lack of sediment entering the area, canal construction, logging, and waves. Relative Seas Level Rise (RSLR) and associated saltwater influx has increased erosion in coastal wetland areas.

Sea level rise (SLR) conditions were modeled for the 2016 WSLP EIS. Table 2 shows the model results from that study.

Table 2: Relative Sea Level Rise Estimates from the 2016 WSLP EIS.

Scenario	SLR (NAVD88 feet)		RSLR (NAVD88 feet)	
	2020	2070	2020	2070
Low SLR	0.06	0.33	0.3	1.81
Intermediate SLR	0.1	0.85	0.34	2.32
High SLR	0.23	2.47	0.47	3.95

3.1.2 Geology

The geology of the lower Mississippi River alluvial valley and the Louisiana coast is summarized in the LCA Ecosystem Restoration Study (USACE 2004), which is incorporated by reference. Lakes Maurepas and Pontchartrain occupy a portion of the old Mississippi River pathway known as the St. Bernard Delta. The St. Bernard delta complex was formed by Mississippi River deposits between 3,000 and 4,000 years ago (Frazier, 1967). The complex formed in what was then Pontchartrain Bay, enclosing a portion of it to form Lake Pontchartrain. The majority of other landform features include inland swamp, tidal channels, shallow lakes and bays, natural levee ridges along active and abandoned channels, barrier islands, and beaches.

3.2 Relevant Resources

This section contains a description of relevant resources that could be impacted by the Proposed Action. Relevant resources described are those recognized by: National, state, or regional agencies and organizations as required by laws, executive orders, regulations, and other official standards of technical or scientific agencies, groups, or individuals; and the general public. Table 3 provides summary information of the institutional, technical, and public importance of these resources.

Twenty-one resources were included in the WSLP 2016 EIS, some of which are particular examples of more general resource designations found in Table 3. Of those 21 particular resources, 12 are included in SEA 570, plus 1 additional resource not included in the WSLP 2016 EIS. Table 4 summarizes resources included in the WSLP 2016 and whether or not they were included in SEA 570.

Table 3: 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.
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.
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.
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.
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.
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.
Soils and Prime and Unique Farmland	Farmland Protection Policy Act of 1981	USDA's NRCS recognizes the importance of prime and unique farmlands. Prime farmland is available land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique farmland is 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.	Prime and unique farmland provides food, feed, forage, fiber, and oilseed crops for public consumption.
Aesthetics and Visual Resources	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 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.
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.

Resource	Institutionally Important	Technically Important	Publicly Important
Environmental Justice	Executive Order 12898 and the Department of Defense's Strategy on Environmental Justice of 1995	The social and economic welfare of minority and low-income populations may be positively or disproportionately impacted by the tentatively selected plans.	Public concerns about the fair and equitable treatment (fair treatment and meaningful involvement) of all people with respect to environmental and human health consequences of federal laws, regulations, policies, and actions.
Air Quality	Clean Air Act of 1963, Louisiana Environmental Quality Act of 1983	State and Federal agencies recognize the status of ambient air quality in relation to the NAAQS.	Virtually all citizens express a desire for clean air.
Transportation	National Environmental Policy Act, (Public Law 91-190)	ER-200-2-2, Procedures for Implementing NEPA	Changes to the transportation and traffic patterns affect the public and are of interest to the community.

Table 4. Relevant Resources from SEA 570 and the 2016 WSLP EIS, and their impacts from the Proposed Action.

Relevant Resource	Included in EIS?	Included in SEA?	Impacted by Proposed Action?
Population and Housing	Y	N	N
Employment, Business, and Industrial Activity (including Agriculture)	Y	N	N
Public Facilities and Services	Y	N	N
Transportation	Y	Y	Y
Community and Regional Growth	Y	N	N
Tax Revenues and Property Values	Y	N	N
Community Cohesion	Y	N	N
Environmental Justice	Y	Y	N
Soils, and Prime and Unique Farmlands	Y	Y	Y
Vegetation Resources*	Y	Y*	Y
Aquatic and Fisheries Resources	Y	Y	Y
Wildlife Resources	Y	Y	Y
Essential Fish Habitat (EFH)	N	N	N
Threatened and Endangered Species	Y	Y	N
Flow and Water Levels**	Y	Y**	Y
Sedimentation and Erosion**	Y	Y**	Y
Water Quality and Salinity**	Y	Y**	Y
Cultural Resources	Y	Y	N
Aesthetics and Visual Resources	Y	Y	Y
Recreation Resources	Y	Y	Y
Noise	Y	Y	Y
Air Quality	N	Y	Y

*Wetland impacts are the only vegetation resource potentially being impacted by the Proposed Action, and therefore, wetlands are the only vegetation resource impacts discussed.

**Sedimentation and Erosion, and Water Quality and Salinity are considered collectively as Water Quality by SEA 570.

3.2.1 Wetlands

Historic and Existing Conditions

Wetlands perform important functions of water filtration and water quality improvement, floodwater storage, fish and wildlife habitat, and biological productivity. The Project Area includes BLH, swamps, and estuarine emergent wetlands.

Vast virgin stands of bald cypress-tupelo swamp habitat once stretched from the bottomlands of northern Louisiana to the Gulf of Mexico (Conner and Day 1976). The Maurepas Swamp was vegetated by an expanse of old growth, freshwater forested swamp that extended as far as 26 miles north from the Mississippi River to the Baton Rouge-Denham Springs fault line. Historically, forested wetlands in the Project Area and vicinity were subjected to flooding and drying events. Seasonal flooding by the Mississippi River provided nutrient and sediment input. The area was subjected to extensive logging through the 1930s resulting in loss of old-growth trees. Remnant logging railroad embankments and canal systems used to extract the harvested timber have resulted in increased land loss. Forested wetlands in the vicinity are highly degraded due to subsidence, permanent inundation, lack of sediment and nutrient input, nutria (*Myocastor coypus*) herbivory, and saltwater intrusion (Shafer et al., 2016). Recent observations of forested wetlands within the Project Area and vicinity include high tree mortality rates, little to no observed regeneration, and low growth rates for many native swamp tree species (Shafer et al., 2009; Bradley Breland pers. communication, 2018). With the loss of forested wetlands/swamp habitats, a significant loss of wetland function in relation to wildlife and aquatic species, recreational opportunities, aesthetics, and storm surge protection has occurred.

Forested wetlands/swamp and typical BLH dominant and co-dominant species include bald cypress, water tupelo, green ash, swamp red maple, blackgum, diamond oak, black willow, southern wax myrtle, buttonbush, and the invasive Chinese tallow. BLH species in the Project Area include swamp red maple, green ash, swamp tupelo, various oak species, and the invasive and non-native Chinese privet. Swamp red maple and green ash typically comprise the sub-dominant mid-story (Conner and Day 1976). Scrub species, including black willow, wax myrtle, and buttonbush are sporadically present in areas with diminished canopy cover. Chinese tallow and Chinese privet are of minimal wildlife value and can proliferate until nearly monocultural stands exist, limiting food available for wildlife. Detailed descriptions of common plants are presented in the LCA report (USACE 2004, 2010) and representative plant species are listed in Appendix C, Annex E.

3.2.2 Wildlife Resources

Historic and Existing Conditions

The swamp, BLH, and other wetlands in the Project Area provide birds and wildlife with shelter, nesting, feeding, roosting, cover, nursery, and other life requirements. Wetlands provide neotropical migrants with essential stopover habitat on annual migrations (Zoller 2004) and critical bird breeding habitat (Wakeley and Roberts 1996).

Birds: Area wetlands have historically supported an abundance of neotropical and other migratory and non-migratory birds, including the bald eagle (a recently delisted Endangered Species) and colonial nesting waterbirds (e.g., herons, egrets, ibises, night-herons, and roseate spoonbills). Since 1985, most bird species and species groups in the area have exhibited either increasing or stable populations in the area. See Appendix C, Annex A for representative bird

species.

Mammals: Since 1985, populations of furbearers, such as beavers (*Castor canadensis*), mink (*Neovison vison*), foxes (*Vulpes vulpes* and *Urocyon cinereoargenteus*), and North American river otter (*Lontra canadensis*), have typically remained stable across the Upper Pontchartrain Basin (LCWCRTF & WCRA 1999). The West Indian manatee (*Trichechus manatus*), a Federally-listed Endangered Species, is known to occur or occasionally enter the area. Nutria are an invasive rodent that occurs in the Project Area. Throughout the Maurepas Swamp, nutria eat seedling cypress and other swamp and wetland BLH tree species preventing regeneration (Shafer et al., 2016). See Appendix C, Annex B for representative mammal species.

Reptiles and Amphibians: Due to the ecological and economic importance of the American alligator, historical and current figures on population numbers are available. Louisiana Department of Wildlife and Fisheries (LDWF) survey data from 1996 to 2000 shows alligator nest densities in the area are classified as medium (approximately 1 nest per 250 acres). In contrast, data on other reptiles and amphibians in the area is limited, but the bald cypress-tupelo ecosystem likely supports a wide variety of reptiles and amphibians. LDWF provided a list of reptiles and amphibians likely to occur within the Project Area vicinity that included 23 snake species, five lizard species, thirteen turtle species, fifteen frogs and toads, seven salamanders, and one crocodilian (Michon, pers. comm. 2019; Appendix C; Annex C).

3.2.3 Aquatic and Fisheries Resources

Historic and Existing Conditions

Submerged Aquatic Vegetation (SAV) communities were historically dominated by native species such as fanwort, coontail, small pondweed, bladderwort, water nymph, widgeon grass, and wild celery. SAV are an important food source and habitat for both aquatic organisms and terrestrial wildlife. SAV provides structure and habitat for many invertebrates that are food for various life stages of fish. SAV also provides food for waterfowl and feeding habitat for fish-eating birds such as herons and egrets.

SAV can be replaced by invasive floating aquatic plants, especially in areas of low flow. Floating aquatic invasive plants include water hyacinth, alligatorweed, hydrilla, common salvinia, and giant salvinia. These invasive species compete with native flora for resources such as nutrients and light, and in turn can negatively impact community structure and composition, and ecosystem processes.

Plankton and benthic organisms serve as the lowest food resource level for many species of fish and shellfish. Plankton can often indicate benthic, nutrient, and water quality health (Stone et al. 1980). Because many benthic organisms are sessile or have limited mobility, they cannot move away from environmental stressors. Therefore community profiles reveal information about environmental health (Porrier et al. 2009). There is little data available on Lake Maurepas and the upstream Maurepas Swamp plankton communities. Data for Lake Maurepas suggests the dominance of *Anabaena*, dinoflagellates, diatoms, and cyanobacteria with occasional strong presence of chlorophytes (Atilla et al. 2007, 2016 WSLP EIS).

Benthic macroinvertebrates tend to dominate deepwater swamp invertebrate communities. Characteristic species include crayfishes, clams, oligochaete worms, snails, freshwater shrimp, midges, amphipods, and various immature insects (Mitsch and Gosselink 1993). One of the main functions of a benthic community is secondary production, the conversion of plant material

by benthic detritivores and herbivores to animal tissue, thereby forming major links in the aquatic food web between plants and predators. Limited data exists on benthic communities in the Project Area. Species present are likely typical of deepwater forested wetlands and slow-flowing rivers in the region.

The relatively low salinity of these waters provides transitional habitat for freshwater fish and provides nursery and foraging habitat for marine fish and shellfish. Freshwater fish, such as largemouth bass, sunfish, catfish, and crappie are taken by recreational fishermen (USACE 2010, LDWF 2009, Hastings, 1987). Crawfish and crabs may be harvested from the swamp (Fox et al. 2007). Fisheries surveys have been performed in the vicinity starting in the 1970s (Watson et al. 1981). Many fishes have been sampled in the area, including estuarine, freshwater, catadromous, and anadromous species. Kelso and others (2005) sampled 20 locations in the Maurepas Swamp finding 26 taxa and a total of 1,425 individuals. This study found spotted gar (*Lepisosteus oculatus*) and striped mullet (*Mugil cephalus*) to be the most numerically dominant species. See Appendix C, Annex D for representative fish species.

3.2.4 Threatened, Endangered, and Protected Species

Historic and Existing Conditions

One Threatened Species, the Gulf sturgeon (*Acipenser oxyrinchus desotoi*), one Endangered Species, the West Indian manatee, and one delisted species, the bald eagle (*Haliaeetus leucocephalus*), are known to occur or may occasionally enter the Project Area. The area is also known to support colonial nesting waterbirds (e.g., herons, egrets, and others), protected under the Migratory Bird Treaty Act (MBTA).

Gulf Sturgeon: The Gulf sturgeon is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida. In Louisiana, Gulf sturgeon have been reported at Rigolets Pass, rivers and lakes of the Lake Pontchartrain basin, and adjacent estuarine areas. While sturgeon have been documented in nearby waterways, the Project Area does not contain Gulf sturgeon critical habitat.

West Indian Manatee: West Indian manatees (*Trichechus manatus*) occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). Substantial food sources (submerged or floating aquatic vegetation) have not been observed in the Project Area vicinity. Given the extensive areas of relatively undisturbed wetlands in the region and the paucity of food sources in the Project Area, it is considered unlikely for the manatee to frequent and utilize waterways within the Project Area, although manatees could pass through this area while transiting the lake.

Bald Eagle: The bald eagle was delisted as a federally threatened species in 2007 for most of the United States; however, it is protected under the Bald and Golden Eagle Protection Act (BGEPA), and the MBTA. Habitats suitable for use by the bald eagle are present in St. Charles and St. John the Baptist Parishes and occurrences of the bald eagle have been recorded there. The bald eagle is known to nest and forage in the vicinity, but recent coordination with USFWS indicates there are no known nests within 650 feet of the Proposed Action (Trahan, pers. comm. 2019). However, there are many bald eagle nests within the project vicinity, and new active, inactive, or alternate nests may exist, but not be known.

Colonial Nesting Waterbirds: The Proposed Action would be located in an area where colonial

nesting waterbirds, such as anhingas, cormorants, great blue herons, great egrets, snowy egrets, little blue herons, tricolor herons, reddish egrets, cattle egrets, green herons, black-crowned night-herons, yellow crowned night-herons, ibises, and roseate spoonbills occur. There are two historic colonial nesting waterbird sites within 1000 feet of the Proposed Action (Trahan, pers. comm. 2019).

3.2.5 Water Quality

Historic and Existing Conditions

As part of its surface water quality monitoring program, the Louisiana Department of Environmental Quality (LDEQ) routinely monitors 25 parameters on a monthly or bimonthly basis using a fixed station, long-term network (Monitored Assessments; LDEQ 1996). Based upon those data and the use of less-continuous information (Evaluated Assessments), such as fish tissue contaminants data, complaint investigations, and spill reports, the LDEQ assesses water quality fitness for the following uses: primary contact recreation (swimming), secondary contact recreation (boating, fishing), fish and wildlife propagation, drinking water supply, and shellfish propagation (LDEQ 1996). Based upon existing data and more subjective information, water quality is determined to either fully, partially, or not support those uses. A designation of “threatened” is used for waters that fully support their designated uses but that may not fully support certain uses in the future because of anticipated sources or adverse trends in pollution.

According to the LDEQ “2018 Louisiana Water Quality Inventory: Integrated Report,” there are two subsegments that include the study area. The Pass Manchac subsegment (LA040601_00), which includes Pass Manchac from Lake Maurepas to Lake Pontchartrain, including interlacustrine waters from North Pass to the Mississippi River levee, was found to fully support all designated uses: primary contract recreation (swimming), secondary contact recreation (boating), and fish and wildlife propagation (swimming). The Lake Maurepas subsegment (LA040602_00) was found to fully support two designated uses, primary contact swimming and secondary contact recreation. The Lake Maurepas subsegment was found to not support the designated use for fisheries and wildlife propagation. There are two suspected causes for impaired use: dissolved oxygen and non-native aquatic plants.

3.2.6 Cultural Resources

Eight cultural units are used to characterize the prehistoric cultural sequence in southeast Louisiana: Paleo-Indian (10000–8000 B.C.), Archaic (8000–1000 B.C.), Poverty Point (1700–500 B.C.), Tchefuncte (500 B.C.–A.D. 100), Marksville (A.D. 100–500), Baytown (A.D. 400–700), Coles Creek (A.D. 700–1200), and Mississippian/Plaquemine (A.D. 1200–1700). Historic perspectives generally cover the colonial period to approximately 1764, Acadian migration to the area, end of the Colonial period, the antebellum period, the Civil War, late 19th century reconstruction, and the early 20th century.

Historic and Existing Conditions

The Project Area (Figure 1) extends from the western edge of St. Charles Parish westward through St. John the Baptist Parish. Background research by CEMVN staff in 2017 and 2018 identified historic properties based on a review of National Register of Historic Places (NRHP) database, the Louisiana Cultural Resources Map, a review of cultural resources survey reports, and cultural resources discussions found in previous NEPA documents. Most of the cultural resources surveys in the Project Area have concentrated on proposed pipeline projects, the

majority of which are in an east-west orientation. Prominent among these are by Price, 1977 (report 22-0011); Price, 1987 (report 22-1210); Kelley and others, 2011 (report 3879); and Kelley and others, 2013 (report 22- 4327). Linear surveys on a predominately north-south orientation are by Twiner, 1986 (report 22-1103); Rothrock and Moreno, 2015 (report 22-4868); Rynar and Hahn, 2016 (report 22- 5121); and Stanton and others, 2004 (report 22-2628). Data gathered by previously reported archaeological sites were used to develop a predictive model that indicated high and medium probability areas within 4 miles of the Mississippi River (Lee et al. 2003, report 22-2572). A literature review revealed five cultural resources surveys that located 6 archaeological sites and 11 standing structures within the Project Area. There are three standing structures (48-00431, 48-01032, and 48-01185) within 0.5 miles of the Project Area. With the exception of Angelina Plantation (16SJB 68) and the 1915 Memorial Cemetery (16SJB69), all of the archaeological sites are more than 0.5 miles from the Project Area. The standing structure (48-01185) near Angelina Plantation was evaluated in May 2014 and found not to meet any NRHP criteria (Wells et al. 2014, report 22-4571).

The majority of the Project Area is forested wetlands with higher elevations to the south that are either developed or farmland. The Angelina Plantation is a recorded archaeological site (16SJB68) on the southwestern side of the Proposed Action that has been surveyed for various activities (Beavers and Chatelain 1979, report 22-0641; Foreman et al 2016, report 22-5158; Rothrock and Moreno 2015, report 22-4868; Wells 2008, report 22-3023). Those east-west surveys in the northern part of the plantation produced no indication of significant historic activity (Beavers and Chatelain 1979, report 0498; Hubachen 2014, report 22-4531; Watkins 1994, report 22-1807). Angelina Plantation was recorded as an archaeological site and much of the southern part was evaluated in 2012 (Glass and Jackson 2013, report 22-4288). Locus A, which is an area of archaeological deposits representing slave quarters and later tenant houses for Angelina Plantation, located in the southwestern part of the site was tested in 2014 and approximately half of the 431 acre Locus A area was recommended eligible for the NRHP (Glass et al 2014, report 22-4690). A portion of the Project Area was surveyed for cultural resources in May 2014 for the "Phase I Cultural Resources Survey and Reconnaissance of Alternative C, West Shore Lake Pontchartrain Levees Project, St. John the Baptist and St. Charles Parishes, Louisiana" (Wells et al. 2014, report 22-4571). Part of the Angelina Plantation was evaluated during the 2014 survey and determined not eligible for the NRHP, and the Frenier 1915 Memorial Cemetery was evaluated and recommendations made that the site is considered a potential cultural property and avoidance was recommended. A large part of the vicinity of the Proposed Action was surveyed as part of the Maurepas Pipeline Project by Rothrock and Moreno (2015, report 22-4868). These surveys included six of the proposed access roads. None of the areas surveyed for the Maurepas Pipeline Project in St. John the Baptist Parish produced archaeological remains.

A Programmatic Agreement (PA) regarding the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction System was executed on May 16, 2014, among SHPO, the Advisory Council of Historic Preservation (ACHP) and the CEMVN pursuant to Section 106 of the National Historic Preservation act and its implementing regulation found at 36 CFR 800.14(b). The stipulations of the PA would be implemented and complied with for the proposed project.

3.2.7 Soils and Prime and Unique Farmlands

Historic and Existing Conditions

Farmland classification soil survey data provided by NRCS in February 2019 determined that prime farmland is located within the Project Area. However, unique farmland is not located in the Project Area. Affected soils in the area include Cacienné silt loam, Cacienné silty clay, Carville silt loam, Gramercy silty clay, and Schriever clay which are best suited for food, feed, fiber, forage, and oilseed crops. All of the proposed staging and stockpile areas contain prime farmland. Prime farmland in the Project Area is currently dedicated to common Bermuda grass, improved Bermuda grass, soybeans, wheat, sugar cane, bahia grass, and corn. No other agricultural activities are currently taking place in the Project Area.

3.2.8 Aesthetics and Visual Resources

Historic and Existing Conditions

Aerial photography shows visual conditions of the area changed over the past 20 years. The landscape along with its view sheds have changed due to development and the conversion of swamps into marsh and open water. The scenery has changed from natural to a more developed state with residential, commercial and industrial development dominating US-61, US-51 and US-44, and other corridors. The only major exception is I-10, which traverses the area, giving near unobstructed views of a native landscape that remains aesthetically pleasing. Primary view sheds have been and still are best taken from the local road system and in some instances the Mississippi River levee.

There are two Scenic Streams in the area's vicinity. Blind River stretches south 25 miles from Lake Maurepas, crossing under I-10 and ending near US-61 west of the Project Area. Bayous LaBranche and Trepagnier are located east of the Project Area sourcing from Lake Pontchartrain and stretching south, crossing under I-10 and US-61 and ending near Norco (Bayou Trepagnier) and Good Hope (Bayou LaBranche). Other water resources in the vicinity include the Mississippi River, numerous canals, streams, and creeks that crisscross the native habitat between I-10 and the developed areas along the river.

There is a Scenic Byway in the vicinity which includes the Great River Road traversing US-61. The Great River Road is one segment to an overall scenic byway that stretches on multiple thoroughfares from Canada to the Gulf of Mexico. It is state and federally designated and has an "All American Road" status, making it significant in culture, history, recreation, archeology, aesthetics, and tourism.

3.2.9 Recreational Resources

Historic and Existing Conditions

The Project Area overlaps with parts of the southern perimeter of the 124,567-acre MSWMA. There are a few private camps in the MSWMA. The LDWF provides 16 self-clearing permit stations located throughout the MSWMA. Access into the MSWMA area is generally by boat via the numerous boat launches in the area; however, several locations provide foot access. Many canals and bayous traverse the MSWMA. Consumptive recreation includes hunting deer, squirrels, rabbits, and raccoons; fishing for bass, sunfish and crappie; and trapping alligators

and nutria. Non-consumptive recreation includes bird watching, sightseeing, and boating. There is a 0.5 mile nature trail and two tent-only camping areas in the MSWMA

Within the Project Area, Cajun Pride Swamp Tours is located off Frenier Road near US-51. This commercial operation provides boat tours in their private refuge and in the Manchac Swamp. Belle Terre Country Club and Golf Course is located in the Project Area, providing various recreational facilities including a golf course, outdoor swimming pool, and tennis courts. There are local recreational parks including Regala Park, Montz Park, Bethune Park, and Laplace Recreation and Youth Organization (Larayo) Youth Park. Regala Park facilities include an outdoor swimming pool, softball/baseball fields, picnic pavilions, tennis courts, playground, racquetball courts, 1 mile walking path, and soccer field. Montz Park provides a walking path, baseball fields, basketball courts, playground, and picnic pavilions. Bethune Park provides baseball fields. Larayo Youth Park provides baseball fields, tennis courts, and a swimming pool.

3.2.10 Environmental Justice

Environmental Justice (EJ) is institutionally significant because of Executive Order 12898 of 1994 (EO 12898) and the Department of Defense's Strategy on Environmental Justice of 1995, which direct Federal agencies to identify and address any disproportionately high adverse human health or environmental effects of Federal actions to minority and/or low-income populations. Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, Pacific Islander, 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 as of 2017 are those whose income is at or below \$24,500 for a family of four and are identified using the Census Bureau's statistical poverty threshold. The Census Bureau defines a "poverty area" as a census tract or block group with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level.

Historic and Existing Conditions

An EJ analysis focuses on the potential for disproportionately high and adverse impacts to minority and low-income populations during the construction and normal operation of the Federal action, in this case, the proposed surveys and borings activities. The analysis will assess if EJ communities are disproportionately exposed to high and adverse effects of the Federal action. If the impact is appreciably more severe or greater in magnitude on minority or low-income populations than the adverse effect suffered by the non-minority or non-low-income populations after taking offsetting benefits into account, then there may be a disproportionate finding. Avoidance and mitigation are then required.

Environmental Justice: Minority and Low-Income Population

The communities that are located in the study area include Garyville, Reserve, and Laplace, all within St. John the Baptist Parish. All three of these communities are identified by the US Census Bureau (USCB) as a Census Designated Place (CDP).

In order to identify whether the potential alternatives may disproportionately affect minorities or impoverished citizens, an analysis was conducted utilizing CDP data, obtained from the USCB's American Community Survey (ACS). The following information was collected in the study area.

Racial and Ethnic Characteristics – race and ethnic populations in each CDP were characterized using the following racial categories: White, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some Other Race, and Two or more Races. Persons of Hispanic Origin are also identified. These categories are consistent with the affected populations requiring study under Executive Order 12898. See Table 5 for a listing of race and ethnic characteristics for the CDPs in the Study area.

Percentage of Minority Population – As defined by the USCB, the minority population includes all non-Whites. According to Council of Environmental Quality (CEQ) guidelines, “Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.” See Table 6 for a listing of race and ethnic characteristics for the CDPs in the Study area.

Low-Income Population – The percentage of persons living below the poverty level, as identified in the 2013-2017 ACS, was one of the indicators used to determine the low-income population in a CDP. Low-income population is defined as a CDP with 20 percent or more of its residents below the poverty threshold.

Population by Race, for each CDP, is shown in Table 5. Two of the three CDPs, Reserve and Laplace, are considered Environmental Justice communities, having approximately 63 and 56 percent minority residents. The vast majority of minority residents are Black or African American while those identifying as “Some Other or Two or more Races” make up 2.4 percent or less of the CDP population. Persons of Hispanic or Latino population (of any race) is no higher than 6.6 percent of the population of any CDP. The percent of residents identifying as minority or of Hispanic/Latino origin in Reserve and Laplace is similar to the minority and Hispanic origin percentages for St. John the Baptist Parish.

Garyville and Reserve CDPs are also EJ communities when considering the poverty threshold criteria. Approximately 32 percent and 21 percent, respectively, of people residing in these communities have incomes in the past 12 months below the poverty level. Approximately 18 percent of residents in St. John the Baptist Parish have incomes below the poverty level. See Table 6 for low income population by CDP.

Table 5: Percentage Minority Population by CDP, Project Area

	St. John the Baptist Parish		Garyville		Reserve		Laplace	
RACE	Estimate	Percent	Estimate	Percent	Estimate	Percent	Estimate	Percent
Total population	43565		2225		9995		28218	
One race	42720	98%	2225	100%	9851	99%	27535	98%
White	17716	41%	1214	55%	3656	37%	12433	44%
Black or African American	24175	56%	1011	45%	5962	60%	14506	51%
American Indian and Alaska Native	0	0%	0	0%	0	0%	0	0%
Asian	391	1%	0	0%	25	0%	366	1%
Native Hawaiian and Other Pacific Islander	0	0%	0	0%	0	0%	0	0%
Some other race	438	1%	0	0%	208	2%	230	1%
Two or more races	845	2%	0	0%	144	1%	683	2%
Minority	25849	59%	1011	45%	6339	63%	15785	56%
Hispanic or Latino (of any race)								
Total population	43565		2225		9995		28218	
Hispanic or Latino (of any race)	2524	6%	23	1%	635	6%	1866	7%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Table 6: Low Income Population by CDP, Project Area

CDP	Total Population Estimate*	Low Income As Percent of Total Population
Garyville	2,171	32%
Reserve	9,927	20%
Laplace	27,587	15%
St. John the Baptist	42,804	18%

*For Whom Poverty Status is Determined

Source: U.S. Census ACS 2013-2017

3.2.11 Air Quality

Existing Conditions

National Ambient Air Quality Standards (NAAQS) (see Table 7) have been set by the EPA for six common pollutants (also referred to as criteria pollutants) including: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. States are required by the Code of Federal Regulations to report to the EPA annual emissions estimates for point sources (major industrial facilities) emitting greater than or equal to 100 tons per year of volatile organic compounds, nitrogen dioxide, sulfur dioxide, particulate matter less than 10 microns in size; 1,000 tons per year of carbon monoxide; or 5 tons per year of lead. Since ozone is not an emission, but the result of a photochemical reaction, states are required to report emissions of volatile organic compounds (VOC), which are compounds that lead to the formation of ozone.

St. John the Baptist and St. Charles Parishes are currently in attainment for all Federal NAAQS pollutants, including the 8-hour ozone standard (EPA 2013).

Table 7: National Ambient Air Quality Standards

Pollutant	Time Frame	Primary	Secondary	Form
CO	8-hour	9 ppm (10,000 $\mu\text{g}/\text{m}^3$)	NA	Not to be exceeded more than once per year
	1-hour	35 ppm (40,000 $\mu\text{g}/\text{m}^3$)	NA	
Pb ^b	Quarterly	0.15 $\mu\text{g}/\text{m}^3$	0.15 $\mu\text{g}/\text{m}^3$	Not to be exceeded
NO ₂	Annual	0.053 ppm (100 $\mu\text{g}/\text{m}^3$)	0.053 ppm (100 $\mu\text{g}/\text{m}^3$)	Annual mean
	1-hour	0.100 ppm	NA	98 th percentile, averaged over 3 years
O ₃ ^c	8-hour	0.070 ppm (150 $\mu\text{g}/\text{m}^3$)	0.070 ppm (150 $\mu\text{g}/\text{m}^3$)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM _{2.5}	Annual	12 $\mu\text{g}/\text{m}^3$	15 $\mu\text{g}/\text{m}^3$	Annual mean, averaged over 3 years
	24-hour	35 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$	98 th percentile, averaged over 3 years
PM ₁₀	24-hour	150 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$	Not to be exceeded more than once per year on average over 3 years
SO ₂ ^d	3-hour	NA	0.5 ppm (1,300 $\mu\text{g}/\text{m}^3$)	Not to be exceeded more than once per year
	1-hour	75 ppb (195 $\mu\text{g}/\text{m}^3$)	NA	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years

- a $\mu\text{g}/\text{m}^3$ = micrograms per m³; Pb = lead; O₃ = ozone; ppb = part(s) per billion.
- b In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 $\mu\text{g}/\text{m}^3$ as a calendar quarter average) also remain in effect.
- c Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.
- d The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (b) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a State Implementation Plan (SIP) call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the require NAAQS.

3.2.12 Noise

Historic and Existing Conditions

There are noise ordinances in St. Charles and St. John the Baptist parishes. The maximum permissible sound levels for St. John the Baptist parish during the hours of 7:00 am to 10:00 pm are 70 dBA for residential areas and 75 dBA for business and commercial areas (Code 1988, § 16:126; Ord. No. 88-66, 7-28-1988). The maximum permissible sound levels for St. Charles parish during the hours of 7:00 am to 10:00 pm are 60 dBA for residential areas and 65 dBA for commercial areas (St. Charles Parish Code §24-1 et seq.; Ord. No. 09-7-12, § 1, 7-20-09).

Background noise levels surrounding the St. Charles, St. James, and St. John the Baptist Parishes are variable depending on the time of day and climatic conditions. Near developed areas, automobile and train traffic, and to a lesser extent air traffic, contribute to the background noise levels.

A number of sensitive noise receptors are located adjacent to or near the Project Area such as parks, wildlife management areas, and wildlife. These public lands are sensitive noise receptors where serenity and quiet are an important public resource. The areas with the greatest number of sensitive noise receptors, such as residential homes and apartments, schools, churches, and parks, are located in St. James and St. John the Baptist Parishes. They are located adjacent to the I-10 and I-55 highway system and along state route 3125. In addition, rural neighborhood communities such as Gramercy and Grand Point contain a large number of residential sensitive noise receptors in St. James Parish.

3.2.13 Transportation

Existing Conditions

There are two major roadways within the Project Area, US Highway 61 and US Highway 51. Louisiana Department of Transportation & Development conduct routine traffic counts on major roadways. Table 8 presents Estimated Annual Average Daily Traffic Routine Traffic Counts on US Highway 61 (W. Airline Highway) and US Highway 51 (New Highway 51).

Table 8. Annual average daily traffic for major traffic routes within the project area.

Annual Average Daily Traffic (AADT)			
US Highway 61		US Highway 51	
Year	AADT	Year	AADT
2017	20,755	2017	17,734
2014	15,772	2014	7,615
2011	16,032	1999	15,173
2008	18,562	1997	10,800
2005	14,058	1994	10,130
2002	14,499	1991	9,752

State of Louisiana Department of Transportation & Development

4 Environmental Consequences

This section describes the environmental consequences of the No Action Alternative (Future Without-Project Conditions; FWOP) and the Proposed Action Alternative (Future Conditions with the Proposed Action; FWP). Indirect and direct impacts are discussed for each scenario and resource section. Cumulative effects are discussed in Section 4.14.

Impacts incurred as part of the No Action Alternative would mirror the Structural Alignment impacts of the recommended plan presented in the 2016 WSLP EIS, which is incorporated here by reference. The sections presenting the impacts related to the No Action Alternative summarize relevant information from the 2016 WSLP EIS approved plan, because funding for construction of this feature is authorized by BBA 2018, PL 115-123 and this scenario represents the predicted course of events absent approval of the proposed action. Impacts associated with clearing and grubbing activities that are not a part of the Proposed Action (see section 2.4 for more details) would occur within the 2016 WSLP EIS impact footprint under the prior-approved plan.

For an evaluation of the anticipated impacts if the Corps were to take no action to construct the WSLP Project, including under the previously-approved plan, refer to the evaluation of the No Action Alternative and Future Without Project Condition contained in the 2016 WSLP EIS, which evaluation is incorporated here by reference.

5.1 Wetlands

No Action Alternative

Forested wetland habitats within the vicinity are degraded and this trend is expected to continue into the future (Shaffer et al., 2009; Shaffer et al., 2016; Breland pers. communication, 2018).

WSLP Project levee construction would directly impact approximately 1,114 acres of swamp (595.6 AAHUs) and approximately 120 acres of BLH (95.5 AAHUs). Levee construction would also indirectly impact approximately 8,432 acres of swamp (494.5 AAHUs) and 89 acres of BLH (3.1 AAHUs). These impacts could include some rare and unique or imperiled vegetation communities (LDWF, 2013). All unavoidable impacts associated with the WSLP Project would be mitigated using only the mitigation plan outlined in the 2016 WSLP EIS. Mitigation plan features (total of 1,189 AAHUs) would occur in the Lake Pontchartrain Basin watershed.

Under the No Action Alternative, 213 acres of wetlands, including 167 acres of swamp and 46 acres of BLH, would not be permanently destroyed by the creation of new access routes, investigation corridors and stockpile and staging areas.

Proposed Action Alternative

Direct Impacts: The Proposed Action would have approximately 167 acres of direct, negative impacts to swamp habitat (approximately 91 AAHUs), and would have approximately 46 acres of direct, negative impacts to BLH habitats (approximately 36 AAHUs). These acres would be cleared and grubbed and the trees felled. The total impacts to wetlands associated with the Proposed Action are approximately 213 acres and 127 AAHUs. These impacts are described below. See Table 9 indicating impacts to wetlands by the Proposed Action.

Table 9. Total direct wetland impacts associated with the Proposed Action.

Description	Total Acres	Wetland Acres	Swamp Acres	BLH Acres	Total AAHUs	Swamp AAHUs	BLH AAHUs
100 ft. clearing and grubbing corridor for surveys and borings	138	135	115	20	79	63	16
access roads for surveys and borings*	91	78	52**	26**	48	28	20
TOTAL	229	213	167	46	127	91	36
100 ft. clearing and grubbing corridor for surveys and borings X LDWF land	42	42	42	0	24	24	0
access roads for surveys and borings* x LDWF land	7	7	4	3	4	2	2
TOTAL for LDWF property	49	49	46	3	28	26	2

*Access road impacts represent maximum based on USFWS's National Wetland Inventory. Aerial photography and on the ground surveys indicate that some of this includes existing roads; therefore it represents an estimated maximum wetland impact

**Estimated using Shafer et al., 2016 map

Clearing and grubbing of the 100-foot corridor would remove all vegetation and debris on approximately 115 acres (approximately 63 AAHUs) of swamp habitat and 20 acres (approximately 16 AAHUs) of BLH habitat. Vegetation would be allowed to regrow in areas that are not converted to other uses (such as levee). However, these impacts are considered to be permanent because the low recruitment of trees within the area indicate regrowth is unlikely (Shafer et al., 2009, Breland pers. communication 2018).

Clearing of vegetation for access roads would remove vegetation and debris from approximately 22 acres (approximately 12 AAHUs) of swamp habitat and 11 acres (approximately 9 AAHUs) of BLH habitat.

A total of 49 acres (46 acres, 26 AAHUs for swamp; 3 acres and 2 AAHUs for BLH) of negative impacts to forested wetlands would occur on LDWF property. There would be seven (4 acres, 2 AAHUs for swamp, and 3 acres and 2 AAHUs for BLH) acres of impacts associated with access roads and 42 (42 acres, 24 AAHUs all swamp) acres associated with the 100-foot clearing and grubbing corridor.

All activities within stockpiling and staging areas would have no wetland or BLH impacts. A no work zone buffer of 50 feet would be maintained around all wet pasture wetlands within stockpile areas. A no work zone buffer of 150 feet or trip drip line, whichever is longest, would be maintained around all forested wetlands within the stockpile areas.

Indirect Impacts: The Proposed Action could have minor indirect impacts to vegetation resources of an unknown nature due to altered hydrology. Clearing and grubbing of the 100-foot corridor and improvement of access roads could alter hydrology which could impact vegetation resources. The nature of these impacts are not known, but are expected to be minor. See indirect impacts in the water quality section for more information.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation

banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

All impacts to wetlands would be offset through either the purchase of mitigation bank credits or the construction of new, restored or enhanced habitats to replace the lost habitats in accordance with the Clean Water Act, Section 404(b)(1) and the Water Resources Development Act of 1986, Section 906, as amended.

5.2 Wildlife Resources

No Action Alternative

WSLP Project levee construction would directly or indirectly impact approximately 9,758 acres of high quality wildlife habitat (forested wetlands) if the proposed action is not implemented. During construction any wildlife present would relocate to avoid the construction but could quickly return to any areas that have not converted to other land uses after construction ends. Some aquatic wildlife ingress and egress from the protected side of the levee would be limited.

Under the No Action Alternative, conversion of 213 acres of forested wetland to open water and/or freshwater emergent habitats would not occur.

Proposed Action Alternative

Direct Impacts: The Proposed Action would have long-term negative impacts, and short-term temporary, negative impacts to wildlife resources.

The Proposed Action would convert 213 acres of forested wetland to open water and/or freshwater emergent habitats. During construction, wildlife species would either relocate to adjacent habitats or expire. Since the existing habitat will be converted from swamp to marsh or open water, some of these species may never return. Temporary impacts would also occur in the vicinity of the Proposed Action. Use and transportation of equipment could cause wildlife in the vicinity of the Proposed Action to relocate. However, they would likely return to the vicinity after the Proposed Action is completed.

Indirect Impacts: Indirect, impacts to wildlife could occur as a result of altered hydrology affecting forested wetlands. See Indirect Impacts in the Water Quality and Wetlands sections for more information. Wildlife species pushed from impacted areas into adjacent habitat may exceed the carrying capacity of the adjacent habitat and affect the overall health of the population for that species. This may be a temporary or permanent impact depending on the species. However, if CEMVN constructs new habitats to replace the lost habitats within the vicinity of the project area, upon completion of mitigation measures and replacement of the impacted habitat, these same species may experience rebound.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant

to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.3 Aquatic Resources/Fisheries

No Action Alternative

WSLP Project levee construction would convert approximately 1,114 acres of existing benthos swamp habitat into upland grass covered (levee) habitat. Sessile organisms would be buried during construction and expire. Mobile species of fish, shellfish and other aquatic resources would either avoid the area during construction (fish) or be moved out of the way due to water displacement (plankton). Up to 8,432 acres of forested wetland and swamp habitats utilized by aquatic and fisheries resources could be indirectly impacted when those acres are enclosed by a levee and other flood risk reduction structures that would reduce migration of organisms, and alter the hydrology and water quality. Aquatic organism access ingress and egress from the Project Area would be impacted.

Under the No Action Alternative, conversion of 213 acres of forested wetland to open water and/or freshwater emergent habitats would not occur.

Proposed Action Alternative

Direct Impacts: The Proposed Action would have temporary negative impacts and minor long-term negative impacts to aquatic resources and fisheries.

The Proposed Action would convert 213 acres of forested wetland to open water and/or freshwater emergent habitats. Sessile aquatic organisms could be injured or killed during clearing and grubbing of the 100-foot corridor, and or during the vegetative clearing of the access roads. Mobile species of fish, shellfish and other aquatic resources would either leave the area during clearing and grubbing (fish), or expire, or be moved out of the way due to water displacement (plankton).

Forested wetlands and emergent vegetation are generally of higher quality than open water habitats. The Proposed Action impacts to aquatic resources and fisheries are considered to be minor for two reasons. One, it is likely that some of the swamp habitat would be converted to high quality emergent vegetation habitat. Two, all unavoidable impacts to forested wetlands would be mitigated by construction of replacement habitat or through the purchase of mitigation bank credits.

Indirect Impacts: The Proposed Action would have minor indirect impacts to vegetation resources of an unknown nature. Aspects of the Proposed Action could alter the hydrology which could produce minor indirect impacts. Clearing and grubbing of the 100 foot corridor and improvement of access roads could alter hydrology. The altered hydrology could impact aquatic resources and fisheries beyond those directly impacted. The nature of these impacts are not known, but are expected to be minimal. See Water Quality Section for more details.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.4 Threatened and Endangered Species

No Action Alternative

A discussion on potential impacts to bald eagles, colonial nesting waterbirds, Gulf sturgeon, and West Indian manatees was included in the 2016 WSLP EIS. The 2016 WSLP EIS was found to not likely to adversely affect any listed species. WSLP Project levee construction would directly or indirectly impact approximately 9,758 acres of high quality wildlife habitat (forested wetlands). This plan would destroy approximately 1,237 acres of primarily swamp habitats and BLH. However, other adjacent habitats are available for listed species.

Under the No Action Alternative conversion of 213 acres of primarily swamp and BLH, potentially utilized by the bald eagle and colonial nesting waterbirds would not occur.

Proposed Action Alternative

Based on review of existing data, preliminary field surveys, the rarity of occurrences, and the use of best management practices (BMPs) documented in Appendix A, Annex N of the 2016 WSLP EIS and described below, CEMVN has determined that the Proposed Action is not likely to adversely affect any of the listed species, bald eagles or colonial nesting water birds. USFWS guidelines would be utilized during construction of the Proposed Action to avoid any impacts to the species described below, if encountered.

There are existing bald eagle nests in the area; however, based on information provided by USFWS, all nests are beyond 650 feet from features of the Proposed Action. Two potentially active colonial nesting water bird rookeries exist within 1,000 feet of the proposed alignments. Initial field surveys are underway and the USFWS and CEMVN will continue to survey the area to confirm whether or not the rookeries are active. Additionally, the entire Proposed Action ROWs will be surveyed for colonial nesting waterbirds and bald eagle nests. To deter colonial nesting water birds from establishing active nesting colonies in the vicinity, a Nesting Prevention Plan is being developed, in coordination with the USFWS and LDWF.

If measures to prevent colonial nesting bird populations are not successful in the area, activities that would occur within 1,000 feet of a colony could be restricted to the non-nesting period, which in this region generally extends from September 1 to February 15, depending on the species present. This restriction would likely pose significant problems to schedules. If waterbird nesting colonies become established in the area, the 1,000 foot buffer must be maintained unless coordination with the USFWS indicates that the buffer zone may be reduced based on

the species present or an agreement is reached with USFWS that allows a modified process to be adopted.

During in-water work in areas that potentially support manatees, all personnel associated with the project would be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel would be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel would be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable.

Direct Impacts: The Proposed Action would directly impact 213 acres of primarily swamp and BLH, destroying habitats potentially utilized by the bald eagle and colonial nesting waterbirds: and forcing those species to utilize other adjacent forested wetlands and swamp habitats.

Indirect Impacts: Clearing and grubbing of the 100 foot corridor and improvement of access roads could alter hydrology in the vicinity of the Proposed Action. These hydrologic alterations could also have indirect impacts to adjacent vegetation resources. Negative vegetation impacts could affect Bald and Golden Eagle Protection Act (BGEPA) or MBTA trust species. See the Water Quality and Wetlands sections for more information.

Much of the adjacent area and vicinity is forested wetlands and swamp habitats. ESA, BGEPA, and MBTA trust species could move to adjacent habitats because of indirect and direct impacts associated with the proposed action. None of the Proposed Action area or vicinity is critical habitat for the West Indian manatee or the Gulf sturgeon, and those species are thought to visit the vicinity of the Proposed Action only seasonally and infrequently. Therefore, it is not likely that a loss in habitat would affect ESA trust species. Bald eagles and colonial waterbirds frequent the vicinity of the Proposed Action. The alteration of habitat and subsequent relocation of BGEPA and MBTA trust species as a result of the Proposed Action could have population level impacts if adjacent habitats are at or near carrying capacity in the abundant, adjacent forested wetlands, however, such impacts are not expected. Best management practices, including monitoring, use of recommended buffers, and development of a nesting prevention plan for colonial nesting waterbirds would minimize impacts to bald eagles and colonial waterbirds. Additionally, if CEMVN constructs new habitat in the vicinity to replace the impacted habitat, upon completion of mitigation measures and replacement of the impacted habitat, any impacts to BGEPA and MBTA trust species could be reduced or eliminated. Therefore, it is expected that any relocation of ESA, BGEPA, or MBTA trust species caused by the proposed action would be a minor indirect impact.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.5 Water Quality

No Action Alternative

Structural measures would provide storm damage risk reduction for communities in St. John the Baptist and St. Charles Parishes. Levee construction would reduce the risk of flow and water levels in the interior of the protected levee and pump system during a storm surge. Major indirect impacts would be a decrease in tidal interchange between the interior (protected side) and exterior (unprotected side) areas of the levee alignment.

Sedimentation and erosion impacts associated with levee construction would generally be minor and short-term, lasting only during construction of the proposed project features. Indirect impacts would include significant reduction of erosion and sedimentation associated with storm events.

Levee construction would result in some wetland and open water areas being converted to upland habitat, which would no longer provide water quality benefits. Because fill and construction materials are anticipated to be free of contaminants, discharge of these materials into existing adjacent waters is not expected to result in adverse effects to aquatic organisms. Indirect impacts include the interruption of water exchange between the flood and protected side of the levee system.

Under the No Action Alternative, there would be no disturbances to ambient water and sediment by the Proposed Action.

Proposed Action Alternative

Direct Impacts: During the Proposed Action, there would be some disturbances to ambient water and sediment quality; however, direct impacts would be short-lived and highly localized. Temporary reductions in light penetration due to increased turbidity may indirectly affect phytoplankton (i.e., primary) productivity in the area as the amount of photosynthesis carried out by phytoplankton is reduced. Localized temporary pH changes, as well as a reduction in dissolved oxygen levels, may also occur during the Proposed Action. Water quality is expected to return to pre-construction conditions soon after the completion of the Proposed Action.

Indirect Impacts: The Proposed Action would convert 213 acres of forested wetlands to open water and/or freshwater emergent vegetation habitat. This habitat change could slightly alter hydrology of the Project Area and vicinity. The complete extent and nature of this alteration is unknown. However, the stockpiling of vegetation would impede flow into, out of, and within the 100-foot clearing and grubbing corridor. The removal of trees could also affect the hydrology. Trees and other vegetation buffer flow and decrease flow velocities, which facilitates many important ecosystem processes, such as the uptake of nutrients, filtering of pollutants, and sediment deposition. There are many hydrologic modifications in the vicinity, including maintained right of ways, impoundment, saltwater intrusion, and a lack of nutrient and sediment inputs. Therefore, it is expected that indirect impacts would be minimal.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales.

These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.6 Cultural Resources

No Action Alternative

In the Future Conditions with No Action, the Proposed Action would not occur. Surveys and borings data would not be gathered outside of the 2016 WSLP EIS ROW. However, surveys and borings would take place in the vicinity but only in the WSLP Project Area as identified in the 2016 EIS. Environmental compliance has been achieved (2016 WSLP EIS) and funding has been authorized (PL 115-123) for the WSLP Project. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). Under the No Action alternative, cultural resource surveys of the proposed new corridors, routes and stockpile/staging areas would not occur and undiscovered resources in those areas would not be disturbed. The CEMVN would implement and comply with the stipulations identified in the PA for the West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System as executed on May 16, 2014.

Proposed Action Alternative

Several locations subject to activities associated with the proposed 600 foot wide surveys and borings corridor were surveyed for the 2016 WSLP EIS (Figure 4) and were documented in the management summary "Phase I Cultural Resources Survey and Reconnaissance of Alternate C, West Shore Lake Pontchartrain Levees Project, St. John the Baptist and St. Charles Parishes, Louisiana" (Wells et al. 2014, report 22-4571). The Frenier 1915 Memorial Cemetery (16SJB69) is outside of the Proposed Action area and would not be impacted by the activities associated with the Proposed Action. Angelina Plantation (16SJB68) is located on the west side of the Proposed Action area in an area where clearing and grubbing of trees is to occur as part of the Proposed Action. The clearing and grubbing activities would occur in a portion of the Angelina Plantation site that has been determined ineligible for listing to the NRHP. On December 13, 2018, a records search was conducted for the entire project area through the SHPO Geographic Information System (GIS) database; the site record for the Frenier 1915 Memorial Cemetery is the only new site information reported since then. The eastern portion of the Proposed Action near Lake Pontchartrain has not been previously surveyed for cultural resources and little is known regarding the presence of cultural resources. This area would be subjected to standard field practices to identify cultural resources prior to work associated with the Proposed Action.

Temporary areas for stockpiling vegetation, timber, and construction material would be used. All five stockpile areas would be north of Airline Highway (U.S. 61) on previously cleared ground. Limited archaeological survey of 47 acres in the vicinity of Stockpile Area 1 by Fogg et al. (2012, report 22-3718) produced negative results. Roussel's Restaurant and Bar (structure 48-00431) located just outside of Stockpile Area 1 at 650 East Airline Highway has been determined not eligible for the NRHP. There have been no standing structure or archaeological surveys on or near Stockpile Area 2. Airline Reserve is a standing structure (48-01032) on the south of Stockpile Area 3. Several archaeological surveys have been conducted in the vicinity of

Stockpile Area 4 and 5 (Rothrock and Moreno 2015, report 22-4868; Kelley and Blank 2013, report 22-4327; Foreman and others 2016, report 22-5158; Hale and others 2011, report 22-3793). There have been no standing structure surveys in the vicinity of either Stockpile Area 4 or 5. Due to the limited coverage of the archaeological surveys in or near the proposed five stockpile areas, all would be subjected to standard field practices to identify cultural resources prior to work associated with the Proposed Action.

Temporary access roads planned for the project would be used to haul equipment and personnel for surveys and borings activities. Many follow existing roads or are along pipeline routes that have been surveyed previously for cultural resources by Rothrock and Moreno (2015, SHPO report 22-4868). The four unsurveyed roads are all in St. John the Baptist Parish and would be investigated for cultural resources prior to work associated with the Proposed Action.

The CEMVN would implement and comply with the stipulations identified in the PA for the West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System as executed on May 16, 2014.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.7 Soils and Prime and Unique Farmlands

No Action Alternative

Under the FWOP condition, the Proposed Action would not occur. Surveys and borings data would not be gathered outside of the 2016 WSLP EIS ROW. However, surveys and borings would take place but only in the WSLP Project Area as identified in the 2016 EIS. Environmental compliance has been achieved (2016 WSLP EIS) and funding has been authorized (PL 115-123) for the WSLP Project. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). With the No Action Alternative, 1,008 acres of prime farmland soils located within the Proposed Action area would not be affected. Prime and unique farmland resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices and policies.

Proposed Action Alternative

Direct Impacts: Implementation of the Proposed Action would result in the temporary removal of 1008 acres of prime farmland soils from agricultural use and into use as stockpile areas for the Proposed Action. The loss of prime farmland soils as a result would not be significant to agricultural production locally or regionally, as those soils would be only temporarily impacted

and the vicinity has ample farmland. The areas to be impacted are currently dedicated to common Bermuda grass, improved Bermuda grass, soybeans, wheat, sugar cane, bahia grass, and corn, and would not remain available for the duration of activity.

Stockpile Area 1 consists of 583 acres of which approximately 98% is rated as prime farmland. The majority of the 571 acres of prime farmland consists of Carville silt loam. A very small amount of the prime farmland consists of Cacicenne silt loam.

Stockpile Area 2 consists of 40 acres of which approximately 100% is rated as prime farmland. The entire prime farmland consists of Carville silt loam.

Stockpile Area 3 consists of 98 acres of which approximately 100% is rated as prime farmland. Approximately 43% of the prime farmland consists of Schriever clay. Approximately 22% of the prime farmland consists of Cacicenne silt loam. Approximately 20% of the prime farmland consists of Cacicenne silty clay. Approximately 15% of the prime farmland consists Gramercy silty clay.

Stockpile Area 4 consists of 143 acres of which approximately 100% is rated as prime farmland. Approximately 69% of the prime farmland consists of Cacicenne silt loam. Approximately 21% of the prime farmland consists of Cacicenne silty clay. Approximately 10% of the prime farmland consists of Schriever clay.

Stockpile Area 5 consists of 156 acres of which approximately 100% is rated as prime farmland. Approximately 50% of the prime farmland consists of Cacicenne silt loam. Approximately 24% of the prime farmland consists of Cacicenne silty clay. Approximately 20% of the prime farmland consists Gramercy silty clay. Approximately 6% of the prime farmland consists of Carville silt loam.

Indirect Impacts: There would be no indirect impacts through implementation of the Proposed Action as the stockpile/staging areas would be returned to pre-existing conditions upon project completion and no material is being mined from these areas.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.8 Aesthetics and Visual Resources

No Action Alternative

In the FWOP condition, the Proposed Action would not occur. Surveys and borings data would not be gathered outside of the 2016 WSLP EIS ROW. However, surveys and borings would take place but only in the WSLP Project Area as identified in the 2016 EIS. Environmental

compliance has been achieved (2016 WSLP EIS) and funding has been authorized (PL 115-123) for the WSLP Project. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). Similar impacts would still occur from access, clearing and grubbing, stockpiling of debris, and other surveys adjacent to the Proposed Action, but within the 2016 WSLP EIS Structural Alignment ROW. Much of the previously authorized levee system would be in areas that are screened by deep forest and swamp, or are remote and have minimal access. Where once a natural landscape of water, marsh, or swamp could be seen, a green topped levee with a wide footprint and storm damage walls would now be seen; however, the limited impacts to visual resources from the Proposed Action would not occur.

Proposed Action Alternative

Direct Impacts: Direct impacts from the Proposed Action to visual resources would be minimal in residential and agricultural areas. Much of the clearing and grubbing within the 100-foot wide corridor, access roads, and stockpile areas would be in areas that are screened by forested wetlands or are remote and have minimal access. The River Road Scenic Byway may see minimal increases in truck traffic, dust, and noise levels during activities associated with the Proposed Action thus reducing the visual quality of the drive. This is a temporary impact and conditions should return to existing conditions after completion. View sheds from I-10 may also be altered near the intersection with I-55 and further west where the proposed 100-foot wide clearing and grubbing corridor crosses under the interstate. Where once a natural landscape of water, marsh, or swamp could be seen, a 100-foot wide corridor void of vegetation would now be seen. Approximately 1 mile of the proposed 100-foot wide clearing and grubbing corridor is within the MSWMA. The MSWMA may be temporarily less accessible by land and water to recreation users.

Indirect Impacts: The affected area of wetlands south of the proposed 100-foot wide clearing and grubbing corridor could change the landscape of the region due to changes in water quality as the result of the removal of vegetation. Runoff and water exchange alterations could lead to localized changes in plant communities near activity. Further examination is provided in the Water Quality and Wetlands Sections.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.9 Recreation Resources

No Action Alternative

In the FWOP condition, the Proposed Action would not occur. Surveys and borings data would not be gathered outside of the 2016 WSLP EIS ROW. However, surveys and borings would

take place but only in the WSLP Project Area as identified in the 2016 EIS. Environmental compliance has been achieved (2016 WSLP EIS) and funding has been authorized (PL 115-123) for the WSLP Project. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). Impacts would still occur from access, clearing and grubbing, stockpiling of debris, and other surveys adjacent to the Proposed Action, but within the 2016 WSLP EIS Structural Alignment ROW. Under the No Action alternative, there would be no impacts to recreation due to stockpiling of borrow or the staging of construction materials in the stockpile/staging areas near parks or pools and no disruption of access to recreation areas that could be caused by clearing and grubbing activities.

Proposed Action Alternative

Direct Impacts: Stockpile area 4 is adjacent to River Parishes Community College Reserve Campus as well as Regala Park. Regala Park recreational facilities include an outdoor swimming pool, softball/baseball fields, picnic pavilions, tennis courts, playground, racquetball courts, 1 mile walking path, and soccer field. Due to adjacent trucking traffic and the potential for increased noise and dust that could temporarily impact park users during the project, a buffer measure would be considered in proximity to these facilities. A temporary buffer of a 100 percent sight-obscuring fence, a minimum of eight feet in height, for the duration of work would be considered where recreational resource use is high. Working hours in the stockpiling areas would be limited to weekday daylight hours. Best management practices for dust abatement would be used, including maintaining a water truck onsite to water down areas within stockpiles and when hauling along access roads. Final layout of stockpile area configurations at one or more of the potential stockpile areas would locate stockpiles and staging sites as far as feasibly possible from residences and recreational areas.

Habitat changes associated with the proposed action (i.e., clearing 49 acres of forests) and other similar would have negative impacts to recreational resources within the MSWMA such as hunting and wildlife viewing opportunities. See Wetlands section for a breakdown of forest impacts to LDWF property.

Indirect Impacts: With the proposed 100-foot wide clearing and grubbing corridor, recreationists may have less access to MSWMA. Approximately 1 mile of the proposed 100-foot wide clearing and grubbing corridor is within the MSWMA. The MSWMA may be less accessible by land and water to recreational users as a result of the Proposed Action, including but not limited to those who use the Reserve Relief Canal and boat launch. The CEMVN is coordinating with camp owners, the LDWF, and other stakeholders to minimize and reduce indirect recreational impacts associated with the Proposed Action to the extent practicable.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.10 Environmental Justice

No Action Alternative

In the FWOP condition, the Proposed Action would not occur. Surveys and borings data would not be gathered outside of the 2016 WSLP EIS ROW. However, surveys and borings would take place but only in the WSLP Project Area as identified in the 2016 EIS. Environmental compliance has been achieved (2016 WSLP EIS) and funding has been authorized (PL 115-123) for the WSLP Project. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). Impacts from completing surveys and borings necessary for the construction of the 2016 WSLP levee are not expected to have impacts on Environmental Justice (EJ) communities. There are no direct, indirect or cumulative impacts from the surveys and borings that will take place under the previously-approved plan. Under the No Action alternative, EJ communities would not be affected by construction activities at the stockpile/staging areas.

Proposed Action Alternative

Direct Impacts: There are no direct impacts to EJ resources from activities associated with the proposed action.

Indirect Impacts: SEA 570 covers the required NEPA documentation of impacts associated with stockpile sites, which were not discussed in the 2016 WSLP EIS. The surveys and borings activities would not have indirect impacts to EJ communities. However, continued use of the stockpiling and staging areas for construction related activities could result in an increase in truck traffic in the Garyville, Reserve, and Laplace communities. Material could be stockpiled for a period of 3-4 years, until year 2023. A total of five stockpile sites have been identified to hold a total of approximately 4 million cubic yards of material. All five of the stockpile sites are located in St. John the Baptist Parish. Stockpile areas 1 and 2 are in Laplace, Stockpile area 3 is in Reserve, and Stockpile areas 4 and 5 are in Garyville. All three of the communities, Laplace, Reserve, and Garyville, contain EJ communities as defined by minority or low-income criteria. A majority of the material stockpiled will likely be earthen fill (borrow material) to be used for the levee enlargement project. However, trees and other debris from clearing and grubbing of a 100-foot corridor adjacent to the Proposed Action along with clearing wider access routes could be transported to the stockpile sites. Since all five stockpile sites are directly accessed via US Highway 61 (Airline Hwy.) and US Highway 51, high adverse impacts to the community are not anticipated. Highway 61 and Highway 51 are DOTD classified 3, Principal Arterial, 4-lane, divided highways. Additional truck traffic will be evident to residents using this road for several years, as material is transported from the Bonnet Carré Spillway to the stockpile sites. See the Transportation section for more information on transportation impacts. There may be temporary, low adverse impacts felt by the surrounding low income and minority neighborhoods. These impacts, however adverse, are not disproportionate since the minority and low income composition is similar to the Parish as a whole and the benefits of the levee improvement will be felt by both EJ and non EJ communities and outweigh the adverse impacts associated with traffic congestion.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales.

These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.11 Air Quality

No Action Alternative

St. John the Baptist and St. Charles Parishes are currently in attainment for all Federal NAAQS pollutants, including the 8-hour ozone standard (EPA 2013). This classification is the result of area-wide air quality modeling studies. There would be temporary and localized increases in air pollutants related to levee construction under the previously-approved plan. However, it is expected that these parishes would maintain attainment throughout the WSLP construction period. Under the No Action alternative, temporary impacts to air quality due to dust and emissions from activities within the stockpile/staging areas and the new corridors would not occur.

Proposed Action Alternative

Direct Impacts: St. John the Baptist and St. Charles Parishes are currently in attainment of all NAAQS and direct impacts to ambient air quality as a result of the Proposed Action are expected to be temporary, and primarily due to the emissions of surveys and borings equipment. Best management practices for dust abatement would be used, including maintaining a water truck onsite to water down areas within stockpiles and when hauling along access roads. Final layout of stockpile area configurations at one or more of the potential stockpile areas would locate stockpiles and staging sites as far as feasibly possible from residences and recreational areas. Due to the short duration of the Proposed Action, any increases or impacts to ambient air quality are expected to be short-term and minor and are not expected to cause or contribute to a violation of Federal or State ambient air quality standards. The stockpiling of borrow in the staging areas and the use of earthmoving equipment to move this material around those sites and to and from trucks may cause an increase in dust in areas adjacent to those sites throughout the construction period of approximately four years. Once all activities associated with the Proposed Action cease, air quality within the vicinity is expected to return to existing conditions. St. John the Baptist and St. Charles Parishes would remain in attainment of all NAAQS.

Indirect Impacts: Any indirect impacts to ambient air quality as a result of the Proposed Action are expected to be temporary, and primarily due to the emissions of surveys and borings equipment.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation

bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.12 **Noise**

No Action Alternative

There would be increased noise levels related to levee construction within the WSLP Project ROW and in adjacent areas. Noise effects associated with levee construction are expected to be localized, temporary and minor.

Under the No Action Alternative, there would be no temporary and localized increases in noise levels resulting from the Proposed Action.

Proposed Action Alternative

Direct Impacts: There would be temporary and localized increased noise levels during activities during construction of the Proposed Action. Effects would be limited to within the immediate vicinity. Felling of trees along the access roads and the 100-foot clearing and grubbing corridor would mostly be in remote areas and would have minor effects on wildlife populations that would already be relocating due to construction activity. Increased traffic associated with transportation of material to stockpiling and staging areas would have minor effects on noise levels. Increases in traffic congestion are expected to be minor and so would increases in associated noise levels. Table 10 shows the 350 structures, by type, within 1,000 feet of the five stockpile areas. Earth-moving construction equipment that could be used at the stockpile areas produce noise emissions of approximately 81 dBA. A noise model referenced in the 2016 WSLP EIS projected that noise levels from such equipment would attenuate to 75 dBA at a distance of approximately 100 ft. Local noise ordinances would be followed to reduce and minimize impacts to these noise sensitive receptors to the extent practicable. Working hours in the stockpiling areas would be limited to weekday daylight hours. Final layout of stockpile area configurations at one or more of the potential stockpile areas would locate stockpiles and staging sites as far as feasibly possible from residences and recreational areas.

Table 10. Noise sensitive receptors, by structure type, within 1,000 of the proposed stockpile areas.

Structure Type	Count
Residential	242
Commercial / Industrial	102
Churches / Not for Profits	3
Government	2
School	1
Total	350

Indirect Impacts: There would be no indirect impacts due to noise.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant

to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.13 Transportation

No Action Alternative

In the FWOP condition (a.k.a no-action), the Proposed Action would not occur. Surveys and borings data would not be gathered outside of the 2016 WSLP EIS ROW. However, surveys and borings would take place but only in the WSLP Project Area as identified in the 2016 EIS. Environmental compliance has been achieved (2016 WSLP EIS) and funding has been authorized (PL 115-123) for the WSLP Project. Access, clearing and grubbing, stockpiling of debris, and other surveys would occur within the 2016 WSLP EIS Structural Alignment ROW (Figure 4). There would be no stockpiling of material in the FWOP, but approximately 9,000,000 cubic yards of material was identified in the 2016 WSLP EIS and would be transported from Bonnet Carré Spillway to the vicinity of the WSLP ROW for construction related to WSLP Structural Alignment. Transportation for this is likely to occur along major roadways such as US Highways 61 and 51. The traffic counts on both Highways 61 and 51 show increasing traffic through 2017 and it is expected to increase into the future. There would be increased traffic related to WSLP levee construction. Transportation effects related to transportation are expected to be minor compared to existing traffic on the highways.

Proposed Action Alternative

Direct Impacts: A majority of the material stockpiled would likely be earthen fill (borrow material) to be used for the levee enlargement project. However, trees and other debris from clearing and grubbing of a 100-foot corridor adjacent to the Proposed Action, along with clearing wider access routes could be transported to the stockpile sites. Since all five stockpile sites are directly accessed via US Highway 61 (Airline Hwy.) and US Highway 51, there will be increased traffic along these routes. It is expected that 328,000 truck trips would be needed to haul 6 million cubic yards of material to the stockpile areas. This would happen over a 4.5 year period, 365 days per year. This would equate to an increase of 199 vehicles per day on to Highways 61 and 51 which already have AADT counts of 20,755 and 17,734 vehicles per day, respectively. This increase in traffic is expected to have a minor impact on traffic within the area and is not considered significant. Other features and activities associated with the Proposed Action would only have minor impacts to traffic.

Indirect Impacts: There would be no significant indirect impacts to transportation by implementation of the proposed action.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales.

These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

5.14 Cumulative Impacts Analysis

CEQ Regulations define cumulative impacts (CI) as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. CI can result from individually minor but collectively significant actions taking place over a period of time.”

Coastal Louisiana, including the Project Area, has been greatly impacted by natural subsidence, levees, hurricanes, and oil and gas infrastructure. Direct and indirect impacts of past, present and reasonably foreseeable future events were considered in the analysis of the Proposed Action consequences. These impacts include historical and predicted future land loss rates for the area and other restoration projects in the vicinity.

Wetland resource cumulative effects include historical degradation of forested wetlands, likely future trends of degradation within the vicinity, and other reasonably foreseeable activities negatively impacting wetland resources.

Forested wetlands in the vicinity and across coastal Louisiana have experienced a decline over the recent past. It is likely that this trend will continue into the future and wetland impacts as part of the Proposed Action would add to this trend. At least one large scale restoration projects is being planned, the River Reintroduction into Maurepas Swamp Project (PO-0029; Buras et al., 2018), and smaller scale restoration plans are being implemented, such as Lake Pontchartrain Basin Foundation’s Maurepas Landbridge Swamp Restoration Project (Hillmann et al., 2017). However, there are no restoration projects being planned, funded, or implemented that are expected to be large enough to completely reverse the likely long-term decline (Shafer et al., 2016).

The Proposed Action is one of three reasonably foreseeable activities within the Project Area vicinity that would have negative impacts to forested wetlands.

The Proposed Action would have negative impacts to 213 acres of forested wetlands. Up to approximately 78 acres of impacts would be from access roads. One hundred and thirty five acres of these impacts would be in the 100-foot clearing and grubbing corridor. Adjacent to the clearing and grubbing corridor would be another approximately 91-acre clearing and grubbing corridor (Figure 2). All vegetation would be removed from this corridor as well, which would also be used for surveys and borings for the WSLP levee alignment. The cumulative impact of both of these actions is approximately 225 acres of forested wetlands (swamp and BLH) along a contiguous 100-foot corridor.

Construction of the WSLP levee is another reasonable foreseeable activity with negative impacts to forested wetlands. The 2016 WSLP EIS estimates that approximately 1,114 acres of swamp (595.6 AAHUs) and approximately 120 acres of BLH (95.5 AAHUs) would be directly negatively impacted. Levee construction would indirectly impact approximately 8,432 acres of

swamp (494.5 AAHUs) and 89 acres of BLH (3.1 AAHUs). The clearing and grubbing corridor adjacent to the Proposed Action is within the 2016 WSLP EIS levee alignment. A mitigation plan was developed that would fully mitigate for unavoidable habitat impacts associated with the WSLP Project (2016 WSLP EIS).

Lastly, if there is a shift in the WSLP levee alignment, it is likely that the shifted alignment ROW would include the Proposed Action's clearing and grubbing corridor ROW. If there is no shift, then impacts associated with the Proposed Action would be in addition to other levee alignment features. All impacts to wetlands associated with the Proposed Action would be completely mitigated for whether or not a shift occurs. If further design determines a shift is preferable to the current alignment, anticipated construction-related WSLP Project impacts associated with that shift would be assessed via subsequent NEPA documentation. If further design determines that the current mitigation plan is not practicable to offset anticipated habitat losses, the mitigation plan in the 2016 WSLP EIS would also be re-assessed. If necessary, modifications to the mitigation plan would occur in subsequent NEPA documentation. Therefore, although there will be temporary impacts from the loss of this habitat, overall a significant cumulative change in wetlands due to impacts associated with this Proposed Action is not anticipated.

Wildlife resources, and aquatic resources, and fisheries resources cumulative effects would mirror the trend of wetland loss. The cumulative losses of forested wetland habitats, as described above, would have a negative long-term impact on terrestrial and avian wildlife resources. However, since impacts to forested wetland habitats would be mitigated, the impacts to these resources would be temporary and not anticipated in result in an overall increase in cumulative impacts. Aquatic resources and fisheries resources would also experience negative long-term and cumulative effects as forested wetlands are anticipated to convert to emergent wetlands and eventually open water in the area of the Proposed Action and vicinity. There would not be a significant cumulative change in wildlife resources, and aquatic resources and fisheries resources from implementation of the Proposed Action as mitigation for these impacts would be completed as required by law.

Water quality cumulative effects would include the incremental direct and indirect effects on flows and water levels attributable to the Proposed Action in addition to the direct and indirect impacts to flows and water levels attributable to other past, present, and reasonably foreseeable future actions including previous, existing and authorized levee systems in the Pontchartrain Basin, and the authorized and funded WSLP levee system. Impacts associated with the approximately 203 miles of levee systems within the Greater New Orleans Hurricane and Storm Damage Risk Reduction System are reported in the numerous NEPA evaluations of the various features of the HSDRRS documented in the Individual Environmental Reports (produced under NEPA Emergency Alternative Arrangements) and the "Comprehensive Environmental Document, Phase I, Greater New Orleans HSDRRS", (USACE 2013). Impacts associated with the approximately 18-mile WSLP levee are discussed in the 2016 WSLP EIS. Water quality impacts associated with the Proposed Action are likely to be minor and localized. Therefore, there would not be a significant cumulative change in water quality due to impacts associated with this Proposed Action.

Much of the clearing and grubbing within the 100-foot wide corridor, access roads, and stockpile areas would be in areas that are screened by forested wetlands or are remote and have minimal public access. However, cumulative change in aesthetics and visual resources would take place on approximately 1 mile of the proposed 100-foot wide clearing and grubbing corridor which is within the MSWMA. A total of 49 acres of negative impacts to forested wetlands would occur on LDWF property. There would be seven acres of impacts associated with access roads and 42

acres associated with the 100-foot clearing and grubbing corridor within the MSWMA. Habitat changes associated with the proposed action and other similar habitat changes associated with WSLP Project activities in the reasonably foreseeable future would have negative cumulative impacts on recreational resources such as hunting and wildlife viewing opportunities.

Access to LDWF boat launches at the Hope Canal and Reserve Relief Canal, a swamp tour, the I-55 launch and the I-10 launch, and a recreational camp, which are in the vicinity on the southern side of the proposed 100-foot wide clearing and grubbing corridor, would be either partially or completely blocked during construction of the proposed action. Boat access from the Reserve Relief Boat Launch via the Reserve Relief Canal to the MSWMA could be temporarily blocked during the Proposed Action. Therefore, the Proposed Action may have temporary cumulative impacts associated with recreation on the southern side of the proposed clearing and grubbing corridor. The CEMVN is coordinating with camp owners, the LDWF, and other stakeholders to minimize and reduce recreational impacts associated with the Proposed Action to the extent practicable.

Noise, air quality, transportation, and soils and prime and unique farmlands impacts associated with the Proposed Action would be temporary, minor, and during construction only. Therefore, the Proposed Action would not significantly increase cumulative effects for these resources.

Any adverse cumulative impacts to Environmental Justice communities associated with Proposed Action are not disproportionate since the minority and low income composition is similar throughout the Parish as a whole, the benefits of the levee improvement will be felt by both EJ and non EJ communities alike, and the benefits of the levee improvement outweigh the adverse impacts associated with traffic congestion which are temporary in nature.

Under the Proposed Action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Approved mitigation banks construct, operate and maintain wetland habitats pursuant to the requirements and schedule set forth in their Mitigation Banking Instrument. Mitigation banks are required to meet certain habitat performance milestones regardless of credit sales. These banks are established at existing approved sites. The purchase of credits from a mitigation bank does not change the environmental conditions at the bank. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new cumulative impacts to any resource would be incurred.

In conclusion, there would be no significant cumulative effects for any resource.

6 Mitigation

The Proposed Action would have approximately 166 acres of direct, negative impacts to swamp habitat (approximately 91 AAHUs), and would have approximately 46 acres of direct, negative impacts to BLH habitats (approximately 36 AAHUs).

The mitigation plan approved in the 2016 WSLP EIS was developed to fully mitigate for unavoidable impacts associated with the WSLP Project. The Proposed Action surveys are being taken because current existing conditions in the project area suggest a shift in levee alignment may be prudent and will be studied further. Additional mitigation above what was already identified in the 2016 WSLP EIS may be needed. If it is determined that an alignment shift is preferred, a NEPA document will be prepared to evaluate such a shift and its impacts, including impacts to habitat. If it is determined that the previously-approved WSLP Project mitigation plan is not sufficient to offset the habitat losses to be incurred, the mitigation plan from the 2016 WSLP EIS would be revisited and additionally augmented to ensure all impacts from the WSLP project are fully mitigated, including the impacts identified in SEA 570. If necessary, modifications to the mitigation plan would occur in NEPA documentation.

7 Coordination and Public Involvement

A Public Notice for SEA 570 would be published in the Baton Rouge and New Orleans Advocate for 15 days beginning April 3, 2019 and ending April 17, 2019. Seven comments were received. Two comments were received from individual members of the public. One expressed concern regarding wetland impacts due to construction of access roads. Both expressed concern regarding the location of the WSLP Project levee alignment. The Federal Emergency Management Association (FEMA) Region VI requested we coordinate with the community floodplain administrators for St. John the Baptist and St. Charles Parishes. CEMVN coordinated with the floodplain administrators for both parishes (Appendix A, Annex G). See Section 8.10 for more information. The SHPO commented that no known historic properties will be affected and the office has no objections to implementing the Proposed Action. The USFWS, National Marine Fisheries Service (NMFS), and the Louisiana State Department of Health and Hospitals all expressed their support of the Proposed Action. All public comments are located in Appendix F.

Preparation of this SEA and FONSI was 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
MCN – Muscogee (Creek) Nation

Jena Band of Choctaw Indians
Seminole Tribe of Florida
Seminole Nation of Oklahoma
Tunica-Biloxi Tribe of Louisiana

8 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 570 and associated Finding of No Significant Impact. 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 was accomplished during a public and agency review comment period beginning April 3, 2019 and ending April 17, 2019 of this SEA #570, and associated Finding of No Significant Impacts.

8.1 Clean Air Act of 1972

The Clean Air Act (CAA) sets goals and standards for the quality and purity of air. It requires the Environmental Protection Agency to set NAAQS for pollutants considered harmful to public health and the environment. The Project Area is in St. John the Baptist and St. Charles Parishes, which are currently in attainment of NAAQS. A general conformity determination is not required.

8.2 Clean Water Act of 1972 – Section 401 and Section 404

The CWA sets and maintains goals and standards for water quality and purity. Section 401 requires a Water Quality Certification (WQC) from the LDEQ that a proposed project does not violate established effluent limitations and water quality standards. Coordination with LDEQ regarding Section 401 compliance is ongoing (Appendix A, Annex A).

As required by Section 404(b)(1) of the 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. Section 404(b)(1) public notice was mailed out for public review comment period beginning April 3, 2019 and ending April 17, 2019. There were no comments received during this time period. The final Section 404(b)(1) evaluation is located in Appendix B.

8.3 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 submitted on March 11, 2019 to Louisiana Department of Natural Resources (DNR) for the Proposed Action. DNR concurred with our Determination via letter dated May 6, 2019.

8.4 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 USFWS identified two T&E species, the gulf sturgeon, and the West Indian manatee, which are known to occur or believed to occur within the vicinity of the Proposed Action. On March 27, 2019, USFWS reviewed this project for effects to Federal trust resources under their jurisdiction and currently protected by the

Endangered Species Act of 1973, concurring that the project, as proposed, is not likely to adversely affect these resources (Appendix A, Annex D).

8.5 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. The FWCA requires that fish and wildlife resources receive equal consideration to other project features. The FWCA also 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 (CAR) that details existing fish and wildlife resources in a Project Area, potential impacts due to a proposed project and recommendations for a project. The USFWS reviewed the proposed action and provided a Final CAR with project specific recommendations on May 6, 2019 (Appendix A, Annex C). The Final CAR and CEMVN's responses to the USFWS recommendations are as follows:

1. For proposed work on the Maurepas Swamp WMA (MSWMA), LDWF requires the USACE obtain a Letter of Authorization request to construct a survey right-of-way, which will require clearing forested wetland habitat within MSWMA, AND obtain the survey permission for all preliminary survey activities (i.e., Timber Assessments) to ensure the safety of crews within the recreational hunting seasons. The permission request shall include specific timeframe (dates) that survey activities will occur.

Response 1 – Concur. A survey permission for Timber Assessments and other preliminary survey activities will be obtained prior to work on LDWF property. A Letter of Authorization will be obtained prior to clearing and grubbing of forested wetland habitat within MSWMA.

2. At this time, LDWF and USFWS are requesting a letter of intent regarding the alignment of the proposed levee system. Currently, there are no objections to proposed activities to clear a new right-of-way with appropriate compensatory mitigation; however LDWF expresses concern for habitat loss in the event that the alignment is changed after completion of the survey and soil boring evaluations. The referenced letter of intent would provide assurances that levee construction will occur along the centerline of the cleared survey right-of-way.

Response 2 – Partial Concur. CEMVN provided a letter of intent discussing the levee construction footprint and the cleared survey right of way to the LDWF and USFWS on April 15, 2019 (Appendix A, Annex G). It is anticipated and likely that levee construction footprint will include the cleared survey right of way.

3. In an effort to reduce impacts, LDWF and USFWS recommends that the USACE consider reducing the proposed 100-foot right-of-way to the greatest extent practicable. Reducing the survey right-of-way to 50' - 75' in width is deemed more

reasonable for the nature of these activities. Please provide justification for the need of the proposed right-of-way width if reduction is not possible.

Response 3 – Concur. CEMVN considering reducing the proposed 100-foot right-of-way to the greatest extent practicable. CEMVN provided justification to LDWF and USFWS, via letter dated April 15, 2019 (Appendix A, Annex G).

4. LDWF recommends the value of the cleared timber be determined in consultation with LDWF and appropriate compensation must be provided to LDWF.

Response 4 – Partial Concur. The value of the cleared timber on MSWMA property will be determined in coordination with LDWF. CEMVN will not provide compensation to LDWF for the cleared timber. Discussions between the NFS, LDWF and CEMVN regarding the timber are ongoing. CEMVN would consider mitigating MSWMA impacts in kind on LDWF property to the extent LDWF property is available and such mitigation is practicable.

5. LDWF and USFWS recommend that all impacts occurring on MSWMA shall be mitigated for on MSWMA or within the LDWF's WMA primarily system. Therefore in an effort to provide meaningful and permanent mitigation, LDWF primarily desires the USACE investigate the recommended mitigation projects identified in the attached map and summary (Appendix A). LDWF is open to discussing land donations via acquisition of adjacent properties by the USACE.

Response 5 – The mitigation plan approved in the 2016 WSLP EIS was developed to fully mitigate for unavoidable impacts associated with the WSLP Project. If it is determined that the previously-approved WSLP Project mitigation plan is not sufficient to offset the habitat losses to be incurred, the mitigation plan from the 2016 WSLP EIS would be revisited and additionally augmented to ensure all impacts from the WSLP project are fully mitigated, including the impacts identified in SEA 570. CEMVN will consider these recommendations if modifications to the mitigation plan would be necessary.

6. The proposed levee alignment will isolate portions of MSWMA on the protected side of the levee. These fragmented and isolated properties may provide less value as for wildlife and recreation. LDWF recommends discussions take place on how best to address these losses.

Response 6 – Concur. CEMVN will continue to coordinate with LDWF regarding fragmentation and isolation of MSWMA property as a result of the WSLP Project.

7. Avoid adverse impacts to bald eagles and their nesting activities through careful design of project features and timing of construction. During any project construction, on-site personnel should be informed of the possible presence of nesting bald eagles in the vicinity of the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest occurs or is discovered within

1,500 feet of the proposed Project Area, then an evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles. That evaluation may be conducted on-line at: <https://www.fws.gov/southeast/es/baldeagle/>. Refer to the Fish and Wildlife Resources section of this report for more details.

Response 7 – Concur. An aerial survey was performed to identify any historic, alternate, or in-use bald eagle nests and BMPs would be used to reduce, minimize, and avoid impacts. No historic, alternate, or in-use bald eagle nests were observed for this or any subsequent bald eagle surveys. If any historic, alternate, or in-use bald eagle nests are observed to be within 1,500 feet of the proposed Project Area, USFWS would be contacted immediately and an evaluation would be conducted using the USFWS recommended website.

8. Avoid adverse impacts to nesting wading bird colonies through careful design project features and timing of construction. USFWS and LDWF recommend that a qualified biologist inspect the proposed work site for the presence of undocumented nesting colonies during the nesting season (i.e., February 15 through September 1 for wading bird nesting colonies and October through mid-May for bald eagles). Refer to the Fish and Wildlife Resources section of this report for more details.

Response 8 - Concur. An aerial survey and five on the ground surveys were performed during the nesting season to identify any nesting water bird colonies. No colonies were observed during any survey. The Proposed Action would continue to avoid adverse impacts to nesting wading birds. A qualified biologist would inspect Proposed Action ROWs during the nesting season for waterbirds and bald eagles. Bird abatement procedures would be implemented to prevent wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants from nesting during their nesting period. In the event that implementation of the bird abatement plan is not successful and nesting does occur, all activity occurring within the distance provided by USFWS would be suspended and further coordination with USFWS would occur.

9. West Indian manatees (*Trichechus manatus*) occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). During in-water work in areas that potentially support manatees all personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable. For more detail on avoiding contact with manatee contact this office. Should a Proposed Action directly or indirectly affect the West Indian manatee, further consultation with this office will be necessary.

Response 9 - Concur. All personnel associated with project in-water work areas will be instructed about the potential presence of manatees; to obey speed zones; and to avoid collisions with manatees; and be advised that there are civil and criminal penalties for harming, harassing, or killing manatees. Personnel will also be

instructed not to attempt to feed or otherwise interact with the manatee. The USACE will consult with the USFWS should a Proposed Action potentially directly or indirectly affect the West Indian manatee.

10. Clearing and investigations will occur partly within the boundaries of Maurepas Swamp WMA. Please coordinate all activities within the WMA with LDWF. Please contact Jill Day 985-543-4785 or jday@wlf.la.gov and Cornelius Williams at 225-763-8807 or cjwilliams@wlf.la.gov for more information about appropriate WMA authorizations.

Response 10 – Concur. Coordination with LDWF regarding impacts to the Maurepas Swamp WMA is ongoing. Appropriate authorizations and permissions would be attained prior to work within the boundaries of Maurepas Swamp WMA. Coordination with Mr. Williams and Ms. Day will continue for the Proposed Action and other WSLP Project activities.

11. The impacts to Essential Fishery Habitat should be discussed with the NMFS to determine if the project complies with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Magnuson-Stevens Act; P.L. 104-297, as amended) and its implementing regulations.

Response 11 – There are no anticipated impacts to Essential Fish Habitat (EFH) as a result of the Proposed Action. In a letter dated October 1, 2013, NMFS stated that the project described in the draft 2016 WSLP EIS does not contain Essential Fish Habitat and recommended EFH sections be deleted from the final EIS.

12. Access roads across existing wetlands should be avoided if possible and secondary impacts to wetland hydrology should be prevented or reduced. To avoid changes to hydrology USFWS recommends appropriately sized culverts (minimum 24 inch culverts) be installed and maintained every 300 feet across access roads through wetlands with additional culverts placed at stream crossings and drainage features. Alternatively, upon completion of construction activities, access roads should be degrading to restore natural hydrology.

Response 12 – Partial concur. Culverts would be added to maintain existing hydrologic conditions when constructing new roads. Improvements to existing culverts would be considered when improving existing roads for access. Construction related impacts, including access roads for construction, would be addressed in subsequent NEPA documentation.

13. USFWS recommends monitoring changes to wetland hydrology resulting from impacts of stockpiling debris and building access roads. The proposed alternative may alter natural periods of inundation or soil saturation in the impounded wetlands and could prove detrimental to their function and longevity. Therefore, USFWS recommends hydrologic gauges be placed and maintained in appropriate locations to assist in determining future impacts to surrounding forested wetlands and assist in determining the adequacy of placed culverts or the need for installation of additional culverts and/or water control structures to ensure adequate water exchange. Gauges could be supported or cost-shared through existing activities such as through the US Geological Survey (USGS) or Coastwide Reference Monitoring System (CRMS).

Response 13 – Monitoring for the WSLP Project is being considered. Coordination with the USFWS will continue regarding this. Upon completion of the Proposed Action, any access roads not be improved for construction of the WSLP Project would be returned to their existing condition to the extent practicable. Stockpiling of felled trees within the clearing and grubbing corridor would be temporary.

14. The clearing of forested wetlands for the Proposed Action is necessary for investigative work. Full, in-kind compensation (quantified as Average Annual Habitat Units) is recommended for unavoidable direct adverse impacts on forested wetlands. To help ensure that the proposed mitigation features meet their goals, USFWS provides the following recommendations.
- a. If applicable, a General Plan should be developed by the Corps, LDWF, and USFWS in accordance with Section 3(b) of the Fish and Wildlife Coordination Act for mitigation lands.
 - b. Continued mitigation planning should be closely coordinated with USFWS, LDWF, and other interested natural resource agencies and should include any additional losses identified during future monitoring and engineering and design studies.
 - c. As mitigation measures for WSLP investigations will coincide with mitigation for the construction of the WSLP levee, USFWS recommends an accounting of impacts from activities that occur prior to construction be maintained, shared with the agencies and presented in subsequent NEPA documents.
 - d. If mitigation is not implemented concurrent with levee construction, the amount of mitigation needed should be reassessed and adjusted to offset temporal losses of wetlands.
 - e. The Corps should remain responsible for the required mitigation until the mitigation is demonstrated to be fully compliant with interim success and performance criteria. At a minimum, this should include compliance with the requisite vegetation, elevation, acreage, and dike gapping criteria.
 - f. The acreage restored and/or managed for mitigation purposes, and adjacent affected wetlands, should be monitored over the project life. This monitoring should be used to evaluate project impacts, the effectiveness of the compensatory mitigation measures, and the need for additional mitigation should those measures prove insufficient.

Response 14 – Concur. Full, in-kind compensation (quantified as Average Annual Habitat Units) for unavoidable adverse impacts to wetlands would occur as required by law. In order to fulfill mitigation requirements and adequately plan mitigation for project impacts, an accounting of all impacts will be maintained and shared with the resource agencies. If it is determined that the previously-approved WSLP Project mitigation plan is not sufficient to offset the habitat losses to be incurred, the mitigation plan from the 2016 WSLP EIS would be revisited and additionally augmented to ensure all impacts from the WSLP project are fully mitigated, including the impacts identified in SEA 570. If necessary, modifications to the mitigation plan would occur in NEPA documentation. Coordination with USFWS and LDWF regarding the mitigation plan and its details will continue to ensure the mitigation fully offsets the project's impacts. If a delay in mitigation implementation is experienced,

the USACE understands that temporal losses, until such time as the mitigation is implemented, may be assessed.

15. USFWS recommends that the USACE contact USFWS for additional consultation if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. Additional consultation as a result of any of the above conditions or for changes not covered in this consultation should occur before changes are made and or finalized.

Response 15 – Concur.

8.6 Hazardous, Toxic, and Radioactive Waste

The discharge of dredged material into waters of the United States is regulated under the Clean Water Act (CWA). In the absence of a known Hazardous, Toxic, and Radioactive Waste (HTRW) concern, the Proposed Action would not qualify for an HTRW investigation.

Engineer Regulation (ER) 1165-2-132 provides that in the Planning, Engineering and Design (PED) Phase that, for proposed project in which the potential for HTRW problems has not been considered, an HTRW initial assessment, as appropriate for a reconnaissance study, should be conducted as a first priority. If the initial assessment indicates the potential for HTRW, testing as warranted and analysis similar to a feasibility study should be conducted prior to proceeding with the project design. The NFS will be responsible for planning and accomplishing any HTRW response measures, and will not receive credit for the costs incurred.

An ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA), HTRW 18-05 dated December 19, 2019 and addendum on March 14, 2019 has been completed and a copy is being maintained on file at CEMVN. The probability of encountering HTRW for the Proposed Action is low based on the initial site assessment. If a recognized environmental condition is identified in relation to the Project Area, CEMVN 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.

8.7 Magnuson-Stevens Fisheries Conservation and Management Act

These laws govern marine fisheries management in the U.S. Essential Fish Habitat (EFH) does not intersect the proposed alignment or the enclosed area in the near term. The USACE has determined that the Recommended Plan would have no impacts to EFH. In a letter dated October 1, 2013, the National Marine Fisheries Service stated the WSLP Project, as described in the 2016 WSLP Draft EIS, would not adversely impact EFH and that an EFH assessment is unnecessary (Appendix A, Annex E).

8.8 Migratory Bird Treaty Act

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 (MBTA). Colonial nesting wading bird, neotropical migratory birds, and other birds are protected under the MBTA (50 CFR 10.13). During nesting season,

construction and other related activities must take place outside of USFWS/LDWF buffer zones. A USACE Biologist and USFWS Biologist will survey for nesting birds prior to implementation of the Proposed Action. In addition, CEMVN recommends that on-site contract personnel be trained to identify colonial nesting birds and their nests and avoid affecting them during the breeding season. Coordination with the USFWS pursuant to the BGEPA and MBTA has been initiated and is ongoing. Surveys for bald eagle nests and colonial nesting waterbird nests are underway. BMPs, included the development of a NPP, would be used. Coordination with the USFWS and the LDWF is ongoing for MBTA trust species.

8.9 National Historic Preservation Act and Tribal Consultation

In compliance with Section 106 of the act and 36 CFR Part 800, Federal agencies must take into account the effects of their actions on historic properties and afford the Advisory Council on Historic Properties (ACHP) a reasonable opportunity to comment on such undertakings. Historic properties include any prehistoric or historic district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. A Federal agency shall consult with any federally recognized Indian Tribe that attaches religious and cultural significance to such properties. Agencies shall afford the State Historic Preservation Officer (SHPO) and Indian tribes a reasonable opportunity to comment before decisions are made. Section 106 consultation was initiated for the WSLP project with the SHPO and Indian tribes on May 3, 2013. USACE has determined that the effects on historic properties cannot be fully determined before plan approval, and pursuant to 36 CFR 800.14(b) CEMVN has elected to fulfill its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended, through the execution and implementation of a Programmatic Agreement (PA). In accordance with the stipulations of the PA, the proposed action as described in SEA #570 will be coordinated with the SHPO and identified federally recognized Indian Tribes and any necessary cultural resources surveys will be conducted prior to implementation of the proposed action. A copy of the executed PA for consultation, identification of historic properties, assessment and resolution of adverse effects is included in Appendix C.

8.10 Executive Order 11988

Executive Order 11988 (EO 11988) requires Federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. FEMA Region VI requested the Proposed Action be in compliance with EO 11988, and requested coordination with the community floodplain administrators for St. John the Baptist and St. Charles Parishes via letter dated April 5, 2019 during the public review period for Draft SEA 570 (Appendix F). CEMVN contacted the floodplain administrators for both parishes. The administrator for St. John the Baptist Parish responded with concerns about potential flood impacts from the stockpile/staging areas and access roads proposed to be located either partially or entirely within Special Flood Hazard Areas (SFHAs). CEMVN considered these concerns and concluded that no significant long or short-term adverse impacts to SFHAs would be incurred from implementation of the Proposed Action. If any impacts to the SFHAs or the floodplain occur, they are expected to be negligible to minor and would be only temporary. CEMVN will provide this determination in letter form and will continue coordination with both floodplain administrators. The Proposed Action would, in part, support the construction of the WSLP levee alignment in St. John the Baptist and St. Charles Parishes. The eight-step EO 11988-Floodplain Management evaluation process and a determination of

compliance with EO 11988 is documented in the 2016 WSLP EIS, which is incorporated here by reference.

8.11 Executive Order 11990

Executive Order 11990 (EO 11990) directs Federal agencies to avoid to the extent possible, long and short term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. FEMA Region VI requested the Proposed Action be in compliance with EO 11990, and requested coordination with the community floodplain administrators for St. John the Baptist and St. Charles Parishes via letter dated April 5, 2019 during the public review period for Draft SEA 570 (Appendix F). The mitigation plan approved in the 2016 WSLP EIS was developed to fully mitigate for unavoidable impacts associated with the WSLP Project. Additional mitigation above what was already identified in the 2016 WSLP EIS may be needed. If it is determined that an alignment shift is preferred, a NEPA document will be prepared to evaluate such a shift and its impacts, including impacts to habitat. If it is determined that the previously-approved WSLP Project mitigation plan is not sufficient to offset the habitat losses to be incurred, the mitigation plan from the 2016 WSLP EIS would be revisited and additionally augmented to ensure all impacts from the WSLP project are fully mitigated, including the impacts identified in SEA 570, therefore, the Proposed Action complies with EO 11990. CEMVN contacted both community floodplain administrators coordinating this determination via letter dated April 26, 2019 (Appendix A, Annex F).

9 Conclusion

The Proposed Action would consist of surveys and borings and related activities necessary to investigate potential changes to and further refine engineering and design of the 2016 WSLP EIS's levee alignment in St. John the Baptist and St. Charles Parishes, Louisiana. These activities would result in 166 acres of direct, negative impacts to swamp habitat (approximately 91 AAHUs), and would have approximately 46 acres of direct, negative impacts to BLH habitats (approximately 36 AAHUs). Direct negative impacts to wildlife, aquatic, and fisheries resources, including ESA, BGEPA, and MBTA trust species would be a result of the loss of this forested habitat. Loss of forested habitat as a result of the Proposed Action would impact wildlife resources and aquatic resources and fisheries. There is similar adjacent habitat, so these impacts are expected to be minor. The majority of these impacts would be remote, so impacts to visual resources are expected to be minor.

Approximately 46 acres of swamp (26 AAHUs) and 3 acres of BLH (2 AAHUs) would be impacted on LDWF property. The loss of habitat on LDWF property would occur within the Maurepas Swamp Wildlife Management Area, causing a negative impact to recreational use to a portion of this 124,567-acre WMA.

There would be some temporary, minor impacts to soils and prime and unique farmlands associated with the use of stockpiling/staging areas. No wetlands would be impacted from use of these stockpile/staging areas and these areas would be returned to pre-existing conditions upon project completion. No significant increases in traffic are expected from transportation of material from borrow locations to stockpiling areas. There could be some minor impacts to EJ communities associated with transportation, but these are expected to not be disproportionate.

If approved, after the surveys and investigations associated with the Proposed Action are concluded and CEMVN determines whether an alignment shift for the WSLP levee is warranted, the anticipated habitat impacts of the WSLP Project would be re-assessed. If CEMVN concludes that additional compensatory mitigation is required, mitigation for these impacts would be addressed in subsequent NEPA documentation to be prepared for the potential levee alignment shift. Additionally, the Proposed Action also includes the use of 5 stockpile/staging locations for construction related activities and the addition of a mitigation bank purchase option to mitigate BLH impacts. Since permitted banks exist as reasonably foreseeable projects in the FWOP conditions and as the purchase of mitigation bank credits does not affect environmental conditions, adding this option into the mitigation plan approved in the 2016 WSLP EIS would incur no new impacts.

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.

10 Prepared By

SEA 570 and the associated FONSI were prepared by Patrick Smith, PhD, Biologist. Table 11 lists the preparers of relevant sections of this report and the project managers. Dr. Smith can be reached at U.S. Army Corps of Engineers, New Orleans District; Regional Planning and Environment Division South, PDS-C; 7400 Leake Avenue; New Orleans, Louisiana 70118.

Table 11. List of Preparers for SEA #570.

Title/Topic	Team Member
Senior Environmental Manager Team Lead	Elizabeth Behrens, CEMVN
Environmental Manager, Lead	Patrick Smith, CEMVN
Senior Project Manager	Chris Gilmore, CEMVN
Project Manager	Tutashinda Salaam, CEMVN
Project Manager	Sean Brunet, CEMVN
Cultural Resources	John Penman, CEMVN
Aesthetics, Recreation, Soils and Prime and Unique Farmland	John Milazzo, CEMVN
Environmental Justice	Andrew Perez, CEMVN
Transportation	Diane Karnish, CEMVR
HTRW	Joe Musso, CEMVN

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Appendix A Agency Coordination

Annex A: Department of Environmental Quality, Water Quality Certificate

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY ENVIRONMENTAL SERVICES

APR 24 2019

Mr. Patrick Smith
US Army Corps of Engineers, New Orleans District
7400 Leake Ave
New Orleans, Louisiana 70118-3651

AI Number: 101235
Activity Number: CER20190002

RE: West Shore Lake Pontchartrain HSDRR Alignment Surveys and Borings Investigations
Water Quality Certification WQC 190424-02
St. Charles and St. John the Baptist Parishes

Dear Mr. Smith:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has received notice of the application for a 401 Water Quality Certification to conduct alignment surveys and boring investigations for the Hurricane and Storm Damage Risk Reduction (HSDRR) Project located on the West Shore-Lake Pontchartrain in various parishes.

Based on the information provided in the application and the additional information received April 15, 2019, LDEQ has determined that the requirements for a Water Quality Certification have been met. LDEQ concludes that the deposit of fill material will not violate water quality standards as provided for in LAC 33:IX.Chapter 11. Therefore, LDEQ hereby issues the US Army Corps of Engineers, New Orleans District Water Quality Certification, WQC 190424-02.

Should you have any questions concerning any part of this certification, please contact Elizabeth Hill at (225) 219-3225 or by email at elizabeth.hill@la.gov. Please reference Agency Interest (AI) number 101235 and Water Quality Certification 190424-02 on all future correspondence to this Department to ensure all correspondence regarding this project is properly filed into the Department's Electronic Document Management System.

Sincerely,

Scott Guilliams
Administrator
Water Permits Division

c: IO-W

Annex B: Department of Natural Resources, Coastal Zone Consistency – In accordance with Section 307, a Consistency Determination is being prepared for the Proposed Action and will be finalized prior to signing of the FONSI.



State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

May 6, 2019

Marshall Harper
Corps of Engineers- New Orleans District
7400 Leake Avenue
New Orleans, LA 70118
Via email: Marshall.K.Harper@usace.army.mil

RE: **C20140059 mod03**, Coastal Zone Consistency
New Orleans District, Corps of Engineers
Direct Federal Action
West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Project:
Clearing and grubbing, and geotechnical surveys and soil borings in areas within the
levee footprint previously-authorized for construction, **St. Charles, St. James, and St.**
John the Baptist Parishes, Louisiana

Dear Mr. Harper:

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

If you have any questions concerning this determination please contact Jeff Harris of the Consistency Section at (225) 342-7949 or jeff.harris@la.gov.

Sincerely,

/S/ Charles Reulet
Administrator
Interagency Affairs/Field Services Division

CR/SK/jdh

cc: Patrick Smith, COE
Dave Butler, LDWF
Craig LeBlanc, OCM/FI
René C. Pastorek, St. John The Baptist Parish
Earl Matherne , St. Charles Parish

Annex C: Fish and Wildlife Coordination Act Report



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Louisiana Ecological Services
200 Dulles Drive
Lafayette, Louisiana 70506



May 6, 2019

Colonel Michael N. Clancy
District Commander
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Clancy:

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) for the New Orleans District (MVN) to evaluate potential impacts of surveys and borings, and related activities that would investigate potential changes being considered to the structural alignment levee footprint in St. John the Baptist and St. Charles Parishes, Louisiana (LA), as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS; <http://www.mvn.usace.army.mil/About/Projects/West-Shore-Lake-Pontchartrain/>). The Record of Decision (ROD) for the 2016 WSLP EIS was signed by the Assistant Secretary of the Army on September 14, 2016. Potential changes to the WSLP levee alignment in St. John the Baptist and St. Charles Parishes being considered would occur outside of the Right of Way (ROW) described in the 2016 WSLP EIS. Surveys and borings data would further investigate any potential changes, and to aid engineering and design of the levee. Any impacts associated with changes to the structural alignment and other construction related changes would be discussed in subsequent National Environmental Policy Act (NEPA) and Fish and Wildlife Coordination Act (FWCA) documentation.

This report contains an analysis of the impacts on fish and wildlife resources that would result from the implementation of the proposed surveys and borings investigation and provides recommendations to minimize adverse project impacts while maximizing beneficial project impacts on those resources. This final report has been prepared by the Fish and Wildlife Service (USFWS) under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and a copy of the report was provided to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF) for review and their comments have been included in our final report. This final report does constitute the report of the Secretary of the Interior as required by Section 2(b) of the Fish and Wildlife Coordination Act (FWCA, 48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

PROPOSED ACTION

A map indicating where the Proposed Action would occur is provided (Figure 1).

There are five distinct activities in the Proposed Action: access, clearing and grubbing, stockpiling and staging, soil borings and Cone Penetration Testing (CPTs), and other surveys. Each activity is discussed below. The duration for the Proposed Action would be approximately nine months. The entire survey Right-of-Way (ROW) would be approximately 600 feet (ft) wide, with the clearing and grubbing necessary for the soil borings and CPT's occurring within a 100 ft corridor within the 600 ft ROW. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. All tree felling would be performed to avoid damage to trees left standing, to existing structures and installations, to those under work operations, and with due regard for the safety of employees and others. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and Hazardous, Toxic, and Radioactive Waste (HTRW) assessments would be within the approximately 600 foot ROW surrounding the 100 foot clearing and grubbing corridor.

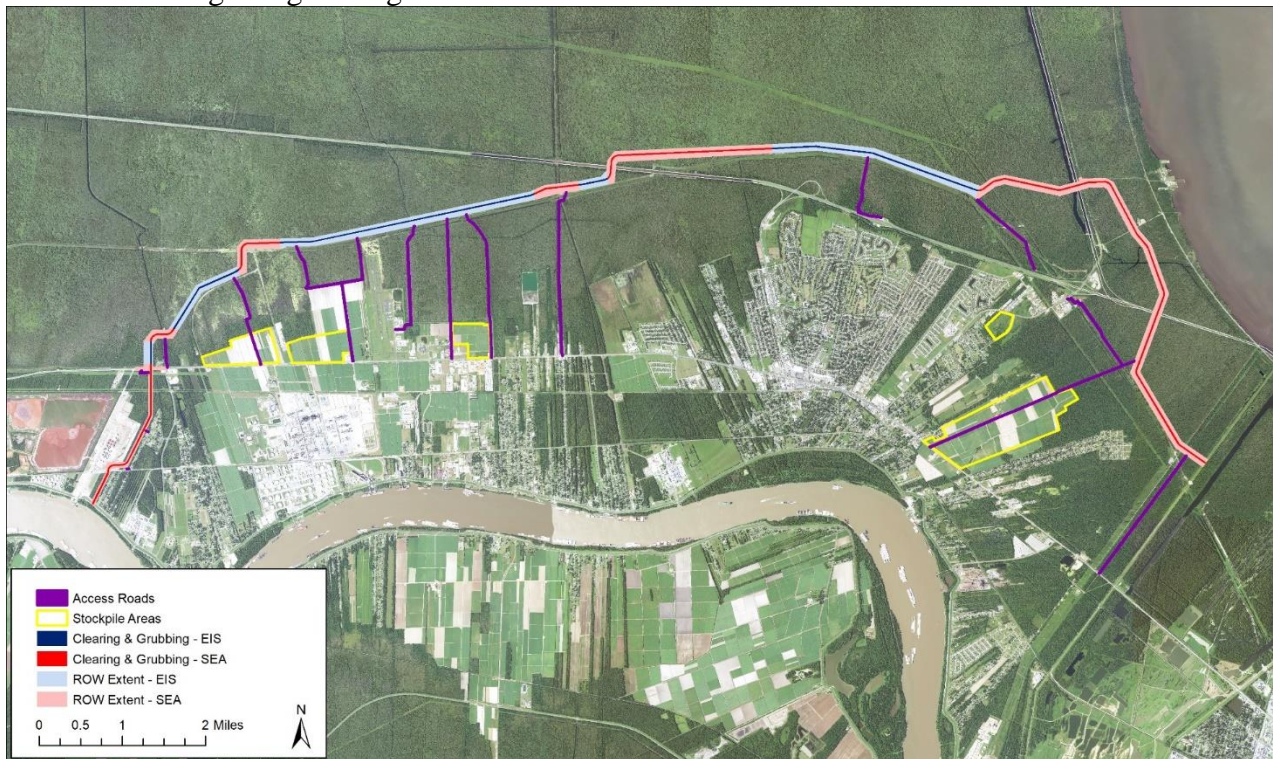


Figure 1: Map showing the Proposed Action. There are 15 access routes, with one access route bifurcating into two roads near the surveys and borings/CPTs area. "Clearing & Grubbing" indicates the extent to which tree felling, borings/CPTs, and stockpiling would occur. "ROW Extent" refers to the extent to which other surveys would occur. Areas with "EIS" are within the ROW from the 2016 WSLP EIS and are shown for reference as they are not part of the Proposed Action. Areas with "SEA" refer to the Proposed Action.

Access

Access for clearing and grubbing of the 100 foot corridor, cross-sectional surveys, soil borings/CPTs, environmental and cultural resources investigations, and HTRW assessments would be from U.S. Highway 61 (Airline Hwy), LA Highway 44, LA Highway 54, 1-10 Service Road, Old US Highway 51, Frenier Road, Prescott Road, other existing roads, trails, pipeline corridors, and along Reserve Canal leading to the alignment (Figure 1). These access routes would be utilized for the delivery of surveys, tree clearing, and boring/CPT equipment. Some of the proposed access routes would require the clearing of vegetation for the movement of this equipment. Clearing and grubbing for access routes would be limited to a 40-foot width, which is

the minimum width necessary for the passage of surveys and borings/CPTs equipment. A 60-foot road width would be allowed for access roads within pipeline ROWs, but a 40 foot width is expected to be required. The extra width would accommodate for special construction considerations to minimize impacts to infrastructure. Coordination with pipeline companies is ongoing to determine the best method to accommodate pipeline infrastructure and reduce environmental impacts. Clearing would consist of the complete removal of all trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris within access route corridors. Debris resulting from access road clearing and grubbing operations could be stockpiled in temporary windrows within access corridors, or within the stockpile and staging areas described below. Felled timber may be chipped on-site prior to hauling and disposal, and other cleared debris would be hauled offsite and disposed of according to applicable laws and regulations. Timber matting or similar measures may be required across some pipeline corridors. Approximately 89 acres have been identified as access routes with a maximum impact to coastal swamp habitat of approximately 64 acres. All equipment to be utilized for the surveys are described in the subsequent sections.

Clearing and Grubbing

Clearing and grubbing would occur within a 100 ft corridor and would provide the necessary work area for the completion of soil boring/CPT activities. The corridor is broken into six distinct segments shown in red in Figure 1 totaling approximately 138 acres and 11.4 linear miles. Approximately 135 of these 138 acres are forested wetlands, with approximately 115 acres being swamp and approximately 20 acres are bottomland hardwoods (BLH). A width of 100 feet is needed for operation of equipment and for stockpiling of cut trees and undergrowth. All trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris would be cleared within the clearing and grubbing corridor. Trees on dry land would be cut flush with the natural ground, while trees in water would be cut flush with the natural ground or mud line underwater. In limited circumstances, the removal of tree stumps and rootballs below the ground surface may be necessary to provide unobstructed and safe access for equipment. Rootball removal is not expected to exceed 20% of the 135 acre corridor.

Trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations could be stockpiled in temporary windrows within the clearing and grubbing corridor, spaced approximately every 300 feet. Windrows would alternate between land side and flood side of the project centerline. Debris may be placed in neat windrows or piles with the tree limbs trimmed sufficiently to make the windrow as small as practicable. No windrowed debris or cleared material shall extend beyond the 100- foot clearing and grubbing limit. Debris could also be stockpiled in the stockpile and staging areas described below. Debris removal would occur during the levee construction phase.

Stockpiling

Two options for temporary stockpiling of trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations would be available to the contractor. Material could be stockpiled within any of the five stockpile areas shown in Figure 1, or material could be temporarily stockpiled within the 100-foot clearing and grubbing corridor or access roads ROWs. Descriptions of how material could be stockpiled within the clearing and grubbing corridor and access roads are discussed in their respective sections.

The five temporary stockpile areas total approximately 1,020 acres (583 acres, 40 acres, 98 acres, 143 acres, and 156 acres from east to west; Figure 1). These sites may be used for the temporary storage of felled trees, temporary staging of equipment for the Proposed Action that is described in other sections, and trailers may be used to serve as office space during the Proposed Action.

These temporary stockpile areas may also be used for various activities during the construction phase of the WSLP Project, such as those described herein. Use of these stockpiles during construction is expected to end in 2023. The sites may also be used for the temporary storage of felled trees, temporary staging of the construction contractors' levee construction equipment such as bulldozers, excavators, pile driving equipment, and/ or temporary storage of construction materials such as steel sheet piling, steel piles, and other materials and items for construction of pump stations and drainage structures. The construction contractor or USACE may also set up trailers to serve as office space during construction of the levees or floodwalls within one or more of the stockpile areas.

They could be used for temporary stockpiling of clay and sand for levee or floodwall construction. Up to 3,000,000 cubic yards of clay material and approximately 1,000,000 cubic yards of sand would be used to construct the WSLP Project levee. These materials could be transported to the stockpile areas from the Bonnet Carré Spillway (BCS) borrow pits cleared in the 2016 WSLP EIS using dump trucks. Sand would be from commercially available sources or within the BCS. This would take up to 225,000 truck trips to haul 4,000,000 cubic yards of material. All stockpile areas are located along major highways. Material would be hauled from BCS to five stockpile areas exclusively via Highway 61 for the four stockpile areas on Highway 61, and via Highways 61 and 51 for the northern most stockpile area that is on Highway 51.

There would be no impacts to wetlands within any of these temporary stockpile areas for any of the activities for the duration of the WSLP Project.

Soil Borings and Cone Penetration Testing (CPTs)

Soil borings and CPTs would be conducted within the clearing and grubbing corridor at intervals of 500 feet. The borings would consist of undisturbed type borings. Borings and CPTs would be taken with truck and track mounted equipment. The boring holes would be backfilled in accordance with standard criteria. Two and four wheel drive vehicles, standard boring and land surveying equipment, machetes, chainsaws, a small boat and trailer (as required), and marsh buggies would be used.

Other Surveys

Other surveys include topographical surveys to locate features and utilities, define the project baseline alignment, and define ROW extent; as well as those necessary to complete cross-sections, HTRW assessments, cultural resource investigations, and environmental surveys. Small vehicles, such as all-terrain vehicles, other similar small 4x4s, small boats, air boats, and marsh buggies would be allowed to operate within the approximately 600 foot ROW surrounding the clearing and grubbing corridor (see other surveys area in Figure 1). Foot traffic would also be permitted. Cross-sectional surveys would occur at intervals between 50 and 300 feet.

Environmental surveys would include vegetative surveys such as plant identification and measurements. HTRW assessments would include traversing the area to identify potential HTRW concerns. If any suspected HTRW concerns are noticed, soil and/or water samples may be taken.

Environmental surveys and HTRW assessments would be performed by two to four person crews that would traverse the area.

Similarly, cultural resources (CR) investigations would be completed with two to four person crews. Some CR subsurface investigations may be required to determine if buried cultural remains exist within the site limits. The subsurface investigation would be accomplished by hand auger or shovel. If items of seeming cultural significance are discovered during the initial traverse of the site, the CR investigation would be expanded to include, at the most, a series of 2-meter by 2-meter holes or 1-meter wide trenches excavated to depths of 1 to 2 meters. Excavation would be accomplished by hand augers and/or shovels. All excavations would be held to the absolute minimum required to determine the apparent existence or non-existence of significant cultural remains. All excavations would be backfilled upon completion of the excavations. Artifacts discovered during the survey would be marked for identification and removed from the site for analysis and examination to determine historical significance. Permission to remove the items from the site would be obtained through personal contact with the landowner. All objects removed from the site would be returned to the landowner, if required, upon completion of the analysis and report. If the landowner does not require the return of the objects discovered, they would be donated to the State Historic Preservation Officer (SHPO) for permanent curation. If the investigations reveal the existence of cultural remains significant enough to render the site eligible for the National Register, additional ROE for more extensive excavations and mitigation would be required.

No roads, fences, buildings, or other improvements within the area would be disturbed. No trees would be felled outside of the 100 ft clearing and grubbing corridor in Figure 1. Branch cutting would be allowed for small vehicle passage, if necessary within the 600 ft ROW.

FISH AND WILDLIFE RESOURCES

The dominant forested habitat types in the study area are bottomland hardwoods and swamp. Vegetation commonly found in these wetland areas includes sugarberry, red maple, sweetgum, American elm, black willow, green ash, overcup oak, Nuttall oak, and American sycamore in the bottomland hardwood habitat and bald cypress, tupelogum, blackgum, lizard's tail, swamp lily, buttonbush, swamp privet, and duckweeds in the swamp habitat. Scattered portions of upland hardwoods, scrub/shrub uplands, and scrub/shrub wetlands also are found along and within the developed areas. Except for Lake Pontchartrain, Lake Maurepas, and the Mississippi River, which border the study area, most of the open water within the study area consists mainly of tidal streams, canals, and ditches. The shallower open water areas may support submerged and/or floating aquatic vegetation such as coontail, pondweeds, naiads, fanwort, water hyacinth, pondweeds, American lotus, and widgeongrass.

Development for residential, commercial, and industrial purposes is located immediately adjacent to U.S. 61 and along the Mississippi River levee. Agriculture, primarily sugarcane production, is also extensive within that portion of the study area. Residential and commercial development is also becoming extensive between U.S. 61 and I-10, as wetlands are drained and/or filled to accommodate growth. Most of U.S. 61 and portions of I-10 are not elevated above the swamps they cross thus impacting the hydrology of those swamps. The wetland complex they cross is part of the largest contiguous wetland area in Louisiana.

The fresh and low-salinity water of the study area supports many commercially and recreationally important fishes such as largemouth bass, black crappie, sunfishes, catfishes, freshwater drum, buffalos, and gars. The low-salinity waters and wetlands of the study area also provide habitat for many species of estuarine-dependent fishes and shellfishes including southern flounder, sand seatrout, spotted seatrout, Atlantic croaker, striped mullet, Gulf menhaden, blue crab, and white shrimp. Decaying plant material (detritus) is carried by surface runoff and tidal action from the study area wetlands into the adjacent estuarine waters, substantially contributing to the detritus-based food web that supports a high level of estuarine-dependent finfish and shellfish productivity.

The coastal marshes and forested wetlands of the Lake Pontchartrain Basin have been identified by the North American Waterfowl Management Plan (NAWMP), Gulf Coast Joint Venture (GCJV): Mississippi River Coastal Wetlands Initiative as a key waterfowl wintering area. The Gulf Coast is the terminus of the Central and Mississippi Flyways and is therefore one of the most important waterfowl areas in North America, providing both wintering and migration habitat for significant numbers of the continental duck and goose populations that use both flyways. The Mississippi River Coastal Wetlands Initiative area is dominated by coastal marsh, forested swamps, and seasonally flooded bottomland hardwoods that provide habitat for several species of wintering waterfowl. Wood ducks are the primary waterfowl species in forested wetlands, while other ducks (e.g., mallard, American widgeon, gadwall, and lesser scaup) use those forested habitats to a lesser degree. One strategy to achieving the goals and objectives of the GCJV is to maintain the existing functions and values of those habitats and prevent additional losses and degradation of those wetlands (Wilson 2002). Numerous other game birds are present in or adjacent to the study area, including American coot, rails, gallinules, wood duck, common snipe, and American woodcock. Non-game bird species also utilize the study area marshes, including least bittern, pied-billed grebe, black-necked stilt, American avocet, killdeer, black-bellied plover, willet, and various species of sandpipers, gulls, and terns. The study area supports many resident and transient hawks and owls including red-shouldered hawk, barn owl, common screech owl, great horned owl, and barred owl. Winter residents include red-tailed hawk, northern harrier, and American kestrel, while the Mississippi kite, swallow-tailed kite and broad-winged hawk are common summer residents. In addition, the project area supports many species of resident and migratory passerine birds. Some neo-tropical migrants that are currently experiencing a population decline (e.g., white-eyed vireo, northern parula) are dependent on large forested acreage to successfully reproduce. Also, present are cuckoos, swifts, hummingbirds, nighthawks, woodpeckers, and the belted kingfisher.

Important game mammals occurring in the project area include white-tailed deer, eastern cottontail, swamp rabbit, gray squirrel, and fox squirrel. Commercially important furbearers include muskrat, nutria, river otter, raccoon, and mink. Other mammals expected include various species of insectivores, bats, rodents, and the nine-banded armadillo.

Numerous amphibians are expected to occur on stream and lake edges, ponds, and in forested wetlands of the study area including lesser siren, three-toed amphiuma, Gulf Coast toad, eastern narrow-mouthed toad, spring peeper, green treefrog, cricket frog, and bullfrog. Commercially important reptiles found in the streams, canals, and open water areas include American alligator, snapping turtle, alligator snapping turtle, smooth softshell turtle, spring softshell turtle, and diamondback terrapin. Other reptiles commonly found in the project area include red-eared turtle, painted turtle, Mississippi mud turtle, stinkpot, green anole, broad-headed skink, various water snakes, western ribbon snake, speckled kingsnake, and the western cottonmouth.

Threatened and Endangered Species

The Gulf sturgeon (*Acipenser oxyrinchus desotoi*), federally listed as a threatened species, is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida. In Louisiana, Gulf sturgeon have been reported at Rigolets Pass, rivers and lakes of the Lake Pontchartrain basin, and adjacent estuarine areas. On March 19, 2003, the Service and the National Marine Fisheries Service (NMFS) published a final rule in the Federal Register (Volume 68, No. 53) designating critical habitat for the Gulf sturgeon in Louisiana, Mississippi, Alabama, and Florida. Portions of the Pearl and Bogue Chitto Rivers, Lake Pontchartrain east of the Lake Pontchartrain Causeway, all of Little Lake, The Rigolets, Lake St. Catherine, and Lake Borgne within Louisiana were included in that designation. While sturgeon have been documented in study area waterways, those waterways are not designated critical habitat.

Federally listed as an endangered species, West Indian manatees (*Trichechus manatus*) occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). Manatee occurrences appear to be increasing, and they have been regularly reported in the Amite, Blind, Tchefuncte, and Tickfaw Rivers, and in canals within the adjacent coastal marshes of Louisiana. They have also been occasionally observed elsewhere along the Louisiana Gulf coast. Should the proposed project involve activity in the aquatic environment in those areas during summer months, further consultation with this office will be necessary.

Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA)

The proposed project area forested wetlands may provide nesting habitat for the bald eagle (*Haliaeetus leucocephalus*), which was officially removed from the List of Endangered and Threatened Species as of August 8, 2007. However, the bald eagle remains protected under the MBTA and BGEPA. There are approximately 28 known bald eagle nests in the study area. Comprehensive bald eagle survey data have not been collected by the Louisiana Department of Wildlife and Fisheries (LDWF) since 2008, and new active, inactive, or alternate nests may have been constructed within the proposed project area since that time. Bald eagles typically nest in large trees located near coastlines, rivers, or lakes that support adequate foraging from October through mid-May. In southeastern Louisiana parishes, eagles typically nest in mature trees (e.g., bald cypress, sycamore, willow, etc.) near fresh to intermediate marshes or open water. During any project construction, on-site personnel should be informed of the possible presence of nesting bald eagles in the vicinity of the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest occurs or is discovered within 1,500 feet of the proposed project area, then an evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles. That evaluation may be conducted on-line at: <https://www.fws.gov/southeast/es/baldeagle/>. Following completion of the evaluation, that website will provide a determination of whether additional consultation is necessary.

The proposed project would be located in an area where colonial nesting waterbirds may be present in the project area. There are approximately 6 known nesting bird colonies in the study area. Colonies may be present that are not currently listed in the database maintained by LDWF. That database is updated primarily by (1) monitoring previously known colony sites and (2)

augmenting point-to-point surveys with flyovers of adjacent suitable habitat. Although several comprehensive coast-wide surveys have been recently conducted to determine the location of newly-established nesting colonies, we recommend that a qualified biologist inspect the proposed work site for the presence of undocumented nesting colonies during the nesting season because some waterbird colonies may change locations year-to-year.

For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 feet of a rookery should be restricted to the non-nesting period, depending on the species present. Below is the list of colonial nesting birds that may be found and the corresponding activity window during which the project may occur without affecting nesting wading bird colonies. Please note no part of the project should occur outside those windows.

<u>Species</u>	<u>Project Activity Window/Non-Nesting Period</u>
Anhinga	July 1 to March 1
Cormorant	July 1 to March 1
Great Blue Heron	August 1 to February 15
Great Egret	August 1 to February 15
Snowy Egret	August 1 to March 1

In addition, we recommend that on-site contract personnel including project-designated inspectors be trained to identify colonial nesting birds and their nests, and avoid affecting them during the breeding season (i.e., the time period outside the activity window). Should on-site contractors and inspectors observe potential nesting activity, coordination with the LDWF and the Service should occur.

<u>Species</u>	<u>Project Activity Window/Non-Nesting Period</u>
Little Blue Heron	August 1 to March 1
Tricolored Heron	August 1 to March 1
Reddish Egret	August 1 to March 1
Cattle Egret	September 1 to April 1
Green Heron	September 1 to March 15
Black-crowned Night-Heron	September 1 to March 1
Yellow-crowned Night-Heron	September 1 to March 15
Ibis	September 1 to April 1
Roseate Spoonbill	August 1 to April 1

Managed Areas

The LDWF operates the Maurepas Swamp Wildlife Management Area (MSWMA) which encompasses over 100,000 acres of wetlands in and around the study area. Portions of the WMA would be bisected by the levee alignment. Unavoidable direct and indirect impacts to the Maurepas Swamp WMA should be mitigated for on the WMA. In addition, the Maurepas Swamp WMA could be considered for mitigation of unavoidable impacts to other swamp areas. Please contact the LDWF, Region 7 Office (225/765-2360), for further information regarding any additional permits that may be required to perform work on that WMA.

Essential Fish Habitat

The project may be located within an area identified as Essential Fish Habitat (EFH) by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA, Magnuson-Stevens Act; P.L. 104-297). The USACE should consult with the NMFS regarding EFH.

Species of Management Concern

Species of fish, wildlife, and plants labeled as “S1” and S2” by the Louisiana Department of Wildlife and Fisheries are extremely and very rare species, respectively, that are vulnerable to extirpation in Louisiana. These species, along with those identified as priority species by the Gulf Coast Joint Venture are species of management concern. Continued population declines could result in these species becoming candidates for listing under the Endangered Species Act. Some of these species may also be referred to as at-risk species; the USFWS has defined at-risk species as those species that have either been proposed for listing, are candidates for listing, or have been petitioned for listing. In addition, species of concern that would use study area’s swamp, bottomland hardwood, and fresh wetland habitats include the glossy ibis, seaside sparrow, mottled duck, and the peregrine falcon.

IMPACTS OF SELECTED PLAN

Clearing of existing trees for access roads and in the 100 ft corridor of the proposed levee alignment for investigations will impact 158 acres (91 AAHUs) of swamp and 42 acres (36 AAHUs) of bottomland hardwoods (BLH) for a total of 200 acres (127 AAHUs) of forested wetlands. Of these impacts 46 acres (26 AAHUs) of swamp and 3 acres (2 AAHUs) of BLH are on the Maurepas Swamp Wildlife Management Area. Impacts to these forested wetlands is considered to result in the permanent loss of trees. Even if the vegetation would be allowed to regrow the low recruitment of trees within the area indicate regrowth is unlikely. All unavoidable impacts for surveys and borings and related work will be mitigated for using the mitigation plan outlined in the 2016 WSLP EIS. Mitigation plan features would occur in the project area vicinity.

The Proposed Action could have minor indirect impacts to vegetation resources of an unknown nature due to altered hydrology. Clearing and grubbing of the 100 foot corridor and improvement of access roads could alter hydrology which could impact vegetation resources. The nature of these impacts are not known. In order to help combat changes in hydrology the Service recommends the additions of culverts every 300 feet where building of access roads occurs through wetlands and/or upon completion of construction activities, access roads should be degrading to restore natural hydrology.

USFWS POSITION AND RECOMMENDATIONS

Implementation of surveys and borings, and related activities, for the West Shore Lake Pontchartrain levee project will result in the direct loss of approximately 158 acres (91 AAHUs) of swamp and 42 acres (36 AAHUs) of bottomland hardwoods. Of these impacts 46 acres (26 AAHUs) of swamp and 3 acres (2 AAHUs) of BLH are on the Maurepas Swamp Wildlife Management Area.

The Service's Mitigation Policy (Federal Register, Volume 46, No. 15, January 23, 1981) identifies four resource categories that are used to ensure that the level of mitigation recommended by Service biologists will be consistent with the fish and wildlife resource values involved.

Considering the high value of forested wetlands for fish and wildlife and the relative scarcity of that habitat type on a basin-wide scale, that habitat type is designated as Resource Category 2, the mitigation goal for which is no net loss of in-kind habitat value.

We appreciate the Corps' consideration of our below recommendations for the WSLP Surveys and Borings. Provided that the below recommendations are included and adequately addressed in the final feasibility report, the Service does not oppose implementation of the surveys and borings for WSLP.

The Service respectfully requests the following recommendations are implemented concurrently with project implementation:

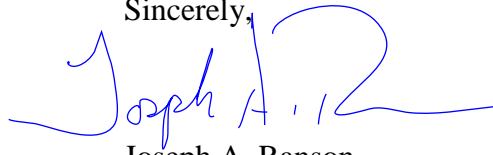
1. For proposed work on the Maurepas Swamp WMA, LDWF requires the USACE obtain a Letter of Authorization request to construct a survey right-of-way, which will require clearing forested wetland habitat within MSWMA, AND obtain the survey permission for all preliminary survey activities (i.e., Timber Assessments) to ensure the safety of crews within the recreational hunting seasons. The permission request shall include specific timeframe (dates) that survey activities will occur.
2. At this time, LDWF and the Service are requesting a letter of intent regarding the alignment of the proposed levee system. Currently, there are no objections to proposed activities to clear a new right-of-way with appropriate compensatory mitigation; however LDWF expresses concern for habitat loss in the event that the alignment is changed after completion of the survey and soil boring evaluations. The referenced letter of intent would provide assurances that levee construction will occur along the centerline of the cleared survey right-of-way.
3. In an effort to reduce impacts, LDWF and the Service recommends that the USACE consider reducing the proposed 100' right-of-way to the greatest extent practicable. Reducing the survey right-of-way to 50' - 75' in width is deemed more reasonable for the nature of these activities. Please provide justification for the need of the proposed right-of-way width if reduction is not possible.
4. LDWF recommends the value of the cleared timber be determined in consultation with LDWF and appropriate compensation must be provided to LDWF.
5. LDWF and the Service recommend that all impacts occurring on MSWMA shall be mitigated for on MSWMA or within the LDWF's WMA primarily system. Therefore in an effort to provide meaningful and permanent mitigation, LDWF primarily desires the USACE investigate the recommended mitigation projects identified in the attached map and summary (Appendix A). LDWF is open to discussing land donations via acquisition of adjacent properties by the USACE.
6. The proposed levee alignment will isolate portions of MSWMA on the protected side of the levee. These fragmented and isolated properties may provide less value as for wildlife and recreation. LDWF recommends discussions take place on how best to address these losses.

7. Avoid adverse impacts to bald eagles and their nesting activities through careful design of project features and timing of construction. During any project construction, on-site personnel should be informed of the possible presence of nesting bald eagles in the vicinity of the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest occurs or is discovered within 1,500 feet of the proposed project area, then an evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles. That evaluation may be conducted on-line at: <https://www.fws.gov/southeast/es/baldeagle/>. Refer to the Fish and Wildlife Resources section of this report for more details.
8. Avoid adverse impacts to nesting wading bird colonies through careful design project features and timing of construction. The Service and LDWF recommend that a qualified biologist inspect the proposed work site for the presence of undocumented nesting colonies during the nesting season (i.e., September 1 through February 15 for wading bird nesting colonies and October through mid-May for bald eagles). Refer to the Fish and Wildlife Resources section of this report for more details.
9. West Indian manatees (*Trichechus manatus*) occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). During in-water work in areas that potentially support manatees all personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable. For more detail on avoiding contact with manatee contact this office. Should a proposed action directly or indirectly affect the West Indian manatee, further consultation with this office will be necessary.
10. Clearing and investigations will occur partly within the boundaries of Maurepas Swamp WMA. Please coordinate all activities with the LDWF Hammond Field Office. Please contact Jill Day 985-543-4785 or jday@wlf.la.gov and Cornelius Williams at 225-763-8807 or cjwilliams@wlf.la.gov for more information about appropriate WMA authorizations.
11. The impacts to Essential Fishery Habitat should be discussed with the NMFS to determine if the project complies with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Magnuson-Stevens Act; P.L. 104-297, as amended) and its implementing regulations.
12. Access roads across existing wetlands should be avoided if possible and secondary impacts to wetland hydrology should be prevented or reduced. To avoid changes to hydrology the Service recommends appropriately sized culverts (minimum 24 inch culverts) be installed and maintained every 300 feet across access roads through wetlands with additional culverts placed at stream crossings and drainage features. Alternatively, upon completion of construction activities, access roads should be degrading to restore natural hydrology.

13. The Service recommends monitoring changes to wetland hydrology resulting from impacts of stockpiling debris and building access roads. The proposed alternative may alter natural periods of inundation or soil saturation in the impounded wetlands and could prove detrimental to their function and longevity. Therefore, the Service recommends hydrologic gauges be placed and maintained in appropriate locations to assist in determining future impacts to surrounding forested wetlands and assist in determining the adequacy of placed culverts or the need for installation of additional culverts and/or water control structures to ensure adequate water exchange. Gauges could be supported or cost-shared through existing activities such as through the US Geological Survey (USGS) or Coastwide Reference Monitoring System (CRMS).
14. The clearing of forested wetlands for the proposed action is necessary for investigative work. Full, in-kind compensation (quantified as Average Annual Habitat Units) is recommended for unavoidable direct adverse impacts on forested wetlands. To help ensure that the proposed mitigation features meet their goals, the Service provides the following recommendations.
- a. If applicable, a General Plan should be developed by the Corps, LDWF, and the Service in accordance with Section 3(b) of the Fish and Wildlife Coordination Act for mitigation lands.
 - b. Continued mitigation planning should be closely coordinated with the Service, LDWF, and other interested natural resource agencies and should include any additional losses identified during future monitoring and engineering and design studies.
 - c. As mitigation measures for WSLP investigations will coincide with mitigation for the construction of the WSLP levee, the Service recommends an accounting of impacts from activities that occur prior to construction be maintained, shared with the agencies and presented in subsequent NEPA documents.
 - d. If mitigation is not implemented concurrent with levee construction, the amount of mitigation needed should be reassessed and adjusted to offset temporal losses of wetlands.
 - e. The Corps should remain responsible for the required mitigation until the mitigation is demonstrated to be fully compliant with interim success and performance criteria. At a minimum, this should include compliance with the requisite vegetation, elevation, acreage, and dike gapping criteria.
 - f. The acreage restored and/or managed for mitigation purposes, and adjacent affected wetlands, should be monitored over the project life. This monitoring should be used to evaluate project impacts, the effectiveness of the compensatory mitigation measures, and the need for additional mitigation should those measures prove insufficient.
15. The Service recommends that the USACE contact the Service for additional consultation if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. Additional consultation as a result of any of the above conditions or for changes not covered in this consultation should occur before changes are made and or finalized.

We appreciate the cooperation of your staff on this study. We look forward to our continued coordination with you to further protect fish and wildlife resources. If you need additional assistance or have questions regarding this letter, please contact Cathy Breaux (504/862-2689) of this office.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joseph A. Ranson", with a stylized flourish at the end.

Joseph A. Ranson
Field Supervisor
Louisiana Ecological Services Office

cc: CPRA, Baton Rouge, LA
EPA, Dallas, TX
LDNR, CMD, Baton Rouge, LA
LDWF, Baton Rouge, LA
NMFS, Baton Rouge, LA
USACE, NOD, New Orleans, LA (Attn: Mr. Patrick Smith)

Appendix A

Maurepas Swamp WMA Mitigation Proposals

DRAFT Maurepas Swamp WMA Mitigation Proposals

Prepared by the Louisiana Department of Wildlife and Fisheries (LDWF)

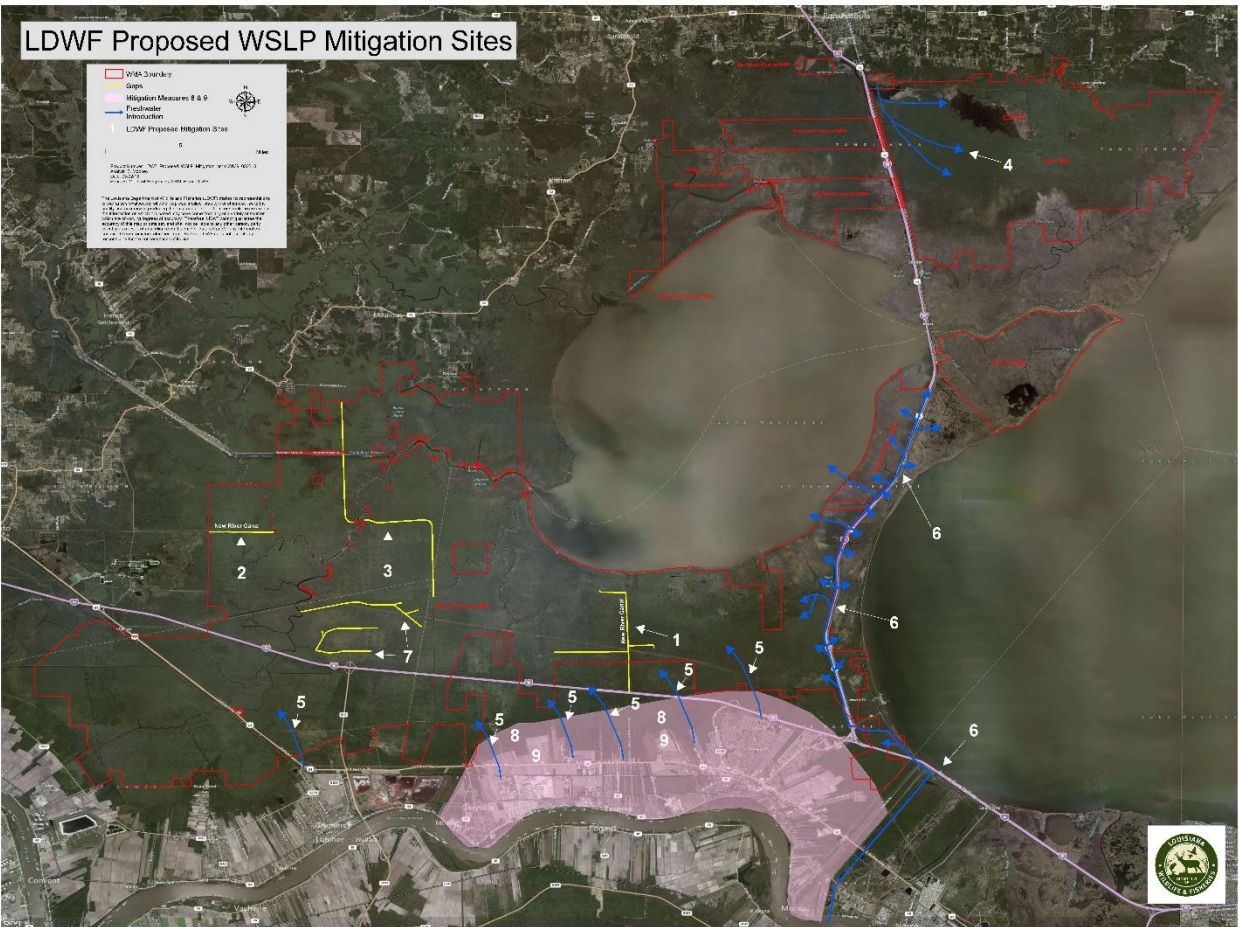
Presented to the West Shore-Lake Pontchartrain Project Delivery Team (PDT)

May 23, 2013

The elimination of nutrient and freshwater inputs threatens the sustainability of the Maurepas Swamp. The most effective strategy to restore health and productivity of the swamp is construction of Mississippi River reintroductions into Maurepas Swamp. However, additional measures such as eliminating barriers to surface flow patterns are also needed, not only to complement the planned river reintroductions, but also to improve current hydrologic conditions. Therefore, the mitigation measures identified below by LDWF primarily aim to enhance or improve surface hydrology until such time that river reintroductions are constructed. The mitigation measures are still conceptual and will require further planning and engineering. LDWF also prioritized each measure (i.e., High, Medium or Low) to inform the PDT on which measures are believed to be most beneficial.

1. Gap spoil banks along Reserve Relief Canal (**High priority**).
2. Gap spoil banks along New River Canal (**High priority**).
3. Gap/degrade railroad bed which traverses the swamp beginning from Hope Canal and proceeding north and west to the northern property boundary (crossing Blind River and Amite River Diversion Canal (**High priority**).
4. Improve through flow of Hammond wastewater into existing Joyce WMA outfall area (**High priority**).
5. Make efficient use of stormwater and wastewater produced by communities south of I-10 (e.g., Laplace, Ascension Parish) by distributing this water into the Maurepas Swamp (**High priority**).
6. Diversion of freshwater from Bonnet Carre Spillway guide levee to the swamps and marshes to the northwest (**Medium priority**).
7. Gap any spoil banks north of I-10 in the area of Tennessee Williams (**Medium priority**).
8. Preserve existing wetlands by acquiring land in fee title that is enclosed within the levee (**Low priority**).
9. Restrict development in wetlands enclosed within the levee (**Low priority**).

The number of the proposed mitigation measure corresponds with the number on the accompanying map.



Appendix A

Maurepas Swamp WMA Mitigation Proposals

DRAFT Maurepas Swamp WMA Mitigation Proposals

Prepared by the Louisiana Department of Wildlife and Fisheries (LDWF)

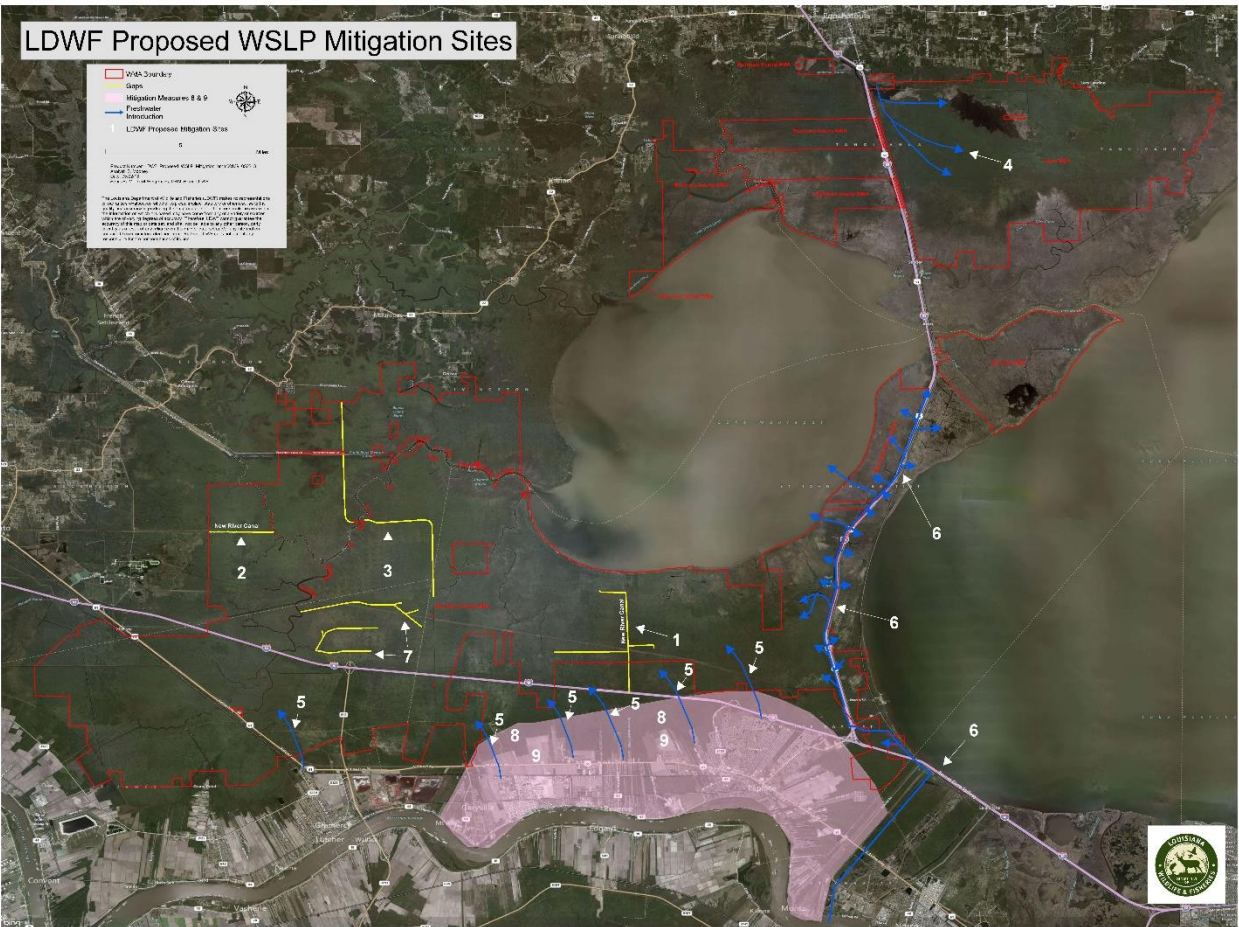
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9. Restrict development in wetlands enclosed within the levee (**Low priority**).

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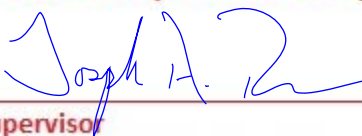


Annex D: Endangered Species Act

To: Joseph Ranson, USFWS
646 Cajundome Blvd., Suite 400
Lafayette, LA 70506
Fax: (337) 291-3139

From: Patrick Smith
FAX: (504) 862-2088
Date: March 22, 2019

Is not Likely to adversely effect those resources



27 Mar 19

Supervisor

Date

Louisiana Ecological Services Office
U.S. Fish and Wildlife Service

Subject: Protected, Threatened and Endangered Species Determination for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations

Dear Mr. Ranson:

Attention: David Walther

The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has proposed Supplemental Environmental Assessment (SEA) for the New Orleans District (CEMVN) to evaluate potential impacts of surveys and borings, and related activities necessary to investigate potential changes to the structural alignment levee footprint in St. John the Baptist and St. Charles Parishes, Louisiana (LA), as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS). Additionally, the SEA also evaluates adding 5 stockpile/staging areas for construction related activities as well as the addition of a bank credit purchase option into the mitigation plan approved in the 2016 WSLP EIS for compensating bottomland hardwoods (BLH) impacts. The Record of Decision for the 2016 WSLP EIS was signed by the Assistant Secretary of the Army on September 14, 2016. The USFWS determined that the project was not likely to adversely affect Federal trust resources currently protected by the Endangered Species Act of 1973 via letter dated May 7, 2014.

A project description, occurrence of protected, threatened and endangered species, impacts to protected, threatened and endangered species, and CEMVN's conclusion and determination is included below. Based on review of existing data, preliminary field surveys, the rarity of occurrences, and the use of best management practices, CEMVN has determined that the proposed action is not likely to adversely affect any of the listed species, bald eagles or colonial nesting water birds.

Project Description

A map indicating where the proposed action activities would occur is provided (Figure 1).

There are five distinct activities in the proposed action in addition to the option to purchase Mitigation Bank credits for BLH impacts. They are: access, clearing and grubbing, stockpiling and staging, soil borings and Cone Perimeter Testings (CPTs), and other surveys. Each activity is discussed below. The duration for the proposed action activities would be approximately nine months. The entire survey ROW would be approximately 600 feet wide, with the clearing and grubbing necessary for the soil borings and CPT's occurring within a 100 foot corridor within the 600 foot ROW. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. All tree felling would be performed to avoid damage to trees left standing, to existing structures and installations, and with due regard for the safety of employees and others. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and HTRW assessments would be within the approximately 600 foot ROW surrounding the 100 foot clearing and grubbing corridor. A typical survey ROW plan view is shown in Figure 2.

Access

Access for clearing and grubbing of the 100 foot corridor, cross-sectional surveys, soil borings/CPTs, environmental and cultural resources investigations, and HTRW assessments would be from U.S. Highway 61 (Airline Hwy), LA Hwy 44, LA Hwy 54, I-10 Service Road, Old US HWY 51, Frenier Road, Prescott Road, other existing roads, trails, pipeline corridors, and along Reserve Canal leading to the alignment (Figure 1). These access routes would be utilized for the delivery of survey, tree clearing, and boring/CPT equipment. Some of the proposed access routes would require the clearing of vegetation for the movement of this equipment. Clearing and grubbing for access routes would be limited to a 40-foot width, which is the minimum width necessary for the passage of surveys and borings/CPTs equipment. A 60-foot road width would be allowed for access roads within pipeline ROWs to allow for pipeline protection. The extra width would accommodate for special construction considerations to minimize impacts to infrastructure. Coordination with pipeline companies is ongoing to determine the best method to accommodate pipeline infrastructure and minimize environmental impacts. For instance, timber matting or similar measures may be required across some pipeline corridors. Clearing would consist of the complete removal of all trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris within access route corridors. Debris resulting from access road clearing and grubbing operations could be stockpiled in temporary windrows within access corridors, or within the stockpile and staging areas described below. Felled timber may be chipped on-site prior to hauling and disposal, and other cleared debris any timber hauled offsite and disposed of according to applicable laws and regulations. Approximately 91 acres have been identified as access routes with a maximum impact

to coastal swamp habitat of approximately 78 acres. All equipment to be utilized for the surveys are described in the subsequent sections.

Clearing and Grubbing

Clearing and grubbing would occur within a 100 foot corridor and would provide the necessary work area for the completion of soil boring/CPT activities. The corridor is broken into six distinct segments shown in red in Figure 2 totaling approximately 138 acres and 11.4 linear miles. Approximately 135 of these 138 acres are forested wetlands, with approximately 115 acres being swamp and approximately 20 acres are BLH. A width of 100 feet is needed for operation of equipment and for stockpiling of cut trees and undergrowth. All trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris would be cleared within the clearing and grubbing corridor. Trees on dry land would be cut flush with the natural ground, while trees in water would be cut flush with the natural ground or mud line underwater. In limited circumstances, the removal of tree stumps and rootballs below the ground surface may be necessary to provide unobstructed and safe access for equipment. Rootball removal is not expected to exceed 20% of the corridor.

Trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations could be stockpiled in temporary windrows within the clearing and grubbing corridor, spaced approximately every 300 feet. Windrows would alternate between land side and flood side of the project centerline. Debris may be placed in neat windrows or piles with the tree limbs trimmed sufficiently to make the windrow as small as practicable. No windrowed debris or cleared material shall extend beyond the 100- foot clearing and grubbing limit. Debris could also be stockpiled in the stockpile and staging areas described below. Debris removal would occur during the levee construction phase.

Stockpiling and Staging

Two options for temporary stockpiling of trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations would be available to the contractor. Material could be stockpiled within any of the five stockpile areas shown in Figure 2, or material could be temporarily stockpiled within the 100-foot clearing and grubbing corridor or access roads ROWs. Descriptions of how material could be stockpiled within the clearing and grubbing corridor and access roads are discussed in their respective sections.

The five temporary stockpile/staging areas total approximately 1,020 acres (583 acres, 40 acres, 98 acres, 143 acres, and 156 acres from east to west) and are shown in Figure 2. Originally nine stockpile/staging areas were considered, but four were eliminated from further consideration due to potential impacts to wetlands, cultural resources, Environmental Justice communities, or local development plans.

These temporary stockpile/staging areas may be used for various activities during the investigative and construction phases of the WSLP Project. Use of these areas is expected to end in 2023. The sites may be used for the storage of felled trees, staging of investigative and construction equipment such as drilling rigs, small boats, bulldozers, excavators, pile driving equipment, and/ or storage of construction materials such as steel sheet piling, steel piles, and other materials and items for construction of pump stations and drainage structures. The construction contractor or USACE may also set up trailers to serve as office space during construction within one or more of the stockpile/staging areas.

Some of the stockpile/staging areas could also be used for the temporary stockpiling of clay and sand for levee or floodwall construction. Up to 3,000,000 cubic yards of clay material and approximately 1,000,000 cubic yards of sand would be used to construct the WSLP Project levee. These materials could be transported to the stockpile areas from the Bonnet Carré Spillway (BCS) borrow pits, as approved in the 2016 WSLP EIS, using dump trucks. Sand could be obtained from commercially available sources or within the BCS. Approximately 225,000 truck trips would be required to haul 4,000,000 cubic yards of material. All stockpile/staging areas are located along major highways. Material would be hauled from BCS to five stockpile/staging areas exclusively via Highway 61 for the four stockpile areas located adjacent to Highway 61, and via Highways 61 and 51 for the northern most stockpile area that is adjacent to Highway 51.

Soil Borings and Cone Penetration Testing (CPTs)

Soil borings and CPTs would be conducted within the clearing and grubbing corridor at intervals of 500 feet. The borings would consist of undisturbed type borings. Borings and CPTs would be taken with truck and track mounted equipment. The boring holes would be backfilled in accordance with standard criteria.

Two and four wheel drive vehicles, standard boring and land surveying equipment, machetes, chainsaws, a small boat and trailer (as required), and marsh buggies would be used.

Other Surveys

Other surveys include topographical surveys to locate features and utilities, define the project baseline alignment, and define ROW extent; as well as those necessary to complete cross-sections, HTRW assessments, cultural resource investigations, and environmental surveys. Small vehicles (such as all-terrain vehicles or other similar small 4x4s), small boats, air boats, and marsh buggies would be allowed to operate within the approximately 600 foot ROW surrounding the clearing and grubbing corridor (see other surveys area in Figure 2). Foot traffic would also be permitted. Cross-sectional surveys would occur at intervals between 50 and 300 feet.

Environmental surveys would include vegetative surveys such as plant identification and measurements. HTRW assessments would include traversing the area to identify

potential HTRW concerns. If any suspected HTRW concerns are noticed, soil and/or water samples may be taken. Environmental surveys and HTRW assessments would be performed by two to four person crews that would traverse the area.

Similarly, cultural resources (CR) investigations would be completed with two to four person crews. Some CR subsurface investigations may be required to determine if buried cultural remains exist within the site limits. The subsurface investigation would be accomplished by hand auger or shovel. If items of seeming cultural significance are discovered during the initial traverse of the site, the CR investigation would be expanded to include, at the most, a series of 2-meter by 2-meter holes or 1-meter wide trenches excavated to depths of 1 to 2 meters. Excavation would be accomplished by hand augers and/or shovels. All excavations would be held to the absolute minimum required to determine the apparent existence or non-existence of significant cultural remains. All excavations would be backfilled upon completion of the excavations. Artifacts discovered during the survey would be marked for identification and removed from the site for analysis and examination to determine historical significance. Permission to remove the items from the site would be obtained through personal contact with the landowner. All objects removed from the site would be returned to the landowner, if required, upon completion of the analysis and report. If the landowner does not require the return of the objects discovered, they would be donated to the State Historic Preservation Officer (SHPO) for permanent curation. If the investigations reveal the existence of cultural remains significant enough to render the site eligible for the National Register, additional ROE for more extensive excavations and mitigation would be required.

No roads, fences, buildings, or other improvements within the area would be disturbed. No trees would be felled outside of the 100 foot clearing and grubbing corridor in Figure 2. Branch cutting would be allowed for small vehicle passage, if necessary within the 600 foot ROW.

Purchase of Mitigation Bank Credits

In addition to the mitigation plan approved in the 2016 WSLP EIS, USACE approved mitigation banks with a service area that encompasses the impacts, with perpetual conservation servitudes currently in compliance with their mitigation bank instrument, and with released BLH credits would be an option for mitigating BLH impacts incurred from the WSLP project. If the BLH impacts are wetland in nature and/or incurred within the coastal zone, the purchase of mitigation bank credits would also have to meet these requirements in kind. Mitigation banks would be required to run the same version of the WVA model as was used to assess the impacts from constructing the WSLP project to ensure that the assessment of the functions and services provided by the mitigation bank match the assessment of the lost functions and services at the impacted site.

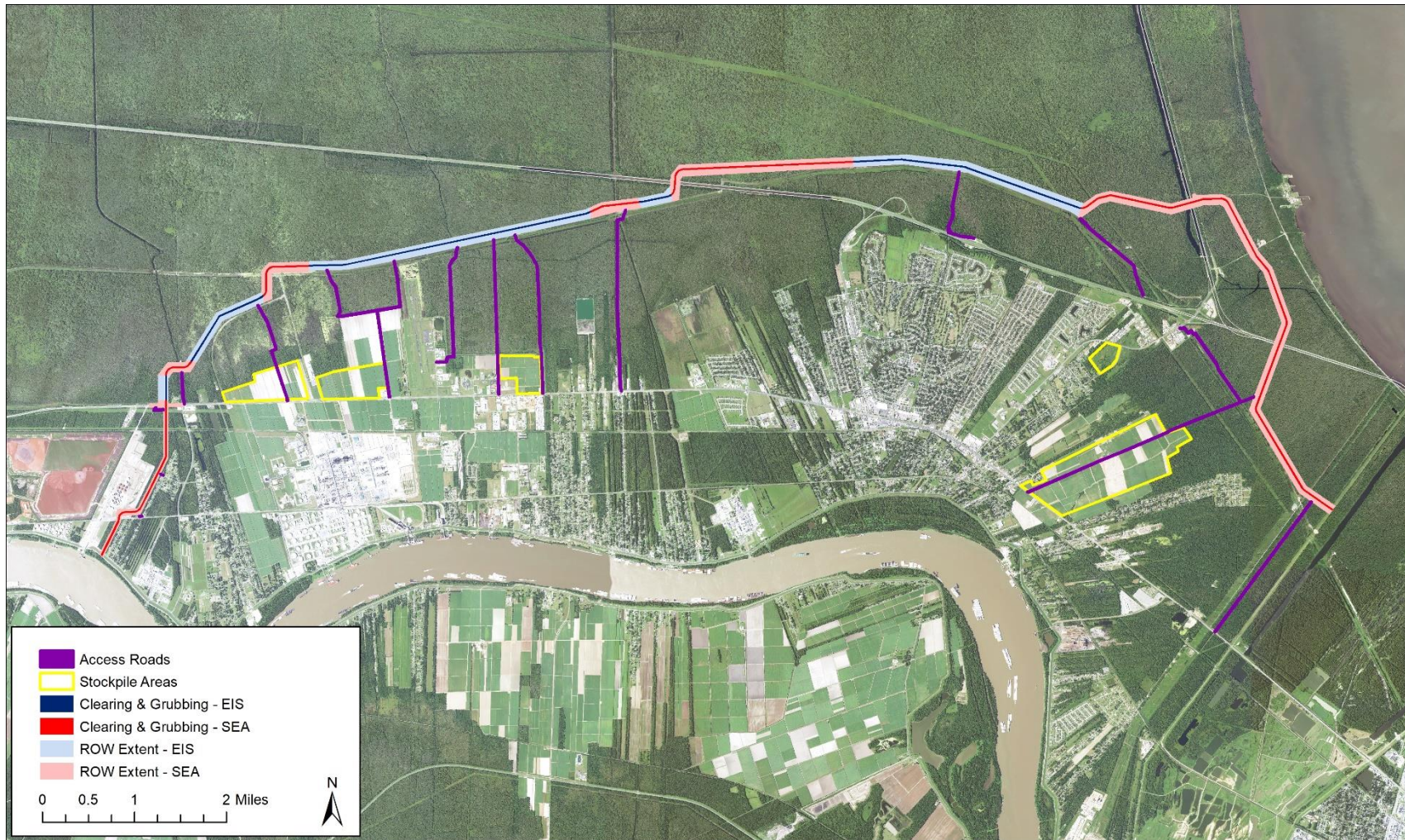


Figure 1: Map showing the proposed action. There are 15 access routes, with one access route bifurcating into two roads near the surveys and boring/CPT area. "Clearing & Grubbing" indicates the extent to which tree felling, borings/CPTs, and stockpiling would occur. "ROW Extent" refers to the extent to which other surveys would occur. Areas with "EIS" are within the ROW from the 2016 WSLP EIS and are shown for reference as they are not part of the proposed action. Areas with "SEA" refer to the proposed action.

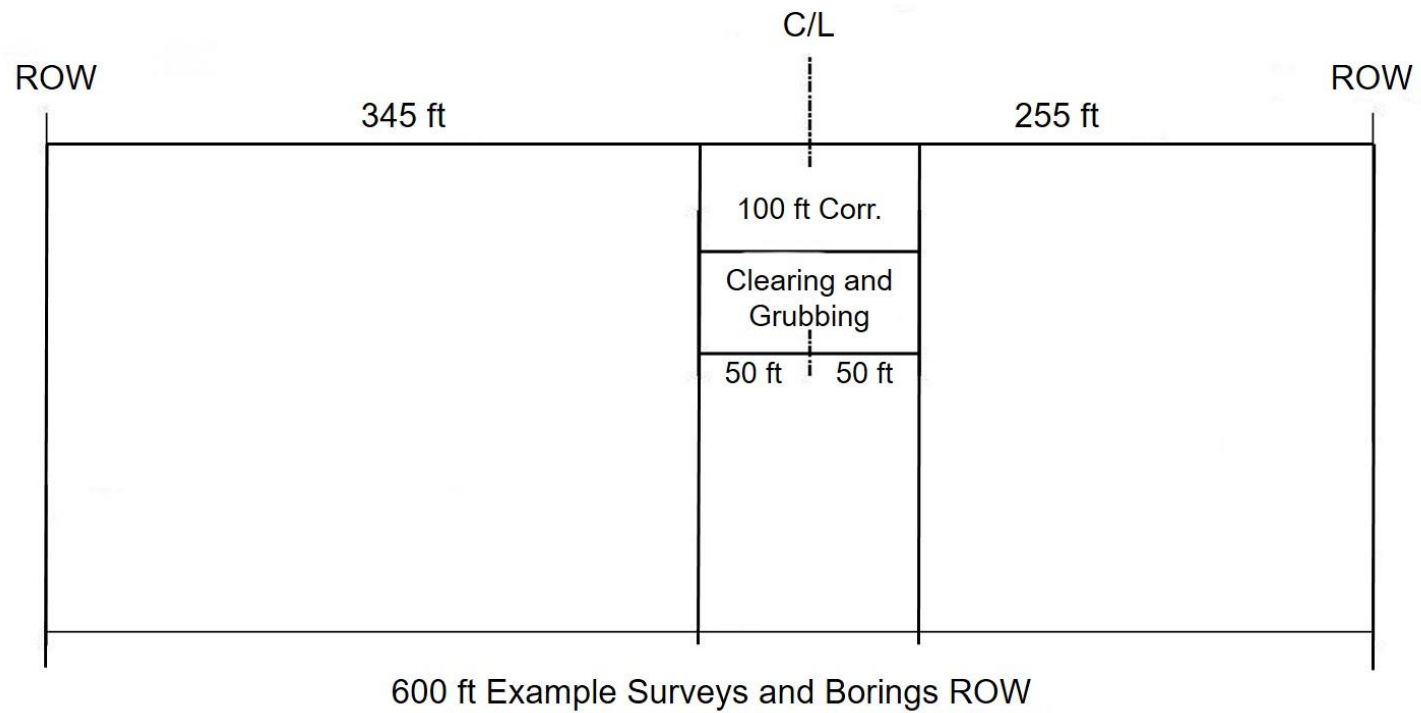


Figure 2: Plan view drawing of a typical ROW for the proposed action.

Occurrence of Protected, Threatened and Endangered Species

Two threatened and endangered species, the Gulf sturgeon (*Acipenser oxyrinchus desotoi*) and the West Indian manatee (*Trichechus manatus*), and one delisted species, the bald eagle (*Haliaeetus leucocephalus*), are known to occur or may occasionally enter the vicinity of the proposed action. The area is also known to support colonial nesting waterbirds (e.g., herons, egrets, and others), which are protected under the Migratory Bird Treaty Act (MBTA).

The Gulf sturgeon is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida. In Louisiana, Gulf sturgeon have been reported at Rigolets Pass, rivers and lakes of the Lake Pontchartrain basin, and adjacent estuarine areas. While sturgeon have been documented in nearby waterways, the vicinity of the proposed action does not contain Gulf sturgeon critical habitat.

West Indian manatees (*Trichechus manatus*) occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). Substantial food sources (submerged or floating aquatic vegetation) have not been observed in the vicinity of the proposed action. Given the extensive areas of relatively undisturbed wetlands in the region and the paucity of food sources in the vicinity, it is considered unlikely for the manatee to frequent and utilize waterways affected by the proposed action, although manatees could pass through this area while transiting the lake.

There are existing bald eagle nests in the area; however, based on information provided by USFWS, all nests are beyond 650 feet from features of the proposed action. Two potentially active water bird rookeries exist within 1,000 feet of the proposed alignments. Initial field surveys are underway and the USFWS and CEMVN will continue to survey the area to confirm if the rookeries are active or not. Additionally, the entire proposed action ROWs will be surveyed for colonial nesting waterbirds and bald eagle nests.

Impacts to Protected, Threatened and Endangered Species

The proposed action would directly impact (destroy) 213 acres of primarily swamp and BLH. These areas could potentially be utilized by the bald eagle and colonial nesting waterbirds. With destruction of this habitat, such species would be forced to utilize other, adjacent forested wetlands and swamp habitats.

Clearing and grubbing of the 100 foot corridor and improvement of access roads could alter hydrology in the vicinity of the Proposed Action. These hydrologic alterations could also have indirect impacts to adjacent vegetation resources. Negative vegetation impacts could affect Bald and Golden Eagle Protection Act (BGEPA) or MBTA trust species.

Much of the adjacent area and vicinity is forested wetlands and swamp habitats. ESA,

BGEPA, and MBTA trust species could move to adjacent habitats, because of indirect and direct impacts associated with the proposed action. None of the proposed action or vicinity is critical habitat for the West Indian manatee or the Gulf sturgeon, and they are thought to seasonally and infrequently visit the vicinity of the proposed action.

Therefore, it is not likely that a loss in habitat would affect ESA trust species. Bald eagles and colonial waterbirds frequent the vicinity of the proposed action. The alteration of habitat and subsequent relocation of BGEPA and MBTA trust species as a result of the proposed action could have population level impacts if adjacent habitats are at or near carry capacity in the abundant, adjacent forested wetlands, however, such impacts are not expected. Best management practices, including monitoring, use of recommended buffers, and development of a nesting prevention plan for colonial nesting waterbirds would minimize impacts to bald eagles and colonial waterbirds. Additionally, upon completion of mitigation measures and replacement of the impacted habitat, any impacts to BGEPA and MBTA trust species could be eliminated. Therefore, it is expected that any relocation of ESA, BGEPA, or MBTA trust species caused by the proposed action would have minor indirect impacts.

A Nesting Prevention Plan is being developed, in coordination with the USFWS and the Louisiana Department of Wildlife and Fisheries to deter colonial nesting water birds from establishing active nesting colonies in the vicinity. If measures to prevent colonial nesting bird populations are not successful in the area, activities that would occur within 1,000 feet of a colony could be restricted to the non-nesting period, which in this region generally extends from September 1 to February 15, depending on the species present. If waterbird nesting colonies become established in the area, the 1,000 foot buffer would be maintained unless coordination with the USFWS indicates that the buffer zone may be reduced based on the species present or an agreement is reached with USFWS that allows a modified process to be adopted.

During in-water work in areas that potentially support manatees, all personnel associated with the project would be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel would be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable.

Under the proposed action, the mitigation plan approved in the 2016 WSLP EIS would be augmented by adding the purchase of mitigation bank credits as an option to mitigate BLH impacts. Since permitted banks exist as reasonably foreseeable projects in the Future Without Project conditions, if in-kind mitigation bank credits were purchased as part of the WSLP mitigation plan from banks with a service area that encompasses the impacts, no new direct or indirect impacts to this resource would be incurred.

CEMVN Determination

Based on review of existing data, preliminary field surveys, the rarity of occurrences, and the use of best management practices documented in Appendix A, Annex N of the 2016 WSLP EIS and described above, CEMVN has determined that the proposed action is not likely to adversely affect any of the listed species, bald eagles or colonial nesting water birds. USFWS guidelines would be utilized during construction of the proposed action to avoid any impacts to the species described below, if encountered. If there are any questions about the project or if any additional information is needed please contact Patrick Smith by phone at (504) 862-1544 or by email at Patrick.W.Smith@usace.army.mil.

Annex E: National Marine Fisheries Service Essential Fish Habitat letter



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

October 1, 2013 F/SER46/LA:jk
225/389-0508

Ms. Joan Exnicios, Chief
Environmental Planning and Compliance Branch
New Orleans District, U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Ms. Exnicios:

NOAA's National Marine Fisheries Service (NMFS) has received your letter dated August 23, 2013, transmitting the Integrated Draft Feasibility Report and Environmental Impact Statement (EIS) titled "**West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Study.**" The U.S. Army Corps of Engineers (USACE) is evaluating alternatives to provide hurricane and tropical storm surge protection to residents in St. Charles, St. John the Baptist, and St. James Parishes, Louisiana.

The Corps has identified Alternative C as the Tentatively Selected Plan (TSP). Alternative C consists of approximately 18 miles of levees spanning from the West Guide Levee of the Bonnet Carré Spillway, along Interstate Highway 10, and terminating at the Mississippi River levee near Garyville, Louisiana. The TSP would directly impact approximately 775 acres and enclose 8,424 acres of forested wetlands and swamp habitats.

NMFS believes there are environmental concerns and requests additional information be included in the Final EIS. The following comments identify areas where additional information is necessary to demonstrate compliance with applicable laws and regulations pertaining to mitigation and the National Environmental Policy Act (NEPA).

General Comments

NMFS does not object to hurricane protection to reduce risk to life or property, or to the proposed levee alignment. However, we find the draft EIS lacks information necessary to demonstrate adverse wetland impacts would be fully offset through the implementation of an adequate mitigation plan. Specifically, adverse wetland impacts are not quantified by the Wetland Value Assessment methodology determined acceptable under USACE guidelines for Louisiana habitats. In addition, the mitigation plan included in Appendix A, Annex K, proposes conceptual mitigation ideas only which also have not been assessed or quantified to determine benefits. Lacking an assessment of impacts and benefits, it is unclear how the USACE can determine wetland impacts would be fully offset in compliance with the Clean Water Act. Lacking an adequate assessment of mitigation benefits, or a discussion which clearly identifies the potential for long term wetland impacts if mitigation is inadequate, it is unclear how the draft



EIS fully complies with NEPA requirements. Finally, the proposed mitigation plan does not have sufficient information to demonstrate compliance with the 12 “items” required by mitigation regulations. This information is necessary for project planning purposes, including alternatives analysis, and equally important for public disclosure of the type and location of the mitigation.

NMFS is concerned the source of more than 3 million cubic yards of borrow material for levee construction is not identified, and associated impacts discussed, in the draft EIS. Unless there is a commitment to not obtain borrow from wetlands or other sensitive habitats, NMFS believes failure to discuss or disclose what could be a significant environmental impact is a violation of NEPA. We encourage the USACE to use non-wetland borrow locations to the maximum extent practicable. If the USACE determines wetland impacts associated with borrow sources are unavoidable, a discussion and quantification of such wetland impacts (and mitigation costs) should be included in a supplemental draft EIS for this project.

While direct wetland impacts have been quantified for the TSP in terms of acreage, NMFS does not agree sufficient information has been provided to demonstrate indirect impacts to more than 8,000 acres of enclosed wetlands would not occur. The draft Adaptive Management and Monitoring Plan has not been finalized, but at present, only includes monitoring of mitigation plan success and corrective actions to be taken if such actions do not result in anticipated benefits. The draft Adaptive Management and Monitoring Plan does not include efforts to evaluate whether project implementation results in adverse impacts to enclosed wetlands. The final EIS should include an Adaptive Management and Monitoring Plan, developed in coordination with the natural resource agencies, which evaluates the impact of levee construction and water control structure operations on enclosed wetlands. NMFS recommends sufficient funds be included in the overall cost projection to sufficiently address adaptive management and monitoring needs for the enclosed wetlands and the mitigation areas.

According to the draft EIS, under both intermediate and high sea level rise scenarios, in 50 years all structures providing drainage between enclosed wetlands and exterior waters would be closed the vast majority of the time. However, no discussion is provided to identify how water levels in enclosed wetlands would be managed. The final EIS should identify and discuss this issue.

Specific Comments

Chapter 2

Section 2.4.5 Essential Fish Habitat

Page 2-24. NMFS agrees project implementation would not adversely impact essential fish habitat (EFH). As such, an EFH assessment is unnecessary. NMFS recommends this section be deleted from the final EIS. Likewise, NMFS recommends Section 4.3.5 also be removed from the final EIS.

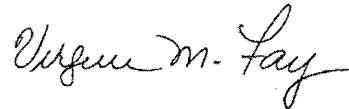
Chapter 4

Section 4.3.2 Vegetation Resources

Page 4-12. Wording in the second paragraph indicates Alternative C would directly impact 719 acres of wetlands, while Table 4-2 indicates 775 acres of wetlands would be impacted. The correct numbers should be provided in the final EIS.

We appreciate the opportunity to review and comment on the Integrated Draft Feasibility Report and EIS. If you have questions regarding comments provided above, please direct your questions to Lisa Abernathy at lisa.abernathy@noaa.gov or by phone at (225) 389-0508, extension 209.

Sincerely,

A handwritten signature in cursive script, appearing to read "Virginia M. Fay".

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

c:
FWS, Lafayette, Walther
EPA, Dallas, Keeler, Ettinger
LA DNR, Consistency, Haydel
F/SER46, Swafford
F/SER4, Rolfes
Files

Annex F: Floodplain Management



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

Regional Planning and Environment
Division South

APR 26 2019

Earl Matherne
Coastal Zone Management
P.O. Box 302
Hahnville, LA 70057

Dear Mr. Matherne:

This is in response to a comment letter postmarked on April 19, 2019 from the Mitigation Division of the Federal Emergency Management Agency Region 6 requesting that the community floodplain administrators for St. John the Baptist and St. Charles Parishes be contacted regarding the Supplemental Environmental Assessment #570, West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations, St. Charles and St. John the Baptist Parishes, Louisiana (SEA 570).

SEA 570 supplements the much more comprehensive West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Feasibility Study and Environmental Impact Statement (2016 WSLP EIS). Draft SEA 570 and its associated draft FONSI, the 2016 WSLP EIS, and the comment letter from FEMA Region 6 are all enclosed.

The proposed action, as described in SEA 570, is consistent with Executive Order (EO) 11990. All unavoidable impacts to wetlands associated with the proposed action would be fully mitigated to the full extent of the law.

The proposed action in SEA 570 would not occupy or modify the floodplain. Therefore, the proposed action, as described in SEA 570, is compliant with EO 11988. This determination is based on two reasons described below.

a. The proposed action is surveys and borings activities, stockpiling of materials, and to add the option of purchasing bottomland hardwoods mitigation bank credits to the mitigation plan described in the 2016 WSLP EIS. The proposed action does not involve the construction of WSLP Project features, such as the levee alignment described in the 2016 WSLP EIS. The surveys and borings activities, as described in SEA 570, are investigating a potential shift in the levee alignment described in the 2016 WSLP EIS. If the results of the investigations discussed in SEA 570 and further engineering and design of the WSLP levee suggests a levee alignment shift is

warranted, evaluation of the impacts associated with potential changes to the levee alignment identified in the 2016 WSLP EIS as well as any other construction related changes would be discussed in subsequent National Environmental Policy Act documentation. Re-evaluation of impacts associated with occupancy and modification of the floodplain would occur at that time.

b. SEA 570 supplements the 2016 WSLP EIS. Part of the Recommended Plan, as described in the 2016 WSLP EIS, includes construction of a levee alignment in St. John the Baptist and St. Charles Parishes. The 2016 WSLP EIS followed the eight-step process required in Section 2(a) of EO 11988 to demonstrate coordination and compliance with EO 11988. It was determined that the Recommended Plan, as described in the 2016 WSLP EIS, would avoid short-term and long-term adverse effects associated with the occupancy and the modification of the existing floodplain.

If you have any questions or concerns, please contact Patrick Smith, PhD by email at Patrick.W.Smith@usace.army.mil or by phone at (504) 862-1583.



MARSHALL K. HARPER
Chief, Environmental Planning Branch

4 Encls



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

Regional Planning and Environment
Division South

APR 26 2019

Rene Pastorek
Planning and Zoning Director
St. John the Baptist Parish
1811 W Airline Hwy
LaPlace, Louisiana 70068

Dear Mr. Pastorek:

This is in response to a comment letter postmarked on April 19, 2019 from the Mitigation Division of the Federal Emergency Management Agency Region 6 requesting that the community floodplain administrators for St. John the Baptist and St. Charles Parishes be contacted regarding the Supplemental Environmental Assessment #570, West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations, St. Charles and St. John the Baptist Parishes, Louisiana (SEA 570).

SEA 570 supplements the much more comprehensive West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Feasibility Study and Environmental Impact Statement (2016 WSLP EIS). Draft SEA 570 and its associated draft FONSI, the 2016 WSLP EIS, and the comment letter from FEMA Region 6 are all enclosed.

The proposed action, as described in SEA 570, is consistent with Executive Order (EO) 11990. All unavoidable impacts to wetlands associated with the proposed action would be fully mitigated to the full extent of the law.

The proposed action in SEA 570 would not occupy or modify the floodplain. Therefore, the proposed action, as described in SEA 570, is compliant with EO 11988. This determination is based on two reasons described below.

a. The proposed action is surveys and borings activities, stockpiling of materials, and to add the option of purchasing bottomland hardwoods mitigation bank credits to the mitigation plan described in the 2016 WSLP EIS. The proposed action does not involve the construction of WSLP Project features, such as the levee alignment described in the 2016 WSLP EIS. The surveys and borings activities, as described in SEA 570, are investigating a potential shift in the levee alignment described in the 2016 WSLP EIS. If the results of the investigations discussed in SEA 570 and further

engineering and design of the WSLP levee suggests a levee alignment shift is warranted, evaluation of the impacts associated with potential changes to the levee alignment identified in the 2016 WSLP EIS as well as any other construction related changes would be discussed in subsequent National Environmental Policy Act documentation. Re-evaluation of impacts associated with occupancy and modification of the floodplain would occur at that time.

b. SEA 570 supplements the 2016 WSLP EIS. Part of the Recommended Plan, as described in the 2016 WSLP EIS, includes construction of a levee alignment in St. John the Baptist and St. Charles Parishes. The 2016 WSLP EIS followed the eight-step process required in Section 2(a) of EO 11988 to demonstrate coordination and compliance with EO 11988. It was determined that the Recommended Plan, as described in the 2016 WSLP EIS, would avoid short-term and long-term adverse effects associated with the occupancy and the modification of the existing floodplain.

If you have any questions or concerns, please contact Patrick Smith, PhD by email at Patrick.W.Smith@usace.army.mil or by phone at (504) 862-1583.



MARSHALL K. HARPER
Chief, Environmental Planning Branch

4 Encls



NATALIE ROBOTOM
PARISH PRESIDENT

ST. JOHN

THE BAPTIST PARISH

OFFICE OF THE PLANNING AND ZONING DEPARTMENT

RENE PASTOREK
Director

1811 WEST AIRLINE HIGHWAY • LAPLACE, LOUISIANA 70068

May 7, 2019

Dr. Patrick Smith, PhD
United States Army Corps of Engineers, New Orleans District
7400 Leake Avenue
New Orleans, LA 70118-3651

RE: Draft Supplemental Environmental Assessment # 570 – West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations

Dear Dr. Smith:

As requested, the St. John the Baptist Parish Planning and Zoning Department has reviewed Supplemental Environmental Assessment (SEA) #570 for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations, including the stockpiling, staging, and construction of access roads associated with construction of this federal project. Following review, the Planning and Zoning Department has comments pertaining to potential flood impacts from those 5 stockpile/staging locations and access roads proposed to be located either partially or entirely within Special Flood Hazard Areas (SFHA). The Planning and Zoning Department requests the U.S. Army Corps of Engineers mitigate potential flood impacts of the proposed stockpile/staging locations and access roads located in SFHAs. More specifically, the proposed action, when combined with all other existing and anticipated development, must not increase the water surface elevation of the base flood more than one foot at any point within the Parish.

Should you have any questions concerning the comments detailed in this letter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, reading "René C. Pastorek".

René C. Pastorek
Planning and Zoning Director
St. John the Baptist Parish

cc: Natalie Robottom, Parish President
LaVerne Toombs, Chief Administrative Officer

Annex G: Louisiana Department of Wildlife and Fisheries Letter



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

Coastal Environmental Planning Section
Environmental Planning Branch

15 April 2019

Randell S. Myers
Assistant Secretary
Louisiana Department of Wildlife and Fisheries
P.O. Box 98000
Baton Rouge, Louisiana 70898

Dear Mr. Myers:

Please reference the letter received via email on February 26, 2019, stating Louisiana Department of Wildlife and Fisheries' (LDWF) concerns regarding the US Army Corps of Engineers' (USACE) proposal to perform investigations for the West Shore Lake Pontchartrain, Louisiana, Hurricane and Storm Damage Reduction Project (WSLP Project). These investigations would require the creation, improvement, or use of 15 access routes; clearing and grubbing of a 100-foot corridor; use of stockpiling and staging areas; and completion of soil borings and CPTs, and other surveys. In this letter, information regarding the WSLP Project was requested prior to LDWF issuing a letter of permission for USACE to perform investigations on the Maurepas Swamp Wildlife Management Area (MSWMA). This letter is in response to those concerns.

In regard to your concern about Survey Permission, a Survey Permission letter was provided by LDWF on March 6, 2019. Regarding right-of-way clearance, based on existing information, it is unlikely that an additional levee alignment footprint shift would occur, and even more unlikely that the clearing and grubbing corridor would not be included in the final levee alignment footprint. All of the clearing and grubbing corridor on MSWMA would be centered on the current levee alignment centerline. The centerline of the levee alignment would not change unless there are unforeseen site conditions observed during surveys and borings, such as cultural resource or hazardous, toxic, and radioactive waste concerns. If the levee footprint is slightly modified it would likely still include the clearing and grubbing corridor through MSWMA because it is centered on the proposed alignment centerline.

A 100-foot width for the clearing and grubbing corridor would be cleared of vegetation for investigations for three reasons:

a. Construction of a sand base and subsequent geotextile reinforcement fabric would be an initial construction step and would require a construction corridor of 100 feet wide. The sand base is anticipated to be constructed before actual levee construction and act as a pre-load to provide consolidation of the foundation in advance of the levee construction. Due to the amount of cleared vegetation requiring stockpile within the corridor, the 100-foot corridor is necessary to allow equipment to work around such material when constructing the sand base. If a narrower corridor is used construction would be problematic and adversely impact the overall construction schedule.

b. A 100-foot wide cleared area provides better satellite coverage for land surveying.

c. A 100-foot wide corridor would alleviate some concerns regarding safely handling felled trees. Typically burning is allowed to reduce volume; however, a 100-foot width is not adequate to safely burn trees without risk of impacting non-felled trees. Consequently, the 100-foot width allows sufficient area to stockpile felled trees and provide a usable corridor for surveys and soil borings.

Timber valuation methods and results would be coordinated with LDWF. USACE will not provide compensation to LDWF for timber value. All impacts to wetlands and bottomland hardwoods (BLH) incurred during surveys, borings, and related activities would be fully mitigated regardless of whether or not they co-occur with the final levee alignment footprint.

Regarding mitigation, Wetland Value Assessments (WVA) were performed to determine the impacts to swamp and BLH habitats for the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS) with the best available information at the time. USACE and the U.S. Fish and Wildlife Service are in the process of reevaluating the WSLP Project impacts to swamp and BLH habitats using WVAs. The new WVAs will estimate indirect and direct impacts to swamp and BLH habitats associated with the WSLP Project. WVAs and acreages of impacts on the portions of the projects to be impacted on the MSWMA will be calculated and provided to LDWF. USACE will continue coordination with LDWF and other agencies during the reevaluation of WVAs and recalculation of WSLP Project impacts.

The mitigation plan approved in the 2016 WSLP EIS was developed to fully mitigate unavoidable impacts associated with the WSLP Project. If it is determined that the previously-approved WSLP Project mitigation plan is not sufficient to offset the habitat losses to be incurred, the mitigation plan from the 2016 WSLP EIS would be revisited and additionally augmented to ensure all impacts from the WSLP project are fully mitigated. Mitigation would be in-kind with no net loss to the extent practicable, and MSWMA impacts would be mitigated for on LDWF property to the extent practicable. USACE will continue to work in coordination with LDWF and other resource agencies to

ensure that all project impacts to wetlands, including impacts to the MSWMA, are fully mitigated for in accordance with all applicable laws and regulations.

The proposed levee alignment would isolate portions of MSWMA on the protected side of the levee. CEMVN will continue discussions with LDWF regarding any potential impacts associated with isolation and fragmentation of MSWMA.

If you have any questions or concerns, please contact Patrick Smith, PhD by email at Patrick.W.Smith@usace.army.mil or by phone at (504) 862-1583.



Michael N. Clancy
Colonel, US Army
District Commander

Appendix B: 404(b)(1) determination

The following short form 404(b)(1) evaluation follows the format designed by the Office of the Chief of Engineers, (OCE). As a measure to avoid unnecessary paperwork and to streamline regulation procedures while fulfilling the spirit and intent of environmental statutes, New Orleans District is using this format for all proposed project elements requiring 404 evaluation, but involving no adverse significant impacts.

PROJECT TITLE. West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations

PROJECT DESCRIPTION

A map indicating where the Proposed Action activities would occur is provided (Figure 1).

There are five distinct activities in the Proposed Action in addition to the option to purchase Mitigation Bank credits for BLH impacts. They are: access, clearing and grubbing, stockpiling and staging, soil borings and CPTs, and other surveys. Each activity is discussed below. The duration for the Proposed Action activities would be approximately nine months. The entire survey ROW would be approximately 600 feet wide, with the clearing and grubbing necessary for the soil borings and CPT's occurring within a 100 foot corridor within the 600 foot ROW. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. All tree felling would be performed to avoid damage to trees left standing, to existing structures and installations, to those under work operations, and with due regard for the safety of employees and others. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and HTRW assessments would be within the approximately 600 foot ROW surrounding the 100 foot clearing and grubbing corridor. A typical survey ROW plan view is shown in Figure 2.

Access

Access for clearing and grubbing of the 100 foot corridor, cross-sectional surveys, soil borings/CPTs, environmental and cultural resources investigations, and HTRW assessments would be from U.S. Highway 61 (Airline Hwy), LA Hwy 44, LA Hwy 54, 1-10 Service Road, Old US HWY 51, Frenier Road, Prescott Road, other existing roads, trails, pipeline corridors, and along Reserve Canal leading to the alignment (Figure 1). These access routes would be utilized for the delivery of survey, tree clearing, and boring/CPT equipment. Some of the proposed access routes would require the clearing of vegetation for the movement of this equipment. Clearing and grubbing for access routes would be limited to a 40-foot width, which is the minimum width necessary for the passage of surveys and borings/CPTs equipment. A 60-foot road width would be allowed for access roads within pipeline ROWs to allow for pipeline protection. The extra width would accommodate for special construction considerations to minimize impacts to infrastructure. Coordination with pipeline companies is ongoing to determine the best method to accommodate pipeline infrastructure and minimize environmental impacts. For instance, timber matting or similar measures may be required across some pipeline corridors. Clearing would consist of the complete removal of all trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris within access route corridors. Debris resulting from access road clearing and grubbing operations could be stockpiled in temporary windrows within access corridors, or within the stockpile and staging areas described below. Felled timber may be chipped on-site prior to hauling and disposal, and other cleared debris any timber hauled offsite and disposed of according to applicable laws and regulations. Approximately 91 acres have been identified as access routes with a maximum impact to coastal swamp habitat of approximately 78 acres. All equipment to be utilized for the surveys are described in the subsequent sections.

Clearing and Grubbing

Clearing and grubbing would occur within a 100 foot corridor and would provide the necessary work area for the completion of soil boring/CPT activities. The corridor is broken into six distinct segments shown in red in Figure 2 totaling approximately 138 acres and 11.4 linear miles. Approximately 135 of these 138 acres are forested wetlands, with approximately 115 acres being swamp and approximately 20 acres are BLH. A width of 100 feet is needed for operation of equipment and for stockpiling of cut trees and undergrowth. All trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned

structures, fencing, and similar debris would be cleared within the clearing and grubbing corridor. Trees on dry land would be cut flush with the natural ground, while trees in water would be cut flush with the natural ground or mud line underwater. In limited circumstances, the removal of tree stumps and rootballs below the ground surface may be necessary to provide unobstructed and safe access for equipment. Rootball removal is not expected to exceed 20% of the corridor.

Trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations could be stockpiled in temporary windrows within the clearing and grubbing corridor, spaced approximately every 300 feet. Windrows would alternate between land side and flood side of the project centerline. Debris may be placed in neat windrows or piles with the tree limbs trimmed sufficiently to make the windrow as small as practicable. No windrowed debris or cleared material shall extend beyond the 100-foot clearing and grubbing limit. Debris could also be stockpiled in the stockpile and staging areas described below. Debris removal would occur during the levee construction phase.

Stockpiling and Staging

Two options for temporary stockpiling of trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations would be available to the contractor. Material could be stockpiled within any of the five stockpile areas shown in Figure 2, or material could be temporarily stockpiled within the 100-foot clearing and grubbing corridor or access roads ROWs. Descriptions of how material could be stockpiled within the clearing and grubbing corridor and access roads are discussed in their respective sections.

The five temporary stockpile/staging areas total approximately 1,020 acres (583 acres, 40 acres, 98 acres, 143 acres, and 156 acres from east to west) and are shown in Figure 2. Originally nine stockpile/staging areas were considered, but four were eliminated from further consideration due to potential impacts to wetlands, cultural resources, Environmental Justice communities, or local development plans.

These temporary stockpile/staging areas may be used for various activities during the investigative and construction phases of the WSLP Project. Use of these areas is expected to end in 2023. The sites may be used for the storage of felled trees, staging of investigative and construction equipment such as drilling rigs, small boats, bulldozers, excavators, pile driving equipment, and/or storage of construction materials such as steel sheet piling, steel piles, and other materials and items for construction of pump stations and drainage structures. The construction contractor or USACE may also set up trailers to serve as office space during construction within one or more of the stockpile/staging areas.

Some of the stockpile/staging areas could also be used for the temporary stockpiling of clay and sand for levee or floodwall construction. Up to 3,000,000 cubic yards of clay material and approximately 1,000,000 cubic yards of sand would be used to construct the WSLP Project levee. These materials could be transported to the stockpile areas from the Bonnet Carré Spillway (BCS) borrow pits, as approved in the 2016 WSLP EIS, using dump trucks. Sand could be obtained from commercially available sources or within the BCS. Approximately 225,000 truck trips would be required to haul 4,000,000 cubic yards of material. All stockpile/staging areas are located along major highways. Material would be hauled from BCS to five stockpile/staging areas exclusively via Highway 61 for the four stockpile areas located adjacent to Highway 61, and via Highways 61 and 51 for the northern most stockpile area that is adjacent to Highway 51.

Soil Borings and Cone Penetration Testing (CPTs)

Soil borings and CPTs would be conducted within the clearing and grubbing corridor at intervals of 500 feet. The borings would consist of undisturbed type borings. Borings and CPTs would be taken with truck and track mounted equipment. The boring holes would be backfilled in accordance with standard criteria.

Two and four wheel drive vehicles, standard boring and land surveying equipment, machetes, chainsaws, a small boat and trailer (as required), and marsh buggies would be used.

Other Surveys

Other surveys include topographical surveys to locate features and utilities, define the project baseline alignment, and define ROW extent; as well as those necessary to complete cross-sections, HTRW assessments, cultural resource investigations, and environmental surveys. Small vehicles (such as all-terrain vehicles or other similar small 4x4s), small boats, air boats, and marsh buggies would be allowed to operate within the approximately 600 foot ROW surrounding the clearing and grubbing corridor (see other surveys area in Figure 2). Foot traffic would also be permitted. Cross-sectional surveys would occur at intervals between 50 and 300 feet.

Environmental surveys would include vegetative surveys such as plant identification and measurements. HTRW assessments would include traversing the area to identify potential HTRW concerns. If any suspected HTRW concerns are noticed, soil and/or water samples may be taken. Environmental surveys and HTRW assessments would be performed by two to four person crews that would traverse the area.

Similarly, cultural resources (CR) investigations would be completed with two to four person crews. Some CR subsurface investigations may be required to determine if buried cultural remains exist within the site limits. The subsurface investigation would be accomplished by hand auger or shovel. If items of seeming cultural significance are discovered during the initial traverse of the site, the CR investigation would be expanded to include, at the most, a series of 2-meter by 2-meter holes or 1-meter wide trenches excavated to depths of 1 to 2 meters. Excavation would be accomplished by hand augers and/or shovels. All excavations would be held to the absolute minimum required to determine the apparent existence or non-existence of significant cultural remains. All excavations would be backfilled upon completion of the excavations. Artifacts discovered during the survey would be marked for identification and removed from the site for analysis and examination to determine historical significance. Permission to remove the items from the site would be obtained through personal contact with the landowner. All objects removed from the site would be returned to the landowner, if required, upon completion of the analysis and report. If the landowner does not require the return of the objects discovered, they would be donated to the State Historic Preservation Officer (SHPO) for permanent curation. If the investigations reveal the existence of cultural remains significant enough to render the site eligible for the National Register, additional ROE for more extensive excavations and mitigation would be required.

No roads, fences, buildings, or other improvements within the area would be disturbed. No trees would be felled outside of the 100 foot clearing and grubbing corridor in Figure 2. Branch cutting would be allowed for small vehicle passage, if necessary within the 600 foot ROW.

Purchase of Mitigation Bank Credits

In addition to the mitigation plan approved in the 2016 WSLP EIS, USACE approved mitigation banks with a service area that encompasses the impacts, with perpetual conservation servitudes currently in compliance with their mitigation bank instrument, and with released BLH credits would be an option for mitigating BLH impacts incurred from the WSLP project. If the BLH impacts are wetland in nature and/or incurred within the coastal zone, the purchase of mitigation bank credits would also have to meet these requirements in kind. Mitigation banks would be required to run the same version of the WVA model as was used to assess the impacts from constructing the WSLP project to ensure that the assessment of the functions and services provided by the mitigation bank match the assessment of the lost functions and services at the impacted site.

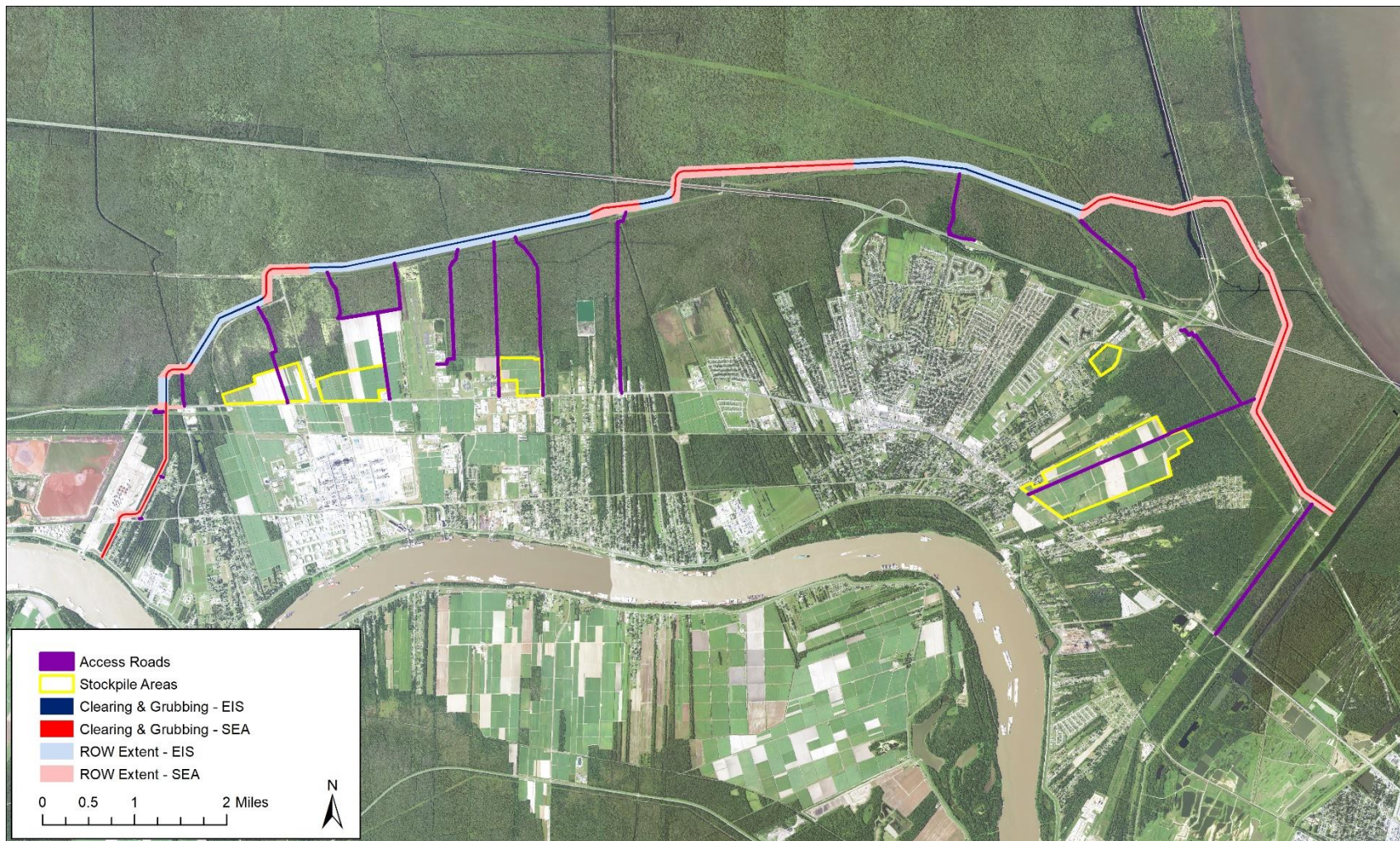


Figure 1: Map showing the Proposed Action. There are 15 access routes, with one access route bifurcating into two roads near the surveys and boring/CPT area. "Clearing & Grubbing" indicates the extent to which tree felling, borings/CPTs, and stockpiling would occur. "ROW Extent" refers to the extent to which other surveys would occur. Areas with "EIS" are within the ROW from the 2016 WSLP EIS and are shown for reference as they are not part of the Proposed Action. Areas with "SEA" refer to the Proposed Action.

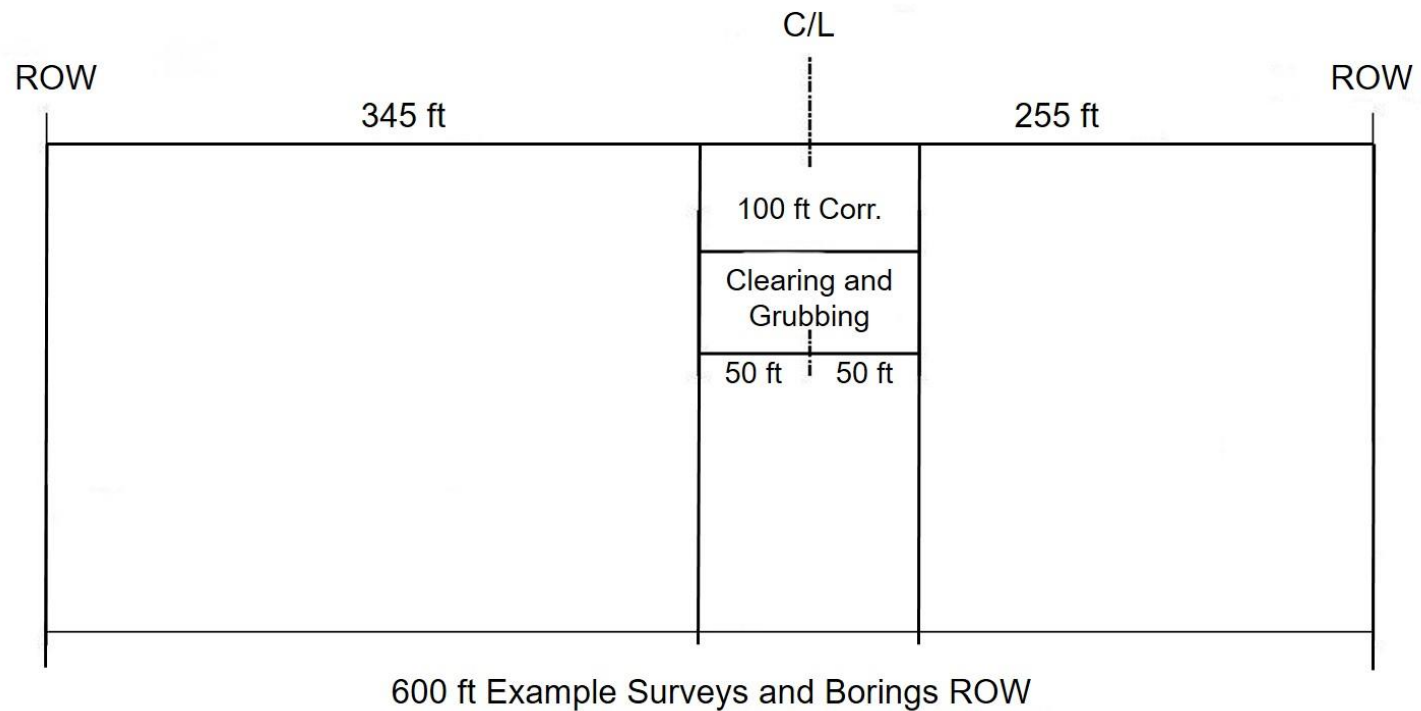


Figure 2: Plan view drawing of a typical ROW for the Proposed Action.

1. Review of Compliance (§230.10 (a)-(d)).

Preliminary¹

Final²

A review of this project indicates that:

a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for environmental assessment alternative);

YES

NO*

YES

NO

b. The activity does not appear to: (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act; (2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and (3) violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);

FOR (1) ONLY

YES

NO*

YES

NO

c. The activity will not cause or contribute to significant degradation of waters of the United States including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values (if no, see section 2);

YES

NO*

YES

NO

d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5).

YES

NO*

YES

NO

2. Technical Evaluation Factors (Subparts C-F).

N/A

Not Significant

Significant*

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C).

- (1) Substrate impacts.
- (2) Suspended particulates/turbidity impacts.
- (3) Water column impacts.
- (4) Alteration of current patterns and water circulation.
- (5) Alteration of normal water fluctuations/hydroperiod.
- (6) Alteration of salinity gradients.

	x	
	x	
	x	
	x	
	x	
	x	

b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).

- (1) Effect on threatened/endangered species and their habitat.
- (2) Effect on the aquatic food web.
- (3) Effect on other wildlife (mammals, birds, reptiles, and amphibians).

	x	
	x	
	x	

c. Special Aquatic Sites (Subpart E).

- (1) Sanctuaries and refuges.
- (2) Wetlands.
- (3) Mud flats.
- (4) Vegetated shallows.
- (5) Coral reefs.
- (6) Riffle and pool complexes.

	x	
	x	
x		
	x	
x		
x		

d. Human Use Characteristics (Subpart F).

- (1) Effects on municipal and private water supplies.
- (2) Recreational and commercial fisheries impacts.
- (3) Effects on water-related recreation.
- (4) Esthetic impacts.
- (5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves.

x		
	x	
	x	
	x	
	x	

Remarks. Where a check is placed under the significant category, the preparer has attached explanation.

3. Evaluation of Dredged or Fill Material (Subpart G).³

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material.

- | | |
|---|-------------------|
| (1) Physical characteristics | <u> x </u> |
| (2) Hydrography in relation to known or anticipated sources of contaminants | <u> </u> |
| (3) Results from previous testing of the material or similar material in the vicinity of the project | <u> </u> |
| (4) Known, significant sources of persistent pesticides from land runoff or percolation | <u> </u> |
| (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances | <u> </u> |
| (6) Other public records of significant introduction of contaminants from industries, municipalities, or other sources | <u> </u> |
| (7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities | <u> </u> |
| (8) Other sources (specify) | <u> </u> |

Appropriate references: See memorandum (Encl 2)

b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or the material meets the testing exclusion criteria.

YES	NO*
-----	-----

4. Disposal Site Delineation (§230.11(f)).

a. The following factors, as appropriate, have been considered in evaluating the disposal site.

- | | |
|--|-------------------|
| (1) Depth of water at disposal site | <u> x </u> |
| (2) Current velocity, direction, and variability at disposal site | <u> x </u> |
| (3) Degree of turbulence | <u> x </u> |
| (4) Water column stratification | <u> x </u> |
| (5) Discharge vessel speed and direction | <u> </u> |
| (6) Rate of discharge | <u> </u> |
| (7) Dredged material characteristics (constituents, amount, and type of material, settling velocities) | <u> </u> |
| (8) Number of discharges per unit of time | <u> </u> |
| (9) Other factors affecting rates and patterns of mixing (specify) | <u> </u> |

Appropriate references:

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES	NO*
-----	-----

5. Actions to Minimize Adverse Effects (Subpart H).

All appropriate and practicable steps have been taken, through application of the recommendations of §230.70-230.77 to ensure minimal adverse effects of the proposed discharge.

YES

NO*

6. Factual Determination (§230.11).

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short- or long-term environmental effects of the proposed discharge as related to:

- | | | |
|---|------------------------------|-----|
| a. Physical substrate at the disposal site (review sections 2a, 3, 4, and 5 above). | <input type="checkbox"/> YES | NO* |
| b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5). | <input type="checkbox"/> YES | NO* |
| c. Suspended particulates/turbidity (review sections 2a, 3, 4, and 5) | <input type="checkbox"/> YES | NO* |
| d. Contaminant availability (review sections 2a, 3, and 4). | <input type="checkbox"/> YES | NO* |
| e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5). | <input type="checkbox"/> YES | NO* |
| f. Disposal site (review sections 2, 4, and 5). | <input type="checkbox"/> YES | NO* |
| g. Cumulative impact on the aquatic ecosystem. | <input type="checkbox"/> YES | NO* |
| h. Secondary impacts on the aquatic ecosystem. | <input type="checkbox"/> YES | NO* |

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

¹Negative responses to three or more of the compliance criteria at this stage indicates that the proposed projects may not be evaluated using this "short form procedure". Care should be used in assessing pertinent portions of the technical information of items 2a-d, before completing the final review of compliance.

²Negative responses to one of the compliance criteria at this stage indicates that the proposed project does not comply with the guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the "short form" evaluation process is inappropriate.

³If the dredged or fill material cannot be excluded from individual testing, the "short form" evaluation process is inappropriate.

7. Evaluation Responsibility.

- a. This evaluation was prepared by:

Name: Patrick Smith, PhD

Position: Biologist

Organization: U.S. Army Corps of Engineers, New Orleans District

Date: March 8, 2019

- b. Water Quality evaluation was prepared by:

- c. Water Quality evaluation was reviewed by:

Name: Whitney Hickerson

Position: Hydraulic Engineer

Organization: U.S. Army Corps of Engineers, New Orleans District

Date: March 13, 2019

8. Findings.

a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines X

b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

(1) There is a less damaging practicable alternative

(2) The proposed discharge will result in significant degradation of the aquatic ecosystem

(3) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem

Date: 04/22/2019


Chief, Environmental Planning Branch

Appendix C: Programmatic Agreement among The United States Army Corps of Engineers, Louisiana State Historic Preservation Officer, and The Advisory Council on Historic Preservation regarding the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction System

**Programmatic Agreement
among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer,
and
The Advisory Council on Historic Preservation
regarding the
West Shore Lake Pontchartrain Hurricane and
Storm Damage Risk Reduction System**

WHEREAS, historically, residents and businesses of St. Charles, St. John the Baptist, and St. James Parishes, Louisiana have suffered major damage as a result of storms and hurricanes. Recent hurricanes that have impacted the area include Hurricanes Katrina and Rita in 2005, Hurricanes Gustav and Ike in 2008, and Hurricane Isaac in 2012, which caused a storm surge in the area that threatened lives and damaged more than 7,000 homes; and

WHEREAS, the U.S. Congress recognized the need for a hurricane and storm damage risk reduction project in the area with two Congressional resolutions to authorize its study. The first was adopted on July 29, 1971 by the U.S. House of Representatives Committee on Public works.

“RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE HOUSE OF REPRESENTATIVES, UNITED STATES, that the Board of Engineers for Rivers and Harbors is hereby requested to review the report of the Chief of Engineers on Lake Pontchartrain and Vicinity, Louisiana, published as House Document No. 231, 89th Congress, First Session, and other pertinent reports, with a view to determining whether modifications to the recommendations contained therein are advisable at this time, with particular reference to providing additional levees for hurricane protection and flood control in St. John the Baptist Parish and that part of St. Charles Parish west of the Bonnet Carré Spillway.”

The U.S. Senate Committee on Public Works adopted a resolution on September 20, 1974.

“RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, that the Board for Rivers and Harbors is hereby requested to review the report of the Chief of Engineers on Lake Pontchartrain and Vicinity, Louisiana, published as House Document No. 231, 89th Congress, First Session, and other pertinent reports, with a view to determining whether modifications to the recommendations contained therein are advisable at this time, for hurricane protection and flood control in St. James Parish.”

WHEREAS, the United States Army Corps of Engineers (USACE) has been working with state and local officials to study potential solutions to reduce

damage caused by hurricane and tropical storm surge in the three-parish area. This study has come to be known as the West Shore Lake Pontchartrain (WSLP) Hurricane and Storm Damage Risk Reduction Study; and

WHEREAS, the USACE has determined that the WSLP project is an "Undertaking" pursuant to the National Historic Preservation Act of 1966 (16 U.S.C. 470), as amended, (NHPA), and may have an adverse effect on properties included or eligible for inclusion in the National Register of Historic Places (NRHP); and

WHEREAS, the USACE has elected to fulfill its obligations under Section 106 of the NHPA through the execution and implementation of a Programmatic Agreement (this Agreement) as provided in 36 CFR 800.14(b); and

WHEREAS, the USACE notified the Advisory Council on Historic Preservation (ACHP) of the potential for this undertaking to adversely affect historic properties pursuant to the ACHP's implementing regulations (36 CFR Part 800); and

WHEREAS, the ACHP accepted the invitation to participate in consultation to develop this Agreement and to seek ways to avoid, minimize, or mitigate adverse effects on historic properties; and

WHEREAS, the USACE consulted with the Louisiana State Historic Preservation Officer (LA SHPO), Tribal Historic Preservation Officers (THPO) and federally recognized Indian Tribes as defined under 36 CFR 800.16(m) (Tribes), and other appropriate consulting parties in developing this Agreement in order to define efficient and cost effective processes for taking into consideration the effects of the WSLP project upon historic properties pursuant to 36 CFR 800.14(b); and

WHEREAS, the USACE acknowledges Tribes as sovereign nations which have a unique government-to-government relationship with the federal government and its agencies; USACE further acknowledges its Trust Responsibility to those Tribes; and

WHEREAS, the USACE made a reasonable and good faith effort to identify any Tribes that may attach religious and cultural significance to historic properties that may be affected by the undertaking; and

WHEREAS, the USACE has invited the 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, Quapaw Tribe of Oklahoma, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and the Tunica-Biloxi Tribe of Louisiana to consult in the development of this Agreement. The Quapaw Tribe of Oklahoma and the Seminole Tribe of Florida have independently determined that

the undertaking is not within their tribe's area of interest and do not wish to comment; and

WHEREAS, the USACE will invite any interested Tribe who participates in the development of this Agreement to sign this Agreement as an Invited Signatory Party, and those Tribes not requesting to sign this Agreement as an Invited Signatory Party will be invited to sign as a Concurring Party; and

WHEREAS, the USACE has involved the public through the National Environmental Policy Act (NEPA) process, which affords all persons, organizations and government agencies the right to review and comment on proposed major federal actions that are evaluated by a NEPA document. Public meetings to collect input during planning were held in January 2009, February 2011, November 2012, April 2013, and May 2013. On August 23, 2013, the USACE released an Integrated Draft Feasibility Report and Environmental Impact Statement for the WSLP project (Draft Report) to the public for a review period of forty-five (45) calendar days. The public review period was extended an additional 14 days to October 22, 2013 as compensation for Federal Government shutdown of 2013. This document included a general discussion of cultural resources within the study area. Public hearings of the Draft Report were held on September 10, September 17, and November 2, 2013. Comments received during the 59-day review and the public hearings are being incorporated into the Integrated Final Feasibility Report and Environmental Impact Statement; and

WHEREAS, the USACE has taken appropriate measures to identify other parties that may be interested specifically in the development of this Agreement, by notification to the Parish Presidents of St. James, St. John the Baptist, and St. Charles Parishes, as well as to four (4) historical associations within these three parishes, and has invited such parties to participate in the development and execution of this Agreement; and

WHEREAS, the USACE has also taken steps to notify the wider public with newspaper announcements in the Times-Picayune of New Orleans, and NOLA.com of New Orleans. The USACE will furthermore take appropriate steps to involve and notify parties, as appropriate, during the implementation of the terms of this Agreement; and

WHEREAS, the Louisiana Coastal Protection and Restoration Authority Board (CPRAB) is a local sponsor for WSLP project and has participated in the development of this Agreement and will be invited to sign this Agreement as a Concurring Party. Any additional local sponsors for the WSLP project will also be invited to sign this Agreement as a Concurring Party; and

NOW, THEREFORE, the USACE, ACHP, and LA SHPO agree that the implementation of the following stipulations will evidence that the USACE has taken into account the effects of the WSLP project upon historic properties.

STIPULATIONS

The USACE shall adhere to the process and protocols set forth in this Agreement.

I. Correspondence

Electronic mail (email) will serve as the official correspondence method for all communications regarding this Agreement and its provisions. See Appendix A for a list of contacts and email addresses. Contact information in Appendix A may be updated as needed without an amendment to this Agreement. It is the responsibility of each signatory to immediately inform the USACE of any change in name, address, email address, or phone number of any point-of-contact. The USACE will forward this information to all signatories by email. Failure of any party to this Agreement to notify the USACE of any change to a point-of-contact's information shall not be grounds for asserting that notice of a proposed action was not received.

- A. All standard response timeframes established by 36 CFR Part 800 will apply to this Agreement, unless an alternative response timeframe is agreed to by the LA SHPO and Tribes. The USACE may request expedited review by the LA SHPO and Tribes on a case by case basis. Such expedited review period shall not be less than 10 working days.

II. Tribal Consultation

- A. The Chitimacha Tribe of Louisiana, the Choctaw Nation of Oklahoma, and the Coushatta Tribe of Louisiana participated in the development of this Agreement and will sign this Agreement as an Invited Signatory Party.
- B. The Mississippi Band of Choctaw Indians participated in the development of this Agreement and will be invited to sign this Agreement as a Concurring Party.
- C. The Alabama-Coushatta Tribe of Texas, Caddo Nation of Oklahoma, Jena Band of Choctaw Indians, Seminole Nation of Oklahoma, and the Tunica-Biloxi Tribe of Louisiana will be invited to sign this Agreement as a Concurring Party.
- D. The Seminole Tribe of Florida and the Quapaw Tribe of Oklahoma have independently determined that the undertaking is not within their tribe's area of interest and they have elected not to consult further in connection with the WSLP project.

- E. The USACE shall make a reasonable and good faith effort to identify any additional Tribes that might attach religious and cultural significance to historic properties in the area of potential effects (APE) for the WSLP project.
- F. The USACE shall consult with Tribes that are invited to sign this Agreement as Invited Signatory Parties and Tribes that are invited to sign this agreement as Concurring Parties, as well as any other Tribe that requests in writing to be a consulting party (collectively, "Consulting Tribes").
- G. The USACE will provide the Consulting Tribes with an executed copy of this Agreement and with copies of all plans, determinations, and findings provided to the LA SHPO.

III. Public Involvement

- A. The USACE, in consultation with the LA SHPO, shall continue to identify and provide members of the public likely to be interested in the effects of the WSLP project upon historic properties with a description of the undertaking and the provisions of this Agreement.
- B. Specific cultural resources data will not be released to the general public or become released as part of NEPA documents.
- C. To the extent permitted under applicable federal laws and regulations (e.g., Section 304 of the NHPA, Section 9 of the Archaeological Resources Protection Act [ARPA]), the USACE will release to the public, documents developed pursuant to this Agreement, effects determinations, and Interim Progress Reports.

IV. Other Consulting Parties

- A. Any member of the public expressing an interest in the effects of this undertaking on historic properties, may become a consulting party by submitting a written request to USACE.
- B. The USACE, in consultation with the LA SHPO, will continue efforts during the duration of this Agreement to identify other parties with demonstrated interests in the preservation of historic properties.
- C. The USACE will document the consulting parties in the consultation process for the WSLP project and maintain it as part of the administrative record.

- D. If any dispute arises about the right to be recognized as a consulting party, the USACE will contact the ACHP and provide all appropriate documentation. The ACHP will participate in the resolution of the issue.

V. Identification, Evaluation, and Assessment of Effects Determinations

- A. The USACE, in consultation with the LA SHPO and Consulting Tribes, will define and document the geographic areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist, referred to as an area of potential effects (APE). Because WSLP contains borrow sources and mitigation areas that are spatially distinct from the risk reduction system, there will be multiple APE (collectively, the WSLP APE). Each APE will assist in identifying the potential for direct, indirect, and cumulative effects upon historic properties. The reasonable and good faith identification and evaluation efforts will be limited to the identified WSLP APE.
- B. WSLP APE are defined at this time to include areas that may be directly or indirectly impacted by:
 - 1. A 55-foot wide and 18.27-mile long levee to be constructed in St. John the Baptist Parish, including its associated features (i.e., pump stations, canals, and drainage structures), as well as activities associated with construction (i.e., access roads and staging areas);
 - 2. Three (3) 20-foot wide berms enclosing three residential communities located in St. James Parish with a combined total length of approximately 7 miles;
 - 3. Installation of 145 flap gates on existing culverts below Highway 3125.
- C. Borrow sources and mitigation sites are not yet fully defined, and will be coordinated for purposes of defining the APE by the USACE, LA SHPO, and Consulting Tribes. Additional areas of the WSLP APE will be identified as necessary.
- D. Following the delineation of final WSLP APE components, the USACE will conduct a reasonable and good faith effort to identify historic properties located within the WSLP APE. Level of survey to be conducted within the APE and methodology will be developed in consultation with the LA SHPO and

Consulting Tribes, in a manner equivalent to the Section 106 Process of NHPA and equivalent to Reconnaissance or Phase I Investigations required by the Louisiana Division of Archaeology. Areas that are inaccessible or are determined to possess a low probability for containing historic properties may be excluded from survey after consultation with the LA SHPO and Consulting Tribes.

- E. The USACE will ensure that the results of identification efforts are documented in reports that meet the standards of the Louisiana Division of Archaeology, and will ensure that the reports are submitted to the LA SHPO and Consulting Tribes for review and comment. The USACE will ensure that the comments provided by the LA SHPO and Consulting Tribes are addressed and incorporated into a final report.
- F. The USACE will consult with the LA SHPO and Consulting Tribes on the eligibility of any properties identified during the identification effort. For any properties determined not eligible for nomination to the NRHP, no further consideration will be required under the terms of this Agreement. For those properties determined eligible for nomination, the USACE will proceed in accordance with Stipulation VI. For those properties whose eligibility for the NRHP cannot be determined on the basis of the identification effort, the USACE will consult with the LA SHPO and Consulting Tribes to determine if the proposed project can avoid the properties. If the properties can be avoided, the USACE will proceed as in Stipulation VI. If the properties cannot be avoided, the USACE will ensure that additional investigations to evaluate each property's eligibility for nomination will be undertaken.
- G. The USACE will ensure that the results of the evaluation efforts are documented in reports that meet the standards of the Louisiana Division of Archaeology and will ensure that the reports are submitted to the LA SHPO and Consulting Tribes for review and comment. The USACE will ensure that the comments provided by the LA SHPO and Consulting Tribes are addressed and incorporated into a final report.
- H. The USACE will consult with the LA SHPO and Consulting Tribes on the eligibility of the properties assessed during the evaluation effort. For any properties determined not eligible for nomination to the NRHP, no further consideration will be required. For those properties determined eligible for nomination, the USACE will proceed in accordance with Stipulation VII.

- I. In the event of disagreement between the USACE, LA SHPO, and/or Consulting Tribes concerning the eligibility of a property for listing in the NRHP under 36 CFR Part 60, the USACE shall request a formal determination of eligibility for that property from the Keeper of the NRHP (Keeper). The determination by the Keeper will serve as the final decision regarding the NRHP eligibility of the property.

VI. Coordination of Effects Determinations

- A. The USACE shall evaluate the effects of a project activity on historic properties in a holistic manner and will not segment activities. In the event the USACE determines that any aspect of the project activity will have an effect or adverse effect on a historic property within the WSLP APE, the entire project activity will be reviewed accordingly.
- B. Consultation under this Agreement will be concluded for USACE findings of *no historic properties affected* and *no adverse effect* when the LA SHPO and Consulting Tribes have been provided the opportunity to review and comment on the written documentation and either concur or do not object within 30 days of receipt of the USACE finding, and subject to the provisions of this Agreement.
- C. Following submission of written documentation to the LA SHPO and Consulting Tribes, the USACE may propose a finding of *no adverse effect with conditions*, as appropriate. Such conditions may include, but are not limited to:
 1. Avoidance and/or preservation-in-place of historic properties;
 2. Modifications or conditions to ensure consistency with the Secretary of Interior's Standards for the Treatment of Historic Properties and applicable guidelines.
- D. In the event of an objection by the LA SHPO, Consulting Tribes or other consulting parties regarding the USACE's findings of *no historic properties affected*, findings of *no adverse effect*, and findings of *no adverse effect with conditions*, the USACE shall seek to resolve such objection through consultation in accordance with procedures outlined in Stipulation XII.

VII. Resolution of Adverse Effects

- A. In the event that the USACE, in consultation with the LA SHPO and Consulting Tribes, determines that the implementation of a project activity may result in an adverse effect to historic properties (as defined in 36 CFR 800.5(a)(1) and (2) of the ACHP's regulations), the USACE shall notify the ACHP, LA SHPO, Consulting Tribes, other consulting parties and the public. If the project activity will affect a National Historic Landmark, USACE shall also notify the National Park Service (NPS). The notification of adverse effect shall include the following documentation, subject to the confidentiality provisions of 36 CFR 800.6:
 1. Summary description of the activity area;
 2. Summary of identification efforts in accordance with this agreement;
 3. Summary analysis of effects to historic properties;
 4. Summary of alternatives considered to avoid or reduce adverse effects;
 5. Proposed mitigation measures in accordance with Stipulation VIII when adverse effects cannot be avoided or conditioned to reach a determination of no adverse effect; and
 6. Request for ACHP comment and involvement, as appropriate.
- B. The ACHP, LA SHPO, Consulting Tribes, and any additional consulting parties, including the NPS, as appropriate, shall be afforded an opportunity to review and to comment on the adverse effect notification for a period of thirty (30) calendar days after receipt of the adverse effect notification.
- C. Should the USACE, LA SHPO, and Consulting Tribes disagree on the proposed mitigation measures, the USACE shall seek to resolve such objection through consultation in accordance with Stipulation XII.

VIII. Standard Mitigation Measures

- A. The USACE, in coordination with the ACHP, LA SHPO, Consulting Tribes, and other consulting parties, will identify standard mitigation measures for adverse effects to historic properties. Standard mitigation measures will be tailored to the significance of the historic property, and may include, but are not necessarily limited to, one or more of the following:
 1. Public Interpretation;
 2. Documentation consistent with the Level II Standards of the Historic American Building Survey/Historic American Engineering Record (HABS/HAER);
 3. Historical, Architectural or Archeological Monographs;
 4. Rehabilitation of historic buildings in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68);
 5. Off-site mitigation, including acquisition of property or preservation easements on property, as appropriate and legal, containing threatened resources of comparable significance in circumstances where there is an imminent need to proceed with construction activity and it is in the public interest;
 6. Ethnographic studies;
 7. Studies of traditional cultural properties;
 8. Relocation of historic properties to sites approved by the LA SHPO as possessing similar overall character; and
 9. Data recovery for archeological properties.
- B. In the event that the ACHP, LA SHPO, and/or Consulting Tribes determine that standard mitigation measures are not adequate or appropriate to resolve adverse effects, the USACE, LA SHPO, and Consulting Tribes will consult to negotiate additional mitigation measures. Other consulting parties may express their concerns regarding mitigation measures through written comments submitted to any of the signatories to the Agreement.

- C. Once the USACE, ACHP, LA SHPO, and/or Consulting Tribes agree to the terms of the mitigation, such agreement will be formalized through an MOA executed and implemented pursuant to 36 CFR 800.6(c). Such MOA shall be forwarded to all signatories to this Agreement. If there is a disagreement that cannot be resolved, the formal dispute provisions at Stipulation XII will be implemented.

IX. Curation

The USACE will ensure that all collections and associated records retrieved or created during the life of this Agreement are curated in accordance with 36 CFR Part 79.

X. Unanticipated Discoveries and Effects

- A. In the event that the USACE discovers a previously unidentified cultural resource, including but not limited to archeological sites, standing structures, human remains, and properties of traditional religious and cultural significance to Tribes, during the execution of the project, the USACE immediately shall secure the immediate jobsite by the most appropriate quickly available means, to include but not necessarily limited to a 50-foot radius buffer around the unexpected discovery, and suspend work in that buffered area of the affected resource. The USACE shall immediately notify the LA SHPO, Consulting Tribes, and additional consulting parties, as appropriate, of the finding. Any previously unidentified cultural resource will be treated as though it is eligible for the NRHP until other determination may be made. If consulting parties agree that the cultural resource is not eligible for the NRHP, then suspension of work will end. If consulting parties agree that the cultural resource is eligible for the NRHP, then the USACE, in consultation with the LA SHPO and Consulting Tribes, will develop a treatment plan or Standard Mitigation Measures agreement in accordance with Stipulation VIII. USACE will implement the plan or Standard Mitigation Measures agreement once approved by the LA SHPO, Consulting Tribes, and additional consulting parties, as appropriate. If there is a disagreement that cannot be resolved, the formal dispute provisions at Stipulation XII will be implemented.
- B. In the event that the USACE is notified of a previously unidentified archaeological property on federal or tribal land during the execution of any of the undertakings, the USACE will ensure that procedures established by ARPA 1979 (Public Law

96-95; 16 U.S.C. 470aa-mm), as amended, and implementing regulations (43 CFR Part 7) will be followed.

- C. The USACE shall insure that all contractors are made aware of the requirements of this Agreement. Language of Stipulation X shall be included in Construction Plans and Specifications. In the event that a contractor discovers a previously unidentified cultural resource, the contractor shall immediately notify the USACE and refrain from further project activities within a minimum of 50 feet from the discovery (50-foot radius no work buffer), and shall take reasonable efforts to avoid and minimize harm to the cultural resource. The USACE shall implement any additional measures thought necessary to secure the historic property for safety and security concerns.
- D. In the event that previously unidentified effects to historic properties are identified following the completion of work within an activity area, any party may provide the USACE with evidence of such effects for a period of twelve (12) months from the completion of the affecting work. The USACE, in consultation with the LA SHPO, Consulting Tribes, and ACHP, as appropriate, will review and if determined necessary will develop a treatment plan or Standard Mitigation Measures agreement in accordance with Stipulation VIII.
- E. If the USACE, LA SHPO, and/or Consulting Tribes cannot agree on an appropriate course of action to address the discovery situation, the USACE shall initiate the dispute resolution process set forth in Stipulation XII.

XI. Discovery of Human Remains

- A. Language of Stipulation XI shall be included in Construction Plans and Specifications, to offer fullest knowledge of the importance therein.
- B. When human remains or indications of a burial are discovered, the individual(s) who made the discovery shall immediately notify the local law enforcement and the USACE, New Orleans District. All work shall cease within a minimum of 50 feet from the discovery (50-foot radius no work buffer) until and unless determined otherwise in consultation according to this Agreement.

- C. The USACE may authorize the activity in the direct discovery areas to resume, following the completion of all necessary steps as outlined below.
- D. In the event that the USACE is notified of a previously unidentified burial, including burial sites, human skeletal remains, or burial artifacts, on private or state land during the execution of any of the Undertakings, the USACE will ensure that the procedures established in the Louisiana Unmarked Human Burial Sites Preservation Act (La. R.S. 8:671-681) will be followed.
- E. In the event that the USACE is notified of a previously unidentified burial, including burial sites, human remains or funerary objects, on federal or tribal land during the execution of any of the undertakings, the USACE will ensure that procedures established by ARPA 1979 (Public Law 96-95; 16 U.S.C. 470aa-mm), as amended, and implementing regulations (43 CFR Part 7) will be followed.
- F. In the event that the USACE is notified of a previously unidentified American Indian burial, including burial sites, human remains or funerary objects, on federal or tribal land during the execution of any of the undertakings, the USACE will ensure that procedures established by the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 and the regulations that implement it (43 CFR Part 10) will be followed.
- G. The USACE shall have an archaeologist immediately survey or resurvey the general area where the remains were found to determine the nature of the remains and evaluate the possibility of preserving the remains in place or whether they will need to be exhumed/moved. Tribes likely to have a cultural affiliation with the remains will be notified by telephone immediately in accordance with 43 CFR Part 10.4(b). If possible, Tribal representative(s) shall be present to advise on appropriate treatment of the exposed remains and on the most appropriate long-term solution.
- H. The USACE shall provide information collected on the nature of the remains and a recommended plan of action pursuant to 43 CFR 10.5(e) within five (5) working days to the Consulting Tribes and the LA SHPO. The USACE shall consult with all relevant parties to determine the appropriate course of action with regard to the human remains and any accompanying artifacts, grave goods, or funerary objects.

- I. All signatories agree that the most appropriate treatment, if feasible, is to protect the remains and permanently preserve the burial in situ.
- J. If the USACE, after consultation, determines that protection, avoidance, or repair is not feasible, disinterment shall be conducted in accordance with methods and procedures developed in accordance with the appropriate federal and state laws and in consultation with the Consulting Tribes and the LA SHPO.

XII. Dispute Resolution

- A. Except for the resolution of eligibility issues, as set forth in Stipulation V, should the LA SHPO, Consulting Tribes, or a member of the public disagree on the implementation of the provisions of this agreement, they will notify the USACE, who will seek to resolve such objection through consultation.
- B. If the dispute cannot be resolved through consultation, the USACE shall forward all documentation relevant to the dispute to the ACHP, including any proposed resolution identified during consultation. Within seven (7) calendar days after receipt of all pertinent documentation, the ACHP may:
 - 1. Provide the USACE with recommendations to take into account in reaching final decision regarding the dispute; or
 - 2. Notify the USACE that it will comment pursuant to 36 CFR 800.7(c) and provide formal comments within twenty-one (21) calendar days.
- C. Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute, and the USACE's responsibilities to fulfill all actions that are not subject of the dispute will remain unchanged.
- D. If the ACHP does not provide the USACE with recommendations or notification of its intent to provide formal comments within seven (7) calendar days, the USACE may assume that the ACHP does not object to its recommended approach and it will proceed accordingly.

XIII. Administration, Effect, and Duration of this Agreement

- A. This Agreement will be signed in counterparts and shall take effect upon execution by the ACHP, USACE, and LA SHPO.
- B. This Agreement will remain in effect for ten (10) years from the date of execution, unless extended for a two-year period by written agreement negotiated by all signatories.
- C. All signatories to this Agreement shall meet annually to evaluate the effectiveness of this Agreement, beginning one (1) year after the date of execution. The USACE shall coordinate such annual meetings following the execution of this Agreement. At each annual meeting, held in manner and location as mutually agreed upon by all signatories, the effectiveness of the Stipulations of this Agreement shall be discussed. After five (5) years, all signatories will begin the discussion to consider any cumulative effects as discussed by Stipulation XIV.

XIV. Comprehensive Review

- A. Upon completion of the construction activities for the WSLP project, the USACE will analyze the undertaking holistically to identify cumulative effects upon historic properties. Cumulative effects are those coincident effects on specific resources of all related activities, not just the proposed actions governed by the Stipulations of this Agreement.
- B. The USACE, in consultation with the signatories to this Agreement, shall identify and implement additional mitigation measures to address adverse cumulative effects, as appropriate. If there is a disagreement that cannot be resolved, the formal dispute provisions at Stipulation XII will be implemented.
- C. Measures to address adverse cumulative effects shall be documented in a report that meets the standards of the Louisiana Division of Archaeology and will be submitted to the LA SHPO and Consulting Tribes for review and comment. The final cumulative report shall be distributed to the signatories to this Agreement, as well as any additional consulting parties.

XV. Amendment and Termination

- A. Notwithstanding any provision of this Agreement, USACE, ACHP, LA SHPO, and Invited Signatory Parties may request that it be amended, whereupon these parties will consult to consider such amendment. The USACE will facilitate such consultation within thirty (30) days of receipt of the written request. Any amendment will be in writing and will be signed by the USACE, ACHP, LA SHPO, and Invited Signatory Parties, and shall be effective on the date of the final signature.
- B. Any Invited Signatory Party may withdraw its participation in this Agreement by providing thirty (30) days advance written notification to all other parties. In the event of withdrawal by one Invited Signatory Party, the Agreement will remain in effect for the other signatories.
- C. The Agreement may be terminated in accordance with 36 CFR Part 800. Any party requesting termination of this Agreement shall provide thirty (30) days advance written notification to all other signatories.

Execution of this Agreement by the ACHP, USACE, and LA SHPO and implementation of its terms, evidences that the USACE has taken into account the effects of the WSLP project upon historic properties and has afforded the ACHP an opportunity to comment.

**Programmatic Agreement
among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer,
and
The Advisory Council on Historic Preservation
regarding the
West Shore Lake Pontchartrain Hurricane and
Storm Damage Risk Reduction System**

Execution of this Agreement by the ACHP, USACE, and LA SHPO and implementation of its terms, evidences that the USACE has taken into account the effects of the WSLP project upon historic properties and has afforded the ACHP an opportunity to comment.

Signatory:

United States Army Corps of Engineers

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


Date: 5/15/14

**Programmatic Agreement
among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer,
and
The Advisory Council on Historic Preservation
regarding the
West Shore Lake Pontchartrain Hurricane and
Storm Damage Risk Reduction System**

Execution of this Agreement by the ACHP, USACE, and LA SHPO and implementation of its terms, evidences that the USACE has taken into account the effects of the WSLP project upon historic properties and has afforded the ACHP an opportunity to comment.

Signatory:

Louisiana State Historic Preservation Officer

By: 
Pam Breaux
Louisiana State Historic Preservation Officer
Louisiana Office of Cultural Development

Date: 5-15-14

**Programmatic Agreement
among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer,
and
The Advisory Council on Historic Preservation
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Execution of this Agreement by the ACHP, USACE, and LA SHPO and implementation of its terms, evidences that the USACE has taken into account the effects of the WSLP project upon historic properties and has afforded the ACHP an opportunity to comment.

Signatory:

Advisory Council on Historic Preservation

By: John M. Fowler
John M. Fowler
Executive Director
Advisory Council on Historic Preservation

Date: 5/16/14

**Programmatic Agreement
among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer,
and
The Advisory Council on Historic Preservation
regarding the
West Shore Lake Pontchartrain Hurricane and
Storm Damage Risk Reduction System**

Invited Signatory Party:

Chitimacha Tribe of Louisiana

By: John Paul Darden
John Paul Darden, Chairman

Date: 6-25-14

**APPENDIX A
CONTACT INFORMATION**

U.S. Army Corps of Engineers, New Orleans District

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Advisory Council on Historic Preservation

John Fowler, Executive Director
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State Historic Preservation Officer

Pam Breaux, SHPO
Department of Culture, Recreation and Tourism
Louisiana State Historic Preservation Office
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Chitimacha Tribe of Louisiana

John Paul Darden, Chairman
Chitimacha Tribe of Louisiana
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Tunica-Biloxi Tribe of Louisiana

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Cultural Director
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Coastal Protection and Restoration Authority Board

Jerome Zeringue, Chair
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Elizabeth Davoli,
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DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

February 27, 2014

Regional Planning and
Environment Division, South
New Orleans Environmental Branch

Reid Nelson, Director
Office of Federal Agency Programs
Advisory Council on Historic Preservation
Old Post Office
1100 Pennsylvania Ave., NW, Suite 809
Washington, D.C. 20004

Dear Mr. Nelson:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), is consulting for development of a Programmatic Agreement (PA) for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction System (WSLP) Study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate.

The proposed undertakings of the WSLP Study have the potential to effect historic properties. The WSLP Study was first authorized in 1971 and experienced many variations and delays, but now finds further development to be directed by the USACE SMART Feasibility Study Process. A draft Integrated Feasibility Report and Environmental Impact Statement for the WSLP study is available for review at

<http://www.mvn.usace.army.mil/Portals/56/docs/PD/Projects/WSLP/WSLPFINAL.pdf>.

The CEMVN is currently funding a cultural resources survey for an approximately 18.5 mile, 550-foot wide, proposed levee corridor (TSP C) (to include construction, adjacent drainage ditch reservoirs, and Right-of-Way), that is the largest single component of the WSLP study. This levee corridor is immediately adjacent to previous cultural resource surveys (as per Louisiana SHPO files) with negative findings, for approximately 10 linear miles. Approximately 1.8 miles of levee corridor pass through or adjacent to cultural resource site 16SJB68 (Angelina Plantation) near the Mississippi River. This site received extensive cultural resources survey in 2012 (Louisiana Site Report 22-4288), and did not locate National Register of Historic Places (NRHP) eligible resources within the proposed levee corridor. Remaining areas of corridor that remain unsurveyed are within seasonally wet lands not conducive to recoverable human activity or preserved cultural resources. No other cultural resources have been recorded within 1 miles of the TSP C levee corridor. It is anticipated that any previously unrecorded cultural resource will be located by the current survey underway for the WSLP study.

Remaining undertakings of the WSLP Study are defined as “non-structural” and were not sufficiently designated in time to be included within the currently-conducted cultural resources survey, but are thought to be similarly low-probability to affect cultural resources. Existing Louisiana Highway 3125 has an elevated roadway, and will serve as a low berm to prevent storm water from affecting any resources to its south. A series of flap gates will be integrated under the roadway to allow natural water-flow as necessary and not artificially create flood damages. Site 16SJ1 is a prehistoric mound site on private property, considered eligible for the NRHP and approximately 600 feet south of Highway 3125. Two other sites located within 1000 feet of 16SJ1 are 16SJ50 (prehistoric midden; NRHP eligibility undetermined) and 16SJ51 (prehistoric mound; NRHP eligibility undetermined), located approximately 500 feet and 250 feet south of Highway 3125, respectively. The other recorded cultural resource within ½ mile of Highway 3125 within WSLP system is 16SJ56 (historic trash dump; NRHP ineligible according to SHPO). Highway 3125 also crossed the property boundaries of Wilton (16SJ20) and Helvetia (16SJ21) Plantations, portions of which are considered eligible for the NRHP; however according to cultural resources survey in 2011 (Louisiana Site Report 22-3017) no NRHP eligible portion is located in areas of potential effect by proposed flap gates under Highway 3125.

Protective low berms will be built around residences in the small communities of Gramercy and Grand Point, and similarly were not sufficiently designated in time to receive a cultural resources survey. A total of 3 berms with approximate 15-foot basal footprint are proposed. Total length of berms proposed is approximately 6.5 miles. These berm footprints are also thought to be of low probability to affect cultural resources because of: 1) their distance (ca. 1.4, 1.5, and 2.5 miles at closest) to the Mississippi River natural levee and its more stable soils; 2) their closer proximity to seasonally wet soils; 3) the lack of an identified cultural resource by any proximate cultural resources survey; and 4) their overlap on previously developed land likely to have disturbed any previously existing cultural resource.

The SMART Feasibility Study Process implemented by USACE designates that the WSLP Study should next seek Congressional approval for construction and move to Preliminary Engineering Design (PED) of proposed features, using information and risks now extant. Discussion for a Programmatic Agreement to be formed is considered as follows:

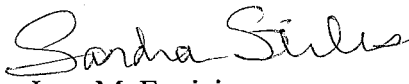
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- 3) Mitigation for swamp or bottomland hardwoods that may be destroyed during construction activities, is proposed for an area near the Amite River Diversion canal. This location has not been coordinated for Section 106, and therefore must be coordinated for Section 106.

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- 6) Currently proposed features leave approximately 80 homes outside of the WSLP system. 33 of these homes are calculated to require lifting to include them within the desired protection from a 100-year storm event. Any homes to be raised should be examined to determine if raising would adversely affect any existing NRHP status.

Maps and information that are helpful to familiarize with project area, are enclosed. A teleconference has been scheduled for March 6, 2014, at 10 a.m. central time, and the agenda and call-in information will be provided by email.

The point of contact at the CEMVN is Dr. Paul Hughbanks. You can reach him at the above address or by phone at (504) 862-1100 or by e-mail at Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter will be submitted to Dr. Tom McCulloch, tmcculloch@achp.gov.

Sincerely,


Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



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

REPLY TO
ATTENTION OF:

February 27, 2014

Regional Planning and
Environment Division, South
New Orleans Environmental Branch

Ms. Pam Breaux
State Historic Preservation Officer
Department of Culture, Recreation, & Tourism
P.O. Box 44247
Baton Rouge, LA 70804

Dear Ms. Breaux:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), is consulting for development of a Programmatic Agreement (PA) for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction System (WSLP) Study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate.

The proposed undertakings of the WSLP Study have the potential to effect historic properties. The WSLP Study was first authorized in 1971 and experienced many variations and delays, but now finds further development to be directed by the USACE SMART Feasibility Study Process. A draft Integrated Feasibility Report and Environmental Impact Statement for the WSLP study is available for review at <http://www.mvn.usace.army.mil/Portals/56/docs/PD/Projects/WSLP/WSLPFINAL.pdf>.

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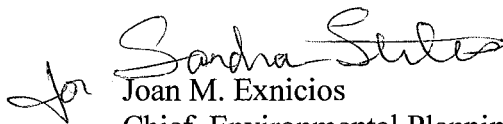
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The point of contact at the CEMVN is Dr. Paul Hughbanks. You can reach him at the above address or by phone at (504) 862-1100 or by e-mail at Paul.J.Hughbanks@usace.army.mil. An electronic cop of this letter is also being sent to Section106@crt.la.gov.

Sincerely,


Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



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

REPLY TO
ATTENTION OF:

February 27, 2014

Regional Planning and
Environment Division, South
New Orleans Environmental Branch

Mr. Jerome Zeringue, Executive Director
Coastal Protection and
Restoration Authority Board of Louisiana
P.O. Box 94004
Office of Governor-Coastal, 4th Floor
Baton Rouge, LA 70804

Dear Mr. Zeringue:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), is consulting for development of a Programmatic Agreement (PA) for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction System (WSLP) Study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate.

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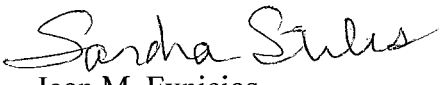
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The point of contact at the CEMVN is Dr. Paul Hughbanks. You can reach him at the above address or by phone at (504) 862-1100 or by e-mail at Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter will be submitted to Ms. Elizabeth Jarrell, elizabeth.jarrell@la.gov and Ms. Elizabeth Davoli, elizabeth.davoli@la.gov.

Sincerely,


Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

Regional Planning and
Environment Division, South

MAY 03 2013

Ms. Pam Breaux
State Historic Preservation Officer
Department of Culture, Recreation and Tourism
Office of Cultural Development
P.O. Box 44247
Baton Rouge, Louisiana 70804

Re: West Shore Lake Pontchartrain Hurricane Protection Project, St. John the Baptist and St. Charles Parish, Louisiana.

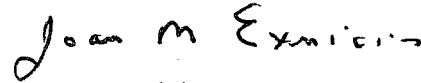
Dear Ms. Breaux:

The U.S. Army Corps of Engineers, New Orleans District (The Corps) has been in process of collecting data to select an alignment for construction of a levee in St. Charles and St. John the Baptist Parish, intended to protect the citizens of these parishes from storm surges that have shown able to cause extreme flooding. No construction has yet taken place on the ground, and the Corps has developed three alignments that appear most suitable given the various interests of federal and local governments. Each of these alignments begins at the western guide levee of the Bonnet Carre Spillway, and then diverge in different paths to protect various amounts of land and urban settlement. An image showing each of these three alignments is enclosed in this letter, for your review.

The Corps has been studying the need for this protection levee for many years, and in 2001 requested that Earth Search, Inc. conduct a cultural resources survey of an alignment very similar to Alignment A (Report 22-2559; Wilson et al. 2003). No cultural resources were located as a result of this survey. Alignments C and D have not received specific cultural resources surveys, although the Corps has reviewed available records of previous surveys or previously recorded cultural resources, and found that large portions of these alignments have been partially covered by other surveys without finding cultural resources. However, the Corps does intend to continue collecting information as to the potential effects caused by the construction of any protection levee, as well as potential effects of weather events after any levee is in place. This information will continue to be compared to known cultural resource locations and surveys. The Corps will continue consultation in compliance with Section 106 of the National Historic Preservation Act.

The Corps has sent this letter with intention to inform you of the current status of this project and our continuing efforts to be aware of any potential to affect historic resources. If you have concerns with this method and area of investigation, we invite you to notify us of those concerns so that we may be fully aware of them as this project proceeds. Please contact project archaeologist Dr. Paul Hughbanks, (504) 862-1100, Paul.J.Hughbanks@usace.army.mil, with any questions or comments.

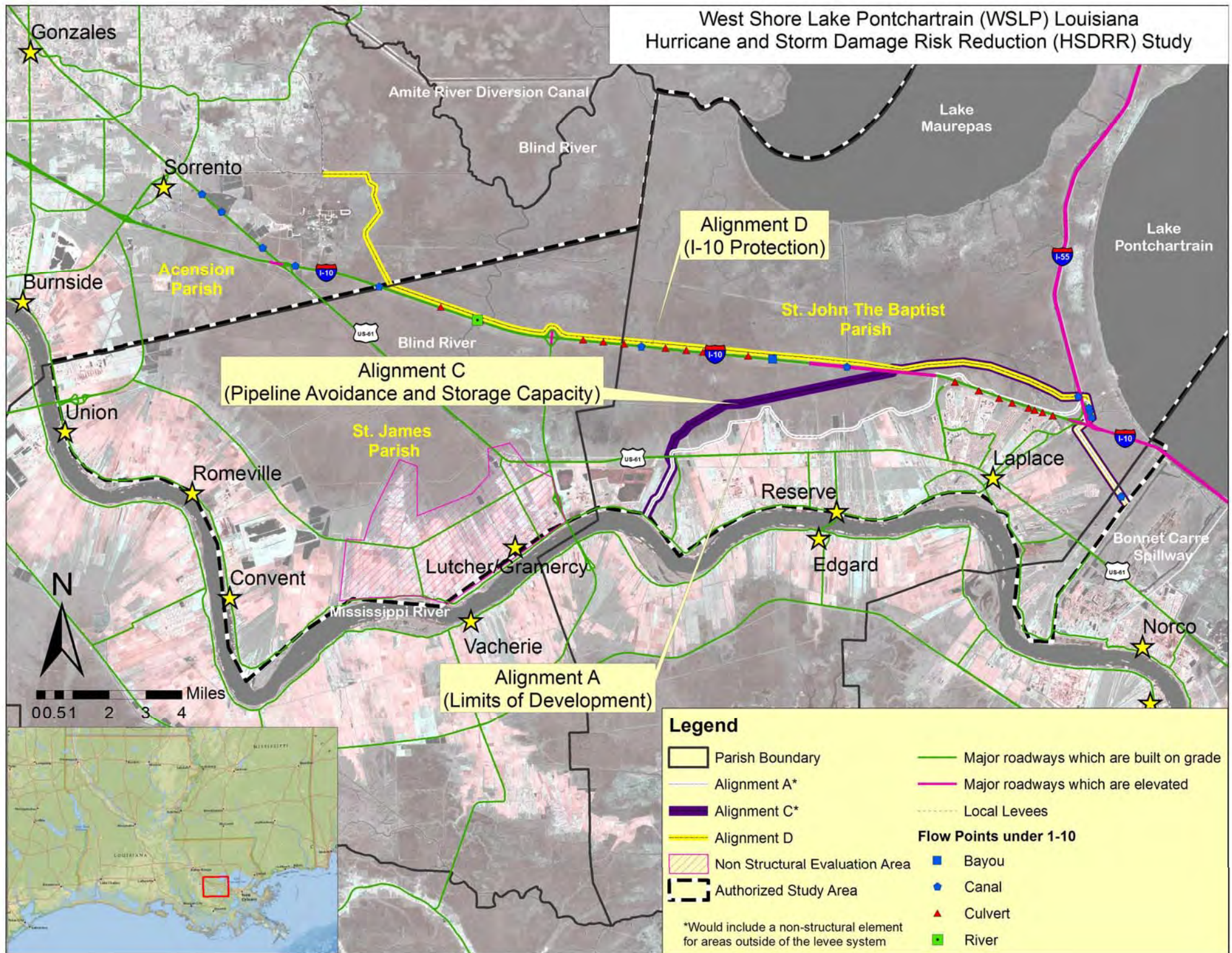
Sincerely,

A handwritten signature in black ink that reads "Joan M. Exnicios". The signature is written in a cursive style with a large initial "J" and "E".

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures

West Shore Lake Pontchartrain (WSLP) Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) Study





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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Carlos Bullock, Chairman
Alabama-Coushatta Tribe of Texas
571 State Park Rd 56
Livingston, TX 77351

Dear Chairman Bullock:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

The CEMVN has determined that implementation of the selected TSP for each study has the potential to cause effects on historic properties and proposes to develop two PAs to establish Section 106 consultation procedures tailored to the accelerated schedules required by the USACE SMART Feasibility Study Process. The undertakings have been summarized in previous Section 106 consultation correspondence and are detailed in the draft Integrated Feasibility Report and Programmatic Environmental Impact Statement for the SWC LA study, available electronically for review at <http://www.mvn.usace.army.mil/About/Projects/SouthwestCoastal.aspx> and the draft Integrated Feasibility Report and Environmental Impact Statement for the WSLP study, available electronically for review at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>.

A teleconference has been scheduled for March 10, 2014, and the agenda and call-in information will be provided by email. We request that you inform us of your desire to participate as a consulting party in these PAs. Given the accelerated schedules, CEMVN requests that consultation for the development of the PAs utilize a combination of email and teleconferences.

As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Mr. Bryant J. Celestine, Historic Preservation Officer, Alabama Coushatta Tribe of Texas, celestine.bryant@actribe.org.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Brenda Shemayne Edwards, Chairwoman
Caddo Nation of Oklahoma
P.O. Box 487
Binger, OK 73009

Dear Chairwoman Edwards:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

John Paul Darden, Chairman
Chitimacha Tribe of Louisiana
P.O. Box 661
Charenton, LA 70523

Dear Chairman Darden:

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Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Gregory E. Pyle, Chief
Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74702-1210

Dear Chief Pyle:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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A teleconference has been scheduled for March 10, 2014, and the agenda and call-in information will be provided by email. We request that you inform us of your desire to participate as a consulting party in these PAs. Given the accelerated schedules, CEMVN requests that consultation for the development of the PAs utilize a combination of email and teleconferences.

As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Dr. Ian Thompson, Director/Tribal Historic Preservation Officer, Choctaw Nation of Oklahoma, ithompson@choctawnation.com.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Kevin Sickey, Chief
Coushatta Tribe of Louisiana
P.O. Box 818
Elton, LA 70532

Dear Chief Sickey:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Dr. Linda Langley, Tribal Historic Preservation Officer, Coushatta Tribe of Louisiana, llangley@mcneese.edu, and Mr. Michael Tarpley, Deputy Tribal Historic Preservation Officer, Coushatta Tribe of Louisiana, kokua.aina57@gmail.com.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

B. Cheryl Smith, Principal Chief
Jena Band of Choctaw Indians
P.O. Box 14
Jena, LA 71342

Dear Principal Chief Smith:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Ms. Dana Masters, Tribal Historic Preservation Officer, Jena Band of Choctaw Indians, jbc.thpo106@aol.com, and Ms. Lillie McCormick, Environmental Director, Jena Band of Choctaw Indians, lmccormickjbc@centurytel.net.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Phyliss J. Anderson, Chief
Mississippi Band of Choctaw Indians
P.O. Box 6257
Choctaw, MS 39350

Dear Chief Anderson:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Mr. Kenneth H. Carleton, Tribal Historic Preservation Officer/ Archaeologist, Mississippi Band of Choctaw Indians, karleton@choctaw.org.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Leonard M. Harjo, Principal Chief
Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884

Dear Principal Chief Harjo:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Ms. Natalie Harjo, Tribal Historic Preservation Officer, Seminole Nation of Oklahoma, harjo.n@sno-nsn.gov.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

James Billie, Chairman
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024

Dear Chairman Billie:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Mr. Paul N. Backhouse, Tribal Historic Preservation Officer, Seminole Tribe of Florida, paulbackhouse@semtribe.com; Ms. Anne Mullins, Deputy Tribal Historic Preservation Officer, annemullins@semtribe.com; Mr. Bradley Mueller, Compliance Review Supervisor, bradleymueller@semtribe.com; and Ms. Alison Swing, Compliance Review Data Analyst, alisonswing@semtribe.com.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

MARCH 7, 2014

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Earl J. Barbry, Sr., Chairman
Tunica-Biloxi Tribe of Louisiana
P.O. Box 1589
Marksville, LA 71351

Dear Chairman Barbry:

The United States Army Corps of Engineers, New Orleans District (CEMVN), is continuing consultation to develop Programmatic Agreements (PAs) for two studies, the Southwest Coastal Louisiana (SWC LA) study and the West Shore Lake Pontchartrain (WSLP) study, in accordance with 36 CFR § 800.14(b) of the regulations implementing Section 106 of the National Historic Preservation Act. We invite you to participate in the consultation for the development of these two separate PAs.

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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; rebecca.hill@usace.army.mil. An electronic copy of this letter and all future correspondence pertaining to the development of the PAs will be provided electronically to Mr. Earl Barbry, Jr., Cultural Director, Tunica-Biloxi Tribe of Louisiana, earlji@tunica.org.

Sincerely,

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Carlos Bullock, Chairman
Alabama-Coushatta Tribe of Texas
571 State Park Rd 56
Livingston, TX 77351

Dear Chairman Bullock:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), has prepared an Integrated Draft Feasibility Report and Environmental Impact Statement (Integrated Draft Report) for the West Shore Lake Pontchartrain (WSLP) Hurricane and Storm Damage Risk Reduction Study. The Integrated Draft Report is available electronically for review at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>, and hard copies are available upon request.

In partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act (NEPA), and Section 106 of the National Historic Preservation Act, the CEMVN offers you the opportunity to review and comment on the potential of the proposed action described in the Integrated Draft Report to significantly affect protected tribal resources, tribal rights, or Indian lands. Consultation for the proposed action was initiated in a letter dated May 3, 2013.

The Integrated Draft Report proposes potential solutions to reduce damages from hurricane and tropical storm surge for residents in St. Charles, St. John the Baptist and St. James Parishes, Louisiana. Without action, an estimated 62,900 residents and 20,000 residential structures; 1,900 non-residential structures; and 165 public and quasi-public facilities will be at risk to damage from hurricane and tropical storm surge damages.

Eleven management measures were crafted to address storm surge. Structural and nonstructural features included levees, elevating buildings, and restoring cypress swamp. Measures were combined into a dozen alternative plans. A focused array of four alternative plans was evaluated under SMART Planning. Alternatives A and C are comprised of non-structural measures and levee alignments. A third plan (Alternative D) consists of a levee and flood wall alignment. A no-action plan is the basis to compare benefits and environmental impacts.

Alternative C is the Tentatively Selected Plan (TSP). Feasibility-level design will commence after the SMART Planning Agency Decision Milestone and will finish before a Final

Report. The TSP is an 18.27-mile risk reduction system around the communities of Montz, Laplace, Reserve, and Garyville with non-structural components in St. James Parish. The alignment of the TSP is shown in Figure 3-6 of the Integrated Draft Report. The risk of storm surge damage would be reduced for over 7,000 structures and four miles of I-10 located in the system. Inclusion of this segment of I-10 would help maintain a major emergency evacuation and re-entry route for residents of southeast Louisiana, including residents in the New Orleans metropolitan area. The TSP also includes non-structural measures for 1,571 structures in the communities of Gramercy, Litcher, and Grand Point that are located outside of the proposed levee system. It is estimated that these non-structural measures would include elevation of 1,481 structures and acquisition of 90 structures. Implementation of non-structural features will be developed in more detail during feasibility level of design and analysis during which time an economic analysis will be conducted based on economic reaches. In developing the plan, consideration will be given to community cohesion and the requirements of E.O. 12898.

The structural component of the system would consist of earthen levees, floodwalls (T-walls), floodgates, drainage structures, and pump stations located along the alignment. The preliminary level of design, based on modeling for a 1 percent AEP storm event includes levee elevations that would range from +13.5 NAVD88 on the eastern reaches near the Bonnet Carré Spillway to +7.0 NAVD88 in the western portion of the project area. They would be constructed with 3:1 side slopes with a 10-foot crown width. Construction of levees would involve the placement of 3,100,000 cubic yards of compacted and uncompacted clay (borrow) material on top of 3,400,000 square yards of geotextile fabric. Approximately 26,124 cubic yards of aggregate limestone would be used to build a road on the levee crown. A conveyance canal at a depth of - 10 ft. NAVD88 would be situated along the levee. Floodwalls would be located under the I-10/I- 55 interchange and other areas where space is limited. Nine floodwall sections would span 5,304 linear feet over the length of the system. The system would include 2,080 feet of drainage gates, 288 feet of roadway gates, two railway gates, and thirty-six pipeline crossings. Four pump stations would be located along the alignment to ensure the project does not adversely impact local drainage. Design parameters will be further refined during feasibility level design and analysis which may result in changes to the design parameters; however, the TSP is anticipated to reduce risk for at minimum a 1 percent AEP storm event but not exceed a 0.5 percent AEP storm event.

The TSP would maintain hydrologic connectivity to the extent practicable through the use of water control structures except during closure for hurricane and tropical storm surge events. When the system is closed, pumps would operate on average for 1.7 storm events per year, which equates to closure of structures on average 8.5 days per year. The structural alignment would directly convert approximately 856 acres to uplands including approximately 775 acres of hydric soils, 14.8 acres of water bottoms, and 55.4 acres of prime farmlands. Approximately 8,424 acres of wetlands could be indirectly impacted due to enclosing the project area within the levee system. Further investigation is required to determine if cultural resources are located

within any part of the footprint. Additional environmental investigations will be performed during feasibility-level design and analysis. The estimated cost of the TSP is \$880,851,070. The BCR for the TSP is equal to 1.63 to 1 with annualized net benefits equal to approximately \$23,000,000.

Section 106 Consultation

Formal Section 106 consultation pursuant to 36 CFR § 800.3(c) has been initiated with the Louisiana State Historic Preservation Officer (SHPO) and eleven federally-recognized Tribes with an interest in USACE undertakings within the boundaries of CEMVN. The Choctaw Nation of Oklahoma has requested additional information regarding the undertaking, and the CEMVN will continue consultation with the SHPO and federally-recognized Tribes. With selection of the TSP as presented in the Integrated Draft Report, the CEMVN will now proceed with the identification and evaluation of historic properties, the results of which will be coordinated with the SHPO and federally-recognized Tribes in a continuation of Section 106 consultation.

Integrated Draft Report

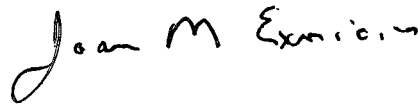
Finally, I would like to offer my apologies for an oversight resulting in an error on page 7-2 of the Integrated Draft Report. You may note that both federally-recognized Tribes and non-federally-recognized tribes are included in Table 7.1: List of report recipients, and that the Mississippi Band of Choctaw Indians was inadvertently omitted. No disrespect was intended, and actions have already been taken to ensure that this is corrected for the final report.

This is the first CEMVN study within the USACE SMART Planning framework, which organizes the planning process for feasibility studies around key decision points. Over the next few months a public comment period will be conducted along with technical, peer and policy reviews. Additional feasibility work remains to be completed on engineering, cost estimating, environmental, economic, real estate and construction elements of the plan. Results of the reviews and additional feasibility work will be incorporated into the final report, which will be made available for review before the Chief of Engineers makes a final recommendation on the project.

Please review the Integrated Draft Report and provide comments. The official closing date for receipt of comments will be 45 days from the date on which the Notice of Availability of the Draft EIS appears in the Federal Register. Please send comments or questions on the Draft Integrated Report the U.S. Army Corps of Engineers, New Orleans District, Attention: Dr. William P. Klein, Jr., P.O. Box 60267, New Orleans, Louisiana 70160-0267. Telephone: (504) 862-2540; FAX: (504) 862-2088. Comments may also be provided electronically to the study web site at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>.

As always, should you have any questions or concerns about the proposed action or the SMART Planning framework, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; Rebecca.Hill@usace.army.mil. You may also contact the project archaeologist Dr. Paul Highbanks with any questions or comments at (504) 862-1100 or Paul.J.Highbanks@usace.army.mil. An electronic copy of this letter will be provided to Mr. Bryant J. Celestine, Historic Preservation Officer, Alabama Coushatta Tribe of Texas, celestine.bryant@actribe.org.

Sincerely,

A handwritten signature in black ink that reads "Joan M. Exnicios". The signature is written in a cursive style with a large, stylized initial "J".

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Brenda Shemayne Edwards, Chairwoman
Caddo Nation of Oklahoma
P.O. Box 487
Binger, OK 73009

Dear Chairwoman Edwards:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), has prepared an Integrated Draft Feasibility Report and Environmental Impact Statement (Integrated Draft Report) for the West Shore Lake Pontchartrain (WSLP) Hurricane and Storm Damage Risk Reduction Study. The Integrated Draft Report is available electronically for review at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>, and hard copies are available upon request.

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Section 106 Consultation

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As always, should you have any questions or concerns about the proposed action or the SMART Planning framework, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; Rebecca.Hill@usace.army.mil. You may also contact the project archaeologist Dr. Paul Hughbanks with any questions or comments at (504) 862-1100 or Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter will be provided to Mr. Robert Cast, Tribal Historic Preservation Officer, Caddo Nation of Oklahoma, rcast@caddonation.org.

Sincerely,

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Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

John Paul Darden, Chairman
Chitimacha Tribe of Louisiana
P.O. Box 661
Charenton, LA 70523

Dear Chairman Darden:

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Integrated Draft Report

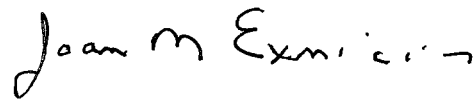
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As always, should you have any questions or concerns about the proposed action or the SMART Planning framework, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; Rebecca.Hill@usace.army.mil. You may also contact the project archaeologist Dr. Paul Hughbanks with any questions or comments at (504) 862-1100 or Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter will be provided to Mrs. Kimberly Walden, M. Ed., Cultural Director/Tribal Historic Preservation Officer, Chitimacha Tribe of Louisiana, kswalden@chitimacha.gov.

Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive style with a large initial "J" and a stylized "M".

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Gregory E. Pyle, Chief
Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74702-1210

Dear Chief Pyle:

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Report. The TSP is an 18.27-mile risk reduction system around the communities of Montz, Laplace, Reserve, and Garyville with non-structural components in St. James Parish. The alignment of the TSP is shown in Figure 3-6 of the Integrated Draft Report. The risk of storm surge damage would be reduced for over 7,000 structures and four miles of I-10 located in the system. Inclusion of this segment of I-10 would help maintain a major emergency evacuation and re-entry route for residents of southeast Louisiana, including residents in the New Orleans metropolitan area. The TSP also includes non-structural measures for 1,571 structures in the communities of Gramercy, Litcher, and Grand Point that are located outside of the proposed levee system. It is estimated that these non-structural measures would include elevation of 1,481 structures and acquisition of 90 structures. Implementation of non-structural features will be developed in more detail during feasibility level of design and analysis during which time an economic analysis will be conducted based on economic reaches. In developing the plan, consideration will be given to community cohesion and the requirements of E.O. 12898.

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Integrated Draft Report

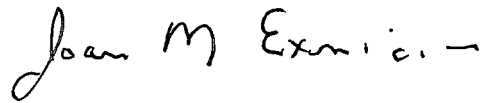
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Sincerely,

A handwritten signature in cursive script that reads "Joan M Exnicios".

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Kevin Sickey, Chief
Coushatta Tribe of Louisiana
P.O. Box 818
Elton, LA 70532

Dear Chief Sickey:

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Sincerely,

A handwritten signature in black ink that reads "Joan M. Exnicios". The signature is written in a cursive style with a large, looped initial "J".

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

B. Cheryl Smith, Principal Chief
Jena Band of Choctaw Indians
P.O. Box 14
Jena, LA 71342

Dear Principal Chief Smith:

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Integrated Draft Report

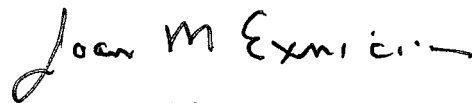
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Sincerely,

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Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Phyliss J. Anderson, Chief
Mississippi Band of Choctaw Indians
P.O. Box 6257
Choctaw, MS 39350

Dear Chief Anderson:

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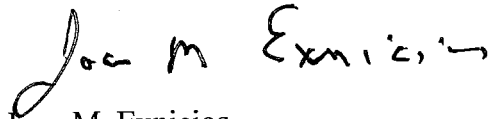
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Sincerely,

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Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

John Berrey, Chairman
Quapaw Tribe of Oklahoma
P.O. Box 765
Quapaw, OK 74363

Dear Chairman Berrey:

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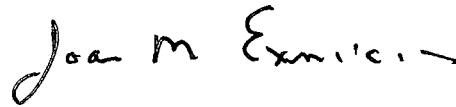
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Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Leonard M. Harjo, Principal Chief
Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884

Dear Principal Chief Harjo:

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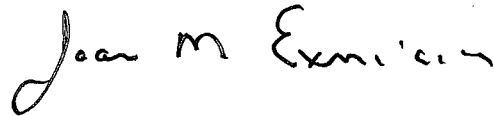
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Please review the Integrated Draft Report and provide comments. The official closing date for receipt of comments will be 45 days from the date on which the Notice of Availability of the Draft EIS appears in the Federal Register. Please send comments or questions on the Draft Integrated Report the U.S. Army Corps of Engineers, New Orleans District, Attention: Dr. William P. Klein, Jr., P.O. Box 60267, New Orleans, Louisiana 70160-0267. Telephone: (504) 862-2540; FAX: (504) 862-2088. Comments may also be provided electronically to the study web site at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>.

As always, should you have any questions or concerns about the proposed action or the SMART Planning framework, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; Rebecca.Hill@usace.army.mil. You may also contact the project archaeologist Dr. Paul Hughbanks with any questions or comments at (504) 862-1100 or Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter will be provided to Ms. Natalie Harjo, Tribal Historic Preservation Officer, Seminole Nation of Oklahoma, harjo.n@sno-nsn.gov.

Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive, flowing style.

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

James Billie, Chairman
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024

Dear Chairman Billie:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), has prepared an Integrated Draft Feasibility Report and Environmental Impact Statement (Integrated Draft Report) for the West Shore Lake Pontchartrain (WSLP) Hurricane and Storm Damage Risk Reduction Study. The Integrated Draft Report is available electronically for review at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>, and hard copies are available upon request.

In partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act (NEPA), and Section 106 of the National Historic Preservation Act, the CEMVN offers you the opportunity to review and comment on the potential of the proposed action described in the Integrated Draft Report to significantly affect protected tribal resources, tribal rights, or Indian lands. Consultation for the proposed action was initiated in a letter dated May 3, 2013.

The Integrated Draft Report proposes potential solutions to reduce damages from hurricane and tropical storm surge for residents in St. Charles, St. John the Baptist and St. James Parishes, Louisiana. Without action, an estimated 62,900 residents and 20,000 residential structures; 1,900 non-residential structures; and 165 public and quasi-public facilities will be at risk to damage from hurricane and tropical storm surge damages.

Eleven management measures were crafted to address storm surge. Structural and nonstructural features included levees, elevating buildings, and restoring cypress swamp. Measures were combined into a dozen alternative plans. A focused array of four alternative plans was evaluated under SMART Planning. Alternatives A and C are comprised of non-structural measures and levee alignments. A third plan (Alternative D) consists of a levee and flood wall alignment. A no-action plan is the basis to compare benefits and environmental impacts.

Alternative C is the Tentatively Selected Plan (TSP). Feasibility-level design will commence after the SMART Planning Agency Decision Milestone and will finish before a Final

Report. The TSP is an 18.27-mile risk reduction system around the communities of Montz, Laplace, Reserve, and Garyville with non-structural components in St. James Parish. The alignment of the TSP is shown in Figure 3-6 of the Integrated Draft Report. The risk of storm surge damage would be reduced for over 7,000 structures and four miles of I-10 located in the system. Inclusion of this segment of I-10 would help maintain a major emergency evacuation and re-entry route for residents of southeast Louisiana, including residents in the New Orleans metropolitan area. The TSP also includes non-structural measures for 1,571 structures in the communities of Gramercy, Litcher, and Grand Point that are located outside of the proposed levee system. It is estimated that these non-structural measures would include elevation of 1,481 structures and acquisition of 90 structures. Implementation of non-structural features will be developed in more detail during feasibility level of design and analysis during which time an economic analysis will be conducted based on economic reaches. In developing the plan, consideration will be given to community cohesion and the requirements of E.O. 12898.

The structural component of the system would consist of earthen levees, floodwalls (T-walls), floodgates, drainage structures, and pump stations located along the alignment. The preliminary level of design, based on modeling for a 1 percent AEP storm event includes levee elevations that would range from +13.5 NAVD88 on the eastern reaches near the Bonnet Carré Spillway to +7.0 NAVD88 in the western portion of the project area. They would be constructed with 3:1 side slopes with a 10-foot crown width. Construction of levees would involve the placement of 3,100,000 cubic yards of compacted and uncompacted clay (borrow) material on top of 3,400,000 square yards of geotextile fabric. Approximately 26,124 cubic yards of aggregate limestone would be used to build a road on the levee crown. A conveyance canal at a depth of - 10 ft. NAVD88 would be situated along the levee. Floodwalls would be located under the I-10/I- 55 interchange and other areas where space is limited. Nine floodwall sections would span 5,304 linear feet over the length of the system. The system would include 2,080 feet of drainage gates, 288 feet of roadway gates, two railway gates, and thirty-six pipeline crossings. Four pump stations would be located along the alignment to ensure the project does not adversely impact local drainage. Design parameters will be further refined during feasibility level design and analysis which may result in changes to the design parameters; however, the TSP is anticipated to reduce risk for at minimum a 1 percent AEP storm event but not exceed a 0.5 percent AEP storm event.

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within any part of the footprint. Additional environmental investigations will be performed during feasibility-level design and analysis. The estimated cost of the TSP is \$880,851,070. The BCR for the TSP is equal to 1.63 to 1 with annualized net benefits equal to approximately \$23,000,000.

Section 106 Consultation

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Integrated Draft Report

Finally, I would like to offer my apologies for an oversight resulting in an error on page 7-2 of the Integrated Draft Report. You may note that both federally-recognized Tribes and non-federally-recognized tribes are included in Table 7.1: List of report recipients, and that the Mississippi Band of Choctaw Indians was inadvertently omitted. No disrespect was intended, and actions have already been taken to ensure that this is corrected for the final report.

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Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive style with a large, stylized "J" and "M".

Joan M. Exnicios
Chief, Environmental Planning Branch



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

AUGUST 23, 2013

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division, South

Earl J. Barbry, Sr., Chairman
Tunica-Biloxi Tribe of Louisiana
P.O. Box 1589
Marksville, LA 71351

Dear Chairman Barbry:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), has prepared an Integrated Draft Feasibility Report and Environmental Impact Statement (Integrated Draft Report) for the West Shore Lake Pontchartrain (WSLP) Hurricane and Storm Damage Risk Reduction Study. The Integrated Draft Report is available electronically for review at <http://www.mvn.usace.army.mil/About/Projects/WestShoreLakePontchartrain>, and hard copies are available upon request.

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Integrated Draft Report

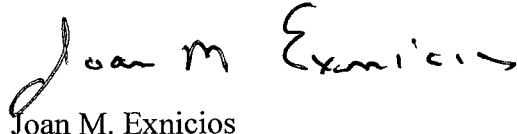
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Sincerely,

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Joan M. Exnicios
Chief, Environmental Planning Branch



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

Carlos Bullock, Chairman
Alabama-Coushatta Tribe of Texas
571 State Park Rd 56
Livingston, TX 77351

Dear Chairman Bullock:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

The purpose of this letter is to initiate consultation for the WSLP LA HSDRR study, in partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act. The CEMVN offers you the opportunity to review and comment on the potential of the proposed action to significantly affect protected tribal resources, tribal rights, or Indian lands.

Study Authority and History of Investigation

The WSLP LA HSDRR study was initiated by two authorizations, one by the House of Representatives in 1971 and another by the Senate in 1974. Several formulations and reports have been accomplished since the original authorizations. In 1996 Congress authorized funding for a general investigation into hurricane and flood protection in St. James, St. John the Baptist, and St. Charles parishes in the area west of the Bonne Carré Spillway as part of the Lake Pontchartrain and Vicinity, Louisiana Authority. Subsequently, a feasibility study was initiated and the preliminary findings were presented to the PLD and St. John Parish in 1998. One of the eight alignments from the preliminary findings and an additional alignment presented by the PLD were chosen for further investigation and in 2003, the USACE presented alignment and

cost options to the PLD and St. John the Baptist Parish for these two alternatives. No consensus could be reached on which alignment to pursue and the study was halted. In 2006, the PLD developed a third alignment for consideration by the USACE and St. John the Baptist Parish. A preliminary screening level analysis was completed in 2007, and the PLD and the USACE agreed to re-initiate the feasibility study and an EIS.

Study Area

The WSLP LA HSDRR study area is located in St. Charles, St. John the Baptist and St. James parishes, Louisiana (see enclosed Figure 1). The study area is bounded on the east by the west guide levee of the Bonnet Carré Spillway, on the north by Lake Pontchartrain and Lake Maurepas, on the west by the St. James Parish line and on the south by the Mississippi River. The study area includes residential, commercial, industrial and undeveloped land. The southern portion of the study contains the communities of LaPlace, Reserve, Garyville, Gramercy, Litcher and Convent. Most of the northern portion is occupied by the Maurepas Swamp Wildlife Management Area and includes sections of Interstate Highway 10 (I-10) and I-55.

Proposed Alignments

Thirty-two alignments were identified and screened based on objectives and constraints and local conditions, including pipeline avoidance and storage and infrastructure concerns, reducing the number of alignments to twelve. These twelve alignments were ranked based on their ability to meet the study objectives and avoid constraints, and the top four alignments that met evaluation criteria were carried forward for evaluation. An additional non-structural alternative was developed.

The final array of alternatives include the No Action Alternative; Alternative A: Spillway to Hope Canal/Mississippi River and Non-Structural Alternative; Alternative C: Spillway to Hope Canal/MS River (Pipeline Avoidance) and Non-Structural Alternative; Alternative D: Spillway to Ascension Parish (I-10 Protection) without Non-Structural Alternative; and Alternative E: Non-Structural Alternative (see enclosed Figure 2).

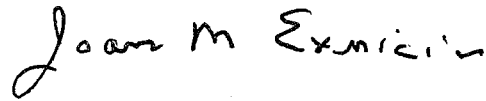
Section 106 Consultation

This letter initiates formal Section 106 consultation pursuant to 36 CFR § 800.3(c). The majority of the authorized study area is within the Maurepas Swamp, although the study area also contains natural levee of the Mississippi River. Upon selection of the tentatively selected plan and the identification of historic properties, in accordance with 36 CFR § 800.4, the CEMVN will continue Section 106 consultation. Also enclosed is a copy of the 3 May 2013 CEMVN letter to the Louisiana State Historic Preservation Officer.

Your response to this letter, including any information your office may wish to provide at this time concerning the proposed undertaking and its potential to significantly affect protected tribal resources, tribal rights, or Indian lands is greatly appreciated. Please also notify us of any other interested party who may wish to participate in this consultation.

As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; Rebecca.Hill@usace.army.mil. You may also contact the project archaeologist Dr. Paul Hughbanks with any questions or comments at (504) 862-1100 or Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter with enclosures will be provided to Mr. Bryant J. Celestine, Historic Preservation Officer, Alabama Coushatta Tribe of Texas, celestine.bryant@actribe.org.

Sincerely,

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Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

Brenda Shemayne Edwards, Chairwoman
Caddo Nation of Oklahoma
P.O. Box 487
Binger, OK 73009

Dear Chairwoman Edwards:

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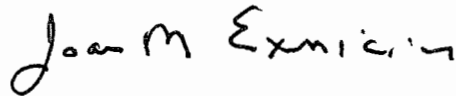
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Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

John Paul Darden, Chairman
Chitimacha Tribe of Louisiana
P.O. Box 661
Charenton, LA 70523

Dear Chairman Darden:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

The purpose of this letter is to initiate consultation for the WSLP LA HSDRR study, in partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act. The CEMVN offers you the opportunity to review and comment on the potential of the proposed action to significantly affect protected tribal resources, tribal rights, or Indian lands.

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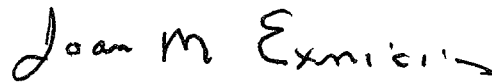
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As always, should you have any questions or concerns about the proposed action, you may contact Ms. Rebecca Hill; Archeologist/Tribal Liaison; U.S. Army Corps of Engineers, New Orleans District; (504) 862-1474; Rebecca.Hill@usace.army.mil. You may also contact the project archaeologist Dr. Paul Hughbanks with any questions or comments at (504) 862-1100 or Paul.J.Hughbanks@usace.army.mil. An electronic copy of this letter with enclosures will be provided to Mrs. Kimberly Walden, M. Ed., Cultural Director/Tribal Historic Preservation Officer, Chitimacha Tribe of Louisiana, kswalden@chitimacha.gov.

Sincerely,

A handwritten signature in black ink that reads "Joan M. Exnicios". The signature is written in a cursive, flowing style.

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

Gregory E. Pyle, Chief
Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74702-1210

Dear Chief Pyle:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

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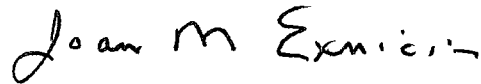
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Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive, flowing style.

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

Kevin Sickey, Chief
Coushatta Tribe of Louisiana
P.O. Box 818
Elton, LA 70532

Dear Chief Sickey:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

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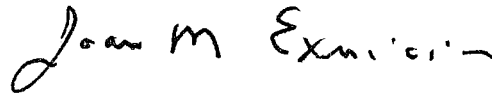
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Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive, flowing style.

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

B. Cheryl Smith, Principal Chief
Jena Band of Choctaw Indians
P.O. Box 14
Jena, LA 71342

Dear Principal Chief Smith:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

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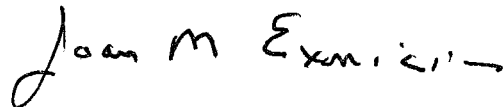
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Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive style with a long horizontal line extending from the end of the name.

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

Phylliss J. Anderson, Chief
Mississippi Band of Choctaw Indians
P.O. Box 6257
Choctaw, MS 39350

Dear Chief Anderson:

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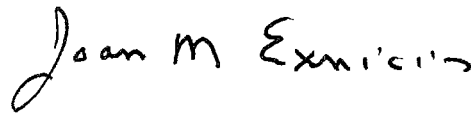
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Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive style with a large, stylized "J" and "E".

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

John Berrey, Chairman
Quapaw Tribe of Oklahoma
P.O. Box 765
Quapaw, OK 74363

Dear Chairman Berrey:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

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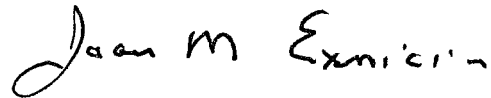
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Sincerely,

A handwritten signature in black ink that reads "Joan M Exnicios". The signature is written in a cursive, flowing style.

Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
ATTENTION OF

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

May 3, 2013

Regional Planning and
Environment Division, South

Leonard M. Harjo, Principal Chief
Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884

Dear Principal Chief Harjo:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

The purpose of this letter is to initiate consultation for the WSLP LA HSDRR study, in partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act. The CEMVN offers you the opportunity to review and comment on the potential of the proposed action to significantly affect protected tribal resources, tribal rights, or Indian lands.

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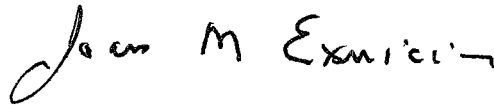
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Sincerely,

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Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures



REPLY TO
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NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

May 3, 2013

Regional Planning and
Environment Division, South

James Billie, Chairman
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024

Dear Chairman Billie:

The United States Army Corps of Engineers (USACE) and the Pontchartrain Levee District (PLD) have initiated an investigation into the feasibility of providing hurricane and storm damage risk reduction to residents living in the area west of the Bonnet Carré Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas and the St. James Parish line. The New Orleans District (CEMVN) is preparing a West Shore-Lake Pontchartrain (WSLP) Integrated Feasibility Study/Environmental Impact Statement (Integrated Report), which will describe all aspects of the WSLP Louisiana Hurricane and Storm Damage Risk Reduction (HSDRR) study, from its inception, through the evolution of the various alternatives, the discussion of potential impacts to all applicable natural, socioeconomic and cultural resources, to the decision to recommend a preferred alternative.

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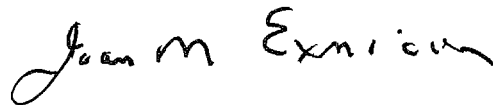
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REPLY TO
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DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

May 3, 2013

Regional Planning and
Environment Division, South

Earl J. Barbry, Sr., Chairman
Tunica-Biloxi Tribe of Louisiana
P.O. Box 1589
Marksville, LA 71351

Dear Chairman Barbry:

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Joan M. Exnicios
Chief, Environmental Planning Branch

Enclosures

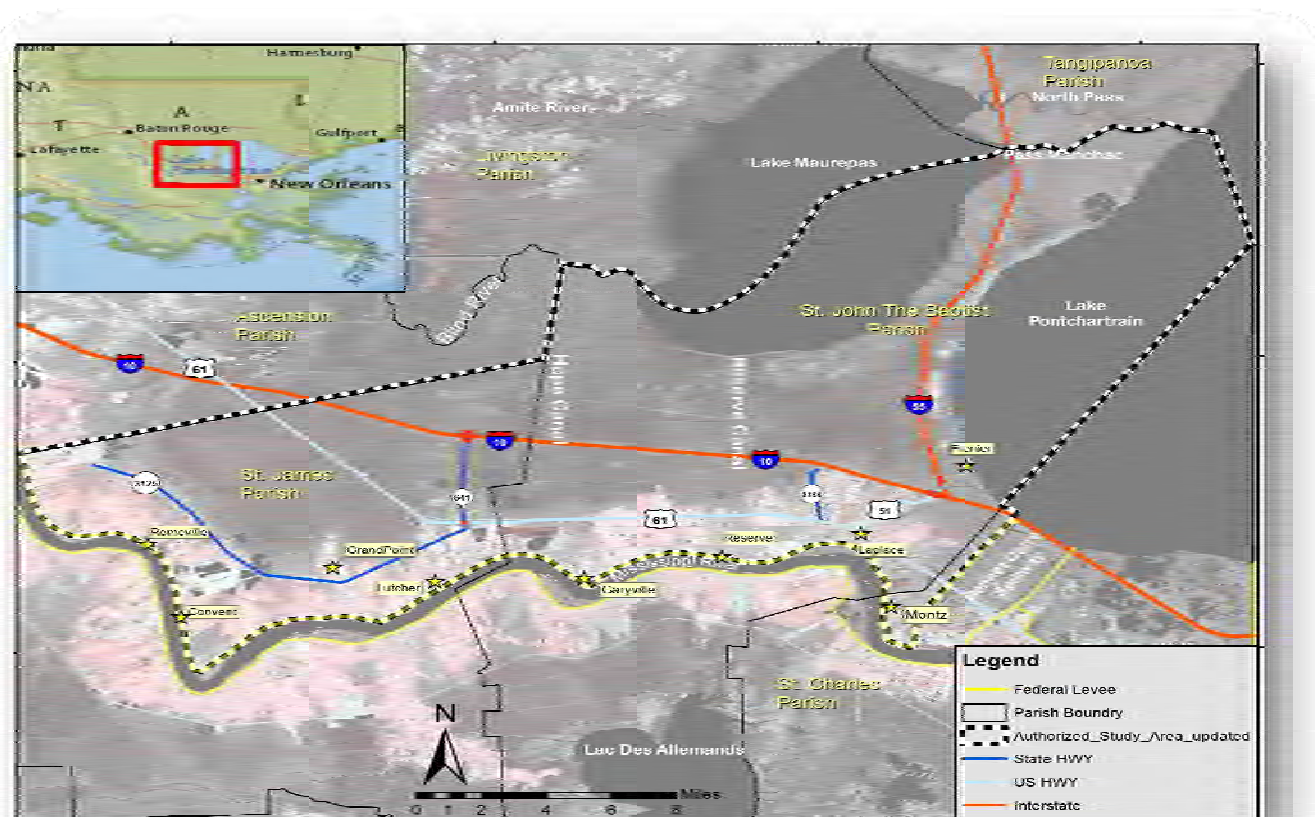


Figure 1. West Shore-Lake Pontchartrain Louisiana Hurricane and Storm Damage Risk Reduction Study Area.

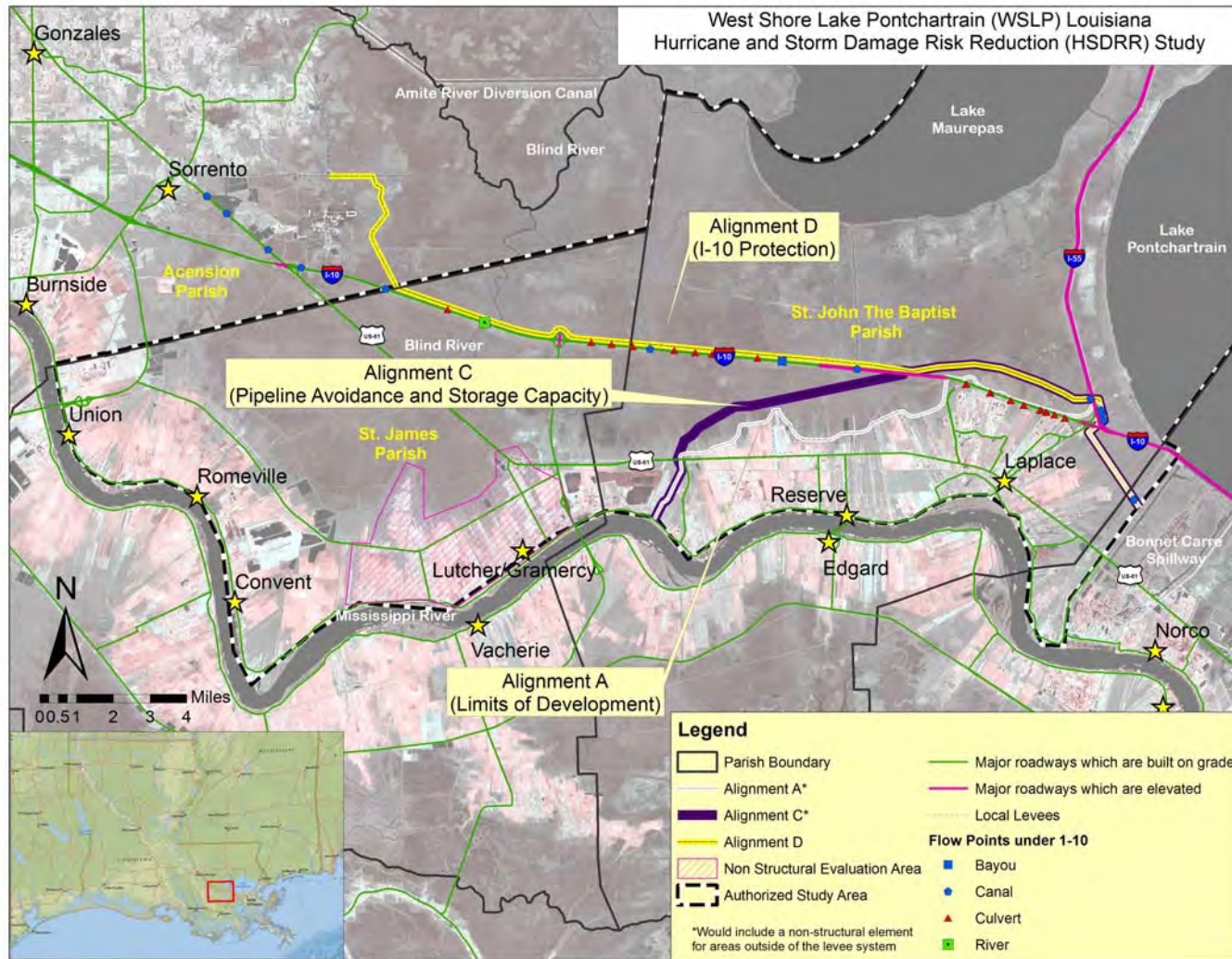


Figure 2. West Shore-Lake Pontchartrain Louisiana Hurricane and Storm Damage Risk Reduction Study Final Array of Alternatives.

Appendix D: Representative species tables

Annex A: Representative bird species

Common Name	Scientific Name	Common Name	Scientific Name
Little blue heron	<i>Egretta caerulea</i>	Northern harrier	<i>Circus hudsonius</i>
Great blue heron	<i>Ardea herodias</i>	Sedge wren	<i>Cistothorus stellaris</i>
Green-backed heron	<i>Butorides virescens</i>	Greater yellowlegs	<i>Tringa melanoleuca</i>
Yellow-crowned night heron	<i>Nyctanassa violacea</i>	Eastern screech owl	<i>Megascops asio</i>
Black-crowned night heron	<i>Nycticorax nycticorax</i>	Mississippi kite	<i>Ictinia mississippiensis</i>
Great egret	<i>Ardea alba</i>	Red-tailed hawk	<i>Buteo jamaicensis</i>
Snowy egret	<i>Egretta thula</i>	Red-bellied woodpecker	<i>Melanerpes carolinus</i>
Cattle egret	<i>Bubulcus ibis</i>	Pileated woodpecker	<i>Dryocopus pileatus</i>
Reddish egret	<i>Egretta rufescens</i>	Barred Owl	<i>Strix varia</i>
Tricolor Heron	<i>Egretta tricolor</i>	Turkey Vulture	<i>Cathartes aura</i>
White ibis	<i>Eudocimus albus</i>	House Wren	<i>Troglodytes aedon</i>
Roseate spoonbill	<i>Platalea ajaja</i>	Prothonotary Warbler	<i>Protonotaria citrea</i>
White-faced ibis	<i>Plegadis chihi</i>	Wood duck	<i>Aix sponsa</i>
Killdeer	<i>Charadrius vociferus</i>	Hooded-merganser	<i>Lophodytes cucullatus</i>
American avocet	<i>Recurvirostra americana</i>	Canada goose	<i>Branta canadensis</i>
Black-necked stilt	<i>Himantopus mexicanus</i>	Blue-winged teal	<i>Spatula discors</i>
Herring gull	<i>Larus argentatus</i>	Mallard	<i>Anas platyrhynchos</i>
Laughing gull	<i>Leucophaeus atricilla</i>	Black-bellied whistling duck	<i>Dendrocygna autumnalis</i>
Boat-tailed grackle	<i>Quiscalus major</i>	Gadwall	<i>Mareca strepera</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>	American wigeon	<i>Mareca americana</i>
Anhinga	<i>Anhinga anhinga</i>	American coot	<i>Fulica americana</i>

Annex B: Representative mammal species (adapted from LCA Blind River Final SEIS; USACE, xyz).

Common Name	Scientific Name
Beaver	Castor Canadensis
Bobcat	Felis rufus
Cotton Mouse	Peromyscus gossypinus
Cotton Rat	Sigmodon hispidus
Coyote	Canis latrans
Eastern Cottontail	Sylvilagus floridanus
Eastern Harvest Mouse	Reithrodontomys humilis
Eastern Spotted Skunk	Spilogale putorius
Feral Hog	Sus scrofa
Fox Squirrel	Sciurus niger
Golden mouse	Ochrotomys nuttalli
Gray Fox	Urocyon cinereoargenteus
Gray Squirrel	Sciurus carolinensis
House Mouse	Mus musculus
Least Shrew	Cryptotis parva
Long-tailed Weasel	Mustela frenata
Marsh Rice Rat	Oryzomys palustris
Mink	Mustela vison
Muskrat	Ondatra zibethicus
Nine-banded Armadillo	Dasypus novemcinctus
Nutria	myocastor coypus
Old World Rats	Rattus spp.
Raccoon	Procyon lotor
Red Fox	Vulpes vulpes
River Otter Southern Flying Squirrel	Lutra canadensis
Southern Short-tailed Shrew	Glaucomys volans
Striped Skunk	Blarina carolinensis
Swamp Rabbit	Mephitis mephitis
Virginia Opossum	Didelphis virginiana
West Indian Manatee	Trichechus manatus

Annex C: Herpetofauna: Table indicating reptiles and amphibians likely to occur in project area vicinity (Michon, pers. comm. 2019).

Common Name	Scientific Name	Common Name	Scientific Name
Western Lesser Siren	<i>Siren intermedia nettingi</i>	Red-eared Slider	<i>Trachemys scripta elegans</i>
Central Newt	<i>Notophthalmus viridescens louisianensis</i>	Gulf Coast Box Turtle	<i>Terrapene carolina major</i>
Marbled Salamander	<i>Ambystoma opacum</i>	Midland Smooth Softshell	<i>Apalone mutica</i>
Three-toed Amphiuma	<i>Amphiuma tridactylum</i>	Gulf Coast Spiny Softshell	<i>Apalone spinifera aspera</i>
Valentine's Southern Dusky Salamander	<i>Desmognathus valentinei</i>	Mediterranean Gecko	<i>Hemidactylus turcicus (l)</i> <i>Anolis carolinensis carolinensis</i>
Four-toed Salamander	<i>Hemidactylum scutatum</i>	Northern Green Anole	
Western Dwarf Salamander	<i>Eurycea paludicola</i>	Little Brown Skink	<i>Scincella lateralis</i>
Fowler's Toad	<i>Bufo fowleri</i>	Common Five-lined Skink	<i>Plestiodon fasciatus</i>
East Texas Toad	<i>Bufo velatus</i>	Broad-headed Skink	<i>Plestiodon laticeps</i>
Gulf Coast Toad	<i>Bufo nebulifer</i>	Mississippi Ring-necked Snake	<i>Diadophis punctatus stictogenys</i>
Blanchard's Cricket Frog	<i>Acris blanchardi</i>	Western Mud Snake	<i>Farancia abacura</i>
Spring Peeper	<i>Pseudacris crucifer</i>	Eastern Hog-nosed Snake	<i>Heterodon platirhinos</i>
Cajun Chorus Frog	<i>Pseudacris fouquettei</i>	Pine Woods Snake	<i>Rhadinaea flavilata</i>
Cope's Gray Tree Frog	<i>Hyla chrysoscelis</i>	Midland Brown Snake	<i>Storeria dekayi wrightorum</i>
Western Bird-voiced Tree Frog	<i>Hyla avivoca avivoca</i>	Southern Red-bellied Snake	<i>Storeria occipitomaculata obscura</i>
Green Tree Frog	<i>Hyla cinerea</i>	Rough Earth Snake	<i>Haldea striatula</i>
Squirrel Tree Frog	<i>Hyla squirella</i>	Delta Glossy Swamp Snake	<i>Liodytes rigida deltae</i>
Eastern Narrow-mouthed Toad	<i>Gastrophryne carolinensis</i>	Graham's Crawfish Snake	<i>Regina grahamii</i>
Coastal Plains Leopard Frog	<i>Rana sphenoccephala utricularius</i>	Mississippi Green Water Snake	<i>Nerodia cyclopion</i>
Bronze Frog	<i>Rana clamitans clamitans</i>	Northern Diamond-backed Water Snake	<i>Nerodia rhombifer rhombifer</i> <i>Nerodia erythrogaster flavigaster</i>
American Bull Frog	<i>Rana catesbeiana</i>	Yellow-bellied Water Snake	
Pig Frog	<i>Rana grylio</i>	Broad-banded Water Snake	<i>Nerodia fasciata confluens</i>
American Alligator	<i>Alligator mississippiensis</i>	Orange-striped Ribbon Snake	<i>Thamnophis proximus proximus</i>
Common Snapping Turtle	<i>Chelydra serpentina</i>	Eastern Garter Snake	<i>Thamnophis sirtalis sirtalis</i>
Alligator Snapping Turtle	<i>Macrochelys temminckii</i>	Northern Rough green Snake	<i>Opheodrys aestivus aestivus</i>
Mississippi Mud Turtle	<i>Kinosternon subrubrum hippocrepis</i>	Black-masked Racer	<i>Coluber constrictor latrunculus</i>
Stinkpot	<i>Sternotherus odoratus</i>	Gray Rat Snake	<i>Pantherophis spiloides</i>
Eastern Chicken Turtle	<i>Deirochelys reticularia reticularia</i>	Western Milk Snake	<i>Lampropeltis gentilis</i>
Mississippi Map Turtle	<i>Graptemys pseudogeographica kohnii</i>	Eastern Black King Snake	<i>Lampropeltis nigra</i>
Ouachita Map Turtle	<i>Graptemys ouachitensis</i>	Eastern Copperhead	<i>Agkistrodon contortrix</i>
Southern Painted Turtle	<i>Chrysemys dorsalis</i>	Northern Cottonmouth	<i>Agkistrodon piscivorus</i>
River Cooter	<i>Pseudemys concinna</i>	Timber Rattlesnake	<i>Crotalus horridus</i>

Annex D: Representative fishes adapted from LCA Blind River Final SEIS (USACE, xyz) and Kelso and others (2005).

Common Name	Scientific Name
skipjack herring	<i>Alosa chrysochloris</i>
black bullhead	<i>Ameiurus melas</i>
bowfin	<i>Amia calva</i>
American eel	<i>Anguilla rostrata</i>
freshwater drum	<i>Aplodinotus grunniens</i>
gulf menhaden	<i>Brevoortia patronus</i>
common carp	<i>Cyprinus carpio</i>
American gizzard shad	<i>Dorosoma cepedianum</i>
threadfin shad	<i>Dorosaoma petenense</i>
golden topminnow	<i>Fundulus chrysotus</i>
blue catfish	<i>Ictalurus furcatus</i>
channel catfish	<i>Ictalurus punctatus</i>
bigmouth buffalo	<i>Ictiobus cyprinellus</i>
spotted gar	<i>Lepisosteus oculatus</i>
longnose gar	<i>Lepisosteus osseus</i>
warmouth	<i>Lepomis gulosus</i>
orangespotted sunfish	<i>Lepomis humilis</i>
bluegill	<i>Lepomis macrochirus</i>
longear sunfish	<i>Lepomis megalotis</i>
redecor sunfish	<i>Lepomis microlophus</i>
spotted bass	<i>Micropterus punctulatus</i>
largemouth bass	<i>Micropterus salmoides</i>
yellow bass	<i>Morone mississippiensis</i>
striped mullet	<i>Mugil cephalus</i>
black crappie	<i>Pomoxis nigromaculatus</i>
white crappie	<i>Pomoxis annularis</i>
blacktail shiner	<i>Cyprinella venusta</i>
western mosquitofish	<i>Gambusia affinis</i>
sailfin molly	<i>Poecilia latipinna</i>

Annex E: Representative plant species list adapted from Individual Environmental Report 36 (USACE xyz) and LCA Blind River Final SEIS (USACE, xyz).

Common Name	Scientific Name	Common Name	Scientific Name
Alligator weed	<i>Alternanthera philoxeroides</i>	Peppergrass	<i>Lepidium</i> spp.
American elm	<i>Ulmus americana</i>	Peppervine	<i>Ampelopsis arborea</i>
American sycamore	<i>Platanus occidentalis</i>	Pickeralweed	<i>Pontederia rotundifolia</i>
Bald cypress	<i>Taxodium distichum</i>	Pignut hickory	<i>Carya glabra</i>
Bedstraw	<i>Galium</i> spp.	Pigweed	<i>Amaranthus</i> spp
Bermuda grass	<i>Cynodon dactylon</i>	Planertree	<i>Planera aquatica</i>
Black willow	<i>Salix nigra</i>	Ragweed	<i>Ambrosia</i> spp.
Boxelder	<i>Acer negundo</i>	Red maple	<i>Acer rubrum</i>
Bushy beardgrass	<i>Andropogon glomeratus</i>	Red mulberry	<i>Morus rubra</i>
Buttonbush	<i>Cephalanthus occidentalis</i>	Smooth cordgrass	<i>Spartina alterniflora</i>
Carpetweed	<i>Mollugo verticillata</i>	Southern waterhemp	<i>Amaranthus</i> spp.
Cedar elm	<i>Ulmus crassifolia</i>	Spiny thistle	<i>Cirsium horridulum</i>
Chinese tallow tree	<i>Sapium sebiferum</i>	Sugarberry	<i>Celtis laevigata</i>
Cocklebur	<i>Xanthium</i> spp.	Sweetgum	<i>Liquidambar styraciflua</i>
Coffeeweed	<i>Sesbania</i> spp.	Three-corner grass	<i>Schoenoplectus americanus</i>
Common persimmon	<i>Diospyros virginiana</i>	Vervain	<i>Verbena</i> spp.
Dallis grass	<i>Paspalum dilatatum</i>	Water hyacinth	<i>Eichhornia crassipes</i>
Delta duck potato	<i>Sagittaria platyphylla</i>	Water Oak	<i>Quercus nigra</i>
Floating water primrose	<i>Ludwigia peploides</i>	Water pennywort	<i>Hydrocotyle umbellata</i>
Goldenrod	<i>Solidago</i> spp.	Water tupelo/tupelogum	<i>Nyssa aquatica</i>
Green ash	<i>fraxinus pennsylvanica</i>	Wire grass	<i>Spartina patens</i>
Honey locust	<i>Gleditsia triacanthos</i>	Woolly croton	<i>Croton capitatus</i>
Ironweed	<i>Vernonia</i> spp.	Wood sorrel	<i>Oxalis</i> spp.
Marshhay cordgrass	<i>Spartina patens</i>	Yankeeweed	<i>Eupatorium compositifolium</i>
Mock bishopweed	<i>Ptilimnium macrospermum</i>	Water milfoil	<i>Myriophyllum</i> spp.
Mosquito fern	<i>Azolla caroliniana</i>	Coontail	<i>Ceratophyllum demersum</i>
Nuttall oak	<i>Quercus nuttallii</i>	Souther pondweeds	<i>Potamogeton</i> spp.
		Dwarf Palmetto	<i>Sabal minor</i>

Appendix E: List of Acronyms

2016 WSLP EIS - West Shore Lake Pontchartrain Environmental Impact Statement

AADT - Annual Average Daily Traffic

AAHU - Average Annual Habitat Unit

ACHP - Advisory Council of Historic Preservation

ACS - American Community Service

B.C. - before Christ

BCS – Bonnet Carre’ Spillway

BGEPA – Bald and Golden Eagle Protection Act

BLH - Bottomland Hardwoods

BMP - Best Management Practice

C/L - Centerline

CAA - Clean Air Act

CAR - Coordination Act Report

CDP - Census Designated Place

CEMVN - United States Army Corps of Engineers, Mississippi Valley Division, New Orleans District

CEQ - Council of Environmental Quality

CFR - Code of Federal Regulations

CI - Cumulative Impacts

CO - Carbon Monoxide

CPT – Cone Penetration Testing

CR – Cultural Resources

CRMS - Coastwide Reference Monitoring System

CWA - Clean Water Act

CZMA - Coastal Zone Management Act

dBA - A weighted decibel

DOTD - Department of Transportation and Development

EFH – Essential Fish Habitat

EIS - Environmental Impacts Statement

EJ - Environmental Justice

EO – Executive Order

EPA – Environmental Protection Agency

ER – Engineering Regulation

ESA - Endangered Species Act

FONSI - Finding of No Significant Impacts

FWCA - Fish and Wildlife Coordination Act

FWOP - Future Without Project

FWP - Future With Project

HSI - Habitat Suitability Index

HSDRRS - Hurricane Storm Damage Risk Reduction System

HTRW - Hazardous, Toxic, and Radioactive Waste

HU - Habitat Unit

Hwy - Highway
I - Interstate
LA - Louisiana
LCA - Louisiana Coastal Area
LDEQ – Louisiana Department of Environmental Quality
LDNR – Louisiana Department of Natural Resources
LDWF – Louisiana Department of Wildlife and Fisheries
MBTA – Migratory Bird Treaty Act
MP2.5 - Particulate Material less than
MSWMA – Maurepas Swamp Wildlife Management Area
NAAQS - National Air Quality Standards
NEPA - National Environmental Policy Act
NMFS – National Marine Fisheries Service
No. - Number
NO2 - Nitrous dioxide
NPP - Nesting Prevention Plan
NRCS – National Resource Conservation Service
NRHP - National Register of Historic Places
O3 - Oxone
PA - Programmatic Agreement
Pb - Lead
PDS-C - United States Army Corps of Engineers, Mississippi Valley Division, Regional Planning Division, South, Environmental Planning Branch, Environmental Studies Section
PED - Planning, Engineering, and Design
ROD - Record of Decision
ROE- Right of Entry
ROW – Right of Way
SAV – Submerged Aquatic Vegetation
SEA - Supplemental Environmental Assessment
SHPO – State Historic Preservation Officer
SI - Suitability Index
T&E - Threatened and Endangered
US - United States
USACE - United States Army Corps of Engineers
USDA – United States Department of Agriculture
USFWS – United States Fish and Wildlife Service
USGS - United States Geological Survey
W. - West
WMA – Wildlife Management Area
WQC - Water Quality Certificate
WSLP Project - West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Project
WVA - Wetland Value Assessment

Appendix F: Public Comments

**Mr. Gregory W. Kahn
924 Governor Nicholls Street
New Orleans, Louisiana 70116**

8 April 2019

Subject: WSLP PROJECT INPUT

To: Mr. Patrick Smith
US Army Corps of Engineers
Regional Planning and Environmental Division South (PDS-C)
7400 Leake Ave., New Orleans, LA 70118

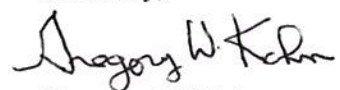
Dear Mr. Smith:

Having lived in S.E., LA for nearly 75 years, I am familiar topographically with the areas to be impacted by construction of hurricane flood protection levees to the SW of Lake Ponchartrain and to the S of Lake Maurepas. I am also quite familiar with storm surge threats projected for this area. This flood threat could and should have been addressed at the time of construction of the I-10 decades ago. At this point, the primary objective should be storm surge protection with very minimum loss of additional wetlands even at the expense of developed land, properties, and structures largely in St. John the Baptist Parish.

The levees should originate in St. Charles Parish at the existing western levee of the Bonnet Carre Spillway just to the north of US 61. It should run WNW to about 1/4 mile E of US 51 and then NE at a distance of about 1/4 mile E of that highway. The levee should cross US 51 just S of its interchange with I-10. It should then be extended westward immediately to the south of I-10. Where I-10 again becomes elevated north of Reserve, the levee should turn S to a point just north of US 61 and be extended further W to Gramercy if funding allows.

Access to actual construction sites should always be from existing roadways, i.e. US 61, US 51, I-10, and the state road between I-10 and Reserve and never through undeveloped wetlands. None of these levees will face direct storm wave action or excessively high water levels and thus need not be as wide or high as Mississippi River and immediate lakeside shore levees. Levee alignments should not encompass existing wetlands, otherwise they will be drained, destroyed, and developed at some future time. Fill material should be trucked in from elsewhere and not dredged from land adjacent to the new levees.

Sincerely,



Gregory W. Kahn
(504) 522-5000

USACE Response: SEA 570 discusses surveys and borings investigations. Please see the 2016 WSLP EIS for the plan formulation of the levee alignment in St. John the Baptist and St. Charles Parishes. If the results of the investigations discussed in this SEA and further engineering and design of the WSLP levee suggests an alignment shift is warranted, evaluation of the impacts associated with potential changes to the structural alignment identified in the 2016 WSLP EIS as well as any other construction related changes would be discussed in subsequent NEPA documentation. Existing roads would be used to the extent practicable for access routes. Due to the remote location, access routes would have some impacts to forested wetlands. All unavoidable impacts to wetlands associated with the proposed action, including those for access, would be fully mitigated for.

KLIEBERT AND HELTZ, APC.
ATTORNEYS AT LAW
205 N. AIRLINE AVE. GRAMERCY, LA 70052
TELEPHONE 225-869-5517 FACSIMILE 225-869-5045

Michael K. Heltz
Cell phone 225-907-3601
Adam Koenig

THOMAS J. KLIEBERT
(1925-2002)

April 13, 2019

Via fax (504) 862-1375
Mr. Patrick Smith
U.S. Army Corps of Engineer
Regional Planning and Environmental Division South
PDS-C
7400 Leake Avenue
New Orleans, Louisiana 70118

Re: West Shore Lake Ponchartrain Hurricane and Risk Reduction Project (WSLP)

Dear Mr Smith,

I represent Kristi Woods Gertsner Smith, the sole owner (100%) of approximately 500 acres of land bounded on its eastern boundary by the upper guide levee of the Bonnett Carre' spillway. My client's property is the first privately-owned property that the project will traverse, starting east to west.

Please explain how the alignment/route over my client's property was selected. Is this decision final? She is particularly interested in knowing the reason(s) why the alignment of the levee starts at a point commencing approximately two miles south of the northern boundary of her property, the shoreline of Lake Ponchartrain and whether or not the project will effect the pipeline corridor which traverses her property .

Sincerely.

Michael K. Heltz

MKH/mh

cc. Kristi Smith via email (with copies of Documents)

USACE Response: SEA 570 discusses surveys and borings investigations. Please see the 2016 WSLP EIS for the plan formulation of the levee alignment in St. John the Baptist and St. Charles Parishes. If the results of the investigations discussed in this SEA and further engineering and design of the WSLP levee suggests an alignment shift is warranted, evaluation of the impacts associated with potential changes to the structural alignment identified in the 2016 WSLP EIS as well as any other construction related changes would be discussed in subsequent NEPA documentation.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Louisiana Ecological Services

200 Dulles Drive

Lafayette, Louisiana 70506

April 9, 2019



Colonel Michael N. Clancy
District Commander
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Clancy:

The Fish and Wildlife Service (Service) has reviewed the Supplemental EA 570 and the draft Finding of No Significant Impact (FONSI) on the West Shore Lake Pontchartrain Surveys and Borings, and related activities necessary to investigate potential changes to the structural alignment levee footprint in St. John the Baptist and St. Charles Parishes, Louisiana (LA), as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS; <http://www.mvn.usace.army.mil/About/Projects/West-Shore-Lake-Pontchartrain/>).

General Comments

The Service appreciates the opportunity to review and provide comments on Supplemental EA 570 and the draft FONSI on the West Shore Lake Pontchartrain Surveys and Borings, and related activities. The Service and Corps of Engineers' New Orleans District have coordinated closely throughout the planning process thus many of the Services' concerns have been adequately addressed. The Service has no further comments on the above-mentioned reports. If you have any questions regarding our comments, please contact Catherine Breaux at (504) 862-2689.

Sincerely,

Joseph A. Ranson
Field Supervisor
Louisiana Ecological Services Office

USACE Response: Comment noted.

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698



FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION 6
MITIGATION DIVISION

**RE: Supplement Environmental Assessment #570, West Shore Lake Pontchartrain
Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings
Investigations, St. Charles and St. John the Baptist Parishes, Louisiana**

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

**WE WOULD REQUEST THAT THE COMMUNITY FLOODPLAIN
ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT
REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD
REQUEST PROJECT TO BE IN COMPLIANCE WITH EO11988 & EO 11990.**

St. Charles Parish
Earl Matherne
Coastal Zone Management
P.O. Box 302
Hahnville, LA 70057
ematherne@stcharlesgov.net
(985) 783-5060

St. John the Baptist Parish
Evelyn Campo
Planning & Zoning Manager
102 E. Airline Hwy
La Place, LA 70068-4103
l.vaughn@sjbparish.com
(985) 359-0233

REVIEWER:

Colleen Sciano
Floodplain Management and Insurance Branch
Mitigation Division
(940) 383-7257

DATE: April 5, 2019

USACE Response: The Community Floodplain Managers for St. Charles and St. John the Baptist Parishes have been contacted. See Appendix A Annex F: Floodplain Management. CEMVN has determined that that Proposed Action would not result in significant adverse impacts to the floodplain. Therefore, the Proposed Action is compliant with Executive Order (EO) 11988. CEMVN will continue to coordinate with the Community Floodplain Managers for St. Charles and St. John the Baptist Parishes. All unavoidable impacts to wetlands associated with the proposed action would be fully mitigated to the full extent of the law. Therefore, the proposed action is compliant with EO 11990.

From: Craig Gothreaux - NOAA Federal

To: Smith, Patrick W CIV USARMY CEMVN (US)

Subject: [Non-DoD Source] SEA 570

Date: Friday, May 3, 2019 12:04:05 PM

Patrick,

NMFS does not object to the issuance of SEA 570 and FONSI.

Thank you for your coordination,

Craig

--

Craig Gothreaux

Fishery Biologist

Southeast Region, Habitat Conservation Division

NOAA Fisheries

5757 Corporate Blvd., Suite 375

Baton Rouge, LA 70808

Office: (225) 380-0078

Craig.Gothreaux@noaa.gov

<https://lh5.googleusercontent.com/gc6HF9ogNRn502qkyTYO8yBZPpBB3m0LeuqI63driwVbcYCMB4jqcVY8YIUCOjkbux_M1tIzMv4Lk3_GFmCdiH RP0esGtALpbzfEnujDHIYyvrnwTk>

Web www.nmfs.noaa.gov <<http://www.nmfs.noaa.gov>>

Facebook www.facebook.com/usnoaafisheriesgov <<http://www.facebook.com/usnoaafisheriesgov>>

Twitter www.twitter.com/noaafisheries <<http://www.twitter.com/noaafisheries>>

YouTube www.youtube.com/usnoaafisheriesgov <<http://www.youtube.com/usnoaafisheriesgov>>

USACE Response: Comment Noted.



State of Louisiana
Department of Health and Hospitals
Office of Public Health

April 25, 2019

Mr. Patrick W. Smith
U.S. Army Corps of Engineering; Regional Planning and Environment Division South
New Orleans Environmental Branch, CEMVN-PDS-C
7400 Leake Avenue
New Orleans, Louisiana 70118

**Re: Supplemental Environmental Assessment (SEA #570)
West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural
Alignment Surveys and Borings Investigation**

This office is in receipt of a Solicitation of Views regarding the above referenced project(s).

Based upon the information received from your office we have no objection to the referenced project(s) at this time. The applicant shall be aware of and comply with any and all applicable Louisiana State Sanitary Code regulations (LAC 51, as applicable). Furthermore, should additional project data become available to this office that in any way amend the information upon which this office's response has been based, we reserve the right of additional comments on the referenced project(s).

In the event of any future discovery of evidence of non-compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any applicable public health laws or statutes which may have escaped our awareness during the course of this cursory review, please be advised that this office's preliminary determination on this Solicitation of View of the project(s) shall not be construed as absolving the applicant of responsibility, if any, with respect to compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any other applicable public health laws or statutes.

Sincerely,

A handwritten signature in black ink, appearing to read "Yuanda Zhu".

Yuanda Zhu, P.G., Ph.D.
Louisiana Department of Health and Hospitals, Office of Public Health
Engineering Services
Telephone: (225) 342-7432
Electronic mail: yuanda.zhu@la.gov

USACE Response: Comment Noted.



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

RECEIVED

APR 03 2019

ARCHITECTURE

Regional Planning and Environment
Division South

APR 03 2019

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

Dear Ms. Breaux:

Draft Supplemental Environmental Assessment (SEA 570) and draft Finding of No Significant Impact (FONSI), for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations, has been prepared by the U.S. Army Corps of Engineers, New Orleans District (CEMVN). A hard copy of the main report along with its appendices are enclosed for your review. An electronic copy of the report and its appendices, along with prior reports and supporting documents are also located on the CEMVN District web page at: <http://www.mvn.usace.army.mil/Environmental/NEPA/>.

Draft SEA 570 evaluates the potential impacts of surveys and borings, and related activities necessary to investigate potential changes to the structural alignment levee footprint in St. John the Baptist and St. Charles Parishes, Louisiana, as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS). CEMVN proposes five distinct activities in addition to the option to purchase Mitigation Bank credits for bottomland hardwoods (BLH) impacts. They are: access, clearing and grubbing, stockpiling and staging, soil borings and CPTs, and other surveys. The duration would be approximately nine months. The entire survey footprint would be approximately 600 feet wide, with the clearing and grubbing necessary for the soil borings and cone perimeter testings occurring within a 100 foot corridor within the 600 foot footprint. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and HTRW assessments would be within the approximately 600 foot ROW surrounding the 100 foot clearing and grubbing corridor. Approximately 167 acres (81 Average Annual Habitat Units (AAHUs)) of swamp habitat and 46 acres (36 AAHUs) of BLH habitat would be negatively impacted by the proposed action.

Please review the enclosed documents and provide comments within 15 days of the date of this letter. The FONSI will not be signed until all environmental review and

compliance requirements have been completed. A copy of the signed FONSI will be provided upon request.

Comments should be mailed to the attention of Mr. Patrick W. Smith; U.S. Army Corps of Engineers; Regional Planning and Environment Division South; Environmental Branch, PDS-C; 7400 Leake Ave; New Orleans, Louisiana 70118. Comments may also be provided via email to Patrick.W.Smith@usace.army.mil, by fax to (504) 862-1375 or you may contact Mr. Patrick W. Smith at (504) 862-1583 if any questions arise.

2 Encls

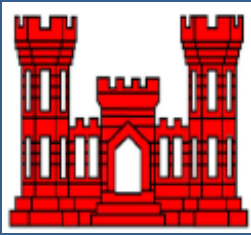

For MARSHALL K. HARPER
Chief, Environmental Planning Branch

No known historic properties will be affected by this undertaking.
Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.

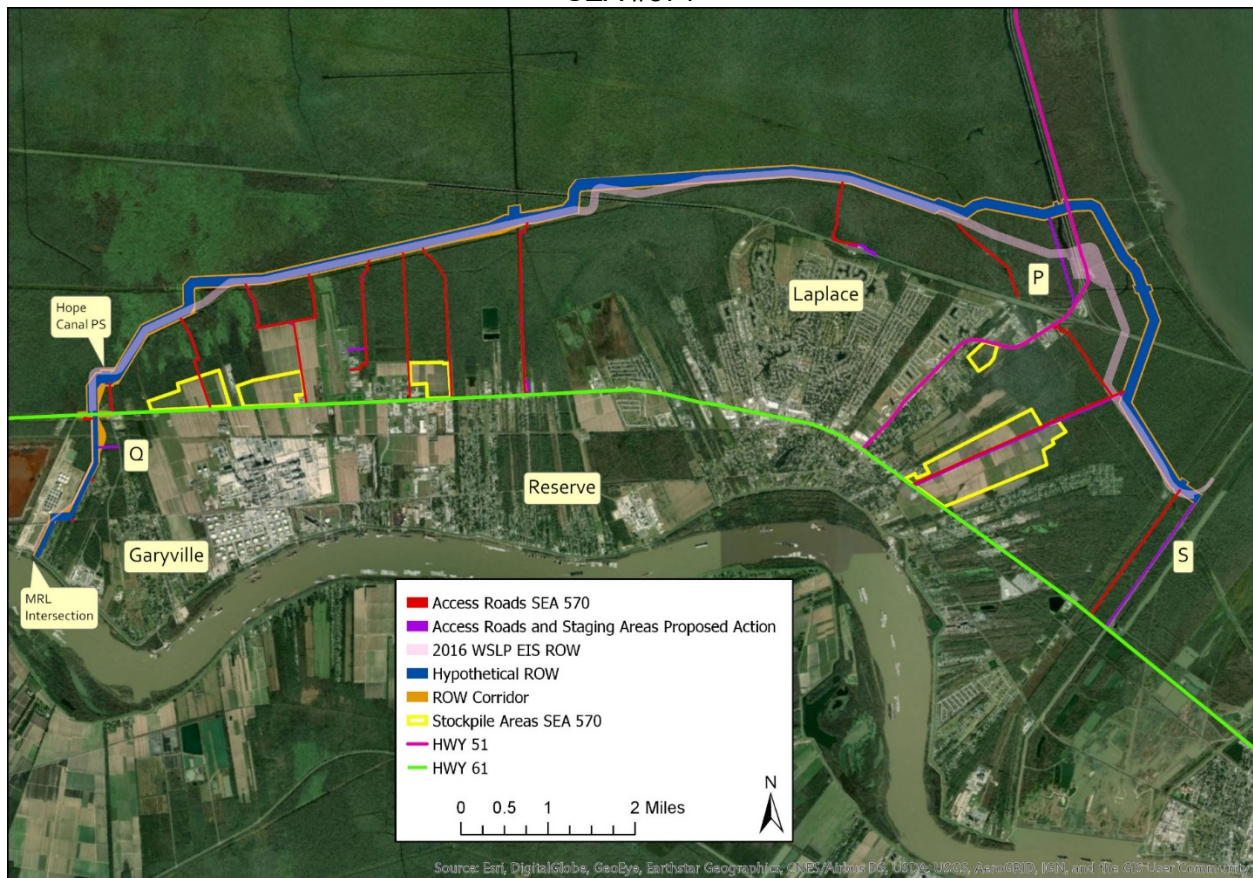


Kristin P. Sanders
State Historic Preservation Officer
Date 05/03/2019

USACE Response: Comment Noted.



Supplemental Environmental Assessment
West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Levee System
St. Charles and St. John the Baptist Parishes, Louisiana
SEA #571



U.S. Army Corps of Engineers
Mississippi Valley Division
Regional Planning and Environment Division South
New Orleans District
April 2020

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1 Introduction

The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division (MVD), Regional Planning and Environment Division South (RPEDS), has prepared this Supplemental Environmental Assessment (SEA) for the New Orleans District (CEMVN) to evaluate potential impacts of a levee alignment right-of-way (ROW) shift and related activities necessary to construct the levee alignment footprint in St. John the Baptist and St. Charles Parishes, Louisiana, as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS; <http://www.mvn.usace.army.mil/About/Projects/West-Shore-Lake-Pontchartrain/>). The Record of Decision (ROD) for the 2016 WSLP EIS was signed by the Assistant Secretary of the Army on September 14, 2016. Supplemental Environmental Assessment #570, West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations St. Charles and St. John the Baptist Parishes, Louisiana (SEA 570) also investigated some levee alignment shifts as well as the addition of five stockpile/staging areas for construction related activities and the addition of a mitigation bank credit purchase option into the mitigation plan approved in the 2016 WSLP EIS for compensating bottomland hardwoods (BLH) impacts. The Finding of No Significant Impacts (FONSI) associated with SEA 570 was signed by the CEMVN District Commander on May 13, 2019. The 2016 WSLP EIS and ROD, and SEA 570 and FONSI are hereby incorporated by reference.

This SEA #571 has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's Regulations (40 CFR 1500-1508), as reflected in 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, and CEMVN District, to make an informed decision on the appropriateness of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

This SEA is evaluating additional potential changes to the WSLP levee alignment in St. John the Baptist and St. Charles Parishes and the addition of four borrow areas which would occur outside of the Right of Way (ROW) described in the 2016 WSLP EIS. Presently, three potential levee alignment shifts are being considered that could aid in the constructability, improve the engineering, and decrease the utility relocations needed for the alignment. One of the shifts being considered would aid in constructability and improve safety during construction of the levees at interstate crossings. Another shift could accommodate the Louisiana Coastal Protection and Restoration Agency's (CPRA) River Reintroduction into Maurepas Swamp Project. Widening of the levee alignment is also being considered in specific areas where the results of field investigations and advanced engineering and design have found it necessary. Minor modifications to previously assessed access roads as well as the addition of three access roads outside of the ROW described in SEA 570 is also included.

1.1 Proposed Action

The proposed action consists of altering the 2016 WSLP EIS's levee alignment in St. John the Baptist and St. Charles Parishes and supplementing the associated levee alignment features described in the 2016 WSLP EIS and SEA 570. Other features being supplemented include modifications to pumping stations, drainage structures, the borrow plan, and access roads, as well as the addition of a sand placement plan and a spoil bank gapping plan, and the option for the Non-Federal Sponsor to design and build part of the levee system. The Project Area of the proposed action is shown in Figure 1.

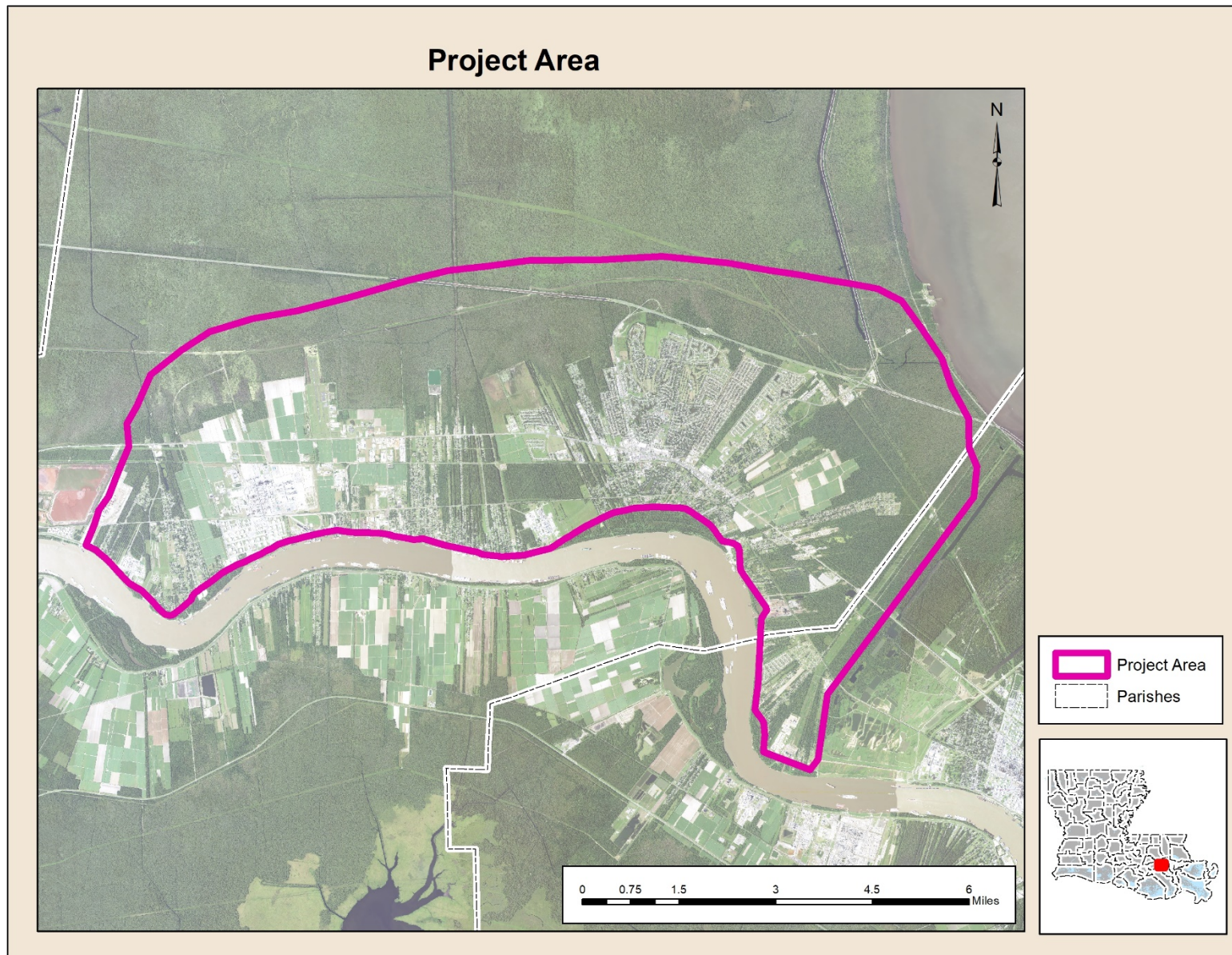


Figure 1: Project Area

1.2 Authority

Construction of the WSLP Hurricane and Storm Damage Risk Reduction Project (WSLP Project) was authorized as part of the Water Infrastructure Improvement for the Nation Act (WIIN Act, Public Law 114-322) in 2016. Construction of the WSLP Project was funded by the Bipartisan Budget Act of 2018 (BBA 2018, Public Law 115-123).

1.3 Purpose and Need for the Proposed Action

The purpose of the proposed action is to construct a more effective Hurricane Storm Damage Risk Reduction System (HSDRRS) for eastern parts of St. John the Baptist and St. Charles Parishes, Louisiana. Further engineering design and investigations of the 2016 WSLP EIS levee alignment indicate that sections of the levee need to be widen and shifted. Additionally, it is likely that the Bonnet Carre' Spillway (BCS) does not have enough suitable clay borrow material to construct the levee. The use of the five stockpile and staging areas described in SEA 570 as borrow sources and the use of licensed commercial borrow sources would provide enough additional borrow for construction. There are other feature and plan changes being considered that are described in Section 2.2. The location of the proposed action is in St. John the Baptist and St. Charles Parishes, near the communities of Montz in St. Charles Parish, and Laplace, Reserve, and Grayville in St. John the Baptist Parish, Louisiana.

1.4 Prior Studies

A number of studies, reports, and environmental documents on water resources development in the project area have been prepared by USACE, other Federal, state, and local agencies, research institutes, and individuals. The most relevant prior studies, reports, and projects are described in Table 1.

Table 1: Relevant Prior Reports and Studies					
Previous West Shore Lake Pontchartrain Reports		Relevance to Proposed Action			
		Data Source	Consistency	Structural Measures	FWOP* Conditions
1985	West Shore Lake Pontchartrain Initial Evaluation Report	X	X	X	X
1987	Lake Pontchartrain West Shore, LA Hurricane Protection Reconnaissance	X	X	X	X
1997	West Shore Lake Pontchartrain, LA Hurricane Protection Project, Reconnaissance	X	X	X	X
2003	St. John the Baptist Parish, LA East Bank Urban Flood Control Reconnaissance Report	X	X	X	X
2016	West Shore lake Pontchartrain Hurricane and Storm Damage Risk Reduction Study	X	X	X	X
2018	Supplemental Environmental Assessment #570 West Shore Lake Pontchartrain hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations St. Charles and St. John the Baptist Parishes, Louisiana	X	X	X	X
Other Studies and Reports					
1985	Supplemental Information Report (SIR) to the Supplemental Environmental Impact Statement on the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection Project	X	X		
2004	LA Coastal Area (LCA), LA Ecosystem Restoration Study	X	X	X	X
2017	LA's Comprehensive Master Plan for a Sustainable Coast	X	X	X	X

*Future without project (FWOP)

1.5 Public Concerns

Many public concerns were raised during the scoping and public review process of the 2016 WSLP EIS. Those public comments and USACE responses can be found in Appendix A, Annex P of the 2016 WSLP EIS. Those comments covered a broad range of topics including concerns about project design, impacts to property and infrastructure, potential induced flooding impacts, and adverse environmental impacts. Public comments associated with SEA 570 concerned wetland impacts and the location of the WSLP Project levee alignment, and can be found in Appendix F of SEA 570. Public comments received during the public review period and responses to these comments can be found in Appendix IX.

1.6 Wetland Value Assessment

Wetland impacts associated with the entire WSLP Project (including those described in the 2016 WSLP EIS, SEA 570, and associated with the proposed action) were estimated by using the Wetland Value Assessment (WVA) Swamp Community Model for Civil Works Version 2.0 (Swamp WVA) and the WVA Bottomland Hardwoods Community Model for Civil Works Version 1.2 (BLH WVA). These models calculate average annual habitat units (AAHUs), which is based on habitat quality and quantity, for both the future with project (FWP) and future without project (FWOP) conditions. Both direct and indirect impacts to swamp and BLH habitats were

assessed. These models are approved for regional use on USACE Civil Works projects (Appendix I).

The Swamp and BLH WVAs utilize an assemblage of variables considered important to the suitability of each habitat type for supporting a diversity of fish and wildlife species. The WVAs allow for a numeric comparison of each future condition and provides a quantitative estimate of project-related impacts to fish and wildlife resources.

WVAs were used to calculate impacts for the 2016 WSLP EIS and SEA 570. The assumptions for these WVAs were re-evaluated and updated upon completion of extensive fieldwork, updated hydrologic modeling, and the currently certified version of the WVAs were utilized. New assumptions were used, because existing conditions had changed (freshening since the closure of the Mississippi River Gulf Outlet in St. Bernard Parish, Louisiana and construction of the Inner Harbor Navigation Canal-Lake Borgne Surge Barrier in Orleans Parish, Louisiana), more detailed hydrologic modeling data, more field data, and a GIS model for habitat type and quality were available. Indirect impacts to wetlands were found to be lower per acre during the WVA re-evaluation. The decrease in indirect impacts per acre was mostly due to increases in the size and number of drainage structures, and updated hydraulic and hydrologic analysis. See Appendix I for more information.

2 Alternatives Including the Proposed Action

Because the Proposed Action consists of modifications to the structural alignment of the levee system and associated features as described in the 2016 WSLP EIS and SEA 570, only the No-Action Alternative (Future without Project Action) and the proposed action were considered.

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

NEPA requires that in analyzing alternatives to a proposed action, a Federal agency 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.

Under the FWOP condition (No-Action), the Proposed Action would not occur. However, the activities described in the 2016 WSLP EIS and SEA 570 would occur in the vicinity of the proposed action. A levee approximately 18.27 miles in length would be constructed as part of the WSLP Project in St. John the Baptist and St. Charles Parishes, Louisiana. See the 2016 WSLP EIS for more information on construction of the structural alignment. Fifteen Access Roads would be constructed to access the levee alignment as described in SEA 570. Approximately 1,313 acres of direct (623.3 AAHUs swamp and 115.5 AAHUs BLH), and 8,521 acres of indirect (494.5 AAHUs swamp and 3.1 AAHUs BLH) negative impacts to forested wetlands would occur.

2.2 Proposed Action

The Proposed Action would include modifications to the structural alignment of the levee system in St. John the Baptist and St. Charles Parishes, Louisiana described in the 2016 WSLP EIS, and modifications to features described in SEA 570. The modifications proposed herein would be in a similar location with similar features as described in the 2016 WSLP EIS and SEA 570. Nowhere within the proposed action levee system alignment/footprint would there be a 100% overlap with the 2016 WSLP EIS levee system alignment/footprint. This is due to an increase in

the levee footprint where the results of field investigations and advanced engineering and design have found it necessary, and a shift in the entire levee system to accommodate for the recent installation of a new pipeline. The levee system would be between approximately 20 – 100 feet wider from the upper guide levee of the BCS to near the crossing at Hwy 61 where it would decrease to approximately the same width as described in the 2016 WSLP EIS. The proposed action also includes additional ROW for pump station construction. Approximately 30-40% of the current levee system ROW is co-located with the 2016 WSLP EIS levee system ROW (Figure 2).

A hypothetical corridor representing the maximum size of the levee system is shown in Figure 2. The corridor indicates the location extent within which the levee system could occur. This corridor would allow for slight shifts in alignment during further engineering and design, and during construction of the levee system. The exact location of the levee system ROW could shift slightly within the corridor, but no less than approximately 30% of it would be co-located with the 2016 WSLP EIS. Additionally, the levee system ROW would not exceed the size of the hypothetical corridor.

There are four shifts, other than the increase in size and slight shift due to installation of a new pipeline that are being considered. Three shifts that could aid in the constructability, improve the engineering, and decrease the utility relocations needed for the alignment are being considered (Figure 3). A fourth shift would accommodate CPRA's River Reintroduction into Maurepas Swamp Project.

Other parts of the proposed action described in this section include:

1. Updated borrow plan
2. Modifications to access roads
3. Addition of new access roads
4. Sand placement plan
5. Updated drainage structure design
6. Addition of new drainage structures
7. Updated pump station design
8. Addition of new pump stations
9. Updated transportation plan
10. Potential for the NFS to design and build the western section of the levee system
11. Potential to alter existing spoil banks in the Project Area and vicinity

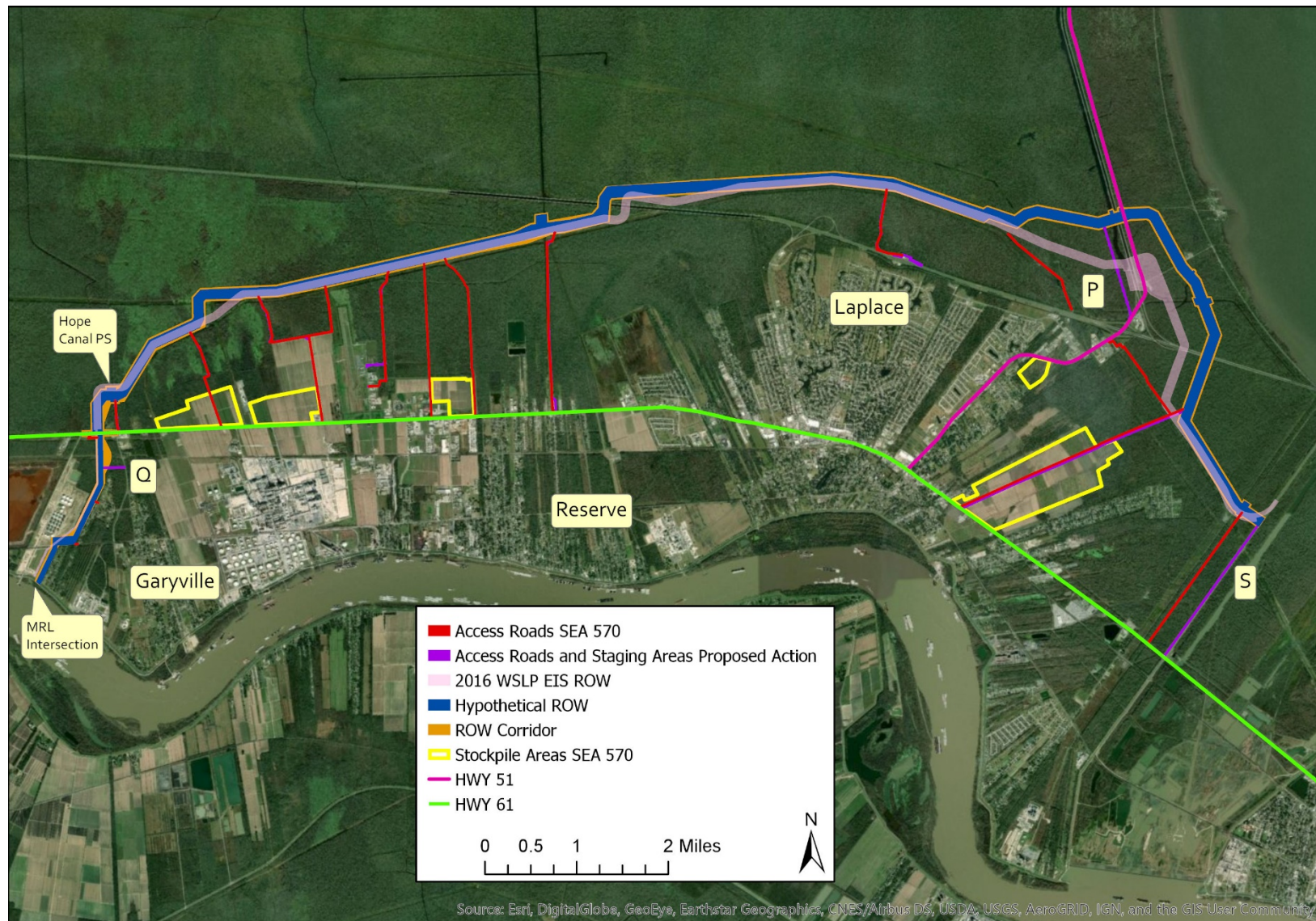


Figure 2: Map showing the Proposed Action. Access Roads that were not identified in SEA 570 are labeled P, Q, and S. Hypothetical ROW represents the proposed action's maximum levee system ROW size.

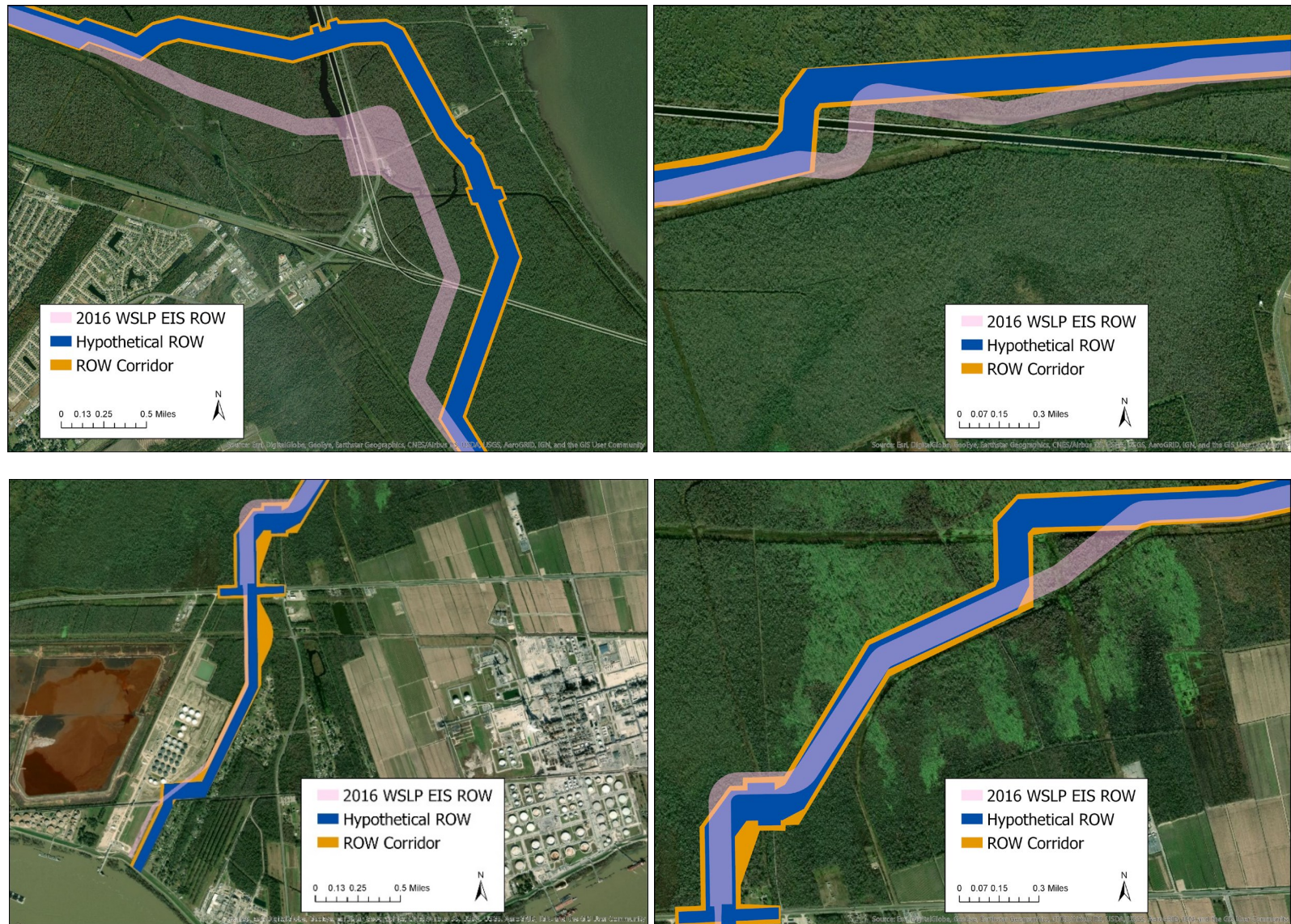


Figure 3. Areas with potential levee system shifts. Clockwise from top left: I-55 and I-10 interchange (pump station ROW increases at Montz north and south, and I-55 can be seen), second I-10 crossing, large transmission corridor crossing, and western section (pump station ROW increase at Hope Canal can be seen).

2.2.1 Borrow Plan

In addition to sources mentioned in the 2016 WSLP EIS, borrow materials (clay and sand) used to construct the levee system could be obtained from within the stockpile areas described in SEA 570, or it could be obtained from permitted commercial sources. Any material purchased from a commercial source would be currently licensed by the Parish (if in Louisiana) or State (if in Mississippi) entity. It would also have all appropriate permits and would meet all submittal requirements outlined in Appendix II.

2.2.2 Access Roads

All access roads described in SEA #570, as well as Access Road P, Q, and S, which is located within the Bonnet Carré Spillway (BCS) upper guide levee berm, could be used for temporary construction and/or permanent access from Hwy 51 or Hwy 61 to the levee system ROW (Figure 2). Further engineering and design of some access roads discussed in SEA 570 indicate a larger ROW would be required for features such as additional width around corners and to allow for culverts for cross drainage. Construction of permanent access roads could be either improvements to existing roads or construction of new roads. Access roads located along existing roadways would be improved primarily through placement of geotextile fabric, sand and rock to provide an approximately 30 foot drivable width for a two-way haul access road within an approximately 40 foot wide ROW along straight sections from Hwy 61 or Hwy 51 to the levee ROW. As discussed in SEA 570, a 60-foot road width would be allowed, if needed, for access roads within underground transmission and utility ROWs to allow for protection features such as pipelines. However, an approximate 100 foot ROW width would be needed for the entire length of Access Road S to allow for adequate drainage due to the slope in the BCS upper guide levee. Additionally, this 100 foot width would be expanded to 130 feet where Access Road S crosses pipelines. Construction of new access roads would require clearing and grubbing in addition to material placement. Additional ROW of approximately 0.1 acres would be needed for the installation of each culvert. More ROW than previously described in SEA 570 would be allowed around bends, corners, and at intersections with public roads to facilitate safe traffic. Some features may be constructed such as traffic lights or wider shoulders and turn lanes where access roads intersect main roads, such as Hwy 61. Coordination with Louisiana Department of Transportation and Development (LA DOTD) and the US Federal Highway Administration (FHWA) is ongoing to determine the best methods and features for safe intersections while minimizing environmental impacts to the extent practicable. The total increase in impact area for access road construction beyond what was described in SEA #570, would be approximately 32 acres. The majority of these impacts would be to forested wetlands (swamp and BLH), existing roads, and the BCS upper guide levee.

2.2.3 Sand Base Placement

Sand would be used to construct an approximately 70 foot to 100 foot wide sand base within the levee alignment ROW. The material would be back dumped and spread by a bull dozer in order to force soft material outward from the levee section. Any displaced soft material formed by construction of the sand base would remain within the alignment ROW, but removed from the levee design section. Sand would be placed until it has reached the minimum elevation of approximately 3 feet NAVD88.

2.2.4 Levees and Floodwalls

Levee and floodwall system would be built to USACE Hurricane and Storm Damage Risk Reduction System standards in a similar location with similar features and crown elevations as described in the 2016 WSLP EIS. As such, typical cross sections provided in this document are still representative. The ROW width would be between 20 and 100 feet wider and four re-

alignments (Figure 3) would increase its length by about 0.5 miles (18.27 miles in the 2016 WSLP EIS to 18.8 miles including the proposed action). Slight deviations in location of the Proposed Action levee system (i.e., Hypothetical corridor in Figure 2) would be allowed, but the maximum ROW size increase would be limited to approximately 0.5 miles longer and approximately 150 additional acres (See section 2.2 and Figure 2 for details).

An approximately 10 foot wide surfaced road would be constructed on the levee crown, floodside berm, or protected side berm for inspection vehicles. Where levee transitions to a floodwall, a 10 foot wide surfaced road would be provided along the protected side of the floodwall. Bridges would be constructed on either the floodside or protected side of the station at the drainage structures and pump station crossings for maintenance access.

2.2.5 Drainage Canals

Interior and exterior drainage canals would be located parallel to the earthen levee section for the majority of the levee system ROW. These canals would be built to the approximate dimensions described in the 2016 WSLP EIS, but would be shifted to parallel the levee system alignment. Both canals would be built within the limits of the hypothetical ROW shown in Figure 2. Where the interior canal intersects pipeline crossings, the depth of the canal would be restricted. The interior drainage canal would widen to 100 feet and would be shallow enough to avoid impacts to pipelines. Any material excavated for canal construction and deemed unsuitable for levee construction could be spread evenly along the project length between the levee and the interior drainage canal.

2.2.6 Western Section

The western section, as described in this section, refers to the levee system from the Hope Canal pump station to the Mississippi River Levee (MRL; Figure 2, Figure 3). The Louisiana Coastal Protection and Restoration Authority (CPRA) could design and construct some or part of the levee system components of the western section of the levee system; however, the USACE would determine the final alignment of this section. Design and location of the western section of the levee system may be co-located with the eastern guide levee of CPRA's River Reintroduction into Maurepas Swamp Project (Appendix III). The earthen levee sections between these stations would be from approximately 300 feet up to 600 feet wide. As the total length and width of levee would be approximately the same whether or not it is aligned to provide for the potential future construction of the River Reintroduction into Maurepas Swamp Project, no additional cost would be incurred by the Federal government. This portion of the project would include a highway ramp at US Highway 61 constructed to an elevation of approximately 16 feet NAVD88. Two lanes of traffic would be maintained in either direction during construction of the ramp. This would require widening the existing highway to maintain two lanes of traffic in either direction. Swing type floodgates would be provided at the Kansas City Southern and Canadian National Railway crossings. A swing type floodgate would also be located across LA Highway 44.

2.2.7 Additional Gates and T-wall Features

The levee system would also require construction of T-walls across pipeline corridors. These locations would be slightly shifted due to the levee system alignment changes. A 10 foot wide access road would run along the land side of the T-walls across the pipeline corridors that would include additional sand and crushed stone to reduce pressures for maintenance vehicles crossing the pipelines. As described in the 2016 WSLP EIS, T-walls would also be located below the three interstate crossings to include the western I-10 crossing, I-55 crossing, and the eastern I-10 crossing. A surfaced access road would only be provided below the eastern I-10 crossing. There would be no bridge crossing at the western I-10 crossing and the I-55 crossing because of insufficient height clearance requirements.

2.2.8 Drainage Structures and Pumping Stations

Additional drainage structures and pumping stations would be considered. Updated sluice gate designs to the Hope Canal, Mississippi, Reserve Relief Canal, Perriloux Canal, Ridgefield, and Montz South are shown in Table 2. A new drainage structure with a 16 feet high by 16 foot wide sluice gate is proposed where the levee system crosses Prescott Canal. A new sluice gate at the Canadian National Railroad is also being considered that would be approximately 5 feet wide x 5 feet high. An 18 foot wide bridge would be constructed across the structure to carry maintenance and inspection vehicles.

Two new pump stations could be constructed at Prescott Canal and Interstate 55. Pump capacities being considered at these and updated pump station capacities for the four pump stations included in the 2016 WSLP EIS are shown in Table 2.

Table 2: Pumping station and Drainage Structures		
Station Name	Number of 16 x 16 foot drainage structures	Pump capacity
Canadian National Railroad	1*	No pumps
Hope Canal	2	400-800 cfs
Mississippi Bayou	2	No pumps
Reserve Relief Canal	1	1200-2000 cfs
Perriloux	1	No pumps
Ridgefield	1	800 cfs
I-55 Canal	5	1200-2000 cfs
Montz North Canal**	1	No pumps
Montz South Canal	1	800 cfs
Prescott Canal	1	400-800 cfs

*drainage structure would be 5 x 5 feet

**under consideration; may not be necessary

Pump station complexes would include a pump station, the size of which would depend on the capacity (Table 2), with an adjacent drainage structure within an existing canal. These structures would tie into the levee system with T-walls on either side of the pump station/drainage structure complex. All pumps would be driven by diesel engines. Several fuel tanks would be located at each station with enough fuel to run the station for five days. A water well would be located at each station to provide potable water for drinking, showers, sprinkler system, and to lubricate the pumps. A surface parking area would also be provided at each station. In order to construct the structures within the existing canals without impeding existing canal flows, a temporary bypass channel would be constructed at each structure site with dimensions that would allow for the same flow capacity as the existing canal. In addition to the sluice gate at Reserve Relief Canal, an adjacent navigable gate would be constructed within the canal to allow for the passage of recreational boats.

Staff gages would be provided at the flood side and protected side of the pump stations and drainage structures. The drainage structures would remain open at all times except when they would be closed for tropical storm events. Closure for tropical storm events would be the same as described in the 2016 WSLP EIS. The amount of time the gates would remain closed would depend on a given storm's characteristics such as forward speed, rainfall, and storm track which

impact water levels, and could remain closed for approximately 8.5 days on average. The days per year of system closure would vary by year and be dictated by tropical storm activity.

2.2.9 Estimated Quantities and Transportation Plans

As stated in the 2016 WSLP EIS, approximately 9,000,000 cubic yards of material would be needed for construction. Approximately 2,000,000 cubic yards of sand would be used to construct the sand base described in Section 2.2.3. Approximately 7,000,000 cubic yards of clay would be used to provide approximately 3,500,000 million cubic yards of in-place compacted clay necessary for levee system construction described in 2.2.4. These materials would be truck hauled to the levee alignment ROW with on-road dump trucks. It is estimated that 750,000 truckloads of sand and clay would be required for levee construction, utilizing triaxle and tandem dump trucks. Primary routes for clay fill would be via the BCS to Hwy 61, to the closest off-road access road as described in Section 1. Commercial sand suppliers are generally located on the flood side of the MRL and transportation routes are expected to be from LA Highway 626 to Hwy 61 and from Hwy 61 to the closest designated off-road access road to the levee system ROW. Commercial clay sources may be utilized but exact pit locations are not currently known. Traffic control plans would be implemented for all construction-related transportation to minimize impacts to existing traffic patterns and would rely upon use of highways to the extent practicable.

Pump stations, T-Walls, floodgates, and drainage structure construction would require use of a variety of commercial vehicles to bring materials, including but not limited to formwork, concrete, structural steel, engines, pumps, fuel, supplies, building materials and foundation piles. The types of vehicles could include, but may not be limited to, concrete mix trucks, flatbed trailers, freight trucks, service trucks, fuel trucks, as well as lowboy trailers to transport cranes, backhoes, forklifts, excavators, and bulldozers. Routes to the construction site would generally be from commercial manufactures and suppliers. Likely routes would be from a combination of I-10, I-55, Louisiana Highway 628, Hwy 51 or Louisiana Highway 3188 to Hwy 61 to the access roads described in Section 2.2.2. The estimated number of delivery trips for this portion of the construction is 4,000.

2.2.10 Staging Locations and Plans

Stockpile areas described in SEA #570, or within the immediate vicinity of access roads. In general, such staging areas would be approximately 200 feet x 200 feet. Any staging areas utilized outside of the levee system ROW would be limited to existing developed sites and would avoid impacts to cultural, recreational, socioeconomic, farmland, environmental justice, and wetlands and other environmentally sensitive areas.

2.2.11 Alterations in Spoil Banks

Gapping of existing spoil banks would be considered within the vicinity of the levee system and other project features, as shown in Figure 2, if such gapping would be necessary or desirable to facilitate drainage and/or maintain existing water flows within the project area. These gappings would be performed to maintain existing hydrology and would not have net negative impacts to vegetation resources. Any impacts to other resources would be minimized to the maximum extent practicable. Coordination with resource agencies regarding potential spoil bank gapping plans has occurred and would continue.

3 Affected Environment

3.1 Description of the Project Area

The Project Area is located within St. John the Baptist and St. Charles Parishes in southeastern Louisiana, between the Mississippi River and Lakes Maurepas and Pontchartrain. The towns of Montz, Laplace, Reserve, and Garyville are communities found within the Project Area (Figure 2). The Project Area occupies a portion of one of the oldest delta complexes in the Mississippi River Deltaic Plain. It is in the lower Mississippi River alluvial plain in the Pontchartrain Basin and includes residential and commercial developments south of I-10. West of Laplace, the majority of the developed areas in the Project Area are found between U.S. Highway 61 (US-61) and the Mississippi River levee. Much of the undeveloped area consists of forested wetlands, including swamp and bottomland hardwood forests. A small portion of the State of Louisiana's Maurepas Swamp Wildlife Management Area (MSWMA) falls within the northern section of the Project Area.

3.1.1 Climate, Climate Change, Sea-level Rise, and Subsidence

The climate in the vicinity of the Project Area is subtropical, marine with long humid summers and short moderate winters. The seasonal rainy period occurs from mid-December to mid-March with dry periods in May, October and November.

The 2014 USACE Climate and Resiliency Policy Statement states: "USACE shall continue to consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affecting its resources, programs, policies, and operations." Climate change was considered for the 2016 WSLP EIS. Climate Change information and relative sea level rise (RSLR) estimates calculated during the 2016 WSLP EIS were used to predict habitat impacts for the Proposed Action (Appendix I).

Coastal Louisiana has one of the highest land loss rates in the country and this is exacerbated by human activities and climate change (Couvillon et al., 2017). Relative Sea level rise (RSLR) conditions were modeled for the 2016 WSLP EIS. Table 3 shows the model results from that study.

Table 3: Relative Sea Level Rise Estimates from the 2016 WSLP EIS				
Scenario	SLR (NAVD88 feet)		RSLR (NAVD88 feet)	
	2020	2070	2020	2070
Low SLR	0.06	0.33	0.3	1.81
Intermediate SLR	0.1	0.85	0.34	2.32
High SLR	0.23	2.47	0.47	3.95

3.1.2 Geology

The geology of the lower Mississippi River alluvial valley and the Louisiana coast is summarized in the LCA Ecosystem Restoration Study (USACE 2004), which is incorporated by reference. Lakes Maurepas and Pontchartrain occupy a portion of the old Mississippi River pathway known as the St. Bernard Delta. The St. Bernard delta complex was formed by Mississippi River deposits between 3,000 and 4,000 years ago (Frazier, 1967). The complex formed in what was then Pontchartrain Bay, enclosing a portion of it to form Lake Pontchartrain. The majority of

other landform features include inland swamp, tidal channels, shallow lakes and bays, natural levee ridges along active and abandoned channels, barrier islands, and beaches.

3.2 Relevant Resources

This section contains a description of relevant resources that could be impacted by the Proposed Action. Relevant resources described are those recognized by: National, state, or regional agencies and organizations as required by laws, executive orders, regulations, and other official standards of technical or scientific agencies, groups, or individuals; and the general public. Table 4 provides summary information of the institutional, technical, and public importance of these resources.

Relevant resources that could be impacted by the proposed action are similar to those described in the 2016 WSLP EIS and SEA 570, which are incorporated by reference. In this section, descriptions from referenced documents are summarized below by resource. Table 5 presents the relevant resources evaluated in the 2016 WSLP EIS, SEA 570, and whether the proposed action has impacts on these resources. Any relevant resources not impacted by the proposed action are not further evaluated in this SEA.

The scientific name associated with all common species names will be presented the first time the common name is utilized. Afterward, only the common name will be used.

Table 4: 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.
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.
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.

Table 4: Relevant Resources and their Institutional, Technical, and Public Importance			
Resource	Institutionally Important	Technically Important	Publicly Important
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.
Water Quality	Clean Water Act of 1977, Fish and Wildlife Coordination Act, Coastal Zone Mg 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.
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.
Soils and Prime and Unique Farmland	Farmland Protection Policy Act of 1981	USDA's NRCS recognizes the importance of prime and unique farmlands. Prime farmland is available land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique farmland is 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.	Prime and unique farmland provides food, feed, and forage, fiber, and oilseed crops for public consumption.
Aesthetics and Visual Resources	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 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.
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.

Table 4: Relevant Resources and their Institutional, Technical, and Public Importance

Resource	Institutionally Important	Technically Important	Publicly Important
Environmental Justice	Executive Order 12898 and the Department of Defense's Strategy on Environmental Justice of 1995	The social and economic welfare of minority and low-income populations may be positively or disproportionately impacted by the tentatively selected plans.	Public concerns about the fair and equitable treatment (fair treatment and meaningful involvement) of all people with respect to environmental and human health consequences of federal laws, regulations, policies, and actions.
Air Quality	Clean Air Act of 1963, Louisiana Environmental Quality Act of 1983	State and Federal agencies recognize the status of ambient air quality in relation to the NAAQS.	Virtually all citizens express a desire for clean air.
Transportation	National Environmental Policy Act, (Public Law 91-190)	ER-200-2-2, Procedures for Implementing NEPA	Changes to the transportation and traffic patterns affect the public and are of interest to the community.

Table 5: Relevant Resources from SEA 570 and the 2016 WSLP EIS, and whether they are impacted by the Proposed Action.

Relevant Resource	Included in 2016 WSLP EIS?	Included in SEA 570?	Included in SEA 571?	Impacted by the proposed action?
Population and Housing	Y	N	N	N
Employment, Business, and Industrial Activity (including	Y	N	N	N
Public Facilities and Services	Y	N	N	N
Transportation	Y	Y	Y	Y
Community and Regional Growth	Y	N	N	N
Tax Revenues and Property Values	Y	N	N	N
Community Cohesion	Y	N	N	N
Environmental Justice	Y	Y	Y	N
Soils, and Prime and Unique Farmlands	Y	Y	Y	Y
Vegetation Resources*	Y	Y*	Y*	Y
Aquatic and Fisheries Resources	Y	Y	Y	Y
Wildlife Resources	Y	Y	Y	Y
Essential Fish Habitat (EFH)	N	N	N	N
Threatened and Endangered Species	Y	Y	N**	N**
Flow and Water Levels***	Y	Y***	Y***	Y
Sedimentation and Erosion***	Y	Y***	Y***	Y

Water Quality and Salinity***	Y	Y***	Y***	Y
Cultural Resources	Y	Y	Y	N
Aesthetics and Visual Resources	Y	Y	Y	Y
Recreation Resources	Y	Y	Y	Y
Noise	Y	Y	Y	Y
Air Quality	N	Y	Y	Y

*Wetland impacts are the only vegetation resource potentially being impacted by the Proposed Action, and therefore, wetlands are the only vegetation resource impacts discussed.

**USFWS concurred with USACE's "not likely to adversely affect" determination

***Sedimentation and Erosion, and Water Quality and Salinity are considered collectively as Water Quality by SEA 570. The Hydrology and Water Quality Sections in SEA 571 include these impacts for SEA 571.

3.2.1 Hydrology

Historic and Existing Conditions

Changes in the Mississippi River have been responsible for changes in the flow and water levels in the vicinity of the project area over several geological periods. Seasonal flooding of the Mississippi River historically contributed to the flow and water level characteristics of the area. Large flood events would bring freshwater, sediment and nutrients to the back swamp areas. However, construction of river levees, beginning in the 1700s by local landowners, interrupted this natural process and has permanently altered hydrology in the vicinity of the project area. Currently, the area's water budget is effected by precipitation, evaporation, stream flow, and direct groundwater flow, as well as tidal flows in and out of the estuary. Lake Maurepas is a shallow, fresh to intermediate (*salinity*) basin, receiving daily mean freshwater discharge, primarily from the Amite and Tickfaw Rivers; and to a lesser extent, the Blind River (American Institute of Hydrology, 2006). Lake Pontchartrain is a shallow, brackish salinity basin that receives freshwater discharge from the Tangipahoa, Pearl, and Tchefuncte Rivers, as well as Bayous Lacombe and Liberty, and many smaller creeks.

CPRA's River Reintroduction into Maurepas Swamp Project would divert Mississippi River water to the Maurepas Swamp through Hope Canal. The WSLP project has been coordinating activities between the project development teams. As part of the WSLP scoping effort, a letter from CPRA requested that the River Reintroduction project features be incorporated into the WSLP study. The letter emphasized that any storm damage control structure built in the area should allow for the exchange of water in the swamp north and south of I-10. The State of Louisiana has submitted a permit application to construct the project and has received partial funding. However, because the CPRA has not received the final permit for this project, it does not fall within the FWOP conditions for this SEA.

3.2.2 Water Quality

Historic and Existing Conditions

As part of its surface water quality monitoring program, the Louisiana Department of Environmental Quality (LDEQ) routinely monitors 25 parameters on a monthly or bimonthly basis using a fixed station, long-term network (Monitored Assessments; LDEQ 1996). Based

upon those data and the use of less-continuous information (Evaluated Assessments), such as fish tissue contaminants data, complaint investigations, and spill reports, the LDEQ assesses water quality fitness for the following uses: primary contact recreation (swimming), secondary contact recreation (boating, fishing), fish and wildlife propagation, drinking water supply, and shellfish propagation (LDEQ 1996). Based upon existing data and more subjective information, water quality is determined to either fully, partially, or not support those uses. A designation of “threatened” is used for waters that fully support their designated uses but that may not fully support certain uses in the future because of anticipated sources or adverse trends in pollution. According to the LDEQ “2018 Louisiana Water Quality Inventory: Integrated Report,” there are two subsegments that include the study area. The Pass Manchac subsegment (LA040601_00), which includes Pass Manchac from Lake Maurepas to Lake Pontchartrain, including interlacustrine waters from North Pass to the Mississippi River levee, was found to fully support all designated uses. The Lake Maurepas subsegment (LA040602_00) was found to fully support two designated uses, primary contact swimming and secondary contact recreation. The Lake Maurepas subsegment was found to not support the designated use for fisheries and wildlife propagation. There are two suspected causes for impaired use: dissolved oxygen and non-native aquatic plants.

3.2.3 Wetlands

Historic and Existing Conditions

Wetlands perform important functions of water filtration and water quality improvement, floodwater storage, fish and wildlife habitat, and biological productivity. The Project Area includes BLH, swamps, and estuarine emergent wetlands. Detailed descriptions of common plants are presented in the LCA report (USACE 2004, 2010) and representative plant species are listed in Appendix IV, Annex E.

Vast virgin stands of bald cypress-tupelo swamp habitat once stretched from the bottomlands of northern Louisiana to the Gulf of Mexico (Conner and Day 1976). The Maurepas Swamp was vegetated by an expanse of old growth, freshwater forested swamp that extended beyond the Project Area vicinity. Historically, forested wetlands in the Project Area and vicinity were subjected to flooding and drying events. Seasonal flooding by the Mississippi River provided nutrient and sediment input. The area was subjected to extensive logging through the 1930s resulting in loss of old-growth trees. Currently, forested wetlands in the vicinity are highly degraded due to subsidence, permanent inundation, lack of sediment and nutrient input, nutria (*Myocastor coypus*) herbivory, and saltwater intrusion (Shafer et al., 2016). Recent observations of forested wetlands within the Project Area and vicinity include high tree mortality rates, little to no observed regeneration, and low growth rates for many native swamp tree species (Shafer et al., 2009; Bradley Breland pers. communication, 2018). With the loss of forested wetlands/swamp habitats, a significant loss of wetland function in relation to wildlife and aquatic species, recreational opportunities, aesthetics, and storm surge protection has occurred.

3.2.4 Wildlife Resources

Historic and Existing Conditions

Birds: Area wetlands provide neotropical migrants with essential stopover habitat on annual migrations (Zoller 2004) and critical bird breeding habitat (Wakeley and Roberts 1996). Area wetlands have historically supported an abundance of neotropical and other migratory and non-migratory birds, including the bald eagle (*Haliaeetus leucocephalus*), a recently delisted Endangered Species, and colonial nesting waterbirds (e.g., herons, egrets, ibises, night-herons, and roseate spoonbills). Since 1985, most bird species and species groups in the area have

exhibited either increasing or stable populations in the area. See Appendix IV, Annex A for representative bird species.

Mammals: Since 1985, populations of furbearers, such as beavers (*Castor canadensis*), mink (*Neovison vison*), foxes (*Vulpes* spp. and *Urocyon cinereoargenteus*), and North American river otter (*Lontra canadensis*), have typically remained stable across the Upper Pontchartrain Basin (LCWCRTF & WCRA 1999). White tailed deer (*Odocoileus virginianus*), northern raccoon (*Procyon lotor*), and North American opossum (*Didelphis virginiana*) are found within the Project Area. The West Indian manatee (*Trichechus manatus*), a Federally-listed Threatened Species, occurs in the vicinity of the Project Area. Nutria, an invasive rodent that eats seedling cypress and other tree species preventing regeneration (Shafer et al., 2016), occurs in the Project Area. See Appendix IV, Annex B for representative mammal species.

Reptiles and Amphibians: Louisiana Department of Wildlife and Fisheries (LDWF) survey data from 1996 to 2000 indicate alligator nest densities in the area are classified as medium (approximately 1 nest per 250 acres). LDWF provided a list of reptiles and amphibians likely to occur within the Project Area vicinity that included 23 snake species, five lizard species, thirteen turtle species, fifteen frogs and toads, seven salamanders, and one crocodilian (Michon, pers. comm. 2019). This list can be found in Appendix IV; Annex C.

3.2.5 Aquatic and Fisheries Resources

Historic and Existing Conditions

Submerged Aquatic Vegetation (SAV) communities dominated by plants such as coontail (*Ceratophyllum demersum*), widgeon grass (*Ruppia maritima*), and wild celery (*Vallisneria spiralis*) were historically more common in the Project Area, but have been replaced by nuisance floating aquatic plants in many open water areas in Louisiana wetlands with low flow. Floating aquatic nuisance plants include water hyacinth (*Echhornia crassipes*) and giant salvinia (*Salvinia molesta*). These invasive species compete with native flora for resources such as nutrients and light, and in turn can negatively impact community structure and composition, and ecosystem processes.

Plankton and benthic organisms serve as the lowest food resource level for many species of fish and shellfish. Plankton can often indicate benthic, nutrient, and water quality health (Stone et al. 1980). Limited available data from Lake Maurepas suggests the dominance of *Anabaena*, dinoflagellates, diatoms, and cyanobacteria with occasional strong presence of chlorophytes (Atilla et al. 2007, 2016 WSLP EIS).

Benthic macroinvertebrates tend to dominate deepwater swamp invertebrate communities. Characteristic species include crayfishes, clams, oligochaete worms, snails, freshwater shrimp, midges, amphipods, and various immature insects (Mitsch and Gosselink 1993). Limited data exists on benthic communities in the Project Area. Species present are likely typical of deepwater forested wetlands and slow-flowing rivers in the region. Crawfish and crabs may be harvested in and within the vicinity of the project area (Fox et al. 2007).

The relatively low salinity of these waters provides typical habitat for freshwater and marine transient fishes and shellfish, and the area has good recreation fishing opportunities (USACE 2010). Freshwater fish, such as largemouth bass (*Micropterus salmoides*) and other sunfishes (Family: Centrarchidae), catfishes (Family: Ictaluridae), and crappie (*Pomoxus* spp.) are taken by recreational fishermen. Many fishes have been sampled in the area, including estuarine, freshwater, catadromous, and anadromous species, with spotted gar (*Lepisosteus oculatus*)

and striped mullet (*Mugil cephalus*) being the most common according to one comprehensive study (Kelso et al., 2005). See Appendix C, Annex D for representative fish species.

3.2.6 Threatened, Endangered, and Protected Species

Historic and Existing Conditions

Two Threatened Species, the Gulf sturgeon (*Acipenser oxyrinchus desotoi*), and the West Indian manatee (*Trichechus manatus*), and one delisted species, the bald eagle, are known to occur in the vicinity of the Project Area. The area is also known to support colonial nesting waterbirds (e.g., herons, egrets, and others), protected under the Migratory Bird Treaty Act (MBTA).

Gulf Sturgeon: The Gulf sturgeon is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida. While sturgeon have been documented in nearby waterways, the Project Area does not contain Gulf sturgeon critical habitat.

West Indian Manatee: West Indian manatees occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). Given the extensive areas of relatively undisturbed wetlands in the region and the paucity of food sources in the Project Area, it is considered unlikely for the manatee to frequent and utilize waterways within the Project Area. The Project Area does not contain West Indian manatee critical habitat.

Bald Eagle: The bald eagle was delisted as a federally threatened species in 2007 for most of the United States; however, it is protected under the Bald and Golden Eagle Protection Act (BGEPA), and the MBTA. Habitats suitable for use by the bald eagle are present in St. Charles and St. John the Baptist Parishes and occurrences of the bald eagle have been recorded there. The bald eagle is known to nest and forage in the vicinity, but recent coordination with USFWS indicates there are no known nests within 650 feet of the Proposed Action (Trahan, pers. comm. 2019). However, there are many bald eagle nests within the project vicinity, and new active, inactive, or alternate nests may exist, but not be known. The Project Area was surveyed for bald eagle nests via six field surveys (December 10, 2018, January 24, 2019, February 14, 2019, February 25, 2019, February 27, 2019), including one helicopter survey (February 25, 2019). In addition, eight WVA field survey days were also conducted in 2019 (May 30, June 28, August 16, August 21, August 22, August 26, September 18, and October 1). No evidence of active bald eagle nests were observed on any field visit. There are existing bald eagle nests documented in the area; however, based on information provided by USFWS, all nests are beyond 650 feet from features of the proposed action.

Colonial Nesting Waterbirds: The Proposed Action would be located in an area where colonial nesting waterbirds, such as anhingas, cormorants, great blue herons, great egrets, snowy egrets, little blue herons, tricolor herons, reddish egrets, cattle egrets, green herons, black-crowned night-herons, yellow crowned night-herons, ibises, and roseate spoonbills occur. There are two historic colonial nesting waterbird sites within 1000 feet of the Proposed Action (Trahan, pers. comm. 2019). The Project Area was surveyed for colonial waterbird activity via six field surveys (December 10, 2018, January 24, 2019, February 14, 2019, February 25, 2019, February 27, 2019), including one helicopter survey (February 25, 2019). In addition, eight WVA field survey days were also conducted in 2019 (May 30, June 28, August 16, August 21, August 22, August 26, September 18, and October 1). No evidence of colonial waterbird nesting (or pre-nesting) activities were observed on any field visit. Two potentially active water

bird rookeries exist within 1,000 feet of the proposed alignments, but these were surveyed and no activity was observed.

3.2.7 Cultural Resources

Eight cultural units are used to characterize the prehistoric cultural sequence in southeast Louisiana: Paleo-Indian (10000–8000 B.C.), Archaic (8000–1000 B.C.), Poverty Point (1700–500 B.C.), Tchefuncte (500 B.C.–A.D. 100), Marksville (A.D. 100–500), Baytown (A.D. 400–700), Coles Creek (A.D. 700–1200), and Mississippian/Plaquemine (A.D. 1200–1700). Historic perspectives generally cover the colonial period to approximately 1764, Acadian migration to the area, end of the Colonial period, the antebellum period, the Civil War, late 19th century reconstruction, and the early 20th century.

Historic and Existing Conditions

Background research identified historic properties based on a review of National Register of Historic Places (NRHP) database, the Louisiana Cultural Resources Map, a review of cultural resources and survey reports. Most of the cultural resources surveys in the Project Area have concentrated on proposed pipeline projects, the majority of which are in an east-west orientation (Price, 1977 (report 22-0011); Price, 1987 (report 22-1210); Kelley and others, 2011 (report 3879); and Kelley and others, 2013 (report 22- 4327). Linear surveys on a predominately north-south orientation are by Twiner, 1986 (report 22-1103); Rothrock and Moreno, 2015 (report 22-4868); Rynar and Hahn, 2016 (report 22- 5121); and Stanton and others, 2004 (report 22-2628). Data gathered by previously reported archaeological sites were used to develop a predictive model that indicated high and medium probability areas within 4 miles of the Mississippi River (Lee et al. 2003, report 22-2572). A literature review revealed five cultural resources surveys that located 6 archaeological sites and 11 standing structures within the Project Area. There are three standing structures (48-00431, 48-01032, and 48-01185) within 0.5 miles of the Project Area. With the exception of Angelina Plantation (16SJB 68) and the 1915 Memorial Cemetery (16SJB69), all of the archaeological sites are more than 0.5 miles from the Project Area. The standing structure (48-01185) near Angelina Plantation was evaluated in May 2014 and found not to meet any NRHP criteria (Wells et al. 2014, report 22-4571).

The majority of the Project Area is forested wetlands with higher elevations to the south that are either developed or farmland. The Angelina Plantation is a recorded archaeological site (16SJB68) on the southwestern side of the Proposed Action that has been surveyed for various activities (Beavers and Chatelain 1979, report 22-0641; Foreman et al 2016, report 22-5158; Rothrock and Moreno 2015, report 22-4868; Wells 2008, report 22-3023). Those east-west surveys in the northern part of the plantation produced no indication of significant historic activity (Beavers and Chatelain 1979, report 0498; Hubachen 2014, report 22-4531; Watkins 1994, report 22-1807). Angelina Plantation was recorded as an archaeological site and much of the southern part was evaluated in 2012 (Glass and Jackson 2013, report 22-4288). Locus A, which is an area of archaeological deposits representing slave quarters and later tenant houses for Angelina Plantation, located in the southwestern part of the site was tested in 2014 and approximately half of the 431 acre Locus A area was recommended eligible for the NRHP (Glass et al 2014, report 22-4690). A portion of the Project Area was surveyed for cultural resources in May 2014 for the “Phase I Cultural Resources Survey and Reconnaissance of Alternative C, West Shore Lake Pontchartrain Levees Project, St. John the Baptist and St. Charles Parishes, Louisiana” (Wells et al. 2014, report 22-4571). Part of the Angelina Plantation was evaluated during the 2014 survey and determined not eligible for the NRHP. The Frenier 1915 Memorial Cemetery was evaluated and recommendations made that the site

is considered a potential cultural property and avoidance was recommended. A large part of the vicinity of the Proposed Action was surveyed as part of the Maurepas Pipeline Project by Rothrock and Moreno (2015, report 22-4868). These surveys included six of the proposed access roads. None of the areas surveyed for the Maurepas Pipeline Project in St. John the Baptist Parish produced archaeological remains.

A Programmatic Agreement (PA) regarding the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction System was executed on May 16, 2014, among SHPO, the Advisory Council of Historic Preservation (ACHP) and the CEMVN pursuant to Section 106 of the National Historic Preservation act and its implementing regulation found at 36 CFR 800.14(b). The stipulations of the PA would be implemented and complied with for the proposed action.

3.2.8 Soils and Prime and Unique Farmlands

Historic and Existing Conditions

Farmland classification soil survey data provided by NRCS in February 2019 determined that prime farmland is located within the Project Area. However, unique farmland is not located in the Project Area. Affected soils in the area include Cacienné silt loam, Cacienné silty clay, Carville silt loam, Gramercy silty clay, and Schriever clay which are best suited for food, feed, fiber, forage, and oilseed crops. All of the proposed staging and stockpile areas contain prime farmland. Prime farmland in the Project Area is currently dedicated to common Bermuda grass, improved Bermuda grass, soybeans, wheat, sugar cane, Bahia grass, and corn. No other agricultural activities are currently taking place in the Project Area.

3.2.9 Aesthetics and Visual Resources

Historic and Existing Conditions

Aerial photography shows visual conditions of the area changed over the past 20 years. The landscape along with its view sheds have changed due to development and the conversion of swamps into marsh and open water. The scenery has changed from natural to a more developed state with residential, commercial and industrial development dominating US-61, US-51 and US-44, and other corridors. The only major exception is I-10, which traverses the area, giving near unobstructed views of a native landscape that remains aesthetically pleasing. Primary view sheds have been and still are best taken from the local road system and in some instances the Mississippi River levee.

There are two Scenic Streams in the area's vicinity. Blind River stretches south 25 miles from Lake Maurepas, crossing under I-10 and ending near US-61 west of the Project Area. Bayous LaBranche and Trepagnier are located east of the Project Area sourcing from Lake Pontchartrain and stretching south, crossing under I-10 and US-61 and ending near Norco (Bayou Trepagnier) and Good Hope (Bayou LaBranche). Other water resources in the vicinity include the Mississippi River, numerous canals, streams, and creeks that crisscross the native habitat between I-10 and the developed areas along the river.

There is a Scenic Byway in the vicinity which includes the Great River Road traversing US-61. The Great River Road is one segment to an overall scenic byway that stretches on multiple thoroughfares from Canada to the Gulf of Mexico. It is state and federally designated and has an "All American Road" status, making it significant in culture, history, recreation, archeology, aesthetics, and tourism.

3.2.10 Recreational Resources

Historic and Existing Conditions

The Project Area overlaps with parts of the southern perimeter of the 124,567-acre MSWMA. There are a few private camps in the MSWMA. The LDWF provides 16 self-clearing permit stations located throughout the MSWMA. Access into the MSWMA is generally by boat via the numerous boat launches in the area; however, several locations provide foot access. Many canals and bayous traverse the MSWMA. Consumptive recreation includes hunting deer, squirrels, rabbits, and raccoons; fishing for bass, sunfish and crappie; and trapping alligators and nutria. Non-consumptive recreation includes bird watching, sightseeing, and boating. There is a 0.5 mile nature trail and two tent-only camping areas in the MSWMA.

Within the Project Area, Cajun Pride Swamp Tours is located off Frenier Road near US-51. This commercial operation provides boat tours in their private refuge and in the Manchac Swamp. Belle Terre Country Club and Golf Course is located in the Project Area, providing various recreational facilities including a golf course, outdoor swimming pool, and tennis courts. There are local recreational parks including Regala Park, Montz Park, Bethune Park, and Laplace Recreation and Youth Organization (Larayo) Youth Park. Regala Park facilities include an outdoor swimming pool, softball/baseball fields, picnic pavilions, tennis courts, playground, racquetball courts, 1 mile walking path, and soccer field. Montz Park provides a walking path, baseball fields, basketball courts, playground, and picnic pavilions. Bethune Park provides baseball fields. Larayo Youth Park provides baseball fields, tennis courts, and a swimming pool.

3.2.11 Environmental Justice

Executive Order 12898 of 1994 (EO 12898) and the Department of Defense's Strategy on Environmental Justice of 1995 directs 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, 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 as of 2017 are those whose income is at or below \$24,500 for a family of four and are identified using the Census Bureau's statistical poverty threshold. The Census Bureau defines a "poverty area" as a census tract or block group with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level.

An EJ analysis focuses on the potential for disproportionately high and adverse impacts to minority and low-income populations during the construction and normal operation of the Federal action. The analysis assesses if EJ communities are disproportionately exposed to high and adverse effects of the Federal action. If the impact is appreciably more severe or greater in magnitude on minority or low-income populations than the adverse effect suffered by the non-minority or non-low-income populations after taking offsetting benefits into account, then there may be a disproportionate finding. Avoidance and mitigation are then required.

Historic and Existing Conditions

The communities that are located in the study area include Garyville, Reserve, and Laplace, all within St. John the Baptist Parish. All three of these communities are identified by the US Census Bureau (USCB) as a Census Designated Place (CDP).

In order to identify whether the potential alternatives may disproportionately affect minorities or impoverished citizens, an analysis was conducted utilizing CDP data, obtained from the USCB's American Community Survey (ACS). The following information was collected in the study area. Racial and Ethnic Characteristics – race and ethnic populations in each CDP were characterized using the following racial categories: White, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some Other Race, and Two or more Races. Persons of Hispanic Origin are also identified. These categories are consistent with the affected populations requiring study under Executive Order 12898. See Table 3 for a listing of race and ethnic characteristics for the CDPs in the Study area.

Percentage of Minority Population – As defined by the USCB, the minority population includes for race, all non-Whites and ethnicity, the Hispanic population. According to Council of Environmental Quality (CEQ) guidelines, "Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis." See Table 3 for a listing of race and ethnic characteristics for the CDPs in the Study area.

Population by Race, for each CDP, is shown in Table 3. Two of the three CDPs, Reserve and Laplace, are considered Environmental Justice communities, having approximately 63 and 56 percent minority residents, respectively. The majority of minority residents are Black or African American while those identifying as "Some Other or Two or more Races" make up 2.4 percent or less of the CDP population. Persons of Hispanic or Latino population (of any race) is no higher than 6.6 percent of the population of any CDP. The percent of residents identifying as minority or of Hispanic/Latino origin in Reserve and Laplace is similar to the minority and Hispanic origin percentages for St. John the Baptist Parish.

Low-Income Population – The percentage of persons living below the poverty level, as identified in the 2013-2017 ACS, was one of the indicators used to determine the low-income population in a CDP. Low-income population is defined as a CDP with 20 percent or more of its residents below the poverty threshold.

Garyville and Reserve CDPs are EJ communities when considering the poverty threshold criteria. Approximately 32 percent and 20 percent, respectively, of people residing in these communities have incomes in the past 12 months below the poverty level. Approximately 18% of residents in St. John the Baptist Parish have incomes below the poverty level. See Table 4 for low income population by CDP.

Table 6: Percentage Minority/Ethnic Population by CDP, Project Area								
	St. John the Baptist Parish		Garyville		Reserve		Laplace	
RACE	Estimate	Percent	Estimate	Percent	Estimate	Percent	Estimate	Percent
Total population	43,565		2,225		9,995		28,218	
One race	42,720	98%	2,225	100%	9,851	99%	27,535	98%
White	17,716	41%	1,214	55%	3,656	37%	12,433	44%
Black or African American	24,175	56%	1,011	45%	5,962	60%	14,506	51%
American Indian and Alaska Native	0	0%	0	0%	0	0%	0	0%
Asian	391	1%	0	0%	25	0%	366	1%
Native Hawaiian and Other Pacific Islander	0	0%	0	0%	0	0%	0	0%
Some other race	438	1%	0	0%	208	2%	230	1%
Two or more races	845	2%	0	0%	144	1%	683	2%
Minority	25,849	59%	1,011	45%	6,339	63%	15,785	56%
Hispanic or Latino (of any race)								
Total population	43,565		2,225		9,995		28,218	
Hispanic or Latino (of any race)	2,524	6%	23	1%	635	6%	1,866	7%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Table 7: Low Income Population by CDP, Project Area		
CDP	Total Population Estimate*	Low Income As Percent of Total Population
Garyville	2,171	32%
Reserve	9,927	20%
Laplace	27,587	15%
St. John the Baptist	42,804	18%

Source: U.S. Census ACS 2013-2017

*For Whom Poverty Status is Determined

3.2.12 Air Quality

Existing Conditions

National Ambient Air Quality Standards (NAAQS) (Table 5) have been set by the EPA for six common pollutants (also referred to as criteria pollutants) including: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. States are required by the Code of Federal Regulations to report to the EPA annual emissions estimates for point sources (major industrial facilities) emitting greater than or equal to 100 tons per year of volatile organic compounds, nitrogen dioxide, sulfur dioxide, particulate matter less than 10 microns in size; 1,000 tons per year of carbon monoxide; or 5 tons per year of lead. Since ozone is not an emission, but the result of a photochemical reaction, states are required to report emissions of volatile organic compounds (VOC), which are compounds that lead to the formation of ozone. St. John the Baptist and St. Charles Parishes are currently in attainment for all Federal NAAQS pollutants, including the 8-hour ozone standard (EPA 2013).

Table 8: National Ambient Air Quality Standards					
Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3 month average	0.15 µg/m ³ (1)	Not to be exceeded
Nitrogen Dioxide (NO ₂)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb (2)	Annual Mean
Ozone (O ₃)		primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	PM _{2.5}	primary	1 year	12.0 µg/m ³	Annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m ³	Annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO ₂)		primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year
<p>(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect.</p> <p>(2) The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.</p> <p>(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.</p> <p>(4) The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a SIP call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.</p>					

3.2.13 Noise

Historic and Existing Conditions

There are noise ordinances in St. Charles and St. John the Baptist Parishes. The maximum permissible sound levels for St. John the Baptist Parish during the hours of 7:00 am to 10:00 pm are 70 dBA for residential areas and 75 dBA for business and commercial areas Sound Levels. The maximum permissible sound levels for St. Charles Parish during the hours of 7:00 am to 10:00 pm are 50 60 dBA for residential areas and 65 dBA for commercial areas.

Background noise levels are variable depending on the time of day and climatic conditions. Near developed areas, automobile and train traffic, and to a lesser extent air traffic, contribute to the background noise levels.

A number of sensitive noise receptors are located adjacent to or near the Project Area such as parks, wildlife management areas, and wildlife. These public lands are sensitive noise receptors where serenity and quiet are an important public resource. The areas with the greatest number of sensitive noise receptors, which are places or areas where occupants are more susceptible to noise, such as residential homes and apartments, schools, churches, and parks, are located in St. Charles and St. John the Baptist Parishes.

3.2.14 Transportation

Existing Conditions

There are two major roadways within the Project Area, US Highway 61 and US Highway 51. Louisiana Department of Transportation & Development conduct routine traffic counts on major roadways. Table 6 presents Estimated Annual Average Daily Traffic Routine Traffic Counts on US Highway 61 (W. Airline Highway) and US Highway 51 (New Highway 51).

Table 9: Annual average daily traffic (AADT)			
US Highway 61		US Highway 51	
Year	AADT	Year	AADT
2017	20,755	2017	17,734
2014	15,772	2014	7,615
2011	16,032	1999	15,173
2008	18,562	1997	10,800
2005	14,058	1994	10,130
2002	14,499	1991	9,752

Source: State of Louisiana Department of Transportation & Development

4 Environmental Consequences

This section describes the environmental consequences of the No Action Alternative (Future Without-Project Conditions; FWOP) and the Proposed Action Alternative (Future Conditions with the Proposed Action; FWP). Indirect and direct impacts are discussed for each scenario and resource in Table 7. Cumulative effects are discussed in Section 4.1.

The No Action Alternative impacts summarize relevant information from the approved plan in the 2016 WSLP EIS and SEA 570, because this scenario represents the predicted course of events absent approval of the proposed action. For an evaluation of the anticipated impacts if the Corps were to take no action to construct the WSLP Project, including under the previously-approved plan, refer to the evaluation of the No Action Alternative and Future Without Project Condition contained in the 2016 WSLP EIS, which evaluation is incorporated here by reference.

Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Hydrology	<p><i>Direct and Indirect Impacts:</i> Hydrologic impacts from construction of the levee system described in 2016 WSLP EIS levee in St. the Baptist and St. Charles Parishes would include: storm damage risk reduction from rising waters associated with tropical storms, and disrupted tidal connectivity that would result in slight increases in water stage on the exterior and slight decreases in tidal exchange on the interior of the levee system.</p> <p>Storm surge modeling indicated that the 2016 WSLP EIS levee system would have increased water surface elevations from between 0.1 and 0.2 feet of water for areas near the levee for the 50-500 year events. No induced flooding was observed in storm surge events between the 1-25 year events.</p>	<p><i>Direct and Indirect Impacts:</i> The proposed action includes an increase number of and size of drainage structures that would better maintain existing hydrologic conditions and be improve tidal connectivity relative to the No Action Alternative. This would reduce the overall impact to hydrology (Appendix 5, Annex A).</p> <p>The proposed action includes an increase in the number of pumping stations, which would allow for more effective flood risk reduction during tropical storm events with heavy rainfall. This would be a beneficial impact to flood risk reduction to local communities (Appendix 5, Annex B).</p> <p>The proposed levee shifts would increase protected area size and increase the acreages of indirect interior hydrological impacts. Increased levee widths could also negatively impact existing hydrology. These negative impact to existing hydrology would be somewhat mitigated by the increased the number of drainage structures and sizes.</p> <p>The proposed action would not cause significant induced flooding impacts outside of those described in the 2016 WSLP EIS (Appendix 5, Annex C).</p>

Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Water Quality	<p><i>Direct Impacts:</i> Levee system construction would result in some wetland and open water areas being converted to upland habitat, which would no longer provide water quality benefits. Sedimentation and erosion impacts would generally be minor and short-term, lasting only during construction of the proposed project features. Because fill and construction materials are anticipated to be free of contaminants, discharge of these materials into existing adjacent waters is not expected to result in adverse effects to aquatic organisms.</p> <p><i>Indirect Impacts:</i> Decreased water exchange as a result 2016 WSLP EIS levee system could result in negative water quality impacts such as stagnation and a reduction of salinity on the interior; significant reduction of erosion and sedimentation associated with storm events.</p>	<p><i>Direct Impacts:</i> Shifts in alignment would slightly increase in construction related water quality impacts. Increases in levee system ROW would have result in similar, but incrementally more associated direct impacts to wetlands that in turn would affect water quality. See wetlands section of this table for more details.</p> <p><i>Indirect Impacts:</i> An increase in indirect impacts would be expected and proportionate to the increase in impounded area. See wetlands section of this table for more details</p>

Wetlands	<p><i>Direct Impacts:</i> Construction of the 2016 WSLP EIS levee would directly impact approximately 1,114 acres of swamp (595.6 AAHUs) and approximately 120 acres of BLH (95.5 AAHUs).</p> <p>Activities described in SEA 570 would directly impact approximately 167 acres of swamp (91 AAHUs) and 46 acres of BLH (36 AAHUs).</p> <p><i>Indirect Impacts:</i> It would also indirectly impact approximately 8,432 acres of swamp (494.5 AAHUs) and 89 acres of BLH (3.1 AAHUs).</p> <p>Indirect and direct impacts could include some rare and unique or imperiled vegetation communities (2016 WSLP EIS). All unavoidable impacts would be mitigated for using the plan in SEA 576.</p> <p>See Table 11 for a breakdown of wetland impacts associated with the No Action Alternative.</p>	<p>Impacts associated with the proposed action would be similar to those described in the 2016 WSLP EIS. All WSLP Project (including those related to actions described in the 2016 WSLP EIS, SEA 570, and the proposed action) impacts to wetlands were re-evaluated. A comparison of total impacts from this re-evaluation are compared to the impacts described in the 2016 WSLP EIS. See Appendix I for more information on the wetland impacts re-evaluation. See Table 12 for a breakdown of direct and indirect impacts to wetlands that would be caused by the proposed action.</p> <p><i>Direct Impacts:</i> Overall, the proposed action would directly impact approximately 26 less acres of swamp (28 less AAHUs) and 93 more acres of BLH (54 more AAHUs).</p> <p><i>Indirect Impacts:</i> Overall, the proposed action would indirectly impact approximately 1,322 more acres of swamp (143 less AAHUs) and 4,546 more acres of BLH (121 more AAHUs). Indirect impacts were found to decrease on a per acre basis during the WVA re-evaluation (Appendix I). This was attributed to an increase number of and size of drainage structures that would better maintain existing hydrologic conditions and have improved tidal connectivity relative to the No Action Alternative (Appendix 5, Annex A).</p> <p>All activities within stockpiling and borrow areas would have no wetland or BLH impacts. A no work zone buffer of 50 feet would be maintained around all wet pasture wetlands within stockpile areas. A no work zone buffer of 150 feet or tree drip line, whichever is longest, would be maintained around all forested wetlands within the stockpile/borrow areas.</p> <p>All impacts to wetlands would be offset through either the purchase of mitigation bank credits or the construction of new, restored or enhanced habitats to replace the lost habitats in accordance with the Clean Water Act, Section 404(b)(1) and the Water Resources Development Act of 1986, Section 906, as amended. The mitigation plan is described in SEA 576.</p>
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Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Wildlife Resources	<i>Direct and Indirect Impacts:</i> Construction of the 2016 WSLP EIS levee system and activities associated with SEA 570 would directly or indirectly impact approximately 9,968 acres of high quality wildlife habitat (forested wetlands). During construction any wildlife present would relocate to avoid the construction but could quickly return to any areas that have not converted to other land uses. Some aquatic wildlife ingress and egress from the protected side of the levee would be limited.	<i>Direct and Indirect Impacts:</i> Impacts associated with the proposed action would be similar to those for the no action alternative. There would be incremental increases in negative impacts associated with increases in impacts to wetland resources as described in that section of this table.
Aquatic and Fisheries Resources	<i>Direct and Indirect Impacts:</i> Construction of the 2016 WSLP EIS levee system would convert approximately 1,114 acres of existing benthos swamp habitat into upland grass covered (levee) habitat. Sessile organisms would be buried during construction and expire. Mobile species of fish, shellfish and other aquatic resources would either avoid the area during construction (fish) or be moved out of the way due to water displacement (plankton). Up to 9,968 acres of forested wetland and swamp habitats utilized by aquatic and fisheries resources would be indirectly impacted via reduced migration of organisms, and altered hydrology and water quality.	<i>Direct and Indirect Impacts:</i> Impacts associated with the proposed action would be similar to those for the no action alternative. There would be incremental increases in impacts associated with increases in negative impacts to wetland resources and water quality as described in those sections of this table. There would be positive benefits to aquatic organism ingress and egress associated with the changes in drainage structures.
Threatened, Endangered, and Protected Species	<i>Direct and Indirect Impacts:</i> Activities discussed in the 2016 WSLP EIS and SEA 570 were found to not likely to adversely affect any listed species. WSLP Project levee construction would directly or indirectly impact approximately 9,968 acres of high quality wildlife habitat (forested wetlands). This plan would destroy approximately 1,313 acres of primarily swamp habitats and BLH. However, other adjacent habitats are available for listed species.	<i>Direct and Indirect Impacts:</i> Activities associated with the proposed action were found to not likely to adversely affect any listed species. Impacts associated with the proposed action would be similar to those for the no action alternative. There would be incremental increases in impacts associated with increases in negative impacts to wetland resources and water quality as described in those sections of this table. See Appendix VI, Annex A for more details.

Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Cultural Resources	<p><i>Direct and Indirect impacts:</i> The CEMVN would implement and comply with the stipulations identified in the PA for the West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System as executed on May 16, 2014.</p>	<p><i>Direct and Indirect impacts:</i> Based on review of existing data and field surveys, there are no significant cultural resources located within the proposed project area. Therefore, the USACE has determined that the Proposed Action will have no direct or indirect adverse impacts on significant historic properties.</p> <p>The USACE coordinated with the SHPO and Federally-recognized Tribes with a determination of “<i>no adverse effect to historic properties</i>” in a letter dated 13 November 2019. The SHPO concurred with the USACE effects determination in their letter dated 6 January 2020. The Muscogee (Creek) Nation concurred with the USACE effects determination in an email dated 4 December 2019. No other Federally-recognized Indian Tribes responded.</p> <p>The USACE would implement and comply with the stipulations identified in the PA for the West Shore Lake Pontchartrain Hurricane Storm Damage Risk Reduction System as executed on May 16, 2014.</p>
Soils and Prime and Unique Farmlands	<p><i>Direct Impacts:</i> 1,008 acres of prime farmland soils associated with stockpile areas described in SEA 570 would be temporarily removed during construction.</p> <p><i>Indirect Impacts:</i> Up to approximately 9,968 acres of hydric soils could be affected due to indirect impacts associated with the 2016 WSLP EIS levee system, but these impacts are expected to be limited. See Wetlands section of this table for more information.</p>	<p><i>Direct Impacts:</i> Due to levee system alignment changes and access road changes, approximately 169 additional acres of soils would be impacted, the majority of which would be hydric soils (Cancienne and Carville, Barbary, Schreiver and Gramercy soils) in St. John the Baptist Parish. A total of approximately 60 acres of land classified as prime farmlands would be converted to nonagricultural use.</p> <p><i>Indirect Impacts:</i> Up to an approximately 5,868 acres of impacts to hydric soils would occur as a result of indirect impacts from the levee system. See Wetlands section of this table for more information.</p>

Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Aesthetic and Visual Resources	<p><i>Direct Impacts:</i> The 2016 WSLP EIS would convert a natural landscape with a wide footprint levee system and would reduce the quality of the vegetation in the vicinity. This would negatively impact aesthetics and visual resources. However, much of this would be in areas that are screened by deep forest and swamp, or are remote and have minimal access.</p> <p><i>Indirect Impacts:</i> The River Road Scenic Byway may see temporary impacts due to truck traffic and construction vehicles, but impacts would be minimal. Construction of the 2016 WSLP EIS levee system would require a structure across US-61. This could reduce the visual quality of the drive along the Byway. Indirect impacts would be approximately 8,521 acres which could change the landscape of the region due to water channel and drainage way closures or redirections.</p>	<p><i>Direct Impacts:</i> An additional 169 acres of minimal negative impacts associated with the updated levee system and access roads ROWs would be incurred to aesthetic and visual resources. These impacts would be similar in nature to those described in the 2016 WSLP EIS and SEA 570. Residential areas may see incremental increases in dust and noise levels during construction. These impacts would be temporary and conditions should return to preconstruction levels after completion of the project.</p> <p><i>Indirect Impacts:</i> An additional 5,868 acres of indirect impacts are estimated, as described in the wetlands section of this table. These indirect wetland impacts could result in negative impacts to aesthetic and visual resources. There would be no significant incremental impacts to the River Road Scenic Byway associated with the Proposed Action.</p>
Recreational Resources	<p><i>Direct Impacts:</i> There would be long-term permanent negative impacts to forested wetlands. Some of these impacts would occur on private property. Some of these impacts would occur on LDWF's MSWMA. There would be temporary negative impacts associated with reduced access to the LDWF boat launch at the Hope Canal, the public boat launch at the Reserve Relief Canal, camps, and potentially recreational businesses such as swamp tours.</p> <p><i>Indirect Impacts:</i> Indirect impacts would be approximately 8,521 acres which could reduce recreational opportunities and experiences.</p>	<p><i>Direct Impacts:</i> Similar direct negative impacts to recreational resources as described in 2016 WSLP EIS and SEA 570 would occur. There would be approximately 169 acres of additional impacts associated with levee system and access road modifications. Approximately 66 of these acres would be to forested wetlands. These impacts would have negative impacts to recreational resources, such as boating, fishing, and hunting. There could be beneficial impacts to swamp tour businesses associated with the levee system shift near the I-55 and I-10 interchange (Figure 3).</p> <p><i>Indirect Impacts:</i> An additional 5,868 acres of indirect impacts are estimated, as described in the wetlands section of this table. These indirect wetland impacts could result in negative impacts to boating, fishing, and hunting.</p>

Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Environmental Justice	<i>Direct and Indirect Impacts:</i> The construction of the 2016 WSLP EIS levee system may have temporary adverse minimal short term impacts (such as increased dust, noise, or traffic) to low income and minority neighborhoods residences, but these impacts would not be disproportionate. Overall, there would be benefits to EJ and non EJ communities, in the form of storm surge risk reduction	<i>Direct and Indirect Impacts;</i> There are no direct or indirect disproportionate negative impacts to EJ communities from construction or operation of the Proposed Action. See Appendix VI, Annex C for more information on the EJ analysis.
Air Quality	<i>Direct Impacts:</i> St. John the Baptist and St. Charles Parishes are currently in attainment of all NAAQS and direct impacts to ambient air quality as a result of the would be temporary, and primarily due to the emissions of construction equipment. Once all activities associated with the Proposed Action cease, air quality within the vicinity is expected to return to existing conditions. St. John the Baptist and St. Charles Parishes would remain in attainment of all NAAQS. <i>Indirect Impacts:</i> Any indirect impacts to ambient air quality as a result of the Proposed Action are expected to be temporary, and primarily due to the emissions of surveys and borings equipment.	<i>Direct and Indirect Impacts:</i> Impacts would be similar to the No Action Alternative with incremental increases associated with the levee system, access road, and borrow plan modifications. St. John the Baptist and St. Charles Parishes would remain in attainment of all NAAQS.
Noise	<i>Direct Impacts:</i> There would be temporary and localized increased noise levels related to activities described in 2016 WSLP EIS and SEA 570. There would be no permanent noise impacts as a result of these activities. <i>Indirect Impacts:</i> There would be no indirect impacts due to noise	<i>Direct and Indirect Impacts:</i> There would be similar impacts for the proposed action as there are in the no action alternatives, with a slight incremental increase related to increased truck traffic. See Transportation section of this table for more information.

Table 10: Comparison of No Action Alternative to Proposed Action

Resource	No Action Alternative Impacts (includes impacts in 2016 EIS and SEA 570)	Proposed Action Impacts
Transportation	<p><i>Direct and Indirect Impacts:</i> There would minor temporary impacts to transportation associated with the borrow plans and construction activities as described in the 2016 WSLP EIS and SEA 570. Traffic counts suggest these impacts would be minor.</p>	<p><i>Direct Impacts:</i> Direct impacts associated with Transportation remain similar to those described in SEA 570. All five stockpile/borrow sites and the proposed levee alignment would be directly accessed via US Highway 61 (Airline Hwy.) and US Highway 51, there would be increased traffic along these routes. The total number of truck trips has been revised and is now estimated to be 754,000. Estimated truck trips in SEA 570 were 328,000. Trips would occur over a 4.5 year period, 365 days per year. This would equate to an average increase of 459 vehicles per day on to Highways 61 and 51 which have AADT counts of 20,755 and 17,734 vehicles per day, respectively. This increase in traffic is expected to have a minor impact on traffic within the area. Other features and activities associated with the Proposed Action would only have minor impacts to traffic. In addition, traffic control plans would be implemented for all construction-related transportation to minimize impacts to existing traffic patterns and would rely upon use of highways to the extent practicable. Coordination with LA Department of Transportation and Development (LADOTD) and US Federal Highway Administration (USFHWA) is ongoing to determine the best methods and features for safe intersections while minimizing environmental impacts.</p> <p><i>Indirect Impacts:</i> There would be no significant indirect impacts to transportation by implementation of the proposed action.</p>

Table 11: Wetland Impacts associated with the No Action Alternative					
2016 WSLP EIS & SEA 570 - Swamp			2016 WSLP EIS & SEA 570 - BLH		
Impact Type	Acres	AAHUs*	Impact Type	Acres	AAHUs*
Direct - Levee	1,112	-595	Direct - Levee	123	-96
Direct - Access	52	-28	Direct - Access	26	-20
Direct - Total	1,164	-623	Direct - Total	149	-116
Indirect-Total	8,432	-495	Indirect - Total	89	-3
Total	9,596	-1,118	Total	238	-119

*Negative values represent decreased wetland values. Positive values represent increases.

Table 12: Proposed action impacts to forested wetlands					
BLH Impacts			Swamp Impacts		
Project Impact	Acres*	AAHUs*	Project Impact	Acres*	AAHUs*
Direct - Levee	95	56	Direct - Levee	-24	-27
Direct - Access	-2	-2	Direct - Access	-2	-1
Direct - Total	93	54	Direct - Total	-26	-28
Indirect-Levee	4,546	121	Indirect-Levee	1,322	-143
Total	4,639	175	Total	1,296	-171

*Negative values represent decreases with respect to the 2016 WSLP EIS and SEA 570. Positive values represent increases.

4.1 Cumulative Impacts Analysis

CEQ Regulations define cumulative impacts (CI) as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. CI can result from individually minor but collectively significant actions taking place over a period of time.”

Coastal Louisiana, including the Project Area, has been greatly impacted by natural subsidence, levees, hurricanes, and oil and gas infrastructure. Direct and indirect impacts of past, present and reasonably foreseeable future events were considered in the analysis of the Proposed Action consequences. These impacts include historical and predicted future land loss rates for the area and other restoration projects in the vicinity.

The Proposed Action includes modifications to the WSLP levee system in St. John the Baptist and St. Charles Parishes, Louisiana as described in the 2016 WSLP EIS and SEA 570. The levee system described in the 2016 WSLP EIS was authorized for construction as part of the WIIN Act (Public Law 114-322) in 2016. Construction of the WSLP Project was funded by the BBA 2018 (Public Law 115-123).

Wetland resource cumulative effects include historical degradation of forested wetlands, likely future trends of degradation within the vicinity, and other reasonably foreseeable activities negatively impacting wetland resources.

Forested wetlands in the vicinity of the proposed action and across coastal Louisiana have experienced a decline over the recent past. It is likely that this trend will continue into the future and wetland impacts as part of the proposed action would add to this trend. At least one large scale restoration project is being planned, the River Reintroduction into Maurepas Swamp Project (Appendix III), and smaller scale restoration plans are being implemented, such as Lake Pontchartrain Basin Foundation's Maurepas Landbridge Swamp Restoration Project (Hillmann et al., 2017) in the vicinity of the proposed action. However, there are no restoration projects being planned, funded, or implemented that are expected to be large enough to completely reverse the likely long-term decline of forests in the area (Shafer et al., 2016).

The CIs for the WSLP Project Levee system, including impacts from the proposed action, SEA 570, and the 2016 EIS, would have direct, permanent negative impacts to approximately 1,138 acres of swamp (-595 AAHUs) and 242 acres of BLH (-169 AAHUs). As a result of altered land uses and hydrologic impacts, there would be indirect, permanent, negative impacts to approximately 9,754 acres of swamp (-352 AAHUs) and 4,635 acres of BLH (-124 AAHUs). All wetland impacts associated with the WSLP Project levee system, -947 AAHUs of impact to swamp and -293 AAHUs of impact to BLH, would be fully mitigated for in accordance with the Clean Water Act Section 404 using the plan described in SEA 576 (Table 13 and 14). See Appendix I for the detailed WSLP Project levee system WVA analysis.

Table 13: Cumulative Impacts of the WSLP Project Levee System to swamp					
Project Impact	Acres	AAHUs*	LDWF Property	Acres	AAHUs*
Direct - Levee	1,088	-568	Direct - Levee	308	-154
Direct - Access	50	-27	Direct - Access	4	-2
Direct - Total	1,138	-595	LDWF Direct - Total	312	-156
Indirect-Total	9,754	-352	LDWF Indirect - Total	1,775	-89
Total	10,892	-947	LDWF - Total	2,087	-245

*Negative values represent losses of habitat value.

Table 14: Cumulative Impacts of the WSLP Project Levee System to BLH					
Project Impact	Acres	AAHUs*	LDWF Property	Acres	AAHUs*
Direct - Levee	218	-152	Direct - Levee	98	-70
Direct - Access	24	-17	Direct - Access	3	-2
Direct - Total	242	-169	LDWF Direct - Total	101	-72
Indirect-Total	4,635	-124	LDWF Indirect - Total	512	-25
Total	4,877	-293	LDWF - Total	613	-97

*Negative values represent losses of habitat value.

Wildlife resources, fisheries, and other aquatic resources cumulative effects would mirror the trend of wetland loss. The cumulative losses of forested wetland habitats, as described above, would have a negative long-term impact on terrestrial and avian wildlife resources. Aquatic resources and fisheries resources would also experience negative long-term and cumulative effects as forested wetlands are anticipated to convert to emergent wetlands and eventually open water in the area of the Proposed Action and vicinity. However, since impacts to forested wetland habitats would be mitigated, impacts to these resources would be temporary and not anticipated in result in an overall increase in cumulative impacts to wildlife resources, fisheries,

and other aquatic resources from implementation of the Proposed Action. In addition, CEMVN determined that the WSLP Project levee system (which combines impacts associated with the proposed action, 2016 WSLP EIS, and SEA 570) is not likely to adversely affect threatened and endangered species, and MBTA and BGEPA trust species. Coordination with the USFWS on the affect to these species is ongoing.

Hydrology and water quality cumulative effects would include the incremental direct and indirect effects of the proposed action on flows and water levels in addition to other past, present, and reasonably foreseeable future actions including previous, existing and authorized levee systems in the Pontchartrain Basin, and the authorized and funded WSLP Project levee system. Impacts associated with the approximately 203 miles of Hurricane and Storm Damage Risk Reduction System levees are reported in the numerous Individual Environmental Reports (produced under NEPA Emergency Alternative Arrangements) and the "Comprehensive Environmental Document, Phase I, Greater New Orleans HSDRRS", (USACE 2013). Impacts associated with the approximately 18.27 mile WSLP levee are discussed in the 2016 WSLP EIS and SEA 570. Adjustments in the number and design of drainage structures and pump stations that are part of the proposed action could provide a slight incremental improvement in hydrology relative to the system described in the 2016 WSLP EIS. Increases in water quality impacts associated with the proposed action are likely to be minor compared to other past, present, and reasonably foreseeable projects. These incremental increases in negative impacts would be due to an increase in levee system ROW and increased direct levee impacts; however, there could be slight improvements in water quality due to the increased hydrologic connectivity relative to the system described in the 2016 WSLP EIS. Therefore, there would not be a significant cumulative change in hydrology and water quality due to impacts associated with this Proposed Action. Hydraulic analysis associated with the WSLP levee system, including the WSLP 2016 EIS, SEA 570, and the proposed action, can be found in Appendix V.

In Louisiana, recreational resources would continue to experience negative impacts from persistent coastal and wetland degradation and loss. Within the study area vicinity, potential diversion projects could provide fresh water and improve wetlands. Recreational access through canals and bayous may decrease during levee system construction, but recreational infrastructure would realize a reduction in the risk of damage from hurricane/tropical storm surge events. Cumulative impacts associated with the WSLP Project levee alignment to LDWF property wetlands are presented in Tables 13 and 14. The loss of habitat on LDWF property would occur within the Maurepas Swamp Wildlife Management Area, causing a negative impact to recreational use to a portion of this 124,567-acre WMA. However, once mitigation for these impacts are completed, no long term impacts to recreation are anticipated.

Noise, air quality, and transportation impacts associated with the Proposed Action would be temporary, minor, and during construction only. Therefore, the Proposed Action would not significantly increase cumulative effects for these resources.

There would be approximately 60 additional acres of prime farmland impacted due to the proposed action. This would not be a significant impact, as there are many acres of prime farmland in the vicinity.

Any adverse cumulative impacts to Environmental Justice communities associated with Proposed Action are not disproportionate since the minority and low income composition is similar throughout the Parish as a whole. Positive cumulative impacts to minority and/or low-income populations associated with providing risk reduction are expected to occur as a result of the lower flood risk in the area.

There would be no significant impacts to aesthetics and visual resources as a result of the incremental changes to natural vistas associated with the proposed action. There would be no significant impacts to cultural resources because of the adherence to the PA.

5 Mitigation

Direct impacts associated with the Proposed Action consist of approximately 26 less acres of negative impacts to swamp habitat (approximately 28 less AAHUs), and approximately 93 more acres of direct, negative impacts to BLH habitats (approximately 54 more AAHUs) as compared to the 2016 WSLP EIS and SEA 570. Indirect impacts associated with the Proposed Action negatively affect approximately 1,322 more acres of swamp (143 less AAHUs), and 4,546 more acres of BLH (121 more AAHUs) as compared to the 2016 WSLP EIS and SEA 570. A total of approximately 5,935 acres (9 AAHUs) would be negatively impacted by the proposed action (Table 12). These impacts, along with impacts associated with the No Action Alternative (Table 13) are presented as the cumulative impacts associated with the WSLP Project in Table 14. All of these impacts would be fully mitigated for as part of the mitigation plan described in SEA 576.

Although the 2016 WSLP EIS contained a plan for mitigating the impacts associated with the WSLP project as defined at that time, due to the proposed changes to the project, that plan is no longer able to fully mitigate the impacts associated with the redefined project. Additionally, significant portions of that plan are currently un-implementable due to defined management strategies for the Bonnet Carré Spillway that cannot accommodate mitigation and due to the need for real estate instruments that are currently unsupported. As such, the mitigation plan for the WSLP project has undergone reformulation and the new approved plan can be found in SEA 576. This plan mitigates all WSLP habitat impacts, in kind, and prioritizes mitigation in the basin affected by each of the BBA 18 construction projects (WSLP, Comite, and East Baton Rouge). This plan includes Corps Constructed projects as well as the purchase of mitigation bank credits, in basin and out of basin (Table 15). Only once all mitigation options within the affected basins have been utilized to the extent practicable would mitigation options outside of the affected basins be implemented. Impacts that occur within the Louisiana (LA) Coastal Zone (CZ) would be mitigated with projects in the LA CZ. Please see SEA 576 for more details on the mitigation plan at <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/Mitigation/>.

Table 15: Mitigation Plan in SEA 576 for WSLP				
	Projects	Habitat	AAHUs	Acres
BLH-Wet in CZ (WSLP)	Mitigation Bank (LPB)	BLH-wet	TBD	TBD
	Saint John (LPB)	BLH-wet	42	94.7
	Mitigation Bank (OB)	BLH-wet	TBD	TBD
	Albania South (OB)	BLH-wet	up to 96	up to 192.1
	Albania North (OB)	BLH-wet	Max of 343	Max of 657
Swamp in CZ (WSLP)	Mitigation Bank (LPB)	Swamp	TBD	TBD
	Pine Island (LPB)	Swamp	775	1,965.0
	Joyce (LPB)	Swamp	195	1,126.1

	Mitigation Bank (OB)	Swamp	TBD	TBD
	Albania South (OB)	Swamp	up to 76	up to 192.1
	Albania North (OB)	Swamp	up to 380	up to 964.8
	Cote Blanche (OB)	Swamp	up to 182	up to 446

LPB – In Lake Pontchartrain Basin. OB – Outside of Basin.

6 Monitoring and Adaptive Management

Hydrologic monitoring of the Proposed Action would occur. This would include the installation of equipment that would continuously (e.g., at an hourly interval) record water quality parameters such as salinity, temperature, and water surface elevation. Construction of any monitoring equipment would be limited in area (up to approximately 100 square feet), and would not have significant impacts to the human or natural environment. The exact location of these stations is being coordinated with USFWS and LDWF. These data would be used to test the WVA assumptions made in regards to indirect impacts (Appendix I) to determine whether adaptive management actions are needed to avoid an increase in mitigation requirements.

Hydrologic modifications, such as gapping along existing spoil banks, are being considered and coordinated with the resource agencies. These hydrologic modifications would be implemented if they are deemed necessary to maintain existing water conditions and/or if they would reduce and/or minimize indirect impacts associated with the Proposed Action. Any modifications would occur within the indirect impacts areas, as defined in the WVA (Appendix I). Monitoring stations for hydrology and/or vegetation would be designed to assess the effectiveness of hydrologic modifications, if constructed. Construction of any hydrologic modifications would have net benefits to wetlands.

A supplemental NEPA document fully describing the impacts from implementing the monitoring and adaptive management plan would be completed, if necessary.

7 Coordination and Public Involvement

A Public Notice announcing public review for SEA 571 was published in the Baton Rouge and New Orleans Advocate for 30 days beginning April 23, 2020 and ending May 23, 2020. All comments received during the public review period and responses to these comments can be found in Appendix IX.

Preparation of this SEA and FONSI was 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

U.S. Army Corps of Engineers, Regional Planning and Environment South Division
DRAFT SEA #571 WSLP

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
MCN – Muscogee (Creek) Nation
Jena Band of Choctaw Indians
Seminole Tribe of Florida
Seminole Nation of Oklahoma
Tunica-Biloxi Tribe of Louisiana

Recommendations under the Fish and Wildlife Coordination Act for the SEA were provided by the USFWS on June 11, 2020 (Appendix VII, Annex A). The USFWS project-specific recommendations for this SEA proposed action and CEMVN's responses to the USFWS recommendations are as follows:

1. Any impacts occurring on LDWF owned and managed property should only be mitigated on LDWF owned and managed property. In this case, impacts occurring on Maurepas Swamp WMA should be mitigated on the WMA. As required by the conveyance documents, tracts of land located on the WMA are restricted in use and should be preserved in their natural state. Any action which damages or diminishes the property's natural state should be subject to enhancement, restoration, or replacement in kind and contiguous with the WMA. Adequate and appropriate mitigation should be planned with and approved by LDWF.

Response 1 – Acknowledged. Compensatory mitigation for impacts on LDWF property would occur on LDWF property to the extent practicable. The mitigation plan for the Proposed Action, which is included in SEA 576, includes projects within the LDWF's WMA system. CEMVN will consider LDWF's recommendations as well as land purchases to mitigate impacts on LDWF's property. CEMVN would like to receive information on adjacent properties that LDWF would be interested in receiving to address impacts to their property from the WSLP project.

2. Full, in-kind compensation (quantified as Average Annual Habitat Units) is recommended for 1379 acres (-764 AAHUs) of unavoidable direct (levee and access

road footprints) construction adverse impacts and 14,390 acres (-476 AAHUs) of indirect (enclosed and exterior wetlands) habitat value losses on forested wetlands associated with levee construction. To help ensure that the proposed mitigation features meet their goals, the Service provides the following recommendations.

- a. If applicable, a General Plan should be developed by USACE, LDWF, and the Service in accordance with Section 3(b) of the Fish and Wildlife Coordination Act for mitigation lands.
- b. The proposed BBA-18 Mitigation proposal, Joyce WMA Swamp Enhancement project is located on LDWF's Joyce WMA. This proposed mitigation project has been planned without prior consultation with appropriate LDWF staff. LDWF, the Service and other interested resource agencies need to be consulted in order for staff to determine whether or not the project is acceptable.
- c. Mitigation measures should be constructed concurrently with the flood damage reduction features that they are mitigating (i.e., mitigation construction should be initiated no later than 18 months after levee construction has begun).
- d. If mitigation is not implemented concurrent with levee construction, the amount of mitigation needed should be reassessed and adjusted to offset temporal losses.
- e. USACE should remain responsible for the required mitigation until the mitigation is demonstrated to be fully compliant with interim success and performance criteria. At a minimum, this should include compliance with the requisite vegetation, elevation, acreage, and dike gapping criteria.
- f. The acreage restored and/or managed for mitigation purposes, and adjacent affected wetlands, should be monitored over the project life. This monitoring should be used to evaluate mitigation project impacts, the effectiveness of the compensatory mitigation measures, and the need for additional mitigation should those measures prove insufficient.

Response 2 – Acknowledged. Please see SEA 576, which includes the plan to mitigate all impacts incurred by the BBA 18 construction projects, including impacts incurred to LDWF lands by the WSLP project. Specifically, the Joyce project, which is an example of the type of project that could be constructed on LDWF WMA land. Coordination on this project is ongoing with LDWF and likely to be acceptable depending on its final location. Mitigation is planned to be implemented concurrently (within 18 months) with construction of the proposed action and coordination with the resource agencies would continue during construction of both the proposed action and its mitigation project. If the mitigation not implemented within this time frame, impacts may be reassessed and adjusted to account for temporal lag. Coordination with USFWS would occur to determine if this reassessment and adjustment is necessary. USACE would remain responsible for compensatory mitigation projects until initial success criteria are met. These criteria include vegetation, elevation, acreage, and dike gapping/degrading criteria. Mitigation projects would be monitored for the entire period of analysis, which is 50 years.

3. The levee alignment could potentially have impacts to the Maurepas Swamp Diversion project (Maurepas diversion). The WSLP project impacts may potentially be mitigated for by the Maurepas Diversion project. The Service recommends close coordinate with the planning objectives and planning team of the restoration project and that any potential impacts to the Maurepas diversion project be addressed. In addition, the Service recommends close coordination with the Service and LDWF if the use of the Maurepas diversion for mitigation for the WSLP project impacts is undertaken.

Response 3 – Discussions on accommodating the potential River Reintroduction into Maurepas Swamp project during the construction of the WSLP levee system are ongoing with the NFS. Modifications to the alignment of the WSLP levee system may be made to accommodate the potential alignment of this diversion project to the extent practicable. Discussions on the use of the River Reintroduction into Maurepas Swamp project as mitigation are ongoing between the USACE and the resource agencies. This coordination would continue if the project is found to be a viable mitigation option.

4. If USACE declares the enclosed wetlands will be used as a flood storage area, the Service recommends that USACE and the nonfederal sponsor be responsible for preservation and maintaining the enclosed wetlands as the flood storage area within the levee system.

Response 4 – The USACE is not declaring that the enclosed wetlands would be used for flood storage. Wetlands on the interior of the levee system alignment would not be enclosed (i.e., closed drainage structure and under pump) except during the threat of a tropical storm. Existing connection to exterior wetlands would be maintained to the maximum extent practicable and conversion of existing wetlands to uplands is not anticipated. As such, development of existing wetlands would be regulated through the Clean Water Act Section 404 permitting process.

5. Due to concerns that the construction of the levee may alter natural periods of inundation or soil saturation in the impounded and exterior wetlands and could prove detrimental to their function and longevity (e.g., maintain existing water exchange in regard to water depth, delays in water movement, water stacking, and impacts to water quality), the Service recommended additional investigations prior to authorization. USACE responded that the determination of number and locations of hydrologic gauges will be developed during PED phase and is part of the overall Operations and Management (O&M) cost. To date this has not been completed during the PED phase. Therefore the Service again makes the following recommendations:
 - a. USACE undertake, as necessary, hydrologic adaptations, such as gapping, both in the interior and exterior swamp to allow for adequate water exchange;
 - b. USACE undertake, as necessary, the installation of additional culverts and/or water control structures in the levee to ensure adequate water exchange while maintaining that all structures should be closed only in advance of tropical storms;
 - c. That USACE maintains that all structures should be closed only in advance of named tropical storms.
 - d. That hydrologic gauges be placed and maintained in appropriate locations to assist in determining future impacts to enclosed and exterior forested wetlands. These gauges could be supported or cost-shared through existing activities such as through the US Geological Survey (USGS) or CRMS.
 - e. Additionally, the Service recommends a biomass study be conducted to help determine impacts to the forested wetlands.

If USACE has decided to not undertake the above recommendations the Service would like to meet and discuss a future course of action to ensure adequate mitigation for those impacts.

Response 5 –Hydrologic modeling and the WVA assessment for the proposed action did not assume any hydrologic adaptations, such as gapping would be conducted. CEMVN has increased the number of drainage structure locations from six in the 2016 WSLP EIS to up to

ten in the Proposed Action in order to maintain existing hydrologic conditions to the maximum extent practicable. Additionally, culverts and bridges have been added to access road designs to better maintain interior water exchange within the protected side of the levees. Closure of the drainage structures and pumps is only authorized to occur in advance of tropical storms and for regular maintenance and inspections. Deployment of a network of hydraulic gages would occur to assess conditions associated with the WSLP Project. This would include the installation of equipment that would continuously (e.g., at an hourly interval) record water quality parameters such as salinity, temperature, and water surface elevation. These data would be used to test the WVA assumptions made in regards to indirect impacts to determine whether adaptive management actions, such as gapping, are needed to avoid an increase in mitigation requirements. MVN would implement appropriate adaptive management subject to cost sharing requirements, availability of funding, and budgetary and other guidance, if found necessary. Coordination on mitigation and adaptive management plans is ongoing with USFWS and LDWF. The mitigation plan for all currently identified impacts from construction of the WSLP can be found in SEA 576.

6. The WSLP levee crosses four separate tracts of Maurepas Swamp WMA (i.e., Mellon, MC Davis, Rogers 1, and Rogers 2). Each individual Act of Sale or Act of Donation requires property alienated by WSLP levee construction to be exchanged for other property of equal or greater wetland ecological function and value.

Response 6 – Acknowledged, CEMVN will continue to coordinate with LDWF and the NFS regarding alienation of MSWMA property as a result of the WSLP Project. CEMVN will consider LDWF's recommendations on mitigation projects as well as land purchases to mitigate impacts on LDWF's property.

7. Operational plans for floodgates and water control structures should be developed to maximize the open cross-sectional area for as long as possible. Water control structure operation manuals or plans should be developed in coordination with the Service and other natural resource agencies.

Response 7 – Closure of the drainage structures and pumps is only authorized to occur in advance of tropical storms and for regular maintenance and inspections. Closures are estimated to be necessary approximately 8.5 days per year on average. Otherwise, drainage structures would remain open and pumping stations would not be operated. This would continue for the entire project life, regardless of sea level rise or non-tropical storm related high water events. This would also maintain, to the extent possible, existing hydrologic conditions within the wetlands on the protected side of the levee system. Coordination with USFWS and other agencies will continue during completion of the project's Operations, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) plans.

8. To aid in water quality improvements, any pumping stations associated with the project should not discharge directly into canals or other open water bodies, but rather into wetland systems that can assimilate nutrients being discharged.

Response 8 – Pump stations are located adjacent to and would discharge into exterior canals in an effort to maintain the existing water flow and nutrient exchange.

9. The trigger for structure closures would be tropical storm events. Therefore, the project would not close the system more often due to higher day-to-day sea level rise impacts. If the sponsor/operator sees a higher level of sea level rise and starts to see increased

soil saturation/flooding in developed areas, they may want to change the operations to close the structures at high tides. A change in operations would be considered a separate project purpose and authorization and would require a new NEPA documentation and/or a permit approval for this operation change. It is unknown at present how water levels within the system would be managed if a change in operation due to RSLR is realized. Hence, there is a potential for substantial additional indirect impacts to swamp and fish and wildlife resources to occur. If the system is closed more often due to higher RSLR impacts, the Service recommends additional impacts be evaluated and mitigated.

Response 9 – Concur. Drainage structures and pump stations are only authorized to operate during threat of tropical storms and for routine maintenance and inspections. A change in operations would be considered a change in project authorization, and would require new NEPA documentation. Impacts should be re-evaluated if this occurs and mitigation could be required.

10. If it becomes necessary to use borrow sources other than the previously proposed environmentally cleared sites, the Service recommends USACE begin investigating potential borrow sources in coordination with the Service. Borrow sites to be considered should have minimal impacts to fish and wildlife resources. The Service provided a list of such sites via a September 9, 2008, letter and identified a priority selection process for borrow sites in our August 7, 2006, letter to USACE regarding the Greater New Orleans Hurricane and Storm Damage Risk Reduction project (Appendix A). That prioritization process should be utilized if additional borrow sites are needed (please contact Cathy Breaux (504)862-2689 or David Walther (337)291-3122 for more information).

Response 10 – Acknowledged. If additional borrow or changes in the borrow plan for WSLP become necessary, CEMVN would coordinate such changes with USFWS. Impacts to fish and wildlife resources would be avoided and minimized to the maximum extent practicable before mitigation would be pursued.

11. The Service recommends that enough money be set aside for adaptive management to address potential impacts of the enclosed and exterior wetlands. The Service, LDWF, and other natural resource agencies should be consulted in the development of plans and specifications for all mitigation features and any monitoring and/or adaptive management plans. In addition, the Service recommends the Monitoring and Adaptive Management Plan, as it is further developed, be provided to the Service and LDWF for review, comment, and input.

Response 11 - Deployment of a network of hydraulic gages is being considered to determine whether adaptive management features would be necessary. This would include the installation of equipment that would continuously (e.g., at an hourly interval) record water quality parameters such as salinity, temperature, and water surface elevation. Currently, the need for adaptive management has not been identified and specific funds are not being set aside for adaptive management. USACE would implement appropriate adaptive management subject to cost sharing requirements, availability of funding, and budgetary and other guidance, if found necessary. Coordination on mitigation and adaptive management plans is ongoing with USFWS and LDWF.

12. In order to avoid adverse impacts to bald eagles and their nesting activities the Service and LDWF recommend that a qualified biologist continue to inspect the construction site

for the presence of new or undocumented bald eagle nest within 1,500 feet of the levee construction area.

Response 12 – Concur. No active, inactive, or alternate bald eagle nests have been observed during any survey to date. A qualified biologist would continue to monitor the area for active, inactive, and alternate bald eagle nests and colonial waterbird nesting activity within the vicinity of the Proposed Action. All eagle monitoring events would be coordinated with USFWS. In order to avoid adverse impacts to nesting wading bird colonies a qualified biologist would inspect the construction site for the presence of undocumented nesting colonies during the nesting season (i.e., September 1 through February 15 for wading bird nesting colonies and October through mid-May for bald eagles).

13. In order to avoid adverse impacts to nesting wading bird colonies the Service and LDWF recommend that a qualified biologist continue to inspect the construction site for the presence of undocumented nesting colonies during the nesting season (i.e., September 1 through February 15 for wading bird nesting colonies and October through mid-May for bald eagles).

Response 13 – Concur. No nesting wading bird colonies or wading birds exhibiting pre-nesting behaviors have been observed during any survey to date. A qualified biologist would continue to monitor the project area for the presence of undocumented nesting colonies. Bird abatement procedures would be implemented to prevent wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants from nesting during their nesting period. In the event that implementation of the bird abatement plan is not successful and nesting does occur, all activity occurring within the distance provided by USFWS would be suspended and further coordination with USFWS would occur.

14. West Indian manatees occasionally enter Lakes Pontchartrain and Maurepas, and associated coastal waters and streams during the summer months (i.e., June through September). During in-water work in areas that potentially support manatees all personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable. For more detail on avoiding contact with manatee contact this office. Should a proposed action directly or indirectly affect the West Indian manatee, further consultation with this office will be necessary.

Response 14 - Concur. All personnel associated with project in-water work areas will be instructed about the potential presence of manatees; to obey speed zones; and to avoid collisions with manatees; and be advised that there are civil and criminal penalties for harming, harassing, or killing manatees. Personnel will also be instructed not to attempt to feed or otherwise interact with the manatee. The USACE will consult with the USFWS should a Proposed Action potentially directly or indirectly affect the West Indian manatee.

15. Construction of the WSLP levee will occur partly within the boundaries of Maurepas Swamp Wildlife Management Area. Please continue coordinate all activities within the

WMA with LDWF. Please contact Cornelius Williams at 225-763-8807 or cjwilliams@wlf.la.gov for more information about appropriate WMA authorizations.

Response 15 – Concur. Coordination with LDWF regarding impacts to the Maurepas Swamp WMA is ongoing. Appropriate authorizations and permissions would be attained prior to work within the boundaries of Maurepas Swamp WMA. Coordination with Mr. Williams will continue for the Proposed Action and other WSLP Project activities.

16. The Service recommends that the USACE contact the Service for additional consultation if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. Additional consultation as a result of any of the above conditions or for changes not covered in this consultation should occur before changes are made and or finalized.

Response 16 – Concur. The USACE will continue to coordinate with USFWS during construction of the project and will keep the USFWS apprised of any changes to the project that may affect listed species or designated critical habitat before such impacts occur.

There are many Federal and state laws pertaining to the enhancement, management and protection of the environment. Federal projects must comply with a variety of environmental laws, regulations, policies, rules, and guidance. Compliance with applicable laws will be accomplished before or concurrent with 30-day public and agency review of this SEA 571 and prior to execution of the associated proposed Finding of No Significant Impact.

8 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 a variety of environmental laws, regulations, policies, rules, and guidance. Compliance with applicable laws will be accomplished before or concurrent with 30-day public and agency review of this SEA 571 and prior to execution of the associated proposed Finding of No Significant Impact.

8.1 Clean Air Act of 1972

The Clean Air Act (CAA) sets goals and standards for the quality and purity of air. It requires the Environmental Protection Agency to set NAAQS for pollutants considered harmful to public health and the environment. The Project Area is in St. John the Baptist and St. Charles Parishes, which are currently in attainment of NAAQS. A general conformity determination is not required.

8.2 Clean Water Act of 1972 – Section 401 and Section 404

The CWA sets and maintains goals and standards for water quality and purity. Section 401 requires a Water Quality Certification (WQC) from the LDEQ that a proposed project does not violate established effluent limitations and water quality standards. On May 15, 2020 the LDEQ determined that the requirements of a Water Quality Certification have been met and issued a WQC (WQC 200512-01) (Appendix VII, Annex B).

As required by Section 404(b)(1) of the 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. Section 404(b)(1) public notice was mailed out for public review comment period beginning April 23, 2020 and ending May 23, 2020. There were no comments received during this time period. The final Section 404(b)(1) evaluation is located in Appendix VII, Annex B.

8.3 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 proposed project and submitted on May 6, 2020 to Louisiana Department of Natural Resources (LDNR) for the Proposed Action, and LDNR concurred via letter dated June 11, 2020 (Appendix VII, Annex D).

8.4 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 USFWS identified two T&E species, the gulf sturgeon, and the West Indian manatee, which are known to occur or believed to occur within the vicinity of the Proposed Action. On March, 25 2020, USFWS reviewed this project for effects to Federal trust resources under their jurisdiction and currently protected by the Endangered Species Act of 1973, concurring that the project, as proposed, is not likely to adversely affect these resources (Appendix VII, Annex E).

8.5 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. The FWCA requires that fish and wildlife resources receive equal consideration to other project features. The FWCA also 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 (CAR) that details existing fish and wildlife resources in a Project Area, potential impacts due to a proposed project and recommendations for a project. The USFWS reviewed the proposed action and provided a Final CAR with project specific recommendations on June 12, 2020 (Appendix VII, Annex A).

8.6 Hazardous, Toxic, and Radioactive Waste

The discharge of dredged material into waters of the United States is regulated under the Clean Water Act (CWA). In the absence of a known Hazardous, Toxic, and Radioactive Waste (HTRW) concern, the Proposed Action would not qualify for an HTRW investigation. Engineer Regulation (ER) 1165-2-132 provides that in the Planning, Engineering and Design (PED) Phase that, for proposed project in which the potential for HTRW problems has not been considered, an HTRW initial assessment, as appropriate for a reconnaissance study, should be conducted as a first priority. If the initial assessment indicates the potential for HTRW, testing as warranted and analysis similar to a feasibility study should be conducted prior to proceeding with the project design. The NFS will be responsible for planning and accomplishing any HTRW response measures, and will not receive credit for the costs incurred.

An ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA), HTRW 18-05 dated December 19, 2019 and addendum on March 14, 2019 has been completed and a copy is being maintained on file at CEMVN. Project associated work has been ongoing since May 2019. The probability of encountering HTRW for the Proposed Action is low based on the initial site assessment. If a recognized environmental condition is identified in relation to the Project Area, CEMVN 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.

8.7 Magnuson-Stevens Fisheries Conservation and Management Act

These laws govern marine fisheries management in the U.S. Essential Fish Habitat (EFH) does not intersect the proposed alignment or the enclosed area in the near term. The USACE has determined that the Recommended Plan would have no impacts to EFH. In a letter dated October 1, 2013, the National Marine Fisheries Service stated the WSLP Project, as described in the 2016 WSLP Draft EIS, would not adversely impact EFH and that an EFH assessment is unnecessary (Appendix VII, Annex F).

8.8 Migratory Bird Treaty Act

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 (MBTA). Colonial nesting wading bird, neotropical migratory birds, and other birds are protected under the MBTA (50 CFR 10.13). During nesting season, construction and other related activities must take place outside of USFWS/LDWF buffer zones. A USACE Biologist and USFWS Biologist have surveyed for nesting birds prior to associated work described in SEA 570 that is ongoing. In addition, CEMVN recommends that on-site contract personnel be trained to identify colonial nesting birds and their nests and avoid affecting them during the breeding season. Coordination with the USFWS pursuant to the BGEPA and MBTA has been initiated and is ongoing. Surveys for bald eagle nests and colonial nesting waterbird nests would continue. BMPs, included the development of a NPP, would be used. Coordination with the USFWS and the LDWF is ongoing for MBTA and BGEPA trust species.

8.9 National Historic Preservation Act and Tribal Consultation

In compliance with Section 106 of the act and 36 CFR Part 800, Federal agencies must take into account the effects of their actions on historic properties and afford the ACHP) a reasonable opportunity to comment on such undertakings. Historic properties include any prehistoric or historic district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. A Federal agency shall consult with any federally recognized Indian Tribe that attaches religious and cultural significance to such properties. Agencies shall afford the State Historic Preservation Officer (SHPO) and Indian tribes a reasonable opportunity to comment before decisions are made. Section 106 consultation was initiated for the WSLP project with the SHPO and Indian tribes on May 3, 2013. USACE has determined that the effects on historic properties cannot be fully determined before plan approval, and pursuant to 36 CFR 800.14(b) CEMVN has elected to fulfill its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended, through the execution and implementation of a Programmatic Agreement (PA). In accordance with the stipulations of the PA, the proposed action as described in SEA #570 will be coordinated with the SHPO and identified federally recognized Indian Tribes and any necessary cultural resources surveys will be conducted prior to implementation of the proposed action. A copy of the executed PA for consultation, identification of historic properties, assessment and resolution of adverse effects is included in Appendix VII, Annex G.

8.10 Executive Order 11988

Executive Order 11988 (EO 11988) requires Federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. FEMA Region VI requested the Proposed Action be in compliance with EO 11988, and requested coordination with the community floodplain administrators for St. John the Baptist and St. Charles Parishes via letter dated April 5, 2019 during the public review period for Draft SEA 570. CEMVN contacted the floodplain administrators for both parishes. The administrator for St. John the Baptist Parish responded with concerns about potential flood impacts from the stockpile/staging areas and access roads proposed to be located either partially or entirely within Special Flood Hazard Areas (SFHAs). CEMVN considered these concerns and concluded that no significant long or short-term adverse impacts to SFHAs would be incurred from implementation of the Proposed Action. If any impacts to the SFHAs or the floodplain occur, they are expected to be negligible to minor and would be only temporary. CEMVN has provided this determination in letter on DATE xyz and will continue coordination with both floodplain administrators (Appendix VII, Annex H). The Proposed Action would, in part, support the construction of the WSLP levee alignment in St. John the Baptist and St. Charles Parishes. The eight-step EO 11988-Floodplain Management evaluation process and a determination of compliance with EO 11988 is documented in the 2016 WSLP EIS, which is incorporated here by reference.

8.11 Executive Order 11990

Executive Order 11990 (EO 11990) directs Federal agencies to avoid to the extent possible, long and short term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. FEMA Region VI requested the Proposed Action be in compliance with EO 11990, and requested coordination with the community floodplain administrators for St. John the Baptist and St. Charles Parishes via letter dated April 5, 2019 during the public review period for Draft SEA 570. The mitigation plan described in SEA 576 was developed to fully mitigate for unavoidable impacts associated with the Proposed Action. CEMVN contacted both community floodplain administrators coordinating this determination via letter dated April 26, 2019 (Appendix VII, Annex I).

9 Conclusion

The Proposed Action would consist of modifications to the levee system described in the 2016 WSLP EIS necessary to aid in the constructability, improve the engineering, decrease the utility relocations, increase safety at interstate crossings, and accommodate construction of the CPRA's River Reintroduction into Maurepas Swamp Project. Direct impacts associated with the Proposed Action consist of approximately 26 less acres of direct, negative impacts to swamp habitat (approximately 28 less AAHUs), and approximately 93 more acres of direct, negative impacts to BLH habitats (approximately more 54 AAHUs) as compared to the 2016 WSLP EIS and SEA 570. Indirect impacts associated with the Proposed Action negatively affect approximately 1,322 more acres of swamp (143 less AAHUs), and 4,546 more acres of BLH (121 more AAHUs) as compared to the 2016 WSLP EIS and SEA 570.

Direct and indirect negative impacts to wildlife, aquatic, and fisheries resources, including ESA, BGEPA, and MBTA trust species would be a result of the negative impacts to forested habitat, alterations in hydrology, and negative impacts to water quality. The incremental loss to these resources, compared to those described 2016 WSLP EIS and SEA 570, would be minor. The loss of habitat on LDWF property would occur within the Maurepas Swamp Wildlife Management Area, causing a negative impact to recreational use to a portion of this 124,567-acre WMA. However, since habitat impacts would be mitigated to the extent practicable on LDWF property, impacts to these resources would be temporary.

There would be impacts to soils and prime and unique farmlands associated with the use of stockpiling/borrow areas. No wetlands would be impacted from use of the borrow areas. No significant increases in traffic are expected from transportation of material from borrow locations to stockpiling areas or to the levee system ROW. There could be some minor impacts to EJ communities associated with transportation, but these are expected to not be disproportionate.

If CEMVN concludes from data obtained from installed water quality monitors, that additional compensatory mitigation is required for the project, implementation of adaptive management features to avoid impacts or mitigation for these impacts would be addressed in subsequent NEPA documentation.

This office has assessed the environmental impacts of the Proposed Action and has determined that the Proposed Action, with implementation of the mitigation plan found in SEA 576, would have no significant adverse impact on the human and natural environment.

10 Prepared By

SEA 571 and the associated FONSI were prepared by Patrick Smith, PhD, Biologist. Table 12 lists the preparers of relevant sections of this report and the project managers. Dr. Smith can be reached at U.S. Army Corps of Engineers, New Orleans District; Regional Planning and Environment Division South, PDS-C; 7400 Leake Avenue; New Orleans, Louisiana 70118.

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Regional Planning and
Environment Division South
Environmental Planning Branch

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (571)

**West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Levee
System**

St. Charles and St. John the Baptist Parishes, Louisiana

Description of the proposed action. The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division (MVD), Regional Planning and Environment Division South (RPEDS), has prepared this Supplemental Environmental Assessment (SEA) for the New Orleans District (CEMVN) to evaluate potential impacts of a levee shift and related activities necessary to construct the levee alignment footprint in St. John the Baptist and St. Charles Parishes, Louisiana, as described in the West Shore Lake Pontchartrain Environmental Impact Statement (2016 WSLP EIS; <http://www.mvn.usace.army.mil/About/Projects/West-Shore-Lake-Pontchartrain/>). The Record of Decision (ROD) for the 2016 WSLP EIS was signed by the Assistant Secretary of the Army on September 14, 2016. Supplemental Environmental Assessment #570, West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations St. Charles and St. John the Baptist Parishes, Louisiana (SEA 570) also investigated some levee alignment shifts as well as the addition of five stockpile/staging areas for construction related activities and the addition of a mitigation bank credit purchase option into the mitigation plan approved in the 2016 WSLP EIS for compensating bottomland hardwoods (BLH) impacts. The Finding of No Significant Impacts (FONSI) associated with SEA 570 was signed by the CEMVN District Commander on May 13, 2019. The 2016 WSLP EIS and ROD, and SEA 570 and FONSI are hereby incorporated by reference.

The proposed action would include modifications to the levee system in St. John the Baptist and St. Charles Parishes, Louisiana described in the 2016 WSLP EIS, and features described in SEA 570. The modifications proposed herein would be in a similar location with similar features as described in the 2016 WSLP EIS and SEA 570. Nowhere within the proposed action levee system alignment/footprint would there be a 100% overlap with the 2016 WSLP EIS levee system alignment/footprint. This is due to an increase in the levee footprint where the results of field investigations and advanced engineering and design have found it necessary, and a shift in the entire levee system to accommodate for the recent installation of a new pipeline. The levee system would

be between approximately 20 – 100 feet wider from the upper guide levee of the Bonnet Carré Spillway to near the crossing at US Highway 61 where it would decrease to approximately the same width as described in the 2016 WSLP EIS. The proposed action also includes additional levee system ROW for pump station construction. Approximately 30-40% of the current levee system ROW is co-located with the 2016 WSLP EIS levee system ROW. The exact location of the levee system ROW could still shift slightly, but no less than approximately 30% of it would be co-located with the 2016 WSLP EIS and levee size would not change.

There are four shifts, other than the increase in size and slight shift due to installation of a new pipeline. Three shifts that could aid in the constructability, improve the engineering, and decrease the utility relocations needed for the alignment are being considered. A fourth shift would accommodate CPRA's River Reintroduction into Maurepas Swamp Project.

Other modifications that are part of the proposed action include:

1. Updated borrow plan
2. Modifications to access roads
3. Addition of new access roads
4. Sand placement plan
5. Updated drainage structure design
6. Addition of new drainage structures
7. Updated pump station design
8. Addition of new pump stations
9. Updated transportation plan
10. Potential for the NFS to design and build the western section of the levee system
11. Potential to alter existing spoil banks in the Project Area and vicinity

Construction for the proposed action is expected to end in 2023 according to the current schedule.

The proposed action would directly impact approximately 26 less acres of swamp (28 less AAHUs) and 93 more acres of BLH (54 more AAHUs) and indirectly impact approximately 1,322 more acres of swamp (143 less AAHUs) and 4,546 more acres of BLH (121 more AAHUs) as compared to the 2016 WSLP EIS and SEA 570. A total of 1,295 more swamp acres (171 less AAHUs) and 4,639 more acres of BLH (175 more AAHUs) would be impacted as a result of the proposed action. All impacts to wetlands would be offset through either the purchase of mitigation bank credits or the construction of new, restored or enhanced habitats to replace the lost habitats in accordance with the Clean Water Act, Section 404(b)(1) and the Water Resources Development Act of 1986, Section 906, as amended. The mitigation plan is described in SEA 576.

Factors Considered in Determination. CEMVN has assessed the impacts of the No-Action and the proposed action alternatives on important resources, including

hydrology, water quality, wetlands, wildlife resources, aquatic and fisheries resources, Threatened, Endangered, and Protected Species, cultural resources, soils and prime and unique farmland, aesthetics and visual resources, recreational resources, environmental justice, air quality, noise, and transportation. No significant adverse impacts were identified for any of these important resources. All practical means of avoiding adverse environmental effects have been adopted. All unavoidable habitat impacts would be fully mitigated through the plan identified in SEA 576.

In correspondence dated June 11, 2020, (CZD 20140059 mod05), the Louisiana Department of Natural Resources (LDNR) stated that the Proposed Action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program. The Louisiana Department of Environmental Quality (LDEQ) issued a State Water Quality Certification (WQC 200512-01) on May 15, 2020 and a Section 404(b)(1) was signed on June 12, 2020 at the end of a 30 day public review period. In a letter dated November 30, 2017, the Louisiana State Historic Preservation Officer (SHPO) stated that no known historic properties would be affected by undertaking the Proposed Action. Through correspondence dated March 25, 2020, the USFWS stated that the Proposed Action would not likely adversely affect any threatened or endangered species in the Project Area. CEMVN has concurred with, or resolved, all draft Fish and Wildlife Coordination Act recommendations contained in a letter from the U.S. Fish and Wildlife Service (USFWS) dated June 11, 2020.

The CEMVN would implement and comply with the stipulations identified in the National Historic Preservation Act (NHPA) Programmatic Agreement regarding the WSLP Hurricane Storm Damage Risk Reduction System, as executed on May 16, 2014.

Environmental Design Commitments. The following commitments, as recommended by the USFWS are an integral part of the proposed action:

1) Hydrologic gages will be planned and installed in the vicinity of the Proposed Action. These data would be used to test the WVA assumptions made in regards to indirect impacts to forested wetlands.

2) A qualified biologist will inspect the proposed work site for the presence of undocumented nesting wading bird colonies and eagle's nests during the nesting season (i.e., September 1 through February 15 for wading bird nesting colonies and October through mid-May for bald eagles).

3) For areas containing nesting wading birds (i.e., herons, egrets, night-herons, ibises, roseate spoonbills, anhingas, and/or cormorants), all activity occurring within 1,000 feet of a nesting colony will be restricted to the non-nesting period.

4) If an eagle's nest is discovered within 1,500 feet of the proposed action, then an evaluation and coordination with USFWS will be performed.

5) All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). All work, equipment, and vessel operation should cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once

the manatee has left the buffer zone of its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s).

6) Authorizations and permissions will be obtained from Louisiana Department of Wildlife and Fisheries prior to any work on the Maurepas Swamp Wildlife Management Area. Compensatory mitigation for impacts on LDWF property would occur on LDWF property to the extent practicable.

Public Involvement. Public Notice of the release and availability of the draft SEA and FONSI for public comment was published in the New Orleans Advocate on April 21, 2020. They were also mailed to persons and entities on the public mailing list for a 30 day public review and comment period that started April 23, 2020, and it was made available for download at <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/West-Shore-Lake-Pontchartrain/>.

The proposed action has been coordinated with appropriate Federal, state, and local agencies and businesses, organizations, and individuals. Eleven comments were received during the public review of SEA 571 that covered a variety of topics, including concerns regarding changes in water surface elevation outside of the project area, mitigation planning, and wetland impacts. Two comments asked for copies of the draft SEA. Five comments offered no objection or explicit support for the proposed action. All comments received during the public review period and responses to these comments can be found in Appendix VIII.

Conclusion. CEMVN Environmental Planning Branch has assessed the potential environmental impacts of the Proposed Action, considered all public comments received during the public review period, and has determined that the action, if implemented, would not cause significant environmental impacts. Any habitat impacts would be mitigated through implementation of the mitigation plan described in SEA 576.

I have reviewed SEA 571 and have considered public and agency comments and recommendations. Based on the assessment conducted in SEA #571 and the implementation of the environmental design commitments listed above, I have determined that the proposed action will not have significant impacts and does not require the preparation of a Supplemental Environmental Impact Statement.

The plan is justified and in accordance with environmental statutes. It is in the public interest to implement the proposed action in SEA 571.

6/29/20
Date


Stephen Murphy,
Colonel, U.S. Army
District Commander