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

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

MISSISSIPPI RIVER AND TRIBUTARIES, MISSISSIPPI RIVER LEVEES LOWER WEST MISSISSIPPI RIVER SEEPAGE CONTROL ASCENSION PARISH, LOUISIANA

ENVIRONMENTAL ASSESSMENT #569

Description of the Proposed Action

The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has prepared draft Environmental Assessment (EA) #569 for the New Orleans District (CEMVN) to evaluate potential impacts of installing 15 passive relief wells to collect seepage during high water stages on the Mississippi River and four removable electric-powered pumps to return the seepage water collected from the wells back to the River (the relief wells, pumps, slabs, hoses, pipes, and other related features are collectively referred to herein as the "Work"). The relief wells and pumps would be located on the landside toe of the existing west bank Mississippi River levee (MRL) adjacent to Louisiana Highway 405 in the township of Modeste, Ascension Parish, Louisiana.

The construction of 15 passive relief wells along the west bank of the Mississippi River ("River") would require boring a series of fifteen (15), eight (8") inch diameter holes, approximately 100 feet below the existing landside MRL toe surface elevation. The relief wells would be spaced approximately 200 feet apart in locations that will avoid impacting any existing utilities and levee access ramps. Portions of an existing Louisiana Department of Transportation and Development drainage ditch, which is located in the existing MR&T Project right-of-way between the landside MRL toe and Louisiana Highway 405, would have to be excavated to remove existing surface vegetation and erosional fill within cross-sectional areas of the ditch. The drainage ditch would be re-graded at various locations to an appropriate depth to collect the outflow from the seepage wells and to allow the pumps to be used to return the seepage water back to the River without compromising the ability and capacity of the drainage ditch to collect and store storm water run-off from the adjacent MRL. Concrete slabs with electric service hook-ups (pump control boxes), would be constructed within the existing Project right-of-way, for the placement of the relief wells. Each slab would measure six feet in length by six feet in width and would be four inches thick. During periods of high water, four portable electric-powered pumps would be used to convey the seepage water discharged from the relief wells back over the MRL and into the River. New

conduits to provide electric service to the pump control boxes affixed to the concrete slabs, would be installed by directionally drilling under Louisiana Highway 405, with the electric conduit originating from an existing electrical power source located on the west side of Louisiana Highway 405. Each well will include a permanent 12 inch HDPE discharge line (15 total) installed above the existing levee section (ground surface) with ductile iron end sections and concrete slope paving at the intake and discharge transitions. The permanent discharge lines would be covered with 12 inches of compacted fill, which would be obtained by the contractor from any commercially available source. During periods of high water, the outflow from the seepage wells would be monitored by Atchafalaya Basin Levee District personnel who would deploy the portable pumps to be used to pump the excess water from the ditch, over the MRL and into the River through removable eight inch flexible discharge hoses. When the portable pumps are deployed for seepage water pumping purposes, the pumps would be connected to the wells as needed. The anticipated pumping capacity is 1,000 gallons per minute at the designated total dynamic head. The total discharge volume (i.e., seepage water pumped back over the MRL and into the River) would vary based upon how much seepage is flowing into the drainage ditch.

All staging, construction, and maintenance access for the construction of this Work would be confined to the existing MR&T Project right-of-way, and Louisiana Department of Transportation and Development (LA DOTD) right-of-way. The portable pumps, discharge hoses, and electrical cables would be stored offsite to prevent vandalism and environmental exposure and would be deployed as necessary during high river stages. Due to the proximity of both the relief wells and pumps, while in use, to Louisiana Highway 405, guard rails would be installed along Louisiana Highway 405 in accordance with LA DOTD standards.

Factors Considered in Determination

This office has assessed the impacts of the Federal action on important resources including: aquatic resources/fisheries, wildlife, threatened or endangered species, cultural resources, recreation resources; visual resources (aesthetics); air quality, and water quality. The no action alternative was also assessed. The New Orleans District concluded that construction of 15 seepage relief wells along the landside toe of the existing west bank MRL in Modeste, Ascension Parish, Louisiana, and the use of four portable electric-powered pumps to convey seepage water discharged from the relief wells back over the levee and into the river would not result in any significant adverse impacts to the previously listed resources. The proposed action would have minimal temporary impacts to wildlife and recreation resources; however, it is expected the area would return to pre-existing conditions soon after completion of the project. A permanent visual impact to the levee would occur with the construction of a guard rail along Louisiana State Highway 405. Overall, the proposed action structures would blend with typical man-made features of the levee, which would be consistent with other areas along the MRL that either have seepage relief wells or guard rails for safety.

Additionally, the risk of encountering hazardous, toxic and radioactive waste is considered low.

CEMVN determined that there are two historic properties within the Work area, as defined in 36 CFR 800.16(l), that possess those qualities of significance and integrity as defined by the NRHP Criteria for Evaluation (36 CFR 60.4 [a-d]) under Criteria A and D; 16AN69 (Babin Place) and 16AN70 (Modeste Place) and that the LWMSCP, as proposed, would directly affect portions of these archaeological sites includes ground disturbing activities that would affect the historic property in a way that would directly affect the characteristics that make the property eligible for the NRHP and per 36 CFR 800.6 constitute an adverse effect. CEMVN considered ways to revise the Scope of Work to substantially conform to the standards, and/or avoid or minimize adverse effects for National Register listed archaeological properties. As a result, the proposed SOW was re-examined, and CEMVN determined that alternate construction measures (see: Section 2.2) would not be effective and that it would be impossible to avoid adversely effecting those portions of Sites 16AN69 and 16AN70.

Accordingly, on December 31, 2018, CEMVN submitted a finding of “Historic Properties Adversely Affected” for this Undertaking to the Louisiana State Historic Preservation Officer of the Department of Culture Recreation and Tourism (SHPO), Atchafalaya Basin Levee District (non-federal sponsor), the Alabama-Coushatta Tribe of Texas (ACTT), Caddo Nation of Oklahoma (CN), the Choctaw Nation of Oklahoma (CNO), the Coushatta Tribe of Louisiana (CT), Chitimacha Tribe of Louisiana (CTL), the Jena Band of Choctaw Indians (JBCI), the Mississippi Band of Choctaw Indians (MBCI), Muscogee Creek Nation (MCN), the Seminole Nation of Oklahoma (SNO), Seminole Tribe of Florida (STF), the Tunica-Biloxi Tribe of Louisiana (TBTL), and ACHP (Appendix C), in which CEMVN recommended that the adverse effects to Sites 16AN69 and 16AN70 could be minimized through archaeological monitoring during ditch re-contouring and mitigated by documenting the significance of these resources through the development of an educational or public interpretive plan, as provided for in a Memorandum of Agreement (MOA), developed in consultation with SHPO, participating Tribes, and others, as appropriate (forthcoming). CEMVN would include stipulations within the MOA that provide for the treatment of unanticipated discoveries and human burials.

Environmental compliance for the Federal action would be achieved upon: coordination of the draft Environmental Assessment and draft Finding of No Significant Impact with appropriate agencies, organizations, tribal representatives and individuals for their review and comments; U.S. Fish and Wildlife Service confirmation that the proposed action would have no effect on any threatened or endangered species; consultation of CEMVN’s finding of “Historic Properties Adversely Affected” to the LA SHPO, affected Tribes, and the ACHP to be resolved though a MOA, developed in consultation with LA SHPO, participating Tribes, and others, as appropriate; and receipt and acceptance or resolution of all Louisiana Department of Environmental Quality

comments on the air quality impact analysis documented in the Environmental Assessment. The Finding of No Significant Impact would not be signed until the Federal action achieves environmental compliance with applicable laws and regulations, as described above.

Environmental Design Commitments

The following commitments are an integral part of the proposed action:

1 If the proposed action is changed significantly or is not implemented within one year, the New Orleans District would reinitiate consultation with the U.S. Fish and Wildlife Service (USFWS) to ensure that the proposed action would have no effect on any Federally-listed threatened or endangered species, critical habitat or USFWS trust resources.

2 **Inadvertent Discovery and Unexpected Effects:** If during the course of work, archaeological artifacts (prehistoric or historic) are discovered or unexpected effects to historic properties, including architecture, architectural elements, and/or archaeology, are identified, the contractor shall stop work in the general vicinity of the discovery or unexpected effect and take all reasonable measures to avoid or minimize harm to the finds or affected property. The contractor would ensure that the discovery or unexpected effects are secured and stabilized, as necessary, and access to the area is restricted. The contractor shall inform their Operations Division (OD) contacts at USACE, who would in turn contact Planning Division (PD) staff. The contractor would not proceed with work until USACE PD completes consultation with the Louisiana SHPO, and others, as appropriate.

3 **Louisiana Unmarked Human Burial Sites Preservation Act:** If human bone or unmarked grave(s) are present within the Work area, compliance with the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671 et seq.) is required. The contractor shall notify the law enforcement agency of the jurisdiction where the remains are located within twenty-four hours of the discovery. The contractor shall also notify USACE and the Louisiana Division of Archaeology within seventy-two hours of the discovery. Discoveries of unmarked graves, burials, human remains, or items of cultural patrimony on Federal or Tribal lands shall be subject to 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).

Conclusion

This office has evaluated the potential environmental impacts of the proposed action in Environmental Assessment #569 (incorporated herein by reference). The proposed action would accomplish flood risk management objectives, which are of great importance in the Lower Mississippi Valley, and would ensure the ability of the levee to prevent flood damage to the natural and human environment on the land side of the levee as well as provide for the preservation and enhancement of the very significant fish, wildlife, and other natural resources of the Barataria Basin. Based on this assessment, a review of the comments made on draft Environmental Assessment #569, and the implementation of the environmental design commitments listed above, a determination has been made that the proposed action would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

Date

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

DRAFT ENVIRONMENTAL ASSESSMENT

MISSISSIPPI RIVER AND TRIBUTARIES

MISSISSIPPI RIVER LEVEES

LOWER WEST MISSISSIPPI RIVER SEEPAGE CONTROL

ASCENSION PARISH, LOUISIANA

EA #569

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

Table of Contents

FIGURES

TABLES

APPENDICES

DRAFT ENVIRONMENTAL ASSESSMENT

MISSISSIPPI RIVER AND TRIBUTARIES

MISSISSIPPI RIVER LEVEES

LOWER WEST MISSISSIPPI RIVER SEEPAGE CONTROL

ASCENSION PARISH, LOUISIANA

EA #569

1. INTRODUCTION

1.0 The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has prepared this draft Environmental Assessment (EA) for the New Orleans District (CEMVN) to evaluate potential impacts of installing 15 passive relief wells to collect seepage during high water stages on the Mississippi River and four removable electric-powered pumps to return the seepage water collected from the wells back to the River (the relief wells, pumps, slabs, hoses, pipes, and other related features are collectively referred to herein as the "Work"). The relief wells and pumps would be located on the landside toe of the existing west bank Mississippi River levee (MRL) adjacent to Louisiana Highway 405 in the township of Modeste, Ascension Parish, Louisiana (Figure 1). This draft EA has been prepared in accordance with the National Environmental Policy Act of 1969 and the Council on Environmental Quality's Regulations (40 CFR 1500-1508), as reflected in the USACE Engineering Regulation ER 200-2-2. This draft EA provides sufficient information on the potential adverse and beneficial environmental effects to allow the District Commander, USACE, CEMVN, to make an informed decision on the appropriateness of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.1 PROPOSED ACTION

1.1.1 The construction of 15 passive relief wells along the west bank of the Mississippi River ("River") would require boring a series of fifteen (15), eight (8") inch diameter holes, approximately 100 feet below the existing landside MRL toe surface elevation (Figure 2). The relief wells would be spaced approximately 200 feet apart in locations that will avoid impacting any existing utilities and levee access ramps. Portions of an existing Louisiana Department of Transportation and Development drainage ditch, which is located in the existing MR&T Project right-of-way between the landside MRL toe and Louisiana Highway 405, would have to be excavated to remove existing surface vegetation and erosional fill within cross-sectional areas of the ditch. The drainage ditch would be re-graded at various locations to an appropriate depth to collect the outflow from the seepage wells and to allow the pumps to be used to return the seepage water back to the River without compromising the ability and capacity of the drainage ditch to collect and store storm water run-off from the adjacent MRL. Concrete slabs with electric service hook-ups (pump control boxes), would be constructed within the existing Project right-of-way, for the placement of the relief wells. Each slab would measure six feet in length by six feet in width and would be four inches thick. During periods of high water, four portable electric-powered pumps would be used

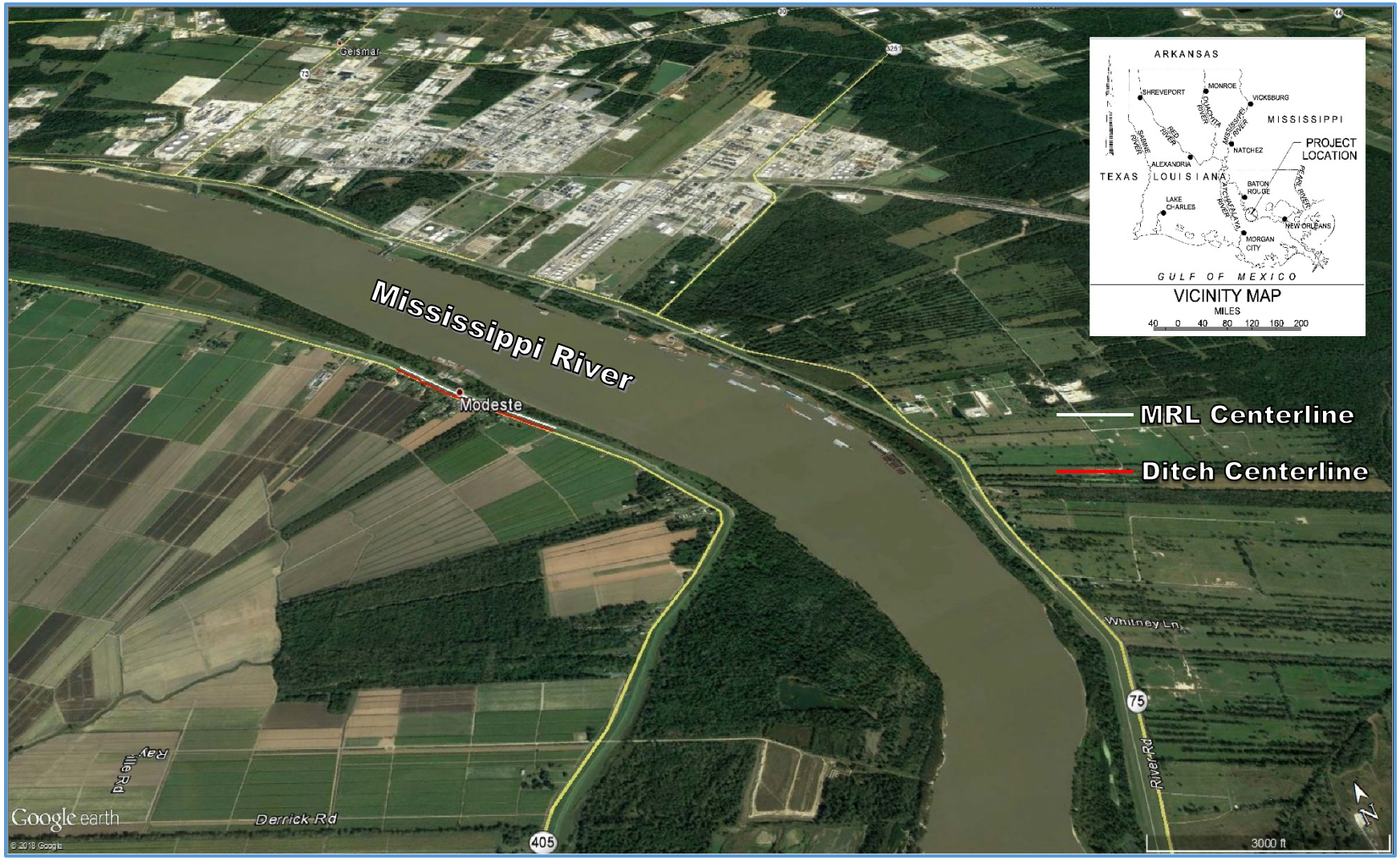

Figure 1: MRL, Lower West Mississippi River Seepage Control, Vicinity Map

Figure 2: MRL, Lower West Mississippi River Seepage Control, Approximate Location of Relief Wells Map

to convey the seepage water discharged from the relief wells back over the MRL and into the River. New conduits to provide electric service to the pump control boxes affixed to the concrete slabs, would be installed by directionally drilling under Louisiana Highway 405, with the electric conduit originating from an existing electrical power source located on the west side of Louisiana Highway 405. Each well will include a permanent 12 inch HDPE discharge line (15 total) installed above the existing levee section (ground surface) with ductile iron end sections and concrete slope paving at the intake and discharge transitions (Figure 3). The permanent discharge lines would be covered with 12 inches of compacted fill, which would be obtained by the contractor from any commercially available source. During periods of high water, the outflow from the seepage wells would be monitored by Atchafalaya Basin Levee District personnel who would deploy the portable pumps to be used to pump the excess water from the ditch, over the MRL and into the River through removable eight inch flexible discharge hoses. When the portable pumps are deployed for seepage water pumping purposes, the pumps would be connected to the wells as needed. The anticipated pumping capacity is 1,000 gallons per minute at the designated total dynamic head. The total discharge volume (i.e., seepage water pumped back over the MRL and into the River) would vary based upon how much seepage is flowing into the drainage ditch.

All staging, construction, and maintenance access for the construction of this Work would be confined to the existing MR&T Project right-of-way, and Louisiana Department of Transportation and Development (LA DOTD) right-of-way. The portable pumps, discharge hoses, and electrical cables would be stored offsite to prevent vandalism and environmental exposure and would be deployed as necessary during high river stages. Due to the proximity of both the relief wells and pumps, while in use, to Louisiana Highway 405, guard rails would be installed along Louisiana Highway 405 in accordance with LA DOTD standards.

1.2 AUTHORITY

1.2.1 The proposed action was authorized by the Flood Control Act of 1928 (Public Law 70-391), as amended, including but not limited to, the Flood Control Act of 1936 (Public Law 74-738), the Flood Control Act of 1938 (Public Law 75-761), the Flood Control Act of 1941 (Public Law 77-228), the Flood Control Act of 1946 (Public Law 79-526), the Flood Control Act of 1950 (Public Law 81-516), the Flood Control Act of 1954 (Public Law 83-780), the Flood Control Act of 1962 (Public Law 87-874), the Flood Control Act of 1965 (Public Law 89-298), the River and Harbor and Flood Control Act of 1968 (Public Law 90-483), and the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662).

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.3.1 The purpose of the proposed action is to continue providing flood risk management resulting from Mississippi River high water events to valuable land uses including, but not limited to, residential and agricultural resources located on the west bank of the MRL in Ascension Parish, Louisiana. During periods of high water on the Mississippi River, the proposed Work would manage seepage flow to improve levee stability to protect environmental resources, infrastructure, and navigation.

1.4 PRIOR NEPA DOCUMENTS

1.4.1 Environmental impacts for previously identified Mississippi River and Tributaries (MR&T) Project features, including Mississippi River levees and floodwalls, were originally addressed in the 1976 Final Environmental Impact Statement (FEIS), "*Mississippi River and Tributaries Mississippi River Levees and Channel Improvement*." A Statement of Findings was signed by Major General Ernest Graves, USACE, Director of Civil Works, on April 4, 1976.

1.5 PUBLIC CONCERNS

1.5.1 Since the great flood of 1927, there has been widespread public concern for flood control along the Mississippi River to protect environmental resources, infrastructure, and navigation. Throughout history, special emphasis has been placed on the construction and maintenance of channel training devices such as levees. The flood control plan of the MR&T Project is designed to control the Mississippi River "Project Design Flood," which is a theoretical flood greater than the great flood of 1927. The comprehensive flood control plan includes several features that protect a large part of the alluvial valley from the Project Design Flood, with a major element of this plan being levees for the containment of flood flows.

1.5.2 The comprehensive MR&T Project has four major features: levees and floodwalls to contain flood flows; floodways to pass excess flows past critical Mississippi River reaches; channel improvement and stabilization to provide efficient navigation alignment, increased flood-carrying capacity and protection of the levee system; and tributary basin improvements. The MR&T Project in the alluvial valley between Cape Girardeau, Missouri, and Head of Passes, Louisiana, provides protection from floods by means of levees, floodwalls, flood ways, reservoirs (in Yazoo and St. Francis basins), bank stabilization and channel improvements in and along the river and its tributaries and outlets insofar as affected by backwater of the Mississippi River.

1.5.3 Historically, the Mississippi River Levees feature has been under construction since 1928 and the engineering, construction, and operation and maintenance capability exists to continue work on the MR&T Project for the foreseeable future. The Mississippi River mainline levees were first constructed by settlers at New Orleans in the early 1700s. Federal construction of the Mississippi River mainline levees began shortly after the passage of the Flood Control Act of 1928 and has continued ever since. The Mississippi River mainline levees protect the lower Mississippi River valley against the Project Design Flood by confining flow to the leveed channel, except where it enters backwater areas, allowing the overflow of several levees designed to overtop and fill tributary basins, or diverting flow into four Project floodway areas. The mainline levee system, comprised of levees, floodwalls, and various control structures, is approximately 1,610 miles long.

Figure 3: Typical relief well with a diameter of 8 inches standing approximately 20 inches above ground. A concrete pad (not shown in this picture) would be present to direct flow from the well.

2. ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 ALTERNATIVE 1 – NO ACTION

2.1.1 In the future without project condition (a.k.a. no-action), the proposed action would not be constructed. Without the proposed improvements to the designated levee reaches there exists an increased risk of damage to the west bank along the Mississippi River mainline levees near the Town of Modeste, Louisiana in Ascension Parish during high river periods typically ranging from early March to June as well as during hurricane season beginning in June and lasting until mid-November.

2.2 ALTERNATIVE 2 – SEEPAGE CUT-OFF WALL

2.2.1 The seepage cut-off wall alternative consists of installing type PZ-27 sheet pile along the existing centerline of the MRL to cut off ongoing seepage within the Work Area (Figure 1). The proposed work would occur on the crown and side slopes. In order to prepare the site, it is expected that heavy construction equipment such as excavators and bulldozers, would excavate two to three feet of the existing crown surface and sheet pile would be driven to an appropriate depth to cut-off seepage flow during periods of high water. This alternative was not considered to be reasonable due to the inability to drive sheet pile to the required depth to cut-off ongoing seepage, and therefore was not carried forward for further analysis.

2.3 ALTERNATIVE 3 – PROPOSED ACTION

2.3.1 The proposed action consists of constructing 15 passive relief wells to collect seepage during high water stages on the Mississippi River and four removable electric-powered pumps to return the seepage water collected from the wells back to the River (the relief wells, pumps, slabs, hoses, pipes, and other related features are collectively referred to herein as the "Work"). The relief wells and pumps would be located on the landside toe of the existing west bank MRL adjacent to Louisiana Highway 405 in the township of Modeste, Ascension Parish, Louisiana. The construction of 15 passive relief wells along the west bank of the Mississippi River ("River") would require boring a series of fifteen (15), eight (8") inch diameter holes, approximately 100 feet below the existing landside MRL toe surface elevation (Figure 2). The relief wells would be spaced approximately 200 feet apart in locations that will avoid impacting any existing utilities and levee access ramps. Portions of an existing Louisiana Department of Transportation and Development drainage ditch, which is located in the existing MR&T Project right-of-way between the landside MRL toe and Louisiana Highway 405, would have to be excavated to remove existing surface vegetation and erosional fill within cross-sectional areas of the ditch. The drainage ditch would be re-graded at various locations to an appropriate depth to collect the outflow from the seepage wells and to allow the pumps to be used to return the seepage water back to the River without compromising the ability and capacity of the drainage ditch to collect and store storm water run-off from the adjacent MRL. Concrete slabs with electric service hook-ups (pump control boxes), would be constructed within the existing Project right-of-way, for the placement of the relief wells. Each slab would measure six feet in length by six feet in width and would be four inches thick. During periods of high water, four portable electric-powered pumps would be used to convey the seepage water discharged from the relief wells back over the MRL and into the River. New conduits to provide electric service to the pump control boxes affixed to the concrete slabs, would be installed by directionally drilling under Louisiana Highway 405, with the electric conduit originating from an existing electrical power source located on the west side of Louisiana Highway

405. Each well will include a permanent 12 inch HDPE discharge line (15 total) installed above the existing levee section (ground surface) with ductile iron end sections and concrete slope paving at the intake and discharge transitions (Figure 3). The permanent discharge lines would be covered with 12 inches of compacted fill, which would be obtained by the contractor from any commercially available source. During periods of high water, the outflow from the seepage wells would be monitored by Atchafalaya Basin Levee District personnel who would deploy the portable pumps to be used to pump the excess water from the ditch, over the MRL and into the River through removable eight inch flexible discharge hoses. When the portable pumps are deployed for seepage water pumping purposes, the pumps would be connected to the wells as needed. The anticipated pumping capacity is 1,000 gallons per minute at the designated total dynamic head. The total discharge volume (i.e., seepage water pumped back over the MRL and into the River) would vary based upon how much seepage is flowing into the drainage ditch. During periods of high water on the Mississippi River, the proposed Work would manage seepage flow to improve levee stability to protect environmental resources, infrastructure, and navigation and was therefore carried forward for further analysis.

3. AFFECTED ENVIRONMENT

3.1 DESCRIPTION OF PROJECT AREA

3.1.1 The Work will be performed within the Mississippi River deltaic plain, with the Mississippi River acting as the primary influence on geomorphic processes in the delta region in the existing MR&T Project Area and right-of-way. The Mississippi River Levees are designed to protect the alluvial valley against the project design flood by confining flow between the levees with the exception of areas where it enters the natural backwater areas or is diverted purposely into floodway areas. The MRL System consists of levees and floodwalls along the river, floodways and control structures. The levee on the west bank begins just south of Cape Girardeau, Missouri, and extends to Venice, Louisiana.

3.1.2 Ascension Parish is located in the southeastern part of Louisiana, approximately 15 miles southeast of Baton Rouge. The Parish has a total area of 303 square miles, with approximately 292 square miles comprised of land and the remaining 11 square miles consisting of water. The Parish contains a variety of suburban, agricultural and industrial development. Suburban areas are situated to the north and northwest portions of the parish bordering East Baton Rouge, while the agricultural and industrial developments exist primarily along the Mississippi River. The parish contains three incorporated areas, including the parish seat, located in the central and southern part of the parish (Donaldsonville, Gonzales and Sorrento). The Mississippi River meanders across the southwestern part of the parish and flows from northwest to southeast. Elevations within the parish range from about 30 feet above sea level in the northwestern part to less than one foot above sea level in the low, back swamp areas in the southeastern part. According to U.S. Census data, the parish had a population of 122,948 in 2017, and it is considered to be one of the fastest growing parishes in the state.

3.1 DESCRIPTION OF THE WATERSHED

3.2.1 A watershed is an area of land drained by a particular set of streams and rivers. Of the twelve major watersheds within Louisiana, the proposed Work is located within the Barataria Basin along the west bank Mississippi River levee in Ascension Parish, Louisiana (Figure 4). The upper Barataria Basin was formed approximately 3,500-4,000 years ago as part of the Lafourche Delta complex. Encompassing approximately 300,000 acres, it is bordered on the north and east

by the levees of the Mississippi River, which were constructed after the flood of 1927, on the west by Bayou Lafourche and on the south by the Gulf of Mexico. The Basin is mainly comprised of the following 4 terrestrial habitat types: ag-crop-grasslands (primarily sugarcane), bottomland hardwood forests, cypress-tupelo swamps, and coastal marshes which range from fresh to salt water. Almost all freshwater input is from local precipitation with minor inflow from the Greater Intracoastal Waterway (LaCoast 2005). Wetland loss due to coastal erosion is a major environmental issue affecting the Basin (LDWF 2005).

3.2 CLIMATE

3.3.1 The climate in the Work Area is humid, subtropical with a strong maritime character. Warm, moist southeasterly winds from the Gulf of Mexico prevail throughout most of the year, with occasional cool, dry fronts dominated by northeast high pressure systems. The influx of cold air occurs less frequently in autumn and only rarely in summer. Tropical storms and hurricanes are likely to affect the area 3 out of every 10 years, with severe storm damage approximately once every 2 or 3 decades. The majority of these occur between early June and November. The largest recent hurricanes were Katrina and Rita in 2005 which caused damage in the Work area. Hurricanes Gustav and Ike in 2008, and more recently, Isaac in 2012, caused additional damage in the Work area. Summer thunderstorms are common, and tornadoes strike occasionally. Average annual temperature in the area is 67°F, with mean monthly temperatures ranging from 82°F in August to 52°F in January. Average annual precipitation is 57.0 inches, varying from a monthly average of 7.5 inches in July, to an average of 3.5 inches in October. (http://www.srcc.lsu.edu/).

3.3 GEOLOGY

3.4.1 The Work Area lies on the flood and protected side of the modern Mississippi River levee. Fluvial activity in Work Area includes lateral migration and overbank deposition during flood stages. This activity is the dominant geologic process operating on the landscape in this region. The formation of natural levees, point bar deposits, and other geomorphic features such as crevasse channels and abandoned river courses has been documented.

3.4.2 The Mississippi River Delta complex was formed by river deposits between 700 and 7,400 years ago. The Natural Resources Conservation Service (NRCS) classifies soils within the proposed Work area as typically peat, mucks, and clays mixed with organic matter, and silts derived from river deposits. The soil composition is subject to change as floodwaters and storm surges deposit new sediments. They are composed predominantly by Balize and Larose soil types. These soils are classified as continuously flooded deep, poorly drained and permeable mineral clays and mucky clays. Marsh and swamp deposits are found in the vicinity of the River from New Orleans to the Heads of Passes at the Gulf of Mexico. Marsh deposits are primarily organic, consisting of 60 percent or more by volume of peat and other organic material with the remainder being a composition of various types of clays. Total organic thickness is normally 10 feet, with variances less than one foot. Inland swamp deposits are composed of approximately 70 percent clay and 30 percent peat and organic materials. The percentage of sand and sandy silts increases with proximity to the open waters of the Gulf of Mexico (Saucier 1974).

Figure 4: Louisiana River Basins (Map provided by Louisiana Department of Environmental Quality. The Barataria Basin is shown in light green. The location of the Work is represented by a red star.

3.4 RELEVANT RESOURCES

3.5.1 This section contains a description of relevant resources that could be impacted by the Work. The important resources described are those recognized by laws, executive orders, regulations, and other standards of National, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Table 1 provides summary information of the institutional, technical, and public importance of these resources.

3.5.2 The following resources have been considered and found to not be affected by the proposed action: wetlands; soils and water bottoms; estuarine water bodies; estuarine or marine fisheries resources, including essential fish habitat; and socioeconomic resources, land use, population, transportation, oil and gas, environmental health and safety, community cohesion, desirable community growth, tax revenues, property values, public facilities and services, business activity and employment, and displacement of people. The objectives of Executive Order 11988 (Floodplain Management) were considered; however, CEMVN has determined that floodplain impacts, if any, from the proposed action would be mainly positive. Additionally, there is no practicable alternative for construction outside the 100-year floodplain. No portion of the Work area has been designated a Louisiana Natural and Scenic River; therefore, a Scenic Rivers permit is not warranted. Environmental Justice was considered because of Executive Order

12898 of 1994 and the Department of Defense's Strategy on Environmental Justice of 1995, which direct Federal agencies to identify and address any disproportionately high adverse human health or environmental effects of Federal actions to minority and/or low-income populations. However, no significant populations or residential areas would be effected by the proposed action. No appreciable terrestrial resources are found within the proposed Work area as it is a maintained (mowed) levee and ditch. No Jurisdictional Waters of the U.S. (including wetlands) are found within the proposed Work area. No Prime or unique farmlands would be adversely effected by the proposed action. Further, the proposed action is located outside the Louisiana Coastal Zone.

3.5.3 The following relevant resources are discussed in this draft EA: aquatic resources/fisheries, wildlife, threatened or endangered species, cultural resources, recreation resources; visual resources (aesthetics); air quality, and water quality.

Table 1: Relevant Resources

Resource	Institutionally Important	Technically Important	Publicly Important
Aquatic Resources/ Fisheries	Fish and Wildlife Coordination Act of 1958, as amended; Clean Water Act of 1977, as amended; Coastal Zone Management Act of 1972, as amended; and the Estuary Protection Act of 1968.	They are a critical element of many valuable freshwater and marine habitats; they are an indicator of the health of the various freshwater and marine habitats; and many species are important commercial resources.	The high priority that the public places on their esthetic, recreational, and commercial value.
Wildlife	Fish and Wildlife Coordination Act of 1958, as amended and the Migratory Bird Treaty Act of 1918	They are a critical element of many valuable aquatic and terrestrial habitats; they are an indicator of the health of various aquatic and terrestrial habitats; and many species are important commercial resources.	The high priority that the public places on their esthetic, recreational, and commercial value.
Threatened or Endangered Species	The Endangered Species Act of 1973, as amended; the Marine Mammal Protection Act of 1972; and the Bald Eagle Protection Act of 1940.	USACE, USFWS, NMFS, NRCS, EPA, LDWF, and LDNR cooperate to protect these species. The status of such species provides an indication of the overall health of an ecosystem.	The public supports the preservation of rare or declining species and their habitats.
Cultural Resources	National Historic Preservation Act of 1966, as amended; the Native American Graves Protection and Repatriation Act of 1990; and the Archeological Resources Protection Act of 1979	State and Federal agencies document and protect sites. Their association or linkage to past events, to historically important persons, and to design and construction values; and for their ability to yield important information about prehistory and history.	Preservation groups and private individuals support protection and enhancement of historical resources.
Recreation Resources	Federal Water Project Recreation Act of 1965 as amended and Land and Water Conservation Fund Act of 1965 as amended	Provide high economic value of the local, state, and national economies.	Public makes high demands on recreational areas. There is a high value that the public places on fishing, hunting, and boating, as measured by the large number of fishing and hunting licenses sold in Louisiana; and the large per-capita number of recreational boat registrations in Louisiana.
Visual Resources (Aesthetics)	USACE ER 1105-2-100, and National Environmental Policy Act of 1969, the Coastal Barrier Resources Act of 1990, Louisiana's National and Scenic Rivers Act of 1988, and the National and Local Scenic Byway Program.	Visual accessibility to unique combinations of geological, botanical, and cultural features that may be an asset to a study area. State and Federal agencies recognize the value of beaches and shore dunes.	Environmental organizations and the public support the preservation of natural pleasing vistas.
Air Quality	Clean Air Act of 1963, Louisiana Environmental Quality Act of 1983.	State and Federal agencies recognize the status of ambient air quality in relation to the NAAQS.	Virtually all citizens express a desire for clean air.
Water Quality	Clean Water Act of 1977, Fish and Wildlife Coordination Act, Coastal Zone Mgt Act of 1972, and Louisiana State & Local Coastal Resources Act of 1978.	USACE, USFWS, NMFS, NRCS, EPA, and State DNR and wildlife/fishery offices recognize value of fisheries and good water quality and the national and state standards established to assess water quality.	Environmental organizations and the public support the preservation of water quality and fishery resources and the desire for clean drinking water.

3.5 AQUATIC RESOURCES/FISHERIES

3.6.1 General Existing Conditions. The proposed action will occur on the landside of the levee adjacent to the Mississippi River. The largest aquatic resource in proximity to the Work area is that portion of the main stem of the Mississippi River. Aquatic habitat can be found within the Mississippi River, adjacent borrow areas, and associated wetlands. This vast area is inherently low in primary productivity on a per acre basis because of high turbidity and has relatively poor benthic productivity because of shifting substrates and high current velocities in the area. The deep main River channel is the habitat of large predaceous fishes, some plankton feeders, and a group of omnivorous species.

3.6.2 Large predaceous fishes, plankton feeders and a group of omnivorous species inhabit the deep main River channel. Minnow, catfishes, carp, carpsuckers, and sunfishes are some of the fishes that may be found in the vicinity of the Work area. Clams, dipterans, and mayflies are some of the area's representative invertebrates.

3.6.3 Several man-made, roadside ditches are found within the Work area. These ditches do not seasonally hold water and would therefore not be considered aquatic resources. These ditches do drain into larger man-made ditches traversing Louisiana Highway 405. Eventually, the man-made ditches reach a series of culverts and associated canals, which handle both rain fall and agricultural runoff as a local drainage feature.

3.6 WILDLIFE

3.7.1 General Existing Conditions. Developed habitats in the vicinity of the area of the Work include residential and agricultural areas, as well as roads and existing levees. Agricultural lands occur throughout the landside area; agriculture includes sugarcane farming, cattle production, and haying.

3.7.2. Forested wetlands on the flood side of the MRL provide habitat for many wildlife species including raccoons, opossum, fox, mink, and rabbits, and bats. Many species of neotropical migratory and resident birds utilize this type of habitat for nesting and rearing. In addition, many species of reptiles and amphibians can be found in this area. The landside toe of the MRL levee provides limited wildlife habitat and no aquatic habitat. The MRL is frequently mowed. Some resident animals likely traverse the levee while foraging at night.

3.7.3 Mammals that adapt in varying degrees to periodically wet riparian or early successional bottomland hardwood habitat are likely to inhabit or frequent land adjacent to the Work area. Beaver, swamp rabbit, nutria, muskrat, gray squirrel, fox squirrel, and white-tailed deer are likely present in the vicinity of the Work. Woodlots in the batture also provide habitat for many resident passerine birds and essential resting areas for many migratory songbirds including warblers, orioles, thrushes, vireos, tanagers, grosbeaks, buntings, flycatchers, and cuckoos. Many of these and other passerine birds have undergone a decline in population primarily due to habitat loss. The area also supports resident hawks and owls including the red-shouldered hawk, barn owl, common screech owl, great horned owl, and barred owl. The red-tailed hawk, marsh hawk, and American kestrel are seasonal residents which utilize habitats within the vicinity of the Work area. Amphibians such as the pig frog, bullfrog, leopard frog, cricket frog, and Gulf coast toad are expected to occur in the fresh and low salinity wetlands adjacent to the Work area. Reptiles such as the snapping turtle, soft-shell turtle, and red-eared turtle are also expected to occur in the wetlands and water bodies adjacent to the Work area.

3.7 THREATENED OR ENDANGERED SPECIES

3.8.1 General Existing Conditions. The U.S. Fish and Wildlife Service (USFWS) lists four threatened or endangered species that may occur in Ascension Parish: West Indian manatee *(Trichechus manatus)* (threatened), pallid sturgeon *(Scaphirhynchus albus)* (endangered), Atlantic sturgeon (*Acipenser oxyrinchus desotoi*) (threatened), and Alabama heelsplitter mussel (*Potamilus inflatus*) (threatened) (USFWS 2017).

3.8.2 West Indian manatees can be found in shallow, slow-moving rivers, estuaries, salt-water bays, canals, and coastal areas (LDWF, 2012). West Indian manatees are typically found in waters with dense submerged aquatic beds or floating vegetation where the species grazes on a variety of aquatic plants. This species has been known to occasionally enter Lake Pontchartrain and associated coastal waters from June through September. Manatees have been reported in the Amite, Blind, Tchefuncte, and Tickfaw Rivers, and in canals within the adjacent coastal marshes of Louisiana. They have also been occasionally observed elsewhere along the Louisiana Gulf coast. The manatee has declined in numbers due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution. While manatees have previously been sighted in the River, their occurrence is extremely rare since the main River has no adequate food source (i.e., aquatic vegetation).

3.8.3 The pallid sturgeon only occurs in large rivers within the Mississippi and Missouri River Basins from Montana to Louisiana. This includes the Mississippi River and Atchafalaya River in south Louisiana. The pallid sturgeon tends to select main channel habitats in the Mississippi River. Aquatic habitats in the Mississippi River have been modified though the construction of flood control levees and channel modification through time, and some changes resulting from those modifications have likely been detrimental to pallid sturgeon. Although the River flows unobstructed for about 2,000 river miles from Gavins Point Dam in the middle Missouri River to the Gulf of Mexico, tributary impoundments, bendway cutoffs and dike and levee construction have each changed localized patterns of channel erosion and deposition in the Mississippi River. Collectively, they have resulted in a degradation trend throughout the system. Effects of these changes on pallid sturgeon are unknown, because there are no historical data for comparison. The Pallid Sturgeon Lower Basin Recovery Workgroup has identified information gaps essential to the consultation and recovery processes in the Lower Mississippi River Basin. These include: relative abundance of pallid sturgeon; demographics; feeding habits; habitat use; hybridization ratios; presence of fish diseases in the wild; population anomalies; and reliable separation and identification of pallid sturgeon, shovelnose sturgeon, and hybrids. While recent publications have contributed to filling some of these data gaps (e.g., Killgore et al., 2007), incomplete knowledge of those areas remains.

3.8.4 The Atlantic sturgeon is an anadromous fish inhabiting coastal rivers from Louisiana to Florida during the warmer months and overwintering in estuaries, bays, and the Gulf of Mexico (NOAA 2018). Historically, Atlantic sturgeon occurred from the Mississippi River east to Tampa Bay. Its present range extends from Lake Pontchartrain and the Pearl River system in Louisiana and Mississippi east to the Suwannee River in Florida; however, sporadic occurrences have been recorded as far west as the Rio Grande between Texas and Mexico, and as far east and south as Florida Bay. The only documented catches of Atlantic sturgeon in the Mississippi River have reportedly taken place near its mouth; however, these are considered incidental occurrences since no resident (i.e., reproducing) population for the Mississippi River is believed to exist. The proposed Work area is not located within any designated critical habitat in Louisiana.

3.8.5 The Alabama heelsplitter, which is referred to as the inflated heelsplitter in the species recovery plan (Hartfield 1988), is a large (sometimes reaching over 140 mm in length) freshwater mussel with a brown to black shell with green rays in young individuals (Hartfield 1988). Like other freshwater mussels, the Alabama heelsplitter feeds by filtering food particles from the water column. In Louisiana, the Alabama heelsplitter has been reported in the Amite and Tangipahoa Rivers. This species prefers soft, stable substrata in slow to moderate currents. It has been found in sand, mud, silt and sandy-gravel, but not in large or armored gravel (Hartfield 1988).

3.8 CULTURAL RESOURCES

3.9.1 General Existing Conditions. The proposed Work area is located near the small community of Modeste on the west bank of the Mississippi River in Ascension Parish, Louisiana (Figure 1), within the floodplain of the modern Mississippi River meander belt, where the surficial geology is dominated by the River and fluvial processes associated with natural levee building and active lateral bank migration. The natural levees in the Work area are approximately 2 miles wide and vary in height from 13-24 feet. They are the highest naturally occurring landscape feature in the floodplain, and, because they are relatively free from flooding, offer the best environment for human settlement and development. Although much of the natural levee in the Work area has been cleared for agricultural purposes, primarily growing sugarcane, it was once forested with a typical bottomland hardwood assemblage making it favorable to Prehistoric occupation. However, at the present-time information regarding the pre-eighteenth-century and/or indigenous occupation of the Work area is largely unknown. A major factor affecting settlement and land use within the vicinity of the Work is lateral bank migration. Cutbank erosion results in the destruction of structures and facilities in these areas or necessitates periodic relocation to protect them from the encroaching River. It also destroys the artificial levees adjacent to the river and “set-back” levees frequently must be constructed behind older structures. The town of Modeste, Louisiana is situated on a Cutbank between two large point bars, Claiborne Island (upstream) and Philadelphia Point (downstream). Because of this, significant erosion has been taking place for the entirety of the historic period in this location, with the bankline steadily shifting west. Historic maps indicate the River has moved as much as 400 feet since 1883, causing buildings and levees to be set back on several occasions.

3.9.2 Comprehensive summaries of the previous work within the vicinity of the Work have been presented by Draughton et al. (2000), George et al. (2000), Hinks et al. (1992), Hunter et al. (2008), and Kerr and Shuman (2018). Historically, the Work area was part of the Babin Place/ Modeste Place/Africa Plantations which included at least 15 no longer extant structures depicted on 1883 *Survey of the Mississippi River* (Chart 69; Appendix C: Figure 3) including worker's cabins, a store, and other facilities associated with the former succession of plantations. Both complexes date from the late-eighteenth-century up until ca. 1933 when the levee was set back to its present location; effectively ending occupation of the batture. The properties within these five sections (Sections 38, 39, 40, 41, and 42) were first settled by Acadian exiles who established small farmsteads or *habitations*, many of which originally derived from Spanish grants. Land conveyance records indicate that most of these properties remained in the hands of those same families from initial settlement well into the twentieth-century (see: Hunter et al. 2008). In 1808, Babin Place Plantation was consolidated from two eighteenth-century Acadian habitations by Pierre Maximilien Babbin. During the early 1800s, it emerged as a sugar plantation owned by a succession of proprietors; all of Acadian descent. Portions of the original plantation were later renamed “Modeste Place” for a lineal descendant of the Babin family (Marguerite Modeste). In 1911, Babin Place was sold to the General Grand Independent Order of Brothers and Sisters of

Love and Charity of North and South America, Liberia, and Adjacent Islands, an African-American benevolent society, that continued to operate the property as a plantation which it renamed “New Africa Farm.” For over 100 years, Babin Place was also the location of several rural schools for African-American and white children residing near the town of Modeste, Louisiana.

3.9.3 Based on the results of CEMVN’s desktop review, CEMVN determined that the proposed action, would affect portions of two archaeological sites determined to possess those qualities of significance and integrity as defined by the National Register of Historic Places (NRHP) Criteria for Evaluation (36 CFR 60.4 [a-d]) under Criteria A and D; 16AN69 (Babin Place) and 16AN70 (Modeste Place). Sites 16AN69 and 16AN70 were first identified by George et al. (2000) during a Phase I survey conducted on the behalf of CEMVN for the proposed installation of concrete paving along the batture-side of the existing MRL. Subsequently, in 2000 and 2001, intensive Phase III data recovery excavations were undertaken at 16AN69 and 16AN70 by Coastal Environments, Inc. (Hunter et al. 2008) to mitigate adverse impacts from the planned undertaking on the batture-side of the existing levee. The cultural horizons identified at both sites, buried beneath varying amounts of post-1932 flood alluvium, proved to be largely intact and extended from as little as 11 inches to as much as 51 inches in depth below surface; with some structural remains being partially covered by the present levee alignment so that only what was in front of the dwellings could be examined during excavations. All test units and/or blocks excavated by Hunter et al. The excavations generated relatively large artifact samples and yielded multiple well-preserved sheet middens and intact structural features. A wealth of historical and archaeological information was obtained on diet, material culture, Acadian architecture, and status and ethnicity. However, to ensure that the levee would not be damaged as a result of the archaeological excavations, CEMVN required that all excavation deeper than 3 feet be kept at a minimum of 6 feet from the levee baseline, leaving deposits throughout portions of the Work area unassessed and/or unmitigated. Therefore, this mitigation did not exhaust the research potential for deposits within the current Work area; in particular those within the present levee footprint.

3.9 RECREATION RESOURCES

3.10.1 General Existing Conditions. The closest waterway to the Work area is the Mississippi River. The potential exists for recreational boating and fishing in the waterways. While vehicle access to the Work area via the levee is restricted, residents living near the levee may walk on top of the levee and bank fish along the water’s edge. There are no developed recreation sites or facilities within the Work area.

3.10 VISUAL RESOURCES (AESTHETICS)

3.11.1 General Existing Conditions. The dominant eco-region is the Holocene Meander Belts, which are part of the Mississippi Alluvial Plain. The immediate area is characteristic of the Holocene Meander Belts with relatively flat terrain mixed with a variety of water resources. The meander belt follows the Mississippi River all the way to the Gulf of Mexico. Higher elevations do occur near the Mississippi River with a natural levee system. Vegetation in the Work area is a mixture of native and non-native trees and some dense hardwoods on the flood side of the levee. Stands of forest dominate the landscape with framed views to the Mississippi River from atop the levee system. Land use in the area is an even mix of agricultural lands and single family residential. Overall access to the Work area is relatively limited, but does include Louisiana Highway 405. User activity is relatively low in this region, and primarily relegated to agricultural, and residential uses with limited recreation. There are no known Scenic Byways in or near the

Work area. There are no major State or Federally protected lands in the vicinity of the Work area. There are no state recognized scenic streams in the vicinity of the Work area.

3.11 AIR QUALITY

3.12.1 General Existing Conditions. The U.S. Environmental Protection Agency (USEPA), under the requirements of the Clean Air Act, has established National Ambient Air Quality Standards (NAAQS) for six contaminants, referred to as "criteria" pollutants (40 CFR 50). These are 1) carbon monoxide (CO), 2) nitrogen dioxide (NO_2), 3) ozone (O_3), 4a) particulate matter less than 10 microns in diameter (PM10), 4b) particulate matter less than 2.5 microns in diameter (PM2.5), 5) lead (Pb), and 6) sulfur dioxide (SO_2). The NAAQS standards include primary and secondary standards. The primary standards were established at levels sufficient to protect public health with an adequate margin of safety. The secondary standards were established to protect the public welfare from the adverse effects associated with pollutants in the ambient air.

3.12.2 Effective December 15, 2016, Ascension Parish was designated by the Environmental Protection Agency as a maintenance area for ozone under the 8-hour standard. This classification is the result of area-wide air quality modeling studies, and the information is readily available from Louisiana Department of Environmental Quality (LDEQ), Office of Environmental Assessment and Environmental Services. Ozone is the only parameter not directly emitted into the air but forms in the atmosphere when three atoms of oxygen (03) are combined by a chemical reaction between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC, also known as ozone precursors. Strong sunlight and hot weather can cause ground-level ozone to form in harmful concentrations in the air.

3.12.3 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).

3.12.4 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 State Implementation Plan (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.

3.12.5 Federal activities proposed in Ascension 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 volatile organic compound (VOC) and nitrogen oxide (NO_X) emissions caused by the construction of the Work. Prescribed *de minimis* levels of 100 tons per year per pollutant are applicable in Ascension 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."

3.12 WATER QUALITY

3.13.1 General Existing Conditions. Water quality in the Work area is affected by both point source and non-point source discharges. Point sources include mainly industrial, municipal, and sewer discharges. Non-point sources include storm water runoff, industrial discharges, landscape maintenance activities, forestry, agriculture, and natural sources.

3.13.2 Section 303(d) of the Clean Water Act requires states to identify water bodies that are not meeting water quality standards and to develop total maximum daily loads for those pollutants suspected of preventing the water bodies from meeting their standards. Total maximum daily loads are the maximum amount of a given pollutant that can be discharged into a water body from all natural and anthropogenic sources including both point and non-point source discharges. In Louisiana, the Department of Environmental Quality oversees the program.

3.13.3 The Louisiana Department of Environmental Quality surface water monitoring program is designed to measure progress towards achieving water quality goals at state and national levels, to gather baseline data used in establishing and reviewing the state water quality standards, and to provide a data base for use in determining the assimilative capacity of the waters of the state. Information is also used to establish permit limits for wastewater discharges. The program provides baseline data on a water body to monitor long-term trends in water quality.

3.13.4 The Louisiana Department of Environmental Quality (LDEQ) Section 305(b) and 303(d) Reports for 2018, included in the Water Quality Inventory Integrated Report, lists one water body that is located adjacent to the Work area, the Mississippi River. The assigned sub-segment code for the Mississippi River is LA070301. Sub-segment Code LA070301 boundaries are described as Mississippi River – from Monte Sano Bayou to Head of Passes. Available LDEQ records indicate that prior to the 2004 Water Quality Inventory (WQI) Report, suspected causes of impairment for the Mississippi River are listed as mercury, nitrate/nitrite (nitrite + nitrate as N), pesticides, phosphorous, priority organics (including dioxin) and total fecal coliforms (LDEQ 2012).

3.13.5 Utilizing the 2018 U.S. Environmental Protection Agency Integrated Report methodology guidance categories, which categorize water body/pollutant combinations, the LDEQ 2018 report no longer assigns the LA070301 (Mississippi River) segment an Integrated Report Category number since they are fulfilling all standards (LDEQ 2018).

4. ENVIRONMENTAL CONSEQUENCES

4.1 AQUATIC RESOURCES/FISHERIES

4.1.1 Future Conditions with No-Action Alternative. With no action, no change to the aquatic or fishery resources in the vicinity of the Work is expected to occur.

4.1.2 Future Conditions with the Proposed Action. With implementation of the proposed action, no adverse effects to aquatic or fishery resources are anticipated because no important fishery resources are present within the Work area. Even during high water events, when River water would be returned from the landside of the levee to the River, the Work as proposed should have no effect on any of the species discussed in Section 3.6.

4.2 WILDLIFE

4.2.1 Future Conditions with No-Action. With no action, no change to the wildlife resources in the vicinity of the Work is expected to occur.

4.2.2 Future Conditions with the Proposed Action. With implementation of the proposed action, existing wildlife would experience a temporary loss of terrestrial habitat on the landside levee slope while relief well installation is ongoing. Any wildlife that may be present in the maintained Project right-of-way would simply utilize the adjacent areas of levee during construction activities. The installation of the relief wells and associated slabs would have no long term effect to the utilization of the levee by the limited wildlife present within the existing Project right-of-way.

4.3 THREATENED OR ENDANGERED SPECIES

4.3.1 Future Conditions with No-Action. With no action, there would be no effect to any listed threatened or endangered species, or their critical habitat.

4.3.2 Future Conditions with the Proposed Action. The CEMVN has determined that the proposed action would have no effect to any listed threatened or endangered species or their critical habitat as the Work area does not contain suitable habitat for listed species. Even during high water events, when River water would be returned from the landside of the levee to the River, the impacts to any of the species listed in Section 3.8 would have no effect. Coordination with the U.S. Fish and Wildlife Service is still ongoing and would be completed prior to signing a Finding of No Significant Impact (Appendix A).

4.4 CULTURAL RESOURCES

4.4.1 Federal regulations require CEMVN, as an agency responsible for funds appropriated by Congress, to identify if properties are historic (listed or eligible for listing in the NRHP); to assess the effects the work would have on historic properties; to seek ways to avoid, minimize, or mitigate any adverse effects to historic properties; and to evaluate the proposed action's potential for significant impacts to the human and natural environment. The consideration of impacts to historic and cultural resources is mandated under Section 101(b)(4) of the NEPA as implemented by 40 CFR, Parts 1501-1508. Section 106 of the NHPA requires Federal agencies to take into account their effects on historic properties (i.e., historic and cultural resources) and allow the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. Additionally, it is the policy of the federal government to consult with Indian Tribal Governments on a Government-to-Government basis as required in E.O. 13175 (U.S. President 2000). CEMVN has chosen to address potential impacts to historic properties through the "Section 106 consultation process" of the NHPA as implemented through 36 CFR, Part 800. The "Section 106 process" requires the identification of historic properties that may be affected by the proposed action or alternatives within the area of potential effects (APE). Historic properties, defined in Section 101(a)(1)(A) of NHPA, include districts, sites (archaeological and religious/cultural), buildings, structures, and objects that are listed in or determined eligible for listing in the NRHP. Historic properties are identified by qualified agency representatives in consultation with interested parties. Below is a consideration of various alternatives and their effects on historic properties.

4.4.2 Future Conditions with No Action. This alternative does not include any CEMVN undertaking; therefore CEMVN has no further responsibilities under Section 106 of the NHPA. With no action, conditions would remain largely the same as present.

4.4.3 Future Conditions with the Proposed Action. CEMVN determined that there are two historic properties within the Work area, as defined in 36 CFR 800.16(l), that possess those qualities of significance and integrity as defined by the NRHP Criteria for Evaluation (36 CFR 60.4 [a-d]) under Criteria A and D; 16AN69 (Babin Place) and 16AN70 (Modeste Place) and that the LWMSCP, as proposed, would directly affect portions of these archaeological sites includes ground disturbing activities that would affect the historic property in a way that would directly affect the characteristics that make the property eligible for the NRHP and per 36 CFR 800.6 constitute an adverse effect. CEMVN considered ways to revise the Scope of Work to substantially conform to the standards, and/or avoid or minimize adverse effects for National Register listed archaeological properties. As a result, the proposed SOW was re-examined, and CEMVN determined that alternate construction measures (see: Section 2.2) would not be effective and that it would be impossible to avoid adversely effecting those portions of Sites 16AN69 and 16AN70.

4.4.4 Accordingly, on December 31, 2018, CEMVN submitted a finding of "Historic Properties Adversely Affected" for this Undertaking to the Louisiana State Historic Preservation Officer of the Department of Culture Recreation and Tourism (SHPO), Atchafalaya Basin Levee District (non-federal sponsor), the Alabama-Coushatta Tribe of Texas (ACTT), Caddo Nation of Oklahoma (CN), the Choctaw Nation of Oklahoma (CNO), the Coushatta Tribe of Louisiana (CT), Chitimacha Tribe of Louisiana (CTL), the Jena Band of Choctaw Indians (JBCI), the Mississippi Band of Choctaw Indians (MBCI), Muscogee Creek Nation (MCN), the Seminole Nation of Oklahoma (SNO), Seminole Tribe of Florida (STF), the Tunica-Biloxi Tribe of Louisiana (TBTL), and ACHP (Appendix C), in which CEMVN recommended that the adverse effects to Sites 16AN69 and 16AN70 could be minimized through archaeological monitoring during ditch re-contouring and mitigated by documenting the significance of these resources through the development of an educational or public interpretive plan, as provided for in a Memorandum of Agreement (MOA), developed in consultation with SHPO, participating Tribes, and others, as appropriate (forthcoming). CEMVN would include stipulations within the MOA that provide for the treatment of unanticipated discoveries and human burials.

4.5 RECREATION RESOURCES

4.5.1. Future Conditions with No-Action. With no action, the conditions within the recreational environment would not be impacted. Recreational usage at this site would be dictated by the natural land use patterns and processes that have dominated the area in the past.

4.5.2. Future Conditions with the Proposed Action. With implementation of the proposed action, any recreational uses such as walking on top of the levee or to the River for scenic views or bank fishing would be temporarily impacted in the immediate construction area. Upon completion of the Work, recreational uses would return to pre-existing conditions.

4.6 VISUAL RESOURCES (AESTHETICS)

4.6.1 Future Conditions with No-Action. With no action, there would be no direct or indirect impacts to visual resources within the area. Visual resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices and policies.

4.6.2 Future Conditions with the Proposed Action. With the implementation of the proposed action there would be minimal direct and indirect impacts to visual resources in the Work area. The proposed relief well construction and subsequent pumping of seepage waters over the existing levee could create a slight change to the landscape of the area.

4.6.3 The proposed Work is necessary and critical in order to protect lives and property from flooding. A temporary impact that would occur during the construction process would include restricted access to the crown of the levee. It is likely there would be a rise in ambient noise levels due to construction activity; however, it is expected the area would return to pre-existing conditions soon after completion of the Work.

4.6.4 Long term negative impacts to visual resources would be minimal. With implementation of the proposed action, residents and people utilizing the adjacent public road would notice a series of small pipes protruding from the base of the levee with concrete pads extending to the roadside ditch. Additionally, a permanent visual impact to the levee would occur with the construction of a guard rail along Louisiana Highway 405. Overall, these structures would blend with typical man-made features of the levee, which would be consistent with other areas along the MRL that either have seepage relief wells or guard rails for safety.

4.7 AIR QUALITY

4.7.1 Future Conditions with No-Action. With no action, the status as a maintenance area of air quality for Ascension Parish would not change from current conditions.

4.7.2 Future Conditions with the Proposed Action. With implementation of the proposed Work, on-site construction activities would be expected to produce less than one ton per year of VOC and less than seven tons per year of NO_X emissions (less than the *de minimis* level of 100 tons per year per pollutant). Thus, the ambient air quality in Ascension Parish would not change from current conditions, and the status as a maintenance area for the Parish would not be altered. Coordination with the LDEQ is ongoing and would be completed prior to signing a Finding of No Significant Impact (Appendix B).

4.8 WATER QUALITY

4.8.1 Future Conditions with No-Action. With no action, no new direct or indirect impacts to water quality would be expected to occur.

4.8.2 Future Conditions with the Proposed Action. With implementation of the proposed action, impacts to water quality are expected to be minimal and limited to the immediate area landside of the levee during relief well construction. A storm water pollution prevention plan would be developed to minimize any potential effects to water quality during construction. During high water events, when River water would be returned from the landside of the levee to the River, there would be no impacts to existing water quality standards of the Mississippi River as discussed in Section 3.12. As no impacts to any wetlands or water bodies are expected, a Clean Water Act Section 404(b)(1) evaluation and public notice and Section 401 State Water Quality Certificate are not required for this Work.

4.9 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

4.9.1 CEMVN is obligated under Engineer Regulation (ER) 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of proposed actions. ER 1165-2-132 identifies that HTRW policy is to avoid the use of project funds for HTRW removal and remediation activities. An American Standard Test Methods E 1527-05 Phase 1 Environmental Site Assessment (ESA), HTRW 19-01 dated February 4, 2019, has been completed for the Work area. A copy of Phase 1 ESA would be maintained on file at the U.S. Army Corps of Engineers, New Orleans District Headquarters. The probability of encountering HTRW for the proposed action is low based on the initial site assessment. If no recognized environmental conditions are identified in relation to the Work area, the probability of encountering HTRW for this Work would be considered low. If a recognized environmental condition is identified in relation to the Work area site, CEMVN would take the necessary measures to avoid the recognized environmental condition so that the probability of encountering or disturbing HTRW would continue to be low.

4.10 CUMULATIVE IMPACTS

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

4.10.2 While the proposed action would result in temporary minor impacts as previously noted, it is expected that no significant adverse cumulative impacts would occur as a result of implementation of the Work. Overall, the proposed action, in comparison to the past, present, and reasonably foreseeable future actions, would not incrementally contribute adversely to the general Work area. This flood risk management feature is part of an ongoing comprehensive plan for the Mississippi River and Tributaries Project. The proposed action would accomplish flood risk management objectives, which are of great importance in the Lower Mississippi Valley, and would ensure the ability of the levee to prevent flood damage to the natural and human environment on the land side of the levee as well as provide for the preservation and enhancement of the very significant fish, wildlife, and other natural resources of the Barataria Basin.

5. COORDINATION AND PUBLIC INVOLVEMENT

Preparation of this draft EA and FONSI is being coordinated with the public, appropriate Congressional, Federal, Tribal, state, and local interests, as well as environmental groups and other interested parties.

6. COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Environmental compliance for the proposed action would be achieved upon coordination of this draft EA and FONSI with all appropriate agencies, organizations, and individuals for their review and comments.

- USFWS concurrence with CEMVN's no effect determination on any threatened or endangered species (Appendix A);
- The LDEQ consultation as required under the Clean Air Act (Appendix B).
- On December 31, 2018, CEMVN submitted a finding of submitted a finding of "Historic Properties Adversely Affected" to the LA SHPO, affected Tribes, and the ACHP (Appendix C) to be resolved though a MOA, developed in consultation with SHPO, participating Tribes, and others, as appropriate (forthcoming). Environmental compliance with all applicable laws and regulations would not be complete until the MOA has been signed. Additionally, USACE, in conjunction with the Atchafalaya Basin Levee District (non-federal sponsor), requires that their agents understand and acknowledge the following conditions required as a result of Section 106 consultation for ground disturbing activities that provide for the protection of and notification protocols for, unexpected discoveries or unexpected effects to historic properties and human remains:

    - **Inadvertent Discovery and Unexpected Effects:** If during the course of work, archaeological artifacts (prehistoric or historic) are discovered or unexpected effects to historic properties, including architecture, architectural elements, and/or archaeology, are identified, the contractor shall stop work in the general vicinity of the discovery or unexpected effect and take all reasonable measures to avoid or minimize harm to the finds or affected property. The contractor would ensure that the discovery or unexpected effects are secured and stabilized, as necessary, and access to the area is restricted. The contractor shall inform their Operations Division (OD) contacts at USACE, who would in turn contact Planning Division (PD) staff. The contractor would not proceed with work until USACE PD completes consultation with the Louisiana SHPO, and others, as appropriate.

    - **Louisiana Unmarked Human Burial Sites Preservation Act:** If human bone or unmarked grave(s) are present within the Work area, compliance with the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671 et seq.) is required. The contractor shall notify the law enforcement agency of the jurisdiction where the remains are located within twenty-four hours of the discovery. The contractor shall also notify USACE and the Louisiana Division of Archaeology within seventy-two hours of the discovery. Discoveries of unmarked graves, burials, human remains, or items of cultural patrimony on Federal or Tribal lands shall be subject to 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).

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

7. CONCLUSION

7.1 The proposed action consists of construction of 15 seepage relief wells placed approximately 200 feet apart at the landside toe of the existing west bank MRL in Modeste, Ascension Parish, Louisiana. Additionally, four portable electric-powered pumps would also be utilized to convey seepage water discharged from the relief wells back over the levee and into the River.

7.2 The proposed Work has been found to have an overall beneficial effect on the human environment by insuring adequate flood risk management along the flood prone lower Mississippi River. This office has assessed the environmental impacts of the proposed action, and has determined that the proposed action would have minimal temporary impacts to wildlife. There would be no impacts to aquatic/fisheries, threatened or endangered species, air quality, or water quality.

8. PREPARED BY

Draft Environmental Assessment 569 and the associated Finding of No Significant Impact were prepared by Mr. Mark Lahare, Environmental Protection Specialist, with relevant sections and contributions prepared by: Mr. Joseph Musso (HTRW and Air Quality); and Mr. Jeremiah Kaplan (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, New Orleans District; Regional Planning and Environment Division South, CEMVN-PDC-CC; 7400 Leake Avenue; New Orleans, Louisiana 70118.

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APPENDIX A

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

REPLY TO
ATTENTION OF:

January 29, 2019

Regional Planning and
Environment Division, South
Environmental Compliance Branch

Mr. Brad Rieck
Field Supervisor
U.S. Fish and Wildlife Service
200 Dulles Drive
Lafayette, Louisiana 70506

Attn: Mr. David Walther

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act.) The project, as proposed,

Will have no effect on those resources

Joseph A. [illegible] 01-Feb-19

Supervisor — Date
Louisiana Ecological Services Office
U.S. Fish and Wildlife Service

Dear Mr. Rieck:

The U.S. Army Corps of Engineers (USACE), New Orleans District, has prepared an Endangered Species Act determination for the Mississippi River and Tributaries (MR&T), Mississippi River Levees (MRL), Atchafalaya Basin Levee District Seepage Control Project. The New Orleans District proposes to install 15 passive relief wells to collect seepage during high water stages on the Mississippi river and four removable electric-powered pumps to return the seepage water collected from the wells back to the river. The relief wells and pumps will be located on the landside toe of the existing west bank MRL adjacent to Louisiana Highway 405 in the township of Modeste, Ascension Parish, Louisiana (Enclosure).

The construction of 15 passive relief wells will require boring an eight inch diameter hole approximately 100 feet below the existing landside MRL toe surface elevation (Enclosure). Each relief well will be spaced approximately 200 feet apart and adjusted to avoid any existing utilities and access ramps. An existing drainage ditch located between the landside MRL toe and the Louisiana Highway 405 will require removal of existing surface vegetation and erosional fill within the cross-sectional area of the ditch. The drainage ditch will be re-graded at various locations to an appropriate depth to collect outflow and allow pumps to return the seepage water back to the river without compromising the ability of the existing drainage ditch capacity to collect and store adjacent storm water run-off. During periods of high water, the four portable electric-powered pumps will convey seepage water discharged from the relief wells back over the levee and into the river. The pumps will be placed at various intervals throughout the project on new concrete slabs measuring six feet in length by six feet in width. The electric utility service to the pump control boxes affixed to the concrete slabs will be run under the roadway by means of new horizontal directionally drilled conduits originating from an existing power service located on the west side of Louisiana Highway 405. Outflow from the ditch will be conveyed to the pumps by means of removable eight inch flexible discharge hoses (HDPE). The pumps will be connected to permanent eight inch HDPE discharge lines installed above the existing levee section (ground surface) with ductile iron

end sections and concrete slope paving at the intake and discharge transitions (Enclosure). The permanent discharge lines will be covered with 12 inches of compacted fill, which will be obtained by the contractor from any commercially available source.

All staging, construction, and maintenance access and will be confined to the existing MRL and Louisiana Department of Transportation and Development (LA DOTD) right-of-way. The portable pumps, discharge hoses, and electrical cables will be stored offsite to prevent vandalism and environmental exposure and will be deployed as necessary during high river stages. Due to the proximity of the pumps to the road, guard rails will be installed along Louisiana Highway 405 for the entire project reach in accordance with LA DOTD standards.

Four Federally threatened or endangered species under U.S. Fish and Wildlife Service purview are either known to or may seasonally occur in Ascension Parish, Louisiana. These species are: West Indian manatee *(Trichechus manatus)* (threatened), pallid sturgeon *(Scaphirhynchus albus)* (endangered), Atlantic sturgeon (*Acipenser oxyrinchus desotoi*) (threatened), and Alabama heelsplitter mussel (*Potamilus inflatus*) (threatened). Based upon available data, our investigations, and interim minimal effects of the proposed work, it is anticipated that the proposed action would have no effect on any of the previously listed threatened or endangered species or any critical habitat.

The environmental impacts associated with the proposed work are currently being addressed in draft Environmental Assessment #569, which is scheduled to be available for review and comment in February 2019.

In accordance with Section 7 of the Endangered Species Act of 1973, as amended, the New Orleans District requests you review the enclosed information and advise us of your concurrence. Responses should be mailed to Mr. Mark Lahare at: U.S. Army Corps of Engineers, CEMVN-PDC-CC, 7400 Leake Avenue, New Orleans, Louisiana, 70160-0267. Responses may also be provided by e-mail to mark.h.lahare@usace.army.mil, or by phone at (504) 862-1344.

Sincerely,

Enclosure

for Edward P. Lambert
Chief, Environmental Compliance Branch

APPENDIX B

REPLY TO
ATTENTION OF:

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

January 29, 2019

Regional Planning and
Environment Division, South
Coastal Compliance Section

Ms. Linda Piper
Louisiana Department of Environmental Quality
Office of the Secretary
Business and Community Outreach and Incentives Division
P. O. Box 4301
Baton Rouge, LA 70821-4301

Dear Ms. Piper:

The U.S. Army Corps of Engineers is proposing to construct a seepage control project on the protected side of the Mississippi River levee system adjacent to LA 405 between river miles 184 and 181 near Modeste, Ascension Parish, Louisiana.

The proposed federal activities are within the five-parish area near Baton Rouge that has been designated as a maintenance area for ozone; therefore, as promulgated under LAC 33:III.14.A, a general conformity applicability determination has been made by estimating the total of direct and indirect volatile organic compounds (VOC) and nitrogen oxide (NO_x) emissions that may be caused by the proposed project. Enclosed are the calculations for VOC and NO_x emissions for the proposed project.

The projects will include the following construction equipment: an excavator, a bulldozer, dump trucks, a compactor, a drill rig, a backhoe, front-end loaders, a grader, and a water truck. The attached calculations presume the seepage control project would be completed within one year. As calculated, the project in the ozone maintenance area would produce estimated total VOC and NO_x emissions of 0.315 tons and 6.662 tons, respectively, which are below the 100 tons per year *de minimis* threshold.

We respectfully request that you review the attached information and offer your comments so that we may move forward with the proposed seepage control project. If you have

any questions please contact Mr. Joseph Musso of our Coastal Compliance Section at (504) 862-2280 or by e-mail at joseph.r.musso@usace.army.mil.

Sincerely,

Edward P. Lambert
Chief, Environmental Compliance Branch

Attachments

APPENDIX C

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

December 31, 2018

Regional Planning and
Environment Division, South
Environmental Planning Branch
Attn: CEMVN-PDS-N

Kristin Sanders, SHPO
LA State Historic Preservation Officer
P.O. Box 44247
Baton Rouge, LA 70804-4241

RE: Section 106 Review Consultation

Undertaking: Mississippi River and Tributaries, Atchafalaya Basin Levee District, Lower West Mississippi Seepage Control Project. B/L Sta. 5805+00 to Sta. 5841 +00, Ascension Parish, LA (Project ID ED-18-059)
(Project Coordinates: -91.013993; 30.170658)

Determination: **Adverse Effect to Historic Properties**

Dear Ms. Sanders:

The U.S. Army Corps of Engineers (USACE), New Orleans District (CEMVN), is conducting a Biddability, Constructability, Operability, Environmental, and Sustainability Review for the Mississippi River and Tributaries, Atchafalaya Basin Levee District (non-federal project sponsor), Lower West Mississippi Seepage Control Project (LWMSCP), in Ascension Parish, Louisiana.

In partial fulfillment of the CEMVN's responsibilities under Executive Order 13175, the National Environmental Policy Act, as amended (42 U.S.C. § 4321 et seq.), and Section 106 of the National Historic Preservation Act, as amended (54 U.S.C. § 306108), and its implementing regulations, the CEMVN offers you the opportunity to review and comment on the potential of the proposed undertaking described in this letter to adversely affect properties listed on or eligible for listing on the National Register of Historic Places (NRHP), protected tribal resources, tribal rights, or Native lands. Documentation in this letter is consistent with the requirements in 36 CFR § 800.11(e).

Description of the Undertaking

The proposed project is designed to address seepage beneath the Mississippi River Levee (MRL) in Ascension Parish, Louisiana. The project area is located between the left descending bank of the Mississippi River (mile 183) and LA-405, at Babbin Landing, in the township of Modeste, approximately 4.9 miles (7.8 km) northwest of Donaldsonville, Louisiana. The current project area includes portions of Sections 38, 39, 40, 41, and 42 in Township 10 South, Range 14 East.

The proposed action consists of the construction of 15 passive relief wells spaced approximately 200 feet (60.9 m) apart from northwest to southeast along the protected-side of the existing levee (91.016956; 30.175133 to -91.011092; 30.166680). Each relief well will measure 8 inches (20.3 cm) in diameter and be bored to a depth of approximately 100 feet (30.4 m). A total of four (4) removable electric-powered pumps will convey the water, discharged from the relief wells by gravity, back over the existing levee concrete slope paving (batture-side) when the Mississippi River reaches flood stage. The pumps will be placed directly on new concrete slabs measuring 6 x 6 feet (1.8 x 1.8 m) wide constructed within the roadside ditch. Electrical utility service to the pump control panel will be run under the roadway by means of new horizontal directionally drilled conduits from the existing power service on the west side of LA-405 to pump control boxes affixed to the concrete slabs. The existing roadside ditch between the levee and the road will be recontoured to collect well outflow to include clearing the drainage of vegetation and erosional fill within the cross-sectional area of the channel and reshaping at various locations to redefine the cross-section to the depth of the existing culverts. From the ditch, water will be conveyed to the pumps by means of removable 8 inch (20.3 cm) flexible discharge hoses (HDPE). The pumps will be connected to permanent 8 inch (20.3 cm) HDPE discharge lines installed above the existing levee section (ground surface) with ductile iron end sections and concrete slope paving at the intake and discharge transitions. The permanent discharge lines will be covered with 12 inches (30.4 cm) of compacted fill. All staging, construction, and maintenance access and will be confined to the existing MRL and Louisiana Department of Transportation Department (LA DOTD) Right of Way (ROW). The pumps, discharge hoses, and electrical cables will be stored offsite to prevent vandalism and environmental exposure and will be deployed as necessary during high river stages. Due to the proximity of the pumps to the road, guard rails will be installed along the road in accordance with LA DOTD standards. The Undertaking location is shown in Figure 1.

Area of Potential Effects (APE)

This letter serves as consultation for the Area of Potential Effects (APE) in accordance with 36 CFR § 800.16(d). The APE is the same for standing structures and archaeology and includes the entire footprint of the proposed LWMSCP within the existing MRL/LA DOTD ROW and in total measures 13.6 acres (5.5 ha). The APE incorporates both direct effects (access, staging, and construction areas) and indirect effects (visual), including all areas of proposed ground disturbance. A 7.5' USGS Topographic Quadrangle Map depicting the APE location is included as Figure 2 and photographs of the project area are included as Figures 4-5.

Identification and Evaluation

Historic Properties within the APE were identified based on CEMVN's review of the National Register of Historic Places (NRHP) database, the Louisiana Division of Archaeology (LDOA), *Louisiana Cultural Resources Map* (LDOA Website), historic aerial photography, historic map research, and a review of pertinent cultural resources survey reports. Map research included the following reference materials: the United States Department of Agriculture (USDA) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov), U.S. Geological Survey (USGS) Quadrangle Maps (http://nationalmap.gov/historical), and other available historic maps. This data was evaluated by CEMVN using the National Register (NR) Criteria.

Standing Structures:

Based on CEMVN's background research it was determined that the existing MRL and LA DOTD ROW encompasses the entire Standing Structures project APE, is not located within a listed or eligible

National Register Historic District, nor is it located within the viewshed of a property individually listed in the NRHP. Additionally, the proposed improvements and continued operation of the existing MRL feature will be consistent with the historic use of the facility.

Archaeology:
On December 19, 2018, CEMVN plotted the latitudes and longitudes of the LWMSCP project location against various data sets: the NRHP database, the *Louisiana Cultural Resources Map* provided by SHPO, and other available historic maps on file with CEMVN. Additional background information consulted included the Louisiana Cultural Resources Management (CRM) Bibliography (LDOA Website), SHPO Site Forms, and pertinent site and survey reports regarding previous investigations within 1-mile (1.6 km) of the APE (Figure 2). Comprehensive summaries of the previous work within the project vicinity have been presented by Draughton et al. (2000), George et al. (2000), Hinks et al. (1992), Hunter et al. (2008), and Kerr and Shuman (2018). Additionally, McIntire (1978) conducted a desktop review and pedestrian survey of the Shell Pipeline's Proposed Geismar-Napoleonville Pipeline corridor, which intersects with a portion of the present APE (Figure 2), during which no cultural resources were identified and it was recommended that the study area did not warrant further historic investigation.

Based on the results of CEMVN's desktop review, CEMVN determined that the LWMSCP, as proposed, would affect portions of two (2) archaeological sites determined to possess those qualities of significance and integrity as defined by the NRHP Criteria for Evaluation (36 CFR 60.4 [a-d]) under Criteria A and D; 16AN69 (Babin Place) and 16AN70 (Modeste Place). Sites 16AN69 and 16AN70 were first identified by George et al. (2000) during a Phase I survey conducted on the behalf of CEMVN for the proposed installation of concrete paving along the batture-side of the existing MRL. Historically, the project area was part of the Babin Place/Modeste Place/Africa Plantations which included at least 15 no longer extant structures depicted on 1883 *Survey of the Mississippi River* (Chart 69; Figure 3) map of the area including worker's cabins, a store, and other facilities associated with the former succession of plantations. Both archaeological sites date from the late-eighteenth-century up until ca. 1933 when the levee was set back to its present location; effectively ending occupation of the batture-side where archaeological investigations were conducted. The properties within these five (5) sections (Sections 38, 39, 40, 41, and 42) were first settled by Acadian exiles who established small farmsteads or *habitations*, many of which originally derived from Spanish grants. Land conveyance records indicate that most of these properties remained in the hands of those same families from initial settlement well into the twentieth-century (see: Hunter et al. 2008). Babin Place Plantation was consolidated from two (2) eighteenth-century Acadian habitations in 1808 by Pierre Maximilien Babbin. During the early 1800s, it emerged as a sugar plantation owned by a succession of proprietors, all of Acadian descent. Portions of the original plantation were later renamed "Modeste Place" for a lineal descendant of the Babin family (Marguerite Modeste). In 1911, Babin Place was sold to the General Grand Independent Order of Brothers and Sisters of Love and Charity of North and South America, Liberia, and Adjacent Islands (GGIO), an African-American benevolent society, that continued to operate the property as a plantation which it renamed "New Africa Farm." For over 100 years, Babin Place was also the location of several rural schools for African-American and white children residing near Modeste.

Because the proposed MRL concrete pavement construction threatened to impact Sites 16AN69 and 16AN70, and avoidance was not a feasible mitigation alternative, a data recovery plan was developed by Goodwin (George et al. 2000) in consultation with CEMVN and the State Historic Preservation Office

(SHPO). Subsequently, in 2000 and 2001, intensive Phase III data recovery excavations were undertaken at 16AN69 and 16AN70 by Coastal Environments, Inc. (Hunter et al. 2008) to mitigate adverse impacts from the planned undertaking. A total of 0.49 acres (0.19 ha) were examined by means of mechanical trenching, mechanical stripping, and hand-excavated units. Archaeological work at 16AN69 was focused on four (4) locales that were identified based on historical map and background research. Discrete archaeological assemblages identified included: the original location of the principal residence on Babin Place Plantation that was set back at least twice prior to the levee being moved in 1895 and 1933; the location of the early-twentieth-century Modeste School, a rural African-American school operated by GGIO until 1920 at which point ownership was transferred to the Ascension Parish School Board; and the locations of two (2) houses used to quarter African-American workers on New Africa Farm. Phase III mitigation at 16AN70 was also focused on four (4) localities identified based on historical map and background research. Discrete archaeological assemblages identified included: the heavily disturbed foundation remnants of an eighteenth-century Acadian house, evidently occupied by the Babin family; an Acadian house site dating to the first decade of the nineteenth-century of which the structural remains were partially covered by the present levee alignment so only the piers along what was the front of the dwelling could be exposed during excavations; and the location of a small, early-twentieth-century, African-American store. All test units and/or blocks excavated by Hunter et al. (2008) at 16AN69 and 16AN70 encountered cultural deposits ranging in date from the late-eighteenth through the mid-twentieth-centuries. Although the excavations produced some information concerning early Acadian adaptations along the lower Mississippi, most of the historical and archaeological data related to a later period of time when the sugar plantation economy developed throughout southern Louisiana. The cultural horizons identified at both sites, buried beneath varying amounts of post-1932 flood alluvium, proved to be largely intact and extended from as little as 30 cm (11.8 in) to as much as 130 cm (51.1 in) in depth below surface. The excavations generated relatively large artifact samples and yielded multiple well-preserved sheet middens and intact structural features. A wealth of historical and archaeological information was obtained on diet, material culture, Acadian architecture, and status and ethnicity.

To summarize, intensive Phase III mitigation conducted by Hunter et al. (2008) was focused along the batture-side of the levee. To ensure that the levee would not be damaged as a result of the archaeological excavations, CEMVN required that all excavation deeper than 1 meter (3.2 ft) be kept at a minimum of 6 feet (1.8 m) from the levee baseline, leaving deposits throughout portions of the present MRL seepage APE unassessed and/or unmitigated. Therefore, this mitigation did not exhaust the research potential for deposits within the current APE; in particular those within the present levee footprint. Furthermore, Hunter et al. (2008:398-399) caution:

> *This work has adequately demonstrated that significant, intact archaeological deposits can exist in areas that appear to have been extensively impacted by previous, large-scale construction projects. The study area was the scene of several levee setbacks where the mainline MRL was actually moved because it was threatened by the westward migration of the river. Not only was the levee itself moved, but also the river road running parallel to it and any buildings in the limits of the construction or structures that would have been left on the riverside of the new levee. At 16AN69 and 16AN70, the project area measured no more than 15 m* [49.2 ft] *wide between the toe of the modern levee and a*

series of old riverside borrow pits. Even in this narrow corridor, the archaeological deposits were more often intact than disturbed.

As such, additional investigation of Sites 16AN69 and 16AN70 may produce important data relevant to *Acadian Adaptations*, *Louisiana Sugar Plantations*, and *African-American Culture* in southeast Louisiana (Smith et al. 1983).

Copies or Summaries of Views by Consulting Parties and the Public
CEMVN is forwarding this letter and the attached documentation to the project's non-federal sponsor, the Atchafalaya Basin Levee District, for their review and comments as required by 36 CFR §800.4(d)(1), and we request that these potential consulting parties provide comments within the 30 days.

Assessment of Effects to Historic Properties
Based on the aforementioned Identification and Evaluation, CEMVN has determined that there are two (2) historic properties as defined in 36 CFR 800.16(l) within the LWMSCP APE; Sites 16AN69 (Babin Place) and 16AN70 (Modeste Place). Due to potential MRL stability concerns, formal archaeological evaluation has not been conducted throughout the entirety of the present APE. However, based on the results of Hunter et al.'s (2008) Phase III mitigation which confirmed that intact cultural deposits extend beneath the existing MRL ROW, CEMVN has determined that the un-evaluated portion of the LWMSCP APE possesses a high potential to contain additional un-mitigated deposits related to Sites 16AN69 and 16AN70 eligible for the NRHP under Criterion D. For purposes of this Section 106 review, CEMVN proposes treating the entire APE as containing NRHP-eligible deposits (Figure 2). Therefore, the proposed LWMSCP project includes ground disturbing activities that will affect the historic property in a way that will directly affect the characteristics that make the property eligible for the NRHP and per 36 CFR 800.6 constitute an adverse effect. Accordingly, CEMVN has determined a finding of **Historic Properties Adversely Affected** for this Undertaking and is submitting this Undertaking to you for your review and comment.

As part of the Section 106 consultation, CEMVN will consider additional measures that may be appropriate to minimize or avoid adverse effects to archaeological resources that could be affected by the proposed LWMSCP. On December 20, 2018, CEMVN discussed the proposed undertaking with LA SHPO Archaeologist, Dr. Charles McGimsey, and recommended that the adverse effects to Sites 16AN69 and 16AN70 could be minimized through archaeological monitoring during ditch recontouring and mitigated by documenting the significance of these resources through the development of an educational or public interpretive plan developed in consultation with SHPO, participating Tribes, and others, as appropriate. SHPO tentatively agreed that the proposed minimization and mitigation measures were appropriate given the limited amount of new ground disturbance that this action will create.

CEMVN will take steps to resolve adverse effects through the development of a Memorandum of Agreement (MOA). CEMVN will include stipulations in the MOA that provide for the treatment of unanticipated discoveries and human burials.

CEMVN requests your review and comments regarding:

- CEMVN's Area of Potential Effect;
- CEMVN's efforts to identify and evaluate historic properties within the APE;
- CEMVN's determination to treat the entire APE as containing NRHP-eligible deposits for the purpose of this undertaking;
- CEMVN's determination that the LWMSCP will result in an Adverse Effect to Historic Properties; and
- CEMVN's proposal to address the effects on Sites 16AN69 (Babin Place) and 16AN70 (Modeste Place) through the development of an MOA.

A date and time for the initial Section 106 consultation meeting has not been set. The purpose of the initial meeting will be to discuss the proposed Undertaking, the historic properties, CEMVN's analysis of alternatives (Attachment 1), and to determine the appropriate steps to avoid, minimize, and mitigate the adverse effects. CEMVN will notify the SHPO and other likely Consulting Parties regarding the meeting as soon as possible and forward information regarding the meeting location, a conference call-in number, and the Agenda.

CEMVN proposes to send future notices, draft agreements, and other background information to the by e-mail to minimize communication delays and expedite the development of the MOA. Please let CEMVN know if this is impractical, so we can make alternative arrangements.

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 Jeremiah Kaplan, Archaeologist at Jeremiah.H.Kaplan @usace.army.mil or (504) 862-2004, or, Jason A. Emery, Archaeologist and Tribal Liaison at (504) 862-2364 or jason.a.emery@usace.army.mil.

Sincerely,

MARSHALL K. HARPER
Chief, Environmental Planning Branch

CC:File
LA SHPO
An electronic copy of this letter with enclosures will be provided to the Section 106 Inbox, section106@crt.la.gov.

References:

Draughton, Ralph B. Jr, Susan Barett Smith, Roger Saucier, William P. Athens
2000 *A Land Use History for Alhambra to Hohen-Solms and Hohen-Solms to Modeste Levee Enlargement Projects, Iberville and Ascension Parishes, Louisiana*. Report prepared by R. Christopher Goodwin & Associates, Inc. for the U.S. Army Corps of Engineers, New Orleans District. New Orleans, Louisiana (LA DOA Report No. 22-2306).

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Mississippi River Commission
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Smith, Steven D., Phillip G. Rivet, Kathleen M. Byrd and Nancy W. Hawkins
1983 *Louisiana's Comprehensive Archaeological Plan*. State of Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana.

Figure 1. Satellite imagery displaying location of LWMSCP APE.

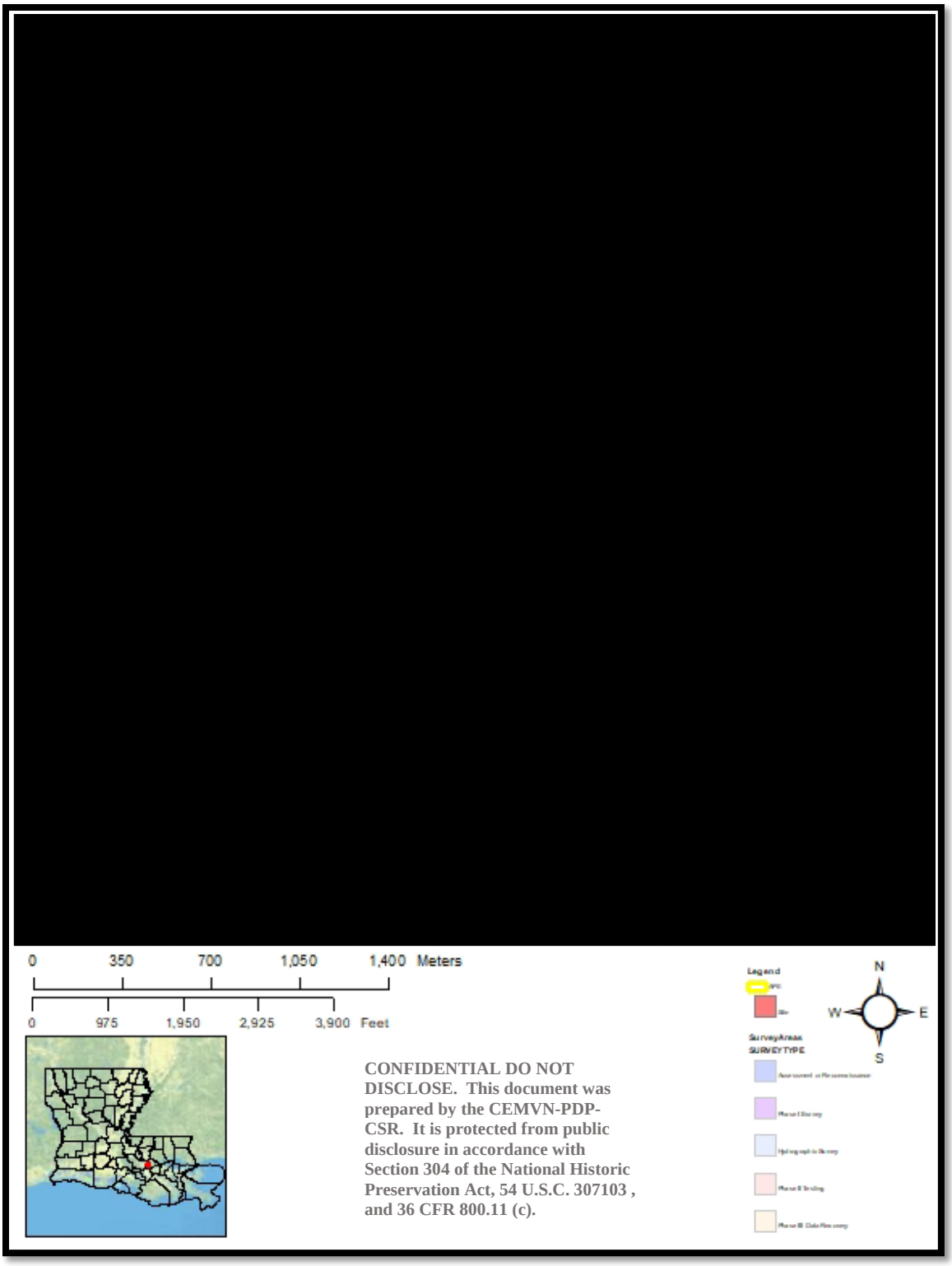

Figure 2. USGS *Carville, LA*, 1:24,000. 7.5 Minute Series (Topographic) Quadrangle map displaying APE location with existing LA SHPO Site Polygons and NRHP Data.

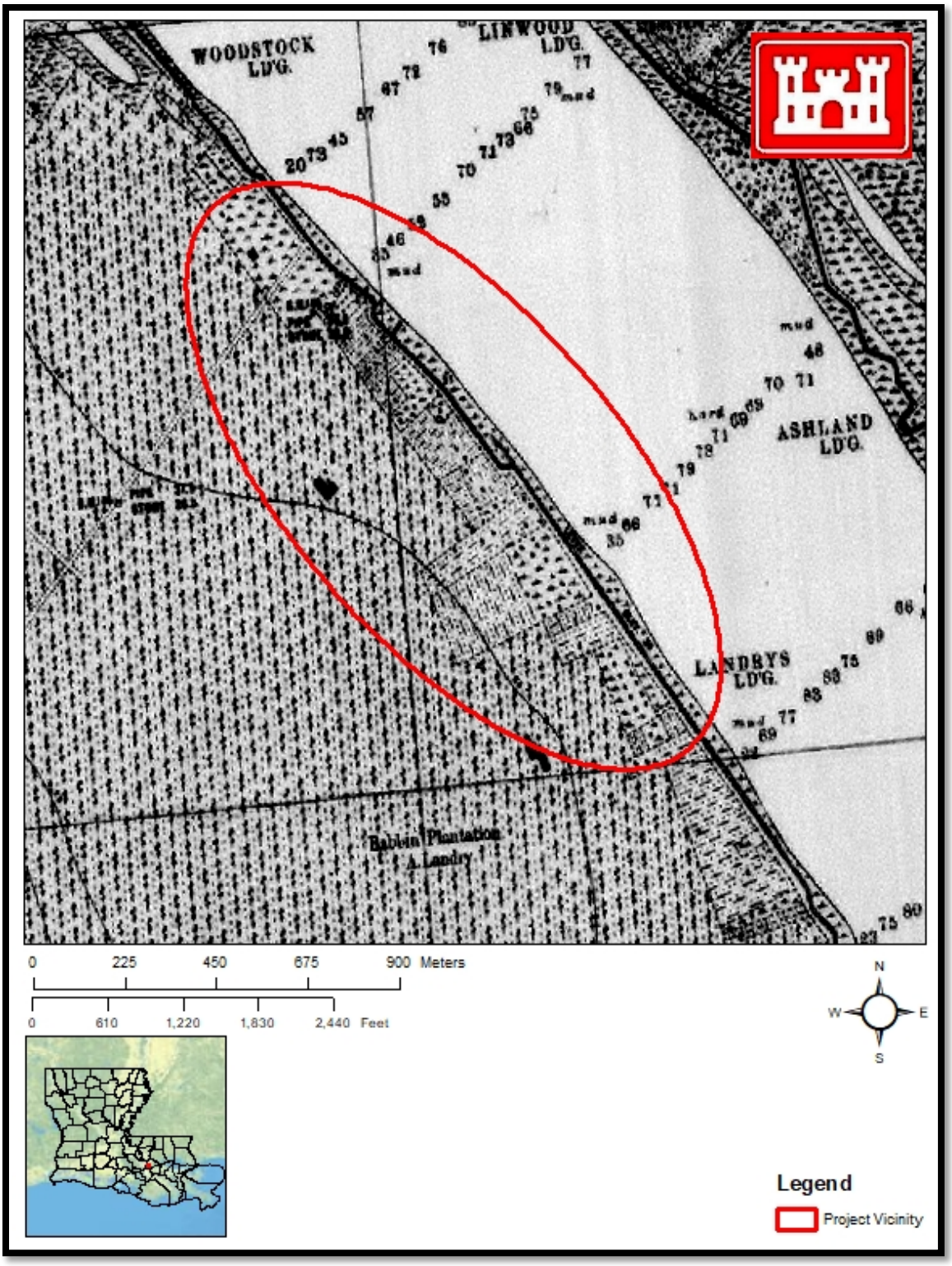

Figure 3. Excerpt from the 1883 *Survey of the Mississippi River* (Chart 69) with project area vicinity projected.

Figure 4. View of APE from crest of MRL levee; facing northwest.

Figure 5. View of APE from crest of MRL levee; facing northwest.

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

Alternate Analysis - Mississippi River and Tributaries, Atchafalaya Basin Levee District, Lower West Mississippi Seepage Control Project. B/L Sta. 5805+00 to Sta. 5841 +00, Ascension Parish, LA (Project ID ED-18-059)

Date: 12/19/2018
Preparer: Mary J. Voisin, E.I., Civil Engineer, Levees Section, Civil Branch (CEMVN-ED-L)

Relief Wells (Preferred Option)

The proposed action consists of the construction of 15 passive relief wells spaced approximately 200 feet (60.9 m) apart from northwest to southeast along the protected-side of the existing levee (91.016956; 30.175133 to -91.011092; 30.166680). Each relief well will measure 8 inches (20.3 cm) in diameter and be bored to a depth of approximately 100 feet (30.4 m). A total of four (4) removable electric-powered pumps will convey the water, discharged from the relief wells by gravity, back over the existing levee concrete slope paving (batture-side) when the Mississippi River reaches flood stage. The pumps will be placed directly on new concrete slabs measuring 6 x 6 feet (1.8 x 1.8 m) wide constructed within the roadside ditch. Electrical utility service to the pump control panel will be run under the roadway by means of new horizontal directionally drilled conduits from the existing power service on the west side of LA-405 to pump control boxes affixed to the concrete slabs. The existing roadside ditch between the levee and the road will be recontoured to collect well outflow to include clearing the drainage of vegetation and erosional fill within the cross-sectional area of the channel and reshaping at various locations to redefine the cross-section to the depth of the existing culverts. From the ditch, water will be conveyed to the pumps by means of removable 8 inch (20.3 cm) flexible discharge hoses (HDPE). The pumps will be connected to permanent 8 inch (20.3 cm) HDPE discharge lines installed above the existing levee section (ground surface) with ductile iron end sections and concrete slope paving at the intake and discharge transitions. The permanent discharge lines will be covered with 12 inches (30.4 cm) of compacted fill. All staging, construction, and maintenance access and will be confined to the existing MRL and Louisiana Department of Transportation Department (LA DOTD) Right of Way (ROW). The pumps, discharge hoses, and electrical cables will be stored offsite to prevent vandalism and environmental exposure and will be deployed as necessary during high river stages. Due to the proximity of the pumps to the road, guard rails will be installed along the road in accordance with LA DOTD standards.

Sheet Pile (Alternative Option)

The proposed action consists of installing type PZ-27 sheet pile along the existing centerline of the levee to cut off ongoing seepage at this site. The proposed work would occur on the crown and side slopes. In order to prepare the site, it is expected that heavy construction equipment such as excavators and bulldozers, would demolish the existing asphalt pavement located on the crown of the levee. Due to the type of seepage and depth of sheet pile required, this action would not be effective.