



REPLY TO  
ATTENTION OF

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

AUG - 8 2016

Regional Planning and  
Environment Division, South  
Coastal Environmental  
Compliance Branch

**FINDING OF NO SIGNIFICANT IMPACT  
(FONSI)**

**HILLARYVILLE PUMP STATION and EFFLUENT DISCHARGE  
FORCE MAIN PROJECT  
DARROW, ASCENSION PARISH, LOUISIANA**

**EA #547**

**Description of Proposed Action**

The U.S. Army Corps of Engineers, New Orleans District (CEMVN), proposes to construct a new sanitary wastewater effluent pump station and force main discharge from the existing Hillaryville Wastewater Treatment Plant (WWTP) to the Mississippi River near Darrow, Louisiana.

This project was initiated as a joint effort between Ascension Parish and CEMVN under the Corps' Environmental Infrastructure Program (Section 219(f)(21) of WRDA 1992, as amended). This section of WRDA authorizes the Corps of Engineers to assist a non-Federal interest (in this case, Ascension Parish) with water-related environmental infrastructure and resource protection and development projects. Projects eligible for inclusion under the Section 219 program include water supply storage and treatment, distribution and wastewater treatment systems, which is inclusive of wastewater treatment plants.

Environmental Assessment (EA) #547 addresses the impacts of constructing and operating a new sanitary wastewater effluent pump station and force main discharge from the existing Hillaryville WWTP to the Mississippi River. The effluent discharge pump station will be constructed within the existing fenced gravel lot surrounding the WWTP. EA #547 is attached hereto and incorporated herein.

The effluent discharge force main will travel below ground at a minimum of 3.5 feet from the new effluent pump station for an approximate length of 4,002 feet to discharge into the Mississippi River. The pipe will be installed by trenching and directional drilling. The force main will be 8 inches in diameter, and will travel as follows: From the new pump station toward Brown Road, then along Brown Road

toward LA Hwy. 22, beneath LA Hwy. 22, then below ground along Marchand School Road toward LA Hwy. 942, beneath LA Hwy. 942, then across the crown of the Mississippi River levee and down the flood-side of the levee to the batture. Once on the batture, the force main will be installed below ground for approximately 300 feet and will re-emerge above ground to discharge across a rock-lined diffuser where the effluent will disperse across the remaining 300 feet of batture before flowing into the Mississippi River. A 35-foot wide corridor for the pipeline will be cleared and maintained from the levee toe to the discharge area on the batture. Discharge will be via a 25-foot long rip-rap lined open channel to allow dispersal of the effluent into the bottomland hardwood habitat on the batture before it discharges into the Mississippi River. Construction of the corridor and discharge area will cause permanent loss of 0.27 acres of moderate quality bottomland hardwoods.

### **Factors Considered in Determination**

CEMVN assessed the environmental impacts of the no action alternative and the proposed action in EA #547 and has determined that the proposed action would have no significant impacts on air quality; water quality; aquatic resources; wetlands; terrestrial resources; wildlife; threatened and endangered species or their critical habitats; cultural resources; socio-economic resources; and aesthetic resources. The risk of encountering hazardous, toxic, and radioactive waste is low. Through the use of directional drilling and incorporation of design changes to allow dispersal of the effluent into the wetlands on the batture approximately 300 feet from the river's edge, CEMVN has avoided and minimized adverse environmental impacts.

In correspondence dated May 3, 2016, the U.S. Fish and Wildlife Service (USFWS) confirmed that the proposed activities are not likely to affect any threatened or endangered species or their critical habitat. A State Water Quality Certificate (#160502-03), dated June 10, 2016, was received from the Louisiana Department of Environmental Quality. Review of the Section 404(b)(1) Public Notice was completed on June 6, 2016. The Section 404(b)(1) evaluation was signed on July 29, 2016. In correspondence dated May 31, 2016, the Louisiana State Historic Preservation Office (SHPO) concurred with a recommendation of no effect on historic properties. This office has concurred with, or resolved, all Fish and Wildlife Coordination Act recommendations contained in a letter from the USFWS, dated July 21, 2016. In e-mail correspondence dated June 15, 2016, the National Marine Fisheries Service (NMFS) concurred with CEMVN that the project implementation would not adversely impact resources under NMFS jurisdiction. This office has resolved, or concurred with, recommendations in a letter dated June 30, 2016, from the Louisiana Department of Wildlife and Fisheries.

### **Environmental Design Commitments**

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

1. Per USFWS recommendation, CEMVN has designed the effluent discharge force main so that the discharge point is no closer than 300 feet

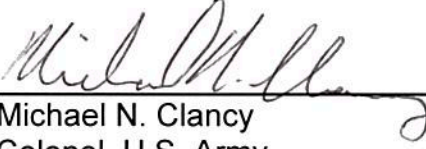
from the river bank. A rip rap lined channel at the discharge point will allow the effluent to spread out over the batture area before it reaches the river. This design will reduce impacts to bottomland hardwoods (because the pipeline corridor will be 300 feet instead of 600 feet) and will indirectly increase the benefits to the batture wetlands by allowing the assimilation of nutrients into the batture wetlands prior to discharging into the Mississippi River during lower river stages. Additionally, the wetlands will serve as a filter for the effluent before discharging into the river. By increasing habitat benefits to the adjacent forested wetlands, construction impacts of the project will be compensated, thereby negating any need for additional mitigation.

2. If the proposed action is changed significantly or is not implemented within one year, CEMVN will reinitiate consultation with the USFWS to ensure that the proposed action would not adversely affect any Federally-listed threatened or endangered species, critical habitat or trust resources.
3. If any unrecorded cultural resources are determined to exist within the proposed project boundaries, then no work will proceed in the area containing these cultural resources until a CEMVN staff archeologist has been notified and final coordination with the State Historic Preservation Officer and Tribal Historic Preservation Officer has been completed.

## Conclusion

This office has assessed the potential environmental impacts of the proposed action. Based on this assessment (incorporated herein by reference), a review of the comments made on Environmental Assessment #547, and the implementation of the environmental design commitments listed above, a determination has been made that the proposed action is environmentally preferable to the no action alternative and that it would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

8 Aug 16  
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Date

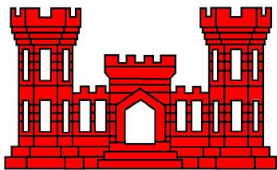
  
\_\_\_\_\_  
Michael N. Clancy  
Colonel, U.S. Army  
District Commander

# **ENVIRONMENTAL ASSESSMENT**

## **HILLARYVILLE PUMP STATION and EFFLUENT DISCHARGE FORCE MAIN PROJECT**

**DARROW, ASCENSION PARISH, LOUISIANA**

**EA # 547**



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

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# ENVIRONMENTAL ASSESSMENT

## HILLARYVILLE PUMP STATION and EFFLUENT DISCHARGE FORCEMAIN PROJECT ASCENSION PARISH, LOUISIANA EA # 547

### 1. INTRODUCTION.

1.0 The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Regional Planning and Environmental Division South, has prepared this Environmental Assessment (EA) #547 to evaluate the potential impacts of constructing and operating a new sanitary wastewater effluent pump station and force main discharge from the existing Hillaryville Wastewater Treatment Plant (WWTP) to the Mississippi River.

Hillaryville is located on the east bank of the Mississippi River in Ascension Parish in south Louisiana, approximately 59 miles northwest of New Orleans, and 30 miles south east of Baton Rouge. The existing Hillaryville WWTP is owned and operated by the Parish of Ascension Department of Public Utilities. The WWTP is located at the north end of Brown Road, approximately 1,400 feet from its intersection with LA Highway 22, and between the communities of Darrow and Burnside, Louisiana.

EA #547 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, U.S. Army Corps of Engineers, New Orleans District (MVN), 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

MVN, in cooperation with the non-Federal sponsor, Ascension Parish, is proposing to construct a new wastewater effluent pump station and a new force main to discharge treated wastewater from the Hillaryville WWTP to the Mississippi River. Once completed, Ascension Parish would operate the pump station. Currently the Hillaryville WWTP discharges treated effluent to a local drainage ditch adjacent to the facility. The quantity and quality of treated effluent will be unchanged from existing conditions. The individual project features are described in detail below, and the location of the project features is shown in Figures 3-6.

#### 1.1.1 HILLARYVILLE WASTEWATER EFFLUENT DISCHARGE PUMP STATION

The effluent discharge pump station will be a duplex submersible station containing two pumps with following characteristics:

No. of pumps	2
Type of drive	Constant speed
Design Capacity per pump	562 Gallons Per Minute (GPM)
Total Dynamic Head (TDH)	61.3 FT
Minimum Efficient at Design Capacity	68%
Design Speed, Max	1750 RPM
Maximum Horsepower per pump	15 HP
Minimum size solids	3 inch
Minimum discharge size	4 inch
Electrical Service	460 Volt, 3-Phase, 60 Hz (Premium efficiency design)

When operating alone, each of the above two pumps will be able to pump the following flows against the indicated total dynamic heads.

Flow	300 GPM	500 GPM	700 GPM	900 GPM
TDH	47.0 FT	58.0 FT	73.6 FT	93.6 FT
TDH	16.1 FT	28.8 FT	46.7 FT	69.6 FT

The pump station will be constructed within the existing fenced gravel lot surrounding the WWTP.

The wet well and valve pit will be constructed of pre-cast concrete. Each of these structures will be constructed on an 11-foot square, pile supported reinforced concrete base slab with a top elevation of 12.0 feet. The structures will be HL-20 rated. The pump station will contain standards items such as hinged covers for access, stainless steel guide rails for maintenance purposes, air vent, check valve, gate valve, etc. An electrical panel for control of the pump station will be installed along the southern edge of the pump station. The minimum bottom elevation of electrical equipment and enclosures will be 14.0 feet.





### 1.1.2 HILLARYVILLE WASTEWATER EFFLUENT DISCHARGE FORCEMAIN

The effluent discharge force main will travel from the new effluent pump station for an approximate length of 4,002 feet to discharge into the Mississippi River. The force main will be 8 inches in diameter, and will travel as follows:

Run of Pipe	Installation Method	Pipe Material	Approximate Length
From the new pump station toward Brown Road	Open cut	Ductile Iron	287 ft
Along Brown Road	Open cut	Ductile Iron	737 ft
Along Brown Road and crossing under LA Highway 22	Horizontal Directional Drill (HDD)	HDPE DR 11	1300 ft
Along Marchand School Road	Open cut	Ductile Iron	1100 ft
Crossing under LA Highway 942	Horizontal Directional Drill (HDD)	HDPE DR 11	108 ft
Over Mississippi River levee	Above grade; pipe covered with fill on protected side and crown of levee; pipe exposed along slope on flood side.	Ductile Iron	147 ft
On Mississippi River batture	Open cut	Ductile Iron	300 ft
Open channel discharge into the river	Open cut rip rap lined open channel	Ductile Iron	25 ft

From the new pump station in the existing WWTP, the force main turns south and east to reach the north end of Brown Road. From this location up to the intersection with LA Highway 22, the pipe will be installed within existing right of way on the eastern side of Brown Road, which is part asphalt and part gravel. At its crossing with LA Highway 22, the pipe will be installed below the intersection via Horizontal Direction Drilling (HDD) method. To the south of the intersection, i.e. along Marchand School Road between LA Highway 22 and LA Highway 942 (River Road), the pipe will be installed within a 15 feet servitude to be acquired along the western side of the road.

At the intersection of Marchand School Road and River Road, the pipe will be installed via HDD method. Downstream of this location, a drainage ditch exists between River Road and the toe of the levee. A new 18 inch diameter corrugated steel pipe culvert (40 feet long) will be installed along this ditch at the location of pipe crossing.

From the toe of the levee on the protected side to the crown of the levee, the pipe will be installed on top of existing grade as follows:

- Placed on existing grade, with a minimum cover of 2 feet above the top of pipe. This cover will be provided with hauled in embankment material.
- At locations where the cross sections of the existing levee are below the required Corps of Engineers' theoretical levee cross section, embankment material will be placed below the pipe to raise the levee cross sections to match with the required theoretical section where necessary.
- Erosion control straw matting will be placed on top of all embankment material.
- The pipe will be covered with a minimum of 3.5 feet of hauled in embankment material at all other locations.

From the crown of the levee to the flood side toe, i.e. along the flood side slope of the levee, the pipe will be exposed. At this location, the existing concrete scour pad will remain, the new pipe will be placed on concrete pipe supports, and a new scour pad will be constructed to extend/meet the existing scour pad.

A 155-foot long ramp with concrete headwalls will be constructed at the location where the new pipe crosses the crown of the levee. (Figure 2) The headwalls will vary in height from 2.5 feet on each end to a maximum of 6 feet in the center 15-foot length. A single body combination air/vacuum release valve will be installed on the pipe at its highest elevation on the crown of the levee. The valve will be placed on the river side of the crown.

An approximate length of 650 feet of wooded area exists along the route of the proposed pipe from the flood side toe of the levee to the water's edge on the river. The force main would extend for approximately 300 feet from the flood side toe of the levee toward the river. A 35-foot wide corridor will be cleared and maintained at this location. The discharge will be via a 25-foot long rip rap lined open channel from the end of the pipe and will spread out and flow over the remaining 300 feet of batture and into the Mississippi River.

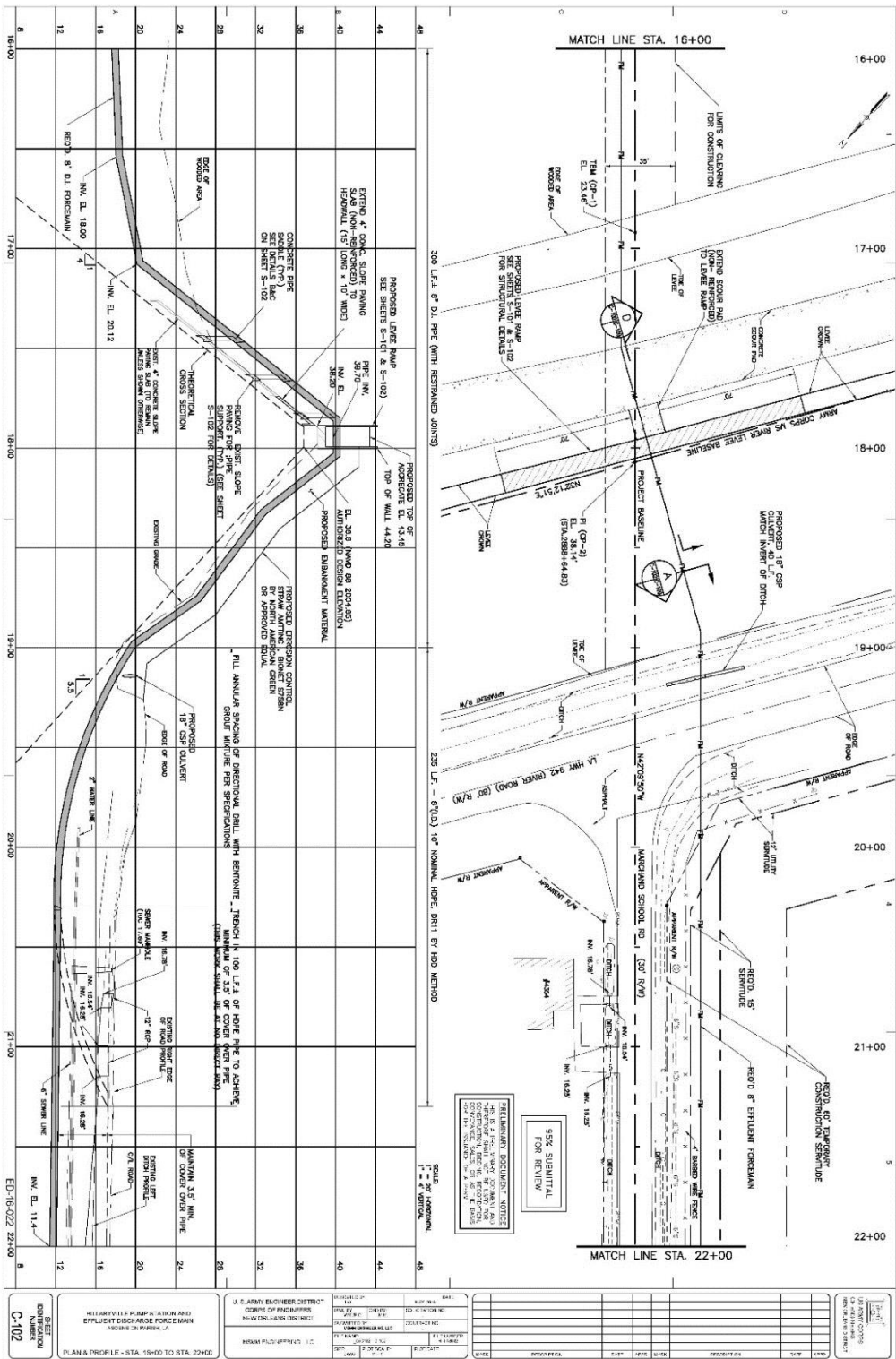


Figure 2. Diagram showing ramp construction over crown of levee.

### 1.1.3 TEMPORARY GRAVEL ACCESS ROAD CONSTRUCTION

A temporary gravel haul route/access road, approximately 12 feet wide and 0.5 miles long, will be constructed on the flood side of the levee to bring construction equipment and materials for construction on the flood side. The road will begin at an existing driveway that crosses the levee approximately 0.5 miles upriver of the project and will be located along the toe of the levee between the levee and the existing tree line. No trees will be impacted by the road. Upon completion of the project the gravel road will be removed and the site will be repaired to pre-project conditions.

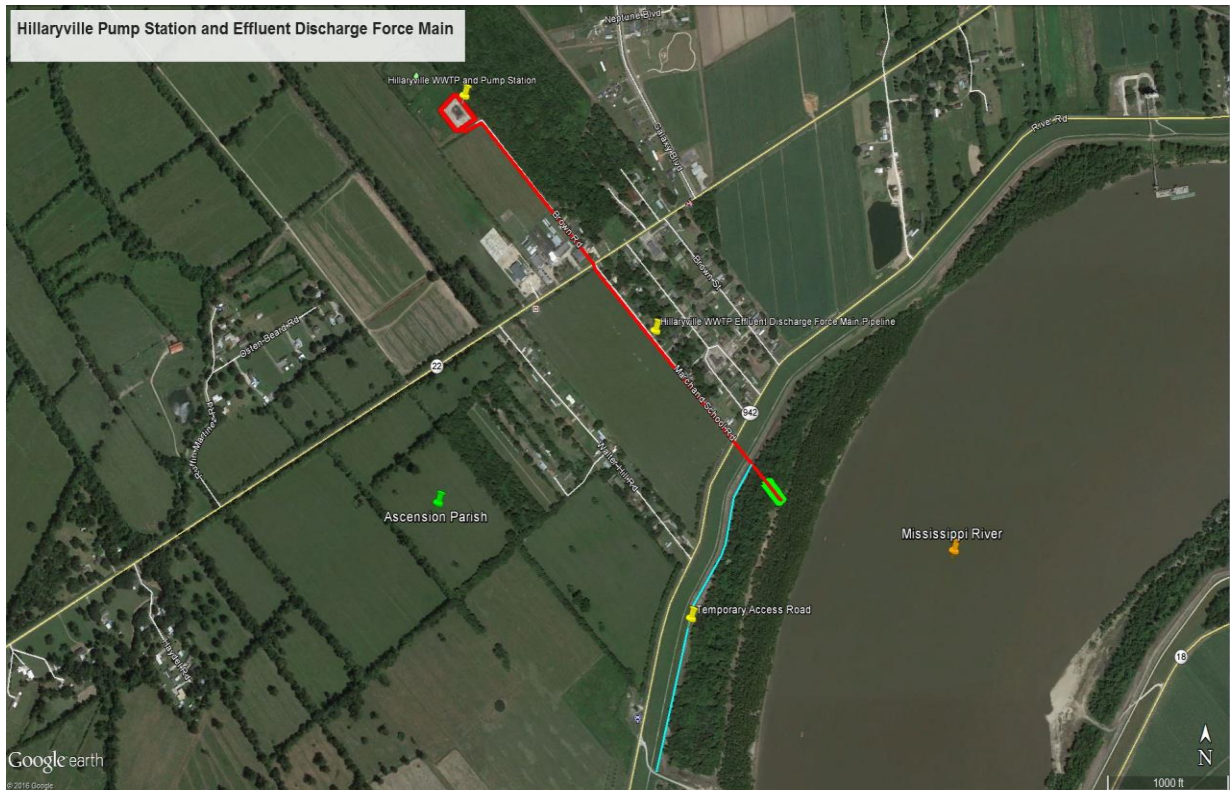


Figure 3. Hillaryville Pump Station and Effluent Discharge Force Main Project Site Map

Hillaryville Waste Water Treatment Plant Pump Station and  
Effluent Discharge Force Main Discharge Area Map  
Northwest Segment



Figure 4. Hillaryville Pump Station and Effluent Discharge Force Main Area Map

Hillaryville Waste Water Treatment Plant Pump Station and  
Effluent Discharge Force Main Discharge Area Map  
Southeast Segment

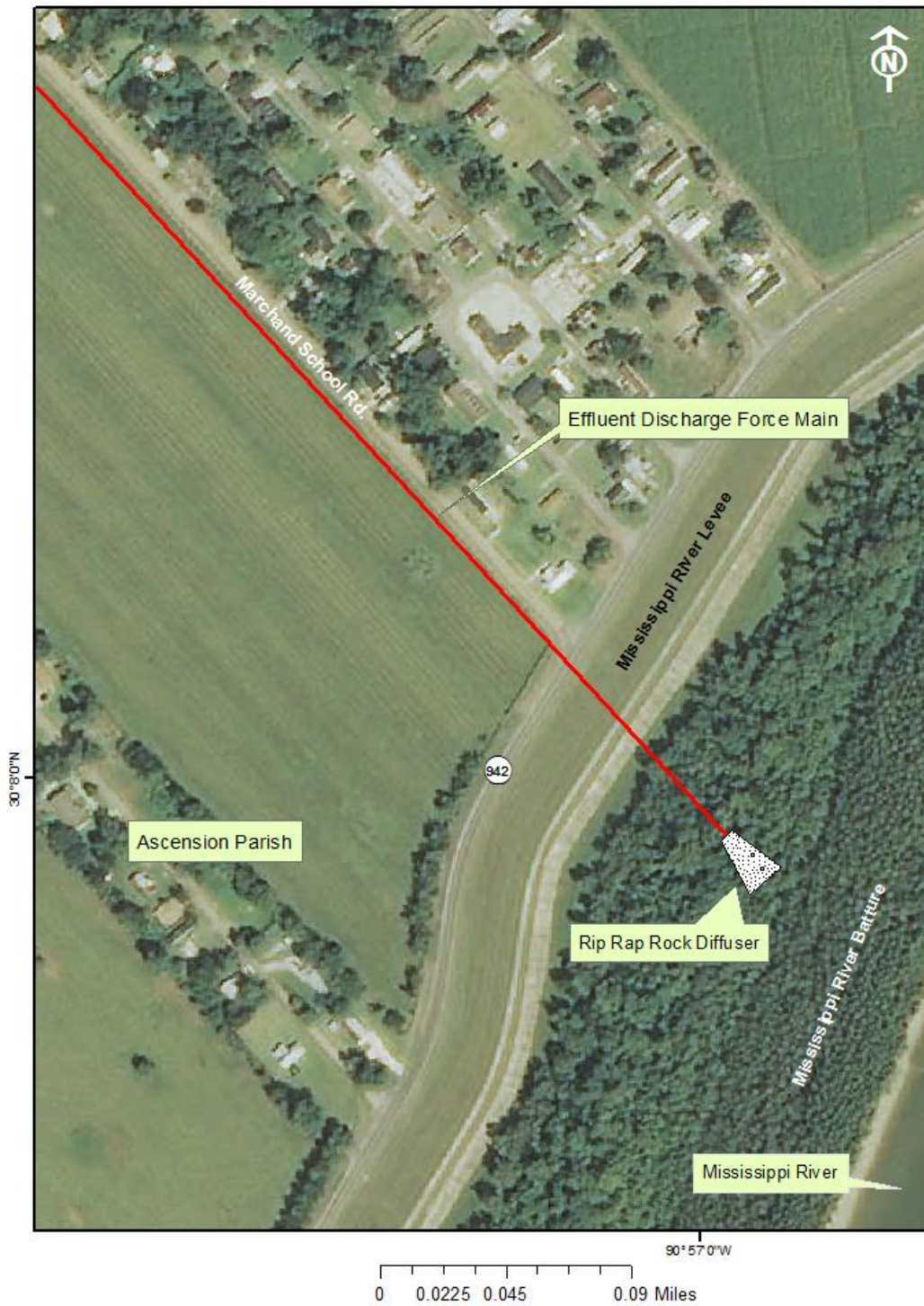


Figure 5. Hillaryville Pump Station and Effluent Discharge Force Main Area Map

Hillaryville Waste Water Treatment Plant Pump Station and  
Effluent Discharge Force Main Discharge Area Map  
Temporary Gravel Access Road



Figure 6. Hillaryville Pump Station and Effluent Discharge Force Main Area Map with Gravel Access Road



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

1.2.1 The Hillaryville WWTP serves four communities – Hillaryville Community, Astroland Subdivision, LA Highway 22 area, and St. Elmo Community. The effluent is currently discharged into a drainage ditch to the immediate west of the WWTP, from where it flows to Bayou Conway and Blind River. All of these water bodies are located within Lake Pontchartrain Basin. The Parish has deemed it necessary to reroute the effluent discharge from the local drainage ditch due to the following reasons:

- i) Anticipated increase in stringency of discharge limitations in Blind River, which would require major upgrades to the treatment system.
- ii) Desired improvement in water quality of local drainage ditches.
- iii) Desired improvement in quality of life for the service area community by improving local water quality.

In order to reroute the treated effluent from a local drainage ditch, the most practicable new discharge location will be the Mississippi River located approximately 4,000 feet to the south of the existing facility. The location of the proposed action is in Hillaryville, Ascension Parish, Louisiana.

## **1.3 AUTHORITY FOR THE PROPOSED ACTION**

1.3.1 The Hillaryville Effluent Discharge Project located in the Town of Darrow, Ascension Parish, Louisiana is an element of the Section 219 Baton Rouge, Louisiana Assistance Project which is authorized under Section 219(f)(21) of the Water Resources Development Act (“WRDA”) of 1992, (P.L. 102-580), as amended by Section 502 of WRDA 1999, (P. L. 106-53); and Section 5080 of WRDA 2007, (P. L. 110-114) (collectively the “Section 219 Program”), which allows USACE to provide planning, design, and construction assistance to Non-Federal interests for carrying out water-related environmental infrastructure and resource protection and development projects, including waste water treatment and related facilities and water supply, storage, treatment, and distribution facilities.

## **1.4 PRIOR REPORTS**

1.4.1 A Draft Ascension Parish Wastewater Facility Plan was developed in June 2013 for the Louisiana Department of Environmental Quality (LDEQ) State Revolving Loan Fund Projects and the Ascension Parish Comprehensive Wastewater Collection and Treatment Program. This plan addressed the sudden population expansion in Ascension Parish subsequent to Hurricane Katrina of 2005, its impact on the existing sewer system, the very large number of poorly performing individual package treatment plants in the Parish (more than 400), and developed a long term phased approach for wastewater collection and treatment system upgrades.

A Preliminary Engineering Report (PER) was developed for Ascension Parish Sewer Program Engineering Services in July 2012. This report was titled Hillaryville, Darrow,

Astroland, St. Elmo Community Sewer Improvements. This PER evaluated the feasibility of consolidating the sewer service of the four separate communities, and the numerous individual package plants existing in these communities. The PER presented a plan for consolidation and upgrade of the systems. The Parish felt the need for consolidating the service areas following the impact Hurricane Gustav in 2008, which rendered these communities without power, resulting in complete absence of sewer service in the numerous individual package plants, thus endangering environmental and human health.

An Environmental Information Document (EID) was prepared in May 2006 as part of US EPA State and Tribal Assistance Grant (STAG) program for Ascension Parish-wide water and wastewater improvements. The EID also evaluated the existence of numerous individual package treatment plants and planned the construction of regional treatment plants, inclusive of Hillaryville, which was eventually constructed.

## **2.0 ALTERNATIVES TO THE PROPOSED ACTION**

The no action alternative was the only alternative to the proposed action formally considered in this EA.

### **2.1 NO ACTION ALTERNATIVE**

2.1.1 In the future without project condition (No Action), the proposed action would not be constructed. If No Action is taken, the needs identified earlier will not be met, i.e. the following could occur:

- Local environmental and human health will not be improved
- The Parish will be required to expend significant resources to upgrade the sewer system to meet more stringent discharge limits

## **3.0 AFFECTED ENVIRONMENT**

### **3.1 ENVIRONMENTAL SETTING**

3.1.1 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 1 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 107,215 in 2010, and it is considered to be one of the fastest growing parishes in the state.

3.1.2 The proposed action is located in a rural area situated between the towns of Darrow and Burnside, Louisiana and parallel to Marchand School Road. The project site is located on both the land side and the flood side of the Mississippi River levee. Various faunal species including swamp rabbit, raccoon, opossum, gray squirrel, fox squirrel and numerous species of birds and reptiles have been documented throughout the area.

### **3.2 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 pump station and effluent discharge force main project is located within the Lake Pontchartrain Basin in Ascension Parish, Louisiana (Figure 7). The Lake Pontchartrain Basin is a 4,700 square mile watershed in southeast Louisiana and southwest Mississippi. The topography of the basin ranges from more than 300 feet above sea level in the rolling hills along the Louisiana and Mississippi state line to sea level throughout the coastal wetlands to more than 10 feet below sea level in some areas of New Orleans. Land use within this basin is varied, ranging from high-density urban areas that drain through metropolitan Baton Rouge and New Orleans drainage canals to rural pastures and dairies in the Florida Parishes (i.e., East Baton Rouge, East Feliciana, Livingston, St. Helena, St. Tammany, Tangipahoa, and Washington [LaCoast 2005]).



Figure 7. Louisiana River Basins (Map provided by Louisiana Department of Environmental Quality. The Mississippi River Basin is shown in green. The location of the Hillaryville WWTP and Effluent Discharge Force Main project area is represented by a red star.

### 3.3 CLIMATE

3.3.1 The climate of southeast Louisiana, which encompasses Ascension 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.. Extremely severe weather conditions are associated with thunderstorms, squall lines, and hurricanes, but the frequency of serious damage at any one location within this parish is very low. Hail and tornadoes occur infrequently during severe thunderstorms. Tropical storms and hurricanes are likely to affect this area in about 3 years in 10. The average annual temperature in the area is 68° (F), with monthly temperatures varying from the low-90°s (F) in July and August, to the mid-40°s (F) between December and February. Average annual precipitation is 57 inches, varying from a monthly average of 6 inches in July, to an average of 2 inches in October (Spicer et al. 1977; Cockerham et al. 1973).

### 3.4 GEOLOGY

3.4.1 The soil survey of Ascension Parish dated August 1976 and issued by US Department of Agriculture's Soil Conservation Service (now Natural Resources Conservation Service) identifies the following soil types underlying the project features:

- i) Sharkey Clay (Sc) from WWTP to a point between LA Highway 22 and LA Highway 942. This is a poorly drained clayey soil with high natural fertility, slow to very slow runoff, some areas being flooded after heavy rain, most of the acreage being used for crops and pasture, and moderately well suited to most of the cultivated crops and pasture grown in Ascension Parish.
- ii) Sharkey silty clay loam (Sa) from the Mississippi River levee to a point between LA Highway 22 and LA Highway 942. These soils are characterized by naturally high fertility, slow to very slow runoff, some areas being flooded for short periods following heavy rain, most of the acreage being used for crops and pasture, being moderately suited to most cultivated crops and well suited to most pasture plants.
- iii) Convent soils, frequently flooded (CV) along the Mississippi River batture. These soils are a combination of silt loam and/or very fine sandy loam. They are characterized by high natural fertility; most of the acreage is frequently flooded and subject to scouring and deposition by the Mississippi River.

### **3.5 SURFACE WATER HYDROLOGY**

3.5.1 Storm water from east bank of the Parish originally drained to the Mississippi River to the southwest. However, this drainage regime was altered when levees were constructed along the Mississippi River. Since the construction of the river levees, storm water flows into local canals and bayous that drain to the south and east, to be eventually pumped into Lake Pontchartrain via Amite River, Blind River and Bayou Manchac. In the vicinity of the Hillaryville WWTP, the storm water drainage system is under the jurisdiction of the East Ascension Parish Drainage District. The most prevalent surface water feature near Hillaryville and the project area is the Mississippi River, while the closest surface water feature is Bayou Conway. Bayou Conway passes the Hillaryville WWTP approximately 4,600 feet to the north. The northern end of Bayou Conway is located within the swamps close to the intersection of Interstate Highway 10 and US Highway 61, while its southern end is located in Darrow to the southwest of the community of Hillaryville.

### **3.6 RELEVANT RESOURCES**

3.6.1 This section contains a description of relevant resources that could be impacted by the project. The relevant resources (Table 1) 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: Relevant Resources**

Resource	Institutionally Important	Technically Important	Why Publicly Important
<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>Terrestrial Resources</b>	Food Security Act of 1985, as amended; the Farmland Protection Policy Act of 1981; the Fish and Wildlife Coordination act of 1958, as amended.	The habitat provided for both open and forest-dwelling wildlife, and the provision or potential provision of forest products and human and livestock food products.	The present economic value or potential for future economic 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, <i>LDWF</i> , and <i>LADNR</i> 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.
<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>Socio-Economic Resources</b>	River and Harbor Flood Control Act of 1970 (PL 91-611).	N/A	Social concerns and items affecting area economy are of significant interest to community.
<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.

<p><b>Water Quality</b></p>	<p>Clean Water Act of 1977, Fish and Wildlife Coordination Act, Coastal Zone Mgmt Act of 1972, and La State &amp; Local Coastal Resources Act of 1978.</p>	<p>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</p>	<p>Environmental organizations and the public support the preservation of water quality and fishery resources and the desire for clean drinking water.</p>
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3.6.2 The following resources have been considered and found to not be affected by the proposed pump station and effluent discharge force main project under consideration: essential fish habitat; estuarine water bodies; beaches; gulf water bottoms; and recreation.

### 3.6.3 WETLANDS

#### Existing Conditions

Wetlands occurring within the project area are confined to the riverside of the existing Mississippi River levee, specifically between the riverside toe of the levee and bank line of the river. The proposed effluent discharge force main has its discharge point located on the flood-side of the levee and within wetland habitat typically classified as bottomland hardwood forest. Floral communities that currently exist within the project areas consist of scrub-shrub vegetation along the outer limits of the project area with mature hardwood trees comprising the majority of the interior of the site (Figures 8 and 9). The tree species on the flood-side of the levee consist of faster growing species such as sycamore, willow, and Chinese tallow. The flood-side of the levee annually experiences seasonal high water that occasionally encroaches on the toe of the flood-side levee.





Figure 8. Hillaryville Effluent Discharge Force Main Discharge Point showing existing vegetation conditions during high water on the Mississippi River.



Figure 9. Hillaryville Effluent Discharge Force Main path from the Mississippi River levee north toward the WWTP.

### 3.6.4 AQUATIC RESOURCES/FISHERIES

#### Existing Conditions

Aquatic habitat in the project vicinity is provided by 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 due to shifting substrates and high current velocities in the area.

The aquatic habitat averaging less than five feet in depth paralleling the bank line of the river within this area of Ascension Parish represents a limited percentage of the river's total aquatic habitat but is importantly productive for all trophic levels. Factors that serve to increase the trophic level productivity include reduced current velocity, increased availability of cover, and shallow substrates allowing photosynthesis to support communities of submerged aquatic vegetation and algae growth. During annual high river season, typically from March – May, riverine aquatic resources (fish, shellfish, etc.) move onto the flooded river bank to 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.

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 various types of fishes that may be found during the annual high river season in the project area. Clams, dipterans, and mayflies are some of the area's representative invertebrates.

### 3.6.5 Terrestrial Resources

#### Existing Conditions

Farmland classification data provided by NRCS in September 2014 and updated in July 2015 determined that no unique farmland soils are located within the project area. All soils in the project area are classified as prime farmland soil types and consist of Commerce silt loam 0 to 1 percent slopes, and Sharkey clay 0 to 1 percent slopes frequently flooded.

Commerce silt loam soils are somewhat poorly drained with moderately high runoff and very high permeability. The soils are typically associated with natural levees and consist of a silty alluvium parent material. Areas of commerce soils are used mainly for cropland; sugarcane, soybeans, corn, and wheat are the principal crops. A portion of these soils in the project area are currently used as pasture, but most have been developed for urban, industrial or residential uses.

Sharkey clays are poorly drained with very low to moderately low runoff and moderate permeability. Sharkey clays are typically associated with natural levees and backswamps and consist of a clayey alluvium parent material. A portion of these soils in the project area are currently used as pasture, but most have been developed for urban, industrial or residential uses.

The prime farmland soils in the project area are predominately dedicated to use as pasture and hay crops.

### 3.6.6 WILDLIFE

#### Existing Conditions

The proposed pump station and effluent discharge force main project area contains a wide variety of mammals, birds, reptiles, and amphibians. Mammals inhabiting the area likely include raccoon, skunks, rabbits, squirrels, armadillos, and a variety of smaller mammals.

Various raptors such as barred owls, red-shouldered hawks, northern harriers (marsh hawks), American kestrel, and red-tailed hawks may be present. Passerine birds in the

areas may include sparrows, vireos, warblers, mockingbirds, grackles, red-winged blackbirds, wrens, blue jays, cardinals, and crows. Many of these birds are present primarily during periods of spring and fall migrations.

Reptiles and amphibians that likely inhabit the project area typically 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.

### 3.6.7 THREATENED AND ENDANGERED SPECIES

#### Existing Conditions

Four federally threatened and endangered species are either known to or may possibly occur in Ascension Parish, Louisiana: West Indian manatee (*Trichechus manatus*) (endangered); pallid sturgeon (*Scaphirhynchus albus*) (endangered); Gulf sturgeon (*Acipenser oxyrhynchus desotoi*) (threatened); and the Alabama heelsplitter mussel (*Potamilus inflatus*) (endangered).

West Indian manatees can be found in shallow, slow-moving rivers, estuaries, salt-water bays, canals, and coastal areas (LDWF, 2012a). 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.

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 (LDWF 2012b, USFWS 1990). Aquatic habitats in the Mississippi River have been modified through 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 channel degradation trend throughout most of 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 many of these data gaps (e.g., Killgore et al. 2007), there are still concerns on the degree of hybridization and introgression of pallid and shovelnose sturgeon, which may be a naturally occurring process for these two sympatric species. As noted in the November 2013 Entrainment Studies of Pallid Sturgeon Associated with Water Diversions in the Lower Mississippi River Study, field sampling of sturgeon in the lowermost reach of the Mississippi River between river miles 0 and 320 has been ongoing since 2001. Results of that study indicated that a total of 51 pallid sturgeon, 319 shovelnose sturgeon, and 84 young-of-year sturgeon were collected between 2001 and 2010 below river mile 320 (ERDC-EL 2013). Under general direction provided by Section 7(a)(1) of the Endangered Species Act, the USACE prepared a Conservation Plan in 2013 which addresses effects of the Mississippi River and Tributaries, Channel Improvement Program on pallid sturgeon and on two other endangered species that occur upriver from the proposed work (Killgore et al. 2014). The Conservation Plan documented that river engineering actions and restoration activities of the USACE have significantly benefitted the habitat baselines of endangered species associated with the Lower Mississippi River channel, and it incorporates strategies and actions to continue and to further improve endangered species habitat in the Lower Mississippi River. Based on the outcome of the Conservation Plan, the U.S. Fish and Wildlife Service (USFWS) issued a non-jeopardy Biological Opinion in December of 2014 for pallid sturgeon in the Lower Mississippi River under Section 7(a)(2) of the Endangered Species Act. USACE agreed to continue working with partners to diversify habitat using innovative river engineering practices techniques and monitor the status and trends of the endangered species

The Gulf sturgeon is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida (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 are more likely to be in the inland reach of the Mississippi River Gulf Outlet during the winter months, (*i.e.*, November 1 through March 31). Gulf sturgeon less than 2 years old appear to remain in riverine habitats and estuarine areas throughout the year, rather than migrate to marine waters. Habitat alterations, poor water quality, hurricanes, toxic spills and over-fishing, have negatively affected this species.

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).

### 3.6.8 CULTURAL RESOURCES

#### Existing Conditions

The existing Hillaryville treatment plant is located approximately 0.65 miles from the Mississippi River Levee (MRL), and approximately 0.80 miles from the Mississippi River. The land between the existing treatment plant and the MRL has never been surveyed for cultural resources. This land and the alignment of the proposed effluent pipe received a site visit in March 2016. Drainage ditches and cleared land offered good visibility of both the surface and subsurface for the proposed project. No indications of undiscovered cultural resources were noted, and a conclusion of “no historic resources affected” was sent to the Louisiana State Historic Preservation Officer (SHPO) on April 28, 2016. Concurrence with this conclusion was received on May 31, 2016. Tribes were notified of the conclusion of “no historic properties affected” on June 28, 2016. The Caddo Nation of Oklahoma concurred with this conclusion on July 5, 2016. The land between the MRL and the river, where the new effluent pipe will discharge, was surveyed by Goodwin et al. (1986) and did not locate any previously unknown cultural resources. Approximately 0.27 miles downriver from the effluent discharge is the recorded site 16AN34, or Riverton Plantation. No portions of this cultural resource will be disturbed by the current project.

### 3.6.9 AESTHETICS

#### Existing Conditions

The visual character of the project area is based on its ecoregion, land use, and water resources. The project area is within the Mississippi Alluvial Plain’s Southern Holocene Meander Belts ecoregion where historically bottomland forests occurring on natural levees dominated this region. Currently, the bottomland forests have been mostly cleared and/or extensively modified for agriculture, flood control, and navigation. Drainage canals divide land cleared for various uses including single family residential housing, agricultural and institutional. Water resources consist of the extensively channelized and leveed Mississippi River. The primary view sheds to the project are from the residential areas along Brown Rd and Marchand School Rd.

### 3.6.10 SOCIO-ECONOMICS

#### Existing Conditions

The Hillaryville Pump Station and Effluent Discharge Force Main project is located along Brown Road and Marchand School Road in a lightly settled area of Ascension Parish, Louisiana. The nearest major thoroughfares to the pump station and effluent discharge force main are LA 22 and LA 942 (River Road). There are six homes along the north side of Brown Road. The Ascension Parish School Board Title I office and Marchand School are located on the south side of Brown Road. There are eight homes on the

north side of Marchand School Road and vacant land on the south side of Marchand School Road.

### 3.6.11 AIR QUALITY

Existing Conditions The U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards for six principal pollutants, called “criteria” pollutants. They are carbon monoxide, nitrogen dioxide, ozone, lead, particulates of 10 microns or less in size (PM-10 and PM-2.5), and sulfur dioxide. Ozone is the only parameter not directly emitted into the air but forms in the atmosphere when three atoms of oxygen (O<sub>3</sub>) are combined by a chemical reaction between oxides of nitrogen and volatile organic compounds in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents are some of the major sources of nitrogen and volatile organic compounds, also known as ozone precursors. Strong sunlight and hot weather can cause ground-level ozone to form in harmful concentrations in the air. The Clean Air Act General Conformity Rule (58 FR 63214, November 30, 1993, Final Rule, Determining Conformity of General Federal Actions to State or Federal Implementation Plans) dictates that a conformity review be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more National Ambient Air Quality Standards. A conformity assessment would require quantifying the direct and indirect emissions of criteria pollutants caused by the Federal action to determine whether the proposed action conforms to Clean Air Act requirements and any State Implementation Plan.

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 for their geographic area. The purpose of conformity is to (1) ensure Federal activities do not interfere with the air quality budgets in the State Implementation Plans; (2) ensure actions do not cause or contribute to new violations, and (3) ensure attainment and maintenance of the National Ambient Air Quality Standards.

Ascension Parish is one of five Baton Rouge area parishes that were designated by the Environmental Protection Agency as ozone non-attainment areas under the 8-hour standard effective June 15, 2004. Currently none of the five parishes is in attainment of National Ambient Air Quality Standards for ozone. 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 the LDEQ, Office of Environmental Assessment and Environmental Services.

Federal activities proposed in Ascension Rouge 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 (NOX) emissions caused by the construction of the project. 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.

### 3.6.12 WATER QUALITY

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.

The Hillaryville WWTP is considered a point source discharge. The effluent is mainly comprised of water together with relatively small concentrations of suspended and dissolved solids such as fats, soaps, and synthetic detergents, an average pH reading between 6.0 and 9.0 per month, and an average biological oxygen demand of 10 mg/l per month. Though not potable, the effluent meets the LDEQ's requirements for a permitted discharge.

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

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. The LDEQ Section 305(b) and 303(d) Reports for 2014, included in the Water Quality Inventory Integrated Report, lists one water body that is located adjacent to the project areas, the Mississippi River. The assigned sub-segment code for the Mississippi River is LA070301. Sub-segment Code LA070301 boundaries are described as the Mississippi River – from Monte Sano Bayou to Head of Passes. Available LDEQ records indicate that prior to the 2014 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 2014).

In the LDEQ 2016 Integrated Report, Bayou Conway and Blind River are in subsegment LA040403. This subsegment is not meeting ambient water quality criteria for fish and wildlife propagation due to low dissolved oxygen.



Utilizing the 2014 U.S. Environmental Protection Agency Integrated Report methodology guidance categories, which categorize water body/pollutant combinations, the LDEQ 2014 report no longer assigns the LA070301 (Mississippi River) segment an Integrated Report Category number since it is fulfilling all standards (LDEQ 2014).

Each summer, a hypoxic zone forms in the northern Gulf of Mexico off the coast of Louisiana and Texas as a result of excess nutrients from the Mississippi River flowing into the Gulf and seasonal stratification (layering) of waters in the Gulf. Sources of excess nutrients in the river include: fertilizers from agriculture, golf courses, and suburban lawns; erosion of nutrient-rich soils; discharges from sewage treatment plants; and deposition of atmospheric nitrogen. These excess nutrients promote algal growth. As dead algae decompose, oxygen is consumed in the process, resulting in low levels of oxygen (hypoxia) in the water.

Hypoxia occurs naturally in many aquatic environments throughout the world, such as in deep basins in the ocean. Hypoxic waters have occurred throughout history, but they are occurring in shallow coastal and estuarine waters more frequently as anthropogenic (i.e. *human*) sources and inputs of nutrients increase. Direct effects of hypoxia include fish kills, which deplete valuable fisheries and disrupt ecosystems. Mobile animals (e.g., adult fish) can typically survive a hypoxic event by moving to waters with more oxygen. Less mobile or immobile animals, such as mussels or crabs, cannot move to waters with more oxygen and are often killed during hypoxic events. Ultimately, hypoxia causes a severe decrease in the amount of life in hypoxia zones. Hypoxia also affects the ability of young fish or shellfish to find the food and habitat necessary to become adults. As a result, fish and shellfish stocks may be reduced or become less stable because less young reach adulthood. Hypoxia can also affect species that rely on fish for food. Such species might have to leave an area to find the necessary food to survive.

The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force was established in the fall of 1997 to understand the causes and effects of eutrophication in the Gulf of Mexico; coordinate activities to reduce the size, severity, and duration; and ameliorate the effects of Gulf of Mexico hypoxia. The Task Force consists of federal agencies with responsibilities over activities in the Mississippi River and its basin, and in the Gulf of Mexico and state agencies in states located along the Mississippi River. The Corps is a member.

On March 1, 2016, the Environmental Protection Agency released the Report on Point Source Progress in Hypoxia Task Force States. This report addresses the extent of nitrogen and phosphorus monitoring and discharge limits for major sewage treatment plants within the borders of the 12 states comprising the Hypoxia Task Force. This report and more information concerning the Gulf hypoxic zone, the Task Force and other studies and reports completed in furtherance of the effort to reduce the size of the Gulf hypoxic zone may be found at [www.epa.gov/ms-htf](http://www.epa.gov/ms-htf).

#### **4.0 ENVIRONMENTAL CONSEQUENCES**

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## 4.1 WETLANDS

### Future Conditions with No Action

With no action, the status of the forested wetlands would not change. The trees and scrub-shrub would continue to flourish.

### Future Conditions with the Proposed Action

With the proposed action, existing scrub-shrub habitat and bottomland hardwood forested habitat would be directly impacted, as clearing and grubbing operations would clear a combined total of approximately 0.27 acres of this habitat. The removal of the low to moderate quality wooded vegetation would constitute a permanent loss of land-based wildlife habitat.

On April 19, 2016, personnel from U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers, New Orleans District, conducted a site visit to the proposed effluent force main discharge site in order to conduct a Wetland Value Assessment (WVA) for purposes of calculating project induced impacts to bottomland hardwood forested habitat. The WVA bottomland hardwood model was selected because it presents the most appropriate evaluation model for habitat-related variables for adjacent flood-side forested wetlands. USFWS and CEMVN personnel inspected a sizeable portion of the site, and two plots were delineated over the course of the site visit. The WVA determined that 0.27 acres of moderate quality bottomland hardwood habitat would be lost with a total loss of -0.1 Average Annual Habitat Units (the value is negative but USFWS concluded the habitat would benefit from the nutrients that would be added by the proposed project).

## 4.2 AQUATIC RESOURCES /FISHERIES

### Future Conditions with No Action

Without implementation of the proposed action, the status of the aquatic resources and fisheries in Bayou Conway, Blind River, or the Mississippi River would not change from their current state.

### Future Conditions with the Proposed Action

With implementation of the proposed action, it is possible that some adjacent existing fisheries resources could be indirectly impacted from the installation of the effluent discharge pipeline and placement of the rip-rap discharge apron on the river bank. A slight but temporary increase in turbidity within the river directly surrounding the rip-rap discharge apron may occur during placement of the rip-rap. The initial increases in turbidity would likely be diminished by the swift moving currents of the river, and any free floating sediment would likely settle downstream.

The water quality in Bayou Conway and Blind River would likely improve over time due to the removal of the discharge from the WWTP.

High-water events on the Mississippi River may occur one or two times per year and the duration may be several days or several weeks. During high water events, the effluent would be discharged directly into the Mississippi River. The amount of effluent that would discharge into the river is immeasurably small compared to the volume of the river, and the impact would be insignificant.

#### 4.3 TERRESTRIAL RESOURCES

##### Future Conditions with No Action

Implementation of the no action alternative would result in no direct impacts to prime farmland soils or result in the removal of identified soils from agricultural use.

##### Future Conditions with the Proposed Action

Implementation of the proposed action would have a temporary impact to <math>\lt;0.5</math> acres of identified prime farmland soils in the project area. Impacts would be temporary lasting only the duration of trenching necessary to place the proposed effluent discharge pipe. The soils would not be permanently removed from agricultural use as a result of the proposed action and would continue to be available for the current use as pastureland.

#### 4.4 WILDLIFE

##### Future Conditions with No Action

Without implementation of the proposed action, wildlife that presently occupies the existing project site would continue to inhabit those areas. It is expected that there would be no direct or indirect impacts to existing wildlife resources with the no action alternative.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, a combined total of approximately 0.27 acres of trees, shrubs, and other vegetation would be cleared from the flood-side of the levee, causing a direct loss of potential habitat opportunities (i.e., nesting, perching, cover, foraging) for area wildlife. The direct loss would be considered minimal, due to the similar habitat available adjacent to the proposed project areas. The lost habitat also would be compensated through the anticipated habitat improvements resulting from the introduction of nutrients from the effluent into the batture wetlands. Additional minimal impacts would result from equipment noise and movements that would temporarily displace most wildlife species from the site. Because the project is approximately six miles from the nearest airport, the project does not have the potential to attract wildlife that could be hazardous to aircraft.

There would be no permanent loss of habitat on the protected side of the levee, therefore, the impacts to wildlife from the horizontal directional drilling and trenching for the pipeline installation on the protected side of the levee would be insignificant and temporary.

#### 4.5 THREATENED AND ENDANGERED SPECIES

##### Future Conditions with No Action

Without implementation of the proposed action, threatened and endangered species and their habitats would not be affected. The proposed project would not be constructed, and impacts to threatened and endangered species in the area would not likely change from current conditions.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, it is anticipated that there would be no direct or indirect impacts to threatened or endangered species. No critical habitat for any threatened, endangered, or candidate species has been designated within the project area or adjacent water body (Mississippi River), and no listed species is known to breed within the project vicinity. While Pallid Sturgeon have been previously found within the flooded bank of the Mississippi River both upstream and downstream from the project areas, it is anticipated that there would be no impact to this species as construction would only occur during periods of low water in the Mississippi River.

The U.S. Army Corps of Engineers, New Orleans District concluded that no threatened or endangered species or designated critical habitat under the purview of the National Marine Fisheries Service, Protected Resources Division, exist within the proposed project area and that the project would result in a no adverse effect.

The USFWS concurred by letter dated May 3, 2016 with MVN's determination that the proposed project is not likely to adversely affect the pallid sturgeon, the West Indian manatee, the Gulf sturgeon, and the Alabama heelsplitter mussel or their critical habitat.

#### 4.6 CULTURAL RESOURCES

##### Future Conditions with No Action

Without implementation of the proposed action, there is no potential to disturb known or unknown cultural resources.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, any previously undiscovered cultural resources that may exist within the proposed route of the effluent pipe could be impacted. No known cultural resources exist within the proposed project area, and

archival and site visit research of the project area does not suggest that undiscovered cultural resources exist within the proposed project area.

#### 4.7 AESTHETICS

##### Future Conditions with No Action

Without implementation of the proposed action, no foreseen impacts to visual resources would occur at the proposed project areas.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, no foreseen long term impacts to visual resources would occur. The proposed action could temporarily impact the visual character of the adjacent areas. Construction of the proposed action may be considered visually distressing from the residential area view sheds located along Brown Rd and Marchand School Rd due to the presence of construction equipment and vehicles. However, upon completion of the proposed action the project area's visual character would return to preconstruction conditions.

#### 4.8 SOCIO-ECONOMICS

##### Future Conditions with No Action

Without implementation of the proposed action, there would be no effect on any socio-economic resources.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, there may be minor, temporary impacts to transportation along Brown Road and Marchand School Road as a result of an increase in heavy vehicle traffic. The impacts include possible transportation delays while construction material and equipment are brought to the construction site. However, no road closures are anticipated and access to all residences, the school and the church would remain open.

#### 4.9 AIR QUALITY

##### Future Conditions with No Action

Without implementation of the proposed action, the status of non-attainment and attainment of air quality for Ascension would not change from current conditions.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, it is expected that there would be minimal short term direct impacts to air quality surrounding the immediate project area during construction activities. For the proposed clearing and grubbing activities, it is expected that portable and stationary equipment such as bulldozers and excavators would likely be responsible for the bulk increase in air pollution temporarily directly impacting the surrounding project area.

With implementation of the proposed action in Ascension Parish, on-site construction activities are expected to produce less than 1 ton per year of VOC emissions and less than 5 tons per year of NOX emissions (less than the de minimis level of 100 tons per year per pollutant). Thus, the ambient air quality in Ascension Parish would not noticeably change from current conditions, and the status of attainment for the parish would not be altered.

#### 4.10 WATER QUALITY

##### Future Conditions with No Action

Without implementation of the proposed action, no new direct or indirect impacts to water quality would be expected to occur. Conditions in Bayou Conway, Blind River and the Mississippi River would be expected to continue unchanged.

##### Future Conditions with the Proposed Action

With implementation of the proposed action, it is possible that there would be an indirect impact to water quality through a temporary increase in turbidity within the river directly surrounding any construction activity areas. Any increases in turbidity would likely be diminished by the swift moving currents of the river, and any free floating sediment would likely settle downstream.

The water quality in Bayou Conway and Blind River would likely improve with the diversion of the treated wastewater effluent from those bodies of water to the Mississippi River. The impacts to the Mississippi River and the Gulf of Mexico from the effluent discharge, however, would be immeasurably small and insignificant when compared to the current loading, i.e., total suspended solids, dissolved oxygen levels, metals, turbidity, etc., in the Mississippi River and the Gulf of Mexico.

During Mississippi River high-water events, the effluent would be discharged directly into the Mississippi River. The amount of effluent that would discharge into the river is immeasurably small compared to the volume of the river, and the impact would be insignificant.

A Section 404(b)(1) has been completed for this project and will be circulated for public comment with this Environmental Assessment. Additionally, a Water Quality Certificate (WQC 140630-01/AI 101235/CER 20140006) has been requested from the LDEQ.

Coordination is currently ongoing and will be completed prior to the signing of a Finding of No Significant Impact.

The discharge of effluent may very minimally contribute to the nutrients carried by the Mississippi River to the Gulf of Mexico and thus contribute to the Gulf hypoxic zone. However, the discharge point will be located at least 300 feet from the river's edge to allow the wetlands on the batture to assimilate the nutrients from the effluent before the discharge reaches the river.

#### 4.11 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

Engineer Regulation (ER) 1165-2-132 states that it is USACE policy to avoid the use of project funds for HTRW removal and remediation activities. An ASTM E 1527-05 Phase 1 Environmental Site Assessment (ESA) (#16-03 dated 20 April 2016) has been completed for the project area. A copy of the Phase 1 ESA will be maintained on file at CEMVN. The probability of encountering HTRW for the proposed action is low based on the Initial Site Assessment. If a recognized environmental condition is identified in relation to the project site, the 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.

#### 4.12 CUMULATIVE IMPACTS

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."

The majority of discharges to the Mississippi River from Baton Rouge, LA south to Plaquemines Parish, LA are composed of sanitary wastewater. While most of these discharges are considered *de minimis* [less than 5,000 gallons per day (gpd)] with a negligible nitrogen load to the Mississippi River, there are 40 sanitary wastewater treatment plants, both publicly and privately owned, that in combination have an average discharge design flow of 366 million gallons per day. The Hillaryville WWTP has a designed discharge capacity of 160,000 gpd. The daily discharge of the Hillaryville WWTP is 0.0004% of the total for the previously mentioned 40 WWTPs. Therefore, the daily discharge amount is negligible.

The analysis set forth in this report indicates that no significant beneficial or adverse impacts to the various resources within the project area are anticipated under either the future with-project conditions scenario, or the future without-project conditions scenario;

therefore, the proposed action is not expected to result in significant cumulative impacts.

## 5.0 COORDINATION

Preparation of this EA and Finding of No Significant Impact (FONSI) is being coordinated with appropriate Congressional, Federal, state, local interests, and Indian Tribes, as well as environmental groups and other interested parties. The following federal and state agencies, non-governmental organizations, as well as other interested parties will receive copies of this Environmental Assessment and the Finding of No Significant Impact:

U.S. Department of Interior, Fish and Wildlife Service  
U.S. Environmental Protection Agency, Region VI  
U.S. Department of Commerce, National Marine Fisheries Service  
U.S. Natural Resources Conservation Service, State Conservationist  
Louisiana Department of Wildlife and Fisheries  
Louisiana Department of Environmental Quality  
Louisiana Historic Preservation Officer  
Louisiana Department of Natural Resources (LADNR), Coastal Management Division  
Louisiana Department of Natural Resources, Coastal Restoration Division

Recommendations of USFWS in accordance with the draft Fish and Wildlife Coordination Act Report received on May 10, 2016.

Recommendation 1. In our May 3, 2016, Threatened and Endangered species concurrence/Planning-aid letter the Service recommended that the Corps examine the possibility of not extending the discharge completely to the river but rather stopping at a distance of no closer than 200 to 300 feet from the river bank. At the end of the discharge pipe they would need to construct a diffuser to allow the discharge to flow over the batture area.

MVN Response 1. MVN has incorporated this approach into the project design, thereby reducing impacts to bottomland hardwoods and to the Gulf hypoxic zone and indirectly increasing benefits to the batture wetlands.

Recommendation 2. If the project has not been initiated within one year, follow-up consultation should be accomplished with this office prior to making expenditures for construction. If the scope or location of the proposed work is changed, consultation should occur as soon as such changes are made.

MVN Response 2. Concur



## 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. Only minimal environmental impacts are expected, and none are expected to have any significant impacts on the important resources described in this Environmental Assessment.

The proposed project would improve the Hillaryville WWTP with the construction of the pump station and effluent discharge force main. The local drainage ditches would see an improvement in water quality.

Representatives from MVN and the USFWS conducted a field visit on 19 April 2016 to conduct a Wetland Value Assessment (WVA). Based on the data collected during the WVA, the construction of the Hillaryville WWTP project would result in the loss of 0.27 acres of moderate quality bottomland hardwood habitat for a total loss of -0.1 Average Annual Habitat Units.

Per USFWS draft Coordination Act Report recommendations, CEMVN has designed the effluent discharge force main so that the discharge point is no closer than 300 feet from the river bank. A rip rap lined channel at the discharge point will allow the effluent to spread out over the batture area. This design will reduce impacts to bottomland hardwood and indirectly increase the benefits to the batture wetlands by allowing the assimilation of nutrients into the batture wetlands prior to discharging into the Mississippi River during lower river stages. By increasing benefits to the adjacent forested wetlands, impacts caused by the project will be countered, thereby, negating the need for additional mitigation.

## 7.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Environmental compliance for the proposed action would be achieved upon: coordination of this EA and Finding of No Significant Impact (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 a Water Quality Certificate from the State of Louisiana; public review of the Section 404(b)(1) Public Notice; signature of the Section 404(b)(1) Evaluation; receipt of the State Historic Preservation Officer Determination of No Effect on cultural resources; receipt and acceptance or resolution of all USFWS Fish and Wildlife Coordination Act recommendations; receipt and acceptance or resolution of all LDEQ comments on the air quality impact analysis documented in the EA. The FONSI will not be signed until the proposed action achieves environmental compliance with applicable laws and regulations, as described above.

*3 May 2016, USFWS concurred that the proposed activities are not likely to adversely affect any endangered species or their critical habitat in the project area.*

## 8.0 CONCLUSION

The proposed action consists of constructing a new pump station for the existing Hillaryville WWTP and a new effluent discharge force main from the WWTP to the Mississippi River. This office has assessed the environmental impacts of the proposed action and has determined that the proposed action would have no impacts upon cultural resources and no impacts would occur to threatened or endangered species. There are no cumulative impacts, adverse or beneficial, associated with the proposed action.

The proposed project has been found to have an overall beneficial effect on the human environment by eliminating waste water discharges into local rivers and bayous, thereby, improving the quality of life for the service area community by improving local water quality.

While the proposed action would clear approximately 0.27 acres of riparian habitat at the effluent discharge point on the Mississippi River bature, with the proposed action, existing scrub-shrub habitat and hardwood forested habitat would be directly impacted, as clearing and grubbing operations would clear a combined total of approximately 0.27 acres of this habitat. The loss is considered minimal, as similar habitat is readily available within the vicinity of the proposed project area.

## 9.0 PREPARED BY

EA #547 and the associated FONSI were prepared by Joseph Musso, environmental resource specialist, with relevant sections prepared by: Joseph Musso – HTRW, Air Quality, and Socio-Economics; Dr. Paul Hughbanks – Cultural Resources; and Richard Radford – Aesthetic Resources. The address of the preparers is: U.S. Army Corps of Engineers, New Orleans District; Regional Planning Division South, Environmental Compliance Branch, Coastal Environmental Compliance Section, CEMVN-PDC-CEC; 7400 Leake Avenue, New Orleans, Louisiana 70118.

## 10.0 REFERENCES

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