

2021

Lake Pontchartrain & Vicinity GRR Appendix G – Environmental Compliance



**US Army Corps
of Engineers**
New Orleans District

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

Non-Federal Sponsor: Coastal Protection and
Restoration Authority Board of Louisiana

March 2021

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TABLE OF CONTENTS

1 CLEAN WATER ACT COMPLIANCE..... 1

1.1 404(B)1 EVALUATION..... 1

 1.1.1 INTRODUCTION..... 1

 1.1.2 FACTUAL DETERMINATIONS 8

 1.1.3 FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE.....14

1.2 401 WATER QUALITY CERTIFICATION APPLICATION LETTER17

1.3 401 WATER QUALITY CERTIFICATION18

2 ENDANGERED SPECIES ACT COMPLIANCE.....20

2.1 NATIONAL MARINE FISHERIES SERVICE CONSULTATION.....20

2.2 NMFS RESPONSE LETTER.....34

2.3 U.S. FISH AND WILDLIFE SERVICE CONSULTATION35

2.4 USFWS RESPONSE LETTER43

2.5 OFFICAL SPECIES LIST: 26 OCT 202045

3 FISH AND WILDLIFE COORDINATION ACT REPORTS52

3.1 DRAFT FISH AND WILDLIFE COORDINATION ACT REPORT 30 OCTOBER 201952

3.2 FINAL FISH AND WILDLIFE COORDINATION ACT REPORT 14 JANUARY 202163

4 ESSENTIAL FISH HABITAT COMPLIANCE 7 FEB 202082

5 COASTAL ZONE MANAGMENET ACT COMPLIANCE – CONSISTENCY DETERMINATION DECEMBER 201984

5.1 CORRESPONDENCE WITH LOUSIANA DEPARTMENT OF NATURAL RESOURCES – FEBRUARY 2020105

5.2 LDNR OFFICE OF COASTAL MANAGEMENT REQUEST FOR REVIEW EXTENSION 7 FEB 2020.....114

5.3 LDNR OFFICE OF COASTAL MANAGEMENT 20 FEB 2020115

5.4 CONSISTENCY MODIFICATION CORRESPONDENCE WITH LOUISIANA DEPARTMENT OF NATURAL RESOURCES – NOVEMBER 2020.....117

6 CLEAN AIR ACT COMPLIANCE122

6.1 AIR QUALITY CONFORMITY ANALYSIS122

LAKE PONTCHARTRAIN & VICINITY GRR

APPENDIX G – ENVIRONMENTAL COMPLIANCE

1 CLEAN WATER ACT COMPLIANCE

1.1 404(B)1 EVALUATION

1.1.1 INTRODUCTION

A. Purpose, Location, General Description, and Authority

The general purpose of the Lake Pontchartrain and Vicinity (LPV) General Re-Evaluation Report study with integrated Environmental Impact Statement (GRR-EIS) is to analyze alternatives to reduce hurricane and storm risk within the LPV study area.

The study area is located on the east bank of the Mississippi River south of Lake Pontchartrain within St. Charles, Jefferson, Orleans, and St. Bernard Parishes in southeast Louisiana (Figure 1). The western end of the study area abuts the Bonnet Carré spillway. The eastern end of the study area is located in the Bayou Sauvage National Wildlife Refuge and along the Mississippi River Gulf Outlet (MRGO). The study area includes the communities of New Orleans, Norco, Kenner, Elmwood, Metairie, Chalmette, Poydras, and St. Bernard. A full study area description is provided in Section 1.6 of the LPV GRR-EIS.

The study authority is provided in Section 1.3 of the LPV GRR-EIS.

Features included in the Recommended Plan requiring placement of fill in waters of the U.S. include foreshore rock protection at reaches LPV-00.2, 01.1, 02.2, 19.2, 20.1, 106, and 108 and associated dredging to allow construction access (Figures 2, 3, and 4) and expansion of Mississippi River levees (Figures 5 and 6).

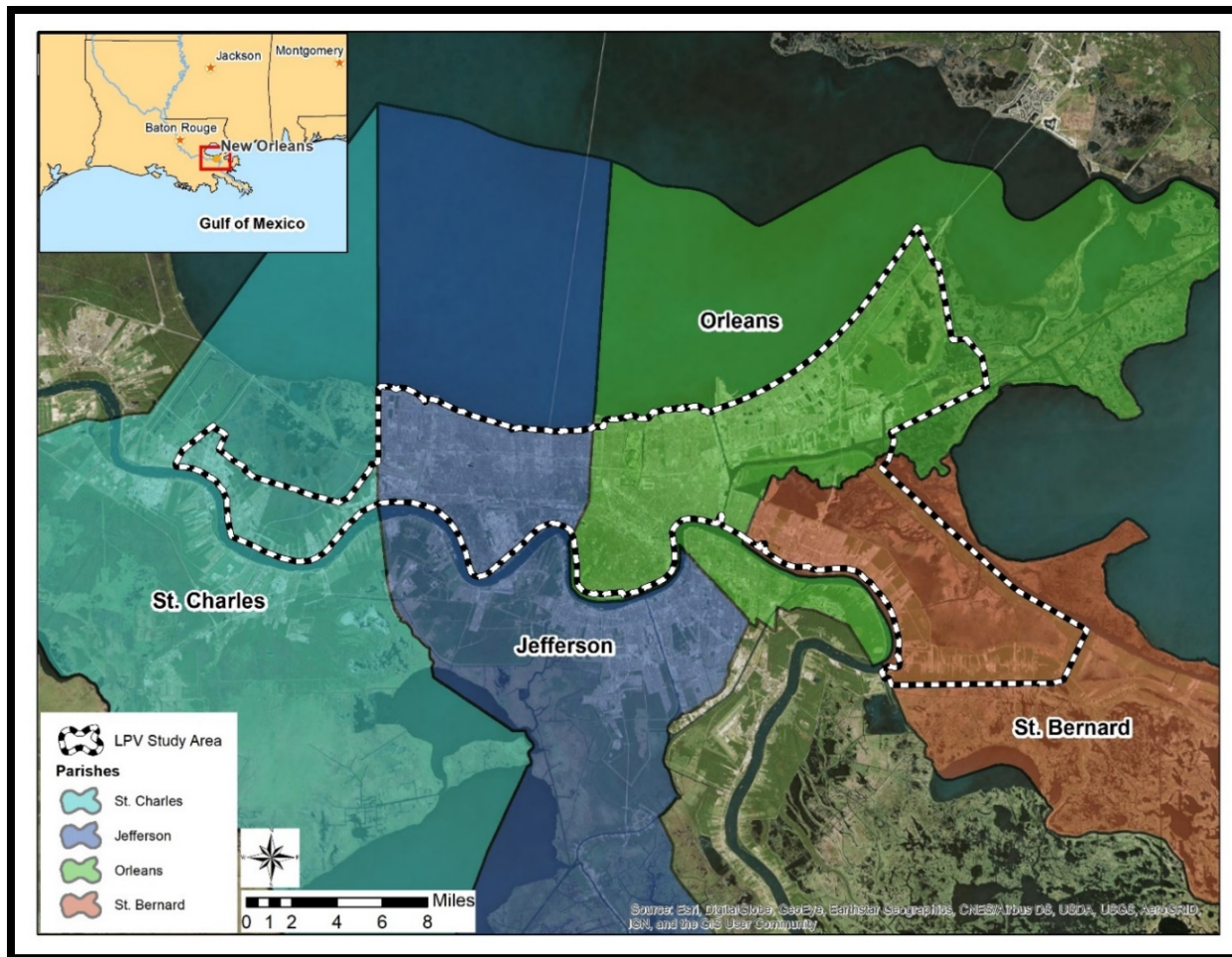


Figure 1. Lake Pontchartrain and Vicinity Study Area.



Figure 2. Foreshore protection placement and construction access dredging areas.

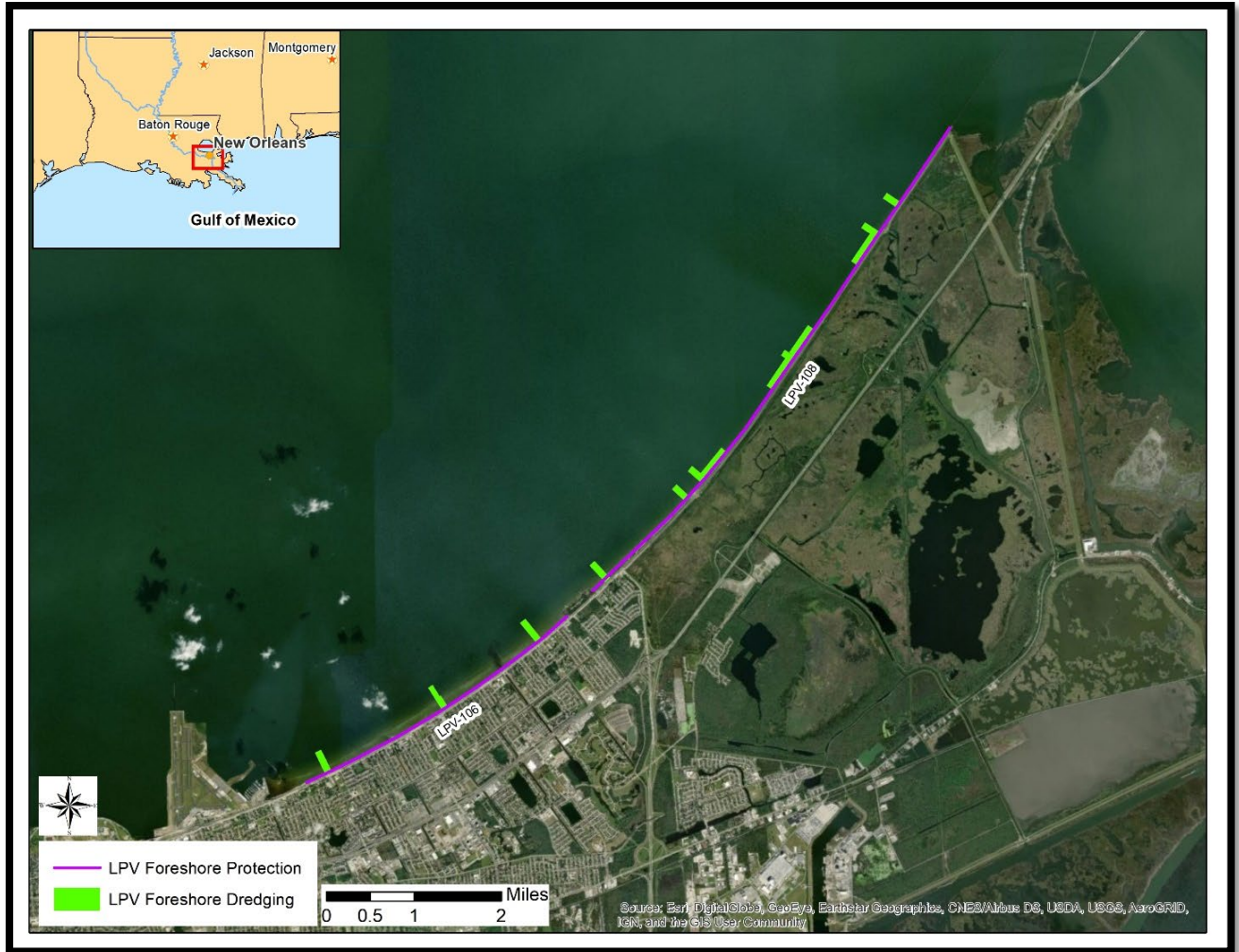


Figure 3. Foreshore protection placement and construction access dredging areas.

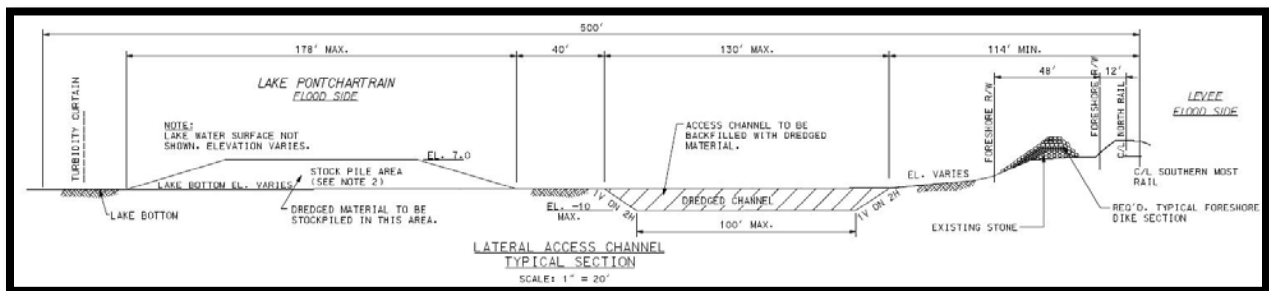


Figure 4. Typical section along Lake Pontchartrain shoreline.

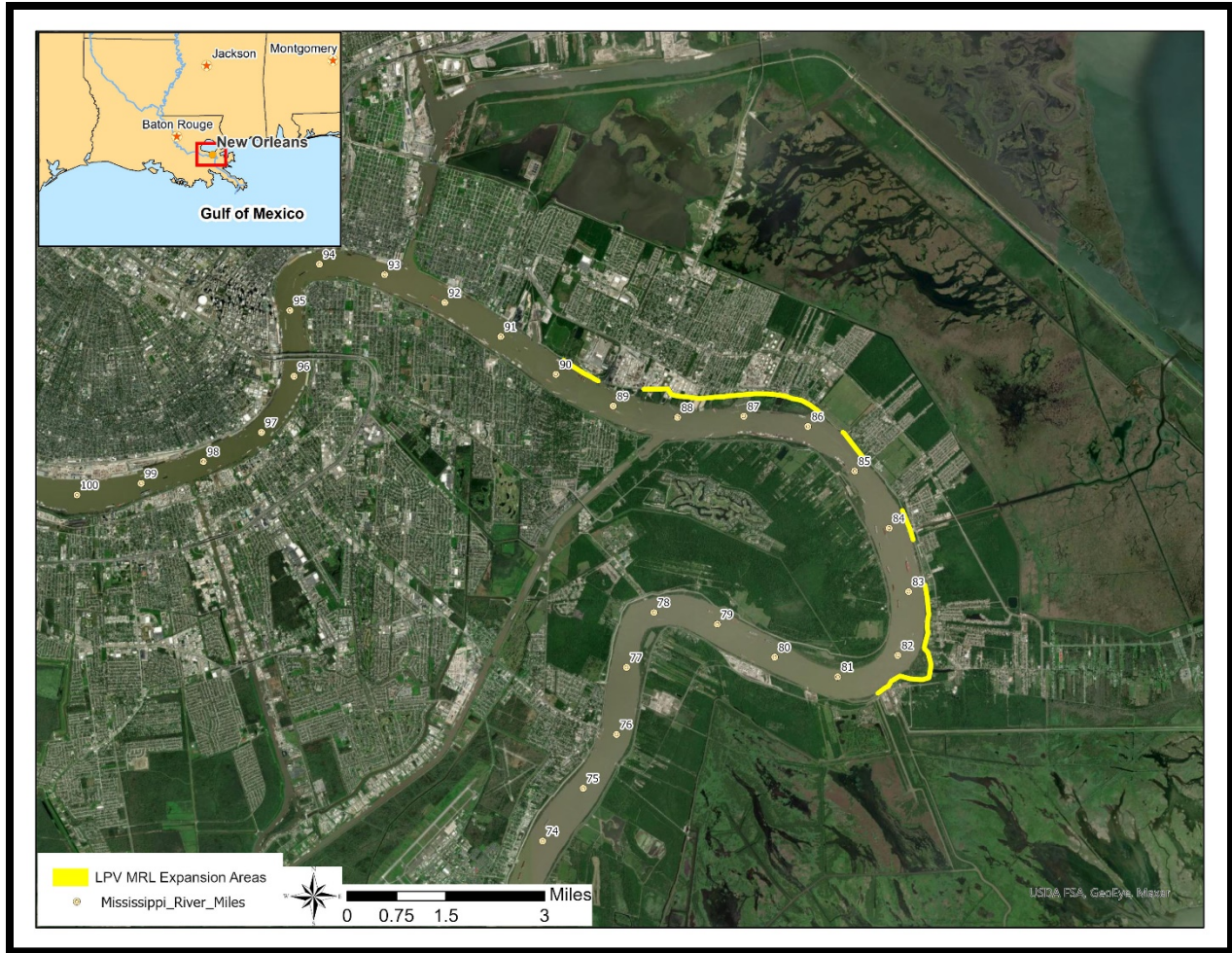


Figure 5. Mississippi River levee expansion areas.

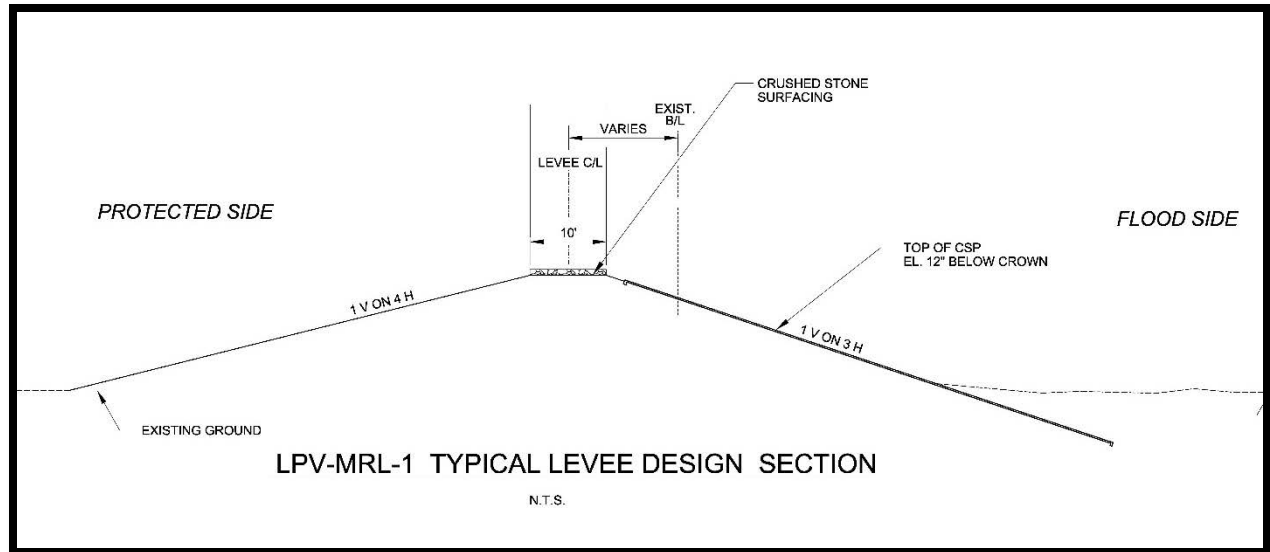


Figure 6. Typical Mississippi River levee design section.

B. General Description of Dredged and Fill Material.

(1) General Characteristics of Material.

Graded stone meeting the following specifications would be used for construction of foreshore protection.

Graded Stone Gradation	
Percent Lighter by Weight	Limits of Stone Weight (lbs.)
100	2200-900
50	930-440
15	460-130

Material dredged from the bottom of Lake Pontchartrain would consist of silty sand.

For the Mississippi River levee expansions, design estimates indicate an additional 25 feet would be required on the flood side for construction. These floodside levee shifts would impact approximately 20.27 acres of bottomland hardwood wet habitat. Figure 4 shows locations anticipated to be impacted by floodside levee shifts. Material required for levee lifts would be clean fill consisting of suitable clay material with the following requirements:

- Soils classified as fat or lean clays are allowed
- Soils with organic content greater than 9% are NOT allowed
- Soils with plasticity indices less than 10 are NOT allowed
- Soils classified as silts are NOT allowed
- Clays will NOT have more than 35% sand content

(2) Quantity of Material.

Graded stone in the following quantities would be used for construction of foreshore protection.

Reach	Quantity of Rock (cubic yards)
LPV-00.2	23,218
LPV-01.1	9,356
LPV-02.2	42,742
LPV-19.2	17,907
LPV-20.1	16,602
LPV-106	56,444
LPV-108	73,920

Material would be dredged from the bed of Lake Pontchartrain to provide construction access channels. Construction access channels would consist of parallel channels at the shoreline in areas where rock would be placed as well as perpendicular access channels to allow access to the shoreline channels (see Figure 2 and Figure 3). The dimensions required for barge access channels would be approximately -7 feet depth with 100-foot bottom width. Perpendicular access channels would begin at the elevation -7 ft contour of the lake and extend 400 to 1600 ft. Adjacent dredged material stockpile sites would be 150 ft wide. The total acreage of lake bottom impacted by dredging temporary construction access channels and associated temporary stockpiling would be 213 acres. A maximum of 2.4 million cubic yards of material would be dredged for construction access.

Approximately 2.9 million cubic yards of material would be needed for the levee lifts; however, only a small portion of this quantity would be placed in waters of the U.S. Exact quantities would not be determined until detailed designs are finalized during pre-construction engineering and design.

(3) Source of Material.

Graded stone used in the construction of foreshore protection would be sourced from any approved quarry capable of supplying stone meeting the quantity, quality, and rate requirements of the project.

Dredged material would be native material from the bed of Lake Pontchartrain.

Fill material for levee lifts would be sourced from any approved borrow location, which will be identified during the design phase of the project.

C. Description of the Proposed Discharge Sites.

(1) Location and Size.

Stone placement locations and sizes are as follows:

Reach	Acres
LPV-00.2	14.8
LPV-01.1	7.9
LPV-02.2	16.1
LPV-19.2	11.8
LPV-20.1	9.3
LPV-106	5.2
LPV-108	9.8

Dredged material placement locations and sizes are as follows:

Reach	Acres
LPV-00.2	13.2
LPV-01.1	6.5
LPV-02.2	14.6
LPV-19.2	0
LPV-20.1	0
LPV-106	40.9
LPV-108	137.3

The Mississippi River levee expansion discharge site consists of a 25-foot corridor totaling 20.27 acres on the flood side of the existing levee system approximately from Mississippi River mile 81.5 to 90 (Figure 4).

(2) Type of Habitat.

The proposed sites for rock placement lie along the south shore of Lake Pontchartrain. All of the proposed sites currently have foreshore protection. Lake Pontchartrain east of the causeway is critical habitat (approximately 195,000 acres) for the endangered Gulf sturgeon. Existing habitat consists of rock-filled open water shoreline habitat. Additional stone placement is required within the existing foreshore protection footprint to bring the stone back up to the required elevation for proper levee protection.

The proposed sites for dredging and temporary stockpiling of dredged material lie along the south shore of Lake Pontchartrain. Existing habitat consists of open water lake bottom and water column with some areas of submerged aquatic vegetation (SAV). Areas of Lake Pontchartrain east of the causeway are also critical habitat (approximately 195,000 acres) for Gulf sturgeon. The proposed Mississippi River levee expansion discharge sites consist of bottomland hardwood wet habitat adjacent to the existing Mississippi River levee system.

(3) Timing and Duration of Discharge.

The construction period would be determined by availability of funding, weather, materials, etc. Construction would be expected to last 1.5 to 2.5 years. See Chapter 10 of the LPV GRR-EIS for additional details on project implementation and schedule.

D. Description of Disposal Method.

Stone would be shipped by barge to the project area. Stone would be placed by crane-operated skip-pan, dragline bucket, clamshell, rock-bucket, hydraulic excavator, trackhoe, or other similar equipment. Dredging of construction access channels and placement of temporary stockpiles would be accomplished by bucket dredge. Fill material would be transported to the project area by dump truck. Excavators, bulldozers, and other typical construction equipment would be used at the project site.

1.1.2 FACTUAL DETERMINATIONS

A. Physical Substrate Determinations.

(1) Comparison to Existing Substrate and Fill.

Stone would be placed on top of existing stone foreshore protection that is of similar composition. Dredged material would be placed on top of existing lake bottom material that is of similar composition. Levee fill material would be placed on existing native bottomland hardwood soils along the flood side of existing Mississippi River levee. Major types of existing bottomland hardwood soils include Cancienne and Schriever soils, frequently flooded (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>).

(2) Changes to Disposal Area Elevation.

Placement of foreshore protection would increase existing foreshore protection area elevations by approximately four feet. Construction access channels would increase lake depth by as much as 10 feet. Temporary stockpile areas would increase in elevation by as much as 10 feet. Construction access channels and temporary stockpile areas would be returned to pre-project elevations at project completion. Levee lift disposal locations would be lifted 1 to 2 feet on average.

(3) Migration of Fill.

Migration of the stone foreshore protection would be minimized by the size and nature of the material used. Migration of dredged material and temporary stockpiles would be minimized by the use of silt curtains and other best management practices. Migration of levee lift material would be minimized by use of best management practices during construction and by establishment of levee grasses after construction.

(4) Changes to Environmental Quality and Value.

The placement of stone foreshore protection would permanently convert aquatic habitat to terrestrial. The creation of temporary dredge material stockpile areas would temporarily convert aquatic habitat to terrestrial. The removal of this habitat represents a proportionately very small area (approximately 287 acres) of similar aquatic habitat within the expanse of Lake Pontchartrain, which has an area of over 400,000 acres. The dredging of access channels would temporarily displace and destroy the benthic organisms where the access channels and associated sediment stockpile areas would be located. Increased turbidity from access dredging could affect fish and other organisms. Flotation channels and stockpile areas would be brought to pre-construction lake bottom elevations upon project completion, which would minimize impacts to the lake bottom and re-establish fish habitat in the area.

The floodside shift levee lifts would permanently convert bottomland hardwood-wet habitat to a vegetation free zone along the toe of the levee alignment. The removal of this wetland habitat type is significant but would be compensated for through the purchase of mitigation bank credits (see Appendix K).

Most mobile species would avoid the areas temporarily impacted by dredging as well as shoreline areas that would be permanently lost due to filling. Impacts to less mobile benthic species from these activities likely would occur but would be temporary, with effects lasting until the areas stabilized. Once the proposed action is complete, sediment would settle, benthos would begin to repopulate the affected footprint, and fish and other mobile aquatic species would return.

(5) Actions to Minimize Impacts.

Water quality impacts would be minimized by the use of silt curtains and other best management practices at construction sites. Bottomland hardwood-wet impacts would be compensated for through the purchase of mitigation bank credits. Pre-construction surveys would be required to delineate existing submerged aquatic vegetation (SAV) in Lake Pontchartrain to facilitate avoidance of impacts. Pre-construction SAV surveys and avoidance of SAV impacts would be included in construction contract solicitation language.

B. Water Circulation, Fluctuation, and Salinity Determinations.

(1) Alteration of Current Patterns and Water Circulation.

Minor alterations to current patterns and water circulation patterns can be expected in areas of dredging and temporary stockpiling for the duration of construction activities. Current patterns and water circulation patterns are expected to return to pre-project conditions after completion of construction.

(2) Interference with Water Level Fluctuation.

Project features are designed to prevent coastal storm waters from overtopping project area levees during storm events. No other changes in water level fluctuation are anticipated with implementation of project features.

(3) Salinity Gradient Alteration.

No alterations of salinity gradients are anticipated with implementation of project features.

(4) Cumulative Effects on Water Quality.

Direct minor, short-term, construction-related impacts on water quality from construction activities may include decreased dissolved oxygen levels in the waters immediately surrounding the construction site, decreased clarity due to construction runoff and sedimentation and due to dredging and disposal activities, and increased water temperature due to increased suspended solids produced during construction that could absorb incident solar radiation. Temporary, minor water quality impacts could occur due to increased nutrient loading, miscellaneous debris, and accidental spills from construction equipment. Impacts would be localized and minimized through the use of silt curtains and other best management practices. After construction, conditions would be expected to stabilize and return to conditions similar to pre-construction.

(5) Changes to Environmental Quality and Value.

The temporary changes in water quality variables could have a negative impact on the environmental quality and value of the aquatic habitat in the immediate vicinity of construction activities. Impacts would temporarily displace organisms in construction areas. Most mobile species would avoid the areas temporarily impacted by construction activities. Once the proposed action is complete, fish and other mobile aquatic species would be expected to return. The area impacted by foreshore protection placement and associated dredging (approximately 287 acres) represents a proportionately very small area within the expanse of Lake Pontchartrain, which has an area of over 400,000 acres. Levee lifts would affect the quality and value of approximately 20.27 acres of bottomland hardwood-wet habitat. These impacts would be compensated for through the purchase of mitigation bank credits. Mitigation is outlined in the mitigation and monitoring plan associated with the GRR-EIS.

(6) Actions Taken to Minimize Impacts.

Impacts would be localized and minimized through the use of silt curtains and other best management practices and adherence to regulations governing stormwater runoff at construction sites. Flotation channels and stockpile areas would be brought to pre-construction lake bottom elevations upon project completion, thus avoiding potential creation of isolated anoxic areas in deep holes. Bottomland hardwood-wet impacts would be compensated for through the purchase of mitigation bank credits (See Appendix K).

C. Suspended Particulate / Turbidity Determinations.

(1) Alteration of Suspended Particulate Type and Concentration.

Background turbidity levels in both Lake Pontchartrain and the Mississippi River are highly variable. Lake Pontchartrain is a large estuarine embayment with circulation and wave energies that generally allow for rapid mixing and dilution, and the south shoreline experiences elevated turbidity and suspended sediment based on tropical events, normal weather and wind patterns, wave energy, opening of the Bonnet Carré Spillway, etc. The Mississippi River experiences highly variable turbidity levels primarily based on rainfall patterns in the watershed and resultant runoff.

Direct minor, short-term, construction-related impacts on turbidity are anticipated in the waters immediately surrounding the construction sites due to construction runoff and sedimentation and due to re-suspension of bottom sediments from dredging activities. Impacts would be localized and minimized through the use of silt curtains and other best management practices. After construction, conditions would be expected to stabilize and return to conditions similar to pre-construction.

(2) Particulate Plumes Associated with Discharge.

Particulate plumes would be limited to the immediate vicinity of the sites by the use of silt curtains and silt fencing.

(3) State Water Quality Standards.

Section 303(d) of the Clean Water Act (CWA) requires that states develop a list of waters that do not meet water quality standards and do not support their Designated Uses. Standards apply to pH, temperature, bacterial density, dissolved oxygen (DO), chloride concentration, sulfate concentration, metals and toxics concentrations, turbidity, color, and total dissolved solids (TDS). Established by the state, the Designated Use articulates the vision for the activities that each water resource can support. The Designated Use establishes the water quality management goals for the water body and determines the associated water quality standards to use to determine if the water body supports the Designated Use.

Designated Uses of Lake Pontchartrain include Primary Contact Recreation, Secondary Contact Recreation, and Fish and Wildlife Propagation. Designated Uses of the Mississippi River include Primary Contact Recreation, Secondary Contact Recreation, Fish and Wildlife Propagation, and Drinking Water Supply. All Designated Uses of Lake Pontchartrain and the Mississippi River are fully supported based on the 2018 Louisiana Water Quality Inventory Integrated Report.

No violations of state water quality standards are anticipated as a result of construction activities. State Water Quality Certification (WQC 201117-02) was obtained from the Louisiana Department of Environmental Quality on 15 December 2020.

(4) Changes to Environmental Quality and Value.

The temporary changes in water quality variables could have a negative impact on the environmental quality and value of the aquatic habitat in the immediate vicinity of construction activities. Impacts would temporarily displace organisms in construction areas. Most mobile species would avoid the areas temporarily impacted by construction activities. Once the proposed action is complete, fish and other mobile aquatic species would be expected to return. The area impacted by foreshore protection and associated dredging (approximately 287 acres) represents a proportionately very small area within the expanse of Lake Pontchartrain, which has an area of over 400,000 acres. Levee lifts would affect the quality and value of approximately 20.27 acres of bottomland hardwood-wet habitat. These impacts would be compensated for through the purchase of mitigation bank credits. Mitigation is outlined in the mitigation and monitoring plan associated with the GRR-EIS.

(5) Actions to Minimize Impacts.

Impacts would be localized and minimized through the use of silt curtains and other best management practices and adherence to regulations governing stormwater runoff at construction sites. Use of a clamshell dredge would minimize the introduction of suspended particulates. Flotation channels and stockpile areas would be brought to pre-construction lake bottom elevations upon project completion. Bottomland hardwood-wet impacts would be compensated for through mitigation.

D. Contaminant Determinations.

Clay to be used in levee construction is expected to be largely comprised of silica and alumina, with lesser amounts of ferric oxide, magnesia, and alkalis. Rock is likely to be limestone, a rock created by the slow compression of marine organisms under the weight of overlying rock and soil. Limestone is largely comprised of calcium carbonate with lesser amounts of dolomite, chemicals which can provide a carbonate buffer to surface waters, which can to some degree help to maintain a neutral to slightly basic pH favorable for aquatic life in south Louisiana waters. Clay and limestone are expected to be comprised of elements that commonly occur in the earth's crust and are not expected to be carriers of contaminants or negatively affect water quality.

U.S. Coast Guard spill reports (nrc.uscg.mil) for 2016-2020 were reviewed for the project area for the potential occurrence of chemical spills that may have contaminated project sediments. No such spills were discovered.

The mobilization of existing contaminants in sediments in the project area may suspend some pollutants, which include primarily trace metals and hydrophobic organic compounds. However, these contaminants are not expected to occur in such quantities that they would impair water quality or be harmful to humans, fish, or wildlife.

The most recent sampling and analysis of lake bottom sediments was conducted following hurricane Katrina in September/October 2005 (USGS 2007). Sediment chemistry data for samples collected in the vicinity of proposed flotation access channels reveals sediment contaminant levels are generally below probable effects freshwater sediment quality guidelines

included in the National Oceanic and Atmospheric Administration screening quick reference tables (SQuiRTs; Buchman 2008). The average contaminant concentrations of all samples associated with a given levee reach were consistently below probable effects levels, suggesting releases of any contaminants in sediment during stockpiling and backfilling activities would likely have negligible and transient water quality impacts.

E. Aquatic Ecosystem and Organism Determinations.

(1) Effects on Fish, Crustaceans, Mollusks, and Other Aquatic Organisms in the Aquatic Food Web.

Impacts from construction activities may include direct mortality due to burial; injury or mortality due to increased turbidity (e.g. gill abrasion, clogging of feeding apparatus); modified behavior; and short-term displacement. Mobile organisms would likely leave the construction area and avoid construction-related disturbances. Sessile and slow-moving organisms would be more likely to suffer direct injury or mortality from material placement or dredging. A temporary loss of benthic invertebrates, a food source for Gulf sturgeon, would occur with the dredging of the construction access channels and the disposal of this material in adjacent stockpile sites. This would occur over a proportionately very small area (213 acres) within the expanse of Lake Pontchartrain (over 400,000 acres). Following construction, displaced organisms would be expected to return to and re-colonize the affected area.

(2) Effects on Special Aquatic Sites.

- a. Sanctuaries and refuges. No direct impacts to sanctuaries or refuges are anticipated. Wildlife utilizing the Bayou Sauvage National Wildlife Refuge may experience some minor disturbance due to construction-related noise.
- b. Wetlands. Approximately 20.27 acres of bottomland hardwood-wet habitat would be impacted.
- c. Mud Flats. No impacts to mud flats are anticipated.
- d. Vegetated shallows. No impacts to vegetated shallows are anticipated. Submerged aquatic vegetation is limited along the south shore of Lake Pontchartrain. Construction access channels and associated stockpile areas would be located so as to avoid any potential impacts. Pre-construction surveys would be required to delineate existing SAV to facilitate avoidance of impacts. SAV surveys and avoidance of impacts would be included in construction contract solicitation language.
- e. Coral reefs. No impacts to coral reefs are anticipated.
- f. Riffle and pool complexes. No impacts to riffle and pool complexes are anticipated.

(3) Effects on Threatened and Endangered Species.

Federally-listed species potentially occurring in the vicinity of the proposed action include West Indian manatees, Gulf sturgeon, Pallid sturgeon, and five species of sea turtles. Gulf sturgeon critical habitat is also located in Lake Pontchartrain east of the causeway. The placement of foreshore protection would permanently impact 24.3 acres of Gulf sturgeon critical habitat. Dredging activities would temporarily impact another 178.2 acres of Gulf sturgeon critical habitat. Gulf sturgeon, manatee, and sea turtle protection measures, as recommended by USFWS and NOAA Fisheries during Endangered Species Act Section 7 consultation, would be implemented to minimize impacts to these species. With implementation of best management

practices and protection measures, implementation of the proposed action is not likely to adversely affect any federally-listed species or designated critical habitat.

(4) Effects on Other Wildlife.

Other potentially-affected wildlife not already addressed would be likely to avoid construction activities and utilize other nearby areas of similar habitat.

(5) Actions to Minimize Impacts.

Impacts would be localized and minimized through the use of silt curtains and other best management practices and adherence to regulations governing stormwater runoff at construction sites. Flotation channels and stockpile areas would be brought to pre-construction lake bottom elevations upon project completion. Protection measures would be implemented to minimize impacts to federally-listed species. Bottomland hardwood-wet impacts would be compensated for through the purchase of mitigation bank credits.

F. Proposed Disposal Site Determinations.

Discussions pertaining to turbidity and suspended particulates are summarized under Section 2. C in this document. Contaminants were discussed previously under Section 2. D of this Evaluation. Disposal site mixing zones will be confined to the smallest practicable zone within each site. Implementation of the proposed project will have no significant adverse effects on municipal or private water supplies; recreational or commercial fisheries; water-related recreation or aesthetics; parks; national monuments; or other similar preserves. State Water Quality Certification (WQC 201117-02) was obtained from the Louisiana Department of Environmental Quality on 15 December 2020.

G. Determination of Cumulative Effects on the Aquatic Ecosystem.

Sections 7.3.3 (Cumulative Effects on Water Resources) and Section 7.4.3 (Cumulative Effects on Wetlands) of the GRR-EIS discuss the cumulative effects on the aquatic ecosystem. Overall, the proposed action in combination with all other regional construction projects would have moderate adverse cumulative impacts on water quality and wetland resources; however, the incremental impact from the proposed action would be less than significant for water quality, but significant for wetland resources. Impacts to wetland resources would be fully compensated for through the purchase of mitigation bank credits and would result in no net loss.

H. Determination of Secondary Effects on the Aquatic Ecosystem.

Implementation of project features could lead to an increase in the human population in the area protected by project features. An increase in population would likely be associated with an increase in stressors on aquatic resources in the area.

1.1.3 FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

A. Adaptation of Section 404(b)(1) Guidelines.

No significant adaptations of the guidelines were made relative to this evaluation.

B. Alternatives.

- C. No practicable alternatives to the proposed discharges could be identified that would have less adverse impact on the aquatic ecosystem. Compliance with State Water Quality Standards.

Chemical constituents of the dredged material released during dredging and disposal operations are not expected to exceed Louisiana water quality standards. State Water Quality Certification (WQC 201117-02) was obtained from the Louisiana Department of Environmental Quality on 15 December 2020.

- D. Compliance with Endangered Species Act.

The proposed action is compliant with the Endangered Species Act of 1973, as amended. The proposed action is not likely to adversely affect endangered or threatened species or their critical habitat. NMFS concurred with this determination via letter dated 23 April 2020. USFWS concurred with this determination via letter dated 10 December 2019 (see GRR-EIS Appendix G).

- E. Evaluation of Extent of Degradation of the Waters of the United States.

The proposed activities would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation, and commercial fishing. The proposed activities would not significantly adversely affect plankton, fish, shellfish, wildlife, or special aquatic sites. The life stages of aquatic life and other wildlife would not be significantly adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity, and stability and on recreational, aesthetic, and economic values would not occur.

- F. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem.

The formulation of project plans and designs, evaluation of alternative plans, and development of operational scenarios have been conducted with the objective of minimizing potential adverse impacts to the aquatic environment. Water quality impacts would be localized and minimized through the use of silt curtains and other best management practices and adherence to regulations governing stormwater runoff at construction sites. Protection measures would be implemented to minimize impacts to federally-listed species. Pre-construction surveys in Lake Pontchartrain would be required to delineate existing SAV to facilitate avoidance of impacts. SAV pre-construction surveys and avoidance of SAV impacts would be included in construction contract solicitation language.

The proposed action is in compliance with requirements of the Clean Water Act Section 404(b)(1) guidelines. The proposed action would not significantly impact water quality.

On the basis of the Clean Water Act Section 404(b)(1) guidelines, the proposed disposal sites for the discharge of dredged or fill material are specified as complying with the guidelines with the inclusion of appropriate and practical conditions to minimize pollution and adverse effects to the aquatic ecosystem as described above.

EVALUATION RESPONSIBILITY

- A. Evaluation Prepared By: Kip Runyon
- B. Evaluation Review By: Eric Glisch

Date: _____

Stephen Murphy
Colonel, U.S. Army
District Commander

1.2 401 WATER QUALITY CERTIFICATION APPLICATION LETTER



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 80267
NEW ORLEANS, LOUISIANA 70160-0267

November 16, 2020

Regional Planning and Environmental
Division North

Scott Guilliams
Louisiana Dept. of Env. Quality
Administrator of Water Permits Div.
P.O. Box 4313
Baton Rouge, LA 70821-4313

Dear Mr. Guilliams:

An application for a State Water Quality Certificate prepared by the U.S. Army Corps of Engineers (USACE) for the Lake Pontchartrain and Vicinity, Louisiana General Re-evaluation Report with Integrated Environmental Impact Statement (EIS) is enclosed. The EIS is currently being finalized and will be provided to LDEQ for review. The USACE staff request that a water quality certification be completed, pursuant to Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C., Section 1341).

The proposed project consists of levee lifts, floodwall modifications, foreshore protection, and construction access dredging. To the best of our knowledge, any dredge/fill material would be free of contaminants. Please provide the Public Notice for publication in the Times-Picayune/New Orleans Advocate. In addition to sending us the hard copy of your documents, we request that an e-mail with the public notice attached also be sent to kip.r.runyon@usace.army.mil.

Please address any comments or concerns to the attention of Mr. Kip Runyon; U.S. Army Corps of Engineers; Regional Planning and Environmental Division North; CEMVS-PD-P; 1222 Spruce Street, St. Louis, Missouri; (314) 331-8396; kip.r.runyon@usace.army.mil.

Sincerely,

JOHNSON.BRIAN.L
LOYD.1231330336

Digitally signed by
JOHNSON.BRIAN.LLOYD.123133
0336
Date: 2020.11.16 11:04:10 -06'00'

Brian L. Johnson
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314-331-8146
Enclosures

1.3 401 WATER QUALITY CERTIFICATION

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

DEC 15 2020

Mr. Kip Runyon
US Army Corps of Engineers
Regional Planning and Environmental Division North
CEMVS-PD-P
1222 Spruce Street
St. Louis, MO 63102

AI No.: 101235
Activity No.: CER20200008

RE: US Army Corps of Engineers – Lake Pontchartrain and Vicinity
Water Quality Certification WQC 201117-02
St. Charles, Orleans, and St. Bernard Parishes

Dear Mr. Runyon:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application to dredge and place spoil and fill to construct levee lifts, floodwall modifications, foreshore protection, and construction access dredging located along the shore of Lake Pontchartrain in Kenner, Metairie, and New Orleans, and along the east bank of the Mississippi River in St. Charles, Orleans, and St. Bernard Parishes.

The information provided in the application has been reviewed in terms of compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ determined that the requirements for a Water Quality Certification have been met. LDEQ concludes that the deposit of spoil will not violate water quality standards as provided for in LAC 33:IX Chapter 11. Therefore, LDEQ hereby issues US Army Corps of Engineers – Lake Pontchartrain and Vicinity Water Quality Certification, WQC 201117-02.

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 201117-02 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,

A handwritten signature in blue ink, appearing to read "Scott Guilliams".

Scott Guilliams
Administrator
Water Permits Division

Attachment

c: IO-W

ec: Kip Runyon
kip.r.runyon@usace.army.mil

Post Office Box 4313 • Baton Rouge, Louisiana 70821-4313 • Phone 225-219-3181 • Fax 225-219-3309
www.deq.louisiana.gov

PUBLIC NOTICE TO RUN IN

THE ADVOCATE OF New Orleans

gnolegals@theadvocate.com

Phone: 225-388-0128

Contact: Josh Crowley

Notice is hereby given that US Army Corps of Engineers has applied for a 401 Water Quality Certification/Corps of Engineers 404 permit for the Lake Pontchartrain and Vicinity to dredge and place spoil and fill to construct levee lifts, floodwall modifications, foreshore protection, and construction access dredging located along the shore of Lake Pontchartrain in Kenner, Metairie, and New Orleans, and along the east bank of the Mississippi River in St. Charles, Orleans, and St. Bernard Parishes. The US Army Corps of Engineers has applied to the Louisiana Department of Environmental Quality, Office of Environmental Services for a Water Quality Certification in accordance with statutory authority contained in the LAC 33:IX.1507.A-E and provisions of Section 401 of the Clean Water Act.

Comments concerning this application can be filed with the Water Permits Division within ten days of this notice by referencing WQC 201117-02, AI 101235 to the following address:

Louisiana Department of Environmental Quality
Water Permits Division
P.O. Box 4313
Baton Rouge, LA 70821-4313
Attn: Elizabeth Hill

A copy of the application is available for inspection and review at the LDEQ Public Records Center, on the first floor of the Galvez Building, Room 127 at 602 North Fifth Street, Baton Rouge, LA 70802, from 8:00 a.m. to 4:30 p.m.

2 ENDANGERED SPECIES ACT COMPLIANCE

2.1 NATIONAL MARINE FISHERIES SERVICE CONSULTATION



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO ATTENTION OF:
Regional Planning and Environmental Division North
Environmental Compliance Section (CEMVP-PD-C)

23 April 2020

SUBJECT: Informal Endangered Species Act Section 7 Consultation for the Lake Pontchartrain and Vicinity, Louisiana General Re-evaluation Report

Mr. David Bernhart
Assistant Regional Administrator
Protected Resources Division
National Marine Fisheries Service
Southeastern Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

Dear Mr. Bernhart:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN), is preparing the Lake Pontchartrain and Vicinity (LPV), Louisiana General Re-evaluation Report with Integrated Environmental Impact Statement to re-evaluate the performance of the LPV system (Figure 1) given the combined effects of consolidation, settlement, subsidence, and sea level rise over time and to determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms. The following evaluates the potential impacts to threatened and endangered species associated with project features (Figure 2). The measures that have been identified as part of the proposed action include lifts to existing levees, raising of existing flood walls, placement of foreshore protection in existing foreshore protection locations, and construction access dredging for placement of foreshore protection.

The CEMVN has determined that the proposed project "may affect but is not likely to adversely affect" (NLAA) federally-listed species and their designated critical habitat, as described below, and is therefore requesting concurrence with our determinations pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1536), and the consultation procedures at 50 C.F.R. Part 402.

Pursuant to our request for informal consultation, CEMVN is providing, enclosing, or otherwise identifying the following information:

- A description of the action to be considered;

- A description of the action area;
- A description of any listed species or designated critical habitat (DCH) that may be affected by the action; and
- An analysis of the potential routes of effect on any listed species or DCH.

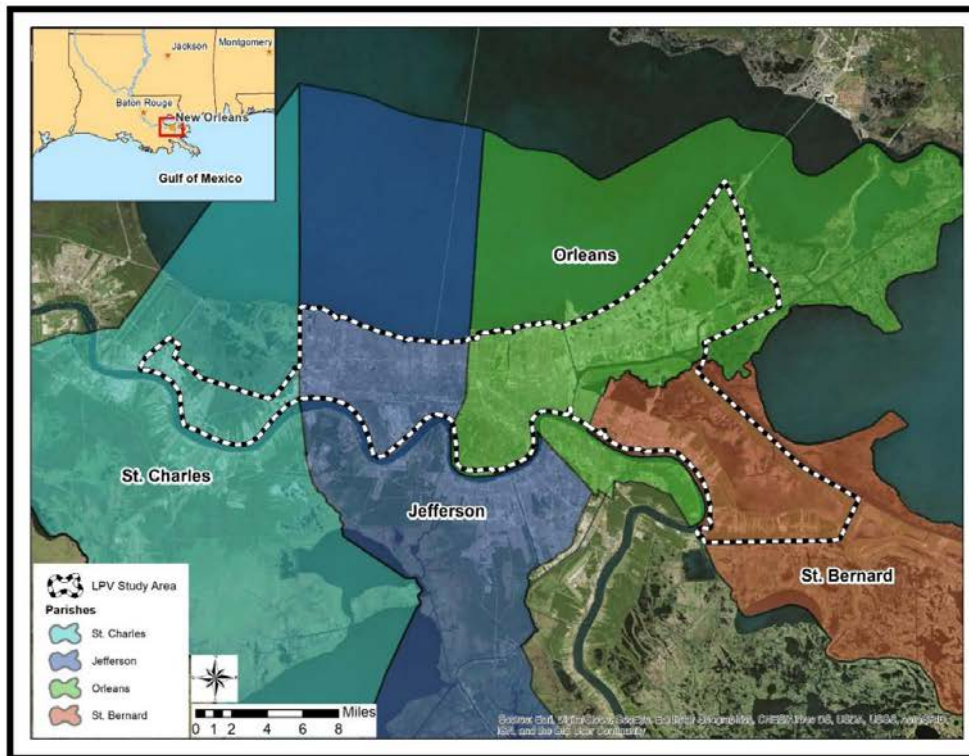


Figure 1. Study Area Location.

1. PROPOSED ACTION

Description of the Proposed Action. The LPV project includes features in four parishes (St. Charles, Jefferson, Orleans, and St. Bernard; Table 1; Figure 1) located in the greater New Orleans area on the east bank of the Mississippi River. Currently, LPV contains a total of approximately 126.5 miles of levees and floodwalls. There are approximately 83 miles of armored perimeter levees and floodwalls and approximately 43.5 miles of interior levees and floodwalls. The project is in a high-density residential and commercial area. The proposed action would include lifts to existing levees, raising of existing flood walls, placement of foreshore protection in existing foreshore protection locations along the shore of Lake Pontchartrain, and construction access dredging for placement of foreshore protection.

Table 1. General Project Location GPS coordinates

Latitude	Longitude
30.018746	-90.440070
30.160123	-89.868840
29.834949	-89.730662
29.892317	-90.426035

The proposed levee lifts would occur along the alignment of the existing levees. The proposed floodwall raises would occur within the existing floodwall footprints. The proposed levee lifts and floodwall raises are expected to be land-based construction, and, therefore, would have no effect to the listed species or their designated critical habitats and are not discussed further. The proposed foreshore protection would also be placed within the existing footprint of the foreshore protection along the Lake Pontchartrain shoreline. Construction of access channels and adjacent temporary stockpiling would be required to provide adequate depth for construction equipment to reach the Lake Pontchartrain shoreline. Construction access channels and adjacent stockpile locations would be returned to pre-construction elevations subsequent to construction completion. See Figure 2 for feature locations.

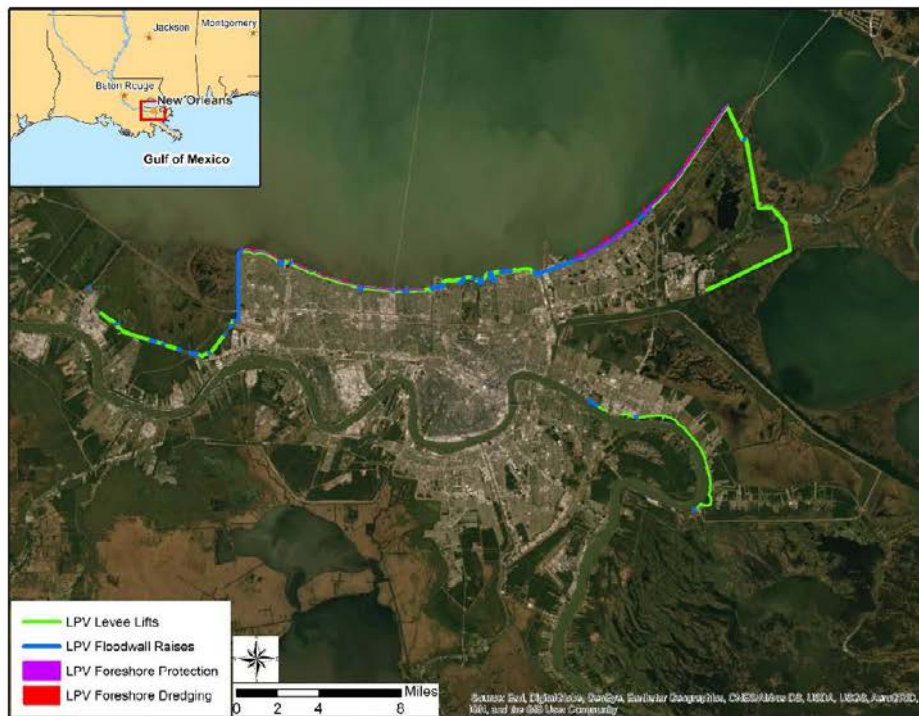


Figure 2. Proposed Action feature locations.

Construction Elements

Construction would not be expected to commence until 2021 at the earliest and would be dependent upon congressional authorization and appropriations.

Foreshore Protection Component

Placement of the stone foreshore protection along the shoreline of Lake Pontchartrain would result in filling approximately 75.1 acres of aquatic habitat (from 30.049726°, -90.276558° to 30.148304°, -89.880545°) less than 1 meter deep. Of this 75.1 acres, approximately 25.3 acres (from 30.020603°, -90.153520° to 30.148304°, -89.880545°) are in designated critical habitat for Gulf Sturgeon. However, the stone would be placed on the existing foreshore protection footprint to bring it back up to the required elevation. Stone would be transported by barge to the project area. Stone would be placed by crane-operated skip-pan, dragline bucket, clamshell, rock-bucket, hydraulic excavator, trackhoe, or other similar equipment.

Construction Access Channels and Stockpiling/Staging Components

One-time construction access channels (Table 2) and associated temporary stockpiling to construct the foreshore protection would impact approximately 212.5 acres of aquatic habitat. At this time, dredging is expected to occur via an excavator on a floating barge. This impact would

be temporary. Construction of foreshore protection is expected to take a total of 1.5 to 2.5 years depending on availability of funding, weather, materials, etc. Following construction of the foreshore protection, the access channels would be returned to pre-project elevations. Construction details will be fully developed following feasibility level design efforts. If construction methods change during design of this project and affect listed species or their DCH differently than what is discussed, ESA consultation would resume. Material would be excavated from the bed of Lake Pontchartrain with an excavator on a floating barge. Construction access channels would consist of parallel channels at the shoreline in areas where rock would be placed as well as perpendicular access channels to allow access to the shoreline (see Figure 2 red areas; Table 2). The dimensions required for barge access channels would be approximately -7 feet depth with 100-foot bottom width. Perpendicular access channels would begin at the elevation -7-foot contour of the lake and extend 400 to 1600 ft. Adjacent stockpile sites would be 150 feet wide. Potential impacts to submersed aquatic vegetation (SAV) in Lake Pontchartrain would be avoided. Pre-construction surveys would be required to delineate existing SAV to facilitate avoidance of impacts.

Table 2. Location of Construction Access Channels

Latitude	Longitude
30.03104436	-90.21060933
30.02676673	-90.19403554
30.04925227	-90.26849909
30.037305	-90.2278472
30.04583439	-90.25178412
30.04433337	-90.00167255
30.05415271	-89.97916436
30.06567599	-89.96175883
30.07536598	-89.94847309
30.08825402	-89.93282626
30.0912732	-89.92971347
30.09318781	-89.92646739
30.11074678	-89.91200498
30.10779795	-89.91377535
30.11320849	-89.90942893
30.13148038	-89.89595406
30.12828218	-89.89731212
30.13637583	-89.89187744

b. Description of the Project Purpose. Southeast Louisiana, including the Greater New Orleans area, is generally characterized by weak soils, general subsidence, and the global incidence of sea level rise that will cause levees and floodwalls to require future lifts to sustain performance. The proposed action would provide the 1% level of risk reduction over the 50-year period of analysis.

c. Description of Minimization Measures.

1) To avoid and minimize impacts from proposed actions turbidity curtains would be employed during construction, which include:

- All turbidity curtains and other in-water equipment must be properly secured with materials that reduce the risk of entanglement and entrapment of protected species. Turbidity curtains likewise must be made of materials that reduce the risk of entanglement of marine species.
- In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) must be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water.
- Turbidity curtains and other in-water equipment must be placed in a manner that does not entrap species within the construction area.
- Position turbidity barriers in a way that does not block species' entry to or exit from designated critical habitat and other important habitats.

2) Dredging would occur only during May through September.

3) Pre-construction surveys would be conducted to delineate existing SAV to facilitate avoidance of impacts.

4) Additionally, in project areas the bucket drop procedure will be utilized. The bucket drop procedure was developed by the USFWS, which involves dropping the bucket into water and retrieving empty one time prior to starting work. After the bucket is dropped and retrieved, a one-minute no work period would be observed. During this no work period, personnel shall carefully observe the work area in an effort to visually detect Gulf Sturgeon. If sturgeons are sighted, no dredging should be initiated until they have left the work area. If the water turbidity makes such visual sightings impossible, work may proceed after the one-minute no work period. If more than fifteen minutes elapses with no dredging, then the empty bucket drop/retrieval process shall be performed again prior to work. The sea turtle construction conditions will also be applied to Gulf Sturgeon.

5) Furthermore, all construction personnel must watch for and avoid collision with listed species. All construction personnel would be responsible for observing water-related activities for the presence of these species. All construction personnel would be advised that there are civil and criminal penalties for harming, harassing, or killing sea turtles, which are protected under the Endangered Species Act of 1973. Vessel operators must avoid potential interactions and operate in accordance with the following protective measures:

- All vessels associated with the proposed construction project shall operate at "idle speed/no wake" at all times while operating in water depths where the draft of the vessel provides less than a 4-foot clearance from the bottom and in all depths after a protected species has been observed in and has departed the area.
- All vessels will follow marked channels and routes using the maximum water depth whenever possible.
- If a sea turtle is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving

equipment closer than 50 feet of a sea turtle. Operation of any mechanical construction equipment shall cease immediately if a sea turtle is seen within a 50-foot radius of the equipment. Activities may not resume until the species has departed the project area of its own volition. Further, construction would be limited to daylight hours (7 am to 7 pm), which will assist construction workers in seeing listed species and, if present, avoiding interactions with them.

6) CEMVN would adhere to the Measures for Reducing Entrapment Risk to Protected Species¹ and the sea turtle construction conditions². Siltation barriers would be made of materials in which sea turtles cannot become entangled, would be properly secured, and would be regularly monitored to avoid protected species entrapment. CEMVN will apply the constructions conditions to Gulf Sturgeon, as well.

2. ACTION AREA: PHYSICAL AND BIOLOGICAL ATTRIBUTES

Pursuant to 50 C.F.R. § 402.02, the term *action area* is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." Accordingly, the action area typically includes the affected jurisdictional waters and other areas affected by the authorized work or structures within a reasonable distance. The ESA regulations recognize that, in some circumstances, the action area may extend beyond the limits of the Corps' regulatory jurisdiction.

For the purposes of this consultation, the CEMVN has defined the action area to include the immediate vicinity of the proposed project features as depicted in Figure 3 below. The action area includes portions of Lake Pontchartrain, Lake Borgne, and the Mississippi River as well as numerous bayous and canals in the Greater New Orleans area.

Foreshore Protection Action Area. Lake Pontchartrain is a large, brackish, shallow estuary, that support SAV, including wild celery (*Vallisneria americana*), widegongrass (*Ruppia maritima*), slender pondweed (*Potamogeton perfoliatus*), Eurasian milfoil (*Myriophyllum spicatum*), and southern naiad (*Najas guadalupensis*) (Duffy & Baltz, 1998). Historically, SAV was abundant on all shores of Lake Pontchartrain; however, today isolated SAV beds exist on the south shore of Lake Pontchartrain. Potential impacts to SAV in Lake Pontchartrain would be avoided. Pre-construction surveys would be required to delineate existing SAV to facilitate avoidance of impacts.

¹ NMFS. 2012. Measures for reducing entrapment risk to protected species, revised May 22, 2012. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, Saint Petersburg, FL.

² NMFS. 2006. Sea turtle and smalltooth sawfish construction conditions, revised March 23, 2006. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries, Southeast Regional Office, Saint Petersburg, FL.



Figure 3. LPV Action Area.

3. AFFECTED SPECIES/HABITAT

Project activities have the potential to affect listed species, as shown in Table 3 below, and their DCH, as shown in Table 4.

Table 3. Species in the action area.

Species	ESA Listing Status	Listing Rule/Date	Most Recent recovery plan date	USACE Effect Determination (Species)*
Green sea turtle ³	Threatened	81 FR 20057/ April 6, 2016	October 1991	NLAA
Kemp's ridley sea turtle	Endangered	35 FR 18319/ December 2, 1970	September 2011	NLAA
Leatherback sea turtle	Endangered	35 FR 8491/ June 2, 1970	April 1992	NLAA
Loggerhead sea turtle ⁴	Threatened	76 FR 58868/ September 22, 2011	January 2009	NLAA
Hawksbill sea turtle	Endangered	35 FR 8491/ June 2, 1970	December 1993	NLAA
Gulf sturgeon	Threatened	56 FR 49653/ September 30, 1991	September 1995	NLAA

*NLAA = Not likely to adversely affect

Table 4. Designated Critical Habitat (DCH) in the action area.

Species	DCH in the Action Area	DCH Rule/Date	USACE Effect Determination (DCH)*
Gulf sturgeon	Unit 8	68 FR 13370/ March 19, 2003	NLAA

*NLAA = Not likely to adversely affect

4. ROUTE(S) OF EFFECT TO SPECIES

Effects to Sea Turtles

All five species of sea turtle have the potential to use Lake Pontchartrain as juvenile or adult foraging habitat. Effects to sea turtles include the risk of direct physical impact from access dredging, placement of foreshore protection, and other in-water construction activities. We

³ North Atlantic and South Atlantic DPS

⁴ Northwest Atlantic Ocean DPS

believe the risk of physical injury therefore the route of effect is discountable due to the species' ability to move away from the project site and into adjacent suitable habitat. Construction activities could potentially cause direct injury or mortality to sea turtles by equipment or propeller strikes. Additionally, implementation of the NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* will require all construction workers to observe in-water related activities for the presence of listed sea turtles.

Sea turtles may be entangled by in-water lines and other in-water equipment. However, we believe the route of effects to sea turtles from entanglement will be discountable because if any in-water lines (rope, chain, or cable etc.) will be utilized for buoy markers and lights they would be taught and non-looping.

Sea turtles might be adversely affected by their inability to access the project area for foraging, refuge, and/or nursery habitat, due to their avoidance of construction activities, and related noise. We have determined that these effects would be insignificant. The site does not contain any structure that could be used by sea turtles for shelter. Sea turtles may forage in the area but the size of the area from which animals will be excluded is relatively small in comparison to the available similar habitat nearby. In addition, any disturbances to listed species would be temporary, limited to approximately 160 days of in-water construction, after which the site conditions are expected to return to background levels and animals will be able to return.

Construction-related water quality impacts could affect the foraging ability of sea turtles, but these impacts would be minor and short-term and sea turtles could avoid the impacted areas. Water quality impacts are expected to be insignificant because they will be temporary and minimized by the use of turbidity curtains.

Section 7 Finding for listed Sea Turtles

Based on currently available historical and catch data; a review of current literature and studies; and with the employment of avoidance measures recommended through guidelines set up during coordination with NFMS; the CEMVN has determined that the actions as proposed, may affect, but are not likely to adversely affect the federally listed species of sea turtles.

Effects to Gulf sturgeon

Direct minor, short-term, impacts on water quality from construction activities may include decreased dissolved oxygen levels in the waters immediately surrounding the construction site, increased turbidity, and increased water body temperature due to increased suspended solids produced during construction that could absorb incident solar radiation. Temporary, minor water quality impacts could occur due to increased nutrient loading, miscellaneous debris, and accidental spills from construction equipment. Water quality impacts in the project area would be temporary during project construction and would be minimized by the movement of the tides and the use of silt curtains and other best management practices. Water quality in the project area would return to normal after construction completion. Water quality impacts are expected to be insignificant because they will be temporary and minimized by the use of silt curtains and other best management practices.

Gulf sturgeon may be physically injured if struck by construction equipment, vessels, or materials. This route of effect is discountable due to the ability of the species to move away from

the project site if disturbed. Gulf sturgeon are mobile and are able to avoid construction noise, moving equipment, and placement or removal of materials during construction.

Gulf sturgeon may be physically injured if struck or entrained during dredging. This is extremely unlikely to occur due to the species' mobility and type of dredge used for this project; therefore, the route of effect is discountable. NMFS has previously determined in dredging Biological Opinions (e.g., (NMFS 2007)) that, while ocean-going hopper-type dredges may lethally entrain sturgeon, non-hopper type dredging methods, such as the excavator on a barge method proposed for this project, are slower and extremely unlikely to adversely affect Gulf sturgeon.

The construction activities and related construction noise may prevent or deter Gulf Sturgeon from entering the project area. However, we believe the effect to Gulf sturgeon from temporary avoidance from the project area due to construction activities including related noise, will be less than significant. The size of the area which animals will avoid is relatively small in comparison to the available similar habitat nearby, which Gulf sturgeon will be able to use during construction. Disturbances and loss of habitat access will be temporary, limited to approximately 160 days of in-water construction. After the project is complete, Gulf sturgeon will be able to return to the project area.

We believe the effect to Gulf Sturgeon from potential loss of foraging habitat due to access dredging and placement of foreshore protection will be insignificant. Gulf sturgeon are opportunistic feeders that forage over large areas and will be able to locate prey beyond the small construction access channel footprint (approximately 212.5 acres). Also, impacts to foraging resources from access dredging are temporary since benthic invertebrate populations in dredged areas have been observed to recover in 3-24 months after dredging (Culter and Mahadevan 1982; Saloman et al. 1982; and Wilber et al. 2007).

5. ROUTE(S) OF EFFECT TO CRITICAL HABITAT

The project is located in critical habitat unit 8. The essential features/primary constituent elements (PCEs) are present in Unit 8 and are those habitat components that support feeding, resting, sheltering, migration, and physical features necessary for maintaining the natural processes that support those habitat components. The following are the primary constituent elements for Gulf sturgeon critical habitat that are present and CEMVN's response on how the proposed action for LPV in critical habitat would affect these elements. Only three of the four PCEs are likely to be affected. The CEMVN has determined the proposed action (access dredging and foreshore protection) is "Not Likely to Adversely Affect" Gulf sturgeon critical habitat based on these responses for the three PCEs.

- 1) Abundant prey items, such as amphipods, lancelets, polychaetes, gastropods, ghost shrimp, isopods, molluscs and/or crustaceans, within estuarine and marine habitats and substrates for sub-adult and adult life stages.

Dredging may remove substrates containing sturgeon prey items (PCE 1). USACE believes the effect to PCE 1 from access dredging and temporary stockpiling would be insignificant since the estimated impact is relatively small (212.5 acres) and prey items will still be present in the areas outside the dredging and stockpiling footprint.

Effects to PCE 1 are also expected to be temporary and short-term in nature, consisting of a temporary loss of benthic invertebrate populations in the dredged areas. Observed rates of benthic community recovery after dredging range from 3-24 months (Culter and Mahadevan 1982; Saloman et al. 1982; Wilber et al. 2007). Therefore, we believe the effect to PCE1 would be insignificant.

- 2) Water quality including temperature, salinity, pH, hardness, turbidity, oxygen content, and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages.

Localized and temporary reductions in water quality (PCE 2) through increased turbidity may result from the installation, repair, replacement, or removal of shoreline stabilization structures. We believe the effect to PCE 2 from localized and temporary turbidity due to shoreline stabilization structures will be insignificant because:

Turbidity curtains will be used to contain turbidity. The effect to PCE 2 from any small amount of turbidity that may escape will be insignificant.

Effects to temperature, salinity, pH, hardness, oxygen content, and other chemical characteristics of the water quality PCE are not expected to result from the installation of shoreline stabilization structures. Therefore, there is no effect to these aspects of PCE 2 from localized and temporary turbidity due to shoreline stabilization structures.

- 3) Sediment quality including texture and other chemical characteristics necessary for normal behavior, growth, and viability of all life stages.

We believe the effect to PCE 3 from access dredging and placement of foreshore protection will be insignificant. The sediments disturbed would be returned to their original location upon project completion. The removal of sediments from the access channels would not impact the texture and other chemical characteristics necessary for Gulf sturgeon life stages because the sediment type (silty sand) would not change with the depth of the material being removed. Therefore, no permanent alteration of habitat composition would occur within the action area.

Section 7 Finding for Gulf Sturgeon and Gulf Sturgeon Critical Habitat

Based on currently available historical and catch data; a review of current literature and studies; and with the employment of avoidance measures recommended through guidelines set up during coordination with NMFS; the CEMVN has determined that the proposed action for LPV study is "Not Likely to Adversely Affect" the Gulf sturgeon or Gulf sturgeon critical habitat.

6. DETERMINATION

The CEMVN has reviewed the proposed project for its impacts to federally listed species and their DCH. Based on currently available, historical and catch data; a review of current literature and studies; and with the employment of avoidance measures recommended through guidelines

set up during coordination with NMFS; including the sea turtle construction conditions, the CEMVN has concluded the project may affect but is not likely to adversely affect the species and DCH listed in Tables 3 and 4. This analysis was prepared based on the best scientific and commercial data available.

The CEMVN is requesting NMFS written concurrence with these determinations. The CEMVN appreciates your cooperation in completing this informal section 7 consultation by concurring with the effect determination(s) in a timely manner. If NMFS disagrees with the effect determination(s) and requests formal Section 7 consultation, please contact the below referenced Environmental Manager to discuss suggested modifications to the action to avoid potential adverse effects and NMFS' additional information needs. The CEMVN will continue to coordinate with NMFS office via email to provide the requested information and, if warranted, a revised effects determination.

If you have questions, please contact the Environmental Manager, Kip Runyon, at 314-331-8396 or kip.r.runyon@usace.army.mil.

The Record of Decision (ROD) will not be signed and no contract for construction nor construction will begin until this ESA consultation is complete with your agency (50 C.F.R. § 402.12(b)(2)).

Sincerely,

JOHNSON.BRIAN.LL
OYD.1231330336

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Date: 2020.04.23 09:30:46 -05'00'

Brian Johnson
Chief, Environmental Compliance Branch
Regional Planning and Environmental Division North

Literature Cited

- Culter, J. K., and S. K. Mahadevan. 1982. Long-term effects of beach nourishment on the benthic fauna of Panama City Beach, Florida. Mote Marine Laboratory, Sarasota, FL., Miscellaneous Report No. 82-2, Fort Belvoir, Va.
- Duffy, K.C., and D.M. Baltz. 1998. Comparison of fish assemblages associated with native and exotic submerged macrophytes in the Lake Pontchartrain estuary, USA. *Journal of Experimental Marine Biology and Ecology* 223(2): 199-221.
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- NMFS. 2007. Regional Biological Opinion on Hopper Dredging of Navigational Channels and Borrow Areas in Gulf of Mexico (<https://www.fisheries.noaa.gov/webdam/download/91875709>).
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- Saloman, C. H., S. P. Naughton, and J. L. Taylor. 1982. Benthic community response to dredging borrow pits, Panama City Beach, Florida. National Marine Fisheries Service, Gulf Coastal Fisheries Center, Miscellaneous Report No. 82-3, Panama City, FL.
- Wilber, D. H., D. G. Clarke, and S. I. Rees. 2007. Responses of benthic macroinvertebrates to thin-layer disposal of dredged material in Mississippi Sound, USA. *Marine Pollution*

2.2 NMFS RESPONSE 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 33701-5505
<https://www.fisheries.noaa.gov/region/southeast>

4/23/20

F/SER31:LW
SERO-2019-03590

Chief, Environmental Compliance Branch
Regional Planning and Environmental Division North
Environmental Compliance Section (CEMVP-PD-C)
St. Louis District Corps of Engineers
Department of the Army
1222 Spruce St.
St. Louis, Missouri, 63103-2833

Ref.: U.S. Army Corps of Engineers, New Orleans District, Construction and Dredging, St. Charles,
Jefferson, Orleans, and St. Bernard Parishes, Louisiana – EXPEDITED TRACK

Dear Mr. Johnson

This letter responds to your April 23, 2020, request pursuant to Section 7 of the Endangered Species Act (ESA) for consultation with the National Marine Fisheries Service (NMFS) on the subject action.

We reviewed the action agency's consultation request document and related materials. Based on our knowledge, expertise, and the action agency's materials, we concur with the action agency's conclusions that the proposed action is not likely to adversely affect the NMFS ESA-listed species and/or designated critical habitat. This concludes your consultation responsibilities under the ESA for species and/or designated critical habitat under NMFS's purview. Reinitiation of consultation is required and shall be requested by the action agency or by NMFS where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) take occurs; (b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in this consultation; (c) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered in this consultation; or (d) if a new species is listed or critical habitat designated that may be affected by the action.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Laura Wright, Consultation Biologist, at (727) 209-5977 or by email at Laura.Wright@noaa.gov.

Sincerely,

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RY.JANE.140034548
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for David Bernhart
Assistant Regional Administrator
for Protected Resources

File: 1514-22.f.7



2.3 U.S. FISH AND WILDLIFE SERVICE CONSULTATION



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO ATTENTION OF:
Regional Planning and Environmental Division North
Environmental Compliance Section (CEMVP-PD-C)

2 December 2019

SUBJECT: Informal Endangered Species Act Section 7 Consultation for the Lake Pontchartrain and Vicinity, Louisiana General Re-evaluation Report

Mr. Joseph A. Ranson
Field Supervisor
Louisiana Ecological Services Office
U.S. Fish and Wildlife Service
200 Dulles Drive
Lafayette, Louisiana 70506

Dear Mr. Ranson,

The U.S. Army Corps of Engineers, New Orleans District (CEMVN), is preparing the Lake Pontchartrain and Vicinity (LPV), Louisiana, General Re-evaluation Report to re-evaluate the performance of the LPV system (Figure 1) given the combined effects of consolidation, settlement, subsidence, and sea level rise over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms. The following evaluates the potential impacts to threatened and endangered species associated with project features (Figure 2). The measures that have been identified as part of the proposed action include lifts to existing levees, raising of existing flood walls, placement of foreshore protection in existing foreshore protection locations, and construction access dredging for placement of foreshore protection.

The CEMVN has determined that the proposed project may affect but is not likely to adversely affect (NLAA) federally-listed species and their designated critical habitat, as described below, and is therefore requesting concurrence with our determinations pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1536), and the consultation procedures at 50 C.F.R. Part 402.

Pursuant to our request for informal consultation, CEMVN is providing, enclosing, or otherwise identifying the following information:

- A description of the action to be considered;
- A description of the action area;
- A description of any listed species or designated critical habitat (DCH) that may be affected by the action; and

- An analysis of the potential routes of effect on any listed species or DCH

The CEMVN has reviewed the proposed project for its impacts to federally listed species. The CEMVN has concluded the project may affect but is not likely to adversely affect the West Indian manatee and pallid sturgeon. Gulf Sturgeon and five species of sea turtle also have potential to occur in the project area. CEMVN has requested the National Marine Fisheries Service to review and concur with the determination of not likely to adversely affect for those species. No West Indian manatee or pallid sturgeon designated critical habitat exists within the study area. This analysis was prepared based on the best scientific and commercial data available.

The CEMVN is requesting U.S. Fish and Wildlife Service (USFWS) written concurrence with these determinations. The CEMVN appreciates your cooperation in completing this informal section 7 consultation by concurring with the effect determinations in a timely manner. If USFWS disagrees with the effect determinations and requests formal Section 7 consultation, please contact the below-referenced Environmental Manager to discuss suggested modifications to the action to avoid potential adverse effects and additional information needs. The CEMVN will continue to coordinate with the USFWS via email to provide the requested information and, if warranted, a revised effects determination.

If you have questions, please contact the Environmental Manager, Kip Runyon, at 314-331-8396 or kip.r.runyon@usace.army.mil.

Sincerely,



Brian Johnson
Chief, Environmental Compliance Branch
Regional Planning and Environmental Division North

Endangered Species Act consultation

PROPOSED ACTION

Description of the Project Purpose

Southeast Louisiana, including the Greater New Orleans area, is generally characterized by weak soils, general subsidence, and the global incidence of sea level rise that will cause levees and floodwalls to require future lifts to sustain performance. The proposed project purpose would be to provide the 1% level of risk reduction over the 50-year period of analysis within the Lake Pontchartrain and Vicinity study area (Figure 1).

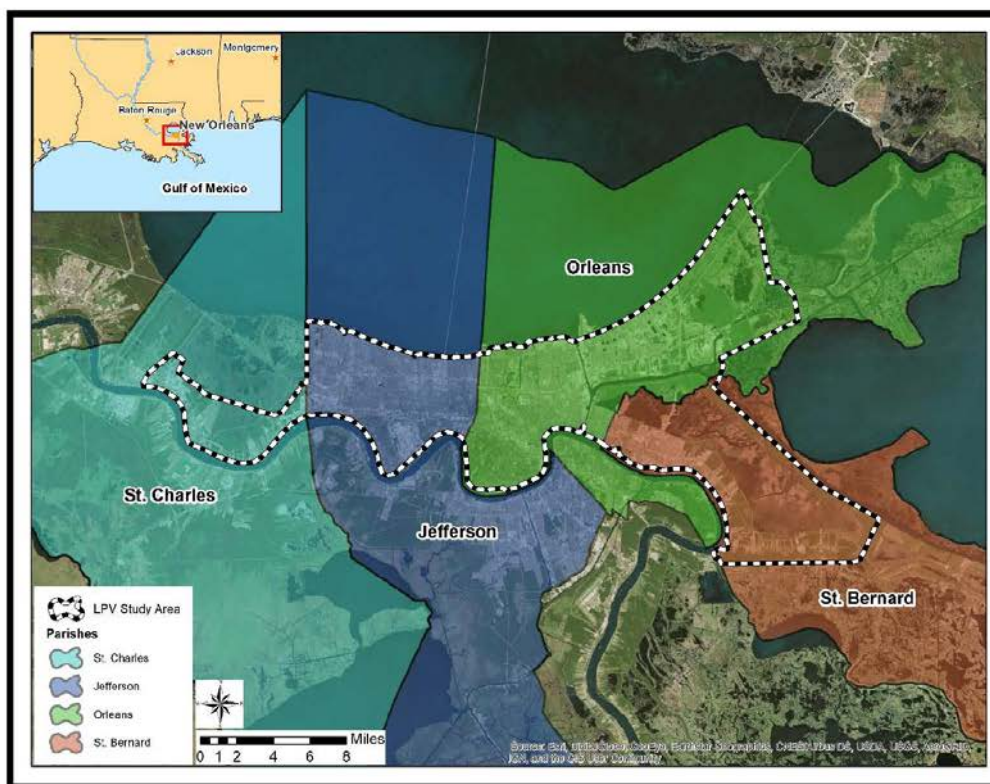


Figure 1. Study area location.

Action Area. For the purposes of this consultation, the CEMVN has defined the action area to include the immediate vicinity of the proposed project features as depicted in Figure 2 below. The action area includes portions of Lake Pontchartrain, Lake Borgne, and the Mississippi River as well as numerous bayous and canals in the Greater New Orleans area.



Figure 2. LPV Action Area and features.

Description of the Proposed Action. The LPV project includes features in four parishes (St. Charles, Jefferson, Orleans, and St. Bernard) located in the greater New Orleans area on the east bank of the Mississippi River. Currently, LPV contains a total of approximately 126.5 miles of levees and floodwalls. There are approximately 83 miles of armored perimeter levees and floodwalls and approximately 43.5 miles of interior levees and floodwalls. The project is in a high-density residential and commercial area. The proposed action would include lifts to existing levees, raising of existing flood walls, placement of foreshore protection in existing foreshore protection locations along the shore of Lake Pontchartrain, and construction access dredging for placement of foreshore protection.

The proposed floodwall increases would occur within the existing floodwall footprints. The proposed foreshore protection would also be placed within the existing footprint of the foreshore protection along the Lake Pontchartrain shoreline. Construction access dredging and adjacent temporary stockpiling would be required to provide adequate depth for construction equipment to reach the Lake Pontchartrain shoreline. Construction access channels and adjacent stockpile locations would be returned to pre-construction elevations subsequent to construction.

completion. Most of the proposed levee lifts would occur along the alignment of the existing levees. However, for the Mississippi River levee expansions, initial design estimates indicate an additional 25 feet would be required on the flood side for construction. These floodside levee shifts would impact approximately 26.9 acres of bottomland hardwood-wet habitat. The exact quantity of fill, acres, and locations would be refined through feasibility level of design.

Construction would not be expected to commence until 2021 at the earliest and would be dependent upon congressional authorization and appropriations. Levee lifts would be conducted in multiple lifts over the course of the 50-year period of analysis. Lift schedules would vary by location and by the corresponding rates of subsidence. Floodwall lifts would only occur once per location but the timing would vary.

MEASURES TAKEN TO MINIMIZE IMPACTS TO LISTED SPECIES

The following conservation measures shall be implemented to avoid and minimize impacts to listed species:

- Silt curtains and other best management practices would be employed during construction
- Manatee protection measures would be followed

AFFECTED SPECIES AND HABITAT

The CEMVN requested the official species list via the ECOS-IPaC website (<http://ecos.fws.gov/ipac/>), dated 23 September 2019. USFWS provided a list of federally threatened and endangered species that could potentially be found in the study area (St. Charles, Jefferson, Orleans, and St. Bernard Parishes). The species, federal protection status and habitat can be found in Table 1. No critical habitat for these species has been designated in the study area. The CEMVN is consulting with the NMFS for potential effects on Gulf Sturgeon and sea turtles and further analysis is not included here.

Table 1. Federally listed species potentially occurring in the action area

Species	Status	Listing Rule/ Date	Habitat	Potential to Occur in the Study Area
MAMMALS				
West Indian manatee (<i>Trichechus manatus</i>)	Threatened	82 FR 16668/ April 5, 2017	Freshwater, brackish, and saltwater warm water environments. Large, slow-moving rivers, river mouths, and shallow coastal areas	Lakes Pontchartrain and Borgne, Bayou Dupre, Bayou Bienvenue, GIVWW, and IHNC
FISHES				

Pallid Sturgeon (Scaphirhynchus albus)	Endangered	55 FR 36641 36647/ September 6, 1990	Large river obligate fish inhabiting the Missouri and Mississippi rivers and some tributaries	Mississippi River
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ROUTES OF EFFECT TO SPECIES

The following section includes a status description of each species and how it might be affected by project elements as well as the determination of effects for each species. The effects determination took into account implementation of the conservation measures listed above.

West Indian Manatee

Status. The West Indian Manatee is listed as threatened under the Endangered Species Act. The manatee is also protected at the Federal level under the Marine Mammal Protection Act of 1972. Manatees are herbivores found in marine, brackish, and freshwater environments. They prefer large, slow-moving rivers, river mouths, and shallow coastal areas. The manatee often rests suspended just below the water’s surface with only the snout above water. Historically, manatees were hunted for their flesh, bones, and hide. Hunting is thought to be largely responsible for the initial decline of this species; however, hunting is no longer allowed. Today, the greatest threat is collisions with boats and loss of warm water habitat. Flood gates and canal locks can kill manatees either by crushing them or drowning them¹.



Sightings in Louisiana, which have been uncommon and sporadic, have included occurrences in Lake Pontchartrain and surrounding water bodies. Between 1997 and 2000, 16 manatee sightings were reported in the Lake Pontchartrain area with a general increase in the number of manatees per sighting (Abadie, Brantley, Mickal, & Shively, 2000). Sightings of the manatee in the Lake Pontchartrain Basin have increased in recent years, and in late July 2005, 20 to 30 manatees were observed in the lake during aerial surveys (Powell & Taylor, 2005).

Effects Determination. Direct minor, short-term, impacts on water quality from construction activities in Lake Pontchartrain may include increased turbidity and increased water body temperature due to increased suspended solids produced during construction that could absorb incident solar radiation. Temporary, minor water quality impacts could occur due to increased nutrient loading, miscellaneous debris, and accidental spills from construction equipment. Water quality impacts in the project area would be temporary during project construction and would be minimized by the movement of the tides and the use of silt curtains and other best management practices. Water quality in the project area would return to normal after construction completion. Water quality impacts are expected to be insignificant because they

¹ USFWS (2008). West Indian Manatee Fact Sheet. USFWS. Available online at <https://www.fws.gov/endangered/esa-library/pdf/manatee.pdf> Accessed online 5 September 2019.

will be temporary and minimized by the use of silt curtains and other best management practices.

In an effort to avoid impacts to manatees that may possibly use the project area during project construction, manatee protection measures would be implemented. These measures include, but are not limited to, reducing vessel traffic speed, posting signs of the potential presence of manatees, and halting construction activities in the event a manatee is observed in the area.

We conclude the proposed Lake Pontchartrain and Vicinity project may affect, but is not likely to adversely affect, West Indian manatee.

Pallid Sturgeon

Status. Pallid sturgeon are a federally listed endangered large river fish species that is found in the Mississippi River. They are bottom dwelling, slow growing fish that feed primarily on small fish and immature aquatic insects. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars of large rivers. The riverine habitat for the pallid sturgeon has been altered due to impoundment, channelization, and environmental contamination leading to species decline².

Effects Determination. Minor, short-term adverse effects from implementing the proposed project are anticipated. The proposed actions along the Mississippi River are not expected to directly affect the pallid sturgeon due to the use of land-based construction. Less than significant direct impacts to the bottomland hardwood habitat adjacent to the Mississippi River levees are anticipated at this time. The proposed activities may result in indirect, temporary short-term effects due to increases in turbidity during construction; however, best management practices would be implemented to reduce impacts to water quality and would result in less than significant impacts.

We conclude the proposed Lake Pontchartrain and Vicinity project may affect, but is not likely to adversely affect, pallid sturgeon.



Photo by South Dakota Game, Fish and Parks; Sam Stukel

² USFWS (2019). Pallid Sturgeon Fact Sheet. USFWS. Available online at https://www.fws.gov/midwest/endangered/fishes/PallidSturgeon/pallid_fc.html Accessed 5 September 2019.

Prepared By:
Kip Runyon
Environmental Planning
U.S. Army Corps of Engineers
Regional Planning and Environmental Division North
1222 Spruce Street
St. Louis, MO 63103

Works Cited

Abadie, S., Brantley, C., Mickal, S., & Shively, S. (2000). Distribution of the Manatee (*Trichechus manatus*) in the Lake Pontchartrain Estuarine System. *Basics of the Basin Research Symposium*.

Powell, J., & Taylor, C. (2005). Newsletter of the IUCN/SSC Sirenia Specialist Group. Number 44.

2.4 USFWS RESPONSE LETTER



United States Department of the Interior

FISH AND WILDLIFE SERVICE
200 Dulles Drive
Lafayette, Louisiana 70506

December 10, 2019

Colonel Stephen Murphy
District Commander
U.S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, LA 70118-3651

Dear Colonel Murphy;

Please reference your December 2, 2019, Threatened and Endangered Consultation letter, in which the U.S. Army Corps of Engineers (USACE) determined that the proposed Lake Pontchartrain and Vicinity (LPV), Reevaluation Study may affect but is not likely to adversely affect the threatened West Indian manatee and pallid sturgeon as a result of improved flood risk reduction measures. This letter is transmitted under the authority of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

USACE has determined that possible impacts to the West Indian manatee would be short-term, and minor. To further minimize the possibility of those potential impacts to that species, the USACE would also implement manatee protection measures during project construction. Accordingly, the Fish and Wildlife Service (Service) concurs with the USACE's determination.

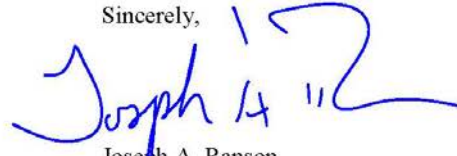
The USACE also determined that the proposed action may affect but is not likely to adversely affect the pallid sturgeon. Best management practices would be implemented to further reduce short-term impacts to water quality which would result in minimal impacts to the pallid sturgeon. Accordingly, the Service concurs with the USACE's determination that the proposed action would not adversely affect the pallid sturgeon.

No further consultation for the proposed action will be necessary for manatees and pallid sturgeon, unless: 1) the scope or location of the proposed project changes in a manner that the potential effects to listed species or designated critical habitat exceed those discussed in the draft EA; 2) new information reveals that the action may adversely affect listed species or designated critical habitat; or 3) 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.

The Service appreciates the USACE's continued cooperation in the conservation of threatened and endangered species

Should you or your staff have any questions, or if you would like to meet with us regarding the content of this letter, please contact Hannah Sprinkle (337-291-3121).

Sincerely,

A handwritten signature in blue ink that reads "Joseph A. Ranson". The signature is stylized and includes a date "1/12" written above the name.

Joseph A. Ranson
Field Supervisor
Louisiana Ecological Services Office

cc: NMFS, St. Petersburg, FL
Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA

2.5 OFFICAL SPECIES LIST: 26 OCT 2020



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Louisiana Ecological Services Field Office
200 Dulles Drive
Lafayette, LA 70506
Phone: (337) 291-3100 Fax: (337) 291-3139



In Reply Refer To:
Consultation Code: 04EL1000-2019-SLI-0612
Event Code: 04EL1000-2021-E-00491
Project Name: Lake Pontchartrain and Vicinity General Re-Evaluation Report

October 26, 2020

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

***Due to the Louisiana Governor's mandatory quarantine order for the coronavirus (COVID-19), and in order to keep our staff and the public safe, we are unable to accept or respond in a timely manner to consultation request or project review/concurrence that we receive through the U.S. Mail. Please submit your request electronically to lafayette@fws.gov or call 337-291-3100.**

The enclosed species list identifies threatened, endangered and candidate species, as well as designated and proposed critical habitat that may occur within the boundary of your proposed project and may be affected by your proposed project. The Fish and Wildlife Service (Service) is providing this list under section 7 (c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Changes in this species list may occur due to new information from updated surveys, changes in species habitat, new listed species and other factors. Because of these possible changes, feel free to contact our office (337/291-3126) for more information or assistance regarding impacts to federally listed species. The Service recommends visiting the ECOS-IPaC site or the Louisiana Ecological Services website (www.fws.gov/lafayette) at regular intervals during project planning and implementation for updated species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to determine whether projects may affect Federally listed species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected (e.g. adverse, beneficial, insignificant or discountable) by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at <http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF> or by contacting our office at the number above.

Bald eagles have recovered and were removed from the List of Endangered and Threatened Species as of August 8, 2007. Although no longer listed, please be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 *et seq.*). The Service developed the National Bald Eagle Management (NBEM) Guidelines to provide landowners, land managers, and others with information and recommendations to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance," which is prohibited by the BGEPA. A copy of the NBEM Guidelines is available at: <http://www.fws.gov/southeast/es/baldeagle/NationalBaldEagleManagementGuidelines.pdf>. Those guidelines recommend: (1) maintaining a specified distance between the activity and the nest (buffer area); (2) maintaining natural areas (preferably forested) between the activity and nest trees (landscape buffers); and (3) avoiding certain activities during the breeding season. On-site personnel should be informed of the possible presence of nesting bald eagles within 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 or adjacent to 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: <http://www.fws.gov/southeast/es/baldeagle>. Following completion of the evaluation, that website will provide a determination of whether additional consultation is necessary. The Division of Migratory Birds for the Southeast Region of the Service (phone: 404/679-7051, e-mail: SEmigratorybirds@fws.gov) has the lead role in conducting any necessary consultation. Should you need further assistance interpreting the guidelines or performing an on-line project evaluation, please contact this office.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g. cellular, digital television, radio and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm> ; <http://www.towerkill.com>; and <http://fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

Activities that involve State-designated scenic streams and/or wetlands are regulated by the Louisiana Department of Wildlife and Fisheries and the U.S. Army Corps of Engineers, respectively. We, therefore, recommend that you contact those agencies to determine their interest in proposed projects in these areas.

Activities that would be located within a National Wildlife Refuge are regulated by the refuge staff. We, therefore, recommend that you contact them to determine their interest in proposed projects in these areas.

Additional information on Federal trust species in Louisiana can be obtained from the Louisiana Ecological Services website at: www.fws.gov/lafayette or by calling 337/291-3100.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Louisiana Ecological Services Field Office
200 Dulles Drive
Lafayette, LA 70506
(337) 291-3100

Project Summary

Consultation Code: 04EL1000-2019-SLI-0612

Event Code: 04EL1000-2021-E-00491

Project Name: Lake Pontchartrain and Vicinity General Re-Evaluation Report

Project Type: STREAM / WATERBODY / CANALS / LEVEES / DIKES

Project Description: The U.S. Army Corps of Engineers, New Orleans District (CEMVN), is preparing the Lake Pontchartrain and Vicinity (LPV), Louisiana General Re-evaluation Report to re-evaluate the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, and sea level rise over time, and determine if additional actions are recommended to sustain the current 1% level of risk reduction for coastal storms. The measures that have been identified as part of the proposed action include lifts to existing levees, raising of existing flood walls, placement of foreshore protection in existing foreshore protection locations, and construction access dredging for placement of foreshore protection.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/30.000621499999465N90.09144511498975W>



Counties: Jefferson, LA | Orleans, LA | Plaquemines, LA | St. Bernard, LA | St. Charles, LA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
West Indian Manatee <i>Trichechus manatus</i> There is final critical habitat for this species. Your location is outside the critical habitat. This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements. Species profile: https://ecos.fws.gov/ecp/species/4469	Threatened

Fishes

NAME	STATUS
Atlantic Sturgeon (gulf Subspecies) <i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/651	Threatened
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

10/26/2020

Event Code: 04EL1000-2021-E-00491

4

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Atlantic Sturgeon (gulf Subspecies) <i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i> https://ecos.fws.gov/ecp/species/651#crithab	Final

3 FISH AND WILDLIFE COORDINATION ACT REPORTS

3.1 DRAFT FISH AND WILDLIFE COORDINATION ACT REPORT 30 OCTOBER 2019



United States Department of the Interior

FISH AND WILDLIFE SERVICE
200 Dulles Drive
Lafayette, Louisiana 70506

October 30, 2019

Colonel Stephen Murphy
District Commander
U.S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, LA 70118-3651

Dear Colonel Murphy;

Please reference the Lake Pontchartrain and Vicinity Hurricane Storm Damage and Risk Reduction Re-evaluation (LPV). Attached is the draft Fish and Wildlife Coordination Act (FWCA) Report which addresses project-associated impacts to forested habitats and estuarine marsh for activities associated with restoring existing levees to an authorized level of hurricane protection.

Levee lifts will be required to offset expected consolidation, settlement, subsidence and sea level rise. This report will evaluate impacts associated with raising and widening existing levee footprints and provides recommendations to minimize and/or mitigate project impacts on those resources. This report does not constitute the 2(b) report of the Fish and Wildlife Service (Service). This report has been provided to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF) for comment; their comments will be incorporated into our final report.

INTRODUCTION

This draft Fish and Wildlife Coordination Act (FWCA) Report of the Fish and Wildlife Service (Service) addresses project-associated impacts to forested habitats and estuarine marsh by the Corps of Engineers' (Corps) for activities associated with implementation of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), Lake Pontchartrain and Vicinity (LPV) Project. Our findings and recommendations are presented in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and have been developed on the basis of surveys and analyses of project impacts and potential improvement of mitigation areas for fish and wildlife resources. This draft report does not constitute the final report of the Secretary of the Interior as required by Section 2(b) of that Act. This draft FWCA provides additional comments in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d), the Migratory Bird

Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.). The Service has provided copies of this report to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF), and their comments will be incorporated into the final report.

The Water Resources Reform and Development Act of 2014 authorized USACE to carry out measures needed to address consolidation, settlement, and sea level rise if the necessary work is determined to be technically feasible, environmentally acceptable, and economically justified. The Bipartisan Budget Act of 2018 provided appropriations to conduct the General Re-evaluation Report necessary to inform this determination.

At the current stage of planning the USACE has preliminarily identified impacts to fish and wildlife resources. As planning and impact assessments continue to be refined, assessment of those impacts and mitigation needs will need to be revised accordingly.

Study Area

The portion of the New Orleans Metropolitan Area known as the East Bank extends from eastern St. Charles Parish to southern St. Bernard Parish along the left descending bank of the Mississippi River. It includes the communities of Norco, Destrehan, Kenner, Harahan, Metairie, New Orleans, Chalmette, Arabi, Meraux, Violet, Poydras, Caernarvon and St. Bernard. The Mississippi River Levee (MRL) protects this area from high river levels. The Lake Pontchartrain and Vicinity (LPV) HSDRRS connects to the MRL at both the north and south end of the system.

The HSDRRS includes risk reduction features in nine sub-basins; five sub-basins are located in LPV (St. Charles, East Jefferson, Orleans Metro, New Orleans East). In this context a sub-basin is the geographic area protected by a specific component of HSDRRS and are independent hydrologic units. All of the sub-basins, except for the New Orleans East sub-basin, are located along the Mississippi River. Flood risk reduction from the Mississippi River flow is provided by the Mississippi River and Tributaries (MR&T) Project.

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

Wetlands (forested, marsh, and scrub-shrub) within the study area provide plant detritus to adjacent coastal waters and thereby contribute to the production of commercially and recreationally important fishes and shellfishes. Wetlands in the project area also provide valuable water quality functions such as reduction of excessive dissolved nutrient levels, filtering of waterborne contaminants, and removal of suspended sediment. In addition, coastal wetlands buffer storm surges, reducing their damaging effect to man-made infrastructure within the coastal area.

Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297) set forth a new mandate for National Oceanic Atmospheric Administration's National Marine Fisheries Service (NMFS), regional fishery management councils (FMC), and other federal agencies to identify and protect important marine and anadromous fish habitat. The Essential Fish Habitats (EFH) provisions of the Magnuson-Stevens Act support one of the nation's overall marine resource management goals of maintaining sustainable fisheries. Essential to achieving this goal is the maintenance of suitable marine fishery habitat quality and quantity. Detailed information on Federally-managed fisheries and their EFH is provided in the 1999 generic amendment of the Fishery Management Plans (FMP) for the Gulf of Mexico prepared by the Gulf of Mexico FMC (GMFMC). The generic FMP subsequently was updated and revised in 2005 and became effective in January 2006 (70 FR 76216). NMFS administers EFH regulations. Categories of EFH in the project area include the estuarine waters, estuarine emergent wetlands and mud, sand, and shell water bottoms.

Coastal wetlands also provide nursery and foraging habitat that supports economically important marine fishery species such as spotted seatrout, sand seatrout, southern flounder, Atlantic croaker, spot, Gulf menhaden, striped mullet, anchovies, and blue crab. Some of these species serve as prey for other fish species managed under the Magnuson-Stevens Act by the GMFMC (e.g., mackerels, snappers, and groupers) and highly migratory species managed by NMFS (e.g., billfishes and sharks). Where tidally-influenced waters designated as EFH are converted to a non-tidal elevation, loss of EFH would result. Should EFH be impacted, those losses should be quantified and presented in the Corps' report. Close coordination with the NMFS is recommended because mitigation for those impacts is necessary.

Endangered and Threatened Species

To aid the Corps in complying with their proactive consultation responsibilities under the Endangered Species Act (ESA), the Service provided a list of threatened and endangered species and their critical habitats within the Service's Planning Aid Report dated April 29, 2019.

The Service provides the following additional information and guidance on best management practices (BMPs) for construction of the project.

The threatened West Indian manatee (*Trichechus manatus*) is known to regularly occur in Lakes Pontchartrain and Maurepas and their associated coastal waters and streams, however, manatee occurrences in southeastern Louisiana appear to be increasing. Based on data maintained by the Louisiana Natural Heritage Program (LNHP), over 80 percent of reported manatee sightings (1999-2011) in Louisiana have occurred from the months of June through December, mostly while the average water temperature is warm. Cold weather and outbreaks of red tide may adversely affect these animals. However, human activity is the primary cause for declines in

species number due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution.

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 ESA 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. All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following to minimize potential impacts to manatees in areas of their potential presence:

- 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 on 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).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the project should operate at “no wake/idle” speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers should be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Temporary signs concerning manatees should be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities should display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½" X 11" reading language similar to the following: “CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT”. A second temporary sign measuring 8½" X 11" should be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: “CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION”.
- Collisions with, injury to, or sightings of manatees should be immediately reported to the Service’s Louisiana Ecological Services Office (337/291-3100) and the LDWF, Natural Heritage Program (225/765-2821). Please provide the nature of the call (i.e., report of an

incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

Should a proposed action directly or indirectly affect the West Indian manatee, further consultation with this office will be necessary.

The Atlantic sturgeon (*Acipenser oxyrinchus desotoi*), federally listed as a threatened species, is an anadromous fish that occurs in many rivers, streams, and estuarine and marine waters along the northern Gulf coast. In Louisiana, Atlantic sturgeon have been reported at Rigolets Pass, rivers and lakes of the Lake Pontchartrain Basin, the Pearl River System, and adjacent estuarine and marine areas. Spawning occurs in coastal rivers between late winter and early spring (i.e., March to May). Adults and sub-adults may be found in those rivers and streams until November, and in estuarine or marine waters during the remainder of the year. Atlantic sturgeon less than two years old appear to remain in riverine habitats and estuarine areas throughout the year, rather than migrate to marine waters. Habitat alterations such as those caused by water control structures and navigation projects that limit and prevent spawning, poor water quality, and over-fishing have negatively affected this species.

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 Atlantic sturgeon in Louisiana, Mississippi, Alabama, and Florida. In Louisiana, the designation includes portions of the Pearl and Bogue Chitto Rivers and Lake Pontchartrain east of the Lake Pontchartrain Causeway, as well as Little Lake, The Rigolets, Lake St. Catherine, and Lake Borgne in their entirety. The primary constituent elements essential for the conservation of Gulf sturgeon, which should be considered when determining potential project impacts, are those habitat components that support feeding, resting, sheltering, reproduction, migration, and physical features necessary for maintaining the natural processes that support those habitat components. The primary constituent elements for Atlantic sturgeon critical habitat include:

- abundant prey items within riverine habitats for larval and juvenile life stages, and within estuarine and marine habitats for juvenile, sub-adult, and adult life stages;
- riverine spawning sites with substrates suitable for egg deposition and development, such as limestone outcrops and cut limestone banks, bedrock, large gravel or cobble beds, marl, soapstone, or hard clay;
- riverine aggregation areas, also referred to as resting, holding and staging areas, used by adult, sub-adult, and/or juveniles, generally, but not always, located in holes below normal riverbed depths, believed necessary for minimizing energy expenditures during freshwater residency and possibly for osmoregulatory functions;
- a flow regime (i.e., the magnitude, frequency, duration, seasonality, and rate-of-change of freshwater discharge over time) necessary for normal behavior, growth, and survival of all life stages in the riverine environment, including migration, breeding site selection, courtship, egg fertilization, resting, and staging; and necessary for maintaining spawning sites in suitable condition for egg attachment, egg sheltering, resting, and larvae staging;

- water quality, including temperature, salinity, pH, hardness, turbidity, oxygen content, and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages;
- sediment quality, including texture and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages; and,
- safe and unobstructed migratory pathways necessary for passage within and between riverine, estuarine, and marine habitats (e.g., a river unobstructed by a permanent structure, or a dammed river that still allows for passage).

Further consultation with this office will be necessary if the proposed action may directly or indirectly affect the Atlantic sturgeon. In addition, should the proposed action involve federal implementation, funding, or a federal permit and directly or indirectly affects designated critical habitat, further consultation with this office or the NMFS will be necessary. As part of the critical habitat designation, the Service and NMFS consultation responsibility was divided by project location and Federal action agency. In riverine waters, the Service is responsible for all consultations regarding Atlantic sturgeon and critical habitat, while in marine waters the NMFS is responsible for consultation. For estuarine waters, the Service is responsible for consultations with the Department of Transportation (DOT), the Environmental Protection Agency (EPA), the U.S. Coast Guard (USCG), and the Federal Emergency Management Agency (FEMA). All other Federal agencies should consult with the NMFS office (Ms. Cathy Tortorici at 727.209.5953).

Migratory Birds

The Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.) and the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) offer protection to many bird species within the project area including colonial nesting birds, osprey, and the bald eagle (*Haliaeetus leucocephalus*). We continue to recommend that a qualified biologist inspect proposed work sites for the presence of undocumented colonial nesting colonies during the nesting season (e.g. February through September depending on the species). If colonies exist, work should not be conducted within 1,000 feet of the colony during the nesting season.

On-site personnel should also be informed of the possible presence of nesting bald eagles and ospreys within the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest is located within 660 feet of the proposed activities, the Corps should complete an on-line evaluation (<http://www.fws.gov/southeast/birds/Eagle/tamain.html>) to determine potential disturbance to nesting bald eagles and any protective measures necessary. A copy of that evaluation should be provided to this office. If assistance is needed in completing the evaluation please contact this office.

Public/Protected Lands

Lands within public ownership/oversight impacted by the LPV project include the Jean Lafitte National Historic Park and Preserve (JLNHPP), Chalmette National Cemetery managed by the National Park Service (NPS) and the Bayou Sauvage National Wildlife Refuge Preserve managed by the Service.

PROJECT IMPACTS AND MITIGATION

Project impacts resulted primarily from levee ROWs expansion and construction of levees, borrows pits, floodwalls, navigable floodgates, and associated features. Development is ongoing within the hurricane protection levees; therefore, the Service has assumed that, for this specific project, project-induced development was insignificant. However, the Corps is continuing to refine projects plans; therefore, proposed habitat impacts cannot be finalized at this time. Impacts to wet bottomland hardwoods within the batture and adjacent to the MRL levee have been tentatively identified. Assessment of the value of those areas and their mitigation needs will be presented in our final report. Borrow sites have not been identified in this planning phase but will be identified during detailed planning efforts. Impacts and mitigation associated with those borrow sites will be identified in subsequent NEPA documents. Additional Service recommendations may be provided in supplemental reports as those plans are more fully developed.

Habitat Assessments

Wetland impacts are anticipated to be minimal due to the use of existing levee and floodwall rights-of-way and avoidance of bottomland hardwood habitat in selection of borrow areas.

To quantify impacts and mitigation needs, the Wetland Value Assessment (WVA) will be utilized. Any proposed change in impacts, mitigation features or plans should be coordinated in advance with the Service, NMFS, LDWF, EPA and LDNR.

ALTERNATIVE EVALUATION PROCESS

Six alternatives and one no action alternative were qualitatively evaluated and screened based on preliminary hydrology and hydraulics (H&H), life safety risk, and economic damages information.

The initial array of alternatives includes:

- No Action Alternative
- Alternative 1: System Levee Lifts to the Projected 1% Event at 2057
- Alternative 2: System Levee Lifts to the Projected 1% Event at 2073
- Alternative 3: System Levee Lifts at 2073 that Maximize Benefits
- Alternative 4: Selective Levee Lifts
- Alternative 5: Non-Structural
- Alternative 6: Sponsor Plan

Alternative 2 achieves the greatest net benefits and is thus the National Economic Development (NED) plan and the Tentatively Selected Plan (TSP) for LPV. The second alternative focuses on the 1% event at the 2073 time period. LPV authorization is for protection against 1% event and Federal Emergency Management Agency (FEMA) levee certification for participation in the National Flood Insurance Program under the base flood elevation at the time of construction. 2073 is the end of the studies' 50-year period of analysis.

FISH AND WILDLIFE CONSERVATION MEASURES

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, that habitat type is designated as Resource Category 2, the mitigation goal for which is no net loss of in-kind habitat value. The scrub-shrub and dry bottomland hardwood habitat that may be impacted, however, is placed in Resource Category 3 due to their reduced value to wildlife, fisheries and degraded wetland functions. The mitigation goal for Resource Category 3 habitats is no net loss of habitat value.

The study assumes that existing borrow areas will continue to be used and additional borrow areas will be identified and utilized by other projects, both Federal and non-Federal. This may lead to a reduced availability of future borrow sites which avoid sensitive environmental areas. While this may occur, the study team has no way to predict the potential reduction in available borrow sites and, therefore, has assumed that sensitive environmental areas can be avoided. Identification of future borrow locations should follow guidance provided in Appendix A. Mitigation for those impacts should be coordinated with all natural resource agencies.

SERVICE POSITION AND RECOMMENDATIONS

We do not oppose the Corps' plan to implement alternative 2 for the LPV HSDRRS provided that the following fish and wildlife conservation recommendations are incorporated into future project planning and implementation efforts:

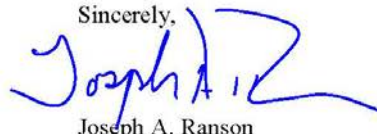
1. Impacts to Essential Fish Habitat (EFH) should be avoided and minimized to the greatest extent possible. Because impacts to designated EFH habitat may need to be mitigated the Corps should coordinate with the NMFS regarding this need.
2. To the greatest extent possible, situate final flood protection features so that impacts to wetlands and non-wet bottomland hardwoods are avoided or minimized.
3. Avoid adverse impacts of bald eagle nesting locations and wading bird colonies through careful design of project features and timing of construction. Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.

4. 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.
5. Further detailed planning of project features (e.g., Design Documentation Report, Engineering Documentation Report, Plans and Specifications, Water Control Plans, or other similar documents) should be coordinated with the Service, NMFS, LDWF, EPA and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.
6. The Corps should avoid impacts to public lands, if feasible. If not feasible the Corps should establish and continue coordination with agencies managing public lands that may be impacted by a project feature until construction of that feature is complete and prior to any subsequent maintenance. In addition all mitigation proposed to occur on public lands should be coordinated with the respective land managing agency. Points of contacts for the agencies potentially impacted by project features are: National Park Service (NPS), contact Superintendent Chuck Hunt, (504) 589-3882 extension 137 (Charles_Hunt@nps.gov) or Chief of Resource Management Guy Hughes (504) 589-3882 extension 128, (Guy_Hughes@nps.gov) and for Bayou Sauvage NWR, the following people should be coordinated with; Shelly Stiaes, (Shelly_Stiaes@fws.gov) Refuge Manager, Barret Fortier (Barret_Fortier@fws.gov) Southeast Refuges Complex Biologist and Neil Lalonde (Neil_Lalonde@fws.gov) Southeast Refuge Complex Supervisor. The telephone number for the Southeast Refuge Complex is (985)882-2000.
7. If applicable, a General Plan for mitigation should be developed by the Corps, the Service, and the managing natural resource agency in accordance with Section 3(b) of the FWCA for mitigation lands.
8. The Corps should maintain full responsibility for all mitigation projects until the projects are found to be fully compliant with success and performance requirements.
9. The Corps should fully compensate for any unavoidable losses of wetland habitat or non-wet bottomland hardwoods caused by project features.
10. Borrow sites should be designed to avoid and minimize impacts to fish and wildlife habitat; in the event new borrow sites are identified, guidelines for borrow site selection are found in Appendix A.

11. Identified impacts shall have a fully defined mitigation plan that is included in the integrated National Environmental Policy Act document. The mitigation plan should be developed, including locations and AAHUs vetted through the natural resource agencies. Existing mitigation banks and existing credits released by Corps Regulatory Branch should be considered in accordance with Department of the Army, Corps of Engineers Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (33 CFR Parts 325 and 332).
12. If the local project-sponsor is unable to fulfill the financial mitigation requirements for operation and/or maintenance of mitigation lands, then the Corps should provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.
13. Any proposed change in mitigation features or plans should be coordinated in advance with the Service, NMFS, LDWF, EPA and LDNR.
14. The Corps should finalize mitigation plans and proceed to mitigation construction so that it will be concurrent with project construction. If construction is not concurrent with mitigation implementation then revising the impact and mitigation period-of-analysis to reflect additional temporal losses will be required

We will continue to work closely with your staff to ensure that fish and wildlife resources are conserved. If you require further assistance in this matter, please contact Hannah Sprinkle (337-291-3121).

Sincerely,



Joseph A. Ranson
Field Supervisor
Louisiana Ecological Services Office

Appendix A

Borrow Site Prioritization Criteria

Where multiple alternative borrow areas exist, use of those alternative sites should be prioritized in the following order: existing commercial pits, upland sources, previously disturbed/manipulated wetlands within a levee system, and low-quality wetlands outside a levee system. The Service supports the use of such protocols to avoid and minimize impacts to wetlands and bottomland hardwoods within project areas. Avoidance and minimization of those impacts helps to provide consistency with restoration strategies and complements the authorized hurricane protection efforts. Such consistency is also required by Section 303(d)(1) of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).

Accordingly, the Service recommends that prior to utilizing borrow sites every effort should be made to reduce impacts by using sheetpile and/or floodwalls to increase levee heights wherever feasible. In addition, the Service recommends that the following protocol be adopted and utilized to identify borrow sources in descending order of priority:

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

Notwithstanding this protocol, the location, size and configuration of borrow sites within the landscape is also critically important. Coastal ridges, natural levee flanks and other geographic features that provide forested/wetland habitats and/or potential barriers to hurricane surges should not be utilized as borrow sources, especially where such uses would diminish the natural functions and values of those landscape features.

To assist in expediting the identification of borrow sites, the Service recommends that immediately after the initial identification of a new borrow site the Corps should initiate informal consultation with the Service regarding potential impacts to federally listed threatened or endangered species. To aid you in complying with those proactive consultation responsibilities, the Service has provided (in the above letter) a list of threatened and endangered species and their critical habitats within the project area.

3.2 FINAL FISH AND WILDLIFE COORDINATION ACT REPORT 14 JANUARY 2021



United States Department of the Interior

FISH AND WILDLIFE SERVICE
200 Dulles Drive
Lafayette, Louisiana 70506



January 14, 2021

Colonel Stephen Murphy
District Commander
U.S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, LA 70118-3651

Dear Colonel Murphy:

Please reference the Lake Pontchartrain and Vicinity Hurricane Storm Damage and Risk Reduction General Re-evaluation (LPV) study. This Fish and Wildlife Coordination Act (FWCA) report addresses project-associated impacts to forested habitats for activities associated with restoring existing levees to an authorized level of hurricane protection.

Levee lifts will be required to offset expected consolidation, settlement, subsidence and sea level rise. This report will evaluate impacts associated with raising and widening existing levee footprints and provides recommendations to minimize and/or mitigate project impacts on those resources. This report constitutes the 2(b) report of the Fish and Wildlife Service (Service). This report has been provided to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF) for comment; their comments were incorporated into our final report.

INTRODUCTION

This FWCA report addresses project-associated impacts to forested habitats determined by U.S. Army Corps of Engineers (USACE) activities associated with implementation of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), Lake Pontchartrain and Vicinity (LPV) Project. Our findings and recommendations are presented in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and have been developed on the basis of surveys and analyses of project impacts and potential improvement of mitigation areas for fish and wildlife resources. This report constitutes the final report of the Secretary of the Interior as required by Section 2(b) of that Act. This FWCA provides additional comments in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d), the Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.).

The Water Resources Reform and Development Act of 2014 authorized USACE to carry out measures needed to address consolidation, settlement, and sea level rise if the necessary work is determined to be technically feasible, environmentally acceptable, and economically justified. The Bipartisan Budget Act of 2018 provided appropriations to conduct the General Reevaluation Report necessary to inform this determination.

Study Area

The portion of the New Orleans Metropolitan Area known as the East Bank extends from eastern St. Charles Parish to southern St. Bernard Parish along the left descending bank of the Mississippi River. It includes the communities of Norco, Destrehan, Kenner, Harahan, Metairie, New Orleans, Chalmette, Arabi, Meraux, Violet, Poydras, Caernarvon and St. Bernard

The HSDRRS includes risk reduction features in nine sub-basins; five sub-basins are located in LPV (St. Charles, East Jefferson, Orleans Metro, New Orleans East). In this context a sub-basin is the geographic area protected by a specific component of HSDRRS and are independent hydrologic units. All of the sub-basins, except for the New Orleans East sub-basin, are located along the Mississippi River.

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

Wetlands (forested, marsh, and scrub-shrub) within the study area provide plant detritus to adjacent coastal waters and thereby contribute to the production of commercially and recreationally important fishes and shellfishes. Wetlands in the project area also provide valuable water quality functions such as reduction of excessive dissolved nutrient levels, filtering of waterborne contaminants, and removal of suspended sediment. In addition, coastal wetlands buffer storm surges, reducing their damaging effect to man-made infrastructure within the coastal area.

Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297) set forth a new mandate for National Oceanic Atmospheric Administration's National Marine Fisheries Service (NMFS), regional fishery management councils (FMC), and other federal agencies to identify and protect important marine and anadromous fish habitat. The Essential Fish Habitats (EFH) provisions of the Magnuson-Stevens Act support one of the nation's overall marine resource management goals of maintaining sustainable fisheries. Essential to achieving this goal is the maintenance of suitable marine fishery habitat quality and quantity. Detailed information on Federally-managed fisheries and their EFH is provided in the 1999 generic amendment of the Fishery Management Plans (FMP) for the Gulf of Mexico prepared by the Gulf of Mexico FMC (GMFMC). The generic FMP subsequently was updated and revised in 2005 and became effective in January 2006 (70

FR 76216). NMFS administers EFH regulations. Categories of EFH in the project area include estuarine waters, estuarine emergent wetlands and mud, sand, and shell water bottoms.

Coastal wetlands also provide nursery and foraging habitat that supports economically important marine fishery species such as spotted seatrout, sand seatrout, southern flounder, Atlantic croaker, spot, Gulf menhaden, striped mullet, anchovies, and blue crab. Some of these species serve as prey for other fish species managed under the Magnuson-Stevens Act by the GMFMC (e.g., mackerels, snappers, and groupers) and highly migratory species managed by NMFS (e.g., billfishes and sharks). Where tidally-influenced waters designated as EFH are converted to a non-tidal elevation, loss of EFH would result. Should EFH be impacted, those losses should be quantified and presented in the Corps' report. Close coordination with the NMFS is recommended because mitigation for those impacts is necessary.

Endangered and Threatened Species

To aid the Corps in complying with their proactive consultation responsibilities under the Endangered Species Act (ESA), the Service provided a list of threatened and endangered species and their critical habitats within the Service's Planning Aid Report dated on April 24, 2019.

Threatened species that may occur in coastal waters of the project vicinity are the West Indian manatee (*Trichechus manatus*) and the Atlantic sturgeon (*Acipenser oxyrinchus desotoi*). For additional information and guidance on best management practices (BMPs) refer to Appendix A.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.) and the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) offer protection to many bird species within the project area including colonial nesting birds, osprey, and the bald eagle (*Haliaeetus leucocephalus*). To avoid adverse impacts of bald eagle nesting locations and wading bird colonies, careful design of project features and timing of construction should be considered. We continue to recommend that a qualified biologist inspect proposed work sites for the presence of undocumented colonial nesting colonies during the nesting season (e.g. February through September depending on the species). If colonies exist, work should not be conducted within 1,000 feet of the colony during the nesting season. The development of an abatement plan to avoid impacts to nesting colonies can be developed in coordination with the Service.

On-site personnel should also be informed of the possible presence of nesting bald eagles and ospreys within the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest is located within 660 feet of the proposed activities, the Corps should complete an on-line evaluation (<http://www.fws.gov/southeast/birds/Eagle/tamain.html>) to determine potential disturbance to nesting bald eagles and any protective measures necessary. A copy of that evaluation should be provided to this office. If assistance is needed in completing the evaluation please contact this office.

Public/Protected Lands

Lands within public ownership/oversight impacted by the LPV project include the Jean Lafitte National Historic Park and Preserve (JLNHPP), Chalmette National Cemetery managed by the National Park Service (NPS) and the Bayou Sauvage National Wildlife Refuge managed by the Service.

PROJECT IMPACTS AND MITIGATION

Project impacts to wet bottomland hardwood (BLH) habitat were identified resulting primarily from levee ROWs expansion and construction of levees, borrows pits, floodwalls, navigable floodgates, and associated features. Impacts should be avoided to the maximum extent practicable but will be unavoidable in some locations. Borrow sites have not been identified in this planning phase but will be identified during detailed planning efforts. Impacts and mitigation associated with those borrow sites will be identified in subsequent NEPA documents. Additional Service recommendations may be provided in supplemental reports as those plans are more fully developed (See Appendix B for Borrow Site Criteria).

Habitat Assessments

Wetland Value Assessment (WVA)

Evaluations of resources were conducted using the WVA methodology. Implementation 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. Although, the WVA may not include every environmental or behavioral variable that could affect fish and wildlife habitat usage, it is widely acknowledged to provide a cost-effective means of assessing restoration measures in coastal wetland communities.

The WVA models operate under the assumption 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 graph for each variable, which defines the assumed relationship between habitat quality (Suitability Index) and different variable values; and, (3) a mathematical formula that combines the Suitability Indices 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.

The USACE-certified Wetland Value Assessment (WVA) Bottomland Hardwood Model (version 1.2) as well as the Hurricane and Storm Risk Reduction System (HSDRRS) for BLH [LPV & WBV] Mitigation Assumption Guide (Revised/Updated: 3 March 2012) were used to evaluate impacts. Target Years (TY) were set as follow: 0, 1, 20 and 50.

Impacts of Selected Plan

As a result of the COVID-19 pandemic, field work and site visits were not permitted for Service employees. The USACE agreed to aid the Service in field data collection and performed site visits on September 27, 2020. Overall impacts will be permanent; habitat destruction as a result of the clearing would result in loss of BLH habitat and those losses should be mitigated for. Project implementation would result in the direct loss of approximately 20.27 acres of BLH and -12.12 AAHUs.

For more details on the WVAs refer to the Project Information Sheet (PIS) found in Appendix C.

ALTERNATIVE EVALUATION PROCESS

Six alternatives and one no action alternative were qualitatively evaluated and screened based on preliminary hydrology and hydraulics (H&H), life safety risk, and economic damages information.

The initial array of alternatives includes:

- No Action Alternative
- Alternative 1: System Levee Lifts to the Projected 1% Event at 2057
- Alternative 2: System Levee Lifts to the Projected 1% Event at 2073
- Alternative 3: System Levee Lifts at 2073 that Maximize Benefits
- Alternative 4: Selective Levee Lifts
- Alternative 5: Non-Structural
- Alternative 6: Sponsor Plan

Alternative 2 achieves the greatest net benefits and is thus the National Economic Development (NED) plan and the Tentatively Selected Plan (TSP) for LPV. The second alternative focuses on the 1% event at the 2073 time period. LPV authorization provides protection against 1% event and enables Federal Emergency Management Agency (FEMA) levee certification for participation in the National Flood Insurance Program under the base flood elevation at the time of construction. 2073 is the end of the studies' 50-year period of analysis.

FISH AND WILDLIFE CONSERVATION MEASURES

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, that habitat type is designated as Resource Category 2, the mitigation goal for which is no net loss of in-kind habitat value. The scrub-shrub and dry bottomland hardwood habitat that may be impacted, however, is placed in Resource Category 3 due to their reduced value to wildlife, fisheries and degraded wetland functions. The mitigation goal for Resource Category 3 habitats is no net loss of habitat value.

The study assumes that existing borrow areas will continue to be used and additional borrow areas will be identified and utilized by other projects, both Federal and non-Federal. This may lead to a reduced availability of future borrow sites which avoid sensitive environmental areas. While this may occur, the study team has no way to predict the potential reduction in available borrow sites and, therefore, has assumed that sensitive environmental areas can be avoided. Identification of future borrow locations should follow guidance provided in Appendix B. Mitigation for those impacts should be coordinated with all natural resource agencies.

SERVICE POSITION AND RECOMMENDATIONS

We do not oppose the Corps' plan to implement alternative 2 for the LPV HSDRRS provided that the following fish and wildlife conservation recommendations are incorporated into future project planning and implementation efforts:

1. Impacts to Essential Fish Habitat (EFH) shall be avoided and minimized to the greatest extent possible. Because impacts to designated EFH habitat may need to be mitigated the Corps shall coordinate with the NMFS regarding this need.
2. To the greatest extent possible, situate final flood protection features so that impacts to wetlands and non-wet bottomland hardwoods are avoided or minimized.
3. Avoid adverse impacts of bald eagle nesting locations and wading bird colonies through careful design of project features and timing of construction. Forest clearing associated with project features shall be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.
4. 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.
5. Further detailed planning of project features (e.g., Design Documentation Report, Engineering Documentation Report, Plans and Specifications, Water Control

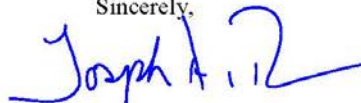
Plans, or other similar documents) shall be coordinated with the Service, NMFS, LDWF, EPA and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.

6. The Corps shall avoid impacts to public lands, if feasible. If not feasible the Corps should establish and continue coordination with agencies managing public lands that may be impacted by a project feature until construction of that feature is complete and prior to any subsequent maintenance. In addition all mitigation proposed to occur on public lands should be coordinated with the respective land managing agency. Points of contacts for the agencies potentially impacted by project features are: National Park Service (NPS), contact Superintendent Chuck Hunt, (504) 589-3882 extension 137 (Charles_Hunt@nps.gov) or Chief of Resource Management Guy Hughes (504) 589-3882 extension 128, (Guy_Hughes@nps.gov) and for Bayou Sauvage NWR, the following people should be coordinated with; Shelly Stiaes, (Shelly_Stiaes@fws.gov) Refuge Manager, Barret Fortier (Barret_Fortier@fws.gov) Southeast Refuges Complex Biologist and Neil Lalonde (Neil_Lalonde@fws.gov) Southeast Refuge Complex Supervisor. The telephone number for the Southeast Refuge Complex is (985)882-2000.
7. If applicable, a General Plan for mitigation shall be developed by the Corps, the Service, and the managing natural resource agency in accordance with Section 3(b) of the FWCA for mitigation lands.
8. The Corps shall maintain full responsibility for all mitigation projects until the projects are found to be fully compliant with success and performance requirements.
9. The Corps shall fully compensate for any unavoidable losses of wetland habitat or non-wet bottomland hardwoods caused by project features.
10. Borrow sites shall be designed to avoid and minimize impacts to fish and wildlife habitat; in the event new borrow sites are identified, guidelines for borrow site selection found in Appendix B should be followed.
11. Identified impacts shall have a fully defined mitigation plan that is included in the integrated National Environmental Policy Act document. The mitigation plan should be developed, including locations and AAHUs vetted through the natural resource agencies. Only existing mitigation banks and existing credits released by Corps Regulatory Branch may be considered.
12. If the local project-sponsor is unable to fulfill the financial mitigation requirements for operation and/or maintenance of mitigation lands, then the Corps shall provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.

13. Any proposed change in mitigation features or plans shall be coordinated in advance with the Service, NMFS, LDWF, EPA and LDNR.
14. The Corps shall finalize mitigation plans and proceed to mitigation construction so that it will be concurrent with project construction. If construction is not concurrent with mitigation implementation then revising the impact and mitigation period-of-analysis to reflect additional temporal losses will be required

We will continue to work closely with your staff to ensure that fish and wildlife resources are conserved. If you require further assistance in this matter, please contact Hannah Sprinkle (337-291-3121).

Sincerely,

A handwritten signature in blue ink that reads "Joseph A. Ranson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Joseph A. Ranson
Field Supervisor
Louisiana Ecological Services Office

Appendix A

West Indian manatee

The threatened West Indian manatee (*Trichechus manatus*) is known to regularly occur in Lakes Pontchartrain and Maurepas and their associated coastal waters and streams. It also can be found less regularly in other Louisiana coastal areas, most likely while the average water temperature is warm. Based on data maintained by the Louisiana Natural Heritage Program (LNHP), over 80 percent of reported manatee sightings (1999-2011) in Louisiana have occurred from the months of June through December. Manatee occurrences in Louisiana 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 southeastern Louisiana. Manatees may also infrequently be observed in the Mississippi River and coastal areas of southwestern Louisiana. Cold weather and outbreaks of red tide may adversely affect these animals. However, human activity is the primary cause for declines in species number due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution.

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.

- All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following to minimize potential impacts to manatees in areas of their potential presence:
- 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 on 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).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the project should operate at “no wake/idle” speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers should be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Temporary signs concerning manatees should be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction

activities should display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½" X 11" reading language similar to the following: "CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A second temporary sign measuring 8½" X 11" should be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: "CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".

- Collisions with, injury to, or sightings of manatees should be immediately reported to the Service's Louisiana Ecological Services Office (337-291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225-765-2821). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.
- To ensure manatees are not trapped due to construction of containment or water control structures, we recommend that the project area be surveyed prior to commencement of work activities. Should a manatee be observed within those areas, the contractor should immediately contact the Service's Louisiana Ecological Services Office (337-291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225-765-2821).

Should a proposed action directly or indirectly affect the West Indian manatee, further consultation with this office will be necessary.

Atlantic Sturgeon

The Atlantic sturgeon (*Acipenser oxyrinchus desotoi*), federally listed as a threatened species, is an anadromous fish that occurs in many rivers, streams, and estuarine and marine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida. In Louisiana, Atlantic sturgeon have been reported at Rigolets Pass, rivers and lakes of the Lake Pontchartrain Basin, the Pearl River System, and adjacent estuarine and marine areas. Spawning occurs in coastal rivers between late winter and early spring (i.e., March to May). Adults and sub-adults may be found in those rivers and streams until November, and in estuarine or marine waters during the remainder of the year. Atlantic sturgeon less than two years old appear to remain in riverine habitats and estuarine areas throughout the year, rather than migrate to marine waters. Habitat alterations such as those caused by water control structures and navigation projects that limit and prevent spawning, poor water quality, and over-fishing have negatively affected this species.

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 Atlantic sturgeon in Louisiana, Mississippi, Alabama, and Florida. In Louisiana, the designation includes

portions of the Pearl and Bogue Chitto Rivers and Lake Pontchartrain east of the Lake Pontchartrain Causeway, as well as Little Lake, The Rigolets, Lake St. Catherine, and Lake Borgne in their entirety. The physical and biological features (PBFs) essential for the conservation of Gulf sturgeon, which should be considered when determining potential project impacts, are those habitat components that support feeding, resting, sheltering, reproduction, migration, and physical features necessary for maintaining the natural processes that support those habitat components. The PBFs for Atlantic sturgeon critical habitat include:

- abundant prey items within riverine habitats for larval and juvenile life stages, and within estuarine and marine habitats for juvenile, sub-adult, and adult life stages;
- riverine spawning sites with substrates suitable for egg deposition and development, such as limestone outcrops and cut limestone banks, bedrock, large gravel or cobble beds, marl, soapstone, or hard clay;
- riverine aggregation areas, also referred to as resting, holding and staging areas, used by adult, sub-adult, and/or juveniles, generally, but not always, located in holes below normal riverbed depths, believed necessary for minimizing energy expenditures during freshwater residency and possibly for osmoregulatory functions;
- a flow regime (i.e., the magnitude, frequency, duration, seasonality, and rate-of-change of freshwater discharge over time) necessary for normal behavior, growth, and survival of all life stages in the riverine environment, including migration, breeding site selection, courtship, egg fertilization, resting, and staging; and necessary for maintaining spawning sites in suitable condition for egg attachment, egg sheltering, resting, and larvae staging;
- water quality, including temperature, salinity, pH, hardness, turbidity, oxygen content, and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages;
- sediment quality, including texture and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages; and,
- safe and unobstructed migratory pathways necessary for passage within and between riverine, estuarine, and marine habitats (e.g., a river unobstructed by a permanent structure, or a dammed river that still allows for passage).

Further consultation with this office will be necessary if the proposed action may directly or indirectly affect the Atlantic sturgeon. In addition, should the proposed action involve federal implementation, funding, or a federal permit and directly or indirectly affects designated critical habitat, further consultation with this office or the NMFS will be necessary. As part of the critical habitat designation, the Service and NMFS consultation responsibility was divided by project location and Federal action agency. In riverine waters, the Service is responsible for all consultations regarding Atlantic sturgeon and critical habitat, while in marine waters the NMFS is responsible for consultation. For estuarine waters, the Service is responsible for consultations with the Department of Transportation (DOT), the Environmental Protection Agency (EPA), the

U.S. Coast Guard (USCG), and the Federal Emergency Management Agency (FEMA). All other Federal agencies should consult with the NMFS office (Ms. Cathy Tortorici at 301-427-8405).

Appendix B

Borrow Site Prioritization Criteria

Where multiple alternative borrow areas exist, use of those alternative sites should be prioritized in the following order: existing commercial pits, upland sources, previously disturbed/manipulated wetlands within a levee system, and low-quality wetlands outside a levee system. The Service supports the use of such protocols to avoid and minimize impacts to wetlands and bottomland hardwoods within project areas. Avoidance and minimization of those impacts helps to provide consistency with restoration strategies and complements the authorized hurricane protection efforts. Such consistency is also required by Section 303(d) (1) of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).

Accordingly, the Service recommends that prior to utilizing borrow sites every effort should be made to reduce impacts by using sheetpile and/or floodwalls to increase levee heights wherever feasible. In addition, the Service recommends that the following protocol be adopted and utilized to identify borrow sources in descending order of priority:

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

Notwithstanding this protocol, the location, size and configuration of borrow sites within the landscape is also critically important. Coastal ridges, natural levee flanks and other geographic features that provide forested/wetland habitats and/or potential barriers to hurricane surges should not be utilized as borrow sources, especially where such uses would diminish the natural functions and values of those landscape features.

To assist in expediting the identification of borrow sites, the Service recommends that immediately after the initial identification of a new borrow site the Corps should initiate informal consultation with the Service regarding potential impacts to federally listed threatened or endangered species. To aid you in complying with those proactive consultation responsibilities, the Service has provided (in the above letter) a list of threatened and endangered species and their critical habitats within the project area.

Appendix C

U.S. Fish and Wildlife Service, Ecological Services
200 Dulles Drive, Lafayette, LA 70506
(337) 291-3100, FAX (337) 291-3139



MEMORANDUM

DATE: October 15, 2020

TO: U.S. Army Corps of Engineers (NOD)

FROM: U.S. Fish and Wildlife Service (Service)

SUBJECT: Project Information Sheet for the Bottomland Hardwood Wetland Value Assessment (WVA) for the proposed Lake Pontchartrain and Vicinity Hurricane Storm Damage and Risk Reduction Re-evaluation (LPV).

Levee lifts will be required to offset expected consolidation, settlement, subsidence and sea level rise. The study area is located within the Mississippi River Deltaic Plain of the Lower Mississippi River Ecosystem. The LPV project includes features in four parishes (St. Charles, Jefferson, Orleans, and St. Bernard) located in the greater New Orleans area on the east bank of the Mississippi River.

Currently, LPV includes approximately a total of 126.5 miles of levees and floodwalls. There are approximately 83 miles of armored perimeter levees and floodwalls and approximately 43.5 miles of interior levees and floodwalls. The project reduces the risk of flooding due to a coastal storm with a 1% chance of being exceeded in any given year. Approximately 20.27 Acres of bottomland hardwood is expected to be impacted from the proposed project.

The USACE-certified Wetland Value Assessment (WVA) Bottomland Hardwood Model (version 1.2) as well as the Hurricane and Storm Risk Reduction System (HSDRRS) for BLH mitigation [LPV & WBV] Mitigation Assumption Guide (Revised/Updated: 3 March 2012) were used to evaluate impacts. Target Years (TY) were set as follow: 0, 1, 20 and 50.

WVA models were previously performed for the proposed West Bank and Vicinity Hurricane Storm Damage and Risk Reduction Re-evaluation. This supplemental PIS addresses revised impacts associated with the clearing of BLH for levee improvement.

Project associated impacts:

LPV

Site	Acres	AAHUs
LPVMRL 1.1	1.88	-0.95
LPVMRL 1.2	8.44	-4.68
LPVMRL 1.3	1.51	-0.77
LPVMRL 1.4	1.44	-0.81
LPVMRL 1.5	7.00	-4.91
Total:	20.27	-12.12

Assumptions for all sites

As a result of the COVID-19 pandemic, field work and site visits were not permitted for Service employees. The USACE agreed to aid the Service in field data collection and perform site visits on September 27, 2020. Not all sites were able to be sampled. To account for this gap in data as well as to supplement and strengthen the current data set, field observations from March 2010 were also used.

Site	Old data set used:	New data set used:
LPVMRL 1.1	MRL-10	LPV-003
LPVMRL 1.2	MRL-10	LPV-003
LPVMRL 1.3	MRL-10	LPV-003
LPVMRL 1.4	MRL-11	LPV-002
LPVMRL 1.5	MRL-13	LPV-001

Variable V₁ – Tree Species Association

FWOP- All sites are expected to see a slight increase in tree species composition by TY20.

Class 1: Less than 25% of overstory canopy consists of mast or other edible-seed producing trees or more than 50% of soft mast present but no hard mast.

Class 2: 25% to 50% of overstory canopy consists of mast or other edible-seed producing trees, but hard mast producers constitute less than 10% of the canopy

Class 3: 25% to 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 10% of the canopy.

Class 4: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, but hard mast producers constitute less than 20% of the canopy.

Class 5: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 20% of the canopy.

FWP class levels were determined as follows for each TY:

Site	TY0-TY10	TY20-TY50
LPVMRL 1.1	Class 2	Class 3
LPVMRL 1.2	Class 2	Class 3
LPVMRL 1.3	Class 2	Class 3
LPVMRL 1.4	Class 2	Class 3
LPVMRL 1.5	Class 4	Class 5

FWP- Trees will be removed for construction of the proposed levee upgrade. Therefore, the lowest value for Tree Species Association (Class 1) was assigned to all sites and for the life of the project.

Variable V₂ – Stand Maturity

FWOP- When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable. Canopy-dominant and canopy co-dominant trees are those trees whose crown rises above or is an integral part of the stand’s overstory. To account for gaps in the data as well as to supplement and strengthen the current data set, field observations from March 2010 and September 2020 were used. The dbh’s gathered from the March 2010 field assessments were grown out 10 years and were then averaged with the September 2020 survey data resulting in a TY0 dbh. Increases in dbh’s over time were then estimated using the bottomland hardwood growth calculator developed by the United States Forest Service (Putnam et al. 1960).*

FWP- All trees will be removed for construction of the proposed levee upgrade. We, therefore, assigned the lowest possible value for Stand Maturity (DBH = 0.01”) for the life of the proposed project and for all sites.

Variable V₃ – Understory/Midstory

FWOP- Field data collected from the 2010 and 2020 were taken into account for this variable. Each site differed in understory/midstory% for TY0-TY10. HSDRSS assumptions were applied to all locations at TY20-TY50.

TY20-TY50 - Understory = 35% // Midstory = 30%

FWP- All understory and midstory vegetation will be removed for construction of the proposed levee upgrade. We, therefore, assigned the lowest possible value for percent of midstory and understory coverage (0%) for the life of the proposed project and for all sites.

Variable V₄ – Hydrology

All sites are located along the banks of the Mississippi River and are subjected to temporary flooding. Significant changes to the current hydrologic regime are not anticipated to change due to the proposed project and should remain constant for the life of the project and for all sites.

Flooding Duration= High and Flow/Exchange= Temporary.

Variable V₅ – Size of Contiguous Forested Area

FWOP- Corridors over 75 feet wide constitute a break in the forested area contiguity and are considered fragmented. Tracts >500 acres in size are optimal.

Class 1	0 to 5 acres
Class 2	5.1 to 20 acres
Class 3	20.1 to 100 acres
Class 4	100.1 to 500 acres
Class 5	> 500 acres

Sites varied in size of contiguous forested area. Some sites had optimal contiguity, offering higher quality habitat. While other sites lacked forested habitat and created a fragmented nature of the surrounding land cover. Conditions are assumed to remain constant throughout all target years.

FWOP conditions are as follows:

Site	Forest Size
LPVMRL 1.1	Class 1
LPVMRL 1.2	Class 3
LPVMRL 1.3	Class 1
LPVMRL 1.4	Class 3
LPVMRL 1.5	Class 4

*Sites were evaluated using information gathered from observations made during field assessments, and from computer-based GIS calculations and Google Earth imagery.

FWP- The proposed project area will be cleared, converting all of its forested area to dirt and mowed grass. Though adjacent forests will likely remain intact, they will not provide benefits to the proposed project site that are typically attributed to contiguous forested systems (because it is now mowed grass, and not forested). Accordingly, once the project is constructed, the project site will provide minimal to no benefits (Class 1) associated with forest contiguity.

Variable V₆ – Suitability and Traversability of Surrounding Land Uses

To measure the effects of surrounding land use, a 0.5 mile buffer was created around the perimeter of the site. Utilizing Google Earth imagery, and previous field data collected and processed through Arc GIS estimates were determined for land use. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP (see attached WVAs).

Suitability weighting factor:

Land Use	Weighting Factor		% of 0.5 mile circle		Weighted Percent
Bottomland hardwood, other forested areas, marsh habitat, etc.	1.0	X		=	
Abandoned agriculture, overgrown fields, dense cover, etc.	0.6	X		=	
Pasture, hayfields, etc.	0.4	X		=	
Active agriculture, open water	0.2	X		=	
Nonhabitat: linear, residential, commercial, industrial development, etc.	0.01	X		=	
					<u> </u> /100 = SI

Variable V7 – Disturbance

The effect of disturbance is a factor of the average distance and the type of disturbance and therefore both are factored into the SI formula. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Distance Class	Disturbance Type Class
Class 1. 0 to 50 ft.	Class 1. Constant/Major. (Major highways, industrial, commercial, major navigation.)
Class 2. 50.1 to 500 ft.	Class 2. Frequent/Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats).
Class 3. > 500 ft.	Class 3. Seasonal/Intermittent. (Agriculture, aquaculture.)
	Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way).

Disturbance Type:

- LPVMRL 1.1: Distance Class 1 and Type Class 2
- LPVMRL 1.2: Distance Class 1 and Type Class 2
- LPVMRL 1.3: Distance Class 1 and Type Class 2
- LPVMRL 1.4: Distance Class 1 and Type Class 2
- LPVMRL 1.5: Distance Class 1 and Type Class 2

Work cited

*Putnam, J.A., G.M. Furnival, and J.S. McKnight. 1960. Management and inventory of southern hardwoods. Agricultural Handbook No. 181. U.S. Department of Agriculture, Forest Service publication. 102pp.

4 ESSENTIAL FISH HABITAT COMPLIANCE 7 FEB 2020



UNITED STATES DEPARTMENT OF COMMERCE
 National Oceanic and Atmospheric Administration
 NATIONAL MARINE FISHERIES SERVICE
 Southeast Regional Office
 263 13th Avenue South
 St. Petersburg, Florida 33701-5505
<http://sero.nmfs.noaa.gov>

February 7, 2020 F/SER46/CG:jbh
 225/380-0078

Mr. Bradley Drouant, P.E.
 U.S. Army Corps of Engineers, New Orleans District (CEMVN-PMO-L)
 7400 Leake Avenue (Room 36)
 New Orleans, Louisiana 70118

Dear Mr. Drouant:

NOAA’s National Marine Fisheries Service (NMFS) has received the draft West Bank and Vicinity (WBV), Louisiana General Re-Evaluation Report with Integrated Environmental Impact Statement (WBV EIS), and the Lake Pontchartrain and Vicinity (LPV) Louisiana General Re-Evaluation Report with Integrated Environmental Impact Statement (LPV EIS); both dated December 8, 2019, provided by the U.S. Army Corps of Engineers, New Orleans District (USACE). The Tentatively Selected Plan (TSP) for the WBV project EIS consists of 52 miles of levee lift and 0.9 miles of floodwall modification and replacements, located along the west bank on the Mississippi River in the Greater New Orleans Area. The LPV TSP consists of 50 miles of levee lifts and 19 miles of floodwall modifications and replacements, located along the east bank on the Mississippi River in the Greater New Orleans Area. The two projects are to be constructed as-needed before the combined effects of consolidation, settlement, subsidence, and sea level rise reduce elevation below the required design elevations. The final reports are scheduled to be released in 2021. The USACE’s initial determination is that the projects will not have a substantial adverse effect on essential fish habitat (EFH) and requests concurrence with this determination. The following is provided in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) and 600.920 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297).

Descriptions of EFH in the Project Areas

The NMFS agrees with the descriptions of essential fish habitat (EFH) and federally managed fishery resources described in Section 4.7 of the WBV EIS, and Section 4.9 of the draft LPV EIS. Detailed information on EFH for federally managed fishery species is provided in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico prepared by the Gulf of Mexico Fishery Management Council. The generic amendment was prepared as required by the Magnuson-Stevens Act; P.L. 104-297.

WBV EIS Discussion

Section 7.7 of the draft WBV EIS states negligible long-term direct construction-related impacts on fisheries and aquatic habitat are anticipated due to levee lifts and floodwall raises. Potential direct effect on fisheries would be associated with the placement of 5.6 acres of foreshore protection in reaches WBV-90 and WBV-12. Foreshore protection would be placed along the Gulf Intracoastal Waterway and Hero Canal to bring existing foreshore protection back up to the proper elevation. The placement of rock would be on top of existing rock and is therefore not expected to impact any wetland vegetation or EFH.



LPV EIS Discussion

Dredging of access channels, adjacent stockpiling, and placement of stone foreshore protection along the shore of Lake Pontchartrain would disturb 212.5 acres of lake bottom and would permanently impact 75.1 acres of shallow lake bottom habitat. Potential impacts to submerged aquatic vegetation (SAV) beds in Lake Pontchartrain would be avoided, through the utilization of pre-construction surveys that would be required to delineate existing SAV and facilitate avoidance of impacts. SAV surveys and avoidance of impacts would be included in construction contract solicitation language; therefore, impacts to EFH would be minimal given these measures.

With inclusion of the aforementioned SAV avoidance measures in the final LPV EIS, WBV EIS, and construction contract solicitation language; the NMFS does not object to the maintenance projects as proposed. This concludes the New Orleans District's responsibilities to meet the requirements of 50 CFR 600.920(k).

Thank you for the opportunity to provide comments on these projects. Related questions or comments should be directed to the attention of Craig Gothreaux at 5757 Corporate Boulevard, Baton Rouge, Louisiana 70808; he may also be reached by telephone at 225-380-0078, or by e-mail at Craig.Gothreaux@noaa.gov.

Sincerely,



Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

c:
USACE, Runyon, McCain
FWS, Walther
EPA, Gutierrez
LDWF, Balkum
LDNR, Morgan
F/SER46, Swafford, Howard
F/SER4, Dale
Files

5 COASTAL ZONE MANAGEMENT ACT COMPLIANCE – CONSISTENCY DETERMINATION DECEMBER 2019

INTRODUCTION

Section 307 of the Coastal Zone Management Act of 1972, 16 U.S.C. 1451 et. seq. 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 has been prepared for the proposed Lake Pontchartrain and Vicinity General Reevaluation Report. The USACE is preparing the study under the authority of Section 3017 of WRRDA 2014. Public Law 115-123 (Bipartisan Budget Act of 2018) funded the study as a new start. The proposed action is located in St. Charles, Jefferson, Orleans, and St. Bernard parishes in southeast Louisiana (Figure 1).

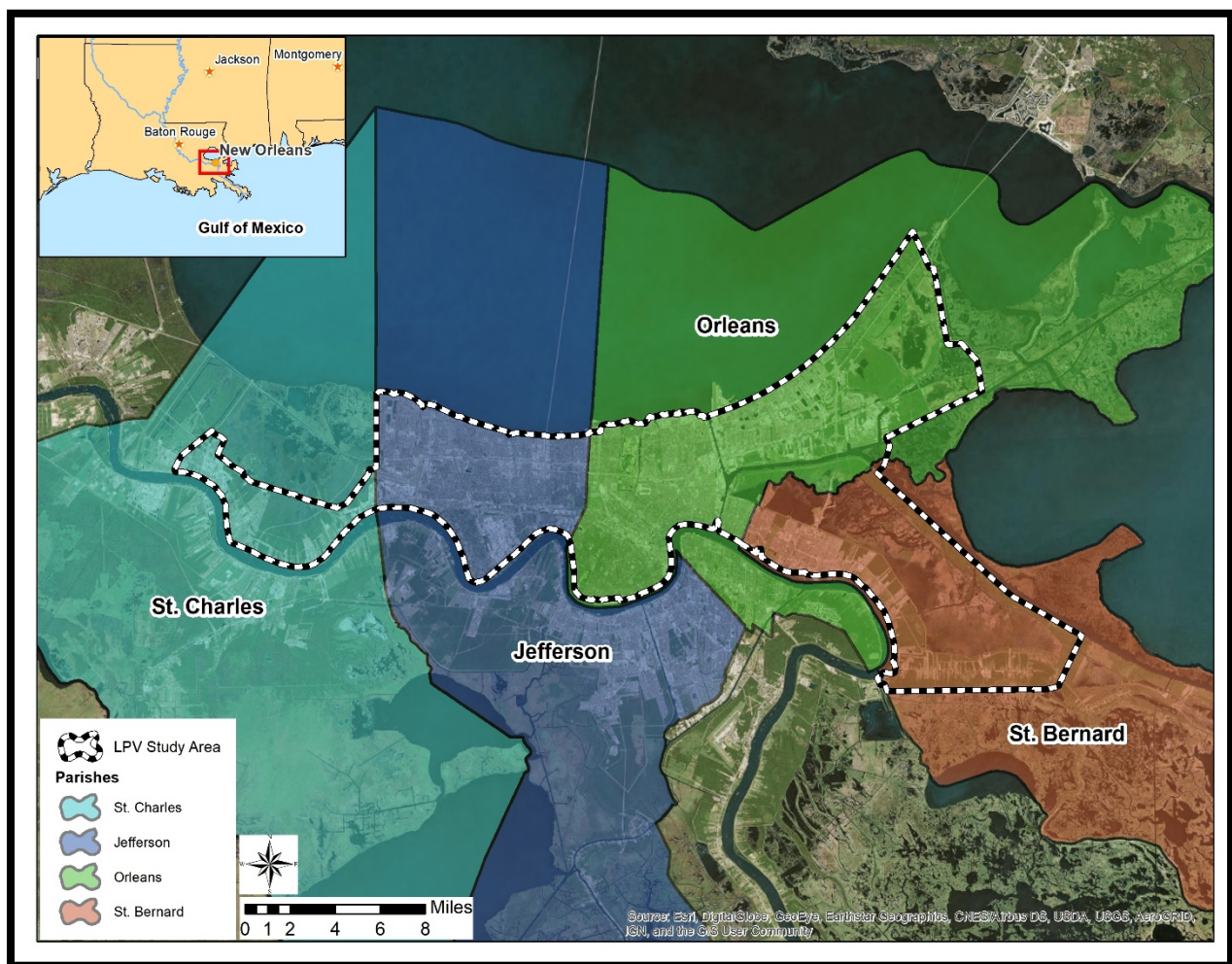


Figure 7. Location of the Study Area in relation to parishes.

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Southeast Louisiana, including the Greater New Orleans area, is generally characterized by weak soils, general subsidence, and the global incidence of sea level rise that will cause levees to require future lifts to sustain performance of the system. The project authority did not provide for future lifts. Absent future levee lifts to offset consolidation, settlement, subsidence, and sea level rise, risk to life and property in the Greater New Orleans area will progressively increase. The LPV study seeks to determine if the work necessary to sustain the 1% level of risk reduction is technically feasible, environmentally acceptable, and economically justified. A positive determination would make construction of future levee lifts eligible for future budget requests.

DESCRIPTION OF THE PROPOSED ACTION

The LPV project includes features in four parishes (St. Charles, Jefferson, Orleans, and St. Bernard) located in the greater New Orleans area on the east bank of the Mississippi River. Currently, LPV contains a total of approximately 126.5 miles of levees and floodwalls. There are approximately 83 miles of armored perimeter levees and floodwalls and approximately 43.5 miles of interior levees and floodwalls. The project is in a high-density residential and commercial area. The proposed action would include lifts to existing levees, raising of existing flood walls, placement of foreshore protection in existing foreshore protection locations along the shore of Lake Pontchartrain, and construction access dredging for placement of foreshore protection.

The proposed levee lifts would occur along the alignment of the existing levees. The proposed floodwall increases would occur within the existing floodwall footprints. The proposed foreshore protection would also be placed within the existing footprint of the foreshore protection along the Lake Pontchartrain shoreline. Construction access dredging and adjacent temporary stockpiling would be required to provide adequate depth for construction equipment to reach the Lake Pontchartrain shoreline. Construction access channels and adjacent stockpile locations would be returned to pre-construction elevations subsequent to construction completion. See Figure 2 for feature locations.



Figure 8. Proposed Action feature locations.

Construction would not be expected to commence until 2021 at the earliest and would be dependent upon congressional authorization and appropriations. Levee lifts would be conducted in multiple lifts over the course of the 50-year period of analysis. Lift schedules would vary by location and by the corresponding rates of subsidence. Floodwall lifts would only occur once per location but the timing would vary.

Placement of the stone foreshore protection along the shoreline of Lake Pontchartrain would result in filling approximately 75.1 acres of aquatic habitat. However, the stone would be placed on the existing foreshore protection footprint to bring it back up to the required elevation. Stone would be transported by barge to the project area. Stone would be placed by crane-operated skip-pan, dragline bucket, clamshell, rock-bucket, hydraulic excavator, trackhoe, or other similar equipment.

Construction access dredging and associated temporary stockpiling would impact approximately 212.5 acres of aquatic habitat. This impact would be temporary as areas would be returned to pre-project conditions after construction. Material would be dredged from the bed of Lake Pontchartrain with a bucket dredge. Construction access channels would consist of parallel channels at the shoreline in areas where rock would be placed as well as perpendicular access channels to allow access to the shoreline channels (see Figure 2). The dimensions required for

barge access channels would be approximately -7 feet depth with 100-foot bottom width. Perpendicular access channels would begin at the elevation -7 ft contour of the lake and extend 400 to 1600 ft. Adjacent dredged material stockpile sites would be 150 ft wide.

GUIDELINES

The following guidelines are used to review a proposed coastal use for compliance with the CZMA through the Louisiana Coastal Resources Program administered by the Louisiana Department of Natural Resources. Reviewing all these guidelines is required for making a decision as to whether or not the proposed action complies with the guidelines, and all applicable guidelines must be considered.

GUIDELINES APPLICABLE TO ALL USES

Guideline 1.1 The guidelines must be read in their entirety. Any proposed use may be subject to the requirements of more than one guideline or section of guidelines and all applicable guidelines must be complied with.

Guideline 1.2 Conformance with applicable water and air quality laws, standards and regulations, and with those other laws, standards and regulations which have been incorporated into the coastal resources program shall be deemed in conformance with the program except to the extent that these guidelines would impose additional requirements.

Guideline 1.3 The guidelines include both general provisions applicable to all uses and specific provisions applicable only to certain types of uses. The general guidelines apply in all situations. The specific guidelines apply only to the situations they address. Specific and general guidelines should be interpreted to be consistent with each other. In the event there is an inconsistency, the specific should prevail.

Guideline 1.4 These guidelines are not intended to nor shall they be interpreted so as to result in an involuntary acquisition or taking of property.

Guideline 1.5 No use or activity shall be carried out or conducted in such a manner as to constitute a violation of the terms of a grant or donation of any lands or water-bottoms to the State or any subdivision thereof. Revocations of such grants and donations shall be avoided.

Guideline 1.6 Information regarding the following general factors shall be utilized by the permitting authority in evaluating whether the proposed use is in compliance with the guidelines.

- a) type, nature and location of use.
- b) elevation, soil and water conditions and flood and storm hazard characteristics of site.
- c) techniques and materials used in construction, operation and maintenance of use.
- d) existing drainage patterns and water regimes of surrounding area including flow, circulation, quality, quantity and salinity; and impacts on them.
- e) availability of feasible alternative sites or methods – for implementing the use.
- f) designation of the area for certain uses as part of a local program.
- g) economic need for use and extent of impacts of use on economy of locality.
- h) extent of resulting public and private benefits.
- i) extent of coastal water dependency of the use.

- j) existence of necessary infrastructure to support the use and public costs resulting from use.
- k) extent of impacts on existing and traditional uses of the area and on future uses for which the area is suited.
- l) proximity to, and extent of impacts on important natural features such as beaches, barrier islands, tidal passes, wildlife and aquatic habitats, and forest lands.
- m) the extent to which regional, state and national interests are served including the national interest in resources and the siting of facilities in the coastal zones as identified in the coastal resources program.
- n) proximity to, and extent of impacts on, special areas, particular areas, or other areas of particular concern of the state program or local programs.
- o) likelihood of, and extent of impacts of, resulting secondary impacts and cumulative impacts.
- p) proximity to and extent of impacts on public lands or works, or historic, recreational or cultural resources.
- q) extent of impacts on navigation, fishing, public access, and recreational opportunities.
- r) extent of compatibility with natural and cultural setting.
- s) extent of long term benefits or adverse impacts.

Guideline 1.7 It is the policy of the coastal resources program to avoid the following adverse impacts. To this end, all uses and activities shall be planned, sited, designed, constructed, operated and maintained to avoid to the maximum extent practicable significant:

- a) reductions in the natural supply of sediment and nutrients to the coastal system by alterations of freshwater flow.
- b) adverse economic impacts on the locality of the use and affected governmental bodies.
- c) detrimental discharges of inorganic nutrient compounds into coastal waters.
- d) alterations in the natural concentration of oxygen in coastal waters.
- e) destruction or adverse alterations of streams, wetland, tidal passes, inshore waters and waterbottoms, beaches, dunes, barrier islands, and other natural biologically valuable areas or protective coastal features.
- f) adverse disruption of existing social patterns.
- g) alterations of the natural temperature regime of coastal waters.
- h) detrimental changes in existing salinity regimes.
- i) detrimental changes in littoral and sediment transport processes.
- j) adverse effects of cumulative impacts.
- k) detrimental discharges of suspended solids into coastal waters, including turbidity resulting from dredging.

- l) reductions or blockage of water flow or natural circulation patterns within or into an estuarine system or a wetland forest.
- m) discharges of pathogens or toxic substances into coastal waters.
- n) adverse alteration or destruction of archaeological, historical, or other cultural resources.
- o) fostering of detrimental secondary impacts in undisturbed or biologically highly productive wetland areas.
- p) adverse alteration or destruction of unique or valuable habitats, critical habitat for endangered species, important wildlife or fishery breeding or nursery areas, designated wildlife management or sanctuary areas, or forestlands.
- q) adverse alteration or destruction of public parks, shoreline access points, public works, designated recreation areas, scenic rivers, or other areas of public use and concern.
- r) adverse disruptions of coastal wildlife and fishery migratory patterns.
- s) land loss, erosion and subsidence.
- t) increases in the potential for flood, hurricane or other storm damage, or increases in the likelihood that damage will occur from such hazards.
- u) reductions in the long-term biological productivity of the coastal ecosystem.

Guideline 1.8 In those guidelines in which the modifier "maximum extent practicable" is used, the proposed use is in compliance with the guideline if the standard modified by the term is complied with. If the modified standard is not complied with, the use will be in compliance with the guideline if the permitting authority finds, after a systematic consideration of all pertinent information regarding the use, the site and the impacts of the use as set forth in guideline 1.6, and a balancing of their relative significance, that the benefits resulting from the proposed use would clearly outweigh the adverse impacts resulting from non-compliance with the modified standard and there are no feasible and practical alternative locations, methods and practices for the use that are in compliance with the modified standard and:

- a) significant public benefits will result from the use, or;
- b) the use would serve important regional, state or national interests, including the national interest in resources and the siting of facilities in the coastal zone identified in the coastal resources program, or;
- c) the use is coastal water dependent.

The systematic consideration process shall also result in a determination of those conditions necessary for the use to be in compliance with the guideline. Those conditions shall assure that the use is carried out utilizing those locations, methods and practices which maximize conformance to the modified standard; are technically, economically, environmentally, socially and legally feasible and practical and minimize or offset those adverse impacts listed in guideline 1.7 and in the guideline at issue.

Guideline 1.9 Uses shall to the maximum extent practicable be designed and carried out to permit multiple concurrent uses which are appropriate for the location and to avoid unnecessary conflicts with other uses of the vicinity.

Guideline 1.10 These guidelines are not intended to be, nor shall they be, interpreted to allow expansion of governmental authority beyond that established by La. R.S. 49:213.1 through 213.21, as amended; nor shall these guidelines be interpreted so as to require permits for specific uses legally commenced or established prior to the effective date of the coastal use permit program nor to normal maintenance or repair of such uses.

Response: These guidelines are acknowledged and have been addressed through the preparation of responses to the guidelines contained within the specific use categories below.

GUIDELINES FOR LEVEES

Guideline 2.1 The leveeing of unmodified or biologically productive wetlands shall be avoided to the maximum extent practicable.

Response: The project involves raising existing levees and floodwalls. Construction activities would occur along the alignment of existing levees and floodwalls. As a result, most impacts to wetlands would be avoided. However, potential wetland impacts would occur with lifts associated with Mississippi River levees due to the necessity to expand the levees to the flood side, thereby impacting bottomland hardwood-wet habitat (Figure 3). These impacts would be avoided to the maximum extent practicable but would be unavoidable in some locations due to infrastructure on the protected side of the levees. Jurisdictional wetlands would be avoided when designating borrow sites and as a result no impacts to wetlands are anticipated.

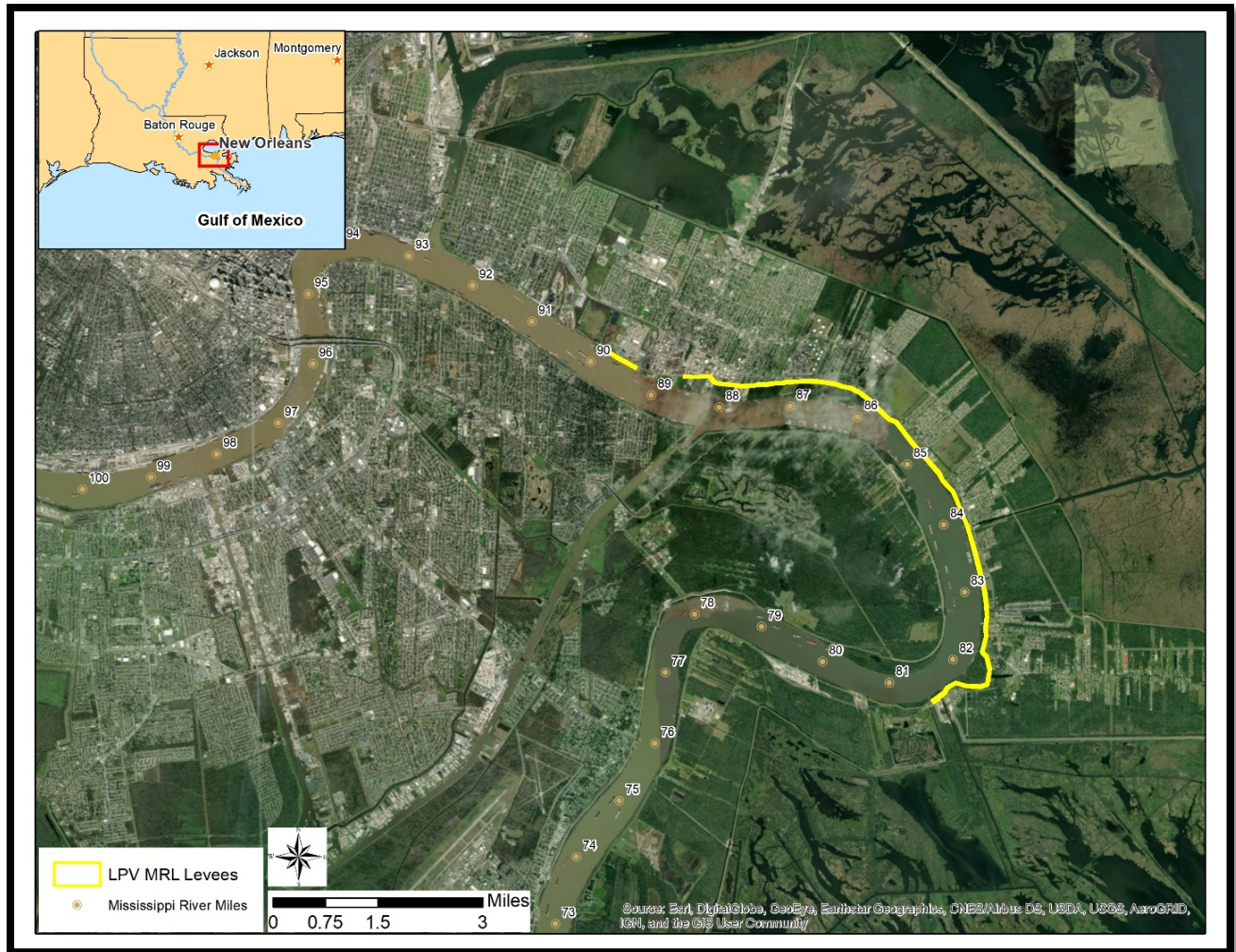


Figure 9. Location of Mississippi River levee lifts.

Guideline 2.2 Levees shall be planned and sited to avoid segmentation of wetland areas and systems to the maximum extent practicable.

Response: The project involves raising existing levees and floodwalls. Construction activities would occur along the alignment of existing levees and floodwalls and as a result no new segmentation of wetland areas and systems is anticipated.

Guideline 2.3 Levees constructed for the purpose of developing or otherwise changing the use of a wetland area shall be avoided to the maximum extent practicable.

Response: The project involves raising existing levees and floodwalls to maintain the authorized level of coastal storm risk reduction. Large sections of the project area are heavily developed for urban and industrial uses, but undeveloped wetlands are abundant in some areas. Wetlands that remain within the project area are subject to local, state, and federal permitting and zoning requirements including the Coastal Zone Management Program and the regulatory procedures of the Clean Water Act. Local, state, and federal interests would be responsible for regulating land development and, therefore, for defining mitigation requirements. Development and change of use would be regulated through these programs.

Guideline 2.4 Hurricane and flood protection levees shall be located at the non-wetland/wetland interface or landward to the maximum extent practicable.

Response: The project involves raising existing levees and floodwalls. Construction activities would occur along the alignment of existing levees and floodwalls and as a result no new impacts to wetlands are anticipated in the footprint of the levees or floodwalls or associated construction areas. In areas where an expansion of the levee footprint is required, wetland impacts would be avoided to the maximum extent practicable. In some areas of Mississippi River levees, a floodside shift and associated wetland impacts are unavoidable (Figure 3).

Guideline 2.5 Impoundment levees shall only be constructed in wetland areas as part of approved water or marsh management projects or to prevent release of pollutants.

Response: Not applicable

Guideline 2.6 Hurricane or flood protection levee systems shall be designed, built and thereafter operated and maintained utilizing best practical techniques to minimize disruptions of existing hydrologic patterns, and the interchange of water, beneficial nutrients and aquatic organisms between enclosed wetlands and those outside the levee system.

Response: The project involves raising existing levees and floodwalls to maintain the authorized level of coastal storm risk reduction. Construction activities would occur along the alignment of existing levees and floodwalls and no changes to existing hydrologic patterns or the interchange of water, beneficial nutrients, or aquatic organisms are anticipated.

GUIDELINES FOR LINEAR FACILITIES

Guideline 3.1 Linear use alignments shall be planned to avoid adverse impacts on areas of high biological productivity or irreplaceable resource areas.

Response: The project involves raising existing levees and floodwalls to maintain the authorized level of coastal storm risk reduction and, therefore, would utilize existing linear corridors for construction. No impacts to areas of high biological productivity or irreplaceable resources are anticipated.

Guideline 3.2 Linear facilities involving the use of dredging or filling shall be avoided in wetland and estuarine areas to the maximum extent practicable.

Response: The project involves raising existing levees and floodwalls to maintain the authorized level of coastal storm risk reduction and, therefore, would utilize existing linear corridors for levee construction. However, water-based construction would be required for construction of the foreshore protection along the shore of Lake Pontchartrain. In order to allow construction equipment to access the shoreline, construction access channels would be dredged and dredged material would be temporarily stockpiled adjacent to the channels. Construction access channels and stockpile areas would be brought back to original elevations subsequent to completion of construction activities. In addition, rock foreshore protection would be placed on top of existing foreshore protection in Lake Pontchartrain to bring the stone back up to the required elevation for proper levee protection. See Figures 4 and 5 below for foreshore protection and construction access dredging areas.

Coastal Zone Management Act compliance

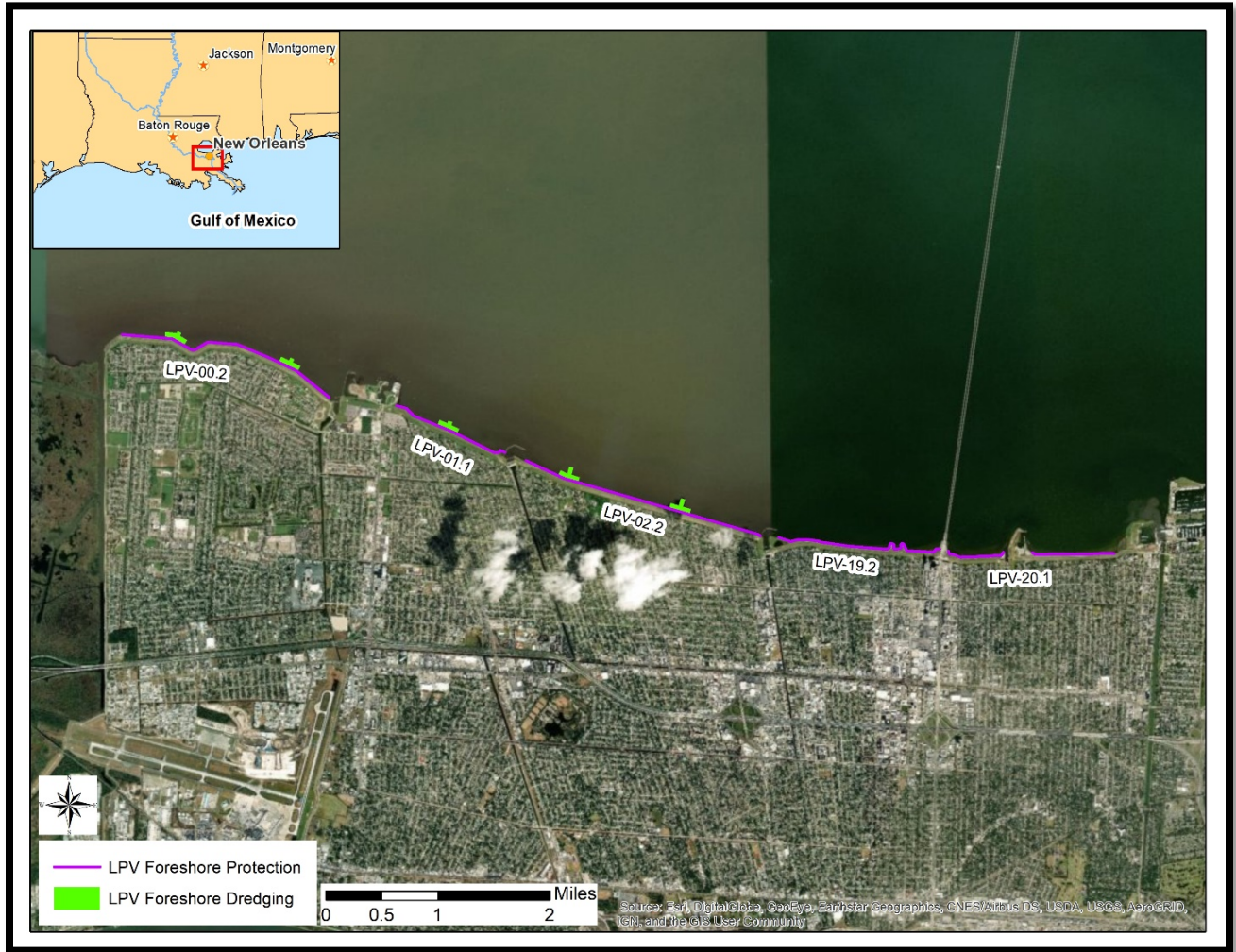


Figure 10. Foreshore protection placement and construction access dredging areas.

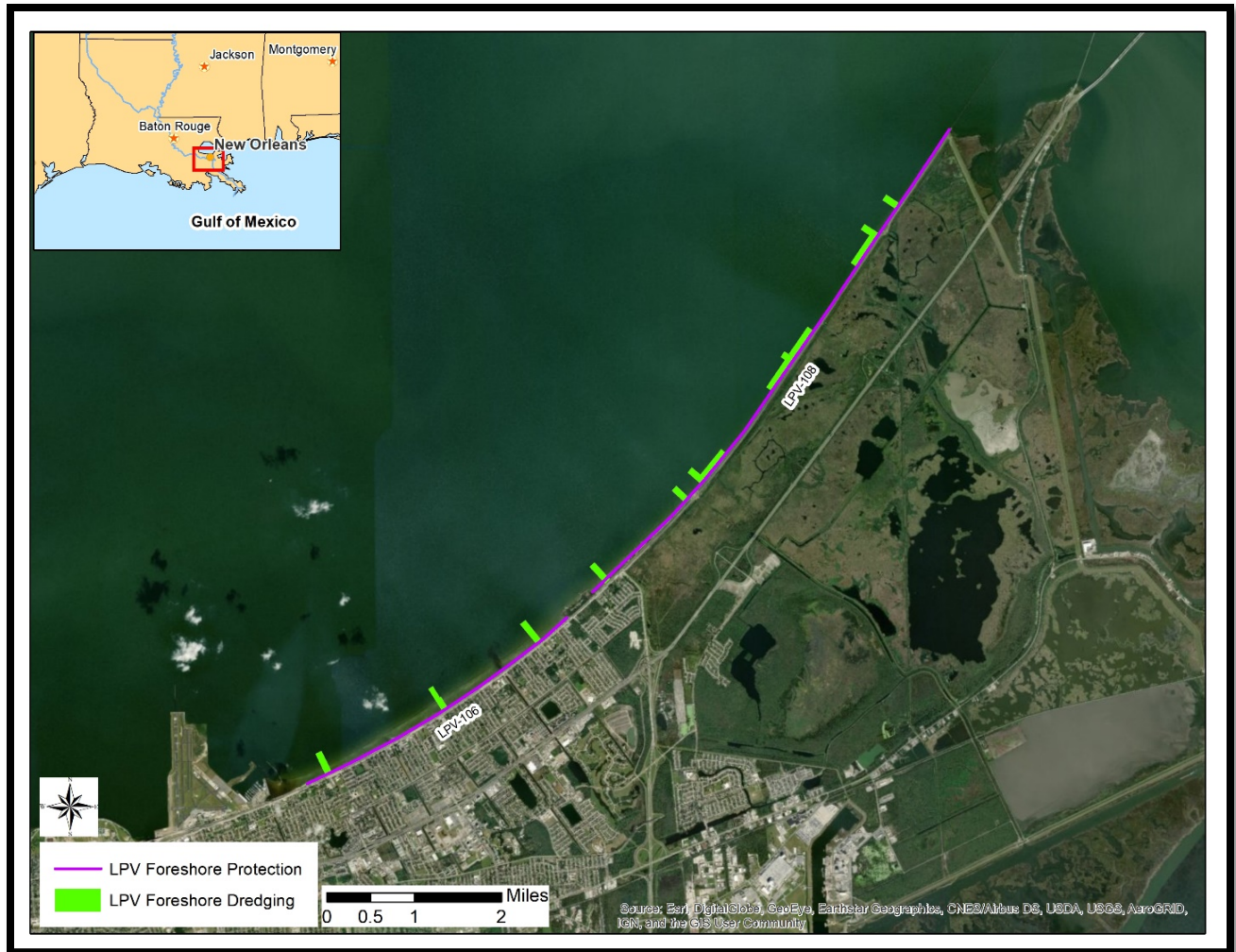


Figure 11. Foreshore protection placement and construction access dredging areas.

Guideline 3.3 Linear facilities involving dredging shall be of the minimum practical size and length.

Response: Dredging to provide access for construction activities along the Lake Pontchartrain shoreline would be of the minimum practical size and length to allow barge and tow access to the shoreline.

Guideline 3.4 To the maximum extent practicable, pipelines shall be installed through the "push ditch" method and the ditch backfilled.

Response: Not applicable.

Guideline 3.5 Existing corridors, rights-of-way, canals, and streams shall be utilized to the maximum extent practicable for linear facilities.

Response: The use of existing corridors and rights-of-way has been and would continue to be implemented throughout the design and construction process.

Guideline 3.6 Linear facilities and alignments shall be, to the maximum extent practicable, designed and constructed to permit multiple uses consistent with the nature of the facility.

Response: Existing linear corridors would be used and would be designed and constructed to permit multiple uses consistent with the existing nature of the facilities.

Guideline 3.7 Linear facilities involving dredging shall not traverse or adversely affect any barrier island.

Response: Not applicable.

Guideline 3.8 Linear facilities involving dredging shall not traverse beaches, tidal passes, protective reefs or other natural gulf shoreline unless no other alternative exists. If a beach, tidal pass, reef or other natural gulf shoreline must be traversed for a non-navigation canal, they shall be restored at least to their natural condition immediately upon completion of construction. Tidal passes shall not be permanently widened or deepened except when necessary to conduct the use. The best available restoration techniques which improve the traversed area's ability to serve as a shoreline shall be used

Response: Not applicable.

Guideline 3.9 Linear facilities shall be planned, designed, located and built using the best practical techniques to minimize disruption of natural hydrologic and sediment transport patterns, sheet flow, and water quality, and to minimize adverse impacts on wetlands.

Response: The project involves raising existing levees and floodwalls to maintain the authorized level of coastal storm risk reduction and, therefore, would utilize existing linear corridors for construction. The project also involves placement of foreshore protection and associated construction access dredging in Lake Pontchartrain. Minor, short-term, impacts on water quality from construction activities may include decreased dissolved oxygen levels in the waters immediately surrounding the construction site, increased turbidity due to construction runoff and sedimentation, and increased water body temperature due to increased suspended solids produced during construction that could absorb incident solar radiation. Temporary, minor water quality impacts could occur due to increased nutrient loading, miscellaneous debris, and accidental spills from construction equipment. Impacts would be minimized by use of silt curtains and other best management practices. Prior to construction, the National Pollutant Discharge Elimination System (NPDES) permit process would be completed and a General Stormwater Permit would be required. Contractors would need a site-specific Spill Prevention, Control and Countermeasure Plan (SPCCP) in place prior to the start of construction. After construction, conditions would be expected to stabilize and return to conditions similar to pre-construction. No new impacts to wetlands are anticipated in the footprint of the levees or floodwalls or associated construction areas. However, potential wetland impacts would occur with lifts associated with Mississippi River levees due to the necessity to expand the levees to the flood side, thereby impacting bottomland hardwood-wet habitat (Figure 3). These impact would be avoided to the maximum extent practicable but would be unavoidable in some locations due to infrastructure on the protected side of the levees.

Guideline 3.10 Linear facilities shall be planned, designed, and built using the best practical techniques to prevent bank slumping and erosion, saltwater intrusion, and to minimize the potential for inland movement of storm-generated surges. Consideration shall be given to the use of locks in navigation canals and channels which connect more saline areas with fresher areas.

Response: The levees and floodwalls of the existing system and the proposed levee and floodwall raises are designed to protect against storm events, specifically storm generated surges

and related saltwater intrusion and are designed using best practical techniques to prevent bank slumping and erosion. No modifications to navigation locks are proposed.

Guideline 3.11 All non-navigation canals, channels, and ditches which connect more saline areas with fresher areas shall be plugged at all waterway crossings and at intervals between crossings in order to compartmentalize them. The plugs shall be properly maintained.

Response: Not applicable.

Guideline 3.12 The multiple use of existing canals, directional drilling, and other practical techniques shall be utilized to the maximum extent practicable to minimize the number and size of access canals, to minimize changes of natural systems and to minimize adverse impacts on natural areas and wildlife and fisheries habitat.

Response: Not applicable.

Guideline 3.13 All pipelines shall be constructed in accordance with parts 191, 192, and 195 of Title 49 of the Code of Federal Regulations, as amended, and in conformance with the Commissioner of Conservation's Pipeline Safety Rules and Regulations and those safety requirements established by La. R. S. 45:408, whichever would require higher standards.

Response: Not applicable.

Guideline 3.14 Areas dredged for linear facilities shall be backfilled or otherwise restored to the pre-existing conditions upon cessation of use for navigation purposes to the maximum extent practicable.

Response: Construction access channels and stockpile areas in Lake Pontchartrain would be brought back to original elevations subsequent to completion of construction activities.

Guideline 3.15 The best practical techniques for site restoration and re-vegetation shall be utilized for all linear facilities.

Response: Re-vegetation through the establishment of turf is required for all levee and floodwall reaches. Along levee and floodwall alignments, vegetation-free zones and root-free zones are maintained to ensure that safety, structural integrity, and functionality are retained and accessibility for maintenance, inspection, monitoring, and flood-fighting are retained per Engineering Technical Letter No. 1110-2-583: Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures.

Guideline 3.16 Confined and dead end canals shall be avoided to the maximum extent practicable. Approved canals must be designed and constructed using the best practical techniques to avoid water stagnation and eutrophication.

Response: Not applicable.

GUIDELINES FOR DREDGED MATERIAL DEPOSITION

Guideline 4.1 Spoil shall be deposited utilizing the best practical techniques to avoid disruption of water movement, flow, circulation and quality.

Response: Impacts would be minimized by use of silt curtains and other best management practices. Prior to construction, the National Pollutant Discharge Elimination System (NPDES) permit process would be completed and a General Stormwater Permit would be required.

Contractors would need a site-specific Spill Prevention, Control and Countermeasure Plan (SPCCP) in place prior to the start of construction. After construction, conditions would be expected to stabilize and return to conditions similar to pre-construction.

Guideline 4.2 Spoil shall be used beneficially to the maximum extent practicable to improve productivity or create new habitat, reduce or compensate for environmental damage done by dredging activities, or prevent environmental damage. Otherwise, existing spoil disposal areas or upland disposal shall be utilized to the maximum extent practicable rather than creating new disposal areas.

Response: Temporary dredged material stockpile areas would be located immediately adjacent to dredged construction access channels. Construction access channels and stockpile areas would be brought back to original elevations subsequent to completion of construction activities.

Guideline 4.3 Spoil shall not be disposed of in a manner which could result in the impounding or draining of wetlands or the creation of development sites unless the spoil deposition is part of an approved levee or land surface alteration project.

Response: Acknowledged.

Guideline 4.4 Spoil shall not be disposed of on marsh, known oyster or clam reefs or in areas of submersed vegetation to the maximum extent practicable.

Response: Construction access channels and temporary dredged material stockpile areas would not impact marsh, oyster reefs, or clam reefs. Submerged aquatic vegetation is limited along the south shore of Lake Pontchartrain. Construction access channels and associated stockpile areas would be located so as to avoid any potential impacts. Pre-construction surveys would be required to delineate existing SAV to facilitate avoidance of impacts. SAV surveys and avoidance of impacts would be included in construction contract solicitation language.

Guideline 4.5 Spoil shall not be disposed of in such a manner as to create a hindrance to navigation or fishing, or hinder timber growth.

Response: Acknowledged.

Guideline 4.6 Spoil disposal areas shall be designed and constructed and maintained using the best practical techniques to retain the spoil at the site, reduce turbidity, and reduce shoreline erosion when appropriate.

Response: Impacts would be minimized by use of silt curtains and other best management practices. Prior to construction, the National Pollutant Discharge Elimination System (NPDES) permit process would be completed and a General Stormwater Permit would be required. Contractors would need a site-specific Spill Prevention, Control and Countermeasure Plan (SPCCP) in place prior to the start of construction. After construction, conditions would be expected to stabilize and return to conditions similar to pre-construction.

Guideline 4.7 The alienation of state-owned property shall not result from spoil deposition activities without the consent of the Department of Natural Resources.

Response: Acknowledged.

GUIDELINES FOR SHORELINE MODIFICATION

Guideline 5.1 Non-structural methods of shoreline protection shall be utilized to the maximum extent practicable.

Guideline 5.2 Shoreline modification structures shall be designed and built using best practical techniques to minimize adverse environmental impacts.

Guideline 5.3 Shoreline modification structures shall be lighted or marked in accordance with U.S. Coast Guard regulations, not interfere with navigation, and should foster fishing, other recreational opportunities, and public access.

Guideline 5.4 Shoreline modification structures shall be built using best practical materials and techniques to avoid the introduction of pollutants and toxic substances into coastal waters.

Guideline 5.5 Piers and docks and other harbor structures shall be designed and built using best practical techniques to avoid obstruction of water circulation.

Guideline 5.6 Marinas, and similar commercial and recreational developments shall to the maximum extent practicable not be located so as to result in adverse impacts on open productive oyster beds, or submersed grass beds.

Guideline 5.7 Neglected or abandoned shoreline modification structures, piers, docks, mooring and other harbor structures shall be removed at the owner's expense, when appropriate.

Guideline 5.8 Shoreline stabilization structures shall not be built for the purpose of creating fill areas for development unless part of an approved surface alteration use.

Guideline 5.9 Jetties, groins, breakwaters and similar structures shall be planned, designed and constructed so as to avoid to the maximum extent practicable downstream land loss and erosion.

Response to Guidelines for Shoreline Modification: The proposed foreshore protection features along the Lake Pontchartrain shoreline are designed to protect project features from erosion and wave impacts and would be designed and built using the best practical techniques to minimize adverse environmental impacts and to avoid introduction of pollutants. Non-structural measures and nature-based features were considered in plan formulation (See Chapter 6 of main report). Nature-based measures were screened out. Marsh creation was screened out due to the high cost per acre of this measure for a low effect. The dunes/beach measure was screened out because the measure would be located too far from the study area to be effective. Non-structural measures (buyouts, floodproofing, risk communication, and elevation) and could be included as part of any of the structural plans. The solely non-structural alternative part of the final array of alternatives considered; however it was screened (Section 6.7.1.3) because it was not considered complete, effect, or efficient.

GUIDELINES FOR SURFACE ALTERATIONS

Guideline 6.1 Industrial, commercial, urban, residential, and recreational uses are necessary to provide adequate economic growth and development. To this end, such uses will be encouraged in those areas of the coastal zone that are suitable for development. Those uses shall be consistent with the other guidelines and shall, to the maximum extent practicable, take place only:

- a) on lands five feet or more above sea level or within fast lands; or
- b) on lands which have foundation conditions sufficiently stable to support the use, and where flood and storm hazards are minimal or where protection from these hazards can be reasonably well achieved, and where the public safety would not be unreasonably endangered; and

- 1) the land is already in high intensity of development use, or
- 2) there is adequate supporting infrastructure, or
- 3) the vicinity has a tradition of use for similar habitation or development

Response: Acknowledged

Guideline 6.2 Public and private works projects such as levees, drainage improvements, roads, airports, ports, and public utilities are necessary to protect and support needed development and shall be encouraged. Such projects shall, to the maximum extent practicable, take place only when:

- a) they protect or serve those areas suitable for development pursuant to Guideline 6.1; and
- b) they are consistent with the other guidelines; and
- c) they are consistent with all relevant adopted state, local and regional plans.

Response: Acknowledged. The project protects the Greater New Orleans Area, an area with significant existing urban and commercial development.

Guideline 6.3 BLANK (Deleted)

Guideline 6.4 To the maximum extent practicable wetland areas shall not be drained or filled. Any approved drain or fill project shall be designed and constructed using best practical techniques to minimize present and future property damage and adverse environmental impacts.

Response: Potential wetland impacts would occur with lifts associated with Mississippi River levees due to the necessity to expand the levees to the flood side, thereby impact bottomland hardwood-wet habitat (Figure 3). These impact would be avoided to the maximum extent practicable but would be unavoidable in some locations due to infrastructure on the protected side of the levees. Impacts would be mitigated as appropriate through compensatory mitigation. Borrow areas would be designed and constructed using the best practical techniques and would avoid wetland impacts.

Guideline 6.5 Coastal water dependent uses shall be given special consideration in permitting because of their reduced choice of alternatives.

Response: Acknowledged

Guideline 6.6 Areas modified by surface alteration activities shall, to the maximum extent practicable, be re-vegetated, refilled, cleaned and restored to their predevelopment condition upon termination of the use.

Response: Project implementation would restore foreshore protection areas to their previous elevation to provide adequate protection for levees. Construction access channels and stockpile areas would be brought back to original elevations subsequent to completion of construction activities.

Guideline 6.7 Site clearing shall to the maximum extent practicable be limited to those areas immediately required for physical development.

Response: Throughout the design and construction process, construction areas and temporary work sites would be minimized to limit impacts beyond what would be required to construct project features.

Guideline 6.8 Surface alterations shall, to the maximum extent practicable, be located away from critical wildlife areas and vegetation areas. Alterations in wildlife preserves and management areas shall be conducted in strict accord with the requirements of the wildlife management body.

Response: Acknowledged

Guideline 6.9 Surface alterations which have high adverse impacts on natural functions shall not occur, to the maximum extent practicable, on barrier islands and beaches, isolated cheniers, isolated natural ridges or levees, or in wildlife and aquatic species breeding or spawning areas, or in important migratory routes.

Response: Acknowledged. Construction activities would be coordinated with state and federal resource agencies to ensure impacts are avoided to the maximum extent practicable. Project activities with potential impacts to threatened or endangered species are being coordinated with USFWS and NMFS. Impacts to threatened and endangered species and their critical habitat would be avoided to the maximum extent practicable. Project activities with potential impacts to Essential Fish Habitat are being coordinated with NMFS. Project activities with potential impacts to colonial nesting water birds are being coordinated with Louisiana Department of Wildlife and Fisheries. Pre-construction bird surveys would be conducted to ensure impacts to colonial nesting water birds are avoided to the maximum extent practicable and construction buffers and season limitations would be employed as necessary. Pre-construction surveys would be required to delineate existing SAV to facilitate avoidance of impacts. SAV surveys and avoidance of impacts would be included in construction contract solicitation language.

Guideline 6.10 The creation of low dissolved oxygen conditions in the water or traps for heavy metals shall be avoided to the maximum extent practicable.

Response: Acknowledged. Prior to construction, the National Pollutant Discharge Elimination System (NPDES) permit process would be completed and a General Stormwater Permit would be required. Contractors would need a site-specific Spill Prevention, Control and Countermeasure Plan (SPCCP) in place prior to the start of construction.

Guideline 6.11 Surface mining and shell dredging shall be carried out utilizing the best practical techniques to minimize adverse environmental impacts.

Response: Not applicable.

Guideline 6.12 The creation of underwater obstructions which adversely affect fishing or navigation shall be avoided to the maximum extent practicable.

Response: Acknowledged

Guideline 6.13 Surface alteration sites and facilities shall be designed, constructed, and operated using the best practical techniques to prevent the release of pollutants or toxic substances into the environment and minimize other adverse impacts.

Response: Acknowledged

Guideline 6.14 To the maximum extent practicable only material that is free of contaminants and compatible with the environmental setting shall be used as fill.

Response: Acknowledged. Potential borrow sites would be screened for potential contaminant issues per USACE regulations. Only material meeting physical and contaminant criteria would be approved for use in levee construction.

GUIDELINES FOR HYDROLOGIC AND SEDIMENT TRANSPORT MODIFICATIONS

Guideline 7.1 The controlled diversion of sediment-laden waters to initiate new cycles of marsh building and sediment nourishment shall be encouraged and utilized whenever such diversion will enhance the viability and productivity of the outfall area. Such diversions shall incorporate a plan for monitoring and reduction and/or amelioration of the effects of pollutants present in the freshwater source.

Guideline 7.2 Sediment deposition systems may be used to offset land loss, to create or restore wetland areas or enhance building characteristics of a development site. Such systems shall only be utilized as part of an approved plan. Sediment from these systems shall only be discharged in the area that the proposed use is to be accomplished.

Guideline 7.3 Undesirable deposition of sediments in sensitive habitat or navigation areas shall be avoided through the use of the best preventive techniques.

Guideline 7.4 The diversion of freshwater through siphons and controlled conduits and channels, and overland flow to offset saltwater intrusion and to introduce nutrients into wetlands shall be encouraged and utilized whenever such diversion will enhance the viability and productivity of the outfall area. Such diversions shall incorporate a plan for monitoring and reduction and/or amelioration of the effects of pollutants present in the freshwater source.

Guideline 7.5 Water or marsh management plans shall result in an overall benefit to the productivity of the area.

Guideline 7.6 Water control structures shall be assessed separately based on their individual merits and impacts and in relation to their overall water or marsh management plan of which they are a part.

Guideline 7.7 Weirs and similar water control structures shall be designed and built using the best practical techniques to prevent "cut arounds," permit tidal exchange in tidal areas, and minimize obstruction of the migration of aquatic organisms.

Guideline 7.8 Impoundments which prevent normal tidal exchange and/or the migration of aquatic organisms shall not be constructed in brackish and saline areas to the maximum extent practicable.

Guideline 7.9 Withdrawal of surface and ground water shall not result in saltwater intrusion or land subsidence to the maximum extent practicable.

Response to Guidelines for Hydrologic and Sediment Transport Modifications: Not applicable.

GUIDELINES FOR DISPOSAL OF WASTES

Guideline 8.1 The location and operation of waste storage, treatment, and disposal facilities shall be avoided in wetlands to the maximum extent practicable, and best practical techniques shall be used to minimize adverse impacts which may result from such use.

Guideline 8.2 The generation, transportation, treatment, storage and disposal of hazardous wastes shall be pursuant to the substantive requirements of the Department of Natural Resources adopted pursuant to Act 334 of 1978 and approved pursuant to the Resource

Conservation and Recovery Act. of 1976 P. 0. 94-580, and of the Office of Conservation for injection below surface.

Guideline 8.3 Waste facilities located in wetlands shall be designed and built to withstand all expectable adverse conditions without releasing pollutants.

Guideline 8.4 Waste facilities shall be designed and constructed using best practical techniques to prevent leaching, control leachate production, and prevent the movement of leachate away from the facility.

Guideline 8.5 The use of overland flow systems for non-toxic, biodegradable wastes, and the use of sump lagoons and reservoirs utilizing aquatic vegetation to remove pollutants and nutrients shall be encouraged.

Guideline 8.6 All waste disposal sites shall be marked and, to the maximum extent practicable, all components of waste shall be identified.

Guideline 8.7 Waste facilities in wetlands with identifiable pollution problems that are not feasible and practical to correct shall be closed and either removed or sealed, and shall be properly re-vegetated using the best practical techniques.

Guideline 8.8 Waste shall be disposed of only at approved disposal sites.

Guideline 8.9 Radioactive wastes shall not be temporarily or permanently disposed of in the coastal zone.

Response to Guidelines for Disposal of Wastes: Not applicable.

GUIDELINES FOR USES THAT RESULT IN THE ALTERATION OF WATERS DRAINING INTO COASTAL WATERS

Guideline 9.1 Upland and upstream water management programs which affect coastal waters and wetlands shall be designed and constructed to preserve or enhance existing water quality, volume, and rate of flow to the maximum extent practicable.

Guideline 9.2 Runoff from developed areas shall to the maximum extent practicable be managed to simulate natural water patterns, quantity, quality and rate of flow.

Guideline 9.3 Runoff and erosion from agricultural lands shall be minimized through the best practical techniques.

Response to Guidelines for Uses that Result in the Alteration of Water Draining into Coastal Waters: Not applicable.

GUIDELINES FOR OIL, GAS, AND OTHER MINERAL ACTIVITIES

Guideline 10.1 Geophysical surveying shall utilize the best practical techniques to minimize disturbance or damage to wetlands, fish and wildlife and other coastal resources.

Guideline 10.2 To the maximum extent practicable, the number of mineral exploration and production sites in wetland areas requiring flotation access shall be held to the minimum number, consistent with good recovery and conservation practices and the need for energy development, by directional drilling, multiple use of existing access canals and other practical techniques.

Guideline 10.3 Exploration, production and refining activities shall, to the maximum extent practicable, be located away from critical wildlife areas and vegetation areas. Mineral operations

in wildlife preserves and management areas shall be conducted in strict accordance with the requirements of the wildlife management body.

Guideline 10.4 Mineral exploration and production facilities shall be to the maximum extent practicable designed, constructed and maintained in such a manner to maintain natural water flow regimes, avoid blocking surface drainage, and avoid erosion.

Guideline 10.5 Access routes to mineral exploration, production and refining sites shall be designed and aligned so as to avoid adverse impacts on critical wildlife and vegetation areas to the maximum extent practicable.

Guideline 10.6 Drilling and production sites shall be prepared, constructed, and operated using the best practical techniques to prevent the release of pollutants or toxic substances into the environment.

Guideline 10.7 All drilling activities, supplies, and equipment shall be kept on barges, on drilling rigs, within ring levees, or on the well site.

Guideline 10.8 Drilling ring levees shall to the maximum extent practicable be replaced with smaller production levees or removed entirely.

Guideline 10.9 All drilling and production equipment, structures, and storage facilities shall be designed and constructed utilizing best practical techniques to withstand all expectable adverse conditions without releasing pollutants.

Guideline 10.10 Mineral exploration, production and refining facilities shall be designed and constructed using best practical techniques to minimize adverse environmental impacts.

Guideline 10.11 Effective environmental protection and emergency or contingency plans shall be developed and complied with for all mineral operations.

Guideline 10.12 The use of dispersants, emulsifiers and other similar chemical agents on oil spills is prohibited without the prior approval of the Coast Guard or Environmental Protection Agency on-Scene Coordinator, in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan.

Guideline 10.13 Mineral exploration and production sites shall be cleared, re-vegetated, detoxified and otherwise restored as near as practicable to their original condition upon termination of operations to the maximum extent practicable.

Guideline 10.14 The creation of underwater obstructions which adversely affect fishing or navigation shall be avoided to the maximum extent practicable.

Response to Guidelines for Oil, Gas, and Other Mineral Activities: Not applicable.

CONSISTENCY DETERMINATION

The Coastal Use Guidelines are acknowledged. The proposed action has been evaluated for consistency with the Coastal Use Guidelines. The proposed action has been planned and designed and would be constructed, operated, and maintained to avoid, to the maximum extent practicable, the significant impacts outlined in Guideline 1.7 of this document. The proposed action would provide a 1% level of risk reduction which would decrease the risk of hurricane and storm surge induced flooding compared to what would be provided without implementation. The project would also decrease the potential for discharge of toxic substances into coastal waters. The proposed action would provide significant public benefit and would serve important

regional, state, and national interest, and the benefits resulting from the proposed action clearly outweigh the adverse impacts. While some data gaps do remain, the cumulative impact analysis for the project indicates that impacts are minor to moderate for the majority of affected resources.

Where practicable and through project feature design, implementation of best management practices, and the implementation of environmental design commitments, adverse impacts have been avoided or reduced. Since the project would largely be constructed in the footprint of the existing system, impacts to human and natural resources would be minimized.

Hazardous, Toxic, and Radioactive Waste assessments would be conducted for all construction areas and borrow sites prior to their use. Unsuitable areas would be avoided and as a result the release of pollutants or toxic substances into the environment would be avoided.

Based on this evaluation, the U. S. Army Corps of Engineers, New Orleans District, has determined that the proposed action is consistent, to the maximum extent practicable, with the State of Louisiana's Coastal Resources Program.

Enclosure: Mitigation Plan

5.1 CORRESPONDENCE WITH LOUISIANA DEPARTMENT OF NATURAL RESOURCES – FEBRUARY 2020

From: [McCain, Kathryn N CIV USARMY CEMVP \(USA\)](#)
To: [jeff.harris \(jeff.harris@la.gov\)](mailto:jeff.harris@la.gov)
Cc: [Runyon, Kip R CIV USARMY CEMVP \(USA\)](#); [McCain, Kathryn N CIV USARMY CEMVP \(USA\)](#)
Subject: C20190215 LPV levee lift and mitigation plan (UNCLASSIFIED)
Date: Tuesday, February 4, 2020 7:24:55 AM
Attachments: [LPVMRL6 BLH WVA v1.2.pdf](#)

Jeff,

View in rich text. Below in the blue are the responses for LPV. Attached is the preliminary WVA model spreadsheet too.

Let me know if you need anything else.

Thanks you
Kat

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

From: Jeff Harris [mailto:Jeff.Harris@LA.GOV]
Sent: Friday, January 24, 2020 2:20 PM
To: Runyon, Kip R CIV USARMY CEMVP (USA) <Kip.R.Runyon@usace.army.mil>; McCain, Kathryn N CIV USARMY CEMVP (USA) <Kathryn.Mccain@usace.army.mil>
Subject: [Non-DoD Source] C20190215 LPV levee lift and mitigation plan

Kip, Kat--

I've completed an initial review of the consistency determination for the Lake Pontchartrain and Vicinity General Re-Evaluation Report, and there are a few questions and clarifications that need to be addressed.

Please provide:

- Locations and dimensions of borrow sites within and outside of Lake Pontchartrain
[Specific borrow sites have not yet been identified. Section 7.1.4 of the EIS provides a generalized description of how borrow sites will be identified in the future in the vicinity of the study area.](#)

From the draft EIS:

1.1.1 GENERALIZED BORROW AREA IMPACT ANALYSIS

Extended construction windows throughout the 50-year period of analysis would be required for implementation of the multiple levee lifts associated with the project. Borrow areas available for use now may not be available when future levee lifts are needed. Accordingly, an analysis of borrow area impacts has been conducted on a "typical" borrow pit that could be chosen for use. Anticipated impacts of excavation and use of such "typical" borrow areas for the action alternatives were evaluated using the below assumptions. The assumptions are based on extensive borrow area impact assessments performed for HSDRRS implementation. The quantities of borrow that would be needed for each lift are estimates. Specific borrow areas would be identified during pre-

construction engineering and design for each segment of project construction. Borrow area acquisition requirements will continue to be evaluated during feasibility design to determine whether temporary or permanent easements are most advantageous to the Government. Additional NEPA documentation and associated public review would be conducted, as necessary, to address impacts associated with those borrow areas. Additionally, if a proposed borrow area contains upland bottomland hardwood forests or another significant resource that requires mitigation, a mitigation plan would be prepared in compliance with WRDA 1986, Section 906 (33 U.S.C. §2283). See Appendix A for construction schedule and estimated borrow quantity for each levee lift.

Table 7-4. Borrow Area Assumptions and Requirements Incorporated into Borrow Area Analysis

Resource	Assumptions and Requirements
Locations	Borrow sites would be located within one or more of the following parishes: <ul style="list-style-type: none"> • Orleans Parish • Plaquemines Parish • Jefferson Parish • St. Charles Parish • Lafourche Parish • St. John the Baptist Parish
Socioeconomics	Borrow sites with potential EJ impacts or potential impacts to sensitive receptors would be avoided.
Soils	Based on the estimated 8.3 million cubic yards of material needed for construction and based on an assumed 20-ft depth of borrow areas, Alternative 2 would require approximately 320.9 acres of borrow area. Based on the estimated 9.3 million cubic yards of material needed for construction, Alternative 3 would require approximately 361.5 acres of borrow area. Suitable clay material would meet the following requirements: <ul style="list-style-type: none"> • Soils classified as fat or lean clays are allowed • Soils with organic content greater than 9% are NOT allowed • Soils with plasticity indices less than 10 are NOT allowed • Soils classified as silts are NOT allowed • Clays will NOT have more than 35% sand content Significant impacts to prime farmland soils would be anticipated given the strong correlation between suitable borrow soils and prime farmland soils.
Transportation	The same transportation corridors used during HSDRRS would be used, as described in <i>Transportation Report for the Construction of the 100-year Hurricane and Storm Damage Risk Reduction System</i> prepared in 2009 and incorporated by reference (USACE, 2009) ^[1] .
Jurisdictional Wetlands	Suitable borrow areas that avoid jurisdictional wetland impacts would be used.
Non-Jurisdictional (i.e. upland) Bottomland	Suitable borrow areas that avoid non-jurisdictional bottomland hardwood (BLH-dry) impacts would be used.

Hardwoods	
Water Quality	Water quality impacts would be minimized through the use of Best Management Practices (BMPs).
Fisheries/Essential Fish Habitat	No impacts to fisheries or EFH would be anticipated due to the use of inland sites
Wildlife	Some permanent impacts to wildlife would be anticipated due to permanent removal of habitat.
Threatened and Endangered Species	No impacts to T&E species would be anticipated as no T&E species are present in upland areas in the target parishes.
Cultural Resources	Cultural resource surveys would be conducted on potential borrow sites; sites with cultural resources would be avoided; no impacts to cultural resources would be anticipated.
Recreational Resources	No impacts to recreational resources would be anticipated as borrow sites would likely be located on private property away from recreational areas
Aesthetics	Minor impacts to aesthetics would be anticipated due to conversion of habitat.
Air Quality	Minor impacts during construction would be anticipated, dissipating upon completion; borrow areas would avoid non-attainment areas
Noise	Minor impacts during construction would be anticipated and minimized through compliance with local noise ordinances; temporary impacts to wildlife in adjacent habitat would be anticipated during construction; avoidance of construction areas may cause carrying capacity of adjacent habitats to be temporarily exceeded.
HTRW	HTRW surveys would be conducted on potential borrow sites; sites with HTRW would be avoided; no impacts would be anticipated.

During scoping, the USFWS provided a recommended protocol for identifying borrow sources. The recommendations in descending order of priority are:

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

Notwithstanding this protocol, the location, size, and configuration of borrow sites within the landscape is also critically important. Coastal ridges, natural levee flanks, and other geographic features that provide forested/wetland habitats and/or potential barriers to hurricane surges should not be utilized as borrow sources, especially where such uses would diminish the natural functions and values of those landscape

features.

USACE would follow this recommended protocol to the extent practicable during borrow area selection. In addition, USACE will select borrow areas in the parishes listed in Table 7-4 that fall within the areas provided by USFWS that contain suitable soils and avoid potential mitigation (see Figure 7-2). Once borrow areas are identified, additional NEPA and environmental coordination for those sites would occur and, if necessary, a mitigation plan would be prepared to compensate for any significant resources existing on those borrow sites.

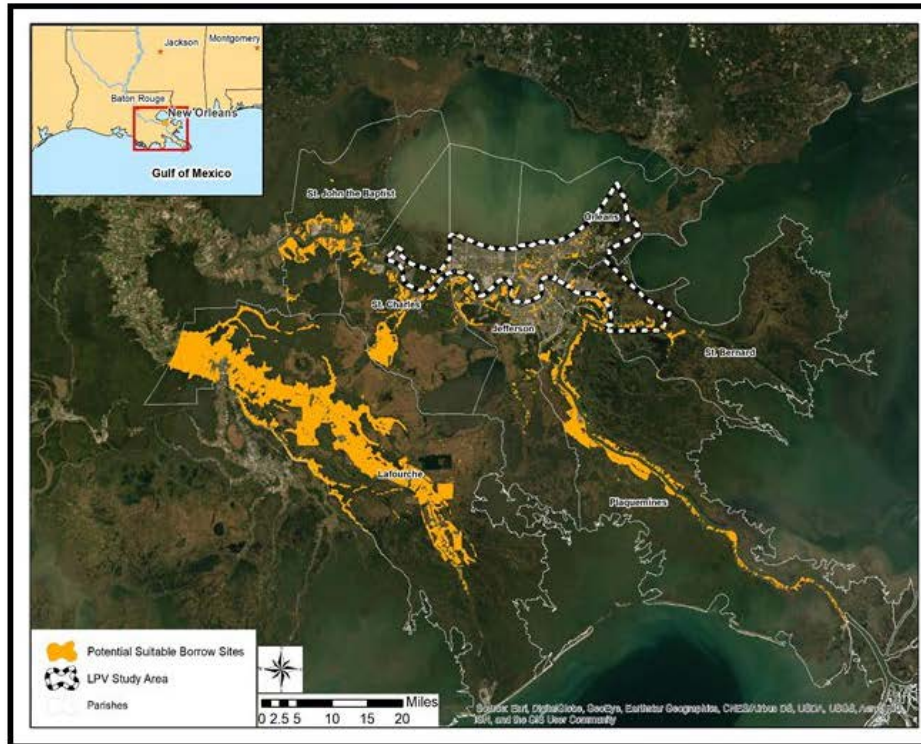


Figure 7-2. Potential Suitable Borrow Sites Based on Soil Types and Avoidance of Potential Mitigation

(data provided by USFWS, 2019; based on 2016 National Land Cover Database and National Resources Conservation Service (NRCS) soil surveys)

- Volume of material to be dredged
2.4 Million Cubic yards of material would be dredged in Lake Pontchartrain for construction access.
- Locations and dimensions of all access routes and staging and laydown areas
Material would be dredged from the bed of Lake Pontchartrain to provide construction access channels. Construction access channels would consist of parallel channels at the shoreline in areas where rock would be placed as well as perpendicular access channels to allow access to the shoreline channels (see Figure 2 and Figure 3). The dimensions required for barge access channels would be approximately -7 feet depth with 100-foot bottom width. Perpendicular access channels

would begin at the elevation -7 ft contour of the lake and extend 400 to 1600 ft. Adjacent dredged material stockpile sites would be 150 ft wide. The total acreage of lake bottom impacted by dredging temporary construction access channels and associated temporary stockpiling would be 213 acres. A maximum of 2.4 million cubic yards of material would be dredged for construction access.



- Please clarify whether compensatory mitigation, as described in Appendix K, is or is not part of the proposed action (it is not included in the Description of the Proposed Action)
 BLH-Wet mitigation is part of the proposed action.

- Please confirm that the eligibility requirements for mitigation banks will include provisions that the banks are OCM approved, and are within the same CWPPRA-defined hydrologic basin as the impacts, or an adjacent basin

Confirmed. If bank credits are purchased they will be from in-basin mitigation banks. If credits are purchased from a mitigation bank, the mitigation bank must be in compliance with the requirements of the USACE Regulatory Program and its MBI, which specifies the management, monitoring, and reporting required to be performed by the bank. The following text has been added to the mitigation appendix: The solicitation for mitigation bank bids will include requirements that the banks are OCM-approved, and within the same or adjacent CWPPRA-defined hydrologic basin as the impacts.

Also, please review the attached comment letter from the Louisiana Department of Wildlife and Fisheries, and confirm that the Corps of Engineers will:

- Obtain authorization from the LDWF Scenic Rivers Program for any activities adjacent to any Scenic River
Concur. Shouldn't be any issues

- Comply with LDWF notification and avoidance requirements regarding Manatees, Nesting Birds, Bald Eagles, Gulf Sturgeon,

Pallid Sturgeon, Blue Suckers, and Live Oak forest

Concur.

In a broader sense, it does not appear that the plans for this project are mature enough to completely describe all of the work, and potential coastal impacts, at this time. For example, the need for future lifts is mentioned. OCM may be able to concur that the project, at this phase of development, is consistent with our coastal management program, but we'll need to arrive at some statement that additional CZM review will be obtained as the project is finalized.

Agreed. Feasibility level of design will be ongoing for the next year or so and will continue to coordinate as final feasibility designs are developed.

And last, our Mitigation staff is still reviewing the proposed mitigation. I'm hoping to get their comments by the end of next week.

Please let me know if there are any questions.

--Jeff

Jeff Harris

Consistency Section

Office of Coastal Management

Louisiana Department of Natural Resources

(225) 342-7949

P5- you will shortly be receiving an identical message regarding the review of the West Bank and Vicinity project

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CLASSIFICATION: UNCLASSIFIED

^[1] Available online in Appendix F at <https://www.mvn.usace.army.mil/Portals/56/Users/194/42/2242/CED%20Volume%20I%20Compiled.pdf>; accessed 4 December 2019

Please let me know if there are any questions.

--Jeff

Jeff Harris

Consistency Section

Office of Coastal Management

Louisiana Department of Natural Resources

(225) 342-7949

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Jeff,

Well it'd be good if I sent you the correct WVA analysis.

The attached is for the proposed action (LPVMRL1). The previous WVA (LPVMRL6 - 1.52 acre) is an additional impact for Alternative 3 (which was another alternative we had evaluated).

Please see the attached for the WVA for the proposed action and what is in the cd and the mitigation plan (appx k).

Sorry for the confusion.

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

From: Jeff Harris [mailto:Jeff.Harris@LA.GOV]

Sent: Wednesday, February 5, 2020 4:04 PM

To: McCain, Kathryn N CIV USARMY CEMVP (USA) <Kathryn.Mccain@usace.army.mil>

Cc: Runyon, Kip R CIV USARMY CEMVP (USA) <Kip.R.Runyon@usace.army.mil>

Subject: [Non-DoD Source] FW: C20190215 LPV levee lift and mitigation plan (UNCLASSIFIED)

Kat—

The preliminary WVA model you sent yesterday has caused some confusion.

The WVAs included in the consistency determination mitigation plan (LPV GRR Appendix K) presumably addressed all of the impacts for the proposed project. The attached document evaluates impacts to 1.57 ac of BLH that we can't correlate to anything in the cd. We can't figure out what impacts this set of WVAs was assessing; whether they're covered by the consistency determination, or if these are additional impacts.

Can you please explain?

Also, for the record... please confirm that new WVAs will be completed using up to date information, and submitted with the consistency determination when project plans are nearing finalization.

Thanks,

--Jeff

5.2 LDNR OFFICE OF COASTAL MANAGEMENT REQUEST FOR REVIEW
EXTENSION 7 FEB 2020

JOHN BEL EDWARDS
GOVERNOR



THOMAS F. HARRIS
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

February 7, 2020

Kip Runyon
U.S. Army Corps of Engineers
1222 Spruce Street
St. Louis MO 63103
Via email: Kip.R.Runyon@usace.army.mil

RE: **C20190215**, Coastal Zone Consistency
U.S. Army Corps of Engineers
Direct Federal Action
Lake Pontchartrain & Vicinity General Re-Evaluation Report With Integrated EIS
St. Charles, Jefferson, Orleans, and St. Bernard Parishes, **Louisiana**

Dear Mr. Runyon:

The Office of Coastal Management (OCM) has received the above referenced federal application for consistency review with the approved Louisiana Coastal Resources Program in accordance with Section 307(c) of the Federal Coastal Zone Management Act of 1972, as amended. NOAA Regulations on Federal Consistency, at 15 CFR §930.41(a), allow 60 days for the review of Direct Federal Activities, and at §930.41(b) allow an additional 15 days with appropriate applicant notification. Please be advised that, by this letter, Interagency Affairs/Field Services Division is requesting the 15 day time extension.

A final determination will be made within the authorized time period. Please refer to the above Consistency Application number when responding to this letter. If you have any questions please call 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/MH/jdh

cc: Kathryn McCain, Corps of Engineers

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5.3 LDNR OFFICE OF COASTAL MANAGEMENT 20 FEB 2020

JOHN BEL EDWARDS
GOVERNOR



THOMAS F. HARRIS
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

February 20, 2020

Kip Runyon
U.S. Army Corps of Engineers
Regional Planning and Environmental Division North
1222 Spruce Street
St. Louis, MO 63103
Via email: Kip.R.Runyon@usace.army.mil

RE: **C20190215**, Coastal Zone Consistency
New Orleans District, Corps of Engineers
Direct Federal Action
Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated EIS:
Levee lifts, raising floodwalls, foreshore protection, access dredging, and purchase of
mitigation bank credits to compensate for unavoidable wetland impacts
St. Charles, St. Bernard, Jefferson and Orleans Parishes, Louisiana

Dear Mr. Runyon:

The Office of Coastal Management has received the above referenced federal application for consistency review with the approved Louisiana Coastal Resources Program (LCRP) in accordance with Section 307(c) of the Federal Coastal Zone Management Act of 1972, as amended. The proposed activity is currently in the feasibility phase, and includes project features or alternatives which will be finalized only after additional information is developed. This includes, for example, the locations and dimensions of future levee lifts and borrow sites, processing of final Wetland Value Assessments for impacts and proposed mitigation, and acquisition/creation of sufficient Average Annual Habitat Units to offset unavoidable wetland impacts. Therefore, review of this determination has proceeded per NOAA regulations on federal consistency at 15 CFR §930.36(d) for "phased consistency determinations."

After careful review, this office finds that **this phase** of the project, as proposed in the application, is consistent with the LCRP. Pursuant to federal regulations, consistency determinations must be submitted for each major decision in subsequent phases of the project that are subject to Federal discretion. The federal agency shall ensure that the activity under development continues to be consistent to the maximum extent practicable with the management program until such plans are finalized.

In order to fully review later phases of the activities addressed by this consistency determination, a clear description and depictions of proposed work, its location, and an assessment of potential wetland impacts must be provided. Information necessary for OCM review includes the specific locations and configurations of proposed construction, borrow sources, fill areas, access routes,

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Page. 2

work and staging areas, and rights-of way; volumes of material excavated and amounts and sources of any material used as fill; cross sections depicting the areas of excavation and fill; estimates of wetland impacts including those resulting from access to and staging for the work site(s); and complete descriptions of compensatory mitigation measures including up-to-date Wetland Value Assessments.

As planning for the proposed activities proceeds and detailed information is developed, please provide additional consistency determinations as appropriate to ensure compliance with the LCRP. Please understand that, aside from the purchase of mitigation bank credits, this concurrence letter specifically does not authorize any construction or other activities which may have reasonably foreseeable effects on coastal land use, water use, or natural resources.

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/MH/jdh

cc: Kathryn McCain, COE
Dave Butler, LDWF
Frank Cole, OCM/FI
Kirk Kilgen, OCM/FI
Earl Matherne, St. Charles Parish
William McCartney, St. Bernard Parish
Jason Smith, Jefferson Parish
Jerome Landry, Orleans Parish

5.4 CONSISTENCY MODIFICATION CORRESPONDENCE WITH LOUISIANA DEPARTMENT OF NATURAL RESOURCES – NOVEMBER 2020

From: [Runyon, Kip R.CIV.USARMY.CEMVP \(USA\)](mailto:Runyon_Kip_R.CIV.USARMY.CEMVP@USA)
To: Sara.Krupa@la.gov
Cc: Jeff.Harris@la.gov
Subject: Modification #1 to C20190215 Phased Consistency Review for LPV
Date: Thursday, November 5, 2020 12:07:00 PM
Attachments: [LPV Shapefiles.zip](#)
[LPVMRL1.1_BLH_WVA v1.2_20201015.pdf](#)
[LPVMRL1.2_BLH_WVA v1.2_20201015.pdf](#)
[LPVMRL1.3_BLH_WVA v1.2_20201015.pdf](#)
[LPVMRL1.4_BLH_WVA v1.2_20201015.pdf](#)
[LPVMRL1.5_BLH_WVA v1.2_20201015.pdf](#)
[20201015_LP_V_PIS.pdf](#)
[LPV Appendix K - Mitigation Plan 02 Nov 2020.docx](#)

Ms. Krupa,

Attached please find updated information for your consideration regarding phased consistency review for the Lake Pontchartrain and Vicinity (LPV) General Re-Evaluation Report with Integrated EIS. The U.S. Army Corps of Engineers New Orleans District has completed a more detailed analysis of the levees and floodwalls in the study area and, based on this updated analysis, has revised the subset of levees and floodwalls that will require modifications over the 50-year period of analysis (please see attached shapefiles). Based on these changes, the U.S. Fish and Wildlife Service updated the Wetland Value Assessment (WVA) impact analysis for bottomland hardwood habitat adjacent to the Mississippi River Levees (please see attached WVA files). Based on this updated analysis, the District updated the Mitigation Plan (please see attached Appendix K).

Based on this updated information, the District evaluated the proposed action for consistency with the Coastal Use Guidelines and determined that the proposed action is consistent, to the maximum extent practicable, with the State of Louisiana's Coastal Resources Program.

The District will continue to provide details on other aspects of the proposed project as they become available during pre-construction engineering and design and will request further phased consistency reviews accordingly.

Please let me know if I can provide additional information. Thank you.

Kip Runyon

Kip Runyon
U.S. Army Corps of Engineers
Regional Planning and Environmental Division North
1222 Spruce Street
St. Louis, MO 63103
Phone: 314-331-8396
Cell: 618-223-9749

From: [Runyon, Kip R CIV USARMY CEMVP \(USA\)](#)
To: [Jeff Harris](#)
Cc: [Sara Krupa](#); [Kelley Templet](#)
Subject: RE: C20190215 mod 01, Lake Pontchartrain and Vicinity mitigation plan
Date: Thursday, December 3, 2020 6:56:00 AM

Jeff,

Thank you for the comments. Please consider the following responses:

1. Acknowledged. The language on preservation is part of the original 33 CFR Section 332.3 language. USACE is not proposing the use of preservation for mitigation.
2. Acknowledged. The language referencing in-lieu fee programs is part of the original 33 CFR Section 332.3 language. USACE is not proposing use of an in-lieu fee program.
3. Acknowledged. OCM review would be sought should the need arise.
4. Acknowledged. Documents representing recent examples of USACE-constructed mitigation projects meeting all current mitigation requirements were provided. USACE will update Appendix K with similar BLH examples should they become available.

Thank you.

Kip

From: Jeff Harris <Jeff.Harris@LA.GOV>
Sent: Tuesday, December 1, 2020 3:06 PM
To: Runyon, Kip R CIV USARMY CEMVP (USA) <Kip.R.Runyon@usace.army.mil>
Cc: Sara Krupa <Sara.Krupa@LA.GOV>; Kelley Templet <Kelley.Templet@LA.GOV>
Subject: [Non-DoD Source] C20190215 mod 01, West Bank and Vicinity mitigation plan

Kip--

After review of the consistency determination for C20190215 Mod 01, Lake Pontchartrain and Vicinity mitigation, the OCM Mitigation Section provides the following comments:

1. Enclosure 2, Page 24, General considerations includes a statement that "Compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and in certain circumstances preservation." Preservation does not replace habitat loss and therefore is not compliant with no net loss of coastal resources. OCM does not support preservation as an option for mitigation.
2. Enclosure 2, Page 25, refers to use of the In Lieu Fee Program. CEMVN requirements preclude the ILF Program as an option for mitigation for this project.
3. Enclosure 2, Page 24, under type and location of mitigation states "...mitigation through off-site and/or out-of-kind mitigation." These alternatives would have to be reviewed by OCM on a case-by-case basis.
4. Enclosures 4 and 5 provide examples of a mitigation monitoring plan and an adaptive management plan, respectively. These examples are for a marsh creation project rather than a BLH project. It would be more appropriate to include examples of a BLH project.

Please provide the information noted in items 1 and 2, and responses to the comments in items 3-7.

Thanks,

--Jeff

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JOHN BEL EDWARDS
GOVERNOR



THOMAS F. HARRIS
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

December 15, 2020

Kip Runyon
U.S. Army Corps of Engineers
Regional Planning and Environmental Division North
1222 Spruce Street
St. Louis, MO 63103
Via email: Kip.R.Runyon@usace.army.mil

RE: **C20190215 mod 01**, Coastal Zone Consistency
New Orleans District, Corps of Engineers
Direct Federal Action
Lake Pontchartrain and Vicinity General Re-Evaluation Report With Integrated EIS:
Modification to update the proposed mitigation plan
St. Charles, St. Bernard, Jefferson and Orleans Parishes, Louisiana

Dear Mr. Runyon:

The Office of Coastal Management has received the above referenced federal application for consistency review with the approved Louisiana Coastal Resources Program (LCRP) in accordance with Section 307(c) of the Federal Coastal Zone Management Act of 1972, as amended. The proposed activity is currently in the feasibility phase, and includes project features or alternatives which will be finalized only after additional information is developed. This includes, among other things, the final flood protection design and the acquisition or creation of sufficient Average Annual Habitat Units to offset unavoidable wetland impacts. Therefore, review of this determination has proceeded per NOAA regulations on federal consistency at 15 CFR §930.36(d) for "phased consistency determinations."

After careful review, this office finds that **this phase** of the project, the updated mitigation plan, is consistent with the LCRP. Pursuant to federal regulations, consistency determinations must be submitted for each major decision in subsequent phases of the project that are subject to Federal discretion. The federal agency shall ensure that the activity under development continues to be consistent to the maximum extent practicable with the management program until such plans are finalized.

In order to fully review later phases of the activities addressed by this consistency determination, a clear description and depictions of proposed work, its location, and an assessment of potential wetland impacts must be provided. Information necessary for OCM review includes the specific locations and configurations of proposed construction, borrow sources, fill areas, access routes, work and staging areas, and rights-of way; volumes of material excavated and amounts and sources of any material used as fill; cross sections depicting the areas of excavation and fill; estimates of wetland impacts including those resulting from access to and staging for the work

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Page. 2

site(s); and complete descriptions of compensatory mitigation measures including up-to-date Wetland Value Assessments.

As planning for the proposed activities proceeds and detailed information is developed, please provide additional consistency determinations as appropriate to ensure compliance with the LCRP. Please understand that, aside from the purchase of mitigation bank credits, this concurrence letter specifically does not authorize any construction or other activities which may have reasonably foreseeable effects on coastal land use, water use, or natural resources.

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/MH/jdh

cc: Dave Butler, LDWF
Kirk Kilgen, OCM/FI
Earl Matherne, St. Charles Parish
John Lane, St. Bernard Parish
Jason Smith, Jefferson Parish
Jerome Landry, Orleans Parish

6 CLEAN AIR ACT COMPLIANCE

6.1 AIR QUALITY CONFORMITY ANALYSIS

The U.S. Environmental Protection Agency (USEPA) Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards (NAAQS) for six principal pollutants, called “criteria” pollutants. They are carbon monoxide, nitrogen dioxide, ozone, lead, particulates of 10 microns or less in size (PM-10 and PM-2.5), and sulfur dioxide (SO₂). The Clean Air Act General Conformity Rule (58 FR 63214, November 30, 1993, Final Rule, Determining Conformity of General Federal Actions to State or Federal Implementation Plans) dictates that a conformity review be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more NAAQS. A conformity assessment would require quantifying the direct and indirect emissions of criteria pollutants caused by the Federal action to determine whether the proposed action conforms to Clean Air Act requirements and any State Implementation Plan (SIP).

The general conformity rule was designed to ensure that Federal actions do not impede local efforts to control air pollution. It is called a conformity rule because Federal agencies are required to demonstrate that their actions “conform with” (i.e., do not undermine) the approved SIP for their geographic area. The purpose of conformity is to (1) ensure Federal activities do not interfere with the air quality budgets in the SIPs; (2) ensure actions do not cause or contribute to new violations, and (3) ensure attainment and maintenance of the NAAQS.

St. Bernard Parish was designated by the Environmental Protection Agency as a sulfur dioxide (SO₂) non-attainment area under the 1-hour standard effective October 4, 2013. This classification is the result of area-wide air quality modeling studies, and the information is readily available from Louisiana Department of Environmental Quality, Office of Environmental Assessment and Environmental Services.

Federal activities proposed in St. Bernard Parish may be subject to the State’s general conformity regulations as promulgated under LAC 33:III.14.A, Determining Conformity of General Federal Actions to State or Federal Implementation Plans. A general conformity applicability determination is made by estimating the total of direct and indirect SO₂ emissions caused by the construction of the project. Prescribed *de minimis* levels of 100 tons per year per pollutant are applicable in St. Bernard Parish. Projects that would result in discharges below the *de minimis* level are exempt from further consultation and development of mitigation plans for reducing emissions.

Tables 1-6 describe the proposed construction activities related to proposed action alternatives generating air pollutants of concern. These estimates were determined by using the USEPA's "Exhaust and Crankcase Emission Factors for Non-road Engine Modeling - Compression Ignition". For additional information on the air quality model method see <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road>.

With implementation of the proposed action, on-site construction activities are expected to produce less than 9.0 tons per year of SO₂ emissions (which is markedly less than the *de minimis* level of 100 tons per year per pollutant). Thus, the ambient air quality in St. Bernard

Parish would not noticeably change from current conditions, and the status of attainment for the parish would not be altered.

St. Bernard Parish LPV Levee Enlargement

Chalmette, Meraux, Violet, and Poydras, St. Bernard Parish, LA

Table 1 Combustible Emissions

Assumptions for Combustible Emissions					
Type of Construction Equipment	Number of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Diesel Compactor	1	70	4	96	26,880
Diesel Bull Dozer	2	110	10	9	19,800
Diesel Grader	2	165	5	64	105,600
Diesel Dump Truck	16	350	8	96	4,300,800
Diesel Crane	1	263	10	64	168,320
Water Truck	3	180	3	9	14,580
Diesel Tractor	1	110	8	64	56,320
Hydro-Mulch Water Truck	1	180	8	56	80,640
Stakebed Truck	2	200	2	64	51,200

Table 2 Emission Factors

Type of Construction Equipment	SO2 g/hp-hr	SO2 lbs/hp-hr
Diesel Compactor	1.0728	0.0024
Diesel Bull Dozer	1.0728	0.0024
Diesel Grader	1.0728	0.0024
Diesel Dump Truck	1.0728	0.0024
Diesel Crane	1.0729	0.0024
Water Truck	1.0728	0.0024
Diesel Tractor	1.0728	0.0024
Hydro-Mulch Water Truck	1.0728	0.0024
Stakebed Truck	1.0728	0.0024

Emission Factors derived from the EPA's NONROAD2010 model

Table 3 Annual SO2 Emissions Totals

Total Calculated Emissions	
Type of Construction Equipment	SO2lbs/hp-hr
Diesel Compactor	0.032256
Diesel Bull Dozer	0.02376
Diesel Grader	0.12672
Diesel Dump Truck	5.16096
Diesel Crane	0.201984
Water Truck	0.017496
Diesel Tractor	0.067584
Hydro-Mulch Water Truck	0.096768
Stakebed Truck	0.06144
TOTALS	5.788968

NOTE: The listed type and number of equipment that may typically be used at a levee enlargement project. equipment is the

Arabi to Chalmette T-walls

Arabi & Chalmette, St. Bernard Parish, LA

Table 4 Combustible Emissions

Assumptions for Combustible Emissions					
Type of Construction Equipment	Number of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Diesel Crane	1	130	10	96	124,800
Diesel Crane	2	225	10	9	40,500
Diesel Crane	3	245	10	64	470,400
Diesel Concrete Truck	1	210	10	96	201,600
Diesel Dump Truck	3	350	10	64	672,000
Diesel Vibratory Pile Driver	1	185	10	9	16,650
Diesel Pile Extractor	1	176	10	64	112,640
Diesel Hammer Pile Driver	1	185	10	56	103,600
Diesel Excavator	1	176	10	64	112,640

Table 5 Emissions Factors

Type of Construction Equipment	SO2 g/hp-hr	SO2 lbs/hp-hr
Diesel Crane	1.0728	0.0024
Diesel Crane	1.0728	0.0024
Diesel Crane	1.0728	0.0024
Diesel Concrete Truck	1.0728	0.0024
Diesel Dump Truck	1.0729	0.0024
Diesel Vibratory Pile Driver	1.0728	0.0024
Diesel Pile Extractor	1.0728	0.0024
Diesel Hammer Pile Driver	1.0728	0.0024
Diesel Excavator	1.0728	0.0024

Emission Factors derived from the EPA's NONROAD2010 model

Table 6 Annual SO2 Emissions Totals

Total Calculated Emissions	
Type of Construction Equipment	SO2 lbs/hp-hr
Diesel Crane	0.14976
Diesel Crane	0.0486
Diesel Crane	0.56448
Diesel Concrete Truck	0.24192
Diesel Dump Truck	0.8064
Diesel Vibratory Pile Driver	0.01998
Diesel Pile Extractor	0.135168
Diesel Hammer Pile Driver	0.12432
Diesel Excavator	0.135168
TOTALS	2.225796

NOTE: The listed equipment is the type and number of equipment that may typically be used at a concrete levee wall demolition/construction project.

7 NATIONAL HISTORIC PRESERVATION ACT COMPLIANCE

7.1 PROGRAMMATIC AGREEMENT

PROGRAMMATIC AGREEMENT

AMONG THE
U.S. ARMY CORPS OF ENGINEERS, MEMPHIS, NEW ORLEANS, AND VICKSBURG DISTRICTS
THE CHICKASAW NATION;
THE CHOCTAW NATION OF OKLAHOMA;
THE OSAGE NATION;
THE QUAPAW NATION;
THE ARKANSAS STATE HISTORIC PRESERVATION OFFICER;
THE ILLINOIS STATE HISTORIC PRESERVATION OFFICER;
THE KENTUCKY STATE HISTORIC PRESERVATION OFFICER;
THE LOUISIANA STATE HISTORIC PRESERVATION OFFICER;
THE MISSISSIPPI STATE HISTORIC PRESERVATION OFFICER;
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER;
THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER;
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES

PREAMBLE

WHEREAS, the mission of the U.S. Army Corps of Engineers (USACE), Memphis District (MVM), Vicksburg District (MVK), and New Orleans District (MVN), is to deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters; and

WHEREAS, the Mississippi River and Tributaries (MR&T) Project, authorized by the Flood Control Act of 1928, as amended, is designed to reduce flood risk in the Mississippi River alluvial valley for approximately 1,610 miles between Cape Girardeau, Missouri and the Head of Passes, Louisiana from the Project Design Flood (PDF); and

WHEREAS, the MR&T Project, including the Mississippi River Levee (MRL) feature assists in protecting the 36,000 square-mile Lower Mississippi River Valley from periodic overflows of the Mississippi River with a Project area in the alluvial valley that encompasses parts of the seven states of Missouri, Illinois, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana; and

WHEREAS, the MRL feature (levees and floodwalls) extends for nearly 1,610 miles along the Mississippi River beginning at the head of the alluvial valley near Cape Girardeau, Missouri and continues to approximately 10 miles above Head of Passes near the Gulf of Mexico and is considered the backbone of the MR&T flood risk management system; and

WHEREAS, there is an urgent need to design, build, maintain, operate, and repair the mainline MRL system to ensure that the system provides protection up to the level of the PDF to avoid a catastrophic failure of the MRL, at any which, would likely cause grievous loss of life and personal injury, extensive damage to property and natural resources, serious harm to river navigation, and significant and long-lasting economic and social upheaval; and

WHEREAS, the MR& T Project has four major elements 1) levees and floodwalls to contain flood flows; 2) floodways to pass excess flows past critical Mississippi River reaches; 3) channel improvement and stabilization measures to provide efficient navigation alignment, increased flood-carrying capacity, and protection of the levee system; and 4) tributary basin improvements, such as retention lakes and sediment reduction features. The MR&T Project functions as a system across portions of seven states: Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi and Louisiana. The project was initiated under the authority of the Flood Control Act of 1928, as amended. The MRL feature—the only component of the MR&T project addressed by this Programmatic Agreement (Agreement) —has been under construction since 1928 and continually augmented through time. The current effort contains 143 Work Items that are listed in Appendix A; and

WHEREAS, the planned MRL construction work (Work Items or Undertakings) will include a variety of measures including but not limited to, the construction of levee enlargements, stability berms, relief wells, stabilizing floodwalls, cutoff trenches, riverside blankets, slope paving, and other forms of under-seepage controls and erosion protections, to improve deficient sections of MRL levees and to achieve the authorized levee design grade and provide the required level of flood protection. The Undertakings will be limited to only the construction of remaining authorized MRL features of the MR&T Project; and

WHEREAS, USACE is the lead federal agency for purposes of the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, set out at 40 CFR Parts 1500-1508 (43 FR 55978), "Section 106" of the National Historic Preservation Act (NHPA) [54 U.S.C. § 300101 et seq.], as amended (54 U.S.C. § 306108), and its implementing regulations, set out at 36 CFR Part 800, and in accordance with 36 CFR § 800.2(a)(2) and 800.8; and

WHEREAS, USACE has conducted previous assessments of the MRL feature of the MR&T Project under NEPA. The 1976 Environmental Impact Statement (EIS) was filed with the Council of Environmental Quality on 8 April 1976. The Supplemental EIS Number 1 (SEIS I) was prepared to supplement the 1976 EIS to evaluate the effects of continued construction of the MRL levee enlargements, stability berms, seepage control, and erosion protection measures. SEIS I was filed with the Environmental Protection Agency on 31 July 1998. SEIS I focused on the levees of the MRL that were the most deficient in height and on seepage control measures for levee reaches with observable signs of seepage during previous high water events. This Agreement has been negotiated during USACE's current effort to supplement and as necessary augment the earlier NEPA documents with a second Supplemental EIS (MRL SEIS II); and

WHEREAS, USACE plans to conduct design work and construction for each Work Item in order to provide flood risk reduction for the PDF; the Non-Federal Sponsor (NFS) (Levee District, Levee Board, or other Local Sponsor) will be responsible for the designated cost share for the development of each Work Item including the Land, Easements, Rights-Of-Way, Relocation, and Disposal Areas (LERRDS); and

WHEREAS, USACE has informed local governments, and local non-federal sponsors during the development of this Agreement and will take appropriate steps to involve and notify those parties, as appropriate, during the implementation of the terms of this Agreement; and

WHEREAS, USACE has determined that the Work Items in Appendix A constitute multiple "Undertakings", as defined by 54 U.S.C. § 300320 and 36 CFR § 800.16(y), that may affect properties listed in or eligible for listing on the National Register of Historic Places (NRHP) pursuant to 36 CFR Part 60 (historic properties) and/or properties having religious and cultural significance to Tribes including sites that may contain human remains and/or associated cultural items, but that there are no Tribal Lands [as defined in 36 CFR § 800.16(x)] within the MRL levee alignment; and

WHEREAS, in accordance with 36 C.F.R. §§ 800.4(b)(2) and 800.5(a)(3), USACE has elected to use a phased process to conduct identification and evaluation of historic properties, and for application of the criteria of adverse effect, respectively, because the scope and programmatic nature of MRL features make it unreasonable to identify historic properties or determine the effects of site-specific Work Items at this time; and

WHEREAS, as USACE cannot fully determine at this time how these Undertakings may affect historic properties, the location of historic properties, or their significance and character, USACE has elected to negotiate an Agreement in consultation with stakeholders, as provided for in 36 CFR § 800.14(b)(1)(ii), and 800.14(b)(2) to govern the implementation of this series of Undertakings and fulfill its obligations under Section 106 of the NHPA including the resolution of adverse effects for these Undertakings; and

WHEREAS, as used in this Agreement, "Signatories" is defined in 36 CFR § 800.6(c)(1), "Invited Signatories" is defined in 36 CFR § 800.6(c)(2), and "Concurring Party" is defined in 36 CFR § 800.6(c)(3); and

WHEREAS, a Consulting Party will be recognized by USACE as a Signatory, Invited Signatory, or Concurring Party starting on the date the Consulting Party signs this Agreement as a Signatory, Invited Signatory, or Concurring Party and provides USACE with a record of this signature; and

WHEREAS, in accordance with 36 CFR § 800.6(c)(1), a Signatory has the authority to execute, amend, or terminate the Agreement; and

WHEREAS, in accordance with 36 CFR § 800.6(c)(2), Invited Signatories who sign this Agreement are signatories with the authority to amend and terminate the Agreement; and

WHEREAS, in accordance with 36 CFR § 800.6(c)(3), a Concurring Party is a Consulting Party invited to concur in the Agreement but who does not have the authority to amend or terminate the Agreement; and

WHEREAS, USACE initiated consultation, via letter on September 11, 2019 with the Absentee-Shawnee Tribe of Indians of Oklahoma, the Alabama-Coushatta Tribe of Texas, the Alabama-Quassarte Tribal Town, the Apache Tribe of Oklahoma, the Caddo Nation of Oklahoma, the Cherokee Nation, the Chitimacha Tribe of Louisiana, the Coushatta Tribe of Louisiana, the Delaware Nation, Oklahoma, the Delaware Tribe of Indians, the Eastern Band of Cherokee Indians, the Eastern Shawnee Tribe of Oklahoma, the Jena Band of Choctaw Indians, the Kaw Nation, Oklahoma, the Kialegee Tribal Town, the Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas, the Menominee Indian Tribe of Wisconsin, the Miami Tribe of Oklahoma, the Mississippi Band of Choctaw Indians, the Otoe-Missouria Tribe of Indians, Oklahoma, the Peoria Tribe of Indians of Oklahoma, the Poarch Band of Creeks, the Ponca Tribe of Indians of Oklahoma, the Quapaw Nation, the Sac & Fox Nation of Missouri in Kansas and Nebraska, the Sac & Fox Nation, Oklahoma, the Seminole Tribe of Florida, the Shawnee Tribe, The Chickasaw Nation, The Choctaw Nation of Oklahoma, The Muscogee (Creek) Nation, The Osage Nation, The Seminole Nation of Oklahoma, the Thlopthlocco Tribal Town, the Tunica-Biloxi Tribe of Louisiana, the United Keetoowah Band of Cherokee Indians in Oklahoma, the Advisory Council on Historic Preservation (ACHP), the Missouri, Illinois, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana State Historic Preservation Officers (SHPOs), and the National Park Service's National Trails Program; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), the ACHP has been provided the required documentation and invited to participate in this Agreement. On March 27, 2020, the ACHP provided written notice that it has chosen to participate in the consultation; and

WHEREAS, USACE recognizes that the seven different State Historic Preservation Offices are organized in accordance with each state's needs. However each has a body of staff, dedicated to historic preservation of the built-environment (divisions, commissions, or departments, etc.) and a body of staff dedicated to archaeological sites (divisions, departments, surveys, etc.). Collectively, these staff fulfill the SHPO's role for each respective state in accordance with the NHPA. These collective units, regardless of how each state has organized them, will be referred to as the SHPO of jurisdiction. Any specific roles or authorities under state regulation will be defined, as appropriate; and

WHEREAS, USACE has consulted with the Missouri State Historic Preservation Officer (MOSHPO), Illinois State Historic Preservation Officer (IL SHPO), Kentucky State Historic Preservation Officer (KY SHPO) Tennessee State Historic Preservation Officer (TN SHPO), Arkansas State Historic Preservation Officer (AR SHPO) Mississippi State Historic Preservation Officer (MS SHPO), and Louisiana State Historic Preservation Officer (LA SHPO) on this Agreement pursuant to 36 C.F.R. § 800.14(b) and 36 C.F.R. § 800.6. Each SHPO of jurisdiction is a Signatory to this Agreement; and

WHEREAS, USACE recognizes that the Absentee-Shawnee Tribe of Indians of Oklahoma, the Alabama-Coushatta Tribe of Texas, the Alabama-Quassarte Tribal Town, the Apache Tribe of Oklahoma, the Caddo Nation of Oklahoma, the Cherokee Nation, the Chitimacha Tribe of Louisiana, the Coushatta Tribe of Louisiana, the Delaware Nation, Oklahoma, the Delaware Tribe of Indians, the Eastern Band of Cherokee Indians, the Eastern Shawnee Tribe of Oklahoma, the Jena Band of Choctaw Indians, the Kaw Nation, the Kialegee Tribal Town, the Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas, the Menominee Indian Tribe of Wisconsin, the Miami Tribe of Oklahoma, the Mississippi Band of Choctaw Indians, the Otoe-Missouria Tribe of Indians, Oklahoma, the Peoria Tribe of Indians of Oklahoma, the Poarch Band of Creeks, the Ponca Tribe of Indians of Oklahoma, the Quapaw Nation, the Sac & Fox Nation of Missouri in Kansas and Nebraska, the Sac & Fox Nation, Oklahoma, the Seminole Tribe of Florida, the Shawnee Tribe, The Chickasaw Nation, The Choctaw Nation of Oklahoma, The Muscogee (Creek) Nation, The Osage Nation, The Seminole Nation of Oklahoma, Thlopthlocco Tribal Town, Tunica-Biloxi Tribe of Louisiana, and the United Keetoowah Band of Cherokee Indians in Oklahoma, (collectively referenced as " Federally-recognized Tribes"), may have sites of religious and cultural significance off Tribal Lands that may be affected by these Undertakings, and in meeting its Federal trust responsibility, USACE invited Tribes to participate in government-to-government consultation starting in September 2019. Pursuant to 36 CFR § 800.2 (c)(2)(ii)(E), and in consideration of the confidentiality of information, USACE has invited the Tribes to enter into this Agreement that specifies how USACE will carry out Section 106 responsibilities for these Undertakings; and

WHEREAS, USACE may invite additional Federally-recognized Tribes that have sites of religious and cultural significance to enter into the terms of this Agreement as invited signatories or concurring parties in accordance with 36 CFR § 800.14(f), and nothing in this Agreement prevents a Federally-recognized Tribe from entering into a separate Programmatic Agreement or other agreement with USACE for administration of USACE Programs; and

WHEREAS, in accordance with 36 CFR § 800.6(c)(2), and based on each Tribe's response, the USACE has invited The Chickasaw Nation, The Choctaw Nation of Oklahoma, the Quapaw Nation, and The Osage Nation (collectively referenced as " Consulting Tribes") to be Invited Signatories in this Agreement and each has elected to sign the Agreement as Invited Signatories; and

WHEREAS, in accordance with 36 CFR § 800.6 (c)(3), the Mississippi Band of Choctaw Indians, and the United Keetoowah Band of Cherokee Indians in Oklahoma (collectively included in "Consulting Tribes" reference) have been invited to participate in the development of this Agreement and have elected to sign as Concurring Parties in this Agreement; and

WHEREAS, as of the date of this Agreement, no Tribe(s) have declined to enter into this Agreement as an Invited Signatory Party; and

WHEREAS, on August 28, 2020, in conjunction with the posting of the SEIS II, USACE posted a NHPA/NEPA Public Notice on the designated project website (<https://www.mvk.usace.army.mil/MRLSEIS/>) for a 45-day comment period requesting the public's input concerning: 1) the proposed Undertaking and its potential to significantly affect historic properties; 2) assistance in identifying any relevant parties who may have an interest in participating in this consultation, and; 3) USACE's proposal to develop an Agreement pursuant to 36 CFR § 800.14(b). No comments specific to historic properties were received; and

WHEREAS, for the review of specific Undertakings under this Agreement, USACE may invite other agencies, organizations, and individuals to participate as Consulting Parties; and

WHEREAS, each USACE District (Memphis, Vicksburg, or New Orleans), depending on the specific Work Item location, uses its own staff and authority and will consult with the SHPO of jurisdiction and the appropriate Federally-recognized Tribe(s) regarding specific Work Items within the respective districts; and

WHEREAS, The Signatories, Invited Signatories, and Concurring Parties have determined that USACE's Section 106 requirements can be effectively and efficiently implemented through a programmatic approach stipulating roles and responsibilities, exempting certain Undertakings from Section 106 review, establishing protocols for consultation, facilitating identification and evaluation of historic properties, and streamlining the assessment and resolution of adverse effects;

NOW THEREFORE, the Memphis, Vicksburg and New Orleans Districts of USACE, the ACHP, the Missouri SHPO, the Illinois SHPO, the Kentucky SHPO, the Tennessee SHPO, the Arkansas SHPO, the Mississippi SHPO, the Louisiana SHPO (Signatories), The Chickasaw Nation, The Choctaw Nation of Oklahoma, the Quapaw Nation, The Osage Nation (Invited Signatories) and the Mississippi Band of Choctaw Indians, and the United Keetoowah Band of Cherokee Indians in Oklahoma (Concurring Parties) agree that the Undertakings associated with the MRL shall be administered in accordance with the following stipulations in order to take into account the effects of the individual undertakings on historic properties and to satisfy USACE's responsibilities under Section 106 of the NHPA for all applicable undertakings.

STIPULATIONS

To the extent of its legal authority, and in coordination with other Signatories, USACE shall ensure that the following measures are implemented and shall not authorize an individual Undertaking until Section 106 review is completed pursuant to this Agreement.

I. APPLICABILITY

A. This Agreement applies to Undertakings in the New Orleans District (MVN), Vicksburg District (MVK) and/or Memphis District (MVM) of USACE for the currently identified authorized remaining work required to complete the MRL feature of the MR&T Project and any USACE proposed work co-located with existing MRL features.

1. Co-located work includes any authorized and funded civil works project addressing the enhancement of the MRL features. This includes the co-location

of features for the West Bank and Vicinity and Lake Pontchartrain and Vicinity (WBV/LPV) Projects, but only the portions along the MRL.

2. The current Work Items (i.e., the list of projects) are listed in Appendix A, which includes the Work Items addressed in the MRL SEIS II.
- B. USACE may utilize this Agreement to fulfill its Section 106 responsibilities and those of other federal agencies that designate USACE as the lead federal agency pursuant to 36 CFR § 800.2(a)(2) with appropriate notification to the other Signatories and ACHP regarding Undertakings that fall within the scope of this Agreement. When USACE is not designated as the lead federal agency, all federal agencies, including USACE, remain individually responsible for their compliance with Section 106. This provision does not prevent USACE from recognizing another federal agency as lead federal agency for specific Undertakings, as appropriate.
- C. If another federal program or federal agency has concluded Section 106 consultation review and approved an Undertaking within the past five (5) years, and no new substantial information has been revealed, USACE has no further requirement for Section 106 compliance regarding that Undertaking provided that USACE:
1. Confirms that the Area of Potential Effects (APE) and effect [as defined by 36 CFR § 800.16(i)] of its Undertaking are the same as that of the Undertaking reviewed by the previous agency, and;
 2. Determines that the previous agency complied with Section 106, including tribal consultation, appropriately and;
 3. Adopts the findings and determinations of the previous agency.
- D. USACE shall document these findings in its project file in order to confirm that the requirements of Section 106 have been satisfied. Should USACE, in consultation with the applicable SHPO and Consulting Tribes determine that the previous Section 106 review was insufficient or involved interagency disagreements about eligibility, effect determinations, and/or resolution of adverse effects (implementation of Treatment Measures), USACE shall conduct additional Section 106 consultation in accordance with the terms of this Agreement.
- E. USACE has determined that the following types of activities have limited or no potential to affect historic properties and USACE has no further Section 106 responsibilities with regard to them, pursuant to 36 CFR § 800.3(a)(1):
1. Administrative actions such as personnel actions, travel, procurement of services, and supplies (including vehicles and equipment) for the support of day-to-day operational activities, and the temporary storage of materials provided storage occurs within existing facilities or on previously disturbed soils.
 2. Providing funding for planning, studies, and design and engineering costs that involve no commitment of resources other than staffing and associated funding.
 3. Funding the administrative action of acquiring properties, including the real estate transactions and transfers.

4. Boundary surveying, monitoring, data gathering, and reporting in support of planning or design activities (e.g., conducting geotechnical boring investigations or other geophysical and engineering activities provided no clearing or grubbing is necessary).
5. Demarcation of project areas and resources (e.g., cultural sites, wetlands, threatened and endangered species habitat).

II. POINTS OF CONTACT

- A. Each USACE District will provide at a minimum a primary and secondary contact, which may include technical staff as well as liaisons). The primary contact is the contact to which all initial and formal correspondence is sent. If the individual designated as the primary point of contact is not available, communications shall be directed to the secondary contact.
- B. Consulting Parties, including Signatories, Invited Signatories and Concurring Parties, will each designate a primary and secondary point of contact. Each Consulting Party to this Agreement is requested to provide phone numbers, email addresses, and mailing addresses for the primary and secondary contacts.
- C. USACE has requested and shall continue to request that Federally-recognized Tribes provide areas of interest in the form of a map or other listing that USACE can use to determine, on a county-by-county (parish-by-parish) basis which Tribes to consult regarding specific Work Items.
- D. USACE acknowledges that contacts and areas of interest may change over time. Addressing this is primarily a USACE responsibility with assistance from the Consulting Parties. The initial compilation is provided in Appendix B. Following the initial compilation, USACE and the Consulting parties shall follow the process outlined in the appropriate set of roles and responsibilities below to provide and distribute updated information for Appendix B. Alteration of Appendix B will not require executing an amendment to the Agreement.
- E. In accordance with the process laid out in the roles and responsibilities below, USACE will follow-up on returned email and hard-copy mail or disconnected phone lines to ensure that a POC is re-established and the relevant Consulting Party receives the necessary information.

III. ROLES AND RESPONSIBILITIES OF THE CONSULTING PARTIES

- A. USACE:
 1. Shall not authorize implementation of an individual Undertaking (Work Item) until Section 106 review is completed pursuant to this Agreement.
 2. Shall notify and consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribes, and other Consulting Parties. Consultations may include face-to-face meetings, as well as communications by U.S. mail, e-mail, facsimile, and/or telephone. Times and places of meetings, as well as an agenda for meetings, will be developed with mutual acceptance and done in a timely manner.
 3. Shall maintain the POC List (Appendix B) and will distribute it annually as part of the consultation, to the Primary POCs. USACE will incorporate any changes to the POC

listing as derived from the steps below into the annual distribution, as well as individual updates received in the interim.

- a. USACE district staff engaged in consultation who receive a returned email, returned letter, or notification of a disconnected phone line, will follow up with the relevant Consulting Party to re-establish the appropriate point of contact. This will be communicated to necessary parties upon clarification and in the annual POC update.
 - b. At a minimum the Mississippi Valley Division (MVD) Cultural staff will make a round of phone calls to confirm the current POC listed for each of the Federally-recognized Tribes contained in the POC listing.
 - c. USACE District Archaeologists will ensure that the contact information for the SHPOs within their district have not changed.
4. Shall consult with any Federally-recognized Tribe on a government-to-government basis in recognition of its sovereign status, whether a signatory to this Agreement or not, but particularly regarding sites that may have traditional, religious, and/or cultural importance to Federally-recognized Tribes. In meeting its federal trust responsibility, USACE alone shall conduct all government-to-government consultation with Federally-recognized Tribes.
 5. Shall be responsible for determining the APE, identifying historic properties located within the APE, providing NRHP eligibility determinations, and findings of effect, in consultation with SHPO, appropriate Federally-recognized Tribes, and other Consulting Parties.
 6. Shall ensure all Cultural Resources review is conducted by qualified professional staff as outlined in Stipulation VI.A. 2.
 7. Shall ensure that all documentation generated as part of the NHPA process resulting from these Undertakings shall be consistent with applicable *Standards (State and Federal)* (Stipulation VI.A) and confidentiality provisions outlined in Stipulation IV.
 8. Shall use federal staff who meet the Professional Qualifications Standards as set forth in the Federal Register at 48 Fed. Reg., Vol. 190, 44716-01 (September 29, 1983), as amended (Qualified Staff) in applying the Programmatic Allowances (Allowances) listed in Appendix D, defining APE boundaries, completing identification and evaluation of all historic properties, and making determinations of effects.
 9. Shall ensure, to the greatest extent practicable, that the SHPO of jurisdiction and the appropriate Federally-recognized Tribe(s) are consulted at the same time. And will, prior to submitting any determinations of eligibility and/or finding of effect as part of the consultation, review National Register eligibility recommendations provided by a cultural resources contractor and make its own determination.
 10. USACE contractors shall not consult directly with any SHPO or Tribal Historic Preservation Officer (THPO), Consulting Tribes, or Federally-recognized Tribes. Consultation with SHPO/THPO, Consulting Tribes, or Federally-recognized Tribes remains a federal responsibility. This is/will be documented in any SOW for Cultural Resource Management activities or other construction work.

11. Shall, when authorizing individual Undertakings requiring environmental/cultural conditions pursuant to this Agreement, include all stipulations and conditions negotiated as part of the Section 106 Process. USACE will ensure that this information is communicated to the NFS and USACE contractor, and will be available for technical questions related to its implementation. This information is conveyed through the Buildability, Constructability, Operability, Environmental and Sustainability Reviews (BCOES Process), per Engineering Regulation 415-1-11, leading to solicitation.
12. Shall ensure that a written record of all stipulations and conditions pursuant to this Agreement regarding any Work Item location for which a particular NFS has jurisdiction are provided to the NFS, and USACE will be available to the NFS technical questions related to its implementation. Additionally, USACE shall provide the NFS with information and technical guidance on the treatment of any historic properties, if applicable.
13. Shall ensure that all documentation (e.g., identification, evaluation, and mitigation reports) resulting from Undertakings reviewed pursuant to this Agreement is consistent with the SHPO of jurisdiction and appropriate Consulting Tribes' Tribal guidelines, per Stipulation VI A. 3, and the confidentiality provisions of 54 U.S.C. § 307103 and 36 CFR § 800.11(c), per Stipulation IV A-E.
14. Shall ensure that, on federal and tribal land, that the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. §3001-3013, 18 U.S.C. § 1170) and the Archaeological Resources Protection Act of 1979 (ARPA)(16 U.S.C. §470aa – 470mm) are followed.
15. Shall ensure that the provisions of the appropriate states' burial laws, including specific authorities outlined in Stipulation IX- Treatment of Human Remains and Items of Religious and Cultural Importance are provided to the NFS. USACE will provide any necessary technical guidance on the implementation of these laws, in support of the Designated Authority on NFS, state, or private land, subject to this agreement.
16. Annual Reporting: USACE shall provide Consulting Parties to this Agreement, with an annual report for the previous calendar year on or about July 30th of each year that this Agreement is in effect.
 - a. This annual report summarizes the actions taken to implement the terms of this Agreement, such as, statistics on Undertakings meeting Allowances; emergency reviews; streamlined project review; resolution of adverse effects; after-the-fact consultations; use of other agency's determinations; the progress and completion of all treatment measures; and recommends any actions or revisions to be considered, including updates to the appendices, A, B, D, and E.
 - b. USACE shall convene a conference call within thirty (30) days from the distribution of the Annual Report. During the conference call, USACE shall invite the Signatories, Consulting Tribes, and interested parties to review the annual report and discuss issues, if any, regarding implementation of the Agreement.
17. The District Tribal Liaison shall consult to establish protocols regarding which Federally-recognized Tribes to engage in specific geographical areas and the District shall follow those protocols. The results will be reflected in the list of POCs.

B. SHPOs:

1. The SHPO of jurisdiction shall coordinate with USACE, to identify Consulting Parties, including any communities, organizations, or individuals that may have an interest in a specific Undertaking and its effects on historic properties.
2. The SHPO of jurisdiction shall consult with USACE regarding USACE's determination of the APE, National Register eligibility, and findings of effect responding within timeframes set out in Stipulation V.
3. On a per Work Item basis, the SHPO of jurisdiction shall provide, as part of the consultation, available information about historic properties (such as access to site files, GIS data, survey information, geographic areas of concern) for the purposes of addressing effects to historic properties. Only Qualified Staff, per Stipulation VI A. 1. shall be afforded access to protected historic property information. USACE and any SHPO of jurisdiction may execute a written agreement to clarify and memorialize data sharing if it extends beyond any basic fee structure or access schedule.
4. The SHPO staff of jurisdiction (typically Division of Historic Preservation and Division of Archaeology staff members or equivalent) shall be reasonably available as a resource and for consultation through site visits, written requests, telephone conversations or electronic media. In those instances where consultation has occurred, USACE shall provide a written summary via e-mail or regular mail to SHPO, including any decisions that were reached.
5. All seven SHPOs, based on availability, shall participate in annual reviews convened by USACE to discuss the effectiveness of this Agreement in accordance with Stipulation III. A. 16.

C. Federally Recognized Tribes:

1. USACE acknowledges that Federally-recognized Tribes possess special expertise in assessing the National Register eligibility of properties with religious and cultural significance to that particular Tribe. Tribal leaders, and as appropriate, their representatives, shall designate an individual(s) for the Tribe's review of Undertakings affecting properties with religious and cultural significance to that particular Tribe. Designations such as this will follow the intent and processes laid out in USACE's 2012 Tribal Consultation Policy.
2. Federally-recognized Tribes (THPOs and other designees) may coordinate with USACE, to identify Consulting Parties, including any communities, organizations, or individuals that may have an interest in a specific Undertaking and its effects on historic properties.
3. Federally-recognized Tribes (THPOs and other designees) may consult with USACE regarding USACE's determination of the APE, National Register eligibility, and findings of effect responding within timeframes set out in Stipulation V.
4. On a per Work Item basis, Federally-recognized Tribes (THPOs and other designees) may provide, as part of the consultation, available information about historic properties (such as access to site files, GIS data, survey information, geographic areas of concern) for the purposes of addressing effects to historic properties. Only Qualified Staff, per

Stipulation VI A. 1. shall be afforded access to protected historic property information. USACE and any Federally-recognized Tribe may execute a written agreement to clarify and memorialize data sharing, if it extends beyond any basic fee structure or access schedule.

5. Federally-recognized Tribes (THPOs and other designees) shall be reasonably available as a resource and for consultation through site visits, written requests, telephone conversations or electronic media. In those instances where consultation has occurred, USACE shall provide a written summary via e-mail or regular mail to THPO, including any decisions that were reached.
6. Federally-recognized Tribes (THPOs and other designees) shall, based on availability, participate in annual reviews convened by USACE to discuss the effectiveness of this Agreement in accordance with Stipulation III. A. 16.

D. ACHP:

1. ACHP will provide guidance and advisory information to resolve disputes that may occur during the implementation of this Agreement, pursuant to the Dispute Resolution process in Stipulation XII.
2. ACHP will advise USACE if it will participate in consultations to resolve adverse effects, pursuant to 36 CFR § 800.6(a)(1).
3. ACHP will participate in the annual reviews convened by USACE to review the effectiveness of this Agreement.

IV. CONFIDENTIALITY OF HISTORIC PROPERTY INFORMATION

- A. USACE will safeguard information about historic properties to the extent allowed by Section 304 of NHPA (54 U.S.C. § 307103), Section 9 of the Archaeological Resources Protection Act (ARPA), and other applicable federal laws, as well as implementing restrictions conveyed to USACE by SHPO and Federally-recognized Tribes, consistent with state and tribal guidelines. These safeguards will be included in any developed cultural resources Scopes of Work, as well.
- B. Only USACE staff meeting the Professional Standards (Stipulation VI. A. 1.) , shall be afforded access to protected historic property information provided by any SHPO and/or Federally-recognized Tribes;
- C. Regarding sensitive information shared by Federally-recognized Tribes, USACE, in accordance with provisions of federal law, will not share non-public information, without first confirming (in writing with the provider of the information) the appropriateness of sharing.
- D. USACE shall provide to all Consulting Parties the documentation specified in 36 CFR § 800.11 subject to the confidentiality provisions of 36 CFR § 800.11(c) and such other documentation as may be developed during consultation to resolve adverse effects to the extent permitted by federal law.
- E. SHPO/THPO, Consulting Tribal staff, and Federally-recognized Tribal staff and/or designee(s), shall safe guard historic property information (locational and other non-public)

in accordance with the provisions of Section 304 of the NHPA and applicable state and tribal legal authorities.

- F. USACE anticipates the presentation of historic property data as part of any Standard Treatment Measure (STM) or Memorandum of Agreement Treatment Measure (MOA TM) but shall ensure that these products, presentations, or other publications are adequately coordinated and consulted upon before release/presentation to ensure that any otherwise protected information is being represented appropriately.

V. CONSULTATION STANDARDS, TIMEFRAMES, AND CORRESPONDENCE

A. Consultation Standards:

1. Consultation among all Consulting Parties to this Agreement will continue throughout the implementation of this Agreement. Consultation is mutual, meaningful dialogue regarding the fulfillment of this Agreement, the process of Section 106 compliance, and the treatment of historic properties that may be affected by USACE undertakings.
2. USACE, when consulting with any Federally-recognized Indian Tribe, whether a signatory to this Agreement or not, will do so on a government-to-government basis in recognition of their sovereign status.
3. USACE will consult with the SHPOs, Federally-recognized Tribes, and other consulting parties, based on expressed areas of interest in the case of Federally-recognized Tribes or jurisdiction in case of SHPO offices. Consultations may include face-to-face meetings, as well as communications by regular mail, electronic mail, and/or telephone. Times and places of meetings, as well as an agenda for meetings, will be developed with mutual acceptance and done in a timely manner.

B. Timeframes:

1. All time designations in this Agreement shall be in calendar days unless otherwise expressly stipulated in writing in this Agreement:
 - a. For emergency Undertakings as reviewed under Stipulation VII.B, USACE shall follow the timeframes as indicated in 36 CFR 800.12 (b) (2).
 - b. For Undertakings associated with all other activities as reviewed under the Streamlined Project Review Stipulations of this Agreement, the response time for each request for concurrence shall be a maximum of thirty (30) days, unless otherwise agreed to by the parties to the specific consultation on a case-by-case basis.
2. The review period will be extended until the next business day, if a review period included in this Agreement concludes on a Saturday, Sunday, state, or federal, or tribal holiday. If requested, USACE may consider an extension of a review period consistent with the time designations in this Agreement for parties affected by an unanticipated state office closure (any state) (e.g., hurricane, tornado or similar).
3. Any electronic communication forwarding plans or other documents for review under the terms of this Agreement that is sent after 4:00 pm Central Time will be deemed to have been received by the reviewing party on the next business day.

4. E-mail comments by the Signatories on any documents submitted for review under this Agreement are timely if they are received at any time on or before the last day of a review period. Responses sent by mail will be accepted as timely if they are postmarked by the last day allowed for the review.
5. If any Signatory does not object to USACE's finding or determination related to an Undertaking within an agreed upon timeframe, USACE may proceed to the next step in the consultation process as described in Stipulation VII, Project Review.
6. Timeframes are contingent upon USACE ensuring that its findings and determinations are made by Qualified Staff and supported by documentation as required by 36 CFR § 800.11(d) and 36 CFR § 800.11(e), and consistent with USACE guidance.

C. Correspondence:

1. The Consulting Parties may send and accept official notices, comments, requests for further information and documentation, and other communications required by this Agreement in accordance with the protocol in Appendix B.
 - a. If the size of an e-mail message is unusually large or an e-mail is returned to a sender because its size prevents delivery, the sender will contact the intended recipient(s) and determine alternative methods to deliver the information (including available file sharing platforms).
 - b. Time-sensitive information that is not sent by e-mail should be sent by overnight mail, courier, or hand-delivered. The timeframe for requests for review not sent by e-mail will be measured by the date the delivery is signed for by the SHPO of jurisdiction, Federally-recognized Tribe, or other organization representing the Consulting Party.

VI. STANDARDS

- A. In addition to the definitions utilized in 36 CFR § 800, this Agreement uses the definitions presented in the subsequent paragraphs to establish standards for performing all cultural resource project reviews and investigations required under the terms of this Agreement including, but not limited to, site identification, NRHP eligibility evaluations, and as appropriate, STM or MOA TM for the resolution of adverse effects to historic properties:
 1. "Qualified Staff" – shall mean staff who meet, at a minimum, the SOI Professional Qualifications Standards set forth at 48 FR 44738 (September 29, 1983), for History, Archaeology, Architectural History, Architecture, or Historic Architecture (https://www.nps.gov/history/local-law/arch_stnds_9.htm) and the appropriate qualifications presented in Professional Qualifications (36 CFR Part 61, Appendix A).
 2. "Standards" -- shall mean the Secretary of the Interior's (SOI) Standards and Guidelines for Archaeology and Historic Preservation [Federal Register 48(190) 1983:44716-44737] (https://www.nps.gov/history/local-law/arch_stnds_0.htm);
 3. "Meeting Professional Standards" -- shall mean that all cultural resource investigations shall be performed by, or under the direct (in-field) supervision of appropriate professional(s) or by contractors, who are "Qualified Staff.";

4. "Field and Reporting Standards" – shall mean the current historic standing structure and archaeological guidance from the SHPO's Office of jurisdiction, depending on the work item location:
 - Arkansas Historic Preservation Program and the Arkansas Archeological Survey, or
 - Illinois State Historic Preservation Office (DNR), or
 - Kentucky Heritage Council, or
 - LA State Historic Preservation Office, or
 - Mississippi Department of Archives and History, or
 - MO State Historic Preservation Office, or
 - Tennessee Department of Environment and Conservation, Division of Archeology and Tennessee Historical Commission;
 5. "Policies and Guidelines" -- shall mean guidance from any of the following:
 - a) The National Park Service publication *The Archaeological Survey: Methods and Uses* (National Park Service 1978);
 - b) ACHP's *Treatment of Archeological Properties: A Handbook* (1980) (<https://www.achp.gov/sites/default/files/documents/2018-11/Treatment%20of%20Archeological%20Properties-A%20Handbook-OCR.pdf>);
 - c) *Identification of Historic Properties: A Decision-making Guide for Managers* (1988, joint ACHP-NPS publication);
 - d) *Consulting About Archeology Under Section 106* (1990);
 - e) ACHP's [Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites](#) (1999);
 - f) ACHP's *Policy Statement Regarding the Treatment of Burial Sites, Human Remains and Funerary Objects* (2007) (<https://staging.achp.gov/sites/default/files/policies/2018-06/ACHPPolicyStatementRegardingTreatmentofBurialSitesHumanRemainsandFuneraryObjects0207.pdf>); and
 - g) *Section 106 Archaeology Guidance: A reference guide to assist federal agencies in making effective decisions about archaeological sites* (2009) (<https://www.achp.gov/sites/default/files/guidance/2017-02/ACHP%20ARCHAEOLOGY%20GUIDANCE.pdf>)
- B. In developing Scopes of Work (SOW) for identification and evaluation studies, STM or MOA TM(s), or any other cultural resources activities required under the terms of this Agreement, USACE will comply with the requirements of the Standards, Field and Reporting Standards, and the Policies and Guidelines, in existence at the time this work is performed.
- C. Additionally, in developing SOW for identification and evaluation studies, STM or MOA TM(s), or any other cultural resources activities required under the terms of this Agreement, and where geographically appropriate, USACE will take into account the following guidance:
1. Guidance from the Osage Nation *National Historic Preservation Act Section 106 Protocol and Standards, Archaeological Survey Standards, and Archaeological Resources Protection Act Violation Procedures*; and

2. Any additional area-specific guidance beyond that provided for under VI A 1. – 4 (e.g., additional Federally-recognized Tribal guidance, or local preservation ordinances).

VII. PROJECT REVIEW

A. Programmatic Allowances:

1. If USACE determines an Undertaking conforms to one or more allowances in Appendix D of this Agreement, USACE shall complete the Section 106 review process by documenting this determination in the project file, without SHPO or Federally-recognized Tribal review or notification, excepting in the annual report.
2. If USACE determines any portion of an Undertaking's scope of work does not conform to one or more Allowances listed in Appendix D, USACE shall conduct Section 106 review, as appropriate, for the entire Undertaking in accordance with Stipulation VII.B, Review for emergency Undertakings, or Stipulation VII.C, Streamlined Project Review.
3. Allowances may be revised and new Allowances may be added to this Agreement in accordance with Stipulation XIV, Amendments.

B. Review for Emergency Undertakings:

1. For review of actions that are emergencies, an essential and immediate response to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or another immediate threat to life or property USACE shall follow the provisions of 36 CFR 800.12 (b).

C. Streamlined Project Review:

For Undertakings not falling under VII. A. or VII. B, USACE shall ensure that the following project review steps are implemented. In the interest of streamlining, USACE may combine some or all of these steps during consultation in accordance with 36 CFR § 800.3(g).

1. Consulting Parties: USACE shall consider all written requests of individuals and organizations to participate as Consulting Parties, and consult with the SHPO of jurisdiction and the appropriate Federally-recognized Tribe(s) to identify any other parties that meet the criteria to be Consulting Parties and invite them to participate in the Section 106 process. USACE may invite others to participate as Consulting Parties as the Section 106 consultation proceeds.
2. Area of Potential Effects (APE): For all projects undergoing streamlined project review, Qualified Staff shall determine the APE in consultation with the SHPO of jurisdiction and appropriate Federally-Recognized Tribe(s).

The APE will be defined as all areas to be affected by construction activities and areas of associated ground disturbance including but not limited to haul roads, borrow areas, staging and stockpiling areas. The APE would generally include all areas for which a Right-of-Entry is sought by USACE or the NFS. Additional effects that will be considered shall include visual, auditory, and off-site anticipated erosion resulting from the constructed feature. USACE may consider

information provided by other parties, such as local governments and the public, when establishing the APE.

APE Definition Factors:

- a. For standing structures not adjacent to or located within the boundaries of a National Register listed or eligible district, Qualified Staff may define the APE as the individual structure or structures when the proposed Undertaking is limited to its repair or rehabilitation (e.g. floodwalls, or other appurtenant structures to the levees, etc.).
 - b. For archaeological sites the USACE should consider the nature of likely properties in unsurveyed areas, the fact that mound sites may have been incorporated into the levee profile or may have been excavated and used as fill material in the levee.
3. Identification and Evaluation: Qualified Staff shall determine, in consultation with SHPO and Tribe(s), if the APE contains historic properties, including properties of religious and cultural significance to Federally-recognized Tribes. This may include the review of newly developed or previously produced documentation in coordination with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and any additional Consulting Parties.
- a. Level of Effort: USACE shall make a reasonable and good faith effort to identify historic properties in accordance with 36 CFR § 800.4(b)(1). USACE shall consult with the SHPO of jurisdiction and appropriate Federally-recognized Tribe(s) to determine the level of effort, methodology necessary to identify and evaluate a variety of historic property types, and any reporting requirements. For properties of religious and cultural significance to affected Federally-recognized Tribe(s), USACE shall consult with the affected Tribe(s) to determine if the APE contains such properties and determine the necessary level of effort to identify and evaluate or avoid any such historic properties. All Identification and Evaluation studies will comply with the Standards (Stipulation VI).
 - b. Timing:
 - i. With respect to each Work Item, USACE shall achieve compliance with all relevant terms of this Agreement prior to initiating physical construction of that Work Item.
 - ii. The results of all field investigations will be subject to a review and comment period of no less than thirty (30) days by the appropriate Consulting Parties, following the receipt by the SHPO of jurisdiction and the appropriate Federally-recognized Tribe(s) of the completed reporting document architectural survey, Phase I or II archaeological reports, and any other supporting documentation.
 - iii. Coordination of consultation will be through the designated POC (Stip. II).
 - c. National Historic Landmarks (NHL): When USACE identifies an Undertaking with the potential to affect an NHL, USACE will adhere to 36 CFR 800.10 Special

Requirements for Protecting NHL's. USACE shall contact NPS NHL Program Manager of the Southeast NPS Regional Office in addition to the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties. The purpose of this notification is to ensure early coordination for the Undertaking, which USACE later may determine adversely affects the NHL as outlined in Stipulation VII C. 7, Assessing Adverse Effects.

4. Determinations of Eligibility: USACE shall make determinations of National Register eligibility based on identification and evaluation efforts, and consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties regarding these determinations. Should the SHPO of jurisdiction, or appropriate Federally-recognized Tribe(s) disagree with the determination of eligibility, USACE shall:
 - a. Consult further with the objecting party to resolve the objection;
 - b. Treat the property as eligible for the National Register; or
 - c. Obtain a determination of eligibility from the Keeper of the National Register in accordance with 36 CFR § 63.2(d)-(e) and 36 CFR § 800.4 (c) 2.
5. Findings of No Historic Properties Affected:
 - a. Basis for Finding. USACE shall make a finding of "no historic properties affected" under the following circumstances:
 - i. If no historic properties are present in the APE; or
 - ii. The Undertaking shall avoid alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register (including cumulative effects); or
 - b. USACE shall notify the SHPO of jurisdiction, appropriate Federally-recognized Tribes(s), and any other Consulting Parties of this finding and provide supporting documentation in accordance with 36 CFR § 800.11(d). Unless Consulting Parties object to the finding, or request additional information, within 30-days, the Section 106 review of the Undertaking will have concluded.
 - c. If the SHPO of jurisdiction and/or appropriate Federally-recognized Tribes(s), objects to a finding of "no historic properties affected," USACE shall consult with the objecting party to resolve the disagreement.
 - i. If the objection is resolved, USACE either may proceed with the Undertaking in accordance with the resolution or reconsider effects on the historic property by applying the criteria of adverse effect pursuant to Stipulation VII.C.6., Application of the Criteria of Adverse Effect, below.
 - ii. If USACE is unable to resolve the disagreement, it will forward the finding and supporting documentation to ACHP and request that ACHP review USACE's finding in accordance with the process described in 36 CFR § 800.4(d)(1)(iv)(A) through 36 CFR § 800.4(d)(1)(iv)(C). USACE shall, pursuant to 800.4(d)(1)(iv)(C), prepare a summary of its decision that

contains the rationale for the decision and evidence of consideration of the ACHP's opinion, and provide this to the SHPO of jurisdiction, appropriate Federally-recognized Tribes(s), and all other Consulting Parties. If USACE's final determination is to reaffirm its "no historic properties affected" finding, the Section 106 review of the Undertaking will have concluded. If USACE will revise its finding, then it shall proceed in accordance with Stipulation VII.C.5., 6, below.

6. **Assessing Adverse Effects:** If, through consultation, USACE finds an Undertaking may affect historic properties in the APE, including those of religious or cultural significance to affected Federally-recognized Tribe(s), USACE shall apply the criteria of adverse effect to historic properties within the APE(s), including cumulative effects, taking into account the views of the Consulting Parties and the public concerning effects in accordance with 36 CFR § 800.5(a).
 - a. ***Findings of No Adverse Effect:*** If, through consultation, USACE determines that an Undertaking does not meet the adverse effect criteria, pursuant to 36 C.F.R. § 800.5(a)(1), USACE shall propose a finding of "no adverse effect" and consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribes(s) and Consulting Parties in accordance with 36 CFR § 800.5(b) and following steps i-iii below, or will move to subparagraph b.
 - i. USACE shall notify all Consulting Parties of its finding; describe any project specific conditions and/or modifications required to avoid or minimize effects to historic properties; and provide supporting documentation pursuant to 36 CFR §800.11(e).
 - ii. Unless a Consulting Party objects within thirty (30) days, USACE will proceed with its "no adverse effect" determination and conclude the Section 106 review.
 - iii. If a Consulting Party objects to a finding of "no adverse effect," USACE will consult with the objecting party to resolve the disagreement.
 - a) If the objection is resolved, USACE shall proceed with the Undertaking in accordance with the resolution; or
 - b) If the objection cannot be resolved, USACE shall request that ACHP review the findings in accordance with 36 CFR § 800.5(c)(3)(i)-(ii) and submit the required supporting documentation. USACE shall, pursuant 800.5(c)(3)(ii)(B), prepare a summary of its decision that contains the rationale for the decision and evidence of consideration of the ACHP's opinion, and provide this to the SHPO of jurisdiction, appropriate Federally-recognized Tribes and all other Consulting Parties. If USACE's final determination is to reaffirm its "no adverse effect" finding, the Section 106 review of the Undertaking will have concluded. If USACE will revise its finding then it shall proceed to Stipulation VI 6. b., below.
 - b. ***Avoidance and Minimization of Adverse Effects:*** If USACE, during its initial review, finds the Undertaking may adversely affect historic properties, USACE

may make a further internal review to consider ways to avoid or minimize effects to historic properties. The review will consider revising the elements of the scope of work affecting historic properties to substantially conform to the SOI Preservation Standards or otherwise avoid or minimize adverse effects.

- i. If USACE modifies the scope of work following its initial internal review to avoid or minimize effects below the "criteria of adverse effect" (36 CFR 800.5 (a)(1), (i.e., to the point USACE can make a finding of No Adverse Effect), USACE shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and all other Consulting Parties providing the *original and modified* Scopes of Work as part of its finding of "no adverse effect" following the process in Stipulation VII.C.6.a.
 - ii. If USACE is unable to modify the Undertaking to avoid or minimize effects below the "criteria of adverse effect", USACE shall initiate consultation to resolve the adverse effect(s) in accordance with Stipulation VII.C.7, Resolution of Adverse Effects.
7. **Resolution of Adverse Effects (AE):** If USACE determines that an Undertaking may adversely affect a historic property, it shall resolve the effects of the Undertaking in consultation with the SHPO of jurisdiction; the appropriate Federally-recognized Tribe(s); ACHP, if participating; and other Consulting Parties; by one of the methods described in VII.C.7.(a) through (c). When, through consultation, USACE determines an Undertaking will adversely affect an NHL, USACE shall notify and invite the Secretary of the Interior and ACHP, as well as notifying Regional National Park Service staff to participate in consultation in accordance with 36 CFR § 800.10.
 - a. **Abbreviated Resolution Process (ABR):** USACE may propose in writing to the Consulting Parties to resolve the adverse effects of the Undertaking through the application of one or more Treatment Measures outlined in Appendix E (Historic Property Treatment Plan). USACE shall ensure that the provisions of the Historic Property Treatment Plan, as outlined in the consultation and agreed to by Consulting Parties, are documented in writing and implemented. The use of these Treatment Measures in a Historic Property Treatment Plan shall not require the execution of an individual Memorandum of Agreement or Secondary Programmatic Agreement.
 - i. In consultation with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, USACE shall propose in writing the implementation of a specific Historic Property Treatment Measure, or combination of Treatment Measures, with the intent of expediting the resolution of adverse effects, and provide documentation as required by 36 CFR § 800.11(e) and subject to the confidentiality provisions of 36 CFR § 800.11(c). The correspondence will include a Historic Properties Treatment Plan that outlines roles and responsibilities for accomplishment of the selected treatment measures, specify the deliverables, and define the timeline.
 - ii. The ACHP is not required to, and would not normally, participate in the development of Historic Property Treatment Plans, under the Abbreviated Resolution Process. However, the ACHP will receive a copy of the

Historic Properties Treatment Plan. Only when requested by USACE, the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), or other Consulting Parties, would they participate, if the ACHP determines that its participation is warranted.

- iii. Unless a Consulting Party or the ACHP objects to USACE's proposed Historic Property Treatment Plan within the timeframe outlined in Stipulation V. B Timeframes, USACE shall proceed with the implementation of the Historic Property Treatment Plan and will conclude the Section 106 review.
 - iv. If any of the Consulting Parties or ACHP objects within the timeframe outlined in Stipulation V.B. Timeframes, to the resolution of adverse effects through the application of the Abbreviated Consultation Process, USACE shall resolve the adverse effect(s) using procedures outlined below in Stipulation VII.C.7 (b), MOA or Stipulation VII.C.7 (c), Programmatic Agreement. USACE shall invite any individual or organization that will assume a specific role or responsibility outlined in a Memorandum of Agreement or Secondary Programmatic Agreement to participate as an Invited Signatory to the Undertaking-specific agreement.
 - v. Because funding and implementation details of a Historic Property Treatment Plan for specific Undertakings may vary by state and Non-Federal Sponsor, USACE shall provide written notice to the Consulting Parties within sixty (60) days of the completion of the Historic Property Treatment Measure(s). This written notice will serve as confirmation that the Historic Property Treatment Measure(s) for a specific Undertaking have been implemented. USACE also shall include information pertaining to the progress and completion of Historic Property Treatment Plans in the annual report pursuant to Stipulation III A. 16. USACE Roles and Responsibilities.
- b. *Memorandum of Agreement (MOA)*: USACE shall provide ACHP with an adverse effect notice in accordance with 36 CFR § 800.6(a)(1) if it has not already provided such under the Abbreviated Consultation Process of this Agreement, if a Consulting Party or ACHP objects in accordance with Stipulation II.C.6(a)(iii), or if USACE in consultation with SHPO/THPO, Tribe(s), and other Consulting Parties has determined that an MOA would be more appropriate than the Abbreviated Consultation Process to resolve the adverse effect(s). In consultation with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, including ACHP (if participating), USACE shall develop an MOA, in accordance with 36 CFR § 800.6(c) to agree upon Treatment Measures to avoid, minimize, and/or mitigate adverse effects on historic properties. The MOA may also include Treatment Measures that serve an equal or greater public benefit in promoting the preservation of historic properties in lieu of the Treatment Measures outlined in Appendix E.
 - c. *Programmatic Agreement (Secondary PA)*: Should the execution of an MOA be inappropriate given the similar nature of effects on historic properties, the inability to determine effects prior to approval of an Undertaking, or where other circumstances warrant, USACE, shall consult with SHPO/THPO, Tribe(s), ACHP, if participating, and any other Consulting Parties to develop a

Programmatic Agreement in accordance with 36 CFR § 800.14(b) and to identify programmatic conditions or Treatment Measures to govern the resolution of potential or anticipated adverse effects from certain complex project situations for an Undertaking or for multiple, but similar Undertakings by a single agent or contractor.

8. Disagreements Regarding AE Resolution Actions: Should any signatory or Consulting Party object within the timeframes established by this Agreement to any plans, specifications, or actions taken pursuant to resolving an adverse effect, USACE shall consult further with the objecting party to seek resolution. If USACE determines the objection cannot be resolved, USACE shall address the objection in accordance with Stipulation XII, Dispute Resolution.
9. Reports:
 - a. USACE shall ensure that all reports and other documents resulting from the actions pursuant to this Agreement will be provided in a format acceptable to the SHPO of jurisdiction and appropriate Federally-recognized Tribes. USACE will ensure that all such reports (e.g., identification surveys, evaluation reports, treatment plans, and data recovery reports) meet or exceed the Department of the Interior's *Format Standards for Final Reports of Data Recovery* (42 FR 5377-79) and the *Field and Report Standards* identified in Stipulation II.A.1(d).
 - b. USACE shall provide all documentation for these efforts to the SHPO of jurisdiction, appropriate Federally-recognized Tribes, or other Consulting Parties, as appropriate, consistent with the confidentiality provisions of Stipulation IV. of this Agreement.
 - c. Once supporting documentation is received, SHPO and Tribes will have thirty (30)-days to review supporting documentation (e.g., site forms and reports). If the SHPO of jurisdiction or appropriate Federally-recognized Tribes intend to review and comment on documentation, and are unable to do so within the thirty (30)-day review period, a request for additional review time must be made in writing to USACE and specify the anticipated completion date. USACE will consider the request and work with the requesting party to come to a mutually agreeable timeframe. USACE will notify other Consulting Parties of any mutually approved extension by e-mail.

VIII. The Public:

- A. USACE recognizes that the views of the public are essential to informed decision making throughout the Section 106 consultation process. USACE shall notify the public of proposed Undertakings in a manner that reflects the nature, complexity, significance of historic properties likely affected by the Undertaking, the likely public interest given USACE's specific involvement, and any confidentiality concerns of Federally-recognized Tribe(s), private individuals and organizations.
- B. USACE may consult with the relevant SHPO/THPO, Consulting Tribes, or Federally-recognized Tribe(s), and other Consulting Parties, to determine if there are individuals or organizations with a demonstrated interest in historic properties that should be included as a Consulting Party for the Undertaking in accordance with 36 CFR § 800.2(c)(5). If such parties are identified or identify themselves to USACE, USACE shall provide them with

information regarding the Undertaking and its effects on historic properties, consistent with the confidentiality provisions of 36 CFR § 800.11(c).

- C. In accordance with the public outreach strategy developed for an Undertaking in consultation with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), USACE shall identify the appropriate stages for seeking public input during the Section 106 consultation process. USACE shall consider all views provided by the public regarding an Undertaking.
- D. USACE shall also provide public notices and the opportunity for public comment or participation in an Undertaking through the public participation process of the National Environmental Policy Act (NEPA) and its implementing regulations set out at 40 CFR Parts 1500-1508, and/or Executive Orders 11988 and 11990 relating to floodplains and wetlands, and if applicable, Executive Order 12898, Environmental Justice, provided such notices specifically reference Section 106 as a basis for public involvement and provide the notices on a webpage established to address MRL Projects (see Appendix A for the specific web addresses).

IX. CURATION

Recovered archaeological collections from a USACE-required archaeological survey, evaluation, and/or mitigation remain the property of the land owner (either private, state, federal, etc.). USACE, in coordination with the SHPO of jurisdiction and appropriate Federally-recognized Tribe(s) may, as determined through consultation, encourage private land owners to transfer any recovered artifacts and related documentation to an appropriate archive or public or Federally-recognized Tribal entity. USACE, in coordination with SHPO and Federally-recognized Tribe(s), shall work with all tribal, state, and local agents to support steps that ensure the long-term curation of these artifacts and documents through the transfer of the materials to a suitable repository as agreed to by USACE, the SHPO of jurisdiction, and appropriate Federally-recognized Tribes(s) and following applicable state or tribal guidelines. USACE shall ensure that collections from federal or tribal land, including field and laboratory records sufficient to document the collection, are curated at a repository meeting federal standards (36 C.F.R. 79) as agreed to by USACE, SHPO, and affected Federally-recognized Tribe(s), and follow that repository's guidelines.

X. TREATMENT OF HUMAN REMAINS AND ITEMS OF RELIGIOUS AND CULTURAL IMPORTANCE

- A. **Documenting Human Remains:** The recordation of human remains in a burial context or as individual elements is a task that requires sensitivity and good judgment, as defined through consultation. Consultation is a necessary part of documenting any human remains (in a discovery situation or during the treatment of historic properties) following the provisions of this stipulation. In planning how to document human remains (photography, drawing for the purposes of illustration, videography, or other), the determination will be made in consultation and concurrence with the SHPO of jurisdiction, Federally-recognized Tribe(s), and, as appropriate, other descendant communities. Even if it is determined to photo document the human remains, the photographs should not be published or made publicly available in any way. The USACE will maintain records for the purpose of management of the human remains, with the intent of satisfying the protection provisions of the federal and state laws governing human remains, the records will be hardcopy and digital. When the records are digital, they will not be connected to externally available electronic resources like GIS servers or other and marked as restricted (per NHPA, FOIA,

and, as appropriate, ARPA). As part of the consultation for each Work Item where Human Remains are present, the USACE will ensure that the consultation happens as appropriate to each jurisdiction to determine the course of action for each situation.

B. General Human Remains Discovery Process:

1. In the event that previously unreported or unanticipated human remains, burials, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony are encountered during field investigations, laboratory work, or during construction or maintenance activities originating from federal, state, or private lands (Federal and Non-Federal Lands) USACE shall notify the relevant historic preservation interests (SHPO's of jurisdiction, and interested Federally-recognized Tribal representatives) within 24-hrs of the discovery. Concurrently, USACE will implement the provisions 2 thru 6, below:
2. Any USACE employee or contractor(s) who knows or has reason to know that they have inadvertently discovered human remains, burials, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony must provide immediate telephone notification of the inadvertent discovery to the responsible Federal construction official, with written confirmation, to the appropriate USACE District's Point of Contact in this agreement. The written notification should contain the results, if any, of the field evaluation. The appropriate USACE District's Cultural Resources Staff and Tribal Liaison will begin to develop a plan of action to inform the appropriate District Commander of the consultation tasks necessary to address the discovery. No photographs should be taken at this time of the human remains.
3. All fieldwork, construction or maintenance activities, must stop immediately within a one hundred (100) meter (328 ft.) radius buffer zone around the point of discovery; unless there is reason to believe that the area of the discovery may extend beyond the one hundred (100) meter (328 ft.) radius buffer zone in which case the buffer zone will be expanded appropriately, within the APE. USACE will implement measures to protect the discovery from theft and vandalism. Any human remains or other items in the immediate vicinity of the discovery must not be removed or otherwise disturbed. USACE will take immediate steps, if necessary, to further secure and protect inadvertently discovered human remains, burials, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony, as appropriate, including stabilization, or covering the find location.
4. USACE will notify local law enforcement, coroner, or medical examiner, as appropriate, and the SHPO of jurisdiction, per the POC in Appendix B, by telephone to assess the nature and age of the human skeletal remains within twenty-four (24) hours of the discovery of unmarked human remains and accompany local law enforcement personnel during all field investigations. USACE will also notify interested Federally-recognized Tribes of the discovery within the same period. If the appropriate local law enforcement official determines that the remains are not involved in a criminal investigation, USACE will follow jurisdictional guidelines as provided for based on land ownership (per Stipulation X. B.).
 - a. In cases where human remains, burials, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony are discovered during the implementation of a USACE-funded undertaking on Federal Land, USACE will notify by telephone and e-mail, the SHPO of jurisdiction, Tribes, and

other affected parties (e.g., living descendants) that may that might attach religious and cultural significance to the discovery at the earliest possible time, but no later than forty-eight (48) hours and inform them of the steps already taken to address the discovery.

- b. In cases where the human remains are discovered on Non-Federal Lands and are determined to be Native American, the individual state's Designated Authority will notify and coordinate with Tribes as required by the appropriate state law, but not later than forty-eight (48)-hours from the time of their notification. As requested and to the extent of its legal authority, USACE will assist the Designated Authority, to consult with Tribes and affected parties, as appropriate.
 - c. In cases where the human remains are discovered on Non-Federal Lands and determined to be other than Native American, the individual state's Designated Authority will notify and coordinate in accordance with the appropriate state law. As requested and to the extent of its legal authority, USACE will assist the Designated Authority to consult with the affected parties, as appropriate.
5. USACE will consult with SHPO, THPOs, and appropriate Federally-recognized Tribes, and other affected parties to develop a mutually agreeable action plan with timeframes to take into account the effects of the Undertaking on the discovery; resolve adverse effects if necessary; and ensure compliance with applicable federal laws and their implementing regulations, if the discovery of Native American human remains, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony occurs on Federal Land (see Stipulation IX. B. for the detailed process).
 6. Following the outcome of any consultation (Federal Lands or Non-Federal Lands) to address the discovery of human remains, USACE will coordinate with any contractor(s) regarding any required scope of project modification necessary to implement recommendations from the consultation and facilitate proceeding with the Undertaking.
- C. **Specific Authorities and Processes for Addressing Human Remains:** If human remains, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony are encountered during project field investigations or laboratory work or during construction activities, the USACE will comply with the provisions based on the nature of the land ownership at the time remains or objects are encountered, in accordance with Engineering Regulation 1102-2-100 (Policy & Guidance), Appendix C-4.
1. **Federal Lands:** If discovered/recovered from *Federal lands*, USACE shall concurrently implement processes defined in this Agreement, satisfying NHPA, as well as
 - ensuring consultation with appropriate Federally-recognized Tribes for any human remains, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony (objects) as required by the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), as amended (25 U.S.C. §§ 3001-3014) and its implementing regulations (43 C.F.R. Part 10; and
 - ensuring the appropriate provisions of the Archaeological Resources Protection Act, 16 USC §§ 470aa et seq., are followed.

- a. For discoveries of human remains, burials, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony, USACE will continue to consult with the SHPO of jurisdiction, claimant Federally-recognized Tribes, and other affected parties, as appropriate, whether they are Signatories to this Agreement or not, regarding additional measures to avoid and protect or mitigate the adverse effect of the Undertaking. These measures may include:
 - i. Visits to the site by the SHPO of jurisdiction, claimant Federally-recognized Tribes, and other affected parties, as appropriate;
 - ii. Formally evaluate the archaeological site for NRHP-eligibility;
 - iii. Explore potential avoidance alternatives;
 - iv. Develop and implement a mitigation plan in consultation and concurrence with the SHPO of jurisdiction, claimant Federally-recognized Tribes, and other affected parties, as appropriate, including procedures for disinterment and re-interment.
- b. Initial Determination of nature of discovered Human Remains when from Federal Lands (Native American or Other)
 - i. USACE, in consultation with the SHPO of jurisdiction and claimant Federally-recognized Tribes, whether they are Signatories to this Agreement or not, and other affected parties, may consult with a qualified physical anthropologist, forensic scientist, or other experts as may be needed to examine and assess the discovery. Unless the remains were inadvertently removed, the evaluation will be conducted at the site of discovery. Other than for crime scene investigation, no excavation, examination, photographs, or analysis of Native American human remains or remains suspected of being Native American will be conducted or allowed by USACE archaeologists or any other professional without first consulting with the claimant Federally-recognized Tribes, whether they are Signatories to this Agreement or not. The consulting expert will be allowed to draw and measure the exposed remains and associated funerary objects. Drawings cannot be published in any form or shown as part of scholarly presentations without the written permission of the appropriate Tribes or next living descendant.
 - ii. USACE, in consultation with the SHPO of jurisdiction, claimant Federally-Recognized Tribes, and other affected parties, as appropriate, whether they are Signatories to this Agreement or not, will have seven (7) days to determine if the skeletal remains are human, the degree to which they were disturbed, and if possible, using reasonable measures to assess their potential age, cultural affiliation, and identity, without any further disturbance. Upon making a determination or at the end of the seven (7) days, whichever comes first, USACE will notify the appropriate affected parties of its findings. This notification will include pertinent information as to kinds of human remains, funerary objects, Native American sacred objects, or Native American items of cultural patrimony discovered, their condition, and the circumstances of their inadvertent discovery.
 - iii. If the remains are determined NOT to be Native American in origin, USACE will follow the principals outlined in the 2007 ACHP "Policy Statement Regarding Treatment Of Burial Sites, Human Remains and Funerary Objects"

to respectfully treat the remains and determine proper disposition, disinterment, re-interment, and memorialization, as well as any Real Estate guidance at the time of the discovery.

- c. Initiating NAGPRA Consultation following Inadvertent Discoveries/Recovery of Human Remains from Federal Lands
 - i. For the purposes of notification and consultation of an inadvertent discovery, USACE considers the Consulting Tribes, and Federally-recognized Tribes who have identified the County/Parish as an area of interest are likely to be cultural affiliated with inadvertently discovered NAGPRA items found on a specific Work Item.
 - ii. Upon certification of an inadvertent discovery of NAGPRA items by the responsible federal official, the USACE shall notify the consulting Federally-recognized Tribes. This notification will be made via email and telephone call to the appropriate consulting Tribes' Primary POC within twenty-four (24) hours, and include concurrent hard copy written notification, via regular mail. Notifications shall include a copy of the field documentation and a list of all other parties being notified.
 - iii. No later than three (3) days after the email and telephone notification, the consulting Federally-recognized Tribes and/or claimant Federally-recognized Tribe shall agree to a date and time for a teleconference to begin the consultation process.
- d. Consultation for Inadvertent Discoveries//Recovery of Human Remains from Federal Lands that are Native American
 - i. Consultation will begin with the teleconference with all consulting Federally-recognized Tribes and/or claimant Federally-recognized Tribe. At this time both parties may determine that the cause of the inadvertent discovery is not on-going, that the location where the discovery occurred is secure (or can be secured), and that the NAGPRA items do not need to be removed.
 - ii. If all Consulting Parties participating in the consultation reach the same conclusion under A above, then the USACE will issue a written notice to all parties concluding that the location of the inadvertent discovery is secure and that the NAGPRA items will be left in place. If any Consulting Parties disagree with this assessment, then consultation will progress with all Consulting Parties including the signatories to this Agreement.
 - iii. If consensus is not attained, the USACE will notify, in writing, all consulting Federally-recognized Tribes of its intent to complete consultation with a written plan of action in accordance with 43 CFR § 10.5(e). The USACE will produce a NAGPRA plan of action which details the steps it will follow to complete the NAGPRA consultation process (43 CFR § 10.5(e)). This plan will contain a) a list of all materials considered to be NAGPRA items, b) the planned treatment, care, and handling of the materials, c) any planned recording of the find location as an archaeological site, d) any analysis planned for the remains, e) and a description of any anticipated summary

- reports. USACE and the consulting Federally-recognized Tribes will create a template plan of action to be on file.
- iv. Within thirty (30) days of receipt of notice to consult and the action plan, the consulting Federally-recognized Tribes agree to provide a summary response containing the names and contact info for any potential lineal descendants, recommendations on any topics that should be included in consultation, request for any additional consultation meetings, recommendations for any treatment actions for the location of the discovery, and a list of any items that should be considered as NAGPRA items. Submission of this report does not preclude on-going discussion on any of these topics as consultation progresses.
 - v. Based on the responses received, USACE may choose to update and resubmit the plan of action to all Consulting Parties, but at a minimum will notify all Consulting Parties in writing of its intent to implement the plan of action previously presented to the Consulting Parties.
 - vi. At the conclusion of implementation of the plan of action, USACE will provide all of the Consulting Parties, in writing, copies of the draft Notice of Intended Disposition, and will provide the Consulting Parties thirty (30) days to comment.
- e. Process to Determine Disposition of Native American Human Remains from Federal Lands
- i. Once the thirty (30) days has commenced after providing the Consulting Parties with the draft copy of the Notice of Intended Disposition, and considering all comments, USACE will publish the Notice of Intended Disposition in a newspaper of general circulation in the local area, and also in a newspaper of general circulation in the local area for the Tribes. Both notices will be published a second time, at least one week later.
 - ii. Copies of the Notice of Intended Disposition, as well as a description of when and where it was published, will be provided to the National Parks Service, National NAGPRA program.
 - iii. USACE anticipates that during the notice period described above, discussions will begin with the appropriate claimant Federally-recognized Tribe/s regarding disposition. Disposition will generally take the form of a physical transfer of custody and reburial on USACE lands, or the claimant Federally-recognized Tribe(s) may choose to rebury privately once the Tribe assumes control over the NAGPRA items.
2. Non-Federal Lands: If human remains are recovered *from NFS, state, or other private land*, USACE will require that the laws of the state of jurisdiction are followed, as outlined by each state's statute. As requested and to the extent of its legal authority, USACE will support the state lead (Designated Authority) in following the state's processes related to discovery, disposition, disinterment, re-interment, and memorialization.

a. Arkansas: Arkansas Burial Law.

- i. Arkansas Act 753 of 1991, as amended – “An act to prohibit the desecration of human skeletal burial remains in unregistered cemeteries; to prohibit trade of commercial display of human skeletal remains or associated burial furniture; and for other purposes.”
- i. Arkansas Act 1533 of 1999 – “An act to increase the penalties for displaying human skeletal remains and desecrating burial grounds.”
- ii. Arkansas Act 705 of 2011 – “An act to amend Arkansas law concerning burial furniture associated with human skeletal burial remains.”
- iii. In the event of an inadvertent discovery of a human burial on Non-Federal Lands, we recommend securing the area-to include a cessation of work at the site, establishing an appropriate buffer, providing protection as necessary, and notifying the following: local law enforcement, the federal agency Point of Contact, the State Archeologist, and the Director and/or Section 106 Manager of the Arkansas Historic Preservation Program. Personnel should refrain from taking photographs except as necessary and directed by authorized authorities. All burials and associated furniture should be treated with respect and dignity. In the event the burial is determined to be archeological in nature, the Arkansas Historic Preservation Program staff will work with the federal agency, State Archeologist, and other parties, consult and enact appropriate measures in accordance with existing Arkansas law.
- iv. Excavation of an unregistered burial by qualified personnel will require completion of a Burial Permit-Application for Excavation Authorization and compliance with Sections 7 through 9 of Act 753.

b. Illinois: Illinois Human Skeletal Remains Protection Act (20 ILCS 3440

- i. <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=376&ChapAct=20%26nbsp%3bILCS%26nbsp%3b3440/&ChapterID=5&ChapterName=EXECUTIVE+BRANCH&ActName=Human+Skeletal+Remains+Protection+Act>
- ii. Implementation Rules are here:
<http://www.ilga.gov/commission/icar/admincode/017/01704170sections.html>
- iii. The notification protocols are outlined in Section 4170.200. Since these rules were written, oversight of this law is no longer a responsibility of the SHPO office. Notification and oversight is carried out by Illinois DNR's Office of Realty and Environmental Planning, Dawn Cobb, archeologist at (217) 785-4992. She is the person to notify, per Section 4170.200(b), despite the definitions in Section 4170.110.
- iv. Per 20 ILCS 3440/16, Section 106 projects are exempted from the permitting process outlined in the regulation and rules but the notification process outlined is to be followed.

- c. Kentucky: Kentucky statutes related to the discovery and proper treatment of human remains are spread across several different revised statutes. The statutes also treat public land and private land differently regarding the discovery of and potential removal of human remains.
 - i. Notification of Legal Authorities When Human Remains are Discovered (KRS 72.020), This process must be followed upon discovery;
 - ii. Desecration of Venerated Objects (KRS 525.105), Violation of Graves (KRS 525.115) and Abuse of a Corpse (KRS 525.120). These define both the nature of violations and penalties;
 - iii. Kentucky Antiquities Act (KRS 164.705-KRS 164.735; KRS 164.990) governs the Removal of "Burial Grounds" from "lands of the Commonwealth," meaning public lands. While KRS Chapter 381 governs the processes for having a cemetery declared abandoned and removed from private lands;
 - iv. The language of each statute can be found here: Kentucky Revised Statute Search--<https://apps.legislature.ky.gov/lrcsearch#tabs-3>.
 - v. For unanticipated discoveries on private, county, or state land in Kentucky, the Kentucky Heritage Council (KHC) (i.e. SHPO) is the lead authority and will consult with USACE, Tribe(s), landowner, and descendants as appropriate to determine the necessary course of action. If human remains are found on city, county, or state lands, the KHC will notify the State Archaeologist.

- d. Louisiana: Louisiana Statutes related to the discovery of human remains are found in the Unmarked Human Burial Sites Preservation Act (R.S. 8:671-681).
 - i. <https://www.crt.state.la.us/cultural-development/archaeology/CRM/cemeteries-burials/index>
 - ii. For unanticipated discoveries on private, parish, or state land in Louisiana, the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671-681) applies. The Louisiana Division of Archaeology is the lead agency and will consult with USACE, Tribe(s), landowner, and descendants as appropriate to determine the necessary course of action.

- e. Mississippi: Mississippi statutes related to the discovery of human remains are collected below.
 - i. Burial Excavation Permits (Native American only). Miss. Code §§ 25-59-1, 39-7-19 (1972, as amended);
 - ii. Abandoned Cemeteries, House Bill 780. <https://www.mdah.ms.gov/historic-preservation/archaeology/permits>
 - iii. For unanticipated discoveries on private, county, or state land in Mississippi, which are Native American, The Chief Archaeologist is the lead authority and

will consult with USACE, Tribe(s), landowner, and descendants as appropriate to determine the necessary course of action.

- f. Missouri: Missouri Unmarked Human Burial Sites.
 - i. <http://revisor.mo.gov/main/OneChapter.aspx?chapter=194>
 - ii. The process for notice and proper treatment of unmarked human burial sites is contained in Missouri State Law under section 194.
 - iii. For unanticipated discoveries on private, county, or state land in Missouri, the MO SHPO has jurisdiction and will consult with USACE, Tribe(s), landowner, and descendants as appropriate to determine the necessary course of action.
- g. Tennessee: Tennessee statutes related to the discovery and treatment of human remains are collected below.
 - i. <https://www.tn.gov/environment/program-areas/arch-archaeology/services-and-resources/human-remains-and-burials.html>
 - ii. Discovery of sites, artifacts or human remains Notice to division, contractors and authorities: TCA 11-6-107d;
 - iii. Desecration of Venerated Objects and Proper Treatment of Corpses: TCA 39-17-(311-312);
 - iv. For unanticipated discoveries on private, county, or state land in Tennessee, the TN SHPO is the lead authority and will consult with USACE, Tribe(s), landowner, and descendants as appropriate to determine the necessary course of action.
- h. Regardless of state, if the human remains recovered are determined to be Native American, USACE, in conjunction with the NFS, will identify and secure a mutually agreeable reburial location in which to reinter the human remains removed from the project area. Other arrangements may defined at the time it is determined that Native American human remains have been recovered, but will include at a minimum:
 - i. In person consultation regarding the human remains and any objects;
 - ii. The identification of a reburial location as close to the disinterment location as feasible;
 - iii. A commitment on the part of USACE to facilitate the reburial by an affiliated Tribe and to protect the human remains and associated grave goods, at no cost to the Federally-recognized Tribes, or the SHPO of jurisdiction.
 - iv. Acknowledgment of the establishment of the cemetery in the administrative record and in the real estate records as determined best at time of reburial.

- i. If the remains are determined NOT to be Native American in origin, USACE will follow the principals outlined in the 2007 ACHP "Policy Statement Regarding Treatment Of Burial Sites, Human Remains and Funerary Objects" to respectfully treat the remains and determine proper disposition, disinterment, re-interment, and memorialization, as well as any USACE real estate guidance at the time of the discovery.

XI. Provisions for Post-Review Discoveries (Non-Human Remains)

- A. USACE is responsible for complying with 36 C.F.R. § 800.13(a) in the event of inadvertent discoveries of Historic Properties during implementation of the Project. Discoveries of previously unidentified Historic Properties or unanticipated adverse effects to known Historic Properties are not anticipated, however if there is an inadvertent discovery or unanticipated effect, USACE will ensure that the following stipulations are met. These provisions will be included in all construction, operations, and maintenance plans and project managers will brief field personnel.
- B. If previously unreported properties that may be eligible for nomination to the NR or that may be of significance to Federally-recognized Tribes, and/or, if unanticipated effects on historic properties are found during the construction phase, USACE will implement the provisions outlined below that are intended to ensure that the Undertaking is in compliance with all applicable federal and state laws and regulations, including Section 106 of the NHPA:
- C. If there is no reasonable expectation that the property contains human remains, funerary objects, Native American sacred objects, or Native American objects of cultural patrimony, all work within a fifty (50) meter (164 ft.) radius buffer zone must stop immediately. If Human Remains are located or suspected, provisions of Stipulation X will be followed. USACE will notify SHPO and Federally-recognized Tribes, as appropriate, as well as any other affected party, of the discovery, and implement interim measures to protect the discovery from theft and vandalism. Construction may continue outside the fifty (50) meter (164 ft.) radius buffer zone. Within seventy-two (72) hours of receipt of notification of the discovery, USACE, as appropriate, will:
 1. Inspect the work site to determine the extent of the discovery and ensure that work activities have halted within the fifty (50) meter (164 ft.) radius buffer zone;
 2. Clearly mark the area of the discovery;
 3. Implement additional measures, as appropriate, to protect the discovery from theft and vandalism; and
 4. Provide an initial assessment of the site's condition and eligibility to the SHPO of jurisdiction and appropriate Federally-recognized Tribes; and
 5. Notify other Consulting Parties, if applicable, of the discovery.
- D. If USACE, in consultation with the SHPO of jurisdiction, Consulting Tribes, and other Consulting Parties, as appropriate, determines the site is either isolated, does not retain integrity sufficient for listing on the NRHP, or will not be further disturbed by construction activities, construction may resume within the fifty (50) meter (164 ft.) radius buffer zone.

- E. If USACE determines that the cultural resource site or artifact either is, or may be, eligible for inclusion on the NRHP, USACE will consult with the SHPO, Consulting Tribes, and other Consulting Parties, as appropriate, regarding appropriate measures for site treatment pursuant to 36 C.F.R. § 800.6(a). SHPO and Tribes will have seven (7)-days to provide their objections or concurrence on the proposed actions. These measures may include:
 - 1. Formal archaeological evaluation of the site;
 - 2. Visits to the site by SHPO and/or Consulting Tribes;
 - 3. Exploration of potential alternatives to avoid the site;
 - 4. Preparation and implementation of a mitigation plan by USACE in consultation and concurrence with the SHPO, Consulting Tribes, and other Consulting Parties, as appropriate.
- F. The notified Consulting Parties will have seven (7)-days following notification to provide comment regarding USACE's determination of the NRHP eligibility of the discovery.
- G. A report of findings describing the background history leading to and immediately following the reporting and resolution of an inadvertent discovery will be prepared by USACE within thirty (30)-days of the resolution of each inadvertent discovery.
- H. USACE will communicate the procedures to be observed with its contractors and personnel.
- I. USACE will provide Notice to Proceed to the contractor to work in the area. Notices to Proceed may be issued by USACE for individual construction segments, defined by USACE in its construction specifications, after the identification and evaluation of historic properties has been completed.

XII. DISPUTE RESOLUTION

- A. Should any Signatory, or Invited Signatory or Concurring Party to this Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, the USACE shall consult with such party to resolve the objection. If USACE determines that such objection cannot be resolved, the USACE will forward all documentation relevant to the dispute, including the USACE's proposed resolution, to the ACHP. The ACHP shall provide USACE with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the USACE shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories, and Invited Signatories, and provide them with a copy of this written response. The USACE will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, the USACE may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, USACE shall prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and Invited Signatories to the Agreement, and provide them and the ACHP with a copy of such written response.

- C. The USACE's responsibility to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute remain unchanged.

XIII. SEVERABILITY AND TERMINATION

- A. In the event any provision of this Agreement is deemed by a federal court to be contrary to, or in violation of, any applicable existing law or regulation of the United States of America, only the conflicting provision(s) shall be deemed null and void, and the remaining provisions of the Agreement shall remain in effect.
- B. USACE or ACHP may terminate this Agreement by providing thirty (30) days written notice to the other Signatories, provided that the Signatories consult during this period to seek amendments or other actions that would prevent termination. If this Agreement is terminated, USACE shall comply with Section 106 through other applicable means pursuant to 36 CFR Part 800. Upon such determination, USACE shall provide all other Signatories and ACHP with written notice of the termination of this Agreement and the current status of any on-going ABRs.
- C. A Consulting Tribe may notify the other Signatories that it is fully withdrawing from participation in the Agreement. Following such a withdrawal, USACE shall review Undertakings that may affect historic properties of religious and cultural significance to the Consulting Tribe, and Undertakings that occur on the Tribal Lands of the relevant Consulting Tribe, in accordance with 36 CFR §§ 800.3 through 800.7, 36 CFR § 800.8(c), or an applicable alternative under 36 CFR § 800.14. Withdrawal from this Agreement by a Consulting Tribe does not otherwise terminate the Agreement. At any time that this Agreement remains in effect, a Consulting Tribe that has withdrawn from the Agreement may notify USACE and SHPO in writing that it has elected to participate again rescinded its notice withdrawing from participation in the Agreement.
- D. Any SHPO of jurisdiction or Tribal Signatory may withdraw from this PA after providing USACE written notice ninety (90) calendar days prior to its withdrawal. USACE shall consult with the withdrawing party to identify any mutually acceptable measures that would avoid the party's withdrawal. If mutually acceptable measures are identified that would require amendment to the PA, USACE will go through the amendment procedures outlined in Stipulation XIV (Amendments). In the case of SHPO withdrawal, the PA would no longer apply within that SHPO's state and USACE would comply with 36 CFR Part 800 for all undertakings previously subject to this PA in that state. In the case of a Tribal Signatory withdrawing from the PA, USACE would consult with that Tribe pursuant to 36 CFR Part 800 for all undertakings previously subject to this PA that would have the potential to affect historic properties of religious and cultural significance to the Tribe. This PA would remain in effect in all other jurisdictions and for all other parties.

XIV. AMENDMENTS

- A. Body of the Programmatic Agreement:
 - May be amended when such an amendment is agreed to in writing by all Signatories and Invited Signatories. The amendment will be effective on the date a copy signed by all of the Signatories and Invited Signatories is filed with the ACHP.
- B. Appendices:
 - May be amended at the request of USACE or another Signatory or Invited Signatory in the following manner:

1. USACE, on its own behalf or on behalf of another Signatory or Invited Signatory, shall notify the Signatories of the intent to modify the current Appendix or Appendices and shall provide a draft of the updated Appendix or Appendices to all Signatory parties.
 2. If no Signatory or Invited Signatory objects in writing within thirty (30) days of receipt of USACE's proposed modification, USACE shall date and sign the amended Appendix and provide a copy of the amended Appendix to the other Signatories. Such an amendment shall go into effect on the date USACE transmits the amendment to the other Signatories.
 3. Current List of Appendices:
 - a. Appendix A: Proposed Work Items
 - b. Appendix B: Point of Contacts (POC)
 - c. Appendix C: (Reserved)
 - d. Appendix D: Programmatic Allowances
 - e. Appendix E: Treatment Measures
- C. Any Amendments to the Body of the Agreement or the Appendices, shall be posted to the websites currently tracking the implementation of the individual Work Items.

XV. DURATION

- A. The Agreement shall expire ten (10) years from the date of the last signature. One (1) year prior to the expiration of the Agreement, the USACE shall review the Agreement in order to determine whether it should be reissued or allowed to expire. If the Agreement requires reissue, the USACE shall consult with the Consulting Parties, as well as amend the Agreement in order to ensure compliance with the most current version of the Federal regulations implementing the NHPA.
- B. The Signatories and Invited Signatories may collectively agree to extend this Agreement to cover additional calendar years, or portions thereof, through an amendment provided that the original Agreement has not expired.

XVI. ANTI-DEFICIENCY ACT

USACE's obligations under this Agreement are subject to the availability of appropriated funds, and the stipulations of this Agreement are subject to the provisions of the Anti-Deficiency Act. USACE shall make reasonable and good faith efforts to secure the necessary funds to implement this Agreement in its entirety. If compliance with the Anti-Deficiency Act alters or impairs USACE's ability to implement the stipulations of this Agreement, USACE shall consult in accordance with the amendment procedures found at Stipulation XIV and termination procedures found at Stipulation XIII.

XVII. EXECUTION AND IMPLEMENTATION

- A. Nothing in this Agreement is intended to prevent the USACE from consulting more frequently with the Consulting Parties concerning any questions that may arise or on the progress of any actions falling under or executed by this Agreement.

- B. This Agreement shall be executed in counterparts, with a separate page for each Signatory, and shall become effective on the date the agreement is signed by or filed with the ACHP.
- C. USACE shall ensure that each Signatory and Invited Signatory is provided with an electronic (pdf) and physical copies of the Agreement including signatures. USACE shall provide electronic copies of additional executed signature pages to the Consulting Parties as they are received. USACE shall provide a complete copy of the Agreement with original signatures to any Signatory on request.
- D. Execution of this Agreement by the Memphis, Vicksburg and New Orleans Districts of USACE, the ACHP, the Missouri SHPO, the Illinois SHPO, the Kentucky SHPO, the Tennessee SHPO, the Arkansas SHPO, the Mississippi SHPO, the Louisiana SHPO (Signatories), The Chickasaw Nation, The Choctaw Nation of Oklahoma, the Quapaw Nation, The Osage Nation (Invited Signatories) and the Mississippi Band of Choctaw Indians, and the United Keetoowah Band of Cherokee Indians in Oklahoma (Concurring Parties) and implementation of its terms evidence that USACE has taken into account the effects of this undertaking on historic properties and afforded ACHP a reasonable opportunity to comment on USACE's Proposed Actions at MRL Features.

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

AMONG THE
U.S. ARMY CORPS OF ENGINEERS (USACE), MEMPHIS, NEW ORLEANS, AND VICKSBURG
DISTRICTS
THE CHICKASAW NATION;
THE CHOCTAW NATION OF OKLAHOMA;
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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES

U.S. Army Corps of Engineers, New Orleans District (CEMVN)



Stephen F. Murphy
Colonel, Corps of Engineers
District Commander

Date: 1/22/21

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

AMONG THE
U.S. ARMY CORPS OF ENGINEERS (USACE), MEMPHIS, NEW ORLEANS, AND VICKSBURG
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MISSISSIPPI RIVER LEVEE FEATURES

U.S. Army Corps of Engineers, Vicksburg District (CEMVK)



Robert A. Hilliard
Colonel, Corps of Engineers
District Commander

Date: 22 Jan 21

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

**AMONG THE
U.S. ARMY CORPS OF ENGINEERS (USACE), MEMPHIS, NEW ORLEANS, AND VICKSBURG
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REGARDING
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MISSISSIPPI RIVER LEVEE FEATURES**

U.S. Army Corps of Engineers, Memphis District (CEMVM)



Zachary L. Miller
Colonel, Corps of Engineers
District Commander

Date: 6 Jan 2021

SIGNATORY PAGE

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**AMONG THE
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THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

The Arkansas State Historic Preservation Officer

Secretary Stacy Hurst
Arkansas State Historic Preservation Officer

Date: _____

SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

**AMONG THE
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REGARDING
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MISSISSIPPI RIVER LEVEE FEATURES**

The Illinois State Historic Preservation Officer



Robert Appleman
Illinois Deputy SHPO

Date: January 13, 2021

SIGNATORY PAGE

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**AMONG THE
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MISSISSIPPI RIVER LEVEE FEATURES**

The Kentucky State Historic Preservation Officer

Craig Potts
Executive Director and State Historic Preservation Officer
Kentucky Heritage Council

Date: _____

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PROGRAMMATIC AGREEMENT

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MISSISSIPPI RIVER LEVEE FEATURES

The Louisiana State Historic Preservation Officer



Kristin P. Sanders,
Louisiana State Historic Preservation Officer

Date: 2/1/2021

SIGNATORY PAGE

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The Mississippi State Historic Preservation Officer

Katie Blount
Mississippi State Historic Preservation Officer

Date: _____

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**AMONG THE
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MISSISSIPPI RIVER LEVEE FEATURES**

The Missouri State Historic Preservation Officer

Toni M. Prawl, Ph.D.
Director and Deputy State
Historic Preservation Officer

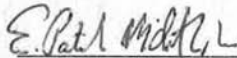
Date: _____

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MISSISSIPPI RIVER LEVEE FEATURES**

The Tennessee State Historic Preservation Officer



Mr. E. Patrick McIntyre, Jr.
Tennessee SHPO

Date: 1-29-21

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**AMONG THE
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THE KENTUCKY STATE HISTORIC PRESERVATION OFFICER;
THE LOUISIANA STATE HISTORIC PRESERVATION OFFICER;
THE MISSISSIPPI STATE HISTORIC PRESERVATION OFFICER;
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER;
THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER;
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

The Advisory Council on Historic Preservation

Aimee Jorjani, Chairman
ACHP

Date: _____

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

**AMONG THE
U.S. ARMY CORPS OF ENGINEERS (USACE), MEMPHIS, NEW ORLEANS, AND VICKSBURG
DISTRICTS
THE CHICKASAW NATION;
THE CHOCTAW NATION OF OKLAHOMA;
THE OSAGE NATION;
THE QUAPAW NATION;
THE ARKANSAS STATE HISTORIC PRESERVATION OFFICER;
THE ILLINOIS STATE HISTORIC PRESERVATION OFFICER;
THE KENTUCKY STATE HISTORIC PRESERVATION OFFICER;
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THE MISSOURI STATE HISTORIC PRESERVATION OFFICER;
THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER;
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

Chickasaw Nation

Nothing in this Agreement shall be construed to waive the sovereign rights and immunities of the Chickasaw Nation, its officers, employees, or agents.

Bill Anoatubby, Governor
Chickasaw Nation

Date: _____

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MISSISSIPPI RIVER LEVEE FEATURES**

The Choctaw Nation of Oklahoma

Nothing in this Agreement shall be construed to waive the sovereign rights and immunities of the Choctaw Nation of Oklahoma, its officers, employees, or agents.

Gary Batton, Chief
Choctaw Nation of Oklahoma

Date: _____

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

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THE MISSOURI STATE HISTORIC PRESERVATION OFFICER;
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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

OSAGE NATION

Geoffrey M. Standing Bear
Principal Chief

Date: _____

INVITED SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

THE QUAPAW NATION

Joseph Byrd,
Quapaw Nation Chairman

Date: _____

CONCURRING PARTY SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

**AMONG THE
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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

Mississippi Band of Choctaw Indians

Ben Cyrus, Chief

Date: _____

CONCURRING PARTY SIGNATORY PAGE

PROGRAMMATIC AGREEMENT

**AMONG THE
U.S. ARMY CORPS OF ENGINEERS (USACE), MEMPHIS, NEW ORLEANS, AND VICKSBURG
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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING
THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT:
MISSISSIPPI RIVER LEVEE FEATURES**

United Keetoowah Band of Cherokee Indians in Oklahoma

Chief Joe Bunch
United Keetoowah Band of Cherokee Indians in Oklahoma

Date: _____

**Appendix A: Proposed Work Items
Mississippi River Levee (MRL) Agreement
As of 5 March 2020**

The project descriptions below include the latest information regarding Work Items that will be reviewed in accordance with this Agreement. They are organized by USACE district, moving from north to south along the Mississippi River. These items are subject to change as additional information and analyses are conducted. In addition, Work Items may be added from other project authorities, but only for alteration or enhancement of the MRL features. USACE maintains a project website for the SEIS effort for Mississippi River Levee (<https://www.mvk.usace.army.mil/MRLSEIS/>) with current information and previous environmental documentation and will post the completed Agreement there.

MVM Boundaries:

For West Bank Ohio River

1. Mound City to Cairo Levee 0/0+00 to 2/26+00, Item 965-R. This item of work is 2.5 miles long and is located on right descending bank opposite river mile 965. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 2 feet on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 3.2 acres of a cultivated field one mile northeast of Mound City, IL riverside of the mainline levee.
2. North Mound City, IL Sump, Item 962.3-R. This item of work is 250 feet long on the right descending bank opposite river mile 962.3. It consists of installing relief wells with the associated drainage work to control seepage. Preliminary design indicates that the relief wells will be located at levee stations 2/45+00 to 2/47+50 landside of the levee.
3. Mound City to Cairo Levee 2/26+00 to 4/0+00, Item 962.5-R. This item of work is 1.5 miles long and is located on right descending bank opposite river mile 962.5. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 3.9 acres of a cultivated field one mile northeast of Mound City, IL riverside of the mainline levee.
4. Mound City to Cairo Levee 4/30+00 to 5/7+00, Item 961-R. This item of work is less than a mile long and is located on right descending bank opposite river mile 961. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 0.8 acres of a cultivated field one mile northeast of Mound City, IL riverside of the mainline levee.
5. Mound City to Cairo, IL 7/50+00 to 8/4+00, Item 958-R. This item of work is 200 feet long and is located on right descending bank opposite river mile 958. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 2 foot

on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 0.1 acres of a cultivated field one mile northeast of Mound City, IL riverside of the mainline levee.

6. Cairo, IL Floodwall, Item 956-R. This item of work is 3.2 miles long and is located on the right descending bank opposite river mile 956. It consists of replacing the existing floodwall. Preliminary design indicates the new floodwall will be located on the landside of the existing floodwall or within the existing floodwall footprint.
7. Fish Market Gate/High 51 Closure, Item 955-R. This item of work is 3,500 feet long and is located on the right descending bank opposite river mile 955. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 2 foot on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 1.8 acres of a cultivated field riverside of levee stations 10/50+75 to 11/5+00.

For East Bank Mississippi River

8. Hickman Floodwall Embankment Tie-in, Item 922-L. This item of work is 500 feet long and is located on the left descending bank opposite river mile 922. It consists of construction of levee that would extend from the existing floodwall to tie-in to high ground. Preliminary design indicates the levee will be 3 feet in height on average with a 5 foot crown. The design slopes 1 foot vertical on 3.5 feet horizontal will result in base width of the levee approximately 26 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 0.1 acres of cleared land 1000 feet west of the Levee Grade Raise adjacent to Hickman Harbor.
9. Hickman Levee Grade Raise, Item 921-L. This item of work is 500 feet long and is located on the left descending bank opposite river mile 921. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 2 feet on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 0.3 acres of cleared land 1000 feet west of the Levee Grade Raise adjacent to Hickman Harbor.
10. Island 8 Parcel 3, KY (4/0+00 to 5/20+00), Item 918-L. This item of work is 1.4 miles long and is located on the left descending bank opposite river mile 918. It consists of installing relief wells with associated drainage work to control seepage. Preliminary design indicates that relief wells will be located at levee stations 4/0+00 to 5/20+00 landside of the levee.
11. Lake No. 9 – KY-TN State Line (21/3+80 to 21/7+30), Item 902-L. This item of work is 350 feet long and is located on the left descending bank opposite river mile 902. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively

proposed to be obtained from 0.2 acres of a cultivated field riverside of levee stations 21/2+79 to 21/4+79.

12. Great River Road Slope Flattening (12/45+00 to 15/0+00), Item 848-L. This item of work is 2.2 miles long and is located on the left descending bank opposite river mile 848. It consists of flattening the landside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 41.5 acres of a cultivated field riverside of levee stations 13/0+00 to 15/0+00.
13. Great River Road Slope Flattening (20/0+00 to 37/0+00), Item 832-L. This item of work is 2 miles long and is located on the left descending bank opposite river mile 832. It consists of flattening the landside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Preliminary design indicates that the slope flattening will be located at levee stations 20/0+00 to 21/0+00, 27/11+00, 32/5+00, 33/20+00, and 34/27+00 landside of the levee. Borrow material for the embankment is tentatively proposed to be obtained from 323.6 acres of a cultivated field riverside of levee stations 26/20+00 to 29/40+00.

For West Bank Mississippi River

14. Nash, MO Slope Flattening (11/12+00 to 12/0+00), Item 49-R AC. This item of work is 0.8 miles long and is located on the right descending bank opposite river mile 49 above the confluence (AC) of the Ohio River. It consists of flattening the landside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 12.6 acres of a cultivated field riverside of levee stations 7/48+13 to 8/2+00.
15. Commerce to Birds Point (15/0+00 to 17/49+00), Item 29-R AC. This item of work is 1.5 miles long and is located on right descending bank opposite river mile 29 AC. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 15/52+00 to 16/45+00, 16/30+00, and 17/30+00 to 17/49+00. Borrow material for the embankment is tentatively proposed to be obtained from 0.4 acres of a cultivated field riverside of levee stations 16/30+92 to 16/33+00.
16. Commerce to Birds Point (17/49+00 to 32/0+00), Item 22-R AC. This item of work is 6 miles long and is located on right descending bank opposite river mile 22 AC. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1.5 feet on average which will increase the base width of the levee approximately 45 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 17/49+00 to 20/14+69, 20/53+36 to 22/37+00, 27/25+63 to 32/0+00. Borrow material for the embankment is tentatively proposed to be obtained from 30.3 acres of cultivated fields riverside of levee stations 18/0+00 to 18/36+49, 18/38+00 to

19/17+00, 19/41+02 to 19/48+02, 20/10+00 to 20/14+69, 21/8+00 to 22/0+00, 22/44+28 to 23/0+00, 28/38+68 to 30/18+00, 31/15+00, 31/22+00 to 31/25+00, and 31/33+37 to 31/37+00, respectively.

17. Birds Point – New Madrid Setback (0/0+00 to 12/32+00), Item 947-R. This item of work is 3.5 miles long and is located on right descending bank opposite river mile 947. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 1/18+00 to 1/20+00, 2/2+00 to 2/14+00, 3/0+00 to 6/30+00 and 9/26+00. Borrow material for the embankment is tentatively proposed to be obtained from 8.2 acres of cultivated fields riverside of levee stations 1/52+93 to 2/1+85, 3/3+00 to 3/10+00, 3/20+00 to 4/20+00, and 5/26+00 to 5/39+00, respectively.
18. Birds Point – New Madrid Frontline Levee (43/21+00 to 87/0+00), Item 920-R. This item of work is 3 miles long and is located on right descending bank opposite river mile 920. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 2.5 feet on average which will increase the base width of the levee approximately 50 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 49/25+00 to 49/28+00, 65/5+00, 72/0+00 to 73/8+00, 75/20+00 to 76/14+00 and 77/20+00 to 78/8+00. Borrow material for the embankment is tentatively proposed to be obtained from 9.1 acres of a cultivated field riverside of levee stations (BP-NM setback levee) 30/42+00 to 31/3+00.
19. Birds Point – New Madrid Setback (12/32+00 to 36/0+00), Item 915-R. This item of work is 3 miles long and is located on right descending bank opposite river mile 915. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 15/25+00, 16/24+00, 17/16+00 to 17/23+00, 23/9+00 to 24/33+00, 27/46+00 to 27/48+00, and 28/37+00 to 34/0+00. Borrow material for the embankment is tentatively proposed to be obtained from 16.6 acres of a cultivated field riverside of levee stations (BP-NM setback levee) 30/37+00 to 31/2+00.
20. Farrenburg Levee, MO Slope Flattening (1/50+00 to 2/21+00), Item 889-R. This item of work is 0.5 miles long and is located on the right descending bank opposite river mile 889. It consists of flattening the waterside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 8.4 acres of a cultivated field riverside of levee stations (BP-NM setback levee) 30/42+00 to 31/3+00.
21. New Madrid, MO to MO-AR Levee (5/0+00N to 0/0+00), Item 882-R. This item of work is 0.5 miles long and is located on right descending bank opposite river mile 882. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee

approximately 35 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 4/22+00N to 4/11+00N, 3/5+00N to 3/1+00N, 2/14+00N to 2/7+00N, and 0/35+00N to 0/13+00N. Borrow material for the embankment is tentatively proposed to be obtained from 1.1 acres of a cultivated fields riverside of levee stations 4/19+01N to 4/14+51N, 0/37+00 to 0/39+00, and 0/25+00 to 0/30+00.

22. New Madrid, MO to MO-AR Levee (2/0+00S to 2/30+00S), Item 877-R. This item of work is 0.5 miles long and is located on right descending bank opposite river mile 877. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1.5 foot on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 0.7 acres of a cultivated field riverside of levee stations 2/19+00S to 2/26+00.
23. Barfield, AR Slope Flattening (61/0+00 to 61/25+00), Item 807-R. This item of work is 0.5 miles long and is located on the right descending bank opposite river mile 807. It consists of flattening the waterside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 8.5 acres of a cultivated field riverside of levee stations 60/47+50 to 63/0+00.
24. Wilson, AR Slope Flattening (100/0+00 to 100/36+00), Item 766-R. This item of work is 0.8 miles long and is located on the right descending bank opposite river mile 766. It consists of flattening the waterside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 13.1 acres of a cultivated field riverside of levee stations 100/4+01 to 100/37+48.
25. Pecan Point, AR Slope Flattening (116/40+00 to 117/45+00), Item 762-R. This item of work is 1 mile long and is located on the right descending bank opposite river mile 762. It consists of flattening the waterside levee slopes from 1 foot vertical on 3.5 feet horizontal to 1 foot vertical on 5 feet horizontal which will increase the base width of the levee approximately 65 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 19.6 acres of a cultivated field riverside of levee stations 117/11+00 to 118/1+00.
26. St. Thomas, AR Berm Re-evaluation, Item 754-R. This item of work is 6 miles long and is located on the right descending bank opposite river mile 754. It consists of installing relief wells with associated drainage work to control seepage. Preliminary design indicates that relief wells will be located at levee stations 120/0+00 to 126/0+00 landside of the levee.
27. MO-AR State Line to St. Francis River Levee Part 1 (134/0+00 to 138/0+00), Item 747-R. This item of work is 2 miles long and is located on right descending bank opposite river mile 747. It consists of raising the grade of the existing levee to control overtopping. The

grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 134/11+00 to 134/25+00, 134/50+00, 135/49+00 to 136/8+00, and 136/40+00 to 137/30+00. Borrow material for the embankment is tentatively proposed to be obtained from 3.5 acres of cultivated fields riverside of levee stations 134/8+00 to 134/14+00, 135/50+00 to 136/0+00, 136/48+00 to 137/5+00, and 137/14+00 to 137/18+00, respectively.

28. MO-AR State Line to St. Francis River Levee Part 2 (145/0+00 to 147/0+00), Item 741-R. This item of work is 2 miles long and is located on right descending bank opposite river mile 741. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1.5 feet on average which will increase the base width of the levee approximately 45 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 5.4 acres of cultivated fields riverside of levee stations 145/36+00 to 145/50+11 and 146/29+23 to 146/36+00.
29. West Memphis, AR Re-Evaluation, Item 726-R. This item of work is 2 miles long and is located on the right descending bank opposite river mile 726. It consists of installing relief wells with associated drainage work to control seepage. Preliminary design indicates that relief wells will be located at levee stations 156/0+00 to 158/0+00 landside of the levee.
30. West Memphis, AR Seepage Remediation, Item 723-R. This item of work is 2.8 miles long and is located on the right descending bank opposite river mile 723. It consists of installing relief wells with associated drainage work to control seepage. Preliminary design indicates that relief wells will be located at levee stations 158/40+00 to 161/29+00 landside of the levee.
31. Horseshoe Lake, AR, Item 705-R. This item of work is 3.2 miles long and is located on the right descending bank opposite river mile 705. It consists of installing relief wells with associated drainage work to control seepage. Preliminary design indicates that relief wells will be located at levee stations 177/0+00 to 180/11+00 landside of the levee.
32. MO-AR State Line to St. Francis Levee Part 3 (183/0+00 to 190/0+00), Item 697-R. This item of work is 3.5 miles long and is located on right descending bank opposite river mile 697. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 183/8+00 to 183/44+00, 184/30+00 to 185/1+00, 186/28+00 to 186/39+00, and 187/0+00 to 190/0+00. Borrow material for the embankment is tentatively proposed to be obtained from 8.8 acres of cultivated fields riverside of levee stations 184/4+50 to 184/8+20, 184/39+00 to 184/43+00, 186/30+00 to 186/36+00, and 187/37+63 to 188/15+50, respectively.
33. MO-AR State Line to St. Francis Levee Part 4 (190/0+00 to 198/0+00), Item 693-R. This item of work is 5.5 miles long and is located on right descending bank opposite river mile 693. It consists of raising the grade of the existing levee to control overtopping. The

grade raise is approximately 1.5 feet on average which will increase the base width of the levee approximately 45 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 190/0+00 to 195/0+00, 195/42+00 to 196/15+00, and 197/18+00. Borrow material for the embankment is tentatively proposed to be obtained from 13.5 acres of a cultivated field riverside of levee stations 187/37+63 to 188/15+50.

34. MO-AR State Line to St. Francis Levee Part 5 (198/0+00 to 210/30+00), Item 682-R. This item of work is 5.5 miles long and is located on right descending bank opposite river mile 682. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1.5 feet on average which will increase the base width of the levee approximately 45 feet on average. Preliminary design indicates that the grade raise will be located at levee stations 199/0+00, 199/25+00 to 204/42+00, and 208/8+00 to 210/25+00. Borrow material for the embankment is tentatively proposed to be obtained from 20.8 acres of cultivated fields riverside of levee stations 199/0+00 to 199/23+01, 204/30+00 to 204/31+00, and 209/30+20 to 209/40+20, respectively.
35. Elaine, AR to Laconia Circle Levee (48/4+00S to 48/8+90S), Item 620-R. This item of work is 500 feet long and is located on the right descending bank opposite river mile 620. It consists of raising the grade of the existing levee to control overtopping. The grade raise is approximately 1 foot on average which will increase the base width of the levee approximately 35 feet on average. Borrow material for the embankment is tentatively proposed to be obtained from 0.4 acres of a cultivated field riverside of levee stations 48/0+00 to 48/3+08.

MVK Boundaries:

36. Cessions, MS, Seepage Remediation, Item 615-L. This item of work is 1.4 miles long and located on the left descending bank opposite river mile 615. The item consist of constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 55-acre borrow location is assumed to be on the land side of the levee in a bottomland hardwood area.
37. Deeson-Gunnison, MS, Seepage Remediation, Item 611-L. This item of work is 7.2 miles long and located on the left descending bank opposite river mile 611. The item consists of constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 25-acre borrow location is assumed to be on the river side of the levee in an agricultural field.
38. Rosedale, MS, Seepage Remediation, Item 587-L. This item of work is 3.2 miles long and located on the left descending bank opposite river mile 587. The item consists of constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 20-acre borrow area for is assumed to be on the river side of the levee in a bottomland hardwood area.
39. Bolivar, MS, Seepage Remediation, Item 577-L. This item of work is 2.8 miles long and located on the left descending bank opposite river mile 577. The item consists of

A-7

constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 29-acre borrow location is assumed to be on the river side of the levee in a bottomland hardwood area.

40. Brunswick-Halpino, MS, Levee Enlargement and Seepage Remediation, Item 443-L. This item of work is 4.3 miles long and located on the left descending bank opposite river mile 443. The item consists of raising the levee an average of 3.5 feet with a river side shift of the centerline and will be further analyzed to determine if seepage measures are needed. The tentatively proposed 19-acre borrow location is assumed to be on the land side of the levee in a bottomland hardwood area.
41. Morville-Black Hawk, LA, Seepage Remediation, Item 355-R. This item of work is 1.8 miles long and located on the right descending bank opposite river mile 355. The item consists of constructing a berm and/or enlarging two existing berms to control seepage. The tentatively proposed 11-acre borrow location is assumed to be on the land side of the levee in a cropland area.
42. Morville-Black Hawk, LA, Levee Enlargement, Item 351-R. This item of work is 4.5 miles long and located on the right descending bank opposite river mile 351. The item consists of raising the levee an average of 2.3 feet with a river side shift of the centerline. The tentatively proposed 51-acre borrow location is assumed to be on the river side of the levee in a pasture/bottomland hardwood area.
43. Morville-Black Hawk, LA, Seepage Remediation, Item 348-R. This item of work is 0.3 miles long and located on the right descending bank opposite river mile 348. The item consists of constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 13-acre borrow location is assumed to be on the river side of the levee in a cropland area.
44. Morville-Black Hawk, LA, Levee Enlargement and Seepage Remediation, Item 345-R. This item of work is 3.4 miles long and located on the right descending bank opposite river mile 345. The item consists of raising the levee an average of 2.0 feet with a river side shift of the centerline. In addition, this item of work consists of constructing two berms and/or enlarging an existing berm to control seepage. The tentatively proposed 112-acre borrow location is assumed to be on both the river side and land side of the levee in cropland and bottomland hardwood areas.
45. Morville-Black Hawk, LA, Seepage Remediation, Item 341-R. This item of work is 1.3 miles long and located on the right descending bank opposite river mile 341. The item consists of installing relief wells to control seepage, therefore no borrow material is expected to be required.
46. Morville-Black Hawk, LA, Seepage Remediation, Item 340-R. This item of work is 3.0 miles long and located on the right descending bank opposite river mile 340. The item consists of constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 18-acre borrow location is assumed to be on the river side of the levee in a shrub-scrub/bottomland hardwood area.

47. Morville-Black Hawk, LA, Seepage Remediation, Item 337-R. This item of work is 3.0 miles long and located on the right descending bank opposite river mile 337. The item consists of installing relief wells to control seepage. The item consist of installing relief wells to control seepage, therefore no borrow material is expected to be required.
48. Morville-Black Hawk, LA, Levee Enlargement and Seepage Remediation, Item 333-R. This item of work is 3.4 miles long and located on the right descending bank opposite river mile 333. The item consists of raising the levee an average of 1.2 feet with a river side shift of the centerline. In addition, this item of work also consists of constructing a berm and/or enlarging an existing berm to control seepage. The tentatively proposed 39-acre borrow location is assumed to be on the river side of the levee in a cropland/bottomland hardwood area.
49. Morville-Black Hawk, LA, Levee Enlargement, Item 330-R. This item of work is 1.5 miles long and located on the right descending bank opposite river mile 330. The item consists of raising the levee an average of 1.0 foot with a river side shift of the centerline. The tentatively proposed 14-acre borrow location is assumed to be on the river side of the levee in a bottomland hardwood area.
50. Morville-Black Hawk, LA, Levee Enlargement and Seepage Remediation, Item 326-R. This item of work is 5.1 miles long and located on the right descending bank opposite river mile 326. The item consists of raising the levee an average of 1.0 foot for approximately 2.8 miles with a river side shift of the centerline and constructing a berm and/or enlarging an existing berm to control seepage. The project will require two borrow areas, with one tentatively proposed 24-acre borrow location assumed to be on the river side of the levee in a shrub/bottomland hardwood area and a 45-acre borrow location is assumed to be on the river side of the levee in a cropland/bottomland hardwood area.
51. Morville-Black Hawk, LA, Levee Enlargement and Seepage Remediation, Item 320-R. This item of work is 3.2 miles long and located on the right descending bank opposite river mile 320. The item consists of raising the levee an average of 2.2 feet with a river side shift of the centerline. Due to the proximity of Red River State Wildlife Management Area, relief wells will be installed instead of the standard berm embankment. Approximately 55-acres of borrow material is expected to be required and is assumed to be on the river side of the levee in a bottomland hardwood area.

MVN Boundaries:

52. Combined Lower/Upper 5th 308-317-W, LA, Levee, Item 312.5-R. This item of work is 4.7 miles long and located on the right descending bank opposite river mile 312.5. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a flood side shift of the centerline. The borrow area (approximate 16 acres) to construct the levee raise for this item is located on the river side of the levee in a bottomland hardwood wetland area.
53. Old River Lock - Levee, LA, Levee, Item 304-R. This item of work is 0.5 miles long and located on the right descending bank opposite river mile 304. The item consists of raising

the levee an average of 2.5 feet extending over the length of the Work Item with a levee lift straddling the existing levee centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood wetland area.

54. Smithland to Lacour 289-298 R, LA, Levee and Berm, Item 293.5-R. This item of work is 8.4 miles long and located on the right descending bank opposite river mile 293.5. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with the levee lift straddling the existing levee centerline. The work also consists of constructing a berm for a portion of the item to control seepage. The borrow area (approximate 20 acres) to construct the levee raise and berm for this item is located on the land side of the levee in a bottomland hardwood wetland area.
55. Pt Coupee Levee Enlargement, LA, Levee, Item 268-R. This item of work is 0.2 miles long and located on the right descending bank opposite river mile 268. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a flood side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood wetland area.
56. Arbroth Levee Enlargement, LA, Levee, Item 253-R. This item of work is 0.1 miles long and located on the right descending bank opposite river mile 253. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a flood side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood wetland area.
57. Smithfield Levee Enlargement, LA, Levee, Item 246-R. This item of work is 0.5 miles long and located on the right descending bank opposite river mile 246. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a flood side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area and/or bottomland hardwood wetland area.
58. Fancy Point, LA, Levee, Item 242.5-R. This item of work is 2.9 miles long and located on the right descending bank opposite river mile 242.5. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 11 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area and/or bottomland hardwood wetland area.
59. Thomas Point, LA, Levee, Item 240.3-R. This item of work is 0.8 miles long and located on the right descending bank opposite river mile 240.3. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area and/or bottomland hardwood wetland area.

60. Port Allen, LA, Levee, Item 231-R. This item of work is 2.5 miles long and located on the right descending bank opposite river mile 231. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 9 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
61. Port Allen Lock – Levee, LA, Levee, Item 228-R. This item of work is 0.01 miles long and located on the right descending bank opposite river mile 228. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with the levee lift straddling the existing levee centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
62. Addis, LA, Levee, Item 223-R. This item of work is 0.3 miles long and located on the right descending bank opposite river mile 223. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
63. Ben Hur Road, LA, Levee, Item 217.6-L. This item of work is 0.07 miles long and located on the left descending bank opposite river mile 217.6. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
64. Morrisonville, LA, Levee, Item 216-R. This item of work is 2.8 miles long and located on the right descending bank opposite river mile 216. The item consists of raising the levee an average of 2.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 9 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
65. Plaquemines Point, LA, Berm and/or Wells, Item 208-L. This item of work is 0.9 miles long and located on the left descending bank opposite river mile 208. The item consists of either embankment berm construction and/or relief wells to control seepage in the area. The borrow area (approximate 5 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
66. Plaquemine/Reveille, LA, Levee, Item 206.7-R. This item of work is 2.7 miles long and located on the right descending bank opposite river mile 206.7. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 4 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
67. Lower Plaquemines Point, LA, Levee, Item 199-L. This item of work is 5.5 miles long and located on the left descending bank opposite river mile 199. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 14 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.

68. Bayou Goula to Alhambra, LA, Levee, Item 194.5-R. This item of work is 0.7 miles long and located on the right descending bank opposite river mile 194.5. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
69. Carville, LA, Levee, Item 189-L. This item of work is 0.7 miles long and located on the left descending bank opposite river mile 189. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1.5 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
70. Claiborne Island, LA, Berm, Item 189-R. This item of work is 0.5 miles long and located on the right descending bank opposite river mile 189. The work consists of constructing a berm for control seepage. The borrow area (approximate 3 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
71. Marchand, LA, Levee, Item 181-L. This item of work is 0.05 miles long and located on the left descending bank opposite river mile 181. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
72. ABLD-1 180 R, LA, Levee, Item 180-R. This item of work is 0.7 miles long and located on the right descending bank opposite river mile 180. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side or flood side shift of the centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
73. Smoke Bend, LA, Levee, Item 178-R. This item of work is 3.3 miles long and located on the right descending bank opposite river mile 178. The item consists of raising the levee an average of 2.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 10 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
74. Stella Landing, LA, Levee, Item 173.9-R. This item of work is 0.1 miles long and located on the right descending bank opposite river mile 173.9. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
75. Aben, LA, Levee, Item 172.6R. This item of work is 1.6 miles long and located on the right descending bank opposite river mile 172.6. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 4 acres) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
76. Point Houmas (Lauderdale), LA, Levee, Item 165-R. This item of work is 0.5 miles long and located on the right descending bank opposite river mile 165. The item consists of

raising the levee an average of 2.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the river side of the levee in a cropland area.

77. Brilliant Point 163.5 R, LA, Levee, Item 163.5-R. This item of work is 1.7 miles long and located on the right descending bank opposite river mile 163.5. The item consists of raising the levee an average of 2.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 10 acres) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
78. Romeville, LA, Levee, Item 163-L. This item of work is 0.05 miles long and located on the left descending bank opposite river mile 163. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
79. Barton Lane 159.7 R, LA, Levee, Item 159.7-R. This item of work is 0.1 miles long and located on the right descending bank opposite river mile 159.7. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
80. St. Amelia 158R, LA, Levee, Item 158-R. This item of work is 0.02 miles long and located on the right descending bank opposite river mile 158. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
81. Romeville/College Point 156.8 L, LA, Levee, Item 156.8-L. This item of work is 0.1 miles long and located on the left descending bank opposite river mile 156.8. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
82. St. James Moonshine, LA, Levee, Item 156-R. This item of work is 1.3 miles long and located on the right descending bank opposite river mile 156. The item consists of raising the levee an average of 3.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 5 acres) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
83. Welham Plantation, LA, Levee, Item 154-L. This item of work is 0.5 miles long and located on the left descending bank opposite river mile 154. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
84. Belmont, LA, Levee, Item 152-L. This item of work is 0.04 miles long and located on the left descending bank opposite river mile 152. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the

- centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
85. Vacherie, LA, Levee, Item 149-R. This item of work is 0.2 miles long and located on the right descending bank opposite river mile 149. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
86. Paulina/Lutcher/Gramercy, LA, Levee, Item 148-L. This item of work is 3.8 miles long and located on the left descending bank opposite river mile 148. The item consists of raising the levee an average of 2.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 10 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
87. Wallace, LA, Levee, Item 147.3-R. This item of work is 0.8 miles long and located on the right descending bank opposite river mile 147.3. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
88. Gramercy.Mt. Airy/48 mile Point, LA, Levee, Item 144-L. This item of work is 0.3 miles long and located on the left descending bank opposite river mile 144. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
89. Oak Alley - Willow Grove 142.6-144 R, LA, Levee, Item 143.7-R. This item of work is 0.1 miles long and located on the right descending bank opposite river mile 143.7. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
90. Upper Edgard 142 R, LA, Levee, Item 142-R. This item of work is 0.3 miles long and located on the right descending bank opposite river mile 142. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
91. Reserve, LA, Levee, Item 136-L. This item of work is 2.1 miles long and located on the left descending bank opposite river mile 136. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 3 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
92. Lower Edgard (3) 135.2-136.2 R, LA, Levee, Item 135.7-R. This item of work is 0.1 miles long and located on the right descending bank opposite river mile 135.7. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work

- Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
93. Laplace, LA, Levee, Item 133-L. This item of work is 0.5 miles long and located on the left descending bank opposite river mile 133. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
94. Lower Edgard 131.7 R, LA, Levee, Item 131.7-R. This item of work is 0.4 miles long and located on the right descending bank opposite river mile 131.7. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
95. 35 Mile Point, LA, Levee, Item 130-L. This item of work is 0.6 miles long and located on the left descending bank opposite river mile 130. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2.5 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
96. Hahnville, Flagville, Dufresne 120-128.5 R, LA, Levee, Item 124.3-R. This item of work is 0.4 miles long and located on the right descending bank opposite river mile 124.3. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
97. Bonnet Carre to New Sarpy, LA, Levee, Item 124-L. This item of work is 1.8 miles long and located on the left descending bank opposite river mile 124. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 4 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
98. Lone Star to Davis Pond, LA, Levee, Item 119.2-R. This item of work is 1.0 miles long and located on the right descending bank opposite river mile 119.2. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2 acres) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
99. Davis Pond Freshwater Diversion Structure Floodwall, LA, Floodwall, Item 118.5- R. This item of work is 0.05 miles long capped sheet pile floodwall and located on the right descending bank opposite river mile 118. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
100. Ama #2, LA, Levee, Item 117.3-R. This item of work is 0.2 miles long and located on the right descending bank opposite river mile 117.3. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of

the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.

101. Cyanamid, LA, Levee, Item 115.5-R. This item of work is 0.3 miles long and located on the right descending bank opposite river mile 115.5. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the river side of the levee in a cropland area.
102. St. Rose (Kenner Revet), LA, Levee, Item 115-L. This item of work is 1.3 miles long and located on the left descending bank opposite river mile 115. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 3 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area.
103. Ama, LA, Levee, Item 113.5-R. This item of work is 0.2 miles long and located on the right descending bank opposite river mile 113.5. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
104. Waggaman and Bridge City Levee and Floodwall, LA, Floodwall, Item 109.6-R. This item of work is 0.24 miles long floodwall and located on the right descending bank opposite river mile 110. The item consists of work on the floodwall only, removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
105. Waggaman, LA, Levee, Item 110.4-R. This item of work is 0.4 miles long and located on the right descending bank opposite river mile 110.4. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
106. Upper Avondale, LA, Levee, Item 108.3-R. This item of work is 0.6 miles long and located on the right descending bank opposite river mile 108.3. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
107. Lower Avondale, LA, Levee or Floodwall, Item 107-R. This item of work is 1.4 miles long and located on the right descending bank opposite river mile 107. The item consists of either raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The item for a floodwall consists of raising the current elevation of the floodwall an average of 2.0 feet for 1.4 miles. In order to meet the current design grade, the existing floodwall will be replaced completely with a new pile-founded concrete T-wall as well as adding steel gates across the ramps. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.

108. Westwego Levee and Floodwall, LA, Floodwall, Item 102.1-R. This item of work is a 0.49 mile long floodwall and is located on the right descending bank opposite river mile 105. The item consists of work on the floodwall only, removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
109. Dugas to Celotex, LA, Levee, Berm and/or Wells, Item 100.4-R. This item of work is 0.7 miles long and located on the right descending bank opposite river mile 100.4. The item consists of raising the levee an average of 1.0 feet extending over the length of the Work Item with a land side shift of the centerline. The item also will consist of either embankment berm construction and/or relief wells to control seepage in the area. The borrow area (approximate 4.5 acres) to construct the levee raise and berm for this item is located on the land side of the levee in a pasture land area.
110. Nashville Ave. to Napoleon Ave. Floodwall, LA, Floodwall, Item 100-L. This item of work is 1.37 miles long floodwall and located on the left descending bank opposite river mile 100. The item consist of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
111. Barataria Blvd., LA, Levee, Item 99.5-R. This item of work is 0.1 miles long and located on the right descending bank opposite river mile 99.5. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
112. Louisiana Avenue Wharves C&D, LA, Floodwall, Item 98.7-L. This item of work is a 0.14 mile long floodwall and is located on the left descending bank opposite river mile 92.7. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
113. Harvey Lock Forebay – Levee, LA, Levee or Floodwall, Item 98.3-R. This item of work is 0.3 miles long and located on the right descending bank opposite river mile 98.3. The item consists of either raising the levee or installing a floodwall. The levee raise would be an average of 3.5 feet extending over the length of the Work Item with a flood side shift of the centerline. The item for a floodwall would consist of raising the current elevation of levee with a new pile-founded concrete T-wall an average of 3.5 feet for 0.3 miles. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
114. Louisiana Ave to Jackson Ave Floodwall, LA, Floodwall, Item 98.1-L. This item of work is 0.28 mile long floodwall and is located on the left descending bank opposite river mile 97.2. The item consist of removing the existing I-wall and replacing with a pile-founded, concrete T-wall
115. Gretna Phase II 97-97.8 R, LA, Levee or Floodwall, Item 97.4-R. This item of work is 0.2 miles long and located on the right descending bank opposite river mile 97.4. The item consist of either raising the levee or installing a floodwall. The levee raise would be an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The item for a floodwall would consist of raising the current elevation of levee with a new pile-founded concrete T-wall an average of 1.5 feet for 0.2 miles. The borrow

A-17

area (less than an acre) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.

116. Jackson to Thalia, LA Floodwall, Item 96.5-L. This item of work is a 1.18 mile long floodwall and is located on the left descending bank opposite river mile 95.6. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
117. Thalia St. to Poydras St. Floodwall, LA, Floodwall, Item 95.3-L. This item of work is a 0.64 mile long floodwall and is located on the left descending bank opposite river mile 95. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
118. Spanish Plaza, LA, Floodwall, Item 95-L. This item of work is a 0.02 mile long floodwall and is located on the left descending bank opposite river mile 95. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
119. Canal St. to Toulouse St. Floodwall, LA, Floodwall, Item 94.8-L. This item of work is a 0.43 mile long capped and uncapped floodwall and is located on the left descending bank opposite river mile 94.9. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
120. Algiers Point 93.75-95.5 R, LA, Levee or Floodwall, Item 94.6-R. This item of work is 0.5 miles long and located on the right descending bank opposite river mile 94.6. The item consists of either raising the levee or installing a floodwall. The levee raise would be an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The item for a floodwall would consist of raising the current elevation of levee with a new pile-founded concrete T-wall an average of 1.5 feet for 0.5 miles. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area and pasture land area.
121. Dumaine St. Floodwall, LA, Floodwall, Item 94.5-L. This item of work is a 0.47 mile long floodwall and is located on the left descending bank opposite river mile 94.5. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
122. Barracks St. to Montegut St. Floodwall, LA, Floodwall, Item 94.1-L. This item of work is a 0.67 mile long floodwall and is located on the left descending bank opposite river mile 93.9. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
123. Montegut St. to Independence St. Floodwall, LA, Floodwall, Item 93.6-L. This item of work is 0.35 miles long floodwall and located on the left descending bank opposite river mile 93.3. The item consist of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
124. Independence St. to I.H.N.C. Floodwall, LA, Floodwall, Item 93-L. This item of work is a 0.6 mile long floodwall and is located on the left descending bank opposite river mile 92.8. The item consists of removing the existing I-wall and replacing with a pile-founded, concrete T-wall.

125. IHNC Lock Forebay 92.6L - Levee, LA, Levee, Item 92.6-L. This item of work is 3.2 miles long and located on the left descending bank opposite river mile 92.6. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 7 acres) to construct the levee raise for this item is located on the land side of the levee in a marsh wetland area.
126. Holy Cross, LA, Levee, Item 92-L. This item of work is 0.4 miles long and located on the left descending bank opposite river mile 92. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a marsh wetland area.
127. Arabi Levee and Floodwall, LA, Floodwall, Item 91.2-L. This item of work is a 0.43 mile long capped and uncapped floodwall and is located on the left descending bank opposite river mile 91.2. The item consists of work on the floodwall only, removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
128. Domino Sugar, LA, Relief Wells, Item 91-L. This item of work is 0.6 miles long and located on the left descending bank opposite river mile 91. The item consists of installation of relief wells to control seepage in the area.
129. Amstar Levee and Floodwall, LA, Floodwall, Item 90.8-L. This item of work is a 0.16 mile long capped and uncapped floodwall and is located on the left descending bank opposite river mile 90.8. The item consists of work on the floodwall only, removing the existing I-wall and replacing with a pile-founded, concrete T-wall.
130. US Coast Guard Reservation, LA, Levee, Item 90.6-R. This item of work is 3.3 miles long and located on the right descending bank opposite river mile 90.6. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 6.5 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area / pasture land area.
131. Chalmette Slip, LA, Levee or Floodwall, Item 90-L. This item of work is 0.4 miles long and located on the left descending bank opposite river mile 90. The item consists of either raising the levee or installing a floodwall. The levee raise would be an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The item for a floodwall would consist of raising the current elevation of the floodwall an average of 1.5 feet for 0.4 miles. In order to meet the current design grade, the existing floodwall will be replaced completely with a new pile-founded concrete T-wall. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood area.
132. Chalmette Battle Field (1), LA, Levee or Floodwall, Item 88.5-L. This item of work is 0.4 miles long and located on the left descending bank opposite river mile 88.5. The item consists of either raising the levee or installing a floodwall. The levee raise would be an average of 1.5 feet extending over the length of the Work Item with a land side shift of the

centerline. The item for a floodwall would consist of raising the current elevation of the floodwall an average of 1.5 feet for 1.25 miles. In order to meet the current design grade, the existing floodwall will be replaced completely with a new pile-founded concrete T-wall. The borrow area (approximate 3 acres) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood area.

133. Algiers Lock – Levee, LA, Levee, Item 88-R. This item of work is 0.5 miles long and located on the right descending bank opposite river mile 88. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1.5 acres) to construct the levee raise for this item is located on the land side of the levee in a cropland area / pasture land area.
134. Chalmette Battle Field (2), LA, Levee, Item 86.1-L. This item of work is 0.4 miles long and located on the left descending bank opposite river mile 86.1. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood area.
135. Stanton, LA, Levee, Item 84.3-R. This item of work is 0.6 miles long and located on the right descending bank opposite river mile 84.3. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 1 acre) to construct the levee raise for this item is located on the land side of the levee in a cropland area and pasture land area.
136. Oakville to Alliance, LA, Levee, Item 67-R. This item of work is 6.6 miles long and located on the right descending bank opposite river mile 67. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 10 acres) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
137. Carnaevon to Phoenix, LA, Levee, Item 67-L. This item of work is 7.0 miles long and located on the left descending bank opposite river mile 67. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 12 acres) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood wetland area.
138. Alliance to Ironton, LA, Levee, Item 61.5-R. This item of work is 2.8 miles long and located on the right descending bank opposite river mile 61.5. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 5 acres) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
139. Ironton to Deer Range, LA, Levee, Item 58-R. This item of work is 3.2 miles long and located on the right descending bank opposite river mile 58. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land

side shift of the centerline. The borrow area (approximate 6 acres) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.

140. Deer Range to W. Point a la Hache, LA, Levee, Item 52.5-R. This item of work is 7.7 miles long and located on the right descending bank opposite river mile 52.5. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 12 acres) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
141. Phoenix to Bohemia, LA, Levee, Item 51-L. This item of work is 10.5 miles long and located on the left descending bank opposite river mile 51. The item consists of raising the levee an average of 2.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 19 acres) to construct the levee raise for this item is located on the land side of the levee in a bottomland hardwood wetland and marsh area.
142. W. Pt a la Hache to St. Jude, LA, Levee, Item 47.5-R. This item of work is 2.1 miles long and located on the right descending bank opposite river mile 47.5. The item consists of raising the levee an average of 2.0 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 5 acres) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.
143. Port Sulphur, LA, Levee, Item 37-R. This item of work is 1.1 miles long and located on the right descending bank opposite river mile 37. The item consists of raising the levee an average of 1.5 feet extending over the length of the Work Item with a land side shift of the centerline. The borrow area (approximate 2.5 acres) to construct the levee raise for this item is located on the land side of the levee in a pasture land area.

Appendix B: Point of Contacts (POC)

CONTACT INFORMATION FOR SIGNATORIES AND FEDERALLY RECOGNIZED TRIBES

Signatories shall provide USACE with updated contact information as it becomes available, and revisions to this Appendix B will be made without an amendment to this Agreement. This Appendix B will be updated annually by USACE and included in the Annual Report.

The Appendix captures that some consultations will be all email (excepting reports), while others will be all paper. This is captured so that the district archaeologist/Tribal Liaison has the right tool to communicate.

Federally-Recognized Tribes	
<p>Absentee-Shawnee Tribe of Indians <u>Primary:</u> Ms. Devon Frazier, THPO Office of the Governor Building 2025 S Gordon Cooper Drive Shawnee, OK 74801 (405) 275-4030 x 6243 dfrazier@astribe.com</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Absentee-Shawnee Tribe of Indians <u>Secondary:</u> Edwina Butler-Wolfe, Governor Office of the Governor Building 2025 S Gordon Cooper Drive Shawnee, OK 74801</p>
<p>Alabama-Coushatta Tribe of Texas <u>Primary:</u> Bryant Celestine, THPO Alabama-Coushatta Tribe of Texas 571 State Park Rd. 56 Livingston, TX 77351 (936) 563-1181 celestine.bryant@actribe.org</p> <p>Method of contact for project notification and documentation: email to histpres@actribe.org and copy to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Alabama-Coushatta Tribe of Texas <u>Secondary:</u> Joann Battise, Chairwoman Alabama-Coushatta Tribe of Texas 571 State Park Rd. 56 Livingston, TX 77351 (936) 563-1181</p> <p>Email: histpres@actribe.org</p>

B-1

<p>Alabama-Quassarte Tribal Town</p> <p><u>Primary:</u> Samantha Robison, THPO PO Box 187 Wetumka, OK 74883 (405) 452-3881 rwind@alabama-quassarte.org; jlowe@alabama-quassarte.org Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Alabama-Quassarte Tribal Town</p> <p><u>Secondary:</u> Nelson Harjo, Chief Tarpie Yargee, Town King PO Box 187 Wetumka, OK 74883 chief@alabama-quassarte.org</p>
<p>Apache Tribe of Oklahoma</p> <p><u>Primary:</u> Wamblee Smith, Apache EPA PO Box 1330 Anadarko, OK 73005 (405) 247-9493 x111/109 apachetribeepa@gmail.com epa4apachetribeok@gmail.com</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Apache Tribe of Oklahoma</p> <p><u>Secondary:</u> Bobby Komardley, Chairman PO Box 1330 Anadarko, OK 73005</p>
<p>Caddo Nation</p> <p><u>Primary:</u> Derrick Hill, THPO Caddo Nation 117 Memorial Lane Binger, OK 73009 (405) 656-2344 dhill@mycaddonation.com</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Caddo Nation</p> <p><u>Secondary:</u> Tamara Francis Fourkiller, Chairman Caddo Nation PO Box 487 Binger, OK 73009 tffourkiller.cn@gmail.com</p>

B-2

<p>Cherokee Nation</p> <p><u>Primary:</u> Elizabeth Toombs, THPO PO Box 948 Tahlequah, OK 74465-0948 (918) 453-5389 elizabeth-toombs@cherokee.org</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Cherokee Nation</p> <p><u>Secondary:</u> Chuck Hoskin Jr. Principal Chief PO Box 948 Tahlequah, OK 74465-0948 (918) 458-5580 Chuck-hoskin@cherokee.org</p>
<p>Chickasaw Nation</p> <p><u>Primary:</u> Karen Brunso, THPO Division of Historic Preservation PO Box 1548 Ada, Oklahoma 74821 (580) 272-1106 Karen.Brunso@chickasaw.net</p> <p>HPO@chicksaw.net</p> <p>Method of contact for project notification and documentation: email to HPO@chicksaw.net.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Chickasaw Nation</p> <p><u>Secondary:</u> Bill Anoatubby, Governor PO Box 1548 Ada, Ok 74821 (580) 436-2603</p>
<p>Chitimacha Tribe of Louisiana</p> <p><u>Primary:</u> Kimberly S. Walden, THPO Chitimacha Tribe of Louisiana 155 Chitimacha Loop Charenton, LA 70523 (337) 923-9923 kim@chitimacha.gov</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Chitimacha Tribe of Louisiana</p> <p><u>Secondary:</u> Chairman Melissa Darden Chitimacha Tribe of Louisiana 155 Chitimacha Loop Charenton, LA 70523 (337) 924-4973</p>

B-3

<p>Choctaw Nation of Oklahoma</p> <p><u>Primary:</u> Ian Thomson Historic Preservation Department Choctaw Nation of Oklahoma P.O. Box 1210 Durant, OK 74702 (580) 924-8280 ithompson@choctawnation.com</p> <p>Lindsey D. Bilyeu, MS Senior Compliance Review Officer lbilyeu@choctawnation.com</p> <p>Method of contact for project notification and documentation: email Senior Compliance Review Officer with a copy to THPO.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Choctaw Nation of Oklahoma</p> <p><u>Secondary:</u> Gary Batton, Chief Choctaw Nation of Oklahoma Attn: Choctaw Nation Historic Preservation Department P.O. Box 1210 Durant, OK 74702-1210 (800) 522-6170 gbatton@choctawnation.com</p>
<p>Coushatta Tribe of Louisiana</p> <p><u>Primary:</u> Dr. Linda Langley Cultural Preservation Officer Coushatta Tribe of Louisiana 1940 C.C. Bell Road Elton, LA 70532 (337) 584-1567 llangley@coushattatribela.org</p> <p>Jonas Johns, Director of the Coushatta Heritage Department. E-mail: jonasi@coushattatribela.org</p> <p>Kassie Dawsey, Section 106 Coordinator. khenry@coushattatribela.org</p> <p>Method of contact for project notification and documentation: email to Primary contact with a copy to Director of Heritage Dept. and Section 106 coordinator.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Coushatta Tribe of Louisiana</p> <p><u>Secondary:</u> Chairman Kevin Sickey Coushatta Tribe of Louisiana 1940 C.C. Bell Road Elton, LA 70532 (337) 584-2998</p>

B-4

<p>Delaware Nation</p> <p><u>Primary:</u> Nekole Allgood, NAGPRA Coordinator Delaware Nation Historic Preservation Office PO Box 825 Anadarko, OK 73005 (405) 247-2448 NAllgood@delawarenation-nsn.gov</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Delaware Nation</p> <p><u>Secondary:</u> Deborah Dotson, President Delaware Nation PO Box 825 Anadarko, OK 73005 (405) 247-2448</p>
<p>Delaware Tribe of Indians</p> <p><u>Primary:</u> Brice Obermeyer, Director Delaware Tribe Historic Preservation Office 1200 Commercial St. Roosevelt Hall, RM 212 Emporia, KS 66801 (918) 335-7026 bobermeyer@delawaretribe.org</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Delaware Tribe of Indians</p> <p><u>Secondary:</u> Chester Brooks, Chief 5100 Tuxedo Blvd. Bartlesville, Ok 74006 (918) 337-6590 cbrookes@delawaretribe.org</p>
<p>Eastern Band of Cherokee Indians</p> <p><u>Primary:</u> Russell Townsend, THPO Qualla Boundary Reservation PO Box 455 Cherokee, NC 28719 (828) 497-1584 russtown@nc-chokeee.com</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Eastern Band of Cherokee Indians</p> <p><u>Secondary:</u> Richard Sneed, Principal Chief PO Box 1927 Cherokee, NC 28719 (828) 359-7002</p>

B-5

<p>Eastern Shawnee Tribe of Oklahoma</p> <p><u>Primary:</u> Brett Barnes, THPO 12705 E. 705 Road Wyandotte, OK 74370 (918) 666-2435 x1845 bbarnes@estoo.net</p> <p>Method of contact for project notification and documentation: email to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Eastern Shawnee Tribe of Oklahoma</p> <p><u>Secondary:</u> Glenna J. Wallace, Chief 12755 S. 705 Rd. Wyandotte, OK 74370 (918) 666-2435</p>
<p>Jena Band of Choctaw Indians</p> <p><u>Primary:</u> Alina J. Shively, THPO Jena Band of Choctaw Indians PO Box 14 Jena, LA 71342 (318) 992-1205 ashively@jenachoctaw.org</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Jena Band of Choctaw Indians</p> <p><u>Secondary:</u> B. Cheryl Smith, Chief Jena Band of Choctaw Indians 1052 Chanaha Hina Street Trout, LA 71371 (318) 992-2717 chief@jenachoctaw.org</p>
<p>Kaw Nation</p> <p><u>Primary:</u> Crystal Douglas, THPO PO Box 50 Kaw City, OK 74641 (580) 269-2552 x235 crystal_douglas@kawnation.com</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Kaw Nation</p> <p><u>Secondary:</u> Lynn Williams, Tribal Chair PO Box 50 Kaw City, OK 74641 (580) 269-2552 lwilliams@kawnation.com</p>

B-6

<p>Kialegee Tribal Town</p> <p><u>Primary:</u> Henry Harjo, EPA Director PO Box 332 Wetumka, OK 74883 (405) 452-3262 dc13.dc4@gmail.com</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Kialegee Tribal Town</p> <p><u>Secondary:</u> Tiger Hobbia, Mekko PO Box 332 Wetumka, OK 74883 (405) 452-3262</p>
<p>Kickapoo Tribe of Kansas</p> <p><u>Primary:</u> Fred Thomas, Vice Chair PO Box 271 Horton, KS 66439 (785) 486-2601 x8 eric.sheets@ktik-nsn.gov</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Kickapoo Tribe of Kansas</p> <p><u>Secondary:</u> Lester Randall, Chairman 824 111th Drive Horton, KS 66439 (785) 486-2131</p>
<p>Menominee Indian Tribe of Wisconsin</p> <p><u>Primary:</u> David Grignon, THPO and Director Menominee Cultural Museum and Logging Museum W3426 Cty VV West Keshena, WI 54135-0910 (715) 799-5258 dgrignon@mitw.org</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Menominee Indian Tribe of Wisconsin</p> <p><u>Secondary:</u> Johnathan Wilber, Tribal Administrator PO Box 910 Keshena, WI 54135 (715) 799-5154 jwilber@mitw.org</p>

B-7

<p>Miami Tribe of Oklahoma</p> <p><u>Primary:</u> Diane Hunter, THPO PO Box 1326 Miami, OK 74355 (918) 541-8966 dhunter@miamination.com</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Miami Tribe of Oklahoma</p> <p><u>Secondary:</u> Douglas G. Langford, Chief PO Box 1326 Miami, OK 74355 (918) 541-1300 dlankford@miamination.com</p>
<p>Mississippi Band of Choctaw Indians</p> <p><u>Primary:</u> Ken Carleton, Tribal Archeologist Mississippi Band of Choctaw Indians 101 Industrial Road Choctaw, MS 39350 (601) 656-5251 ken.carleton@choctaw.org</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Mississippi Band of Choctaw Indians</p> <p><u>Secondary:</u> Ben Cyrus, Chief Mississippi Band of Choctaw Indians 101 Industrial Road Choctaw, MS 39350 (601) 656-5251 info@choctaw.org</p>
<p>Muscogee (Creek) Nation</p> <p><u>Primary:</u> Ms. Corain Lowe-Zepeda, THPO Muscogee (Creek) Nation Historic & Cultural Preservation Office P.O. Box 580 Okmulgee, OK 74447 (918) 732-7733 clowe@mcn-nsn.gov Section106@mcn-nsn.gov</p> <p>Method of contact for project notification and documentation: email to Section106@mcn-nsn.gov and a copy to the Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Muscogee (Creek) Nation</p> <p><u>Secondary:</u> Principal Chief, Mr. James Floyd Muscogee (Creek) Nation Historic & Cultural Preservation Office P.O. Box 580 Okmulgee, OK 74447</p>

<p>Osage Nation</p> <p><u>Primary:</u> Dr. Andrea A. Hunter Tribal Historic Preservation Officer/Director Osage Nation 627 Grandview Avenue Pawhuska, OK 74056 918-287-5671 ahunter@osagenation-nsn.gov</p> <p>Method of contact for project notification and documentation: postal mail/courier (post-pandemic). Email to Deputy THPO and CC the THPO until return to normal business.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Osage Nation</p> <p><u>Secondary:</u> Jess Hendrix Deputy THPO Osage Nation 627 Grandview Avenue Pawhuska, OK 74056 918-287-5427 Jess.Hendrix@osagenation-nsn.gov</p> <p>Method of contact for project notification and documentation: postal mail/courier</p> <p>Method of contact for other communication: email, phone call</p>
<p>Otoe-Missouria Tribe of Oklahoma</p> <p><u>Primary:</u> Elsie Whitehorn, THPO 8151 Hwy 177 Red Rock, OK 74056 (580) 723-4466 x202 ewhitehorn@omtribe.org</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Otoe-Missouria Tribe of Oklahoma</p> <p><u>Secondary:</u> John R. Shotton, Chairman 8151 Hwy 177 Red Rock, OK 74651 (580) 723-4466 x107 jshotton@omtribe.org</p>
<p>Peoria Tribe of Indians of Oklahoma</p> <p><u>Primary:</u> Logan Pappenfort, THPO and Second Chief Peoria Tribe of Indians of Oklahoma 118 S. Eight Tribes Trail Miami, Ok 74354 (918) 540-2535 x33 lpappenfort@peoriatribe.com</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Peoria Tribe of Indians of Oklahoma</p> <p><u>Secondary:</u> Craig Harper, Chief 118 S. Eight Tribes Trail Miami, Ok 74354 (918) 540-2535 chiefharper@peoriatribe.com</p>

B-9

<p>Poarch Band of Creek Indians</p> <p><u>Primary:</u> Larry Haikey, THPO 5811 Jack Springs Road Atmore, AL 36502 (251) 368-9136 x2072 lhaikey@pci-nsn.gov</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Poarch Band of Creek Indians</p> <p><u>Secondary:</u> Stephanie A. Bryan, Tribal Chair and CEO 5811 Jack Springs Road Atmore, AL 36502 (251) 368-9136 x2202</p>
<p>Ponca Tribe of Oklahoma</p> <p><u>Primary:</u> Staci Hesler, THPO 121 White Eagle Drive Ponca City, OK 74601 (580) 763-0120 staci.hesler@ponca.com</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Ponca Tribe of Oklahoma</p> <p><u>Secondary:</u> Douglas Rhodd, Chairman 20 White Eagle Drive Ponca City, Ok 74601 (580) 763-0120</p>
<p>Quapaw Nation</p> <p><u>Primary:</u> Everett Bandy, Historic Preservation Officer Quapaw Nation Historic Preservation Program PO Box 765 Quapaw, O.K. 74363-0765 Telephone: (918) 238-3100 ebandy@quapawnation.com</p> <p>Routine: Section email. Section106@quapawnation.com / specific responses directed to THPO.</p> <p>Method of contact for project notification and documentation: hard copy letter directly to THPO (post-pandemic) and email to Primary contact. In the meantime, continue email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Quapaw Nation</p> <p><u>Secondary:</u> Joseph Byrd, Quapaw Nation Chairman PO Box 765 Quapaw, O.K. 74363-0765 joseph.byrd@quapawnation.com</p> <p>Follow guidance in letter. CC to Chairman</p>

B-10

<p>Sac and Fox Nation of Missouri in Kansas and Nebraska</p> <p><u>Primary:</u> Historic Preservation Office Sac and Fox Nation of Missouri in Kansas and Nebraska 920883 S. Hwy 99 Bldg A Stroud, OK 74079</p> <p>Method of contact for project notification and documentation: address to Primary contact and email to Secondary Contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Sac and Fox Nation of Missouri in Kansas and Nebraska</p> <p><u>Secondary:</u> Tiauna Carnes, Chair 305 N. Main Street Reserve, KS 66434 tiauna.carnes@sacandfoxks.com</p>
<p>Sac and Fox Nation of Oklahoma</p> <p><u>Primary:</u> Mr. Jeremy Fincher , EPA Director 305 N. Main Street Reserve, KS 66434 (918) 968-3526 jfincher@sacandfoxnation-nsn.gov</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Sac and Fox Nation of Oklahoma</p> <p><u>Secondary:</u> Kay Rhoads, Principal Chief Sac and Fox Nation Administration Building 920883 S. Hwy 99 Bldg A Stroud, Ok 74079 (918) 968-9526</p>
<p>Seminole Nation of Oklahoma</p> <p><u>Primary:</u> Mr. Theodore Isham THPO Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, OK 74884 Telephone: (405) 257-7200 isham.t@sno-nsn.gov</p> <p>Method of contact for project notification and documentation: email to Primary Contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Seminole Nation of Oklahoma</p> <p><u>Secondary:</u> Principal Chief Greg Chilcoat Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, OK 74884 Telephone: (405) 257-7200 principalChief@seminolenation.com</p>

B-11

<p>Seminole Tribe of Florida</p> <p><u>Primary:</u> Paul Backhouse, Ph.D., THPO Seminole Tribe of Florida Ah-Ta-Thi-Ki Museum 30290 Josie Billie Hwy, PMB 1004 Clewiston, FL 33440 (863) 983-6549 x12244 THPOCompliance@semtribe.com; paulbackhouse@semtribe.com</p> <p>Method of contact for project notification and documentation: email to THPOCompliance@semtribe.com and copy to Primary Contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Seminole Tribe of Florida</p> <p><u>Secondary:</u> Marcellus W. Osceola, Chairman Seminole Tribe of Florida 6300 Sterling Road Hollywood, FL 33024 (954) 966-6300 trishanastrom@semtribe.com</p>
<p>Shawnee Tribe</p> <p><u>Primary:</u> Ms. Tonya Tipton, THPO PO Box 189 Miami, OK 74355 shawneetribes@shawnee-tribe.com</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Shawnee Tribe</p> <p><u>Secondary:</u> Ron Sparkman, Chief 29 S Hwy 69A Miami OK 74355 rondede1@gmail.com</p>
<p>Thlopthlocco Tribal Town</p> <p><u>Primary:</u> Terry Clouthier, THPO PO Box 188 Okemah, OK 74859 (918) 560-6113 thpo@tttown.org</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Thlopthlocco Tribal Town</p> <p><u>Secondary:</u> Ryan Morrow, Town King PO Box 188 Okemah, OK 74859 (918) 560-6198</p>

B-12

<p>Tunica-Biloxi Tribe of Louisiana</p> <p><u>Primary:</u> Mr. Earl J. Barbry, Jr., THPO Tunica-Biloxi Tribal Historic Preservation Office P.O. Box 1589 Marksville, LA 71351 Telephone: (318) 253-8174 x 6451 earlji@tunica.org</p> <p>Method of contact for project notification and documentation: email to Primary Contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Tunica-Biloxi Tribe of Louisiana</p> <p><u>Secondary:</u> Vice-Chairman Marshall Pierite Tunica-Biloxi Tribe of Louisiana 151 Melancon Drive Marksville, LA 71351 Telephone: (318) 253-1946 joeypbarbry@tunica.org</p>
<p>United Keetoowah Band of Cherokee Indians in Oklahoma</p> <p><u>Primary:</u> Ms. Whitney Warrior, Environmental Services & Historic Preservation Director PO Box 746 Tahlequah, OK 74464 wwarrior@ukb-nsn.gov kpritchett@ukb-nsn.gov Phone: (918) 871-2800 x2838</p> <p>Method of contact for project notification and documentation: email to Primary contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>United Keetoowah Band of Cherokee Indians in Oklahoma</p> <p><u>Secondary</u> Chief Joe Bunch PO Box 746 Tahlequah, OK 74464</p> <p>(918) 871-2800</p>

B-13

SHPOS & Other Non-Federal Organizations	
<p>Advisory Council on Historic Preservation</p> <p><u>Primary:</u> Christopher Daniel, Program Analyst Advisory Council on Historic Preservation 401 F Street NW, Suite 308 Washington DC 20001-2637 (202) 517-0223 e106@achp.gov; cdaniel@achp.gov</p> <p>Method of contact for project notification and documentation: email to e106@achp.gov and copy to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Advisory Council on Historic Preservation</p> <p><u>Secondary:</u> Aimee Jorjani, Chairman Tom McCulloch, Assistant Director Office of Federal Agency Programs Advisory Council on Historic Preservation 401 F. Street NW, Suite 308 Washington, DC 20001-2637 (202) 517-02280222 achp@achp.gov tmcculloch@achp.gov</p> <p>Method of contact for project notification and documentation: email to e106@achp.gov and copy to Primary contact email.</p> <p>Method of contact for other communication: email, phone call</p>
<p>Arkansas Historic Preservation Program</p> <p><u>Primary:</u> Eric Mills 1100 North Street Little Rock, AR 72201 (501) 324-9784</p> <p>Email Consultation to be directed to 106 Mail Box.</p> <p>Method of contact for project notification and documentation: email at Section106@arkansas.gov</p> <p>Archaeological Site Forms: Submit to Registrar's Office Arkansas Archeological Survey 2475 N Hatch Ave Fayetteville, AR 72704 479-575-6552</p> <p>Reports: Email to S106 Inbox.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Arkansas Historic Preservation Program</p> <p><u>Secondary</u> Scott Kaufman Deputy SHPO 1100 North Street Little Rock, AR 72201 (501) 324-9785 scot.kaufman@arkansas.gov</p>

B-14

<p>Illinois Historic Preservation Agency</p> <p><u>Primary:</u> Robert Appleman, Deputy SHPO 1 Old State Capitol Plaza Springfield, IL 62701 shpo.review@illinois.gov</p> <p>Method of contact for project notification and documentation: email at shpo.review@illinois.gov cc as necessary.</p> <p>Archaeological Site Forms: Submit to via email: archaeology.sitefiles@illinoisstatemuseum.org</p> <p>Reports: 2 Hard copies and 1 PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>	<p>Illinois Historic Preservation Agency</p> <p><u>Secondary:</u> Jeff Kruchten Chief Archaeologist Illinois State Historic Preservation Office Attn: Review and Compliance 1 Old State Capitol Plaza Springfield, Illinois 62701 (217) 785-1279 Jeffery.Kruchten@illinois.gov</p>
<p>Kentucky Heritage Council</p> <p><u>Primary:</u> Christopher M. Gunn, Ph.D. Archaeology Review Coordinator The Barstow House 410 High Street Frankfort, KY 40601 Telephone: (502) 892-3615 chris.gunn@ky.gov</p> <p>Method of contact for project notification and documentation: Mail to Primary address, with KHC Coversheet; email to Secondary Contact for visibility.</p> <p>Archaeological Site Forms: Submit via email to Secondary Contact.</p> <p>Reports: PDF and hardcopy mailed to Primary Contact.</p> <p>Method of contact for other communication: email, phone call</p>	<p>Kentucky Heritage Council</p> <p><u>Secondary:</u> Jennifer Ryall Environmental Review Coordinator The Barstow House 410 High Street Frankfort, KY 40601 (502) 892-3619 jennifer.ryall@ky.gov</p>

B-15

<p>Louisiana State Historic Preservation Officer</p> <p><u>Primary:</u> Chip McGimsey State Archaeologist Division of Archaeology PO Box 44247 Baton Rouge, LA 70804-4241 (225) 219-4598 cmcgimsey@crt.la.gov</p> <p>Method of contact for project notification and documentation: email at section106@crt.la.gov</p> <p>Archaeological Site Forms: Submit to LA Division of Archaeology via email to siteforms@crt.la.gov.</p> <p>Reports: Hard copy and PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>	<p>Louisiana State Historic Preservation Officer</p> <p><u>Secondary:</u> Rachel Watson Division of Archaeology PO Box 44247 Baton Rouge, LA 70804-4241 (225) 342-8165 rwatson@crt.la.gov</p> <p>Method of contact for project notification and documentation: section106@crt.la.gov</p> <p>Archaeological Site Forms: Submit to LA Division of Archaeology via email to siteforms@crt.la.gov.</p> <p>Reports: Hard copy and PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>
<p>Mississippi Department of Archives and History</p> <p><u>Primary:</u> Hal Bell State Historic Preservation Office Mississippi Department of Archives and History Historic Preservation Division P.O. 571 Jackson, Mississippi 39205-0571 Telephone: Office (601) 576-6957 hbell@mdah.ms.gov</p> <p>Method of contact for project notification and documentation: email at section106@mdah.ms.gov with a copy to the Primary and Secondary contact.</p> <p>Archaeological Site Forms: Submit to via email</p> <p>Reports: Hard copy and PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>	<p>Mississippi Department of Archives and History</p> <p><u>Secondary:</u> Cindy Carter-Davis, Chief Archaeologist PO Box 571 Jackson, MS 39205-0571 Telephone(office): 601-576-6945 Telephone (cell): 601-307-0133 E-mail: ccarterdavis@mdah.ms.gov</p>

B-16

<p>MO State Historic Preservation Office</p> <p><u>Primary:</u> Dr. Toni M. Prawl, Director Section 106 Review PO Box 176 Jefferson City, MO 65102-0176</p> <p>Method of contact for project notification and documentation: hardcopy mail to address of primary contact. During Pandemic (tempE106@dnr.mo.gov)</p> <p>Archaeological Site Forms: Submit to via email amy.rubingh@dnr.mo.gov</p> <p>Public Notice – MOSection106@dnr.mo.gov</p> <p>Reports: 1 Hard copy and PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>	<p>MO State Historic Preservation Office</p> <p><u>Secondary:</u> Amy Rubingh Section 106 Review PO Box 176 Jefferson City, MO 65102-0176</p>
<p>Tennessee SHPO</p> <p><u>Primary:</u> Casey Lee Historic Preservation Specialist, Section 106 Tennessee Historical Commission State Historic Preservation Office 2941 Lebanon Pike Nashville, TN 37214 (615) 253-3163 Email: Casey.Lee@tn.gov</p> <p>Method of contact for project notification and documentation: email and hard copy</p> <p>Archaeological Site Forms: Submit to TN Division of Archaeology via email</p> <p>Reports: Hard copy and PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>	<p>Tennessee SHPO</p> <p><u>Secondary:</u> Jennifer Barnett</p> <p>Archaeologist Supervisor Tennessee Division of Archaeology 1216 Foster Avenue Cole Building #3 Nashville, TN 37243 (615) 687-4780 Email: Jennifer.Barnett@tn.gov</p> <p>Method of contact for project notification and documentation: email and hard copy</p> <p>Archaeological Site Forms: Submit to TN Division of Archaeology via email</p> <p>Reports: Hard copy and PDF on CD</p> <p>Method of contact for other communication: email, phone call</p>

U.S. Army Corps of Engineers (USACE) Districts	
<p>Memphis District (CEMVM)</p> <p><u>Primary:</u> Pam Lieb, Archeologist and District Tribal Liaison 167 N. Main, B-202 Clifford Davis/Odell Horton Federal Building Memphis, TN 38103-1894 (901) 544-0710 Pamela.Lieb@usace.army.mil</p>	<p>Memphis District (CEMVM)</p> <p><u>Secondary:</u> Edward P. Lambert Chief, Environmental Compliance Branch Regional Planning and Environmental Division South, USACE 167 N. Main St., Room B-202, Memphis, TN 38103-1894 Telephone: Office (901)544-0707 Mobile (901) 634-2461 E-mail: Edward.P.Lambert@usace.army.mil</p>
<p>New Orleans District (CEMVN)</p> <p><u>Primary</u> Jason A. Emery, Cultural Resources RTS and District Tribal Liaison CEMVN-PDS-N 4700 Leake Ave. New Orleans, LA 70118 (504) 862-2364 Jason.a.emery@usace.army.mil</p> <p>Method of contact for project notification and documentation: email or receipt of hard copy</p> <p>Method of contact for other communication: email, phone call</p>	<p>New Orleans District (CEMVN)</p> <p><u>Secondary:</u> Edward P. Lambert Chief, Environmental Compliance Branch Regional Planning and Environmental Division South, USACE 167 N. Main St., Room B-202, Memphis, TN 38103-1894 Telephone: Office (901)544-0707 Mobile (901) 634-2461 E-mail: Edward.P.Lambert@usace.army.mil</p>
<p>USACE Vicksburg District (CEMVK)</p> <p><u>Primary Tribal:</u> Kristen Camp, District Tribal Liaison CEMVK-PP-D 4155 East Clay Street Vicksburg, MS 39183 (601) 631-7934 Kristen.F.Camp@usace.army.mil</p> <p><u>Primary Cultural:</u> Ashley Fedoroff, Archeologist CEMVN-PDS-N 4155 East Clay Street Vicksburg, MS 39183 (601) 631-5278 ashley.m.fedoroff@usace.army.mil</p>	<p>USACE Vicksburg District (CEMVK)</p> <p><u>Secondary:</u> Edward P. Lambert Chief, Environmental Compliance Branch Regional Planning and Environmental Division South, USACE 167 N. Main St., Room B-202, Memphis, TN 38103-1894 Telephone: Office (901)544-0707 Mobile (901) 634-2461 E-mail: Edward.P.Lambert@usace.army.mil</p>

Appendix C: (Reserved)

C-1

Appendix D: Programmatic Allowances

Introduction

USACE has determined in consultation with the other Consulting Parties, that the Programmatic Allowances (Allowances) enumerated below will have either no effect or a minimal effect only, on historic properties, if implemented as specified in this Appendix. It is agreed by the Consulting Parties that the activities specified in the Allowances will not require review by the SHPO of jurisdiction or Federally-recognized Tribe(s). Should a post-review discovery, or discovery of human remains occur, work must stop and compliance with Stipulations X and XI is required.

The activities identified in Appendix A and those anticipated as part of any co-location project can be divided into two (2) categories, and sub-divided into seven (7) project types.

Category 1: Work Items to address *seepage deficiencies* include construction of four (4) project types:

1. Seepage Berms, are berms placed on the protected side of the levee to increase the weight of the soil and decrease its permeability thereby forcing seepage away from the toe of the levee. This technique requires the use of suitable borrow material from a close source.
2. Relief Wells, are relatively small wells placed near the toe of the protected side of the levee to capture the seeping water and pump/redirect it. This strategy uses existing drainage ditches as much as possible, but could require excavation of collector ditches, re-ditching, and/or hardening of ditches (e.g. rip-rap) to provide proper erosion control to account for the volume of captured water from the wells.
3. Slurry Trenches, are trenches excavated to a determined depth to stop levee under-seepage on the river side of the existing levee and filled with impervious materials or sheet piling. This activity typically requires temporary access roads, clearing and grubbing of the work area, deep excavation and stockpiling of materials.
4. Sheet Pile Cut-offs, involve the installation of a sheet pile cut-off wall within the existing levee section. This typically requires the construction of temporary access roads, clearing and grubbing of the levee, degrading of the levee to a certain elevation, installation of sheet pile, and reconstruction of the authorized levee profile.

Category 2: Work Items to address *levee deficiencies* include construction of three (3) project Types:

1. Floodwall Replacement, typically occurs in urban areas where there is little space to expand the footprint of a flood protection feature. This type of undertaking involves driving additional piles and tying those into the existing structure to ensure increased resistance to water loads, or the removal of the existing wall to place new floodwalls to meet the current design elevation, referred to as the authorized grade. While these undertakings typically have a smaller footprint than other activities to address grade deficiencies, they occur in areas with dense urban archaeological deposits and are more likely to affect NRHP-eligible or listed districts including National Historic Landmark Districts.
2. Levee Enlargement, involves raising the elevation of the top of the levee to its proper grade through the placement of suitable material. This technique requires clearing and grubbing, the use of suitable borrow material from close sources, and, typically, additional land side/protected site right-of-way to account for the additional widening or shifting of the centerline of the levee.
3. Slope Flattening, this activity goes beyond ordinary maintenance with the objective of reducing the slope of the levee by increasing the ratio of height to width of the levee profile along reaches of the levee with recurrent levee slides (e.g. moving from a 1:3 to a 1:5 ratio). This action typically requires clearing and grubbing, re-working of the damaged levee section, and, like the Levee Enlargement, the addition of suitable borrow material from a close source, as well as increasing the right-of-way.

Allowances by Activity

Allowances can only be used by staff meeting the applicable SOI Professional Qualifications Standards in accordance with Stipulation VI. of this Agreement. In accordance with Stipulation VII.A, Undertakings composed entirely of work described by the Allowances do not require further Section 106 review.

- I. **ADMINISTRATIVE ACTIONS:** USACE has determined that the following types of activities have limited or no potential to affect historic properties.
 - A. Monitoring, existing data gathering, or non-ground disturbing data gathering, and reporting in support of project design, internal QA/QC reviews such as, District Quality Control (DQC), Agency Technical Review (ATR), and the like.
 - B. Permissions for planning, studies, design and engineering costs that involve no commitment of resources other than staffing and associated funding.
 - C. Funding the administrative action of acquisition or lease of existing facilities where planned uses conform to past use.
- II. **GROUND DISTURBING ACTIVITIES AND SITE WORK.** Project review should take into account the entirety of the proposed activities including staging, site access, site cleanup, and possible site work (e.g. grading for positive drainage, vegetation removal), and excavation of borrow material as potential ground-disturbing activities.
 - A. General. If a cultural resources survey to the current guidelines has been completed, consultation and concurrence with the SHPO of jurisdiction and the Federally-recognized Tribe(s) has occurred (in the past 15 years or meets current state standards), the Civil Works feature is less than 50-years old, and no known eligible or unassessed historic properties are within the area of project activities, then the following activities can be proceed without further consultation. Otherwise standard Project Review per Stipulation VII.C., will apply.
 1. Relief Well construction.
 2. Seepage Berms
 3. Sheet Pile Cut-offs
 4. Slurry Trenches
 5. Flood Wall Replacement
 6. Levee Enlargements
 7. Slope Flattening
 8. Excavation of Borrow Material
 - a. In addition to the specifics above, USACE will inspect the borrow site to ensure that the borrow material is not a mound or other cultural resource.
 - b. Alternative means of certifying a borrow area are: If it was included in a previous cultural resources review as part of a state certification; or present on Borrow Listing as maintained by the state of jurisdiction; or is in certified and in active use
 - B. Haul Roads. This assumes NO timber clearing or other grubbing for new routes.

D-2

1. Re-establishment, armoring, and/or minor upgrading of existing roadway ditches.
2. In-kind repair or in-kind replacement of traffic control devices such as traffic signs or signals.
3. Installation and removal of temporary traffic control devices, (e.g., pre-formed concrete barriers and fences).
4. In-kind repair or in-kind replacement of roadway safety elements such as barriers, guardrails, and impact-attenuation devices. In the case of guardrails, the addition of safety end treatments is permitted.
5. Enhancement of existing utilized roadway corridors, with gravel and other road surfaces.
6. Transportation of borrow Material to Work Items via existing or enhanced roadways.

III. STANDING STRUCTURES.

- A. Demolition activities related to the removal of buildings or structures less than forty-five (45)-years of age (construction date as noted in the project documentation, or by the NFS, or by a photograph/site visit) so long as the demolition activity is substantially limited to the existing footprint and vertical disturbance and the buildings or structures are not located within or adjacent to a National Register-listed or eligible historic district or within five hundred (500) feet of a known eligible or unassessed archaeological site or cemetery. Project review should take into account the entirety of the proposed activities including staging, site access, site cleanup, and possible site work (e.g. grading for positive drainage, vegetation removal), and excavation of borrow material as potential project activities, additionally documentation of an existing cultural resources survey to the current guidelines and subsequent consultation and concurrence with the SHPO of jurisdiction and the Federally-recognized Tribe(s) (in the past 15 years or meeting current state standards), otherwise standard Project Review per Stipulation VII.C., will apply.

Appendix E: Treatment Measures

As provided in Stipulation VII C. 7, if an Undertaking may adversely affect a historic property, USACE may propose to resolve the adverse effect through the application of one or more of the Treatment Measures set out below. The selected measures will be developed by USACE after discussions with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, and will be documented in writing (in a Treatment Plan). USACE will provide the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, with the opportunity to concur on the proposed Treatment Measures as set out in VII.C.7.A.3.

The Treatment Plan shall identify, at a minimum and as appropriate: the responsible party/entity that will implement and complete each treatment measure; the scope of work and the standards that will apply to the preparation and distribution of a deliverable; the deliverable(s) (e.g. the quantity, approximate size, materials, content, final ownership/copyrights); measures to ensure that any treatment measure documenting the condition of or requiring the data recovery on the historic property is implemented before the property is adversely affected; any professional qualifications that will be required to prepare deliverable(s) described in the Treatment Measure(s); the repositories and/or parties that will receive copies of a deliverable and the disposition of any deliverable that is not curated; points when USACE, NFS, agent or contractor, SHPO/THPO, and/or Federally-recognized Tribes, and other Consulting Parties, as appropriate, will be given the opportunity to review and comment on the deliverable; and timeframes for each review and deliverable.

USACE will provide written notice to the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, within sixty (60) days of the completion of the Treatment Measures as required by Stipulation VII. C.7. USACE shall include information pertaining to the progress of and completion of all Treatment Measures in the annual report pursuant to Stipulation III. A. 16. USACE Roles and Responsibilities.

Any dispute regarding the implementation of a Treatment Plan will be resolved following the process set out in Stipulation XII, Dispute Resolution.

This Appendix may be amended in accordance with the process set out in Stipulation XIV B. of this Agreement for amending appendices.

****Reminder**** should there be human remains associated with/anticipated during implementation of a Treatment Plan, review Stipulation X Treatment of Human Remains to ensure accepted protocols are followed.

If USACE, in consultation with the SHPO of jurisdiction, Federally-recognized Tribes, and other Consulting Parties, determines that a treatment measure, including Alternative Mitigation*, *not included* in the list below is in the public interest and is the most appropriate means to resolve an adverse effect, USACE will initiate consultation to develop an MOA or a Programmatic Agreement as set out in Stipulation VII.C.7 (b) or (c).

*Alternate Mitigation means something alternative to either the location or the action that is agreed to be a meaningful offsetting of the adverse effects. Easy examples are for survey of lands unaffected by the project in exchange for no mitigation/data recovery for the specified archaeological site. Agencies have a difficult time justifying the funding for these actions, unless it can clearly be demonstrated to be in the public interest.

List of Treatment Measures:

1. **PHOTOGRAPHIC RECORDATION:** USACE, in consultation with the SHPO of jurisdiction, and/or, Federally-recognized Tribe(s), and other Consulting Parties, will select the photographic medium or mediums from the options described below and identify a list of photographs that will serve to document the historic property that will be adversely affected by an Undertaking. The photographic specifications set out below were previously determined by USACE, in consultation with the appropriate SHPO, to meet archival standards and are provided for guidance. Photographic images may include existing drawings and plans. If the parties determine that it is in the public interest to document a property through the preparation of measured drawings, USACE will initiate consultation to develop an MOA.
- A. **Recordation for Standing Structures (Flexible Standards):** The responsible entity will ensure that a trained professional photographs the exterior and/or interior, if it is accessible, in the selected photographic format(s) with an emphasis on documenting those portions of the exterior and/or interior that will be altered. The trained professional will take photographs of the views identified by USACE, in consultation with the NFS, agent or contractor, SHPO of Jurisdiction, and/or Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, and will print specifically identified images
 1. **Digital Photography:** The digital photography and color photographs must comply with the "Best" category of requirements from the National Register Photo Policy Fact Sheet: http://www.nps.gov/nr/publications/bulletins/photopolicy/Photo_Policy_update_2013_05_15.pdf, with the following additional requirements:
 - Image files must be saved as both TIFF and JPEG files.
 - Color images must be produced in RGB (Red/Green/Blue) color mode as 24-bit or 48-bit color files.
 - In addition to the requirements specified by the latest National Register Photo Policy, photographs will be digitally labeled to state the address (name of facility, street number, street name, city, and state); date of photograph; description of view, including direction of camera; and name of photographer/agency.
 2. **35mm Black/White and Color Photography:** Photographs must be taken with a 35MM SLR Camera or a 35 MM point-and-shoot camera using 35 MM black/white or color film. Photographs taken with disposable cameras are not acceptable.
 - The 35 mm film black/white or color film photography package will include one (1) full set of 35mm film black/white or color photographs printed on acid free paper specifically designed for color prints, the corresponding 35mm film negatives in acid free sleeves.
 - Photographs will be labeled in pencil on the back to state the address, name of facility, street number, street name, city, and state; date of photograph; description of view, including direction of camera; and name of photographer/agency.
 3. **Large Format Photography:** Photographs must be taken with a large-format view camera with ample movement for perspective correction. The minimal complement of lenses includes a sharp rectilinear wide angle, a normal, and a mildly telephoto lens.
 - Acceptable film formats are 4x5, 5x7, and 8x10. Acceptable polyester-based films include those of medium and slow speed (100 and 400 ASA) produced by Kodak, Ilford, and others.
 - The large format film photography package will include one (1) full set of 4 x 5 or 5 x 7-inch photographs printed on acid free paper, the corresponding 4 x 5 or 5 x 7-inch negatives in acid free sleeves.

- Photographs will be labeled in pencil on the back to state the address name of facility, street number, street name, city, and state; date of photograph; description of view, including direction of camera; and name of photographer/agency.
4. **Video:** A video documentary regarding the historic property may include on-camera interviews, archival footage and/or images, current footage of the historic property, and current footage of other similar historic properties. The content and length of the video will be described in the treatment measure.
 5. **Narrative History:** A narrative history may be prepared to provide a context for the photographs following the Historic American Building Survey (HABS) Historical Reports: Short or Outline format.
 6. **Recordation Package:** The recordation package will include a photo log, printed copies of selected photographs, digital copies of photographs, and may include a narrative history. The recordation package may include reproductions of historic photographs, existing building plans, contemporary sketch plans, and/or maps. All materials will be packaged in archival sleeves and boxes. Archival disks will be used for all digital materials.
 7. **Review:** The responsible entity may informally consult with USACE and SHPO, and/or Tribe(s) to select photographs and other images that will be included in the recordation materials. The process to review and finalize the photographs and other images will be described in the treatment measure.
 8. **Distribution:** The responsible entity will prepare a minimum of three archival quality copies of the recordation materials and will forward two copies to SHPO of jurisdiction and one copy to the U.S. Army Corps of Engineers, Office of History, Humphreys Engineer Center. In consultation with the NFS, SHPO of jurisdiction, and/or Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, may identify additional archives and/or parties that will receive copies of the recordation materials. The responsible entity will provide USACE with documentation confirming that the recordation materials have been archived as described in the treatment measure.
- B. Recordation for Standing Structures (Established Standards):** The treatment plan will document the proposed Level and Standard that will be most appropriate to capturing the significance of the historic property prior to alteration and define the responsible entity. Choices will be made between the **Historic American Building Standards (HABS)**, the **Historic American Engineering Standards (HAER)**; or the **Historic American Landscape Standards (HALS) at Level III, Level II or Level I**. During the development of the Treatment Plan USACE will coordinate with the NPS, SHPO of jurisdiction and appropriate Federally-recognized Tribe(s), as necessary to make the selection. For any project requiring recordation to any of these standards, USACE will ensure that a trained professional photographs the exterior and/or interior, if it is accessible, in the selected standard with an emphasis on documenting those portions of the historic property that will be altered or demolished. The trained professional will take photographs of the views identified by USACE, in consultation with the NFS, SHPO of jurisdiction, and/or the appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, and will print specifically identified images and produce the required historical narrative:
- 2. Public Interpretation**
USACE, and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other consulting parties, as appropriate, to design an educational or public interpretive plan. The educational or public interpretive plan may include historical markers, signs, displays, educational pamphlets, websites, workshops, videos, and other similar mechanisms to educate the public on historic properties within the local community, state, or region. In certain

E-3

National Historic Preservation Act compliance

instances the SHPO of jurisdiction may request that the proposed historical marker conform to the requirements of the state in question, and request that the NFS apply to state programs to provide for a uniform interpretive program.

3. Historical Context Statements

USACE, and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate to identify the topic; audience; framework of a historic context statement; and format for the final deliverable. The context statement may focus on an individual property, a historic district, a set of related properties, or relevant themes as identified in the specific statewide preservation plan or the National Park Service's National Historic Landmark Thematic Framework.

4. Oral History Documentation

USACE, and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, to identify the list of potential interview candidates; the parameters of the oral history project; qualifications of the individual or individuals conducting the oral interviews; the process for any ongoing coordination with the appropriate SHPO and relevant Tribe(s); and format for the final deliverable.

5. Historic Property Inventory

USACE, and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, to establish the appropriate level of effort to accomplish an inventory/re-inventory. Efforts may be directed toward the resurvey of previously designated historic properties, per 36 CFR 800.16(l), which have undergone change or lack sufficient documentation, or the survey of new historic properties and/or districts that lack formal designation. The proposed treatment measure will describe the boundaries of the survey area and the data collection method in keeping with the SHPO of jurisdiction's guidance for surveys and define the survey objective.

6. National Register and National Historic Landmark Nominations

USACE, and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, to identify the individual properties that would benefit from a completed National Register of Historic Places (NRHP) or National Historic Landmark (NHL) nomination form. Once the parties have agreed to a property, the responsible entity will continue to coordinate with USACE, the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, through the drafting of the NRHP nomination form or will contact the NHL Program to begin the nomination process. The SHPO of jurisdiction and/or Federally-recognized Tribe(s) will provide adequate guidance to the responsible entity during the preparation of the nomination form. The responsible entity will work with the SHPO of jurisdiction to ensure the completed NRHP form is presented to the particular state's National Register Review Committee in a timely manner for consideration by the State Historic Preservation Officer and the Keeper of the Register.

7. Geo-References of Historical Maps and Aerial Photographs

USACE, and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, to identify the historical maps and/or aerial photographs for scanning and geo-referencing. Once a list of maps and/or aerial photographs have been agreed upon, the responsible entity will continue to coordinate with USACE, the appropriate SHPO, Tribe(s), and other Consulting Parties, as appropriate, through the scanning and geo-referencing process and will submit drafts of paper maps and electronic files to USACE, the appropriate SHPO, Tribe(s), and other Consulting Parties, as appropriate, for review. The final deliverable produced by the responsible entity will include a 1) paper copy of each scanned image, 2) a geo-referenced copy of each scanned image, 3) original high-resolution digital image of map/aerial photograph in TIFF file format, 4) copies of the user agreements for every geo-

referenced image with transferability of use to all parties, 5) a process report outlining the research, and 6) the metadata relating to both the original creation of the paper maps and the digitization process.

8. Archaeological Research Design and Data Recovery Plan

USACE shall develop and implement a data recovery plan with a research design in consultation with the SHPO of jurisdiction, appropriate Federally-recognized tribe(s), and other Consulting Parties, as appropriate, to recover data from archaeological properties listed in, or eligible for listing in the NRHP, which will be adversely affected by ground-disturbing activities that are part of the Undertaking. The research design and data recovery plan will be consistent with the Secretary of the Interior's Guidelines for Archaeological Documentation (http://www.nps.gov/history/local-law/arch_stnds_7.htm) ACHP's recommendations on the recovery of significant information from archaeological sites. <http://www.achp.gov/archguide.html>. All work shall conform to the most current guidelines per the SHPO of jurisdiction and as augmented by Federally-recognized Tribal or other local guidelines, as provide in Stipulation VI. Standards, and, if applicable, Stipulation X. Treatment of Human Remains and Items of Religious and Cultural Importance.

9. Marketing Plan for Demolition or Abandonment

USACE and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized tribe(s), and other Consulting Parties, as appropriate, to develop and implement a feasible marketing plan to advertise the availability of historic structures identified for demolition, abandonment, for sale and/or relocation. A good faith and reasonable marketing plan will include publicizing and advertising the property in newspapers, magazines, and/or websites of record for a specific period of time. The plan may require the purchaser to relocate the property outside of the Special Flood Hazard Area (100-year floodplain), and the plan will give preference to a purchaser who proposes to use a professional house mover that follows the recommendations in Moving Historic Buildings by John Obed Curtis (1975, reprinted 1991 by W. Patram for the International Association of Structural Movers) or other similar updated reference material. If a good faith and reasonable marketing effort does not result in the identification of a party or parties willing to purchase and, if necessary, relocate the property, the property may be demolished or abandoned. This marketing plan will be used in conjunction with Treatment Measure I, Recordation Package. USACE will ensure that the property is recorded prior to relocation or demolition.

10. Salvage

The NFS or contractor shall work with USACE, the SHPO of jurisdiction, and/or appropriate Federally-recognized Tribe(s), and other Consulting Parties, as appropriate, to identify selective architectural elements that may be salvaged from a building/structure slated for demolition. The elements will be removed at the agent or contractor's expense. The salvaged elements may be re-used in another structure or in displays for educational purposes. As an alternative, the agent or contractor, in consultation with USACE, NFS, SHPO, and/or Tribe(s), and other Consulting Parties will attempt to identify a private or public not-for-profit local or regional historic preservation organization interested in receiving a donation of the architectural features. The organization may sell the architectural features to the general public for the specific purpose of raising funds to support future historic preservation activities in the region. . Any income derived by the agent or contractor from the sale of architectural features may be considered project income by the program to be deducted from proceeds of the grant. Salvage activities shall not occur at or below grade in order to avoid affecting unevaluated archaeological resources.

11. Assessment and Reduction of Vibratory Affects

USACE and/or the NFS shall consult with the SHPO of jurisdiction, appropriate Federally-recognized tribe(s), and other Consulting Parties, as appropriate, to develop and implement a feasible vibratory reduction strategy. The plan will follow the best practices outlined in NCHRP 25-25, *Current Practices to Address Construction Vibration and Potential Effects to Historic Buildings Adjacent to Transportation Projects* (2012) or similar. Generalized steps are the following: 1)

E-5

consultation between historic building owner, Project Delivery Team and reviewing agencies such as SHPO and local planning departments to identify potential risks, negotiate changes and agreement on protective measures; 2) documentation of the condition of the building prior to commencement of adjacent work, including a detailed photo survey of existing damage as specified in the particular treatment plan; 3) establishment of vibration limits not to be exceeded based on condition of building, founding soil conditions, and type of construction vibration; 4) implementation of protective measures at both the construction site and the historic building, which could include specific means and methods to be used and those that will not be used and as specified in the BCOES; 5) implementation of regular monitoring during construction to identify damage, evaluate the efficacy of protective measures already in place and to identify and implement additional corrective steps. The results of any implemented plan will be shared with the Consulting Parties to the particular adverse effect and summarized in the annual plan.

7.2 PROGRAMMATIC AGREEMENT MEETING AGENDA



AGENDA

January 15, 2019, 1:00-5:00 pm CT

**4th Section 106 Consultation Meeting for the Development of a
Programmatic Agreement Regarding the Mississippi River and Tributaries Project
(Mississippi River Levee Features)¹
Memphis (MVM), Vicksburg (MVK), and New Orleans Districts (MVN)
Teleconference and Webmeeting**

Teleconference: (877) 402-9757; Access Code 910 3542; Security Code 1234. If asked for participant number, hit #.

Webmeeting: <https://usace.webex.com/meet/jason.a.emery> Mtg #: 968 824 807

- I. **Welcome and Introductions (USACE)**
- II. **Review of Comments on Draft Programmatic Agreement (PA) (All Parties)**
 - A. Several Changes Made Globally
 1. Federally-recognized Tribes for Tribes.
 2. Added all states where appropriate, used language to define “SHPO with Jurisdiction” in other places.
- III. **Discuss Comments For:**
 - A. Stip I – Applicability—revised.
 - B. Stip II - Points of Contact – revised.
 - C. Stip III – Roles and Responsibilities –revised.
 - D. Specifically – comments related to how to refer to various SHPOs/THPOs, Divisions, etc. with differing authorities related to maintenance of historic property data.
 - E. Data sharing/costs (all parties)
 - F. Stip IV – Confidentiality—revised.
 - G. Stip. V. Consultation Standards, Timeframes, and Correspondence. - comments
 - H. Stip. VI. Standards—revised.
 - I. Added Appendix A – Work Item List and Descriptions
- IV. **Next Steps:**
 - A. State Burial Law References- Stipulation (To Be Developed)
 1. Summary of Laws and process – establishment of minimum standard.
 2. Separation in to Federal and State laws.
- V. **Consultation Schedule (USACE)**
 - A. Moving to a 2-week cycle, with more limited per meeting objectives.
 - B. 4th Consultation Meeting: ½ day meeting via Teleconference January 15, 2020.
 - C. 5th Consultation Meeting: Teleconference on January 30, 2020.
 - D. 6th Consultation Meeting:
 - E. 7th Consultation Meeting: Review Final Draft PA and discuss signature process (initiate legal reviews)
 - F. Begin Signature Process (counterpart)

¹ This PA is intended to support USACE’s Supplement No. 2 (SEIS II) to the Final Environmental Impact Statement, Mississippi River and Tributaries (MR&T) Project, Mississippi River Mainline Levees and Channel Improvement of 1976 (1976 EIS) which will evaluate impacts on the quality of the human environment of constructing the remaining authorized work for the Mississippi River mainline levees (MRL) feature. Supplement No. 1, Mississippi River and Tributaries Project, Mississippi River Mainline Levee Enlargement and Seepage Control was completed in 1998 (SEIS I).

7.3 MDAH COORDINATION LETTER

MISSISSIPPI DEPARTMENT *of* ARCHIVES AND HISTORY



HISTORIC PRESERVATION DIVISION
P. O. BOX 571
Jackson, MS 39205-0571
Phone 601-576-6940 Fax 601-576-6955
Website: mdah.ms.gov

December 14, 2020

Mr. John Thron
U.S. Army Corps of Engineers, Vicksburg District
4155 Clay Street
Vicksburg, MS 39183-3435

RE: The Final Supplement II (Final SEIS II) to the 1976 Environmental Impact Statement (FEIS),
Mississippi River and Tributaries (MR&T) Project, Mississippi River Mainline Levees (MRL)
(MDAH Project Log 11-065-20)

Dear Mr. Thron:

We have reviewed the Final Supplement II (SEIS) for the above referenced project, in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After review of the information provided, MDAH concurs that the proposed undertaking will have an impact on historic resources. MDAH has been a participant in the negotiations for the *Programmatic Agreement Among the U.S. Army Corps of Engineers (USACE), Memphis, New Orleans, and Vicksburg Districts, the Chickasaw Nation; the Choctaw Nation of Oklahoma; the Osage Nation; the Quapaw Nation; the Arkansas State Historic Preservation Officer; the Illinois State Historic Preservation Officer; the Kentucky State Historic Preservation Officer; the Louisiana State Historic Preservation Officer; the Mississippi State Historic Preservation Officer; the Missouri State Historic Preservation Officer; the Tennessee State Historic Preservation Officer; and the Advisory Council on Historic Preservation Regarding the Mississippi River and Tributaries Project: Mississippi River Levee Features*. MDAH anticipates signing the agreement once the execution document is sent out for signature. Thus, MDAH has no further comment at this time.

If there are any changes to the scope of work, or should unexpected cultural materials be encountered during the project, MDAH requests that our office be notified so that we can provide comment in accordance with 36 CFR 800.13.

If you have any questions, please contact us at (601) 576-6945.

Sincerely,

Barry White
Deputy State Historic Preservation Officer

FOR: Katie Blount
State Historic Preservation Officer

7.4 DRAFT REPORT TRIBAL/SHPO REVIEW LETTERS



REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

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

December 9, 2019

Cecilia Flores, Tribal Council Chairperson
Alabama-Coushatta Tribe of Texas
571 State Park Rd 56
Livingston, TX 77351

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

The draft report and appendices are available online for your review and comment at the below website:

<https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/LPV-GRR/>

The USACE is initiating consultation for Section 106 of the National Historic Preservation Act (NHPA), with the State Historic Preservation Officer (SHPO) and with Federally-recognized Tribes with this letter for the referenced project. No determination of effect under the NHPA is being made at this time. Consultation will follow the standard Section 106 process.

NHPA consultation will address the Area of Potential Effects for portions of the project that are outside of the undertakings previously reviewed under Individual Environmental Reviews (IER) and Comprehensive Environmental Documents available at (<https://www.mvn.usace.army.mil/Missions/Environmental/NEPA-Compliance-Documents/HSDRRS-Projects/>). The LPV study includes the actions described in IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, and #27. The Section 106 consultation will provide the results of any Phase I Cultural Resources Survey (if necessary), and USACE's determination of effect to historic properties. This will provide an opportunity to for consulting parties to review NHPA specific documentation, per 36 CFR 800.11. The determination of effect and any conditions will be documented in the Final Record of Decision (ROD) before it is signed.

For purposes of understanding the undertaking, please review the documents at the link above. Should your tribe or agency want to provide comments upon the NEPA document, please provide comments by February 7, 2020. All comments postmarked on or before the expiration of the comment period will be considered and addressed as appropriate in the final report. A public open house will be held the week of January 20th and details will be posted on the New Orleans District website: <https://www.mvn.usace.army.mil/Media/Public-Meetings/>

Comments should be mailed to the attention of Mr. Bradley Drouant, U.S. Army Corps of Engineers; New Orleans District; CEMVN-PMO-L; Room 361; 7400 Leake Avenue, New Orleans, Louisiana 70118. Comments may also be provided by email to CEMVN-LPVGRR@usace.army.mil. Mr. Drouant may be contacted at (504) 862-1516 if questions arise.

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Marshall K. Harper
Chief, Environmental Planning Branch

CC: 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.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

Tamara Francis-Fourkiller, Chairman
Caddo Nation of Oklahoma
117 Memorial Lane
P.O. Box 487
Binger, OK 73009

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter will be provided to Mr. Derrick Hill, THPO, Caddo Nation of Oklahoma, dhill@caddo.xyz



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

REPLY TO
ATTENTION OF

December 9, 2019

Regional Planning and
Environment Division South

Gary Batton, Chief
Choctaw Nation of Oklahoma
Attn: Choctaw Nation Historic Preservation Department
P.O. Box 1210
Durant, OK 74702-1210

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Comments should be mailed to the attention of Mr. Bradley Drouant; U.S. Army Corps of Engineers; New Orleans District; CEMVN-PMO-L; Room 361; 7400 Leake Avenue, New Orleans, Louisiana 70118. Comments may also be provided by email to CEMVN-LPVGRR@usace.army.mil. Mr. Drouant may be contacted at (504) 862-1516 if questions arise.

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Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Dr. Ian Thompson, Director/Tribal Historic Preservation Officer, Choctaw Nation of Oklahoma, ithompson@choctawnation.com and Ms. Lindsey Bilyeu, NHPA Section 106 Reviewer, Choctaw Nation of Oklahoma, lbilyeu@choctawnation.com.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

David Sickey, Chairman
Coushatta Tribe of Louisiana
P.O. Box 818
Elton, LA 70532

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Comments should be mailed to the attention of Mr. Bradley Drouant; U.S. Army Corps of Engineers; New Orleans District; CEMVN-PMO-L; Room 361; 7400 Leake Avenue, New Orleans, Louisiana 70118. Comments may also be provided by email to CEMVN-LPVGRR@usace.army.mil. Mr. Drouant may be contacted at (504) 862-1516 if questions arise.

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14358
Date: 2019.12.05 15:58:18 -0600'

Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Dr. Linda Langley, Tribal Historic Preservation Officer, Coushatta Tribe of Louisiana, llangley@coushattatribela.org.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

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

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Date: 2019.12.05 15:59:03 -06'00'

Marshall K. Harper
Chief, Environmental Planning Branch

CC: 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, kim@chitimacha.gov.



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

December 9, 2019

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

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Date: 2019.12.05 16:01:38 -06'00'

Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Mrs. Alina Shively, Tribal Historic Preservation Officer, Jena Band of Choctaw Indians, ashively@jenachoctaw.org.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

Cyrus Ben, Chief
Mississippi Band of Choctaw Indians
P.O. Box 6257
Choctaw, MS 39350

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Date: 2019.12.05 16:02:36 -06'00'

Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Mr. Kenneth H. Carleton, Tribal Historic Preservation Officer/Archaeologist, Mississippi Band of Choctaw Indians, kcarleton@choctaw.org.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

Mr. James Floyd, Principal Chief
Muscogee (Creek) Nation
Attn: Historic and Cultural Preservation Office
P.O. Box 580
Okmulgee, OK 74447

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Date: 2019.12.05 16:03:44 -06'00'
Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Ms. Corain Lowe-Zepeda, Tribal Historic Preservation Officer, Muscogee (Creek) Nation, section106@mcn-nsn.gov.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

Greg Chilcoat, Principal Chief
Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884

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Date: 2019.12.05 16:06:29 -06'00'

Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Mr. Theodore Isham, Tribal Historic Preservation Officer, Seminole Nation of Oklahoma, isham.t@sno-nsn.gov.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

Marcellus W. Osceola, Chairman
Seminole Tribe of Florida
6300 Sterling Road
Hollywood, FL 33024

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Date: 2019.12.05 16:09:40 -06'00'
Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Dr. Paul N. Backhouse, Tribal Historic Preservation Officer, Seminole Tribe of Florida, THPOCompliance@semtribe.com.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

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

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Date: 2019.12.05 16:10:38 -06'00'

Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to Mr. Earl J. Barbry, Jr., Cultural Director, Tunica-Biloxi Tribe of Louisiana, earljj@tunica.org.



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

December 9, 2019

REPLY TO
ATTENTION OF

Regional Planning and
Environment Division South

Kristin Sanders, SHPO
LA State Historic Preservation Officer
P.O. Box 44247
Baton Rouge, LA 70804-4241

The U.S. Army Corps of Engineers, New Orleans District, has prepared a draft report entitled "Lake Pontchartrain and Vicinity General Re-Evaluation Report with Integrated Draft Environmental Impact Statement (LPV GRR-DEIS)." This GRR-DEIS reevaluates the performance of the LPV system given the combined effects of consolidation, settlement, subsidence, sea level rise, and new datum over time, and determine if additional actions are recommended to address the economic and life safety risks associated with flooding due to hurricanes and coastal storms.

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Marshall K. Harper
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to the Section 106 Inbox, section106@crt.la.gov.

7.5 FINAL TRIBAL/SHPO LETTERS



REPLY TO
ATTENTION OF

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

Herbert Johnson, Tribal Council Chairperson
Alabama-Coushatta Tribe of Texas
571 State Park Rd 56
Livingston, TX 77351

RE: Section 106 Review Consultation

Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
Louisiana General Re-Evaluation Reports with Integrated
Environmental Impact Statement.

Determination: No Adverse Effects To Historic Properties

Dear Mikko Skaalaba Johnson:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) is proposing to increase the level of flood risk reduction provided by the Hurricane & Storm Damage Risk Reduction System (HSDRRS) around the New Orleans metropolitan area through a series of levee lifts, floodwall replacements, and foreshore protection. This letter summarizes and confirms the findings of previous HSDRRS consultations from June 2007 to December 2010. The proposed project is located within St. Charles, Jefferson, Orleans, Plaquemines, and St. Bernard Parishes, Louisiana.

In partial fulfillment of responsibilities under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, the U.S. Army Corps of Engineers, New Orleans District (CEMVN), offers you the opportunity to review and comment on the potential of the proposed action described in this letter to affect historic properties.

Description of the Undertaking

The proposed undertaking has been divided into two sections. The Lake Pontchartrain and Vicinity (LPV) projects refer to the HSDRRS levees, Mississippi River Levees (MRL) and associated features located on the east bank of the Mississippi River. The West Bank and Vicinity (WBV) projects refer to the HSDRRS levees, MRLs and associated features located on the west bank of the Mississippi River.

The construction for all proposed work would generally occur in the same footprint as the existing LPV/WBV project and existing MRL levees. Project features would consist of

levee lifts along the existing levee alignment, with construction timing to occur before the combined effects of consolidation, settlement, subsidence, and sea level rise reduce the levee elevations in each levee reach below the required design elevation. In some reaches, levee lifts may need to occur more than once during the period of analysis. Additionally, the project would include floodwall replacements or new floodwall along the existing alignment to be constructed prior to the combined effects causing the design requirements to be exceeded for each structure. Approximately 19 miles of MRL levees will be added as co-located features across both the LPV/WBV project.

The proposed plan also includes targeted areas of foreshore protection along Lake Pontchartrain in areas where foreshore protection already exists. Water-based construction would be required for construction of the foreshore protection along the shore of Lake Pontchartrain. This would require some dredging with a bucket dredge and temporary material stockpiling to provide access to deliver and place the stone for foreshore protection and bring it back up to the required elevation for levee protection. In order to allow construction equipment to access the shoreline, construction access channels would be dredged, and dredged material would be temporarily stockpiled adjacent to the channels. Construction access channels and stockpile areas would be brought back to original elevations subsequent to completion of construction activities. In addition, rock foreshore protection would be placed on top of existing foreshore protection in Lake Pontchartrain to bring the stone back up to the required elevation for proper levee protection.

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A comprehensive summary of these studies, identified cultural resources, and previous Section 106 consultation for HSDRRS construction are presented in IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33 and compiled and summarized in the Comprehensive Environmental Document Phase 1. <https://www.mvn.usace.army.mil/Missions/Environmental/NEPA-Compliance-Documents/HSDRRS-Projects/>.

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Determinations

CEMVN has determined a majority of actions proposed under the LPV/WBV Study were made compliant with section 106 of the NHPA through various IER consultations (IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33); and, pursuant to 36 CFR 800.4 (2) and 800.5(3), CEMVN has phased the identification, evaluation, and determination of effects through implementing the provisions of the MRL SEIS II PA. Most of the proposed actions would be occurring within the existing HSDRSS footprint. These areas have all been subject to surveys as part of previous investigations, including the areas of shoreline protection and dredging on Lake Pontchartrain. All potential work in these areas would be subject to the implementation of the avoidance measures established in the original HSDRSS IER consultations. Therefore, CEMVN has determined a finding of **No Adverse Effect to Historic Properties** for work within these areas and is submitting it to you for your review and comment. The MRL levee work that was not part of the previous HSDRRS IERs, would be subject to further review and follow the processes established as part of the MRL SEIS II PA. CEMVN requests your comments within 30 days.

We look forward to your concurrence with this determination. Should you have any questions or need additional information regarding this undertaking, please contact Noah Fulmer at 504-862-1983, or by email at noah.i.fulmer@usace.army.mil, with any questions or concerns you may have regarding this project.

Sincerely,
WILLIAMS.ERIC.MITCHELL.106
5454323
for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 08:53:40 -06'00'

CC: File

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.

Enclosures

FIGURE 1:

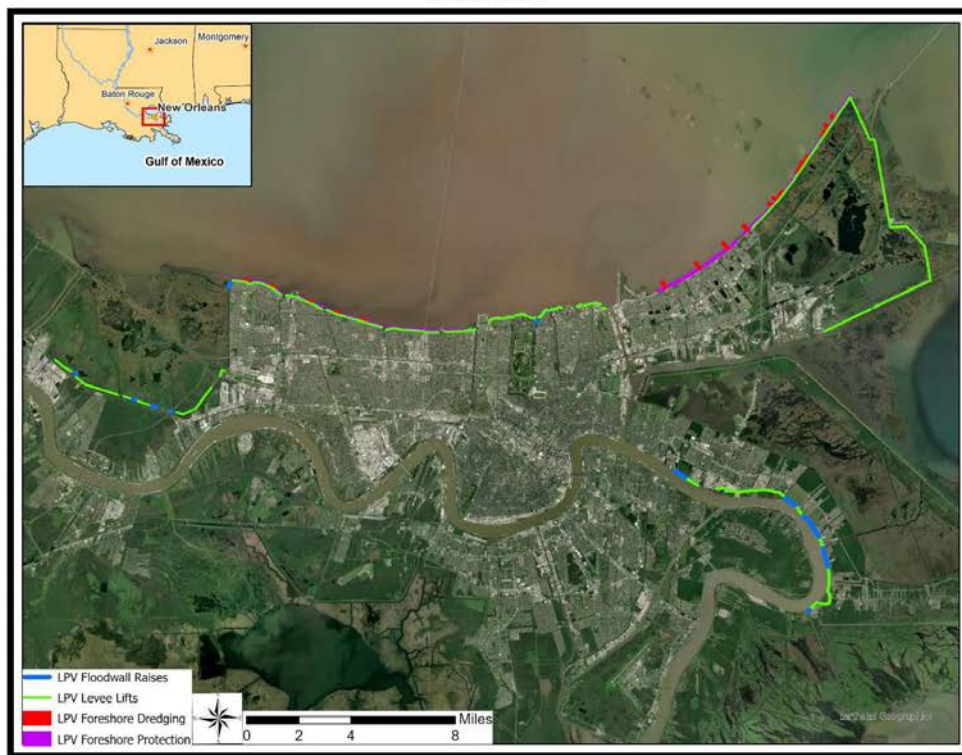


FIGURE 2:





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Regional Planning and
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Tamara Francis-Fourkiller, Chairman
Caddo Nation of Oklahoma
117 Memorial Lane
P.O. Box 487
Binger, OK 73009

RE: Section 106 Review Consultation

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WILLIAMS.ERIC.MITCHELL.
1065454323
for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 08:55:23 -06'00'

CC: File

An electronic copy of this letter will be provided to Mr. Derrick Hill, THPO, Caddo Nation of Oklahoma, dhill@mycaddonation.com

Enclosures

National Historic Preservation Act compliance

FIGURE 1:

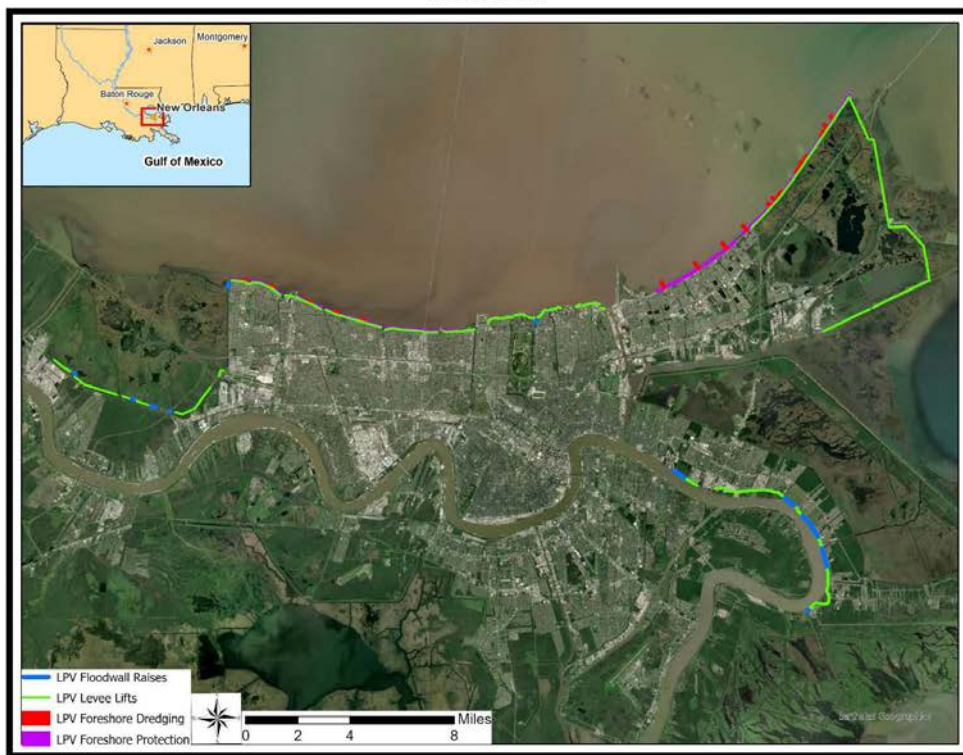


FIGURE 2:





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Regional Planning and
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Gary Batton, Chief
Choctaw Nation of Oklahoma
Attn: Choctaw Nation Historic Preservation Department
P.O. Box 1210
Durant, OK 74702-1210

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Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
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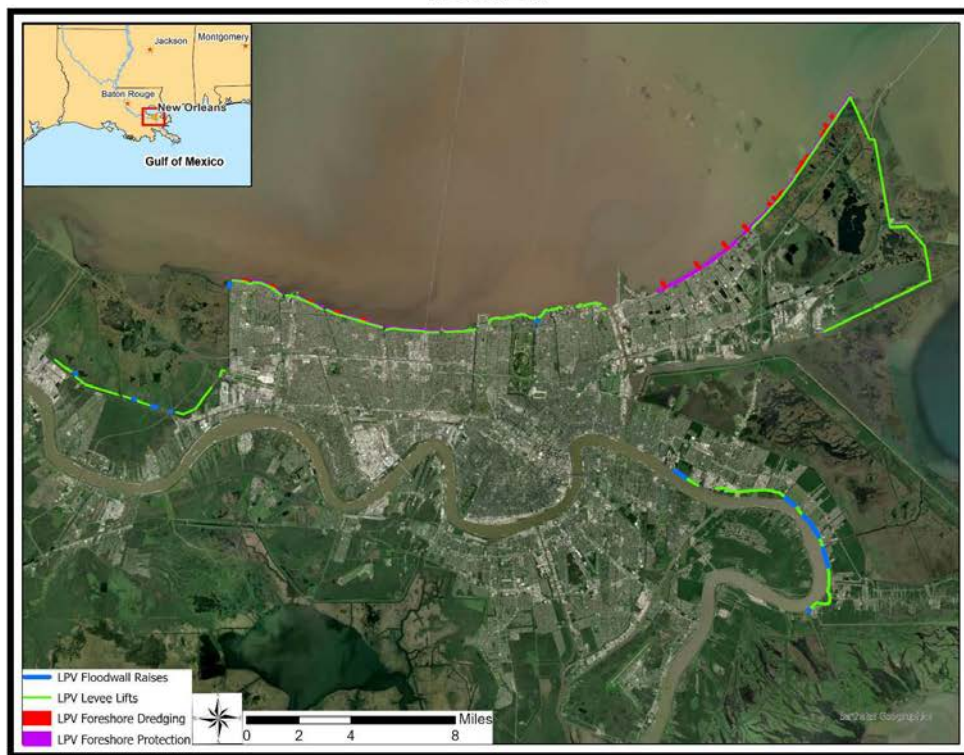
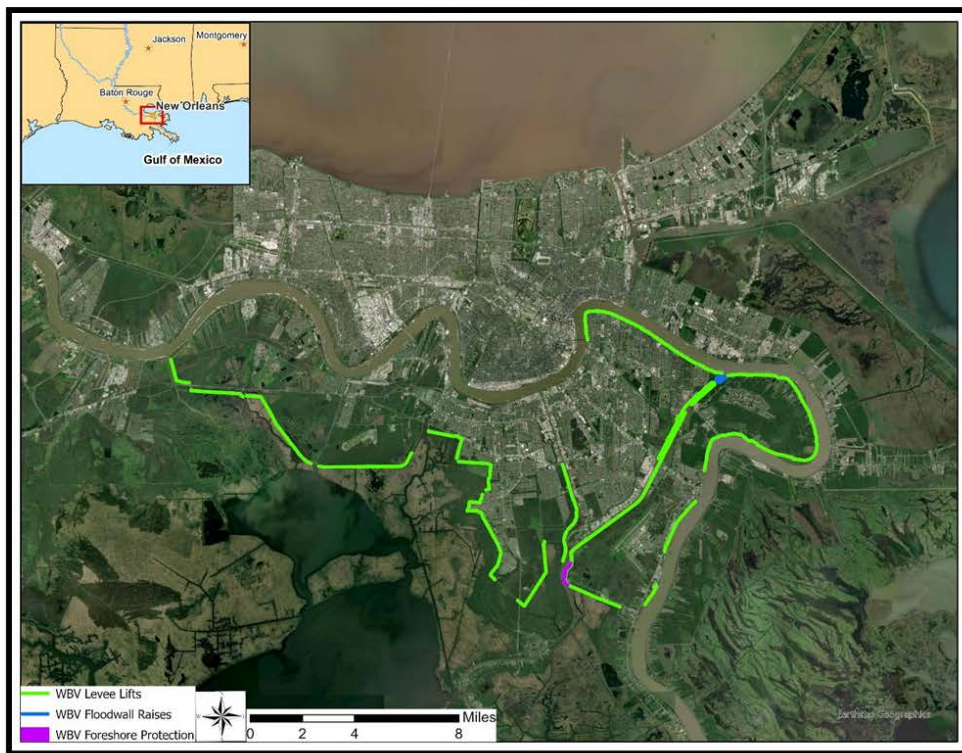


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levee lifts along the existing levee alignment, with construction timing to occur before the combined effects of consolidation, settlement, subsidence, and sea level rise reduce the levee elevations in each levee reach below the required design elevation. In some reaches, levee lifts may need to occur more than once during the period of analysis. Additionally, the project would include floodwall replacements or new floodwall along the existing alignment to be constructed prior to the combined effects causing the design requirements to be exceeded for each structure. Approximately 19 miles of MRL levees will be added as co-located features across both the LPV/WBV project.

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Area of Potential Effects (APE)

The APE for the proposed project would be limited to the existing right of ways of the HSSDRS and areas surrounding MRL features. The APE for LPV is represented as Figure 1, and the APE for WBV is represented as Figure 2. The direct and indirect APEs are the same areas as provided for and consulted upon in several of the IERs, noted below, except for the APEs that will be defined as part of the implementation of a programmatic agreement focused on the Mississippi River Levees, discussed further below.

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Determinations

CEMVN has determined a majority of actions proposed under the LPV/WBV Study were made compliant with section 106 of the NHPA through various IER consultations (IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33); and, pursuant to 36 CFR 800.4 (2) and 800.5(3), CEMVN has phased the identification, evaluation, and determination of effects through implementing the provisions of the MRL SEIS II PA. Most of the proposed actions would be occurring within the existing HSDRSS footprint. These areas have all been subject to surveys as part of previous investigations, including the areas of shoreline protection and dredging on Lake Pontchartrain. All potential work in these areas would be subject to the implementation of the avoidance measures established in the original HSDRSS IER consultations. Therefore, CEMVN has determined a finding of **No Adverse Effect to Historic Properties** for work within these areas and is submitting it to you for your review and comment. The MRL levee work that was not part of the previous HSDRRS IERs, would be subject to further review and follow the processes established as part of the MRL SEIS II PA. CEMVN requests your comments within 30 days.

We look forward to your concurrence with this determination. Should you have any questions or need additional information regarding this undertaking, please contact Noah Fulmer at 504-862-1983, or by email at noah.i.fulmer@usace.army.mil, with any questions or concerns you may have regarding this project.

Sincerely,
WILLIAMS.ERIC.MITCHELL. 1065454323
for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 08:59:03 -06'00'

CC: File

An electronic copy of this letter with enclosures will be provided to Dr. Linda Langley, Tribal Historic Preservation Officer, Coushatta Tribe of Louisiana, llangley@coushattatribela.org and Mr. Johans Johns, jonasj@coushattatribela.org.
Enclosures

FIGURE 1:

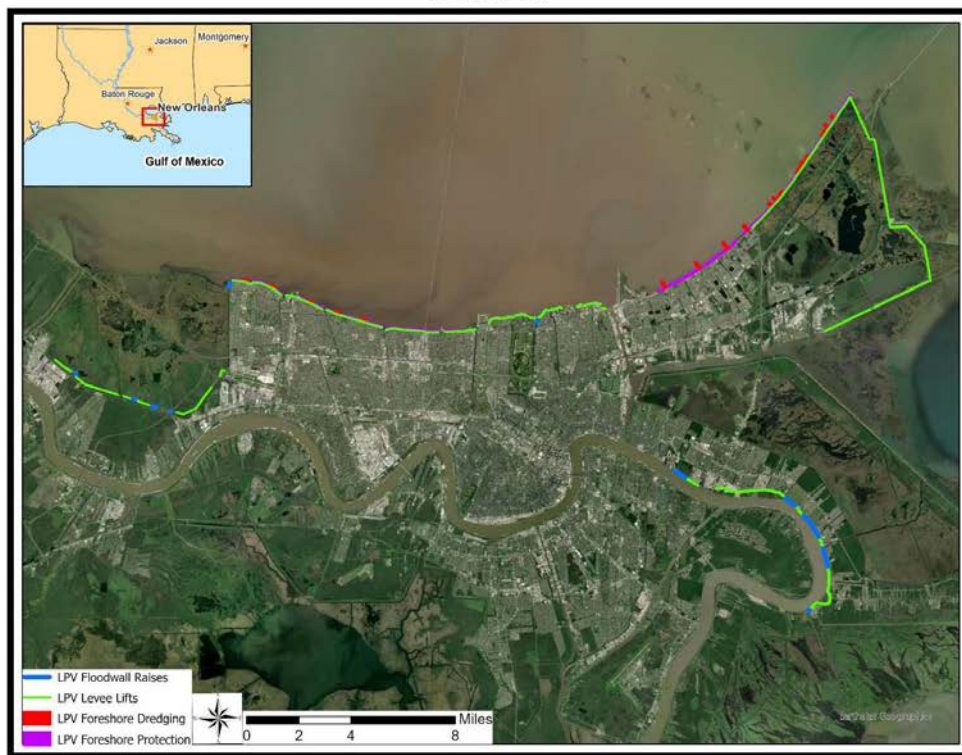


FIGURE 2:





REPLY TO
ATTENTION OF

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

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

RE: Section 106 Review Consultation

Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
Louisiana General Re-Evaluation Reports with Integrated
Environmental Impact Statement.

Determination: No Adverse Effects To Historic Properties

Dear Chairman Darden:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) is proposing to increase the level of flood risk reduction provided by the Hurricane & Storm Damage Risk Reduction System (HSDRRS) around the New Orleans metropolitan area through a series of levee lifts, floodwall replacements, and foreshore protection. This letter summarizes and confirms the findings of previous HSDRRS consultations from June 2007 to December 2010. The proposed project is located within St. Charles, Jefferson, Orleans, Plaquemines, and St. Bernard Parishes, Louisiana.

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WILLIAMS.ERIC.MITCHEL
L.1065454323
for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 09:00:36 -06'00'

CC: File

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, kim@chitimacha.gov.

Enclosures

FIGURE 1:

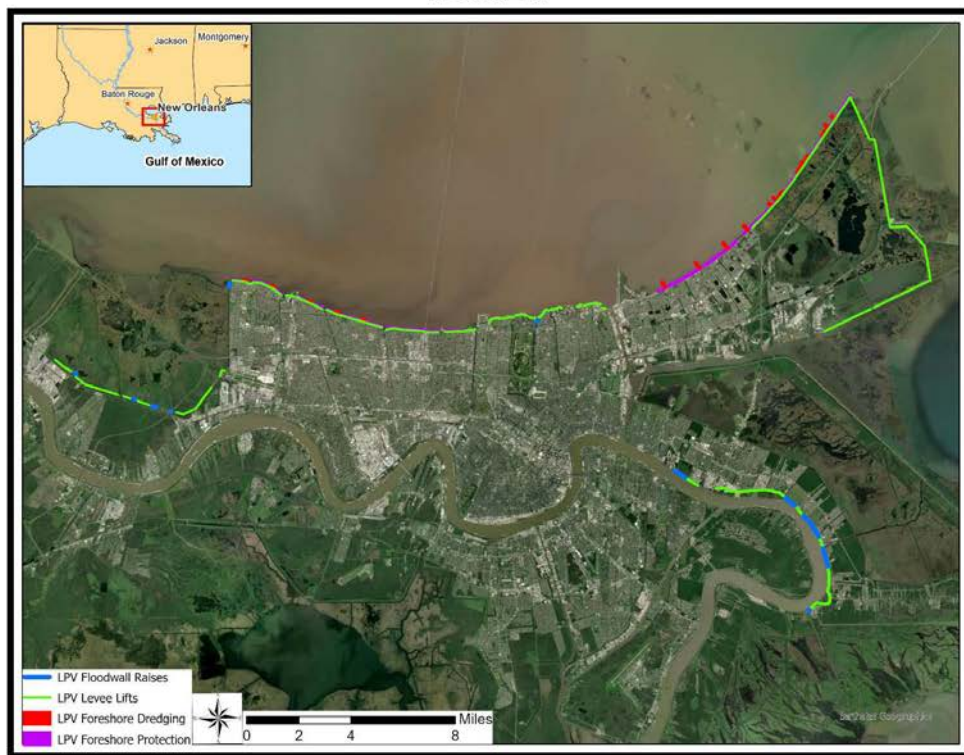
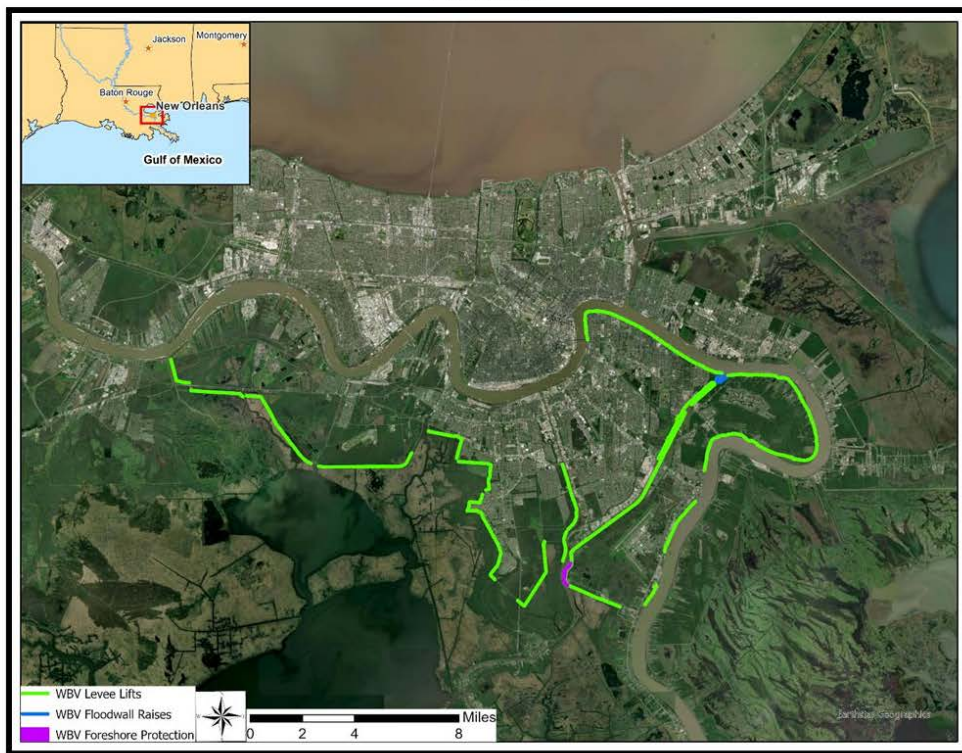


FIGURE 2:





REPLY TO
ATTENTION OF

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

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

RE: Section 106 Review Consultation

Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
Louisiana General Re-Evaluation Reports with Integrated
Environmental Impact Statement.

Determination: No Adverse Effects To Historic Properties

Dear Principal Chief Smith:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) is proposing to increase the level of flood risk reduction provided by the Hurricane & Storm Damage Risk Reduction System (HSDRRS) around the New Orleans metropolitan area through a series of levee lifts, floodwall replacements, and foreshore protection. This letter summarizes and confirms the findings of previous HSDRRS consultations from June 2007 to December 2010. The proposed project is located within St. Charles, Jefferson, Orleans, Plaquemines, and St. Bernard Parishes, Louisiana.

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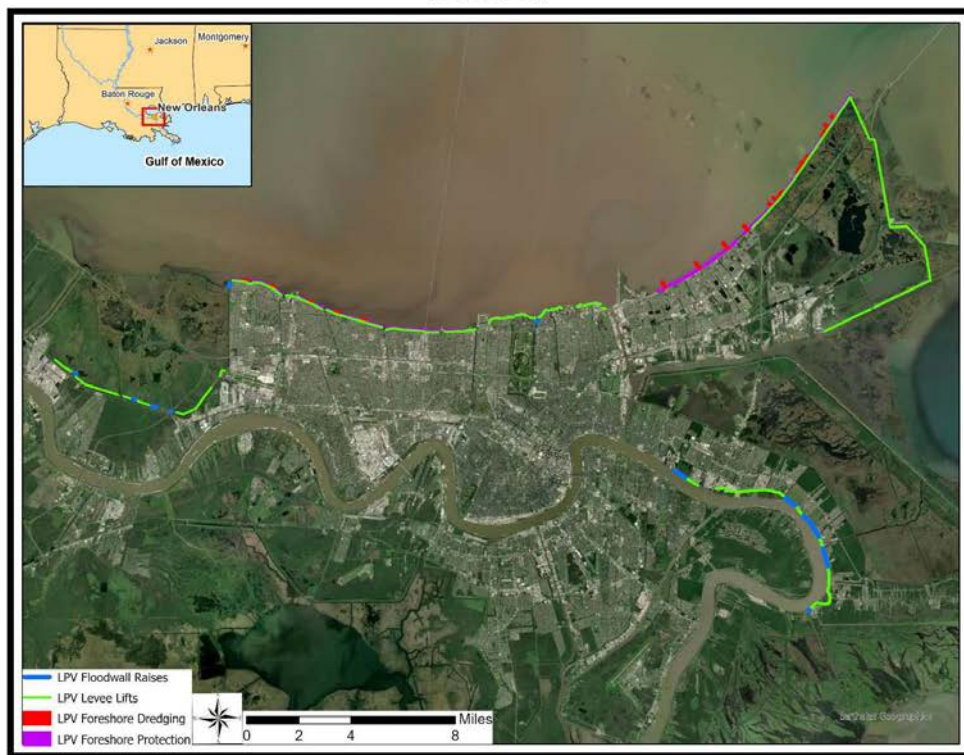


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Regional Planning and
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Cyrus Ben, Chief
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P.O. Box 6257
Choctaw, MS 39350

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Determination: No Adverse Effects To Historic Properties

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Determinations

CEMVN has determined a majority of actions proposed under the LPV/WBV Study were made compliant with section 106 of the NHPA through various IER consultations (IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33); and, pursuant to 36 CFR 800.4 (2) and 800.5(3), CEMVN has phased the identification, evaluation, and determination of effects through implementing the provisions of the MRL SEIS II PA. Most of the proposed actions would be occurring within the existing HSDRSS footprint. These areas have all been subject to surveys as part of previous investigations, including the areas of shoreline protection and dredging on Lake Pontchartrain. All potential work in these areas would be subject to the implementation of the avoidance measures established in the original HSDRSS IER consultations. Therefore, CEMVN has determined a finding of **No Adverse Effect to Historic Properties** for work within these areas and is submitting it to you for your review and comment. The MRL levee work that was not part of the previous HSDRRS IERs, would be subject to further review and follow the processes established as part of the MRL SEIS II PA. CEMVN requests your comments within 30 days.

We look forward to your concurrence with this determination. Should you have any questions or need additional information regarding this undertaking, please contact Noah Fulmer at 504-862-1983, or by email at noah.i.fulmer@usace.army.mil, with any questions or concerns you may have regarding this project.

Sincerely,
WILLIAMS.ERIC.MITCHELL
LL1065454323
for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 09:01:52 -06'00'

CC: File

An electronic copy of this letter with enclosures will be provided to Mr. Kenneth H. Carleton, Tribal Historic Preservation Officer/Archaeologist, Mississippi Band of Choctaw Indians, kcarleton@choctaw.org.

Enclosures

FIGURE 1:

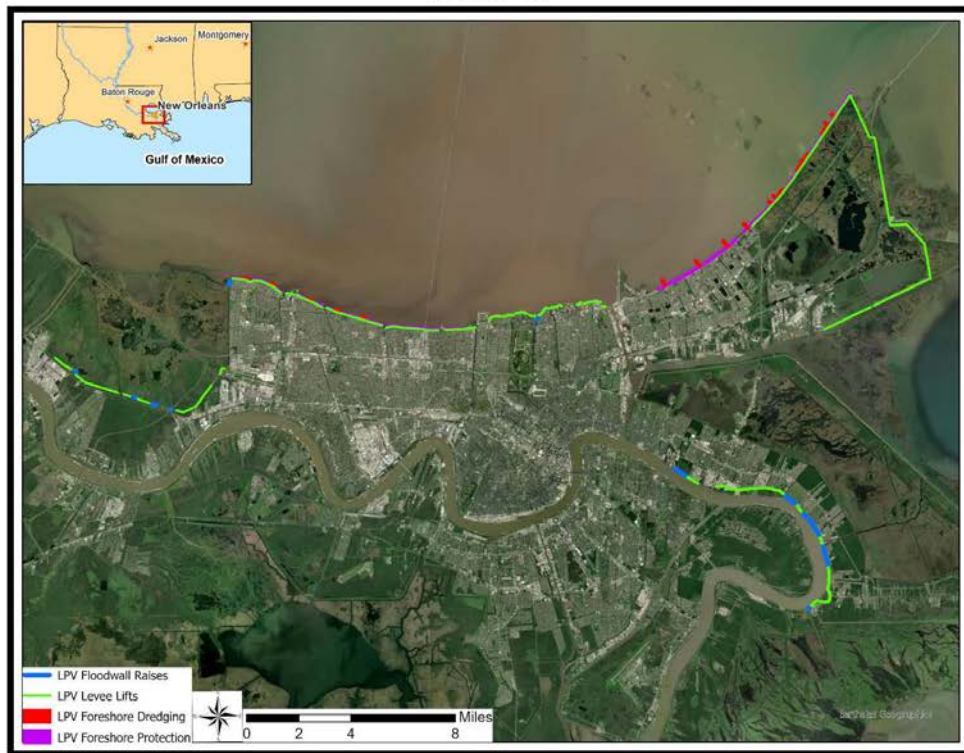


FIGURE 2:





REPLY TO
ATTENTION OF

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

Mr. David Hill, Principal Chief
Muscogee (Creek) Nation
Attn: Historic and Cultural Preservation Office
P.O. Box 580
Okmulgee, OK 74447

RE: Section 106 Review Consultation

Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
Louisiana General Re-Evaluation Reports with Integrated
Environmental Impact Statement.

Determination: No Adverse Effects To Historic Properties

Dear Principal Chief Hill:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) is proposing to increase the level of flood risk reduction provided by the Hurricane & Storm Damage Risk Reduction System (HSDRRS) around the New Orleans metropolitan area through a series of levee lifts, floodwall replacements, and foreshore protection. This letter summarizes and confirms the findings of previous HSDRRS consultations from June 2007 to December 2010. The proposed project is located within St. Charles, Jefferson, Orleans, Plaquemines, and St. Bernard Parishes, Louisiana.

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for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 09:05:11 -06'00'

CC: File

An electronic copy of this letter with enclosures will be provided to Ms. Corain Lowe-Zepeda, Tribal Historic Preservation Officer, Muscogee (Creek) Nation, section106@mcn-nsn.gov.

Enclosures

FIGURE 1:



FIGURE 2:





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ATTENTION OF

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NEW ORLEANS, LOUISIANA 70118

Regional Planning and
Environment Division, South
Environmental Planning Branch

Greg Chilcoat, Principal Chief
Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884

RE: Section 106 Review Consultation

Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
Louisiana General Re-Evaluation Reports with Integrated
Environmental Impact Statement.

Determination: No Adverse Effects To Historic Properties

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Digitally signed by
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Enclosures

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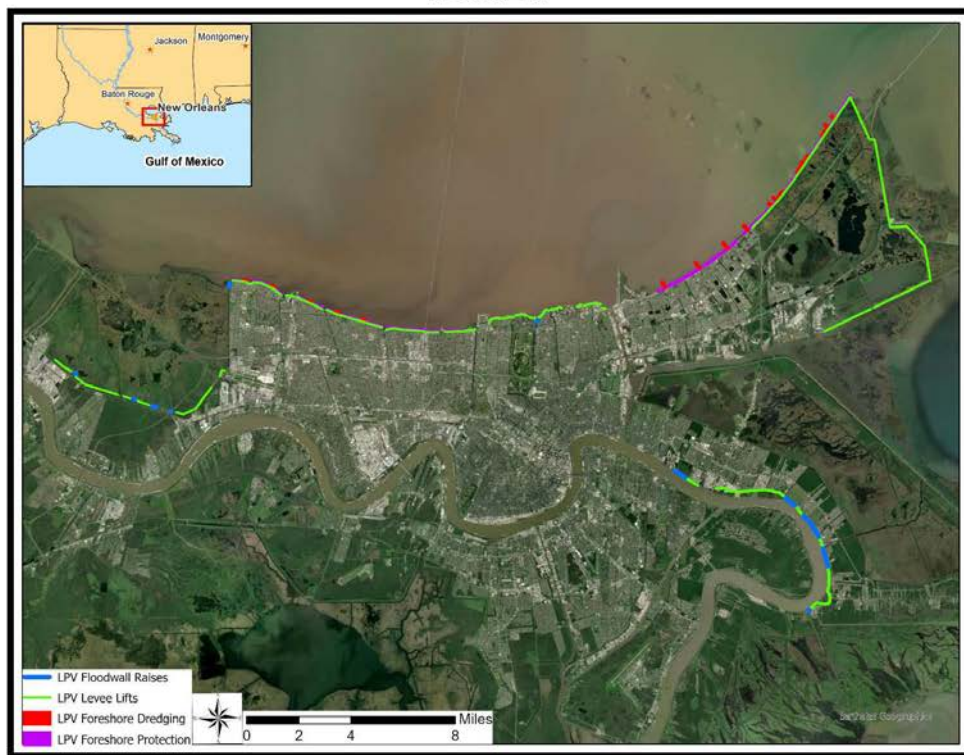


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Regional Planning and
Environment Division, South
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Marcellus W. Osceola, Chairman
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6300 Sterling Road
Hollywood, FL 33024

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Determination: No Adverse Effects To Historic Properties

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Determinations

CEMVN has determined a majority of actions proposed under the LPV/WBV Study were made compliant with section 106 of the NHPA through various IER consultations (IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33); and, pursuant to 36 CFR 800.4 (2) and 800.5(3), CEMVN has phased the identification, evaluation, and determination of effects through implementing the provisions of the MRL SEIS II PA. Most of the proposed actions would be occurring within the existing HSDRSS footprint. These areas have all been subject to surveys as part of previous investigations, including the areas of shoreline protection and dredging on Lake Pontchartrain. All potential work in these areas would be subject to the implementation of the avoidance measures established in the original HSDRSS IER consultations. Therefore, CEMVN has determined a finding of **No Adverse Effect to Historic Properties** for work within these areas and is submitting it to you for your review and comment. The MRL levee work that was not part of the previous HSDRRS IERs, would be subject to further review and follow the processes established as part of the MRL SEIS II PA. CEMVN requests your comments within 30 days.

We look forward to your concurrence with this determination. Should you have any questions or need additional information regarding this undertaking, please contact Noah Fulmer at 504-862-1983, or by email at noah.i.fulmer@usace.army.mil, with any questions or concerns you may have regarding this project.

Sincerely,
WILLIAMS.ERIC.MITCHELL
LL.1065454323
for MARSHALL K. HARPER
Chief, Environmental Planning Branch

Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 09:07:55 -06'00'

CC: File

An electronic copy of this letter with enclosures will be provided to Dr. Paul N. Backhouse, Tribal Historic Preservation Officer, Seminole Tribe of Florida, THPOCompliance@semtribe.com.

Enclosures

FIGURE 1:

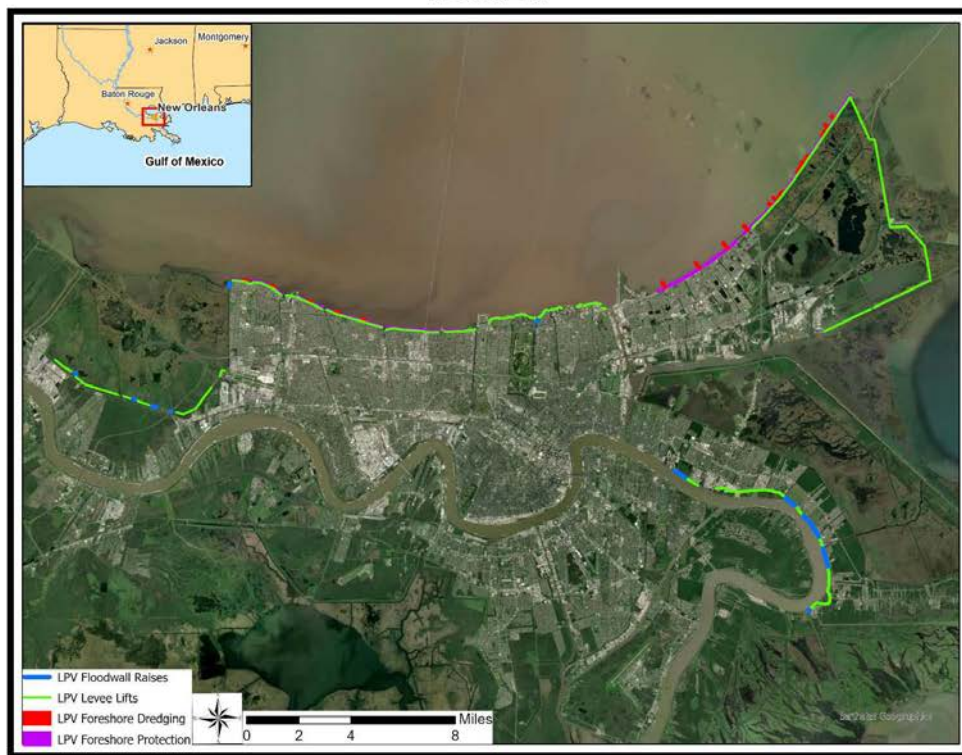
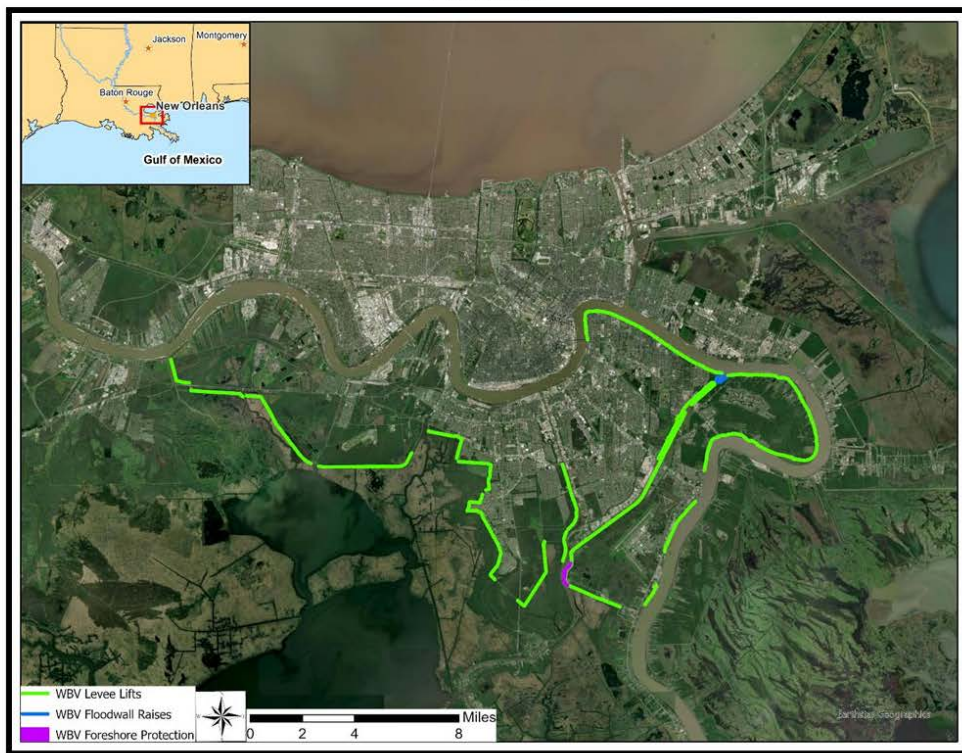


FIGURE 2:





REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
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7400 LEAKE AVENUE
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Regional Planning and
Environment Division, South
Environmental Planning Branch

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

RE: Section 106 Review Consultation

Undertaking: Lake Pontchartrain and Vicinity and West Bank and Vicinity
Louisiana General Re-Evaluation Reports with Integrated
Environmental Impact Statement.

Determination: No Adverse Effects To Historic Properties

Dear Chairman Barbry:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) is proposing to increase the level of flood risk reduction provided by the Hurricane & Storm Damage Risk Reduction System (HSDRRS) around the New Orleans metropolitan area through a series of levee lifts, floodwall replacements, and foreshore protection. This letter summarizes and confirms the findings of previous HSDRRS consultations from June 2007 to December 2010. The proposed project is located within St. Charles, Jefferson, Orleans, Plaquemines, and St. Bernard Parishes, Louisiana.

In partial fulfillment of responsibilities under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, the U.S. Army Corps of Engineers, New Orleans District (CEMVN), offers you the opportunity to review and comment on the potential of the proposed action described in this letter to affect historic properties.

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levee lifts along the existing levee alignment, with construction timing to occur before the combined effects of consolidation, settlement, subsidence, and sea level rise reduce the levee elevations in each levee reach below the required design elevation. In some reaches, levee lifts may need to occur more than once during the period of analysis. Additionally, the project would include floodwall replacements or new floodwall along the existing alignment to be constructed prior to the combined effects causing the design requirements to be exceeded for each structure. Approximately 19 miles of MRL levees will be added as co-located features across both the LPV/WBV project.

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Digitally signed by
WILLIAMS.ERIC.MITCHELL.1065454323
Date: 2021.03.09 09:06:28 -06'00'

CC: File

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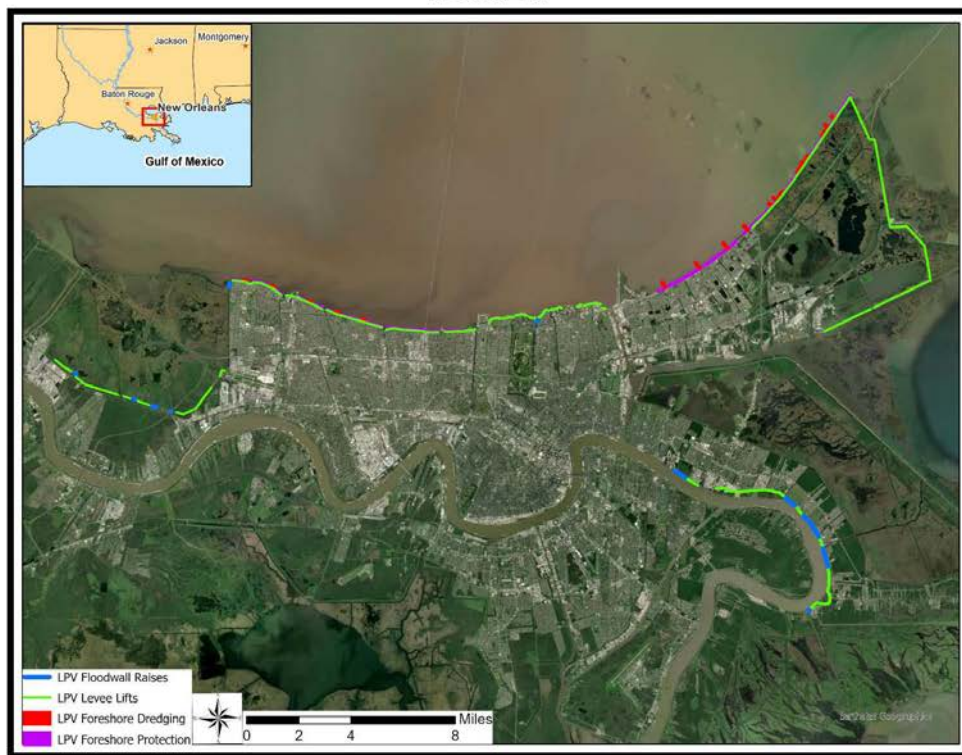
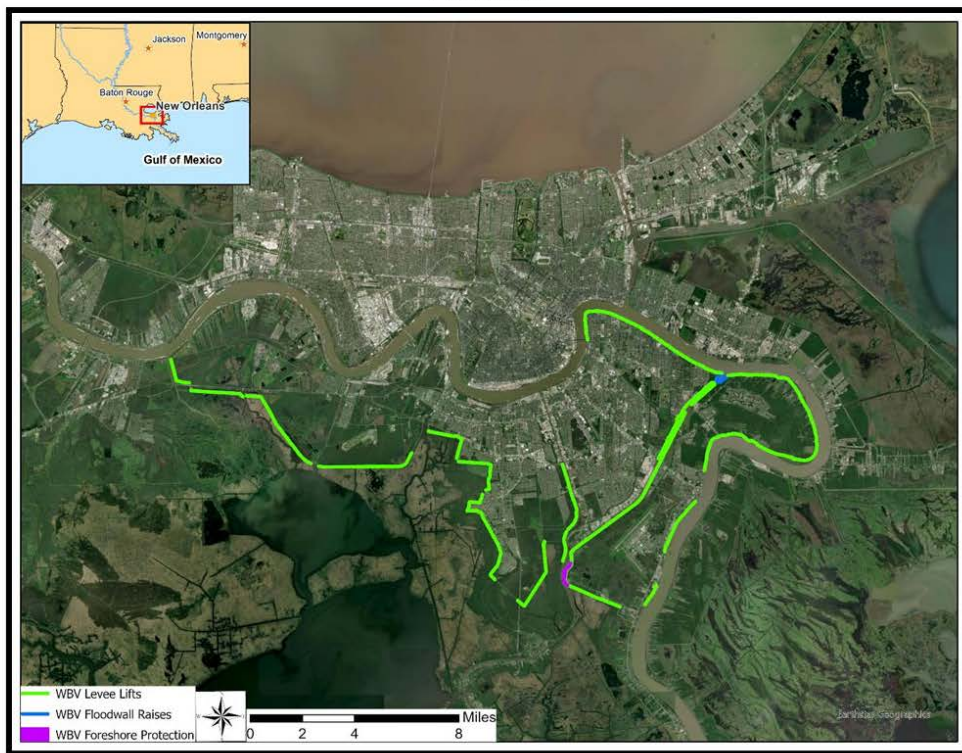


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Regional Planning and
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Kristin Sanders, SHPO
LA State Historic Preservation Officer
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Baton Rouge, LA 70804-4241

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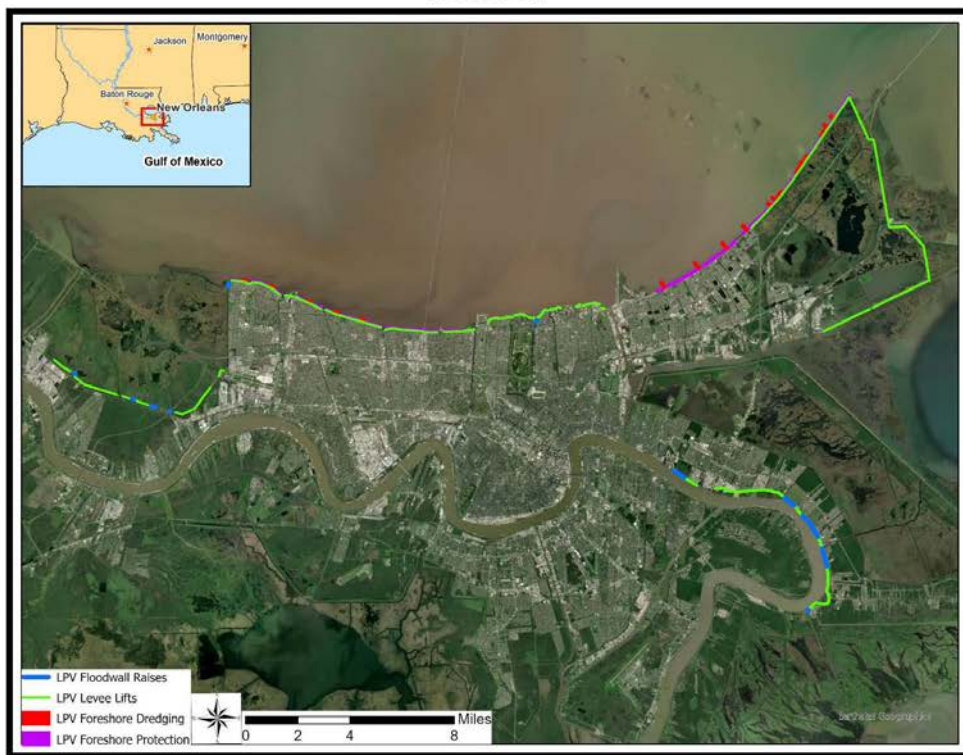


FIGURE 2:



7.6 SHPO CONCURRENCE



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State Historic Preservation Officer

Date

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The WBV APE extends from eastern St. Charles Parish to northern Plaquemines Parish along the right descending bank of the Mississippi River. The APE is part of the Barataria Basin.

Background and Identification

For HSDRRS planning and construction, USACE completed studies of the potentially significant historic properties in the areas that would have been impacted by work associated with HSDRRS corridors. The HSDRRS review was broken into Individual Environmental Reports (IERs) that covered the entire project system. This required background historical research of the study area and identification of previous cultural surveys and known historic properties to assess the areas of probability for cultural resources. Phase I cultural resource surveys were conducted in the form of pedestrian surface surveys with systematic shovel test pit excavations and delineations of site boundaries, when necessary. Where applicable, Phase II site evaluations were conducted for assessing the National Register of Historic Places (NRHP) eligibility. In all cases, the cultural resource survey areas exceeded the size of the preliminary APE, which allowed the USACE project archaeologists to adjust the APE, as needed, to avoid any damage to historic properties with potential eligibility for the NRHP.

USACE sent letters to the Louisiana SHPO and THPOs of the 12 federally recognized tribes with an interest in the region, USACE provided project documentation, evaluated cultural resources potential in the project area, and found that the HSDRRS actions had no impact on historic properties with the implementation of the USACE avoidance measures. Section 106 consultation for the HSDRRS projects was then concluded.

A comprehensive summary of these studies, identified cultural resources, and previous Section 106 consultation for HSDRRS construction are presented in IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33 and compiled and summarized in the Comprehensive Environmental Document Phase 1. <https://www.mvn.usace.army.mil/Missions/Environmental/NEPA-Compliance-Documents/HSDRRS-Projects/>.

Consultation History

On December 9, 2019, consultation initiation letters for the LPV/WBV GRR study were sent to the Louisiana SHPO and Alabama-Coushatta Tribe of Texas (ACTT); Caddo Nation (CN); Chitimacha Tribe of Louisiana (CTL); Choctaw Nation of Oklahoma (CNO); Coushatta Tribe of Louisiana (CT); Jena Band of Choctaw Indians (JBCI); Mississippi Band of Choctaw Indians (MBCI); Muscogee (Creek) Nation (MCN); Quapaw Tribe of Oklahoma (QTO); Seminole Nation of Oklahoma (SNO); Seminole Tribe of Florida (STF); and Tunica-Biloxi Tribe of Louisiana (TBTL), (Tribes). The letters outlined how the proposed LPV/WBV levee lifts would fit within the previous consultations conducted for the individual IERs and that new potential impacts would be subjected to standard Section 106 of the NHPA review procedures.

After sending the initiation letter, USACE determined that the new potential impacts of the LPV/WBV GRR could be addressed by the programmatic agreement being developed for the Mississippi River Levee Supplemental Environmental Impact Statement (MRL SEIS II).

At a meeting on January 15, 2020, USACE proposed to consulting parties the concept of folding the LPV/WBV GRR study into the MRL SEIS PA to avoid a duplication of effort and the creation of redundant agreement documents. LPV/WBV GRR inclusion within the PA was included in discussions during the next 8 consultation meetings and the final update meeting. No party objected. The MRL SEIS II PA was developed over the course of 2020 including the inclusion of LPV/WBV GRR into the document and was executed on March 4, 2021.

Determinations

CEMVN has determined a majority of actions proposed under the LPV/WBV Study were made compliant with section 106 of the NHPA through various IER consultations (IERs #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #27, and #33); and, pursuant to 36 CFR 800.4 (2) and 800.5(3), CEMVN has phased the identification, evaluation, and determination of effects through implementing the provisions of the MRL SEIS II PA. Most of the proposed actions would be occurring within the existing HSDRSS footprint. These areas have all been subject to surveys as part of previous investigations, including the areas of shoreline protection and dredging on Lake Pontchartrain. All potential work in these areas would be subject to the implementation of the avoidance measures established in the original HSDRSS IER consultations. Therefore, CEMVN has determined a finding of **No Adverse Effect to Historic Properties** for work within these areas and is submitting it to you for your review and comment. The MRL levee work that was not part of the previous HSDRRS IERs, would be subject to further review and follow the processes established as part of the MRL SEIS II PA. CEMVN requests your comments within 30 days.

We look forward to your concurrence with this determination. Should you have any questions or need additional information regarding this undertaking, please contact Noah Fulmer at 504-862-1983, or by email at noah.i.fulmer@usace.army.mil, with any questions or concerns you may have regarding this project.

Sincerely,

for MARSHALL K. HARPER
Chief, Environmental Planning Branch

CC: File

An electronic copy of this letter with enclosures will be provided to the Section 106 Inbox, section106@crt.la.gov.

Enclosures