

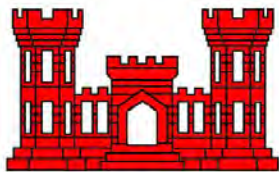
# **DRAFT ENVIRONMENTAL ASSESSMENT**

MISSISSIPPI RIVER AND TRIBUTARIES, MISSISSIPPI RIVER LEVEES

Point Pleasant Relief Wells

*EA #521*

IBERVILLE PARISH, LOUISIANA



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

# TABLE OF CONTENTS

<b>1.0 INTRODUCTION .....</b>	<b>p. 1</b>
<b>1.1 PROPOSED ACTION .....</b>	<b>p. 1</b>
<b>1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION .....</b>	<b>p. 2</b>
<b>1.3 AUTHORITY FOR THE PROPOSED ACTION.....</b>	<b>p. 2</b>
<b>1.4 PRIOR REPORTS .....</b>	<b>p. 2</b>
<b>1.5 NEPA SCOPING .....</b>	<b>p. 2</b>
<b>2.0 ALTERNATIVES .....</b>	<b>p. 3</b>
<b>2.1 NO ACTION ALTERNATIVE .....</b>	<b>p. 3</b>
<b>2.2 ALTERNATIVE 2 .....</b>	<b>p. 4</b>
<b>3.0. AFFECTED ENVIRONMENT .....</b>	<b>p. 4</b>
<b>3.1.1 ENVIRONMENTAL SETTING .....</b>	<b>p. 4</b>
<b>3.1.2 DESCRIPTION OF THE WATERSHED .....</b>	<b>p. 5</b>
<b>3.1.3CLIMATE .....</b>	<b>p. 5</b>
<b>3.1.4GEOLOGY .....</b>	<b>p. 5</b>
<b>3.2 RELEVANT RESOURCES .....</b>	<b>p. 6</b>
<b>3.2.3 WETLANDS .....</b>	<b>p. 10</b>
<b>3.2.4 AQUATIC RESOURCES /FISHERIES.....</b>	<b>p. 10</b>
<b>3.2.5 WILDLIFE .....</b>	<b>p. 11</b>
<b>3.2.6 THREATNED AND ENDANGERED SPECIES .....</b>	<b>p. 11</b>
<b>3.2.7 CULTURAL RESOURCES .....</b>	<b>p. 13</b>
<b>3.2.8 RECREATIONAL RESOURCES.....</b>	<b>p. 13</b>
<b>3.2.9 AESTHETICS .....</b>	<b>p. 14</b>
<b>3.2.10 AIR QUALITY .....</b>	<b>p. 14</b>
<b>3.2.11 WATER QUALITY .....</b>	<b>p. 15</b>
<b>4.0 ENVIRONMENTAL CONSEQUENCES</b>	
<b>4.1 WETLANDS .....</b>	<b>p. 16</b>
<b>4.2 AQUATIC RESOURCES /FISHERIES.....</b>	<b>p. 16</b>
<b>4.3 WILDLIFE.....</b>	<b>p. 16</b>
<b>4.4 THREATNED AND ENDANGERED SPECIES .....</b>	<b>p. 17</b>
<b>4.5 CULTURAL RESOURCES .....</b>	<b>p. 17</b>
<b>4.6 RECREATIONAL RESOURCES.....</b>	<b>p. 17</b>
<b>4.7 AESTHETICS .....</b>	<b>p. 18</b>
<b>4.8 AIR QUALITY .....</b>	<b>p. 18</b>
<b>4.9 WATER QUALITY .....</b>	<b>p. 18</b>
<b>4.10 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE .....</b>	<b>p. 19</b>
<b>4.11 CUMULATIVE EFFECTS .....</b>	<b>p. 19</b>
<b>5.0 COORDINATION .....</b>	<b>p. 20</b>
<b>6.0 MITIGATION .....</b>	<b>p. 21</b>
<b>7.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS .....</b>	<b>p. 21</b>

**EA #521 Mississippi River Levee, Point Pleasant Levees  
May 2013**

**U.S. Army Corps of Engineers, Regional Planning and Environmental Division South**

**8.0 CONCLUSION ..... p. 21**  
**9.0 PREPARED BY ..... p. 21**  
**10.0 REFERENCES ..... p. 22**

**Table 1 ..... p. 8**

**FIGURES ..... p.23**

# **ENVIRONMENTAL ASSESSMENT**

## **MISSISSIPPI RIVER AND TRIBUTARIES, MISSISSIPPI RIVER LEVEES,**

### **Point Pleasant Relief Wells**

*EA #521*

### **IBERVILLE PARISH, LOUISIANA**

#### **1. INTRODUCTION.**

1.0. The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, Regional Planning and Environmental Division South, has prepared this Environmental Assessment (EA) for the New Orleans District (MVN) to evaluate the potential impacts of installing approximately 64 passive relief wells and pumps on the east bank of the Mississippi River mainline levee in Iberville Parish, Louisiana (Figure 1). This 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 EA provides sufficient information on the potential adverse and beneficial environmental effects to allow the District Commander, USACE, MVN to make an informed decision on the appropriateness of an Environmental Impact Statement or a Finding of No Significant Impact.

#### **1.1. PROPOSED ACTION.**

1.1.1. The proposed action consists of construction of approximately 64 passive relief wells placed approximately 90 feet apart near the toe of the existing levee (Figures 2-4). A combination of permanent and portable pumping systems will convey the water, discharged from the relief wells, back over the levee and into the river. The roadside ditch between the levee and the road will be designed and reconfigured to collect well outflow. A series of approximately 6 permanent and 4 portable pumps will be installed to route the well outflow back over the levee and into the river via 12" HDPE pipe and flexible discharge hoses. The 6 larger pumps hang on guide rails and have a 12" discharge line that will be placed over the levee section and then covered with 12" of fill sloping back to the levee with concrete slope paving at the intake and discharge transitions. Removable discharge would not be practical with the 12" pumps. The smaller, portable pumps sit directly on the concrete and have 4" removable, flexible discharge hoses. The smaller pumps and discharge hoses will be stored offsite to prevent vandalism and environmental exposure. They 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 Department of Transportation criteria.

**EA #521 Mississippi River Levee, Point Pleasant Levees  
May 2013**

**U.S. Army Corps of Engineers, Regional Planning and Environmental Division South**

Reach #	Stationing	Length of Reach (Feet)	Total Project Reach Flow (CFS)	Approximate Number of Relief Wells	Approximate Number of Pumps
1	4875+00-4897+88	2288	1.6	11	2 (portable)
4	4920+00-4930+00	1000	1.2	15	2 (portable)
11	5049+00-5083+50	3300	37	38	6 (permanent)

## 1.2. PURPOSE AND NEED FOR THE PROPOSED ACTION.

1.2.1. The purpose of the proposed action is to continue providing flood risk reduction resulting from Mississippi River high water events to valuable urban land uses including, but not limited to, residential, commercial, and agricultural resources located on the right descending bank of river mile 224 in Iberville Parish between White Castle and Plaquemine, Louisiana. The proposed project would manage seepage flow to improve levee stability by designing seepage control measures for three project reaches between stations 4875+00 and 5083+50.

1.2.2. The Mississippi River Levee (MRL) continues to serve as an integral part of reducing the risk to communities from not only Mississippi River high water events but also any potential hurricane driven storm surge propagating upstream from the mouth of the Mississippi River.

## 1.3. AUTHORITY.

1.3.1. The Congressional authority for the construction of the “Mississippi River and Tributaries (MR&T)” project is contained in the Flood Control Acts of 1928, as amended, 1936, 1938, 1941, 1946, 1950, 1954, 1962, 1965 and 1968 and the Water Resources Development Act (WRDA) of 1986. The Flood Control Act of 1928 committed the Federal government to a definite program of flood control and authorized general and progressive channel stabilization and river regulation from Cairo, Illinois to Head of Passes, Louisiana.

## 1.4. PRIOR REPORTS.

1.4.1. Operation and maintenance of the Mississippi River levees, including repairs, is covered by the “*Mississippi River and Tributaries, Mississippi River Levees and Channel Improvement*” Final Environmental Impact Statement (FEIS) 1976. The Statement of Findings was signed on April 4, 1976.

1.4.2. “*Flood Control, Mississippi River and Tributaries, Mississippi River Mainline Levees, Enlargement and Seepage Control, Cape Girardeau, Missouri to Head of Passes, Louisiana*”

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**EA# 521 Mississippi River Levee, Point Pleasant Levee  
May 2013**

**U.S. Army Corps of Engineers, Regional Planning and Environmental Division South**

Final Supplemental Environmental Impact Statement (SEIS) 1998. This SEIS was prepared to report the findings of studies conducted for the MR&T project in the alluvial valley between Cape Girardeau, Missouri and Head of Passes, Louisiana based on environmental laws and regulations passed since 1976 to cover construction of all remaining Mississippi River mainline levees and seepage control. A Record of Decision was signed on October 5, 1998.

## 1.5. NEPA SCOPING.

1.5.1. The comprehensive MR&T project has four major elements: 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, floodways, 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.

1.5.2. Historically, the Mississippi River Levees feature has been under construction since 1928 and the engineering and construction capability exists to complete the project in the year 2020. When completed, approximately 35,000 square miles will be protected from the Mississippi River Project Design Flood (PDF). The Mississippi River mainline levees were first constructed by settlers at New Orleans in the early 1700's. 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 PDF 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.

1.5.3. Widespread public support exists for the protection of environmental resources and for flood control along the Mississippi River. 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.

## 2. ALTERNATIVES TO 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 possible undermining and damage to the east bank Mississippi River mainline levees 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 – Relief Wells with Local Drainage Improvements

2.2.1 This alternative utilizes the existing watershed to drain the water that comes out of the passive relief wells into the existing roadside ditch between River Road and the levee, then through existing and proposed culverts under River Road, eventually flowing into the existing Northeast Section canals flowing away from the project site. This alternative involves impacts to private property as well as Waters of the U.S. (including Wetlands). The wetlands that would be impacted are typically high quality bottomland hardwoods (BLH). This alternative would result in considerable environmental impacts. Therefore, this alternative is removed from further consideration.

## 3. AFFECTED ENVIRONMENT.

### 3.1. GENERAL DESCRIPTION.

#### 3.1.1. ENVIRONMENTAL SETTING.

3.1.1.1. Iberville Parish is located within the Central Gulf Coastal Plain in coastal southeastern Louisiana.

3.1.1.2. The project area is located within the Mississippi River deltaic plain, with the Mississippi River acting as the primary influence on geomorphic processes in the delta region. The Mississippi River levees are designed to protect the alluvial valley against the project flood by confining flow between the levees with the exception of areas where it enters the natural backwater areas of is diverted purposely into floodway areas. The Mississippi River Mainline Levee System consists of levees and floodwalls along the river, floodways and control structures. The levee line on the west bank begins just south of Cape Girardeau, Missouri, and extends to Venice, Louisiana. On the east bank of the river, levees alternate with high bluffs to give protection from floods.

3.1.1.3. Floral communities in the project area consist primarily of hardwood forest. There are existing borrow pits in this area along with old crevasse scars that hold permanent water. Trees along the flood side portion of the MRL typically includes sweetgum, green ash, cottonwood, American elm, water oak, hackberry, sycamore, black willow and Chinese tallow. The dominant tree species located throughout the proposed sites are black willow, sugarberry and sycamore. Additionally, the project area has been documented to support numerous faunal species including swamp rabbit, raccoon, opossum, gray squirrel, fox squirrel and numerous species of birds, reptiles and fish.

### 3.1.2. DESCRIPTION OF THE WATERSHED.

3.1.2.1. A watershed is an area of land drained by a particular set of streams and rivers. There are 12 major watersheds within Louisiana (Figure 6). On national scale, the Mississippi River has the third largest drainage basin in the world, exceeded in size only by the watersheds of the Amazon and Congo rivers. The entire Mississippi River basin covers more than 1,245,000 square miles and includes all or parts of 31 states and two Canadian provinces. Waters from as far east as New York and as far west as Montanan contribute to flows in the Lower Mississippi River Valley, which extends from Cairo, Illinois to Venice, Louisiana and is where the proposed project is located.

3.1.2.2. The Lower Mississippi River Valley has approximately 35,000 square miles which are subject to floodwater if not protected by levees. The Mississippi River divides the floodplain into large flood basins which are generally bounded by the bluffs of the valley wall on one side and the ridges of the river on the other. The western side of the river is comprised of the Arkansas/White, Atchafalaya, Red and St. Francis River basins. The eastern river basins include the Obion, Forked Deer, Big Black and Yazoo River basins. The Mississippi River mainline levee system within the New Orleans District boundaries in Louisiana extend along the Mississippi River west bank from the vicinity of Black Hawk, Louisiana, generally southward to the vicinity of Venice, Louisiana, and on the east bank from Baton Rouge, Louisiana to Bohemia, Louisiana encompassing over 500 miles of levee and associated infrastructure. The Jefferson Heights Levee Enlargement is located on the east Mississippi River mainline levee in Jefferson Parish, Louisiana.

### 3.1.3. CLIMATE.

3.1.3.1. The climate of Iberville Parish is humid subtropical. 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 parish three out of every ten years, with severe storm damage approximately once every two or three decades. The majority of these occur between early June and November. Summer thunderstorms are common, and tornadoes strike occasionally. Average annual temperature in the area is 67° (F), with monthly temperatures varying from the mid-90°'s (F) in July and August, to the mid-30°'s (F) in January and February. 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.

### 3.1.4. GEOLOGY.

3.1.4.1. The project area lies on the flood side of the modern Mississippi River levee, which is the land between the river and the levee. Fluvial activity in the project 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.

3.1.4.2. Soils in the project vicinity typically vary from brown to grayish brown in color with textures ranging from sandy loam to silt loam. Soils on the natural levee in the vicinity of the project area consist of sediments belonging to a soil series that usually consists of dark brown to grayish brown silty loam. Sediments on the natural levee typically vary in texture between silt loams to silty clay loams and normally exhibit a dark grayish brown color.

3.1.4.3. Natural levee deposits are highest near the river channel, and they gradually diminish away from the channel levee toe. These natural levee deposits consist of medium to stiff clays, silts and fine sands with low water and organic content; these deposits commonly are oxidized. Construction of artificial levees has altered the pattern of deposition and accretion. Fluvial activity now is concentrated within the flood side of the MRL. MRL flood side soils in the project area are frequently flooded, and are somewhat poorly drained silty loams and sandy loams that have developed on narrow floodplain ridges. The soils along the protected side of the levee are silt/loams, silty clay loams and clays.

## 3.2. RELEVANT RESOURCES.

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

A wide selection of resources were initially considered and determined not to be affected by the project. Socioeconomic resources, including land use, population, transportation, oil and gas, environmental justice, community cohesion, desirable community growth, tax revenues, property values, public facilities and services, business activity and employment, and displacement of people, would not be affected by the proposed project. The objectives of Executive Order 11988 (Floodplain Management) were considered; however, MVN has determined that floodplain impacts, if any, from the proposed action would be mainly positive. Additionally, there is no practicable alternative for project construction outside the 100-year floodplain. No prime or unique farmlands, as defined and protected by the Farmland Protection Policy Act, would be affected by the proposed project.

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

3.2.2. The following resources have been considered and found to not be affected by the alternative under consideration: estuarine water bodies; Gulf water bottoms; beaches; estuarine

or marine fisheries resources, including essential fish habitat; terrestrial resources, including prime and/or unique farmlands; socio-economic resources; disproportionate impacts to children and environmental justice.

<b>Resource</b>	<b>Institutionally Important</b>	<b>Technically Important</b>	<b>Publicly Important</b>
<b>Wetlands</b>	Clean Water Act of 1977, as amended; Executive Order 11990 of 1977, Protection of Wetlands; Coastal Zone Management Act of 1972, as amended; and the Estuary Protection Act of 1968., EO 11988, and Fish and Wildlife Coordination Act.	They provide necessary habitat for various species of plants, fish, and wildlife; they serve as ground water recharge areas; they provide storage areas for storm and flood waters; they serve as natural water filtration areas; they provide protection from wave action, erosion, and storm damage; and they provide various consumptive and non-consumptive recreational opportunities.	The high value the public places on the functions and values that wetlands provide. Environmental organizations and the public support the preservation of marshes.
<b>Aquatic Resources/ Fisheries</b>	Fish and Wildlife Coordination Act of 1958, as amended.	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.
<b>Wildlife</b>	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.
<b>Threatened and Endangered Species</b>	The Endangered Species Act of 1973, as amended; the Marine Mammal Protection Act of 1972; and the Bald Eagle Protection Act of 1940.	USACE, USFWS, NMFS, NRCS, USEPA, LDWF, and LADNR cooperate to protect these species. The status of such species provides an indication of the overall health of an ecosystem.	The public supports the preservation of rare or declining species and their habitats.
<b>Cultural Resources</b>	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.

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**EA# 521 Mississippi River Levee, Point Pleasant Levee  
May 2013**

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<b>Table 1: Relevant Resources</b>			
<b>Resource</b>	<b>Institutionally Important</b>	<b>Technically Important</b>	<b>Publicly Important</b>
<b>Recreation Resources</b>	Federal Water Project Recreation Act of 1965 as amended and Land and Water Conservation Fund Act of 1965 as amended	Provide high economic value of to local, state, and national economies.	Public makes high demands on recreational areas. There is a high value that the public places on fishing, hunting, and boating, as measured by the large number of fishing and hunting licenses sold in Louisiana; and the large per-capita number of recreational boat registrations in Louisiana.
<b>Aesthetics</b>	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.
<b>Air Quality</b>	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.
<b>Water Quality</b>	Clean Water Act of 1977, Fish and Wildlife Coordination Act, Coastal Zone Mgt Act of 1972, and La State & Local Coastal Resources Act of 1978.	USACE, USFWS, NMFS, NRCS, USEPA, and State DNR and wildlife/fishery offices recognize value of fisheries and good water quality. the national and state standards established to assess water quality	Environmental organizations and the public support the preservation of water quality and fishery resources and the desire for clean drinking water.

### 3.2.3. WETLANDS.

3.2.3.1. General Existing Conditions. Wetlands occurring within the Mississippi River Basin are typically confined to the flood side of the existing MRL. Wetlands located within the vicinity of the project are classified as BLH. In bottomland hardwood forested wetlands, typical species include black willow, bald cypress, green ash, tupelo, nuttall oak, water oak, American elm, red maple, elderberry, palmetto, lizards tail, trumpet creeper, cinnamon fern, poison ivy, and sawgrass. However, no wetlands are found within the direct project area.

### 3.2.4. AQUATIC RESOURCES/FISHERIES.

3.2.4.1. General Existing Conditions. Aquatic habitat in the project vicinity is provided by the Mississippi River, adjacent borrow areas, and associated wetlands. The largest aquatic resource in proximity to project area is that portion of the main stem of the Mississippi River. 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. The proposed action is located on the levee adjacent to the river. No aquatic resources are found within the project area.

3.2.4.2. Previously excavated borrow pits on the flood side of the existing MRL provide additional complexity of aquatic habitat for various species of wildlife, finfish, and shellfish . On the flood side, the higher plants around these water bodies are important primary producers in that a significant amount of leaf litter, branches, and other organic matter may wash into these lakes and borrow pits during high water conditions becoming a source of detritus. During annual high river season, typically from March – May, riverine aquatic resources (fish, shellfish, etc) move onto the flooded river bank to take forage on detritus (rotting vegetation), insects, insect larvae, worms and various other food items. Some species use this high water period to spawn in the flooding areas. These are reasons why overbank areas are so important to riverine fisheries resources.

3.2.4.4. 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 project area. Clams, dipterans and mayflies are some of the area's representative invertebrates.

3.2.4.5 Several man-made, roadside ditches are found within the project 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 a large cane field and residential areas. Eventually, the man-made ditches reach an unnamed natural stream which has been channelized as a local drainage feature.

### 3.2.5. WILDLIFE.

3.2.5.1. General Existing Conditions. Mammals that adapt in varying degrees to periodically wet riparian or early successional hardwood habitat are likely to inhabit or frequent the project area. Beaver, raccoon, swamp rabbit, nutria, muskrat, gray squirrel, fox squirrel, opossum and white-tailed deer have been observed in the project vicinity (USACE, 2010e). Birds observed in the project area include cattle egret, great egret, great blue heron, little blue heron and various species of waterfowl and songbirds.

3.2.5.2. Various species of reptiles and amphibians that are known to occur within the project area include cottonmouth, rat snake, western and southern water snake, snapping turtle, eastern box turtle, eastern mud turtle, green frog, squirrel tree frog, and Gulf coast toad (USACE, 2010e).

### 3.2.6. THREATENED AND ENDANGERED SPECIES.

3.2.6.1. General Existing Conditions. The U.S. Fish and Wildlife Service (USFWS ) lists four threatened or endangered species that may occur in Iberville Parish and include, Louisiana Black bear, Sprague's pipit, Gulf sturgeon, and Pallid sturgeon.

3.2.6.2. 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. Pallid sturgeon tend to select main channel habitats in the Mississippi River. Additional habitat descriptions state that the pallid sturgeon generally inhabits large, turbid, free-flowing riverine type environments with swift moving waters and rocky or sandy substrates (USFWS, 1990). The species is long-lived and spawning is believed to occur between June and August. Larval fish drift downstream from the hatching site and settle in the lower portion of the water column 11 to 17 days after hatching. Anthropogenic alterations to the Mississippi River such as bendway cutoffs, tributary impoundments and channel erosion have led to changes in deposition and erosion patterns potentially affecting pallid sturgeon populations. Pallid sturgeon are more frequently encountered in the Missouri and Atchafalaya rivers than in the Mississippi River, but are "nowhere common" (USACE, 1998). Habitat decline for this species has been attributed to channelization of rivers and construction of reservoirs that ultimately reduce the amount of turbidity in the water, which is vital for the pallid sturgeon for not only feeding areas but also spawning habitat (LDWF, 2012). As stated in the 1998 biological assessment included in the 1998 FSEIS, pallid sturgeon generally avoid shallow water and inhabit thalwegs with hard-packed, sandy substrate, and channels of relatively low slope. In the spring of 2008, during extreme high water on the Mississippi River, pallid sturgeon were captured in the flooded bank of the Mississippi River upstream from the project area near river mile 128. Prior to this time, it was not well documented that pallid sturgeon utilized flooded riverbank areas. Whether the sturgeon were feeding, spawning or both in this flooded river bank was not determined. In 2007, researchers from the USACE Engineer Research and Development Center captured pallid sturgeon in the Mississippi River as far downstream as the

Gramercy Bridge at river mile 145. In December 2008, the same researchers captured a single pallid sturgeon next to the Mississippi River Bridge in New Orleans. Prior efforts to collect pallid sturgeon below New Orleans were unsuccessful, but the possibility exists that pallid sturgeon occur in the Mississippi River adjacent to the proposed levee work.

The Gulf sturgeon is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwanee River, Florida (USFWS, 2003). In Louisiana, the Gulf sturgeon has been reported at Rigolets Pass, rivers and lakes of the Pontchartrain Basin, and adjacent estuarine areas, including the Mississippi River Gulf Outlet inland reach. Spawning occurs in coastal rivers between late winter and early spring (i.e., March to May). Gulf sturgeon less than 2 years old appears to remain in riverine habitats and estuarine areas throughout the year, rather than migrate to marine waters. Habitat alterations, such as those caused by water control structures that limit and prevent spawning, poor water quality, and over-fishing, have negatively affected this species. Additional investigations determined that there was no designated critical habitat for the federally listed species within the project area. There is a very low potential that the Gulf sturgeon can be found in the Mississippi River adjacent to the levee where the work will occur. There is a low likelihood of the species being present Mississippi River in the general vicinity. Further, the project is located inland well outside suitable habitat (i.e. Mississippi River).

The Louisiana black bear prefers large expanses of forested wetlands where it can forage on soft and hard mast. Black bears occur in the Tensas River Basin, the Upper Atchafalaya River Basin, and coastal St. Mary and Iberia Parishes. Black bears could be found within BLH forests near the project. However, the proposed construction area was not designated as part of Unit-2 of Louisiana black bear critical habitat by the USFWS in 2009. Field investigations by USACE biologist in March 2012 determined the project area to be poorly suited for the Louisiana black bear. During the investigation, no candidate or actual den trees were observed, few hard mast trees were observed, and ground denning was found to be unlikely due to the lack of understory. The project is located on an existing levee with no adjacent bottomland hardwoods; therefore, there is a very low likelihood of use by black bear.

The Sprague's pipit is a relatively small passerine endemic to the North American grasslands. It has a plain buff colored face with a large eye-ring. The Sprague's pipit is a ground nester that breeds and winters on open grasslands. It feeds mostly on insects and spiders and some seeds. The Sprague's pipit is closely tied with native prairie habitat and breeds in the north-central United States in Minnesota, Montana, North Dakota and South Dakota as well as south-central Canada. Wintering occurs in the southern states of Arizona, Texas, Oklahoma, Arkansas, Mississippi, Louisiana, and New Mexico. The project area location places it within the wintering area of the pipit. Therefore, consideration should be given to the forage habits of the Sprague's pipits. They typically forage alone throughout the day in all seasons. They walk or run while gleaning food from the ground surface or grasses, typically in grass that is several centimeters tall. The levee is typically unsuitable as foraging habitat due to growth of winter grasses exceeding the grass height preferred by the pipit. Field investigations by USACE biologist

indicated vegetation (various winter grasses and clovers) in excess of 2 feet during the winter months of 2013.

3.2.6.3. Bald eagles are no longer protected under the Endangered Species Act, but are protected by the Bald and Golden Eagle Protection Act. Therefore, they will be given specific consideration in this EA. Bald eagles are common in Louisiana throughout the fall and winter months. The bald eagle is primarily riparian, associated with coasts, rivers, and lakes, usually nesting near bodies of water where it feeds. Selection of nesting sites varies depending on the species of trees growing in a particular area. In Louisiana, nests are usually constructed in living bald cypress trees, but bald eagles will occasionally use dead ones. There are certain general elements which seem to be consistent among nest site selection. These include (1) the proximity of water (usually within one-half mile) and a clear flight path to a close point on the water; (2) the largest living tree in a span; and, (3) an open view of the surrounding area. The proximity of good perching trees may also be a factor in site selection. An otherwise suitable site may not be used if there is excessive human activity in the area. Bald eagle wintering areas possess many of the same characteristics as nest sites. The birds, however, are not as closely limited to shores at this time, with both adults and immature gathering food where it is most easily available. No bald eagle nests are known to exist near the project area.

### 3.2.7. CULTURAL RESOURCES.

3.2.7.1. General Existing Conditions. All project areas discussed for the Point Pleasant Seepage Relief Well project are under coordination with the Louisiana State Historic Preservation Office (SHPO) for a conclusion of no historic properties affected, in a letter dated May 6, 2013. Project area specifics for cultural resources are presented below.

3.2.7.2. A literature review and site visit was completed by MVN archaeologists. No recorded cultural resources exist within the project areas. On the protected side of the levee are properties and roadways. On the riverside of the levee is mixed vegetation and some remnants of borrow area. A cultural resources survey was conducted in 1983 that overlaps with the batture for the northernmost area of seepage relief, and no cultural resources were located (Stuart and Green 1983). The remaining project areas for seepage relief consist of levee and roadway on the protected side, and batture that is annually flooded on the riverside, and there are no indications of cultural resources in these areas. Coordination with the Louisiana State Historic Preservation Officer (SHPO) and with the Federally recognized Native American Tribes within the New Orleans District, is currently being conducted. No additional cultural resources investigations are recommended prior to the project's implementation.

### 3.2.8. RECREATIONAL RESOURCES.

3.2.8.1. General Existing Conditions. The Mississippi River is adjacent to the project area. People may bank fish along the river edge. Residents may walk on top of the levee if access is available. Access is restricted in areas due to a cattle fence adjacent to the levee. There are no recreation sites or facilities within the project area.



### 3.2.9. AESTHETICS (VISUAL RESOURCES).

3.2.9.1. General Existing Conditions. The project area consists of two main components. Reaches 1 and 4 are adjacent to residential areas consisting of single family structures, a church and cemetery. Reach 11 is adjacent to an agricultural field which seems to be utilized for sugar cane. The natural feature of the area has been significantly altered due to development, agriculture and the existing levee.

### 3.2.10. AIR QUALITY.

3.2.10.1. General Existing Conditions. The U.S. Environmental Protection Agency (USEPA) Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards (NAAQS) for six principal pollutants, called “criteria” pollutants. They are carbon monoxide, nitrogen dioxide, ozone, lead, particulates of 10 microns or less in size (PM-10 and PM-2.5), and sulfur dioxide. Ozone is the only parameter not directly emitted into the air but forms in the atmosphere when three atoms of oxygen (O<sub>3</sub>) are combined by a chemical reaction between oxides of nitrogen (NO<sub>x</sub>) 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 NO<sub>x</sub> 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. 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).

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

Iberville Parish is one of five Baton Rouge area parishes that were designated by the USEPA as ozone non-attainment areas under the 8-hour standard effective June 15, 2004. Currently none of the five parishes are in attainment of NAAQS. The five parish area has been classified as marginal, which is the least severe classification. This classification is the result of area-wide air quality modeling studies, and the information is readily available from Louisiana Department of Environmental Quality, Office of Environmental Assessment and Environmental Services.

Federal activities proposed in Iberville 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 VOC and NO<sub>x</sub> emissions caused by the construction of the project. Prescribed *de minimis* levels of 100 tons per year per pollutant are applicable in Iberville 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."

### 3.2.11. WATER QUALITY.

3.2.11.1. General Existing Conditions. Water quality in the project 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.

3.2.11.2. Section 303(d) of the Clean Water Act (CWA) requires states to identify waterbodies that are not meeting water quality standards and to develop total maximum daily loads (TMDLs) for those pollutants suspected of preventing the waterbodies from meeting their standards. TMDLs 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 (LDEQ) oversees the program.

3.2.11.3. The LDEQ 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.

3.2.11.4. The LDEQ Section 305(b) and 303(d) Reports for 2010, included in the Water Quality Inventory Integrated Report, lists one waterbody adjacent to the project area. The waterbody is in Sub-segment Code LA070301 and is described as Mississippi River – from Monte Sano Bayou to Head of Passes. Available LDEQ records indicate that prior to the 2004 Water Quality Inventory Report, suspected causes of impairment to the listed waterbody consisted of: mercury; nitrate/nitrite (nitrite + nitrate as N); pesticides; phosphorous; priority organics (including dioxin); and total fecal coliform.

3.2.11.5. In the 2004 report, testing of the aforementioned impairments indicated a status of attainment had been achieved for the listed waterbody. The status of attainment for the subject waterbody was reported to be the same following the completion of the 2010 report. The current water quality concerns associated with Sub segment Code LA070301 is "fully supporting all standards". The 2006 US Environmental Protection Agency integrated report methodology guidance categories--which are used to categorize a water body / pollutant combinations--listed

the LA070301 segment as an Integrated Report Category (IRC) 1. The IRC 1 description is listed as any water body impairment that was cited on a previous §303(d) list that is now in attainment of all uses and standards and fully support all designated uses.

#### **4. ENVIRONMENTAL CONSEQUENCES**

##### **4.1 WETLANDS**

###### Future Conditions with No Action

Without implementation of the proposed action, no change to wetlands or other waters of the U.S. are anticipated.

###### Future Conditions with the Proposed Action

In consideration of the objectives of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) has been made during the planning and evaluation of this project. In order to provide the necessary flood damage reduction measures, the project features must be sited in the flood plain. With implementation of the proposed action, the project features avoid long- and short-term adverse impacts to wetlands. With the measures included in the recommended plan to reduce erosion, there should not be any significant increase in sediments or changes in water chemistry in the local watersheds.

##### **4.2 AQUATIC RESOURCES /FISHERIES**

###### Future Conditions with No Action

Without implementation of the proposed action, no change to the aquatic resources in the project vicinity is expected to occur.

###### Future Conditions with the Proposed Action

With implementation of the proposed action, no effects to aquatic or fishery resources would occur as the project is located in uplands and will be designed and constructed to avoid impacts to aquatic resources including fish.

##### **4.3 WILDLIFE**

###### Future Conditions with No Action

Without implementation of the proposed action, no change to the wildlife resources in the project vicinity is expected to occur.

###### Future Conditions with the Proposed Action

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**EA# 521 Mississippi River Levee, Point Pleasant Levee  
May 2013**

**U.S. Army Corps of Engineers, Regional Planning and Environmental Division South**

With implementation of the proposed action, no effects to wildlife would occur as the project is located in a previously developed area and will be designed and constructed to avoid impacts to wildlife. Any wildlife that may be present in the maintained levee right of way is highly mobile and would simply utilize an adjacent stretch of levee during construction activities. The installation of the relief wells would have no long term effect to the utilization of the levee by the limited wildlife present within the existing right of way..

#### 4.4 THREATENED AND ENDANGERED SPECIES

##### Future Conditions with No Action

Without implementation of the proposed action, no change to the threatened or endangered species in the project vicinity is expected to occur.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, the USACE has determined that the proposed action would have no effect to listed threatened or endangered species or their critical habitat as the project area does not contain suitable habitat for listed species. Through coordination under Section 7 of the Endangered Species Act, the USFWS has concurred with the USACE “No Effect” determination.

#### 4.5 CULTURAL RESOURCES

##### Future Conditions with No Action

Without implementation of the proposed action, the future risk of levee failure is increased. This situation would allow flooding that could damage any historic properties in the project vicinity.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, no effects to historic properties are likely. There are no known historic properties present within the project area, and no undiscovered cultural resources are likely to be present. A conclusion of no historic properties affected is currently being coordinated with the Louisiana SHPO and with Federally recognized Tribes.

#### 4.6 RECREATION RESOURCES

##### Future with No Action

Without implementation of the proposed action, the conditions within the recreational environment would continue as they have in the past and would be dictated by the natural land use patterns and processes that have dominated the area in the past.

#### Future with Proposed Action

Recreational uses such as walking on top of the levee or to the river for scenic views or bank fishing will be temporarily displaced during construction.

#### 4.7 AESTHETICS

##### Future Conditions with No Action

Without implementation of the proposed action, aesthetics will remain as they are presently. However, all structures would be at increased risk due to deficiencies in the existing levee.

##### Future Conditions with the Proposed Action

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. These structures will blend with the man-made appearance of the levee. No impacts to aesthetic resources were identified.

#### 4.8 AIR QUALITY

##### Future Conditions with No Action

Without implementation of the proposed project, the status of attainment of air quality for Iberville Parish would not change from current conditions.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, on-site construction activities are expected to produce less than 2 tons per year of VOC emissions and less than 26 tons per year of NO<sub>x</sub> emissions (less than the *de minimis* level of 100 tons per year per pollutant). Thus, the ambient air quality in Iberville Parish would not noticeably change from current conditions, and the status of attainment for the parish would not be altered.

#### 4.9 WATER QUALITY

##### Future Conditions with No Action

Without implementation of the proposed action, no change to water quality is anticipated.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, impacts to water quality are expected to be minimal and limited to slight increase in turbidity during construction. A stormwater pollution prevention plan will be developed to minimize any potential effects to water quality during construction. No impacts to wetlands or other waters of the U.S. will occur from implementation of the proposed action. Therefore a CWA, Section 404 evaluation is not required.

#### 4.10 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

The USACE is obligated under Engineer Regulation (ER) 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of proposed actions. ER 1165-2-132 identifies that USACE policy is to avoid the use of project funds for HTRW removal and remediation activities. An ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA) (#13-04 dated February 22, 2013) has been completed for the project area. A copy of the Phase 1 ESA will be maintained on file at CEMVN.

USACE-MVN personnel made a field inspection of the Mississippi River Levee, Point Pleasant Seepage Control project site on February 22, 2013. Several natural gas pipelines were noted to be near or within the project area and should be considered potential Recognized Environmental Conditions (RECs). A review of Government and commercial environmental databases, historical aerial photographs, and historical topographic maps also identified the presence of several natural gas pipelines near or within the project area that could potentially affect the proposed project.

The environmental records search conducted during this screening did not identify the presence of any hazardous or suspected hazardous wastes in the project area. As a result of the site visit and environmental records search it was concluded that the probability of encountering HTRW is low.

Although the probability of encountering HTRW for the proposed action is low, the pipelines are considered to be potential RECs, and extreme caution shall be taken to prevent damage to or breakage of the pipelines during construction of the project.

If any hazardous waste/substance is encountered during construction activities, the proper handling and disposal of these materials will be coordinated with the State Department of Environmental Quality.

#### 4.11 CUMULATIVE IMPACTS

4.11.1. 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.”

4.11.2. While the proposed action would result in minor impacts as previously noted, it is expected that no significant adverse cumulative impacts would occur as a result of implementation of the project. The direct, indirect, and cumulative impacts from associated projects listed in the Prior Reports Section were previously addressed. These reports also provided an evaluation of the direct, indirect, and cumulative impacts associated with the levee enlargement and borrow pit construction in the general project vicinity. The discussions of potential cumulative impacts contained in the cited documents address projects similar to the proposed action and are consistent with the cumulative and indirect impacts anticipated from the proposed action.

4.11.3. Overall, the proposed action, in comparison to past, present, and reasonably foreseeable future actions, would not incrementally contribute adversely to the general project area. This flood risk reduction feature is part of an overall comprehensive plan for the Mississippi River and Tributaries project. The preferred alternative would accomplish flood risk reduction objectives, which are of great importance in the Lower Mississippi Valley, and provide for the preservation and enhancement of the very significant fish, wildlife, and other natural resources of the basin. Installation of the relief wells in Iberville Parish would ensure the ability of the levee to prevent flood damage to the natural and human environment on the protected side of the levee. No wetland impacts or other significant environmental impacts were identified during this evaluation. No secondary or indirect impacts were identified in association with the proposed action. The cumulative impacts of the proposed action are not expected to result in long-term adverse impacts.

## **5.0 COORDINATION**

Preparation of this EA and draft Finding of No Significant Impact (FONSI) is being coordinated with appropriate Congressional, Federal, state, and local interests, as well as environmental groups and other interested parties.

U.S. Department of Interior, Fish and Wildlife Service  
U.S. Environmental Protection Agency, Region VI  
Natural Resources Conservation Service, State Conservationist  
Advisory Council on Historic Preservation  
Louisiana Department of Wildlife and Fisheries  
Louisiana Department of Environmental Quality  
Louisiana Historic Preservation Officer  
Louisiana Department of Natural Resources

The USFWS was consulted in accordance with the Fish and Wildlife Coordination Act. However, no coordination act report was required due to the minor nature of the proposed

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**EA# 521 Mississippi River Levee, Point Pleasant Levee  
May 2013**

**U.S. Army Corps of Engineers, Regional Planning and Environmental Division South**

activity. Through coordination under Section 7 of the Endangered Species Act, the USFWS has concurred with the USACE “No Effect” determination.

## **6.0 MITIGATION**

The appropriate application of mitigation is to formulate an alternative that first avoids adverse impacts, then minimizes adverse impacts, and lastly, compensates for unavoidable impacts. The proposed activity has de minimis impacts not requiring mitigation. Specifically, no waters of the U.S. (wetlands) will be impacted by the proposed action.

## **7.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS**

Environmental compliance for the proposed action would be achieved upon: coordination of this EA and draft FONSI with appropriate agencies, organizations, and individuals for their review and comments; USFWS confirmation that the proposed action would not be likely to adversely affect any endangered or threatened species; receipt of the SHPO Determination of No Affect on cultural resources; and acceptance or resolution of all LDEQ comments on the air quality impact analysis documented in the EA. The draft FONSI will not be signed until the proposed action achieves environmental compliance with applicable laws and regulations, as described above.

## **8.0 CONCLUSION**

The proposed action consists of construction of approximately 64 relief wells placed approximately 90 feet apart near the toe of the existing levee. A combination of permanent and portable pumping systems will convey the water back across the levee into the river. The roadside ditch between the levee and the road will be designed and reconfigured to collect well outflow. A series of approximately 6 permanent and 4 portable pumps will be installed to route the well outflow back over the levee and into the river via 12” HDPE pipe. Guard rails will be installed along the road in accordance with Department of Transportation criteria. This office has assessed the environmental impacts of the proposed action and has determined that the proposed action would have no adverse or beneficial impact upon cultural resources, air quality, wetlands threatened or endangered species or any other identified resource. There are no cumulative impacts, adverse or beneficial, associated with the proposed action.

## **9.0 PREPARED BY**

EA # 521 and the associated draft FONSI were prepared by Howard Ladner, biologist, with relevant sections prepared by: Joseph Musso - HTRW; Paul Hughbanks - Cultural Resources; and Debbie Wright, - Recreational Resources. The address of the preparers is: U.S. Army Corps of Engineers, Mississippi River Valley Regional Planning and Environmental Division South, 7400 Leake Ave., New Orleans LA, 70118.



## 10.0 REFERENCES

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**FIGURES:**

Figure 1: Vicinity Map

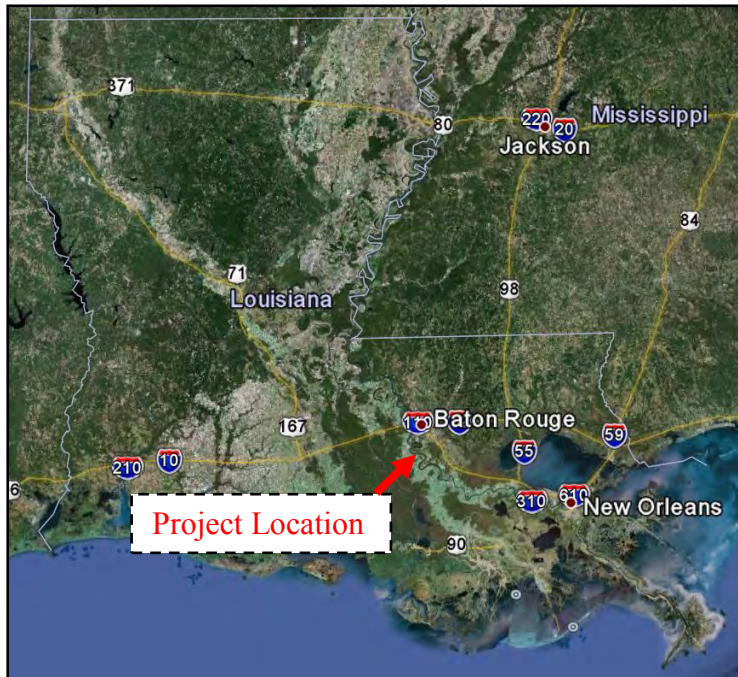


Figure 2: Reach 1



Not to scale

Figure 3: Reach 4



Not to scale

Figure 4: Reach 11



Not to scale.

Figure 5: Typical Relief Well



The typical relief well has a diameter of 8 inches and stands approximately 20 inches above ground. A concrete pad may or may not be present to direct flow from the well.