APPENDIX J
ENVIRONMENTAL SUMMARY REPORT
H.015428

Louisiana International Terminal Roadway Network and Resilience Study

Stage 0 Environmental Summary Report

TRANSPORTATION STUDY
Planning For Future St. Bernard

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LIST OF ACRONYMS AND ABBREVIATIONS

ACS	USCB American Community Survey
AECOM	AECOM Technical Services, INC
AQI	Air Quality Index
CERCLA	Comprehensive Environmental Responses, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	U.S. Code of Federal Regulations
CWA	Clean Water Act
DENR	Louisiana Department of Energy and Natural Resources
DOT	U.S. Department of Transportation
DOTD	Louisiana Department of Transportation and Development
ECHO	EPA Enforcement and Compliance History Online
EDSM	DOTD Engineering Directives and Standards Manual
EFH	Essential Fish Habitat
EJ	Environmental Justice
EO	Executive Order
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
GIS	GIS Engineering, LLC
HUC	Hydrologic Unit Codes
ICWW	Intracoastal Waterway
IPaC	Information for Planning and Consultation
LAC	Louisiana Administrative Code
LBBLD	Lake Borgne Basin Levee District
LDEQ	Louisiana Department of Environmental Quality

LDWF	Louisiana Department of Wildlife & Fisheries
LIT	Louisiana International Terminal
MRGO	Mississippi River-Gulf Outlet
MSA	Magnuson-Stevens Fisheries Conservation and Management Act
NFHL	FEMA National Flood Hazard Layer
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NPL	National Priority List
NPMS	DOT National Pipeline Mapping System
NPS	National Park Service
NRCS	USDA Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTCHS	National Technical Committee for Hydric Soils
NWI	USFWS National Wetland Inventory
OSC	On-Scene Coordinator
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Program
ROW	Right-of-Way
RPC	New Orleans Regional Planning Commission
SEMS	EPA Superfund Enterprise Management System
SHPO	Louisiana State Historic Preservation Office
SLFPA	Southeast Louisiana Flood Protection Authority
SONRIS	DENR Strategic Online Natural Resources Information System
SSA	Sole Source Aquifer
STEAP	FHWA Screening Tool for Equity Analysis of Projects
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tanks
WBD	USGS Watershed Boundary Dataset
WMA	Wildlife Management Area
WSS	NRCS Web Soil Survey

1.0 INTRODUCTION

GIS Engineering, LLC (GIS) prepared this environmental summary and checklist as part of the Lower St. Bernard Transportation Network Feasibility Study. This Stage 0 Feasibility Study aims to evaluate impacts and assess potential improvements to the surface transportation network in St. Bernard Parish relating to the implementation of the proposed Louisiana International Terminal (LIT) project in Violet, Louisiana and other possible future downriver developments. The purpose of this environmental summary is to identify resources associated with the natural and human environment as they relate to the implementation of the proposed LIT project.

This Stage 0 Feasibility Study is part of the contract for the Louisiana Department of Transportation and Development (DOTD) State Project No. H.015428. GIS conducted this Louisiana International Terminal Roadway Network and Resilience Study (Stage 0 Feasibility Study) in coordination with the New Orleans Regional Planning Commission (RPC), The Port of New Orleans, and the St. Bernard Parish Government.

The Study Area for the project consists of 32,652 acres, and is centered at approximately latitude 29°56'27.6936" N and longitude 89°54'48.7908" W (29.941026°, -89.913553°). **Figure 01** shows the location of the Study Area.

2.0 ELEVATED HIGHWAY ALTERNATIVES

The evaluation of alternatives for the Lower St. Bernard Transportation Network considered multiple factors across three rounds of screening, as well as additional considerations such as right-of-way (ROW) acquisition, the number of affected parcels and structures, and utility impacts. The screening processes assessed key metrics through multiple rounds of screenings. Among the thirty-two (32) alternatives analyzed, **Alternative 12 (C-H-I-P), Alternative 22 (G-E-H-I-P),** and **Alternative 25 (G-E-S)** emerged as the top-performing alternatives. Additional details on each alternative evaluated, evaluation criteria, and alternative evaluation matrices can be found within Section 7 of the main report.

2.1 ALTERNATIVE 12 (C-H-I-P)

Alternative 12 is an approximately 8.9-mile elevated roadway planned to have two 12-foot lanes and two 8-foot shoulders that originates at Paris Road (LA 47) north of Eddie Pinto's Marina (**Figure 02-A**). From there, the alignment crosses Bayou Bienvenue (requiring a mid-level bridge) before extending southeast over the marsh toward Meraux. The alignment then parallels the Forty Arpent Canal and crosses Violet Canal (requiring a second mid-level bridge) before making a southwest turn, ultimately terminating directly at the Port of New Orleans Louisiana International Terminal site on Judge Perez Highway (LA 39) near Violet.

2.2 ALTERNATIVE 22 (G-E-H-I-P)

Alternative 22 is an approximately 8.1-mile elevated roadway planned to have two 12-foot travel lanes and two 8-foot shoulders that originates on Paris Rd (LA47) near its intersection with Forty Arpent Canal Rd (**Figure 02-B**). The alignment parallels Forty Arpent through the marsh where it

crosses over Violet Canal (requiring a mid-level bridge) before making a southwest turn, ultimately terminating directly at the Port of New Orleans Louisiana International Terminal site on Judge Perez Highway (LA39) near Violet.

2.3 ALTERNATIVE 25 (G-E-S)

Alternative 25 is an approximately 4.7-mile roadway that originates on Paris Rd. (LA47) near its intersection with Forty Arpent Canal Rd (**Figure 02-C**). The alignment parallels Forty Arpent elevated through the marsh with a planned elevated section consisting of two 12-foot travel lanes and two 8-foot shoulders. The roadway then turns southwest and transitions to an at-grade section through the Meraux tract, ultimately tying into Judge Perez Highway (LA39) between Maureen Lane and St. Marie Dr.

3.0 AFFECTED ENVIRONMENT

This section of the environmental summary will identify existing resources associated with the natural environment within the study area. **Section 4.0** discusses the resources associated with the human environment.

3.1 SOILS

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) provides critical information about soil characteristics, properties, and distribution that can be used in a wild variety of fields. GIS utilized NRCS's Web Soil Survey (WSS) to explore soil characteristics within the study area.[1] The full Custom Soil Resource Report for the Study Area is found in **Attachment A**. Data found in the report was also downloaded in order to create **Figure 03**, a map showing the soil types found in the Study Area.

The total acreage of the Study area was 32,657 acres, 95.8% of which located in St. Bernard Parish with the remaining 4.2% in Orleans Parish. Seventeen (17) different types of soil were identified through the WSS, with the largest portions being 1) Aquents (AT & AD) dredged, frequently flooded (15.9%), 2) Lafitte muck, 0 to 0.2 percent slopes, very frequently flooded (13.7%), 3) Barbary clay (10.3%), and 4) Clovelly muck, 0 to 0.2 percent slopes, very frequently flooded (8.9%). Water was categorized as covering a total of 13.4% of the Study Area.

3.2 HYDRIC SOILS AND PRIME AND UNIQUE FARMLAND

In addition to soil type, land classification was included as part of the NRCS Custom Soil Resource Report. The land classifications included prime and unique farmland and hydric soils.

As part of the Agriculture and Food Act of 1981 (Public law 97-98), the Farmland Protection Policy Act (FPPA) was passed by Congress. FPPA is intended to minimize impacts that Federal programs may have on unnecessary and or irreversible conversion of farmland to nonagricultural

[1] U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS). Web Soil Survey. Accessed May 9, 2024. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

uses. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

USDA defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses (**Attachment A**). Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. And land of statewide or local importance is determined by state or local agencies and may include tracts of land that have been designated for agriculture by State law or local ordinance. A total of 9,421 acres or 28.9% of the Study Area were identified as prime farmland. Prime farmland was located only in the developed portion of the Study Area, south and west of the levee that separates the populated areas from the north and east wetland area.

Hydric soils meet one of the three essential characteristics of wetlands as defined by the U.S. Army Corps of Engineers (USACE), discussed further in **Section 3.5**. Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (**Attachment A**). Hydric soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation, another essential characteristic of wetlands. Within the Study Area, the landforms listed corresponding to each soil type and components include marshes, swamps, natural levees, levees, backswamps, flood plains, and backswamps on flood plains. A total of 2,374 acres or 72.7% of the Study Area were identified as hydric soils, based on the hydric status of the majority of components for each soil type. This hydric soil total does not include the area categorized as water, which was 13.4% of the Study Area. **Figure 04** maps the distribution of both prime farmland and hydric soils identified within the Study Area.

3.3 THREATENED AND ENDANGERED SPECIES

The Endangered Species Act of 1973 (16 U.S.C. 1531-1544) demonstrates protections for the fish, wildlife, and plants listed as threatened or endangered. It allows for adding or removing species from threatened or endangered lists, introducing and implementing plans for the recovery of these species, and providing interagency cooperation to avoid damages to listed species and for issuing permits for certain activities.[2] GIS reviewed the Louisiana Department of Wildlife & Fisheries (LDWF) Rare Species and Natural Communities by Parish list.[3] Additionally, GIS used the U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool to locate threatened or endangered species within the Study Area.[4] Note that the preliminary IPaC results for the study area are not for consultation, and a formal consultation would be need to be completed prior to finalizing lists of potentially affected species. The preliminary IPaC results are included

[2] U.S. Fish & Wildlife Service (USFWS). Endangered Species Act. Accessed 6/20/2024. https://www.fws.gov/law/endangered-species-act

[3] Louisiana Department of Wildlife & Fisheries (LDWF). Rare Species and Natural Communities by Parish, St. Bernard Parish. Accessed 6/20/2024. https://www.wlf.louisiana.gov/page/rare-species-and-natural-communities-by-parish

[4] U.S. Fish & Wildlife Service (USFWS). Information for Planning and Consultation (IPaC). Accessed 5/1/2024. https://ipac.ecosphere.fws.gov/

as **Attachment B** to this report, and **Table 01** shows the species listed for both the LDWF St. Bernard Parish list and the preliminary IPaC results for the Study Area.

3.4 ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fisheries Conservation and Management Act (MSA) of 1976 (16 U.S.C. §§ 1801 et seq.) is the primary law governing marine fisheries management in U.S. federal waters, and the 1996 amendment to MSA, known as the Sustainable Fisheries Act (P.L. 104-297), established new requirements for fishery management councils to identify and describe Essential Fish Habitat (EFH).[5] EFHs are defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity".

GIS utilized the National Oceanic and Atmospheric Administration's (NOAA) Essential Fish Habitat Mapper to identify any EFHs within or around the Study Area.[6] The only EFH within the Study Area is within Bayou Bienvenue, which crosses the northern portion of the Study Area and crosses under Hwy 47. Nearby EFHs include the Mississippi River (southern boundary of Study Area), the Gulf Intracoastal Waterway (northeast of Study Area), and the Mississippi River-Gulf Outlet Canal or MRGO (eastern boundary of Study Area). There are four EFH species identified within these water bodies: Shrimp, Red Drum, Reef Fish, and Coastal Migratory Pelagics. There are numerous other water bodies and wetlands near and within the Study Area that provide habitat for aquatic life, further described in **Sections 3.5** and **3.6**.

3.5 WETLANDS

Under the Clean Water Act (CWA) Section 404, wetlands are considered "waters of the United States" and thus also have special regulations and protections defined in the CWA. The USACE and EPA jointly define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.[7] There are three essential characteristics used to identify wetlands: soils, vegetation, and hydrology. Hydric soils, hydrophilic vegetation specially adapted to prolonged presence of water, and varying levels and patterns of inundation indicate the presence of wetlands.

GIS downloaded data from the U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI)[8] to help identify potential wetland areas within the Study Area. Categories of wetlands NWI classifies include: Estuarine and Marine Deepwater, Estuarine and Marine Wetland, Freshwater Emergent Wetland, Freshwater Forested/Shrub Wetland, Freshwater Pond, Lake, and Riverine. Within the Study Area, there are 188 acres of Riverine area located within or

[5] National Oceanic and Atmospheric Administration (NOAA) Fisheries. Laws & Polices: Magnuson-Stevens Act. Accessed 6/19/2024. https://www.fisheries.noaa.gov/topic/laws-policies

[6] National Oceanic and Atmospheric Administration (NOAA) Fisheries. Essential Fish Habitat Mapper. Accessed 6/19/2024. https://www.habitat.noaa.gov/apps/efhmapper/?page=page_1

[7] U.S. Environmental Protection Agency (EPA). Section 404 of the Clean Water Act, How Wetlands are Defined and Identified under CWA Section 4.4. Accessed 6/20/2024. https://www.epa.gov/cwa-404/how-wetlands-are-defined-and-identified-under-cwa-section-404

[8] U.S. Fish & Wildlife Service (USFWS). National Wetlands Inventory, Wetland Mapper. Accessed 6/21/2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

immediately adjacent to the Mississippi River, which can be effectively ignored for this feasibility study. Excluding those 188 acres of Riverine wetlands, there is a total of approximately 20,194 acres of wetlands within the Study Area (62.2% of the Study Area). The majority of these wetlands are categorized as Estuarine and Marine Wetland (32.0% of the Study Area) and are located in the north/west portion of the Study Area within the Bayou Bienvenue Central Wetland Unit. **Figure 05** shows the wetland areas mapped by USFWS NWI within the Study Area. **Table 02** lists the acreage of wetlands within the Study Area by wetland type.

3.6 WATER RESOURCES

EPA defines water resources to include lakes, streams, ground water, coastal waters, wetlands, and other waters; their associated ecosystems; and the humans uses they support, such as drinking water, recreation, and fish consumption.[9] The extent and condition of water resources are critical to ecosystems, human uses, and overall function and sustainability of the hydrologic cycle.[9]

Major water bodies surrounding the Study Area include the Mississippi River (south/west), Gulf Intracoastal Waterway (north), Mississippi River Gulf Outlet (north/east), and Lake Borgne (northeast). This section discusses surface waters, natural and scenic rivers, aquifers, water wells, and floodplains and levees within and surrounding the Study Area. GIS identified two subwatershed Hydrologic Unit Codes (HUC12) within the Study Area using the U.S. Geological Survey (USGS) Watershed Boundary Dataset (WBD).[10] The two HUC12 subwatershed areas are divided by the levee south of the Bayou Bienvenue Central Wetland Unit. The north/east wetland area is within Bayou Bienvenue: HUC12-080902030301; the south/west developed area is within Bayou Terre aux Boeufs-Fourty Arpent Canal: HUC12-080902030501.

3.6.1 Surface Waters

Surface waters are those that are surrounded by land and are not seawater. The Clean Water Act (CWA) Section 303(d)(40 CFR§130.7) and Section 305(b) (40 CFR§130.8)[11] require that each state must conduct and report a water quality assessment of their water resources to the EPA every two years. The information must include an analysis of the status of waters of the state with regard to their support of recreational activities and fish and wildlife propagation. At the time of writing this report, the current official assessment for Louisiana's surface waters is the Louisiana Department of Environmental Quality (LDEQ) 2022 Louisiana Water Quality Inventory Integrated Report.[12] Louisiana's water quality regulations (LAC, Title 33:IX.1101 et seq.) were used to determine water quality uses, criteria, and assessment procedures.

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[9] U.S. Environmental Protection Agency (EPA). Report of the Environment, Water. Accessed 6/21/2024. https://www.epa.gov/report-environment/water

[10] U.S. Geological Survey (USGS). Watershed Boundary Dataset. Accessed 7/1/2024. https://www.arcgis.com/home/item.html?id=b60aa1d756b245cf9db03a92254af878

[11] U.S. Code of Federal Regulations, Title 40, Chapter I, Subchapter D, Part 130, §130.7 and §130.8.

[12] Louisiana Department of Environmental Quality (LDEQ). 2022 Water Quality Inventory: Integrated Report (305(b)/303(d)). Accessed 6/21/2024. https://www.deq.louisiana.gov/page/2022-water-quality-inventory-integrated-report-305b303d

GIS identified surface waters included in this report using LDEQ Interactive Assessment Map.[13] Results from this search are listed below. If LDEQ classified the water body as "impaired", the water body's impaired use(s) and suspected cause(s)[14] of impairment were also included within this list.

- LA070301_00 (Mississippi River): From Monte Sano Bayou to Head of Passes
- LA041501_00 (Inner Harbor Navigation Canal): From Mississippi River Lock to Lake Pontchartrain, Estuarine
- LA041801_00 (Bayou Bienvenue): From headwaters to hurricane gate at MRGO, Estuarine (inside of Study Area)
- LA042004_00 (Bayou Bienvenue): From MRGO to Bayou Villere, Estuarine (outside of Study Area), **Impaired** for oyster propagation as a result of elevated fecal coliform levels.
- LA041901_00 (Mississippi River Gulf Outlet – MRGO): From ICWW to Breton Sound at MRGO mile 30, **Impaired** for fish and wildlife propagation as a result of low dissolved oxygen levels.
- LA041601_00 (Intracoastal Waterway – ICWW): From Inner Harbor Navigation Canal to Chef Menteur Pass, Estuarine, **Impaired** for fish and wildlife propagation as a result of low pH levels.
- LA041809_00 (Poydras-Verret Marsh Wetland): Forested and marsh wetland located 1.5 miles north of St. Bernard, south of Violet Canal, and northeast of Forty Arpent Canal, 2,748 acres
- LA042001_00 (Lake Borgne): Estuarine (outside of Study Area), **Impaired** for fish and wildlife propagation due to low dissolved oxygen, **Impaired** for oyster propagation due to elevated fecal coliform levels, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels
- LA041802_00 (Bayou Chaperon): Scenic, Estuarine, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels
- LA041805_00 (Lake Borgne Canal): From Mississippi River siphon at Violet to Bayou Dupre; also called Violet Canal, Scenic, Estuarine, **Impaired** for fish and wildlife propagation due to low dissolved oxygen, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels
- LA041804_00 (Bayou Dupre): From Lake Borgne Canal to Terre Beau Bayou, Scenic, Estuarine, **Impaired** for fish and wildlife propagation due to low dissolved oxygen, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels
- LA041803_00 (Bashman Bayou): From headwaters to Bayou Dupre, Scenic, Estuarine, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels

[13] Louisiana Department of Environmental Quality (LDEQ). 2022 Louisiana's Water Quality Integrated Report Interactive Assessment Map. Accessed 6/21/2024. https://ldeq.maps.arcgis.com/apps/instant/portfolio/index.html?appid=a689bc37c40848f598a1937d092f63ae%20

[14] Louisiana Department of Environmental Quality (LDEQ). 2022 Water Quality Inventory: Integrated Report (305(b)/303(d)), Appendix A: 2022 Water Quality Assessments for Louisiana. Accessed 6/21/2024. https://www.deq.louisiana.gov/assets/docs/Water/Integrated_Report/2022_Integrated_Report/22_IR1_App_A_Assessments_CORRECTED_FINAL_8-19-22.pdf

- LA041806_00 (Pirogue Bayou): From Bayou Dupre to New Canal, Scenic, Estuarine, **Impaired** for fish and wildlife propagation due to low dissolved oxygen, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels
- LA041807_00 (Terre Beau Bayou): From Bayou Dupre to New Canal, Scenic, Estuarine, **Impaired** for fish and wildlife propagation due to low dissolved oxygen, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels
- LA041808_00 (New Canal): Estuarine (outside of Study Area), **Impaired** for fish and wildlife propagation due to low dissolved oxygen, **Impaired** for primary contact recreation (swimming) due to elevated enterococcus bacterial levels

3.6.2 Natural and Scenic Rivers

The Louisiana Natural and Scenic River Act of 1970 (LA R.S. 56:1840-1856) established the Louisiana Natural and Scenic River System, a State river protection initiative hosted by LDWF to preserve, protect, develop, reclaim, and enhance the wilderness qualities, scenic beauties, and ecological regimes of designated free-flowing Louisiana rivers, streams, bayous, and segments thereof.[15] In Louisiana, approximately 3,000 miles of water are currently designated as Scenic Rivers. Within the Study Area there are seven (7) designated Scenic and Natural Rivers: Bayou Bienvenue, Pirogue Bayou, Terre-Beau Bayou, Lake Borgne Canal (Violet Canal), Bayou Dupree, Bayou Chaperon and Bashman Bayou. **Figure 06** shows the locations of these waterbodies.

3.6.3 Aquifers

A Sole Source Aquifer (SSA) is an aquifer designated by EPA as the "sole or principal source" of drinking water for a given service areas, and a SSA is one that is used to supply 50% or more of the drinking water for a particular area.[16] GIS utilized the EPA Interactive Map of Sole Source Aquifers and found no SSAs within the Study Area.[17] GIS utilized Louisiana's Department of Energy and Natural Resources (DENR) Strategic Online Natural Resources Information System (SONRIS) database and found no aquifers within the Study Area, the nearest being an "Alluvial" aquifer within Orleans Parish.[18]

3.6.4 Water Wells

GIS searched for water wells within the Study Area utilizing the DENR SONRIS database.[18] There are a total of four hundred and forty-nine (449) registered water wells within the Study Area. Of these wells four (4) are "abandoned", one hundred and sixty-three (163) are "active", two (2) are "destroyed", and two hundred and eighty (280) are "plugged and abandoned." The locations of the

[15] Louisiana Department of Wildlife & Fisheries (LDWF). Scenic Rivers. Accessed 6/20/2024. https://www.wlf.louisiana.gov/page/scenic-rivers

[16] U.S. Environmental Protection Agency (EPA). Sole Source Aquifers for Drinking Water, Overview of the Drinking Water Sole Source Aquifer Program. Accessed 6/19/2024. https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#What_Is_SSA

[17] U.S. Environmental Protection Agency (EPA). Sole Source Aquifers Interactive Map. Accessed 6/19/2024. https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b

[18] Louisiana Department of Energy and Natural Resources (DENR). Strategic Online Natural Resources Information System (SONRIS), Water Wells. Accessed 6/18/2024. https://www.sonris.com/

water wells are shown in **Figure 06**. Water wells are mainly concentrated in Chalmette, especially by the industrial facilities along the bank of the Mississippi River. The others are mostly scattered around the Valero Meraux Refinery and Highways 46, 47, and 39.

3.6.5 Floodplains and Levees

Executive Order (EO)11988 "Floodplain Management" issued in 1977 directs Federal agencies to assert leadership in reducing flood losses and losses of environmental values of floodplains, avoid actions located in or adversely affecting floodplains unless there is no practicable alternative, and take action to mitigate losses if avoidance is not practicable.[19] EO 11988 also establishes a process for flood hazard evaluation based upon the 100-year base flood standard of the National Flood Insurance Program (NFIP).[19]

GIS utilized the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) Viewer to identify flood hazard zones within the Study Area.[20] **Figure 07** shows the flood hazard zones and levees for Flood Insurance Rate Map (FIRM) panels within the Study Area. The overwhelming majority of the Study Area is within the 100-year floodplain (1% annual chance of flooding). The developed area in the south/west portion of the Study Area is approximately half within the 100-year floodplain and half within the 500-year floodplain (0.2% annual chance of flooding).

There are levees on both the south/east and north/west sides of the developed portion of the Study Area, separating those cities from the Mississippi River and the Bayou Bienvenue Central Wetland Unit, respectively. There is an additional levee to the northwest of the Bayou Bienvenue Central Wetland Unit, where there is a northern sector gate along Bayou Bienvenue that is open during normal periods to allow ingress and egress of water and organisms into an out of the wetland system. This sector gate is closed during large storm events to reduce the risk of flooding for developed areas. This leveed system utilizes several large pump stations to pump water out of the developed areas and into Lake Borgne. Seven (7) Lake Borgne Basin Levee District (LBBLD) pump stations are located within the Study Area (LBBLD Pump Stations #1-#7).

3.7 UNIQUE AND ENVIRONMENTALLY SENSITIVE AREAS

The DOTD Office of Engineering in the Engineering Directives and Standards Manual (EDSM No: I.1.1.21) Treatment of Significant Trees in DOTD Right-of-Way (ROW) defines for this policy, a significant tree as a Live Oak, Red Oak, White Oak, Magnolia or Cypress that is considered aesthetically important, 18-inches or greater in diameter at breast height (4-6 feet above the ground), and having a form that separates it from the surrounding vegetation or is considered

[19] U.S. Department of Homeland Security. Federal Emergency Management Agency (FEMA). Executive Order 11988 Floodplain Management. Accessed 6/20/2024. https://www.fema.gov/glossary/executive-order-11988-floodplain-management

[20] U.S. Department of Homeland Security. Federal Emergency Management Agency (FEMA). FEMA's National Flood Hazard Layer (NFHL) Viewer. Accessed 6/19/2024. https://www.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

historic.[21] These significant trees must be in good health and not declining. Field observations will be conducted as to find if there are any significant trees near any of the build alternatives.

GIS also explored the LDWF Louisiana Outdoor Explorer Interactive Map[22] and the DENR SONRIS map[18] in search of other unique or environmentally sensitive areas. GIS found that there are no Wildlife Management Areas (WMAs), Wildlife Refuges, Conservation Areas, or Federal Lands within the Study Area.

3.8 NOISE

Existing ambient noise levels in the project area are those associated with the existing roadways and industrial facilities along Highways 39, 46, and 47. The proposed build alternatives and construction activities may impact existing ambient noise in the Study Area. A noise study will be conducted as part of the Stage 1 process.

3.9 AIR QUALITY

Air quality is determined by the Air Quality Index (AQI), which is based on the concentration of solid particle and chemical pollutants. The EPA Green Book currently lists St. Bernard Parish as a nonattainment zone for Sulfur Dioxide for years 2013-2024.[23] Air quality could temporarily be impacted during construction of an elevated highway alternative; however, the construction of a elevated highway alternative is expected to help mitigate air quality changes associated with increased traffic from the proposed Port of New Orleans: Louisiana International Terminal Facility. One of the goals for the elevated highway alternatives of this project is to prevent significantly increased traffic within the local community. Subsequently, the elevated highway alternatives that can divert some or all of the expected increased traffic of cargo trucks going to and from the proposed Louisiana International Terminal outside of the local community would help mitigate a potential decrease in air quality for the local community compared to if an elevated highway alternative was not built and traffic along the central state highways increased. Therefore, an elevated highway alternative could be beneficial to the air quality of the local community compared to a no action alternative.

3.10 SHADING

The existing conditions of shading in the area include those common in urban and wetland environments. Most buildings are low- to mid-rise which do not cast extensive shadows. Any taller structures from plants or refineries are mainly concentrated to the bank of the Mississippi River

[21] Louisiana Department of Transportation and Development (DOTD). Engineering Directives and Standards, Volume I, Chapter 1, Section 1, Directive 21. Treatment of Significant Trees in DOTD Right-of-Way. Accessed 6/19/2024. http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/EDSM/EDSM/EDSM_I_1_1_21.pdf

[22] Louisiana Department of Wildlife & Fisheries (LDWF). Louisiana Outdoor Explorer Interactive Map. Accessed 6/19/2024. https://experience.arcgis.com/experience/8c8c131a3e8e42728a0658159e79efd4/page/Go-Hunting/

[23] U.S. Environmental Protection Agency (EPA). Green Book, National Area and County-Level Multi-Pollutant Information, Louisiana Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Accessed 7/1/2024. https://www3.epa.gov/airquality/greenbook/anayo_la.html

and water towers in various locations. Shade sensitive areas would be those where sunlight is important for function, physical comfort, or commerce.

The areas most likely to be impacted by potential shading would be wetland areas that alternatives cross through. For alternatives using an elevated bridge crossing over wetlands, the bridge dimensions were assumed to be 43 ft wide and 7 ft in height (above marsh surface). Utilizing the USDA National Agroforestry Center shade equation[24] and the NOAA Solar Calculator,[25] we estimate that a 43 ft wide and 7 ft tall bridge would cast a shadow 168.95 ft at 9 am, 14.36 ft at 12 pm, and 103.14 ft at 4 pm (**Table 03**).

A U.S. Department of Transportation (DOT) and North Carolina State University study investigated the effects of shading from bridges on estuarine wetlands. [26] Results suggest that low bridges adversely affect estuarine marsh productivity by reducing macrophyte growth and soil organic carbon, which in turn reduces density and diversity of benthic invertebrates.[26] Additionally, this study concluded that bridges with height to width ratios greater than 0.7 would not have measurable effects on primary and secondary production. For this Stage 0 Feasibility Study, the elevated highway dimensions have a height to width ratio of 0.16 (7 ft tall to 43 ft wide), thus it is likely that there could be adverse effects on wetland areas caught temporarily or permanently within the highway's zone of shading.

3.11 HAZARDOUS AND SOLID WASTE CONCERNS

Sites found in our search, if contaminated could potentially directly impact the project area if located within project right of way or indirectly by migration of offsite contamination into project right of way.

Hazardous waste defined by 42 United States Code (USC) § 6903(5) is a solid waste or combination of solid wastes due to its quantity, concentration, or physical, chemical, or infectious characteristics may: cause, or significantly contribute to an increase in mortality or serious irreversible or incapacitating illness; pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of. Solid waste as defined by 42 USC § 6903(27) is any garbage, refuse, sludge from a waste treatment plant, or air pollution control facility and other discarded material, including: solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and community activities but does not include solid or dissolved materials in domestic sewage, irrigation return flows, or industrial discharges that are point sources subject to permits under

[24] U.S. Department of Agriculture (USDA). National Agroforestry Center, Conservation Buffers, Guidelines / 5.0 Protection & Safety, 5.6 Managing Shade. Accessed 6/24/2024. https://www.fs.usda.gov/nac/buffers/guidelines/5_protection/6.html

[25] National Oceanic and Atmospheric Administration (NOAA). Global Monitoring Laboratory, NOAA Solar Calculator. Accessed 6/24/2024. https://gml.noaa.gov/grad/solcalc/

[26] North Carolina State University, College of Agriculture & Life Sciences, Department of Soil Science & U.S. Department of Transportation Research and Special Programs Administration. S.W. Broome. C.B. Craft, S.D. Struck, and M. SanClements. *Effects of Shading from Bridges on Estuarine Wetlands*. Technical Report No. FHWA/NC/2003-07. June 2005. https://www.researchgate.net/publication/267975293_Effects_of_Shading_from_Bridges_on_Estuarine_Wetlands_Prepared_By

section 1342 of title 33 , or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923) [42 USC 2011 et seq.].

ERNS

The Emergency Response Notification System (ERNS) is a database for the storage of information or notifications of oil discharges and hazardous substances releases. During Stage 1, after the project area has been narrowed down, a search of the ERNS database will be completed. For this Stage 0 Report, GIS did check the EPA On-Scene Coordinator (OSC) Response listing for Region 6.[27] There were no listings of an OSC response for St. Bernard Parish, and it is not expected that there will be significant findings from the ERNS database search during Stage 1.

CERCLIS / SEMS

The Comprehensive Environmental Responses, Compensation, and Liability Act (CERCLA) of 1980 created the Superfund program, administered by the EPA. Superfund is a program to locate, investigate, and clean up uncontrolled hazardous waste sites throughout the United States.[28] CERCLA created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment.[29]

The previous Comprehensive Environmental Response, Compensation, and Liability Information System (CERLCLIS) database was retired and replaced with the Superfund Enterprise Management System (SEMS) database. SEMS is a searchable EPA database in Envirofacts with Superfund facility data. GIS searched SEMS for any Superfund facilities within Arabi, Chalmette, Meraux, Poydras, and Violet, LA.[30] SEMS results for the Study Area are included in **Table 04**; there were no SEMS facilities listed in Poydras or Violet, LA. SEMS results for the Study Area with known locations are shown in **Figure 08**.

There was a total of twelve (12) SEMS facilities identified within the Study Area. None of these facilities are included within the National Priority List (NPL). Ten (10) of the facilities have a non-NPL status of "No further Remedial Action Planned." The remaining two sites in Chalmette, LA (EPA ID LAN000605669 Norfolk Southern Railway and EPA ID LAD980871701 Recoil Corporation) have a non-NPL status of "Removal Only Site."

ECHO

Enforcement and Compliance History Online (ECHO) is a database for fast searches of EPA and state data for more than 800,000 regulated facilities. The focus of ECHO is inspection, violation, and enforcement data for the Clean Air Act, Clean Water Act (CWA), and Resource Conservation and Recovery Act (RCRA) and includes Safe Drinking Water Act and Toxics Release Inventory

[27] U.S. Environmental Protection Agency (EPA). On-Scene Coordinator (OSC) Response, Region 6 – Central South – AR, LA, NM, OK, TX. Accessed 7/3/2024. https://response.epa.gov/site/region_list.aspx?region=6

[28] U.S. Environmental Protection Agency (EPA). Envirofacts, About the Data. Accessed 7/1/2024. https://www.epa.gov/enviro/about-data

[29] U.S. Environmental Protection Agency. Superfund, Superfund: CERCLA Overview. Accessed 7/1/2024. https://www.epa.gov/superfund/superfund-cercla-overview

[30] U.S. Environmental Protection Agency (EPA). Superfund Enterprise Management Systems (SEMS) database search. Accessed 7/1/2024. https://enviro.epa.gov/envirofacts/sems/search

data.[31] ECHO results for Arabi, Chalmette, Meraux, Violet, and Poydras, LA are included in **Table 05**. There was a total of two hundred and twelve (212) ECHO results between these areas.

3.12 UNDERGROUND STORAGE TANKS AND OIL & GAS WELLS

The locations of underground storage tanks (UST) and oil & gas wells are important to know in order to accurately avoid them and prevent any accidental releases.

Underground storage tanks are defined by the EPA as a tank and any underground piping connected to the tank that has at least 10% of its combined volume underground, and federal UST regulations apply only to UST systems storing either petroleum or defined hazardous substances (40 CFR§302.4).[32,33] GIS downloaded UST locations from Louisiana's Department of Environmental Quality (LDEQ) Interactive Map.[34] Louisiana requires by law that all USTs within the state be registered (LAC 33:XI§301).[35] There are a total of twenty-six (26) USTs within the Study Area. All USTs identified were within the developed portions of the Study Area, not within the wetland portion.

Locations of oil & gas wells were downloaded from DENR's SONRIS database system.[36] In the Study Area, there are a total of thirty-two (32) oil & gas wells, of which fifteen (15) are "dry and plugged, no product specified", eleven (11) are "permit expired", and six (6) are "plugged and abandoned, no product specified." The oil and gas wells present within the area are fairly spread out throughout the Study Area, but there is a concentration of wells around PBF Energy Chalmette and its associated refinery, south of Chalmette, LA. **Figure 08** shows the locations of both underground storage tanks and oil & gas wells within the Study Area.

3.13 PIPELINES

GIS utilized the U.S. Department of Transportation (DOT) National Pipeline Mapping System (NPMS) to explore potential oil & gas pipelines within the Study Area.[37] Using the NPMS Public Map Viewer, GIS identified over a dozen pipelines within the Study Area, with a large cluster surrounding Chalmette, multiple crossing the northern wetland area, some running along levees,

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[31] U.S. Environmental Protection Agency (EPA). Enforcement and Compliance History Online. Accessed 6/5/2024. https://echo.epa.gov/

[32] U.S. Code of Federal Regulations, Title 40, Chapter I, Subchapter J, Part 302, §302.4. Hazardous substances and reportable quantities. Accessed 6/19/2024. https://www.ecfr.gov/current/title-40/chapter-I/subchapter-J/part-302/section-302.4

[33] U.S. Environmental Protection Agency (EPA). Underground Storage Tanks (USTs), Learn About Underground Storage Tanks. Accessed 6/19/2024. https://www.epa.gov/ust/learn-about-underground-storage-tanks

[34] Louisiana Department of Environmental Quality (LDEQ). Louisiana Department of Environmental Quality Interactive Map, LDEQ TEMPO Underground Storage Tanks. Accessed 6/19/2024. https://experience.arcgis.com/experience/2cca66ba6cab415290b95de181a633b4

[35] Louisiana Administrative Code (LAC) Title 33 Environmental Quality, Part XI. Underground Storage Tanks. Accessed 6/19/2024. https://www.deq.louisiana.gov/assets/docs/Legal_Affairs/ERC/USTbook.pdf

[36] Louisiana Department of Energy and Natural Resources (DENR). Strategic Online Natural Resources Information System (SONRIS), Oil & Gas Wells. Accessed 6/18/2024. https://www.sonris.com/

[37] U.S. Department of Transportation (DOT). National Pipeline Mapping System, Public Map Viewer. Accessed 6/18/2024. https://www.npms.phmsa.dot.gov/

and a few near major highways (**Figure 09**). Coordination with pipeline companies will be necessary in following design stages.

4.0 HUMAN ENVIRONMENT

4.1 LAND USE

EPA defines land use as a term to describe the human use of land, representing economic and cultural activities that are practiced at a given place.[38] GIS received land use data from the New Orleans Regional Planning Commission for St. Bernard Parish and cropped its extents to within the Study Area. Note, this land use data does not cover the wetland area north of the levee adjacent to the populated areas, which is a significant portion of the overall Study Area. The identified land use categories within the Study Area include twenty (20) categories (**Table 06**). The top five (5) land use categories by total area are single family detached housing, woodland, manufacturing & refining, local business, and agriculture. **Figure 10** shows a map of land use data within the Study Area.

4.2 COMMUNITY DEMOGRAPHICS

GIS identified fifteen (15) U.S. Census Bureau (USCB) census tracts within the Study Area to investigate community demographics. These census tracts are: 301.03, 302.03, 302.04, 302.06,302.07, 302.08, 302.09, 303, 304, 305, 306.01, 306.02, 306.03, 307, and 308. For context of each census tract location, a map of these census tracts is found in **Figure 11**.[39]

Demographic data for each census tract was downloaded from the USCB data.census.gov website,[40] and data sources include USCB 2018-2022 American Community Survey (ACS) 5-Year Estimates (Table DP02: Selected Social Characteristics in the United States; Table DP03: Selected Economic Characteristics; and Table S1701: Poverty Status in the Past 12 Months) and USCB 2020 Census Demographic and Housing Characteristics (Table P9: Hispanic or Latino, and Not Hispanic or Latino by Race). A total of four (4) demographic tables were created to display relevant community demographics for each of the fifteen (15) census tracts using the sources listed above:

- **Table 07** – Households by Type, Educational Attainment, Employment Status, and Commuting to Work (USCB Tables DP02 and DP03)
- **Table 08** – Industry and Income and Benefits (USCB Table DP03)
- **Table 09** – Race and Ethnicity (USCB Table P9)
- **Table 10** – Poverty Status (USCB Table S1701)

In addition to the USCB census tract data discussed above, the Federal Highway Administration (FHWA) Office of Planning prepared a Screening Tool for Equity Analysis of Projects (STEAP).

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[38] U.S. Environmental Protection Agency (EPA). Report on the Environment, Land Use. Accessed 6/19/2024. https://www.epa.gov/report-environment/land-use

[39] U.S. Census Bureau (USCB). Cartographic Boundary Files, Census Tracts, 1:500,000 (state) shapefile, Louisiana. https://www.census.gov/geographies/mapping-files/time-series/geo/cartographic-boundary.html

[40] U.S. Census Bureau (USCB). Census Tract Geographies (2022) Selection Map. Accessed 6/26/2024. https://data.census.gov/map/

The November 2023 STEAP report for this project, which uses data from the 2016-2020 American Community Survey, includes a 1.0-mile buffer Analysis Summary Report with demographic data along a 1.0-mile buffer zone of major roadways in the Study Area. The FHWA STEAP report can be found in **Attachment C**.

4.3 ENVIRONMENTAL JUSTICE

The U.S. Environmental Protection Agency (EPA) describes environmental justice (EJ) as:

> "the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability , in agency decision-making and other Federal activities that affect human health and the environment so that people:
>
> - are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or system barriers; and
> - have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices."[41]

Within state and local strategic infrastructure planning, environmental justice is a goal to strive for, and the socioeconomic factors that influence environmental justice are important for project teams to be aware of and consider during design. To assist in this regard, the EPA created the EJScreen mapping and screening tool with a nationally consistent dataset and approach for combing environmental and socioeconomic indicators.[42]

The EJScreen includes thirteen (13) EJ Indexes and Supplemental Indexes: particulate matter 2.5, ozone, diesel particulate matter, air toxics cancer risk, air toxics respiratory hazard index, toxic releases to air, traffic proximity, lead paint, Risk Management program (RMP) facility proximity, hazardous waste proximity, superfund proximity, underground storage tanks, and wastewater discharge.[43] The EJ Index combines two demographic factors with a single environmental factor, and the EJ Index is higher in block groups with large numbers of mainly low-income and/or people of color residents with a higher environmental indicator value.[43] In comparison, the Supplemental Index uses the same methodology but incorporates a five-factor supplemental demographic index using: % low income, % unemployed, % limited English speaking, % less than high school education, and low life expectancy. The Supplemental Indexes provide flexibility and a different perspective on community-level vulnerability compared to the EJ Indexes.

The EJScreen tool calculates a score for each of the thirteen (13) Indexes by Census block group, and summary maps can be drawn using the number of Indexes with scores above the 80th percentile. One can assume that greater the number of Indexes above the 80th percentile

[41] U.S. Environmental Protection Agency (EPA). Environmental Justice. Accessed 6/19/2024. https://www.epa.gov/environmentaljustice

[42] U.S. Environmental Protection Agency (EPA). EJScreen: Environmental Justice Screening and Mapping Tool, What is EJScreen? Accessed 6/19/2024. https://www.epa.gov/ejscreen/what-ejscreen

[43] U.S. Environmental Protection Agency (EPA). EJScreen: Environmental Justice Screening and Mapping Tool, EJ and Supplemental Indexes in EJScreen. Accessed 6/19/2024. https://www.epa.gov/ejscreen/ej-and-supplemental-indexes-ejscreen

corresponds with a greater level of community vulnerability. Utilizing the EJScreen tool,[44] **Figure 12** and **Figure 13** show the number of EJ Indexes and Supplemental Indexes above the 80th percentile, respectively. Within the Study Area, greater community vulnerability is found within the Census tracts between and around Arabi and Chalmette, LA.

4.4 CULTURAL RESOURCES

USDA's Natural Resources Conservation Service (NRCS) describes cultural resources as "evidence of past human activity" including "sites, districts, buildings, structures and objects significant in American history, architecture, archaeology, engineering and culture."[45] The National Park Service (NPS) catalogs important cultural resources in their National Register of Historic Places (NRHP).[46] As part of the environmental summary, a preliminary assessment of cultural resources documented in the Study Area was conducted.

GIS reviewed data found through the Louisiana Office of Cultural Development's Cultural Resources Map.[47] Data included NRHP Individual Listings, NRHP Districts, and Cultural Districts. Four (4) NRHP Districts, two (2) Individual Listings, and one (1) Cultural District was identified within the Study Area (**Table 11**). A map of these identified cultural resources is found in **Figure 14**.

In May 2024, GIS requested a Solicitation of Views from the Louisiana State Historic Preservation Office (SHPO). In a response letter (**Attachment D**), SHPO's Division of Archaeology stated "this project is located in an area considered to have a high probability for archaeological sites and there are several previously recorded archaeological sites within the study area boundary." Additionally, SHPO's Division of Historic Preservation stated the Study area "contains several National Register Historic Districts and individually listed National Register properties." SHPO said that they would wait until consultation is initiated on this project before offering comments concerning an effect determination. Future SHPO coordination will proceed in the future as required.

At an earlier phase of this Stage 0 study, AECOM Technical Services, Inc. (AECOM) reviewed a similar study area for previous existing cultural resources investigations, previously identified archaeological sites, historic cemeteries, previously recorded historic standing structures, as well as the eligibility of these sites for listing in the NRHP. The current Study Area was an expansion and revision of this previous project study area AECOM investigated. Since AECOM's study area overlaps significantly with the current Study Area described in this Environmental Summary Report, AECOM's Cultural Resources report is included as **Attachment E**.

Additionally, GIS reviewed a list and map of Louisiana's federally and state recognized Tribes from Louisiana's Governor's Office of Indian Affairs.[48] St. Bernard Parish is within Region 3, and the only Tribe identified in St. Bernard Parish was the United Houma Nation. The project team

[44] U.S. Environmental Protection Agency (EPA). EPA's Environmental Justice Screening and Mapping Tool (Version 2.2). Accessed 6/18/2024. https://ejscreen.epa.gov/mapper/
[45] U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Cultural Resources. Accessed 6/19/2024. https://www.nrcs.usda.gov/group/143/cultural-resources
[46] National Park Service (NPS). National Register of Historic Places (NRHP), National Register Database and Research. Accessed 6/21/2024. https://www.nps.gov/subjects/nationalregister/database-research.htm
[47] Louisiana Office of Cultural Development, Division of Historic Preservation. HP Cultural Resources Map. Accessed 6/18/2024. https://laocd.maps.arcgis.com/apps/webappviewer/index.html?id=d6b1d2a16f214aaf9339064bc0f26312
[48] Louisiana Office of the Governor. Indian Affairs. Accessed 5/3/2024. https://gov.louisiana.gov/page/indian-affairs

identified the United Houma Nation as a stakeholder for this project and GIS had already established a point of contact with the Tribe. GIS contacted the Tribal Representative on June 18, 2024 via a phone call to ask if the Tribe knew of any cultural resources or areas of significance within the Study Area. The Tribal Representative replied that he did not know of any cultural resources or areas of significance within the Study Area.

4.5 COMMUNITY FACILITIES

A desktop analysis of community facilities within the Study Area was completed using Google Maps and Google Earth Pro. The northeast half of the Study Area consists of the Bayou Bienvenue Central Wetland Unit. The southwest, urban portion of the Study Area include the cities of Arabi, Chalmette, Violet, and Poydras. **Figure 15** shows notable community facilities within the Study Area. A non-exhaustive list of these community facilities includes the following:

- Schools: Arlene Meraux Elementary, Arabi Elementary, Chalmette Elementary, Chalmette High, Andrew Jackson Middle, CF Rowley Alternative, Our Lady of Prompt Succor Elementary, First Baptist Chalmette Preschool, Lacoste Elementary, Joseph J. Davies Elementary, NP Trist Middle, W. Smith Junior Elementary, St. Bernard Middle, J.F. Gauthier Elementary
- Hospitals: St. Bernard Parish Hospital
- Industry: St. Bernard Port Harbor & Terminal, PBF Energy Chalmette Refinery, Boasso Global, Air Products & Chemicals, Domino Sugar Chalmette/American Sugar Refining, Turn Services Associated Terminal, Valero Meraux Docks and Refinery
- Government: St. Bernard Parish Government Department of Public Works, St. Bernard Parish Government Complex, St. Bernard Sheriff's Office Field Operations, St. Bernard Sheriff's Office Prison, St. Bernard Parish School Board, St. Bernard Parish Court House
- Historical Landmarks: Chalmette Battlefield, Spotts Monument, Malus-Beauregard House, St. Bernard Highway Tunnel of Trees
- Nature Areas or Parks: Sankofa Wetland Park & Nature Trail, 40 Arpent Wetlands Observatory, Sidney D. Torres Memorial Park, Val Reiss Park, Pakenham Oaks, Violet Park, Patricia Park, Pearl Harbor Memorial Park, Carolyn Park Playground, Community Street Park
- Churches: Celebration Church St. Bernard/9th Ward Campus, Timothy Trumpet of Truth Ministry, Greater South Shore Full Gospel Baptist Church, Living Proof Church, The Church of Jesus Christ of Latter-day Saints, Chalmette Church of Christ, Our Lady of Prompt Succor, First Baptist Church of Chalmette, The Tabernacle Church, Gethsemane Lutheran Church, St Bernard Baptist Church, Covenant United Methodist Church, Victory Life Chalmette, Christ Lutheran Church, First Asia Baptist Church Gospel Temple, Celebration Church - Lower St. Bernard Campus, Our Lady of Lourdes Catholic Church, Christian Fellowship Family Worship Center, Faith Baptist Church, Corinne Missionary Baptist Church, Second Missionary Baptist Church, The City of Love St. Bernard, Cornerstone Church, First Baptist Church of Violet, Christian Fellowship Family Worship Center, Greater Mount Olive Missionary Baptist Church, Greater Round Hill Baptist Church, Violet Church of God In Christ, Lighthouse Pentecostal Church, St. Paul Ministries, House Of Judah Sanctuary, Poydras Baptist Church
- Cemeteries: St. Bernard Memorial Funeral Home & Gardens, Merrick Cemetery, Freedmen's Cemetery, Chalmette National Cemetery, Ellen Cemetery

- Libraries: St. Bernard Parish Library and St. Bernard Parish New Public Library Location.
- Fire Stations: Arabi Fire Station 1, Arabi Fire Station 2, St. Bernard Parish Fire Department, Chalmette Fire Department, St. Bernard Fire Station 3, SBFD Station 5, SBFD Station 6, SBFD Station 7, SBFD Station 8
- Electrical Power Stations: Chalmette Entergy, Meraux Entergy, Oaks Entergy, Kaiser Entergy, Conquest Entergy, Packenham Entergy, Arabi Entergy
- Pump Stations: Lake Borgne Basin Levee District (LBBLD) Pump Stations #1, #2, #3, #4, #5, #6, and #7

In addition to the community facilities listed above, the Study Area also includes dozens of hotels, gas stations, local businesses, and healthcare offices.

5.0 PERMITS

Permits that may be required to implement the proposed project include:

- USACE Section 408 permit and/or Letter of No Objection (LONO)
- USACE Real Estate Crossing Permit
- CPRA Permit and/or LONO
- Scenic Streams Permits
- Louisiana State Lands Permits
- Pipeline/Electrical Utility Crossing Permits
- USACE Section 10/404 permit
- Clean Water Act Section 401 Water Quality Certification
- Louisiana Coastal Use Permit
- US Coast Guard Bridge Permit (if bayous in project area are determined to be navigable)
- Louisiana Pollutant Discharge Elimination System Permits (storm water, sanitary wastewater discharges)
- Local Levee District Permits from the Southeast Louisiana Flood Protection Authority (SLFPA) East (Orleans Levee District and/or Lake Borgne Basin Levee District)
- Local Parish Permits

The exact permits needed for this project are location dependent and will be reviewed at later stages of design as needed.

6.0 TABLE REFERENCES

Table 01: Threatened and Endangered Species

U.S. Fish & Wildlife Service (USFWS). Information for Planning and Consultation (IPaC). Preliminary IPaC Report, not for consultation (**Attachment B**). Accessed 5/1/2024. https://ipac.ecosphere.fws.gov/

Louisiana Department of Wildlife & Fisheries (LDWF). Rare Species and Natural Communities by Parish, St. Bernard Parish. Accessed 6/20/2024. https://www.wlf.louisiana.gov/page/rare-species-and-natural-communities-by-parish

Table 02: NWI Wetland Type Acreage

U.S. Fish & Wildlife Service (USFWS). National Wetlands Inventory, Wetland Mapper. Accessed 6/21/2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

Table 03: Estimated Shading Zone for Elevated Highway Alternatives

National Oceanic and Atmospheric Administration (NOAA). Global Monitoring Laboratory, NOAA Solar Calculator. Accessed 6/24/2024. https://gml.noaa.gov/grad/solcalc/

U.S. Department of Agriculture (USDA). National Agroforestry Center, Conservation Buffers, Guidelines/5.0 Protection & Safety, 5.6 Managing Shade. Accessed 6/24/2024. https://www.fs.usda.gov/nac/buffers/guidelines/5_protection/6.html

Table 04: EPA Superfund Enterprise Management System (SEMS) Results

U.S. Environmental Protection Agency (EPA). Superfund Enterprise Management Systems (SEMS) database search. Accessed 7/1/2024. https://enviro.epa.gov/envirofacts/sems/search

Table 05: EPA Enforcement and Compliance History Online (ECHO) Results

U.S. Environmental Protection Agency (EPA). Enforcement and Compliance History Online. Accessed 6/5/2024. https://echo.epa.gov/

Table 06: RPC Land Use Acreage

New Orleans Regional Planning Commission (RPC) for St. Bernard Parish. St. Bernard Parish Land Use shapefiles. Received on 1/2024.

Table 07: USCB Households by Type, Educational Attainment, Employment Status and Commuting to Work

U.S Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Table DP02: Selected Social Characteristics in the United States (ACSDP5Y2022.DP02) and Table DP03: Selected Economic Characteristics (ACSDP5Y2022.DP03).

U.S. Census Bureau (USCB). Census Tract Geographies (2022) Selection Map. Accessed 6/26/2024. https://data.census.gov/map/

Table 08: USCB Industry and Income and Benefits

U.S Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Table DP03: Selected Economic Characteristics (ACSDP5Y2022.DP03).

U.S. Census Bureau (USCB). Census Tract Geographies (2022) Selection Map. Accessed 6/26/2024. https://data.census.gov/map/

Table 09: USCB Race and Ethnicity

U.S. Census Bureau, 2020 Census Demographic and Housing Characteristics file, Table P9: Hispanic or Latino, And Not Hispanic or Latino by Race (DECENNIALDHC2020.P9).

U.S. Census Bureau (USCB). Census Tract Geographies (2022) Selection Map. Accessed 6/26/2024. https://data.census.gov/map/

Table 10: USCB Poverty Status

U.S Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months (ACSST5Y2022.S1701).

U.S. Census Bureau (USCB). Census Tract Geographies (2022) Selection Map. Accessed 6/26/2024. https://data.census.gov/map/

Table 11: NRHP Cultural Resources

Louisiana Office of Cultural Development, Division of Historic Preservation. HP Cultural Resources Map. Accessed 6/18/2024. https://laocd.maps.arcgis.com/apps/webappviewer/index.html?id=d6b1d2a16f214aaf9339064bc0f26312

National Park Service (NPS). National Register of Historic Places (NRHP), National Register Database and Research. Accessed 6/21/2024. https://www.nps.gov/subjects/nationalregister/database-research.htm

7.0 FIGURE REFERENCES

Figure 01: Project Study Area

Study Project Area defined by project team. St. Bernard Parish Boundary sourced from the Louisiana Department of Transportation and Development (DOTD). Accessed 6/2024. https://www.arcgis.com/home/item.html?id=ec79c0c7cf3044f5a35d6d7b93b8e002

Figure 02-A: Alternative 12 (C-H-I-P)

Alternatives defined by project team.

Figure 02-B: Alternative 22 (G-E-H-I-P)

Alternatives defined by project team.

Figure 02-C: Alternative 25 (G-E-S)

Alternatives defined by project team.

Figure 03: NRCS Soil Types

U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS). Web Soil Survey. Custom Soils Report (**Attachment A**). Accessed 5/9/2024. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Figure 04: NRCS Prime Farmland and Hydric Soils

U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS). Web Soil Survey. Custom Soils Report (**Attachment A**). Accessed 5/9/2024. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Figure 05: NWI Wetland Types

U.S. Fish & Wildlife Service (USFWS). National Wetlands Inventory (NWI), Wetland Mapper. Accessed 6/21/2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

Figure 06: LDWF and DENR Water Resources

Louisiana Department of Wildlife & Fisheries (LDWF). Scenic Rivers. Accessed 6/20/2024. https://www.wlf.louisiana.gov/page/scenic-rivers

Louisiana Department of Energy and Natural Resources (DENR). Strategic Online Natural Resources Information System (SONRIS), Water Wells. Accessed 6/18/2024. https://www.sonris.com/

Figure 07: FEMA Flood Hazard Zones

U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA). FEMA's National Flood Hazard Layer (NFHL) Viewer. Accessed 6/19/2024. https://www.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

Figure 08: LDEQ Underground Storage Tanks, DENR Oil & Gas Wells, EPA SEMS Results

Louisiana Department of Environmental Quality (LDEQ). Louisiana Department of Environmental Quality Interactive Map, LDEQ TEMPO Underground Storage Tanks. Accessed 6/19/2024. https://experience.arcgis.com/experience/2cca66ba6cab415290b95de181a633b4

Louisiana Department of Energy and Natural Resources (DENR). Strategic Online Natural Resources Information System (SONRIS), Oil & Gas Wells. Accessed 6/18/2024. https://www.sonris.com/

U.S. Environmental Protection Agency (EPA). Superfund Enterprise Management Systems (SEMS) database search. Accessed 7/1/2024. https://enviro.epa.gov/envirofacts/sems/search

Figure 09: DOT National Pipeline Mapping System

U.S. Department of Transportation (DOT). National Pipeline Mapping System (NPMS), Public Map Viewer. Accessed 6/18/2024. https://www.npms.phmsa.dot.gov/

Figure 10: RPC Land Use

New Orleans Regional Planning Commission (RPC) for St. Bernard Parish. St. Bernard Parish Land Use shapefiles. Received on 1/2024.

Figure 11: USCB Census Tracts

U.S. Census Bureau (USCB). Cartographic Boundary Files, Census Tracts, 1:500,000 (state) shapefile, Louisiana. https://www.census.gov/geographies/mapping-files/time-series/geo/cartographic-boundary.html

Figure 12: EPA Environmental Justice Indexes Above 80th Percentile

U.S. Environmental Protection Agency (EPA). EPA's Environmental Justice Screening and Mapping Tool (Version 2.2). Accessed 6/18/2024. https://ejscreen.epa.gov/mapper/

Figure 13: EPA Supplemental Indexes Above 80th Percentile

U.S. Environmental Protection Agency (EPA). EPA's Environmental Justice Screening and Mapping Tool (Version 2.2). Accessed 6/18/2024. https://ejscreen.epa.gov/mapper/

Figure 14: NRHP Cultural Resources

Louisiana Office of Cultural Development, Division of Historic Preservation. LA Cultural Resources Map. Accessed 1/15/2025. https://experience.arcgis.com/experience/eb1f50bf72d1494cb735268529630acf

National Park Service (NPS). National Register of Historic Places (NRHP), National Register Database and Research. Accessed 6/21/2024. https://www.nps.gov/subjects/nationalregister/database-research.htm

Figure 15: Community Facilities

Facilities were identified using Google Maps and Google Earth Pro.

8.0 ATTACHMENT REFERENCES

Attachment A: NRCS Custom Soils Report

U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS). Web Soil Survey. Custom Soils Report for Orleans Parish, Louisiana and St. Bernard Parish, Louisiana. Created and downloaded on 5/9/2024.
https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Attachment B: USFWS IPaC Preliminary Report

U.S. Fish & Wildlife Service (USFWS). Information for Planning and Consultation (IPaC). Preliminary IPaC Report, not for consultation. Accessed 5/1/2024.
https://ipac.ecosphere.fws.gov/

Attachment C: FHWA Screening Tool for Equity Analysis of Projects (STEAP) Report

Federal Highway Administration (FHWA) Office of Planning. Screening Tool for Equity Analysis of Projects (STEAP), Project Buffer Analysis Profile Report. Data Source: American Community Survey 2016-2020. TransCAD Transportation Planning Software. Dated 11/13/2023.

Attachment D: SHPO Solicitation of Views Letter

Louisiana State Historic Preservation Office (SHPO). Solicitation of Views, State Project No. H.015428. 6/5/2024 correspondence with GIS Engineering, LLC.

Attachment E: AECOM Cultural Resources Report

AECOM Technical Services, Inc. (AECOM). Cultural Background and Previous Investigations Report, prepared for GIS Engineering, LLC. Received 3/2024.

Table 01

Threatened and Endangered Species

Table 01: Threatened and Endangered Species

Common Name	Scientific Name	Federal Status (IPaC)[1]	Federal Status (LDWF)[2]	State Status (LDWF)[2]
Mammals				
Tricolored Bat[3]	*Perimyotis subflavus*	Proposed Endangered	-	-
West Indian Manatee[4]	*Trichechus manatus*	Threatened	Threatened	Threatened
Birds				
Eastern Black Rail[3]	*Laterallus jamaicensis ssp. jamaicensis*	Threatened	-	-
Bald Eagle	*Haliaeetus leucocephalus*	-	Delisted	Delisted
Piping Plover	*Charadrius melodus*	-	Threatened	Threatened
Red Knot	*Calidris canutus*	-	Threatened	Threatened
Reptiles				
Alligator Snapping Turtle[3]	*Macrochelys temminckii*	Proposed Threatened	-	-
Loggerhead Sea Turtle	*Caretta caretta*	-	Threatened	Threatened
Mississippi Diamond-backed Terrapin	*Malaclemys terrapin pileate*	-	-	Restricted
Fishes				
Pallid Sturgeon[3]	*Scaphirhynchus albus*	Endangered	Endangered	Endangered
Gulf Sturgeon	*Acipenser oxyrinchus desotoi*	-	Threatened	Threatened
Insects				
Monarch Butterfly[3]	*Danaus plexippus*	Candidate	-	-

Note: 1) Status found from a preliminary U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) search of the Study Area. This information is not provided for consultation. A formal consultation would have to be completed prior to finalizing lists of potentially affected species. The informal IPaC report for the Study Area is included as **Attachment B** of the Environmental Summary Report.

2) Status found from the Louisiana Department of Wildlife & Fisheries (LDWF) Rare Species and Natural Communities by Parish. The listings are for the entirety of St. Bernard Parish, not only the Study Area.

3) Wherever found; No critical habitat has been designated for this species (IPaC, not for consultation).

4) Wherever found; There is final critical habitat for this species, but our location does not overlap the critical habitat (IPaC, not for consultation).

Source: U.S. Fish & Wildlife Service (USFWS). Information for Planning and Consultation (IPaC). Preliminary IPaC Report, not for consultation (**Attachment B**). Accessed 5/1/2024. https://ipac.ecosphere.fws.gov/

Louisiana Department of Wildlife & Fisheries (LDWF). Rare Species and Natural Communities by Parish, St. Bernard Parish. Accessed 6/20/2024. https://www.wlf.louisiana.gov/page/rare-species-and-natural-communities-by-parish

Table 02

NWI Wetland Type Acreage

Table 02: NWI Wetland Type Acreage

Wetland Type	Total Acreage	Percent of Study Area
Estuarine and Marine Deepwater	4,465	13.8%
Estuarine and Marine Wetland	10,373	32.0%
Freshwater Emergent Wetland	1,667	5.1%
Freshwater Forested/Shrub Wetland	3,314	10.2%
Freshwater Pond	220	0.7%
Lake	155	0.5%
Total Wetland Acreage	**20,194 acres**	**62.2%**

Note: 1) Wetland types used are defined and categorized by the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI). For more information, please visit: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper

2) The wetlands data displayed on and downloaded from the NWI Wetlands Mapper show wetland type and extent using a biological definition of wetlands. There is no attempt to define the limits of proprietary jurisdiction of any federal, state or local government, or to establish the geographical scope of the regulatory programs of government agencies.

3) Percent of Study Area refers to the total acreage of wetland type compared to the total acreage of the Study Area (32,464 acres). This Study Area acreage excludes the 188 acres identified as Riverine, which were all found within or immediately adjacent to the Mississippi River and can effectively be ignored for the purposes of this Stage 0 Feasibility Study.

Source: U.S. Fish and Wildlife Service (USFWS). National Wetlands Inventory, Wetland Mapper. Accessed 6/21/2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

Table 03

Estimated Shading Zone for Elevated Highway Alternatives

Table 03: Potential Shading Produced by Elevated Highway Alternatives

Time	Sun Azimuth/Elevation[1] (in °)	Shadow Length[2] (ft)
9:00 AM	81.64	168.95
12:00 PM	111.98	14.36
4:00 PM	271.68	103.14

Note: 1) Calculated using an estimated mid-point of the Study Area (29.954042° N, 89.945411°W) for June 18, 2024. Calculations were completed using NOAA the Solar Calculator (https://gml.noaa.gov/grad/solcalc/)

2) Shadow Length was calculated assuming a bridge cross section 43 ft in width and 7 ft. in height (above the marsh surface) using a USDA shading equation.

Source: National Oceanic and Atmospheric Administration (NOAA). Global Monitoring Laboratory, NOAA Solar Calculator. Accessed 6/24/2024. https://gml.noaa.gov/grad/solcalc/

U.S. Department of Agriculture (USDA). National Agroforestry Center, Conservation Buffers, Guidelines/5.0 Protection & Safety, 5.6 Managing Shade. Accessed 6/24/2024. https://www.fs.usda.gov/nac/buffers/guidelines/5_protection/6.html

Table 04

EPA Superfund Enterprise Management Systems (SEMS) Results

Table 04: EPA Superfund Enterprise Management System (SEMS) Results

SEMS EPA ID	Site Name	Address	Federal Facility Status	National Priority List (NPL) Status	Non-NPL Status
LA0000605187	Arabi Mercury Spill	1901 Schnell, Arabi, LA 70032	N	Not on the NPL	Removal Only Site
LAD060839727	Calciner Ind/ Kaiser Aluminum/Chem Corp.	St. Bernard Highway, Chalmette, LA 70044	N	Not on the NPL	No Further Remedial Action Planned
LAN000606813	Chalmette Mercury Spill	2917 Corinne Dr., Chalmette, St. Bernard LA 70043-3846	N	Not on the NPL	Removal Only Site
LAD980749162	Clean Company Inc	7007 St. Claude, Chalmette, LA 70043	N	Not on the NPL	No Further Remedial Action Planned
LAD980699367	Koppers Company Inc – Chalmette Plant	Unknown, Chalmette, LA 70043	N	Not on the NPL	No Further Remedial Action Planned
LAN000605669	Norfolk Southern Railway	Paris St. Milepost 3.7LS, Chalmette, St. Bernard LA 70043	N	Not on the NPL	Removal Only Site
LAD980871701	Recoil Corporation	4150 Old Paris Road, Chalmette St. Bernard, LA 70043	N	Not on the NPL	No Further Remedial Action Planned
LAD985187665	St. Bernard Parish Jail Complex	St. Bernard Hwy/LA Hwy 46/Parish Rd., Chalmette, LA 70043	N	Not on the NPL	No Further Remedial Action Planned
LAD980621825	St. Bernard Parish Landfill	Paris Rd., Chalmette, LA 70043	N	Not on the NPL	No Further Remedial Action Planned
LAD008179707	Tenneco Oil Company	Paris Road, Chalmette, LA 70043	N	Not on the NPL	No Further Remedial Action Planned
LAD980795652	ARCO Sinclair Gulf Corp Refinery	St. Bernard Hwy @ Murphy Oil Co, Meraux, LA 70075	N	Not on the NPL	No Further Remedial Action Planned
LAD008058471	Murphy Oil Corp	2500 E St. Bernard Hwy, Meraux, LA 70075	N	Not on the NPL	No Further Remedial Action Planned

Note: 1) SEMS Results for Arabi, Chalmette, and Meraux, LA. Poydras and Violet, LA did not have any SEMS results as of 7/1/2024.

Source: U.S. Environmental Protection Agency (EPA). Superfund Enterprise Management Systems (SEMS) database search. Accessed 7/1/2024. https://enviro.epa.gov/envirofacts/sems/search

Table 05

EPA Enforcement and Compliance History Online (ECHO) Results

Table 05: EPA Enforcement and Compliance History Online (ECHO) Results

Facility Name	Facility Address	City	Potential EJ Concern
American Maritime Services Llc	Southwest Pass To Port Of Baton Rouge	Arabi	Yes
American Sugar Refining Inc - Chalmette Cane Sugar Refinery	7417 N Peters St	Arabi	Yes
American Sugar Refining Inc.	Mile Marker 91 On Miss. River	Arabi	Yes
Arabi Car Care	7710 W Judge Perez	Arabi	Yes
Arabi Clnrs	7549 W Judge Perez Dr	Arabi	Yes
Associated Terminals Of St Bernard Llc	8000 St Bernard Hwy	Arabi	Yes
Associated Terminals Of St Bernard Llc - Derrick Barge T Lange	Statewide (Mississippi River)	Portable Source	No
Autozone	6730 St Claude Ave	Arabi	Yes
Boyd Breauxs Engine Svc	7713 W Judge Perez Dr	Arabi	Yes
Carolyn Park Shell	701 Perrin Dr	Arabi	Yes
Crescent Ship Service Inc	Po Box 148	Arabi	Yes
Crescent Ship Service Inc	Po Box 148	Arabi	Yes
Crescent Ship Svc Inc	Po Box 148	Arabi	Yes
Crescent Ship Svc Inc	332 Aycock St	Arabi	Yes
D & Ms Automotive Repair Inc	223 Friscoville Ave	Arabi	Yes
Derrick Barge Ability	Statewide	Portable Source	No
Dollar General #24832	7210 Saint Claude Ave	Arabi	Yes
Donald Meyer Repair	7208 W St Bernard Hwy	Arabi	No
Dutchmans Golden Cleaners	7461 St Bernard Hwy	Arabi	Yes
Exxon Co Usa 52065	7415 Judge Perez Dr	Arabi	Yes
Gulf States Intermodal Inc	7300 N Peters Ste A	Arabi	Yes
K & A Auto Svc	6720 St Claude Ave	Arabi	Yes

Facility Name	Facility Address	City	Potential EJ Concern
Metal Menders Inc	7308 St Claude Ave Bay A	Arabi	Yes
Moody Automotive	7429 W St Bernard Hwy	Arabi	Yes
Port Ship Services Inc.	Poydras Facility	Poydras	No
Port Ship Svc Inc	7121 N Peters St	Arabi	Yes
Port Ship Svc Inc	102 Aycock St	Arabi	Yes
Quality Mobile Auto Rpr	1111 Lebeau St	Arabi	Yes
Special Ts	7308 St Claude Ave Ste H	Arabi	Yes
St Bernard Parish School Board	6601 N Rocheblave St	Arabi	Yes
Star Ent	7571 W Judge Perez Dr	Arabi	Yes
Tire Kingdom #183	6707 St Claude Ave	Arabi	Yes
8315 W Judge Perez Llc	8315 W Judge Perez Dr	Chalmette	Yes
Abear Alignment Co Inc	2620 Buffon St	Chalmette	Yes
Advance Auto Parts #9767	400 E Judge Perez Dr	Chalmette	Yes
Advance Concrete Materials	3901 Paris Rd	Chalmette	Yes
Air Products & Chemicals Inc	500 W St Bernard Hwy	Chalmette	Yes
Aj Laundry & Dryclean	2403 Paris Rd	Chalmette	Yes
All Service Machine Shop Dlbldg	9000 W St Bernard Hwy Bldg 55	Chalmette	Yes
American Maritime Services Llc	8401 Parc Pl	Chalmette	Yes
Auto Masters Automotive Llc	112 E Magistrate	Chalmette	Yes
Autozone 3037	3224 Paris Rd	Chalmette	Yes
Bellsouth Tele J2206	305 W Moreau St	Chalmette	Yes
Bend All Muffler & Svc Cntr	1005 E Judge Perez Dr	Chalmette	Yes
Bill Hoffers Chalmette Exxon	2530 Paris Rd	Chalmette	Yes
Boasso America Corp - Chalmette Facility	100 Intermodal Dr	Chalmette	Yes
Bob Collision Cntr	3805 Paris Rd	Chalmette	Yes

Facility Name	Facility Address	City	Potential EJ Concern
Bob Outboard	8517 St Bernard Hwy	Chalmette	Yes
Bobs Collision Ctr	4024 Paris Rd	Chalmette	Yes
Bobs Muffler Shop	4915 Paris Rd	Chalmette	Yes
Brandt Car Care	3370 Paris Rd	Chalmette	Yes
Car Craft Inc	1101 E St Bernard Hwy	Chalmette	Yes
Cembell Industries Inc	5417 Paris Rd	Chalmette	No
Chalmette Medical Center	801 Virtue St	Chalmette	Yes
Chalmette Medical Cntrs	9001 Patricia St	Chalmette	Yes
Chalmette Orthopaedic Clinic	401 W Genie St	Chalmette	Yes
Chalmette Refining Llc	500 W St Bernard Hwy	Chalmette	Yes
Chalmette Tire Inc	2615 Buffon St	Chalmette	Yes
Chalmette Transmission Spec.	8344 Lafitte Court	Chalmette	Yes
Coastal Graphics Inc	8903 W Judge Perez Dr	Chalmette	Yes
Coastal Graphics Inc	600 Bonita St	Chalmette	Yes
Cornes Black Gold Oil Svc	217 E Virtue St	Chalmette	Yes
Crushing Site	201 E. Law St.	Chalmette	Yes
Cures Clnrs Inc	311 W St Bernard Hwy	Chalmette	Yes
Custom Body Shop Inc	3019 Jean Lafitte Pkwy	Chalmette	Yes
Custom Cycle	8517-A W St Bernard Hwy	Chalmette	Yes
Cvs Pharmacy #2597	2600 Paris Rd	Chalmette	Yes
D & J Automotive	3909 Paris Rd	Chalmette	Yes
D & M Body & Paint	516 Magistrate St	Chalmette	Yes
De La Ronde Family Practice Cntr	9000 Patricia St Ste 100	Chalmette	Yes
Discount Tire City Inc	105 E Genie St	Chalmette	Yes
Dollar General #11138	3305 Paris Rd	Chalmette	Yes

Facility Name	Facility Address	City	Potential EJ Concern
Don Fos Processor Svc Inc	2416 Victor St	Chalmette	Yes
Drs Le And Mui Family Medicine Amc	9020 W Judge Perez	Chalmette	Yes
Ducotes Auto Rpr	1904 Judge Perez	Chalmette	No
Energy Transfer Geismar Olefins Llc - Chalmette Gas Processing Plant	1701 Paris Road	Chalmette	Yes
Entergy La Service Center	201 E Libreaux St	Chalmette	Yes
Express Automotive	9200 W Judge Perez Dr	Chalmette	Yes
Firestone Store 7721	8615 W Judge Perez Dr	Chalmette	Yes
Fradellas Collision Cntr Inc	4839 Paris Rd	Chalmette	Yes
George's Enterprises Llc - 5303 Paris Llc	5303 Paris Rd	Chalmette	No
Gibson Rental Realties Llc	3737 Corinne Ave	Chalmette	No
Gorman Transport Inc	2009 Barcelona St	Chalmette	Yes
Harbor Freight Tools Usa Inc #3539	8400 W Judge Perez Dr. Suite C	Chalmette	No
Hercules Metal Bldg	205 E Pleasure St	Chalmette	Yes
Home Depot #0373	8601 W Judge Perez Dr	Chalmette	Yes
Jiffy Lube Intl Inc 935	110 E Judge Perez Dr	Chalmette	Yes
Keith Guy Inc	8407 Park Place	Chalmette	Yes
Kemira Chemicals Inc At Boasso Global	100 Intermodal Dr	Chalmette	Yes
Kern Chiropractic	124 W Judge Perez	Chalmette	Yes
Labourdette Auto Collision	205 E Virtue St	Chalmette	Yes
Lil Jake's Carwash & Self Stor	8589 West St Bernard Hwy	Chalmette	Yes
Maumas Center	721 Friscoville Ave	Arabi	Yes
Mels Car Care	1910 Leblanc Rd	Chalmette	Yes
Midas Muffler	547 E Judge Perez	Chalmette	Yes
Mpg Pipeline Contractors Llc	5405 Paris Rd	Chalmette	No

Facility Name	Facility Address	City	Potential EJ Concern
Munster/Dravo/Fazenvile Wwtp's	1111 E. St. Bernard Hwy	Chalmette	No
Muscle Cars Unlimited	132 E Moreau St	Chalmette	Yes
Nuclear Cardiology Institute	9000 Patricia St	Chalmette	Yes
Nunez Community College	3710 Paris Rd	Chalmette	Yes
Orleans Dodge Chrysler Jeep Collision	4004 Paris Rd	Chalmette	Yes
Outkast Industrial Group Llc	3404 Rose Ave	Chalmette	Yes
Pace Automotive Inc	3216 Laplace St	Chalmette	Yes
Packenham 66 Svc	301 St Bernard Hwy	Chalmette	Yes
Paretti Transmission Svc	301 W St Bernard	Chalmette	Yes
Pei	8360 Lafitte Ct	Chalmette	Yes
Penske Auto Ctr	8601 W Judge Perez Dr Ste B	Chalmette	Yes
Pep Boys 51	8736 W Judge Perez Dr	Chalmette	Yes
Port Ship Svc Shipyard	6325-A Paris Rd	Chalmette	No
Pro Tech Auto	5020 Paris Rd	Chalmette	Yes
Quality Body & Fender Works Inc	2005 Paris Rd	Chalmette	Yes
R. Berthelot Enterprises, Inc. - Gulf Outlet Marina Estates	Parish Road	Chalmette	No
Rain Cii Carbon Llc	100 Coke Plant Rd	Chalmette	Yes
Rain Cii Carbon Llc - Chalmette Calcining Plant	700 Coke Plant Rd	Chalmette	Yes
Rain Cii Carbon Llc - Chalmette Terminal Facility	100 Coke Plant Rd	Chalmette	Yes
Richs Body Works Inc	2618 Buffon St	Chalmette	Yes
Ricord Oil Svc	3521 Lena Dr	Chalmette	No
Rigolets Production Facility	Lake Borgne, 7 Mi E Of Rigolets	Chalmette	No
Rite Aid, Hurricane Katrina	St Bernard Parish	Chalmette	Yes
Riverbend Oxidation Pond - Poydras-Verret Wetland	7501 E Judge Perez Dr	Chalmette	No

Facility Name	Facility Address	City	Potential EJ Concern
Rlh Investments Llc	4141 Paris Rd	Chalmette	Yes
Rock & Roll Car Wash	8320 W. Judge Perez Dr.	Chalmette	Yes
Ronald A Sporl Racing Ent Inc	317 E Virture St	Chalmette	Yes
Ronald Sporl Racing	3212 La Place St	Chalmette	Yes
Rt Automotive Inc	3204 Laplace St	Chalmette	Yes
Sally Beauty #10215	8400 W Judge Perez Dr Ste 34	Chalmette	Yes
Save-A-Lot #4752	8700 W Judge Perez Dr	Chalmette	Yes
Sea Breeze/Chalmette	9000 W St Bernard Hwy Bldg 93	Chalmette	Yes
Serious Shine	214 E Prosper	Chalmette	Yes
Son L Corp Dba Meineke Muffler	1700 E Judge Perez Dr	Chalmette	No
Splash Tech, Llc	922 E. Judge Perez Dr.	Chalmette	Yes
St Bernard Auto Rpr	8615 W St Bernard Hwy	Chalmette	Yes
St Bernard Parish Govt	Loc W/In New Orleans	Chalmette	Yes
St Bernard Parish Govt	120 W Agriculture Rd	Chalmette	Yes
St Bernard Parish Sd#2 (Munste	1111 E St Bernard Hwy	Meraux	No
St Bernard Parish Waterworks-2014 New Surface Water Treatment Plant	St. Bernard Parish Waterworks	Chalmette	Yes
St. Bernard Hospital	8000 W. Judge Perez Dr.	Chalmette	Yes
St. Bernard Parish - Munster Wwtp	3700 Munster Blvd	Chalmette	Yes
St. Bernard Parish Government - Bait & Boat Rental	500 Ft E Of Northern Extent Of Jean Lafitte Pkwy	Chalmette	Yes
St. Bernard Parish Water Treatment Plant	1111 E. St. Bernard Highway	Chalmette	Yes
St. Bernard Port Harbor & Term	9000 W St Bernard Hwy	Chalmette	Yes
Star Enterprise	2601 Paris Rd	Chalmette	Yes
Steves Alignment Svc	115 Virtue St No A	Chalmette	Yes
Suburban Athlete Sporting Goods Inc	1620 E Judge Perez Dr	Chalmette	No

Facility Name	Facility Address	City	Potential EJ Concern
T & T Marine Rpr	Marina Rd At City Limits	Chalmette	No
T & T Marine World Inc	5441 Paris Rd	Chalmette	No
Texaco Svc Station	8920 W Judge Perez	Chalmette	Yes
The Albach Co	302 E Prosper St	Chalmette	Yes
Theresa's Seafood Inc.	215 Marina Rd	Chalmette	No
Times Picayune Inc St Bernard Bur	9000 W Judge Perez Dr	Chalmette	Yes
Tony's Auto Repair	3901 Paris Rd	Chalmette	Yes
United States Environmental Services Llc	4515 Paris Rd Bldg A	Chalmette	Yes
Veolia Water North America Operating Services Llc - Chalmette Facility	500 Bonita Dr	Chalmette	Yes
Virtue Street Truck	Maintenance & Parking Facility	Chalmette	Yes
W W Automotive Engine Exch	301 E Virtue St	Chalmette	Yes
Walgreen Drug Store 7415	100 W Judge Perez Dr	Chalmette	Yes
Walmart Store #909	8333 W Judge Perez Dr	Chalmette	Yes
Walmart Supercenter Store	8101 W Judge Perez Dr	Chalmette	Yes
Winn Dixie 1432	3300 Paris Rd	Chalmette	Yes
World Prayer Tabernacle	4030 Paris Rd	Chalmette	Yes
Xray Unlimited Inc New Orleans	3905 Tournefort St Ste B	Chalmette	Yes
Chalmette Collision	2817 E Judge Perez Dr	Meraux	No
Collins Pipeline Company	2511 E Judge Perez Dr	Meraux	No
D & D Pressure Clean, Llc	2701 Earl Dr.	Meraux	No
Davie Meaux Jr Et Al #2 Production Facility	Hwys 696 & 343 Jct Go S 0.6	Meaux	No
Dollar General #13839	4201 East Judge Perez Drive	Meraux	No
Future Auto Rpr Inc	3014 E St Benard	Meraux	No
Henrys Body Shop	1925 Tusa St	Meraux	No

Facility Name	Facility Address	City	Potential EJ Concern
Jesses Auto Rpr	2324 E St Bernard Hwy	Meraux	Yes
Joe Menant's Body Shop	3405 E St Bernard Hwy	Meraux	No
L A Luck Llc, Movie Production	3810 E Judge Perez	Meraux	No
Meraux Facility	2500 East St. Bernard Highway	Meraux	No
Mikes Outboard Rpr Inc	3101 E Judge Perez Dr	Meraux	No
Munster Wastewater Treatment Plant	3300 Munster Boulevard	Meraux	No
Sears 2385 6557 Roebuck & Co	4300 E Judge Perez Dr	Meraux	No
Smittys Tire	4333 E Judge Perez	Meraux	No
Sun Rise Plaza	4213 E. Judge Perez Dr	Meraux	No
Tractor Supply Co #2258	2505 Archbishop Hannah Blvd	Meraux	No
Us Environmental Services Llc	2809 E Judge Perez Dr	Meraux	No
Us Industrial Svcs	2821 E Judge Perez Dr	Meraux	No
Walgreen Drug Store 13586	4141 E Judge Perez Dr	Meraux	No
Walmart Neighborhood Market #5081	2500 Archbishop Hannan Blvd	Meraux	No
Winn Dixie 1438	4700 E Judge Perez Dr	Meraux	No
A & A Custom Engines	4929 E Judge Perez Dr	Violet	No
Advance Head Mach Inc	5442b E Judge Perez Dr	Violet	Yes
American Overseas Marine Violet Dock	7000 St Bernard Hwy	Violet	No
Cure Oil & Diesel Inc	2601 Packenham Rd	Violet	Yes
Dirty Red, Llc	5000 East St. Bernard Hwy	Violet	No
Dollar General 11428	5505 E Judge Perez Dr	Violet	No
Eco Clean Oil Recovery Llc	2124 N Riverpark Dr	Violet	No
Eric Robinson Property - Unauthorized Dump Site	5721 E St Bernard Hwy	Violet	Yes
M/V Noble Seillan	6800 E St Bernard Hwy	Violet	Yes
Moore & Moore Trucking Llc	6201 E St Bernard Hwy, Ste D	Violet	Yes

Facility Name	Facility Address	City	Potential EJ Concern
Patriot Contract Services	6400 E St Bernard Hwy	Violet	Yes
Piers In Violet	Hwy 610	Violet	Yes
Quality Shrimp Packers Inc.	2521 Packenham Rd	Violet	Yes
Ricords Oil Svc	6449 E St Bernard Hwy	Violet	Yes
Ricords Oil Svc	2601 Packenham St W	Violet	Yes
Sams Auto Repair	7637 E St Bernard Hwy	Violet	Yes
St Bernard Parish School Board - Maintenance Facility	5921 E St Bernard Hwy	Violet	Yes
St Bernard Parish Sd#2 (Highla	3400 Stacie Drive	Violet	No
Valliere Investments, Llc	Violet Chevron	Violet	Yes
Entergy Louisiana Llc - Emergency Combustion Turbine No 1	1025 Bayou Rd	Poydras	No
Entergy Services Inc - Poydras Substation	1024 Bayou Rd	Poydras	No
Port Ship Services Inc.	Poydras Facility	Poydras	No
Ricords Oil Svc	7915 E St Bernard Hwy	Poydras	No
Roland's Body & Fender Shop	2018 W Christie Dr	Poydras	No

Note: 1) ECHO Results for Arabi, Chalmette, Meraux, Violet, and Poydras, LA results as of 6/5/2024.

2) EPA flags facilities as "Potential Environmental Justice (EJ) Concerns" if the 1-mile average EJScreen Supplemental Index or EJ Index ≥ 90th percentile.

Source: U.S. Environmental Protection Agency (EPA). Enforcement and Compliance History Online. Accessed 6/5/2024. https://echo.epa.gov/

Table 06

RPC Land Use Acreage

Table 06. RPC Land Use Acreage

Land Type	Total Area (Acres)	Percent of Area Analyzed (%)
Agriculture	560.6	4.6
Church	24.5	0.2
Funeral Home/Graveyard	16.0	0.1
Government Buildings	106.4	0.9
Historic Preservation Site	142.4	1.2
Hospital/Medical	31.9	0.3
Local Business	666.7	5.5
Manufacturing & Refining	884.1	7.2
Multiple Family	189.1	1.5
Parks & Recreation	121.5	1.0
Ports & Harbors	541.5	4.4
Powerline ROW/Power Plant	28.7	0.2
Schools & Libraries	302.8	2.5
Single Family Detached	4353.6	35.6
Trailer/Mobile Home Park	243.5	2.0
Underdeveloped	164.2	1.3
Vacant	11.9	0.1
Warehouse/Distribution	84.0	0.7
Waterways/Lakes	86.2	0.7
Woodland	4226.0	34.6

Notes: 1) The area analyzed does not include the Bayou Bienvenue Central Wetland System and only includes areas where land use data was provided.

Source: New Orleans Regional Planning Commission for St. Bernard Parish. St. Bernard Parish Land Use shapefiles. Received on 1/2024.

RPC Disclaimer:

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Table 07

USCB Households by Type, Educational Attainment, Employment Status, and Commuting to Work

Table 07: USCB Households by Type, Educational Attainment, Employment Status and Commuting to Work

Census Tract	301.3		302.3		302.4		302.6		302.7		302.8		302.9		303	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Households by Type																
Total households	1943	-	1245	-	1266	-	847	-	1311	-	1013	-	1288	-	670	-
Married-couple household	590	35.9	335	26.9	376	29.7	461	54.4	729	55.6	546	53.9	656	50.9	195	29.1
Cohabitating couple household	55	3.3	41	3.3	94	7.4	35	4.1	131	10.0	171	16.9	89	6.9	84	12.5
Male householder, no spouse/partner present	398	24.2	540	43.4	180	14.2	143	16.9	148	11.3	116	11.5	192	14.9	156	23.3
Female householder, no spouse/partner present	600	36.5	329	26.4	616	48.7	208	24.6	303	23.1	180	17.8	351	27.3	235	35.1
Households with one or more people under 18 years	576	35.1	260	20.9	514	40.6	390	46.0	494	37.7	438	43.2	360	28.0	167	24.9
Households with one or more people 65 years	385	23.4	396	31.8	280	22.1	199	23.5	287	21.9	262	25.9	299	23.2	215	32.1
Average household size	2.65	-	2.13	-	3.08	-	3.55	-	3.17	-	3.27	-	2.75	-	2.18	-
Average family size	3.58	-	3.28	-	3.94	-	3.71	-	3.49	-	3.77	-	3.44	-	2.64	-
Educational Attainment																
Population 25 years and over	2856	-	1898	-	2349	-	1954	-	2622	-	2048	-	2653	-	1080	-
Percent high school graduate or higher	2153	75.4	1435	75.6	1811	77.1	1765	90.3	2120	80.9	1723	84.1	2185	82.4	828	76.7
Percent bachelor's degree or higher	379	13.3	335	17.7	351	14.9	406	20.8	385	14.7	366	17.9	706	26.6	235	21.8
Employment Status																
Population 16 years and over	3326	-	2154	-	2672	-	2287	-	3233	-	2537	-	2899	-	1300	-
In labor force	1840	55.3	1123	52.1	1597	59.8	1388	60.7	2328	72.0	1715	67.6	1995	68.8	806	62.0
Civilian labor force	1840	55.3	1123	52.1	1597	59.8	1380	60.3	2328	72.0	1715	67.6	1995	68.8	806	62.0
Employed	1782	53.6	1034	48.0	1484	55.5	1300	56.8	2089	64.6	1626	64.1	1947	67.2	677	52.1
Unemployed	58	1.7	89	4.1	113	4.2	80	3.5	239	7.4	89	3.5	48	1.7	129	9.9
Armed Forces	0	0.0	0	0.0	0	0.0	8	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Not in the labor force	1486	44.7	1031	47.9	1075	40.2	899	39.3	905	28.0	822	32.4	904	31.2	494	38.0
Commuting to Work																
Workers 16 years and over	1774	-	1001	-	1484	-	1258	-	2064	-	1573	-	1940	-	670	-
Car, truck, or van - drove alone	1513	85.3	968	96.7	1150	77.5	1002	7937	1635	79.2	1313	83.5	1748	90.1	482	71.9
Car, truck, or van – carpooled	128	7.2	7	0.7	55	3.7	91	7.2	84	4.1	165	10.5	159	8.2	74	11.0
Public transportation (excluding taxicab)	0	0.0	0	0.0	38	2.6	0	0.0	0	0.0	0	0.0	0	0.0	7	1.0
Walked	51	2.9	0	0.0	23	1.5	0	0.0	49	2.4	0	0.0	0	0.0	13	1.9
Other means	21	1.2	26	2.6	21	1.4	36	2.9	108	5.2	28	1.8	0	0.0	35	5.2
Worked at home	61	3.4	0	0.0	197	13.3	129	10.3	188	9.1	67	4.3	33	1.7	59	8.8
Mean travel time to work (minutes)	29.4	-	24.3	-	37.9	-	32.5	-	33.8	-	28.0	-	28.7	-	26.1	-

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Census Tract	304		305		306.1		306.2		306.3		307		308		TOTAL [5]	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Households by type																
Total households	640	-	521	-	395	-	1200	-	521	-	687	-	1696	-	**15,243**	-
Married-couple household	218	34.1	194	37.2	178	45.1	437	36.4	88	16.9	190	27.7	556	32.8	5749	37.7
Cohabitating couple household	0	0.0	43	8.3	32	8.1	159	13.3	75	14.4	79	11.5	103	6.1	1191	7.8
Male householder, no spouse/partner present	151	23.6	165	31.7	38	9.6	164	13.7	104	20.0	164	23.9	374	22.1	3033	19.9
Female householder, no spouse/partner present	271	42.3	119	22.8	147	37.2	440	36.7	254	48.8	254	37.0	663	39.1	4970	32.6
Households with one or more people under 18 years	169	26.4	178	34.2	214	54.2	455	37.9	320	61.4	184	26.8	745	43.9	5464	35.8
Households with one or more people 65 years	201	31.4	88	16.9	80	20.3	300	25.0	55	10.6	239	34.8	348	20.5	3634	23.8
Average household size	1.99	-	2.99	-	3.39	-	2.59	-	2.99	-	2.48	-	2.63	-	**2.77**	-
Average family size	2.83	-	3.63	-	3.78	-	3.28	-	3.25	-	2.97	-	3.14	-	**3.41**	-
Educational Attainment																
Population 25 years and over	1145	-	944	-	705	-	2208	-	881	-	1262	-	2829	-	**27,434**	-
Percent high school graduate or higher	868	75.8	815	86.3	560	79.4	1879	85.1	629	71.4	1066	84.5	2404	85.0	22241	81.1
Percent bachelor's degree or higher	211	18.4	241	25.5	140	19.9	342	15.5	33	3.7	165	13.1	371	13.1	4666	17.0
Employment Status																
Population 16 years and over	1190	-	1179	-	969	-	2378	-	1110	-	1375	-	3354	-	**31,963**	-
In labor force	631	53.0	664	56.3	547	56.4	1505	63.3	663	59.7	734	53.4	1983	59.1	19519	61.1
Civilian labor force	631	53.0	664	56.3	534	55.1	1505	53.3	663	59.7	722	52.5	1975	58.9	19478	60.9
Employed	597	50.2	617	52.3	495	51.1	1346	56.6	628	56.6	662	48.1	1706	50.9	17990	56.3
Unemployed	34	2.9	47	4.0	39	4.0	159	6.7	35	3.2	60	4.4	269	8.0	1488	4.7
Armed Forces	0	0.0	0	0.0	13	1.3	0	0.0	0	0.0	12	0.9	8	0.2	41	0.1
Not in the labor force	559	47.0	515	43.7	422	43.6	873	36.7	447	40.3	641	46.6	1371	40.9	12444	38.9
Commuting to Work																
Workers 16 years and over	591	-	597	-	488	-	1322	-	609	-	670	-	1655	-	**17,696**	-
Car, truck, or van – drove alone	474	80.2	390	65.3	432	88.5	1138	86.1	443	72.7	496	74.0	1477	89.2	17661	82.8
Car, truck, or van – carpooled	40	6.8	149	25.0	51	10.5	148	11.2	106	17.4	82	12.2	97	5.9	1436	8.1
Public transportation (excluding taxicab)	44	7.4	0	0.0	0	0.0	0	0.0	19	3.1	0	0.0	8	0.5	116	0.7
Walked	0	0.0	27	4.5	0	0.0	0	0.0	10	1.6	4	0.6	22	1.3	199	1.1
Other means	10	1.7	0	0.0	0	0.0	6	0.5	31	5.1	16	2.4	0	0.0	338	1.9
Worked at home	23	3.9	31	5.2	5	1.0	30	2.3	0	0.0	72	10.7	51	3.1	946	5.3
Mean travel time to work (minutes)	23.5	-	25.2	-	28.3	-	2.7	-	26.4	-	30.8	-	26.1	-	**27.5**	-

Notes: 1) Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the U.S. Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

2) Employment and unemployment estimates may vary from the official labor force data released by the Bureau of Labor Statistics because of differences in survey design and data collection.

3) Households by Type and Educational Attainment are found in ACS Table DP02; Employment Status and Commuting to Work are found in ACS Table DP03.

4) Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The estimated margin of error for each category of the table is available for download on the data.census.gov website.

5) Total summary statistics are totals from the fifteen (15) census tracts included in this analysis, and percentages shown here are based on the total response from the fifteen (15) census tracts for each category. Average household size and average family size statistics shown in the Total summary statistic column are weighted averages from the fifteen (15) census tracts included in this analysis and are weighted by the total number of households within each census tract. Mean travel time to work (minutes) shown in the Total summary statistic column is a weighted average from the fifteen (15) census tracts included in this analysis and are weighted by the total number of workers 16 years and over within each census tract.

Source: U.S Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Table DP02: Selected Social Characteristics in the United States (ACSDP5Y2022.DP02) and Table DP03: Selected Economic Characteristics (ACSDP5Y2022.DP03)

Table 08

USCB Industry and Income and Benefits

Table 08: USCB Industry and Income and Benefits

Census Tract	301.3		302.3		302.4		302.6		302.7		302.8		302.9		303	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Industry																
Civilian employed population 16 years and over	1782	-	1034	-	1484	-	1300	-	2089	-	1626	-	1947	-	677	-
Agriculture, forestry, fishing and hunting, and mining	43	2.4	26	2.5	0	0.0	32	2.5	46	2.2	25	1.5	54	2.8	9	1.3
Construction	74	4.2	116	11.2	142	9.6	90	6.9	133	6.4	104	6.4	72	3.7	50	7.4
Manufacturing	155	8.7	158	15.3	41	2.8	55	4.2	145	6.9	245	15.1	72	3.7	78	11.5
Wholesale trade	56	3.1	11	1.1	45	3.0	101	7.8	19	0.9	37	2.3	115	5.9	37	5.5
Retail trade	316	17.7	112	10.8	147	9.9	182	14.0	251	12.0	282	17.3	308	15.8	68	10.0
Transportation and warehousing, and utilities	231	13.0	87	8.4	78	5.3	85	6.5	107	5.1	104	6.4	50	2.6	37	5.5
Information	20	1.1	0	0.0	0	0.0	9	0.7	75	3.6	38	2.3	10	0.5	21	3.1
Finance and insurance, and real estate and rental and leasing	36	2.0	7	0.7	28	1.9	55	4.2	182	8.7	35	2.2	253	13.0	23	3.4
Professional, scientific, management, administrative, waste mgmt.	170	9.5	92	8.9	170	11.5	188	14.5	231	11.1	95	5.8	48	2.5	87	12.9
Educational services, and health care and social assistance	392	22.0	239	23.1	417	28.1	238	18.3	332	15.9	293	18.0	651	33.4	142	21.0
Arts, entertainment, recreation, accommodation, food services	70	3.9	95	9.2	156	10.5	204	15.7	334	16.0	221	13.6	66	3.4	51	7.5
Other services, except public administration	138	7.7	49	4.7	127	8.6	22	1.7	65	3.1	38	2.3	147	7.6	28	4.1
Public administration	81	4.5	42	4.1	133	9.0	39	3.0	169	8.1	109	6.7	101	5.2	46	6.8
Income and Benefits (in 2022 Inflation-Adjusted Dollars)																
Total households	1643	-	1245	-	1266	-	847	-	1311	-	1013	-	1288	-	670	-
Less than $10,000	152	9.3	181	14.5	195	15.4	56	6.6	33	2.5	30	3.0	55	4.3	70	10.4
$10,000 to $14,999	120	7.3	22	1.8	57	4.5	44	5.2	71	5.4	30	3.0	90	7.0	27	4.0
$15,000 to $24,999	125	7.6	142	11.4	180	14.2	10	1.2	146	11.1	17	1.7	145	11.3	95	14.2
$25,000 to $34,999	137	8.3	138	11.1	89	7.0	174	20.5	101	7.7	102	10.1	143	11.1	77	11.5
$35,000 to $49,999	288	17.5	111	8.9	95	7.5	17	2.0	103	7.9	97	9.6	137	10.6	55	8.2
$50,000 to $74,999	251	15.3	222	17.8	225	17.8	163	19.2	252	19.2	156	15.4	232	18.0	91	13.6
$75,000 to $99,999	339	20.6	161	12.9	214	16.9	77	9.1	133	10.1	128	12.6	47	3.6	87	13.0
$100,000 to $149,999	189	11.5	160	12.9	137	10.8	145	17.1	279	21.3	225	22.2	119	9.2	69	10.3
$150,000 to $199,999	33	2.0	19	1.5	62	4.9	59	7.0	58	4.4	114	11.3	246	19.1	79	11.8
$200,000 or more	9	0.5	89	7.1	12	0.9	102	12.0	135	10.3	114	11.3	74	5.7	20	3.0
Median household income (dollars)	49,974	-	54,153	-	51,037	-	66,890	-	70,855	-	92,375	-	57,311	-	55,370	-

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Census Tract	304		305		306.1		306.2		306.3		307		308		TOTAL [4]	
	#	%	#	%	#	%	#	#	#	%	#	%	#	%	#	%
Industry																
Civilian employed population 16 years and over	597	-	617	-	495	-	1346	-	628	-	662	-	1706	-	**17,990**	-
Agriculture, forestry, fishing and hunting, and mining	0	0.0	6	1.0	30	6.1	24	1.8	0	0.0	0	0.0	8	0.5	303	1.7
Construction	55	9.2	42	6.8	28	5.7	185	13.7	41	6.5	87	13.1	169	9.9	1388	7.7
Manufacturing	38	6.4	81	13.1	45	9.7	65	4.8	0	0.0	36	5.4	46	2.7	1260	7.0
Wholesale trade	15	2.5	7	1.1	18	3.6	50	3.7	6	1.0	0	0.0	19	1.1	536	3.0
Retail trade	61	10.2	142	23.0	46	9.3	198	14.7	68	10.8	112	16.9	304	17.8	2597	14.4
Transportation and warehousing, and utilities	64	10.7	18	2.9	49	9.9	79	5.9	67	10.7	16	2.4	113	6.6	1185	6.6
Information	0	0.0	0	0.0	0	0.0	7	0.5	2	0.3	0	0.0	29	1.7	211	1.2
Finance and insurance, and real estate and rental and leasing	20	3.4	3	0.5	5	1.0	61	4.5	0	0.0	11	1.7	64	3.8	783	4.4
Professional, scientific, management, administrative, waste mgmt.	87	14.6	56	9.1	27	5.5	74	5.5	42	6.7	80	12.1	267	15.7	1714	9.5
Educational services, and health care and social assistance	198	33.2	120	19.4	47	9.5	243	18.1	173	27.5	160	24.2	175	10.3	3820	21.2
Arts, entertainment, recreation, accommodation, food services	19	3.2	78	12.6	69	13.9	183	13.6	151	24.0	118	17.8	300	17.6	2115	11.8
Other services, except public administration	15	2.5	27	4.4	83	16.8	39	2.9	62	9.9	12	1.8	128	7.5	980	5.4
Public administration	25	4.2	37	6.0	48	9.7	138	10.3	16	2.5	30	4.5	84	4.9	1098	6.1
Income and Benefits (in 2022 Inflation-Adjusted Dollars)																
Total households	640	-	521	-	395	-	1200	-	521	-	687	-	1696	-	**14,943**	-
Less than $10,000	46	7.2	53	10.2	29	7.3	104	8.7	76	14.6	60	8.7	224	13.2	1364	9.1
$10,000 to $14,999	58	9.1	21	4.0	27	6.8	59	4.9	58	11.1	24	3.5	130	7.7	838	5.6
$15,000 to $24,999	155	24.2	61	11.7	46	11.6	139	11.6	92	17.7	162	23.6	162	9.6	1677	11.2
$25,000 to $34,999	0	0.0	48	9.2	12	3.0	130	10.8	53	10.2	76	11.1	129	7.6	1409	9.4
$35,000 to $49,999	107	16.7	57	10.9	51	12.9	117	9.8	92	17.7	56	8.2	252	14.9	1635	10.9
$50,000 to $74,999	52	8.1	110	21.1	45	12.2	175	14.6	71	13.6	138	20.1	171	10.1	2354	15.8
$75,000 to $99,999	132	20.6	61	11.7	96	24.3	199	16.6	74	14.2	86	12.5	270	15.9	2104	14.1
$100,000 to $149,999	57	8.9	60	11.5	52	13.2	169	14.1	5	1.0	44	6.4	210	12.4	1920	12.8
$150,000 to $199,999	16	2.5	25	4.8	15	3.8	71	5.9	0	0.0	23	3.3	103	6.1	923	6.2
$200,000 or more	17	2.7	25	4.8	19	4.8	37	3.1	0	0.0	18	2.6	45	2.7	716	4.8
Median household income (dollars)	45,486	-	58,194	-	70,078	-	55,156	-	29,148	-	40,950	-	45,556	-	**$56,351**	-

Notes:

1) Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the U.S. Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

2) Employment and unemployment estimates may vary from the official labor force data released by the Bureau of Labor Statistics because of differences in survey design and data collection.

3) Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The estimated margin of error for each category of the table is available for download on the data.census.gov website.

4) Total summary statistics are totals from the fifteen (15) census tracts included in this analysis, and percentages shown here are based on the total response from the fifteen (15) census tracts for each category. Median household income (dollars) shown in the Total summary statistic column is the weighted average from the fifteen (15) census tracts included in this analysis and are weighted by the total number of households within each census tract.

Source: U.S Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Table DP03: Selected Economic Characteristics (ACSDP5Y2022.DP03)

Table 09

USCB Race and Ethnicity

New Orleans Regional Planning Commission
State Project No. H.015428
Lower St. Bernard Transportation Network Feasibility Study
St. Bernard Parish, Louisiana

Table 09: USCB Race and Ethnicity

Census Tract	Subject	Total Populations (all races)	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian American Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino[1]	Total Minority Populations[2]
301.03	Count	4440	2604	983	31	21	0	26	139	636	1836
	%	-	58.6	22.1	0.7	0.5	0.0	0.6	3.1	14.3	**41.4%**
302.03	Count	2962	1915	332	9	57	0	15	116	518	1047
	%	-	64.7	11.2	0.3	1.9	0.0	0.5	3.9	17.5	**35.3%**
302.04	Count	4499	902	3124	26	28	0	14	138	267	3597
	%	-	20.0	69.4	0.6	0.6	0.0	0.3	3.1	5.9	**80.0%**
302.06	Count	2143	1316	321	0	110	5	15	123	253	827
	%	-	61.4	15.0	0.0	5.1	0.2	0.7	5.7	11.8	**38.6%**
302.07	Count	3843	2277	779	13	152	0	24	149	449	1566
	%	-	59.3	20.3	0.3	4.0	0.0	0.6	3.9	11.7	**40.7%**
302.08	Count	3237	2108	394	19	116	0	7	174	419	1129
	%	-	65.1	12.2	0.6	3.6	0.0	0.2	5.4	12.9	**34.9%**
302.09	Count	3219	2164	490	19	35	0	13	103	395	1055
	%	-	67.2	15.2	0.6	1.1	0.0	0.4	3.2	12.3	**32.8%**
303	Count	1508	864	295	2	32	0	10	66	239	644
	%	-	57.3	19.6	0.1	2.1	0.0	0.7	4.4	15.8	**42.7%**
304	Count	1384	899	213	6	18	0	2	79	167	485
	%	-	65.0	15.4	0.4	1.3	0.0	0.1	5.7	12.1	**35.0%**
305	Count	1807	1032	314	7	84	0	28	95	247	775
	%	-	57.1	17.4	0.4	4.6	0.0	1.5	5.3	13.7	**42.9%**
306.01	Count	1552	498	620	18	168	1	25	33	189	1054
	%	-	32.1	39.9	1.2	10.8	0.1	1.6	2.1	12.2	**67.9%**
306.02	Count	3124	1670	801	14	43	0	26	116	454	1454
	%	-	53.5	25.6	0.4	1.4	0.0	0.8	3.7	14.5	**46.5%**
306.03	Count	1700	126	1072	1	11	0	14	80	396	1574
	%	-	7.4	63.1	0.1	0.6	0.0	0.8	4.7	23.3	**92.6%**
307	Count	1664	1093	186	8	26	0	18	81	252	571
	%	-	65.7	11.2	0.5	1.6	0.0	1.1	4.9	15.1	**34.3%**
308	Count	4406	2002	1354	27	65	0	45	193	720	2404
	%	-	45.4	30.7	0.6	1.5	0.0	1.0	4.4	16.3	**54.6%**
TOTAL [3]	Count	**41,488**	21470	11278	200	966	6	282	1685	5601	**20,018**
	%	-	51.7	27.2	0.5	2.3	0.0	0.7	4.1	13.5	**48.3%**

Notes: 1) Since people of Hispanic or Latino ethnicity are considered a minority regardless of race, the population with Hispanic or Latino ethnicity is identified in the "Hispanic or Latino" column. All other race categories do not include people of Hispanic or Latino ethnicity.

2) In accordance with FHWA Order 6640.23 and DOT Order 5610.2, minority populations include people who are Black or African American, Asian American, American Indian or Alaskan Native, Native Hawaiian and Other Pacific Islander, and Hispanic or Latino (regardless of race). The total population minus the "white alone" population was determined to be the total minority population.

3) Total summary statistics are totals from the fifteen (15) census tracts included in this analysis, and percentages shown here are based on the total response from the fifteen (15) census tracts for each category.

Source: U.S. Census Bureau, 2020 Census Demographic and Housing Characteristics file, Table P9: Hispanic or Latino, And Not Hispanic or Latino by Race (DECENNIALDHC2020.P9)

Table 10

USCB Poverty Status

Table 10: USCB Poverty Status

Census Tract	Subject	Population for whom Poverty Status is Determined
301.03	Total Population Status Determined	4354
	Below Poverty Level	619
	%	**14.2%**
302.03	Total Population Status Determined	2653
	Below Poverty Level	759
	%	**28.6%**
302.04	Total Population Status Determined	3909
	Below Poverty Level	1059
	%	**27.1%**
302.06	Total Population Status Determined	2935
	Below Poverty Level	732
	%	**24.9%**
302.07	Total Population Status Determined	4143
	Below Poverty Level	691
	%	**16.7%**
302.08	Total Population Status Determined	3303
	Below Poverty Level	632
	%	**19.1%**
302.09	Total Population Status Determined	3531
	Below Poverty Level	463
	%	**13.1%**
303	Total Population Status Determined	1462
	Below Poverty Level	320
	%	**21.9%**
304	Total Population Status Determined	1272
	Below Poverty Level	199
	%	**15.6%**
305	Total Population Status Determined	1546
	Below Poverty Level	388
	%	**25.1%**
306.01	Total Population Status Determined	1340
	Below Poverty Level	355
	%	**26.5%**
306.02	Total Population Status Determined	3131
	Below Poverty Level	523
	%	**16.7%**
306.03	Total Population Status Determined	1526
	Below Poverty Level	717
	%	**47.0%**
307	Total Population Status Determined	1711
	Below Poverty Level	543
	%	**31.7%**
308	Total Population Status Determined	4448
	Below Poverty Level	1288
	%	**29.0%**
TOTAL [4]	Total Population Status Determined	**41,264**
	Below Poverty Level	**9,288**
	%	**22.5%**

Note: 1) Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the U.S. Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

2) The 2018-2022 ACS data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

3) Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from Sampling variability is represented through the use of a margin of error. The estimated margin of error for each category of the table is available for download on the data.census.gov website.

4) Total summary statistics are totals from the fifteen (15) census tracts included in this analysis. The Total percentage below poverty level shown is based on the total response of below poverty level from the fifteen (15) census tracts divided by the total population status determined for the fifteen (15) census tracts.

Source: U.S Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months (ACSST5Y2022.S1701).

Table 11

NRHP Cultural Resources

Table 11: NRHP Cultural Resources

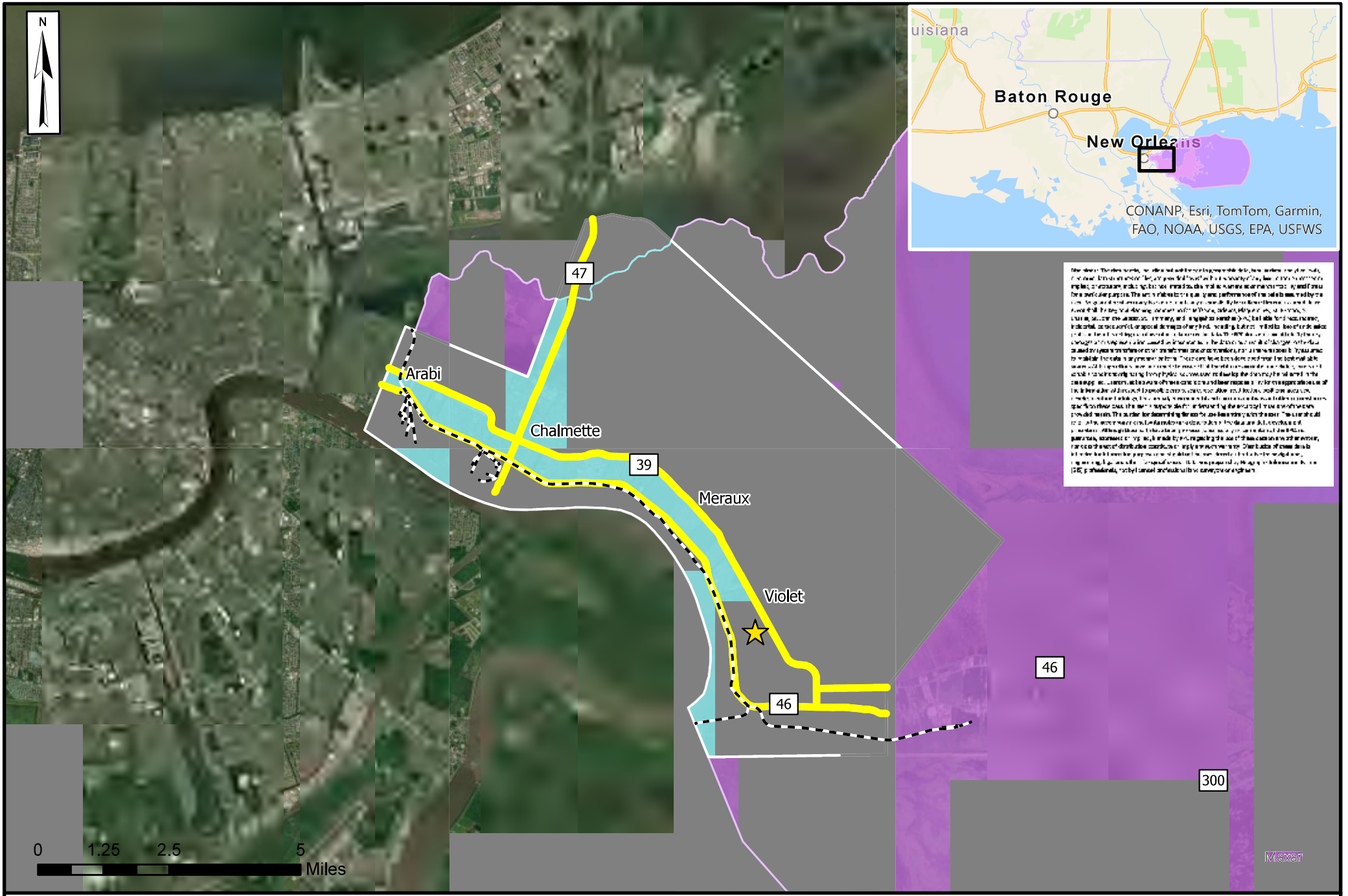
Property Name	Parish	City	Street & Number	Restricted Address	Listed Date	Area of Significance
1939 St. Bernard Parish Courthouse	St. Bernard	Chalmette	1101 W St. Bernard Hwy.	False	1/31/2019	Architecture; Politics/Government
Chalmette Unit of Jean Lafitte National Historical Park Historic District	St. Bernard	New Orleans	6 mi. S of New Orleans	False	10/15/1966	Historic - Non-Aboriginal; Military; Architecture; Social History
Ford Motor Company Assembly Plant	St. Bernard	Arabi	7200 N Peters St.	False	6/22/2018	Architecture; Commerce; Industry
Friscoville Street Historic District	St. Bernard	Arabi	100-900 blocks of Friscoville St.	False	7/9/1998	Architecture
Old Arabi Historic District	St. Bernard	Arabi	Roughly along parts of Angela, Mehle, and Esteban Sts.	False	7/9/1998	Architecture
Pecan Grove Plantation House	St. Bernard	Meraux	10 Pecan Grove Ln.	False	3/20/2013	Architecture
Sebastopol Plantation House	St. Bernard	St. Bernard	LA 46	False	8/13/1986	Architecture

Source: Louisiana Office of Cultural Development, Division of Historic Preservation. HP Cultural Resources Map. Accessed 6/18/2024. https://laocd.maps.arcgis.com/apps/webappviewer/index.html?id=d6b1d2a16f214aaf9339064bc0f26312

National Park Service (NPS). National Register of Historic Places (NRHP), National Register Database and Research. Accessed 6/21/2024. https://www.nps.gov/subjects/nationalregister/database-research.htm

Figure 01

Project Study Area



Proposed LIT Facility
State Highways in Study Area
St. Bernard Parish Railroads
St. Bernard Parish
RPC Study Area

STATE PROJECT NO. H.015428
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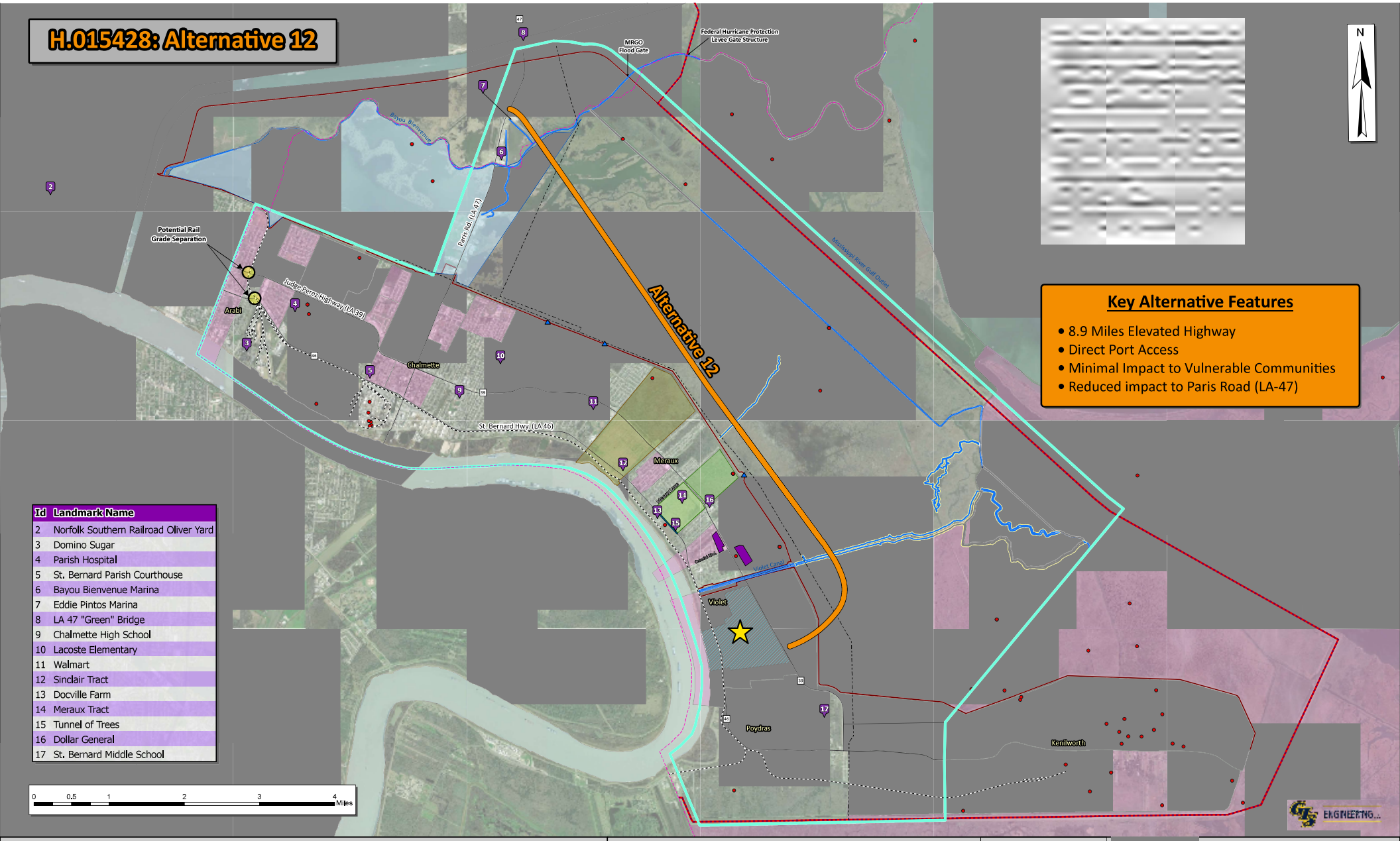
ST. BERNARD PARISH, LOUISIANA

Figure 02-A

Alternative 12 (C-H-I-P)



Id	Landmark Name
2	Norfolk Southern Railroad Oliver Yard
3	Domino Sugar
4	Parish Hospital
5	St. Bernard Parish Courthouse
6	Bayou Bienvenue Marina
7	Eddie Pintos Marina
8	LA 47 "Green" Bridge
9	Chalmette High School
10	Lacoste Elementary
11	Walmart
12	Sinclair Tract
13	Docville Farm
14	Meraux Tract
15	Tunnel of Trees
16	Dollar General
17	St. Bernard Middle School

Legend

- St. Bernard Parish Boundary
- RPC Study Area
- Proposed LIT Facility
- Oil & Gas Wells
- Existing Pump Station
- Sinclair Tract
- Meraux Tract
- Central Wetlands Marsh Creation
- Proposed School Locations
- Vulnerable Communities
- St. Bernard Scenic Rivers
- Navigable Waterways
- Federal Hurricane Protection Levee
- Levee Alignment
- High Voltage Transmission Line
- State Highways in Study Area
- St. Bernard Parish Railroads

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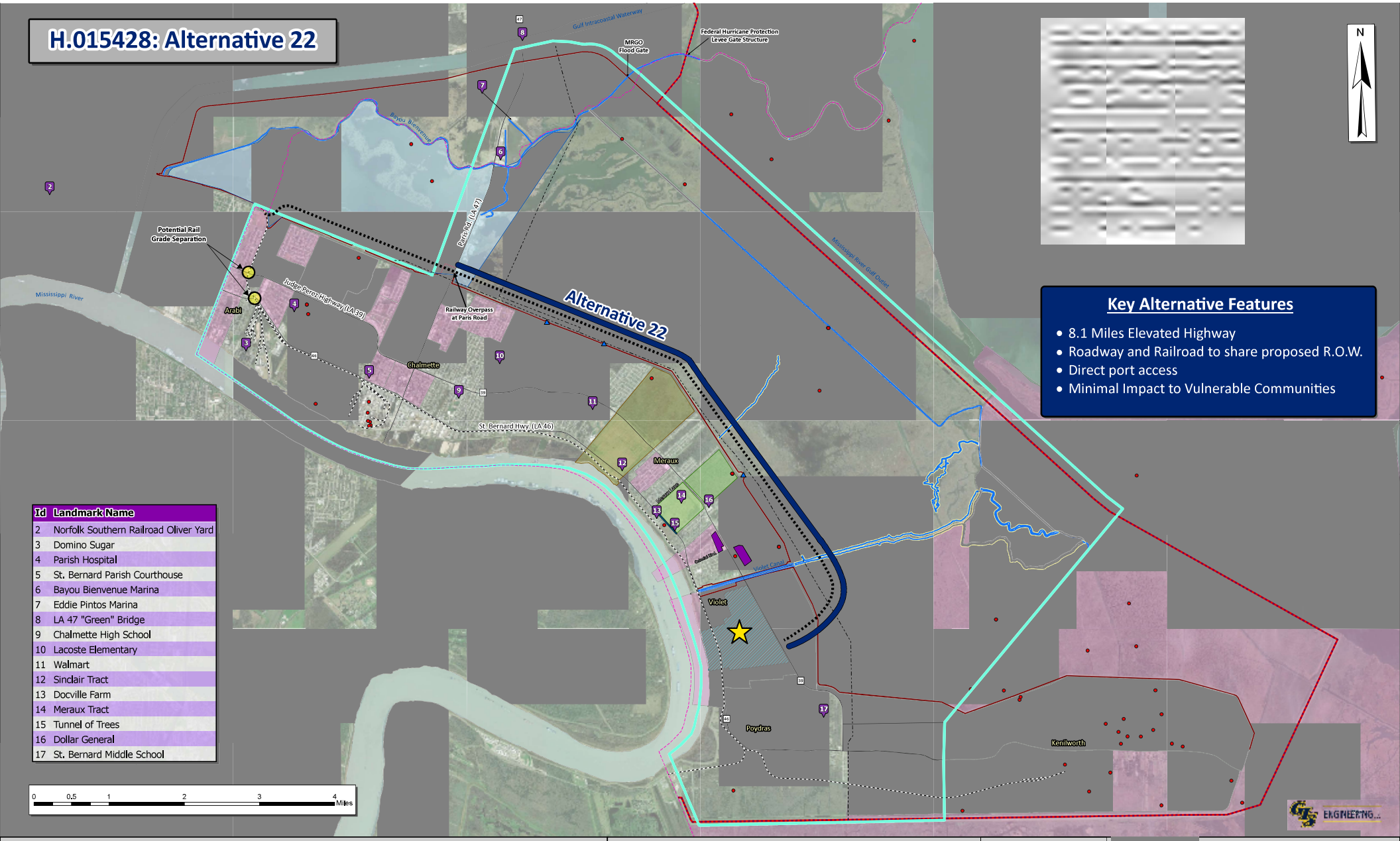
STATE PROJECT NO. H.015428
LOWER ST. BERNARD ROADWAY NETWORK & RESILIENCE STUDY
ST. BERNARD PARISH, LOUISIANA

Alternative 12

GISE Project No.	39130-1459
Date Printed	1/24/2025
Drawn By	BTF
Checked By	SRM

Figure 02-B

Alternative 22 (G-E-H-I-P)



Id	Landmark Name
2	Norfolk Southern Railroad Oliver Yard
3	Domino Sugar
4	Parish Hospital
5	St. Bernard Parish Courthouse
6	Bayou Bienvenue Marina
7	Eddie Pintos Marina
8	LA 47 "Green" Bridge
9	Chalmette High School
10	Lacoste Elementary
11	Walmart
12	Sinclair Tract
13	Docville Farm
14	Meraux Tract
15	Tunnel of Trees
16	Dollar General
17	St. Bernard Middle School

Legend

- St. Bernard Parish Boundary
- RPC Study Area
- Proposed LIT Facility
- Existing Pump Station
- Oil & Gas Wells
- Sinclair Tract
- Meraux Tract
- Central Wetlands Marsh Creation
- Proposed School Locations
- Vulnerable Communities
- St. Bernard Scenic Rivers
- Navigable Waterways
- Federal Hurricane Protection Levee
- Levee Alignment
- High Voltage Transmission Line
- State Highways in Study Area
- St. Bernard Parish Railroads
- Potential Rail

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Alternative 22

GISE Project No.	39130-1459
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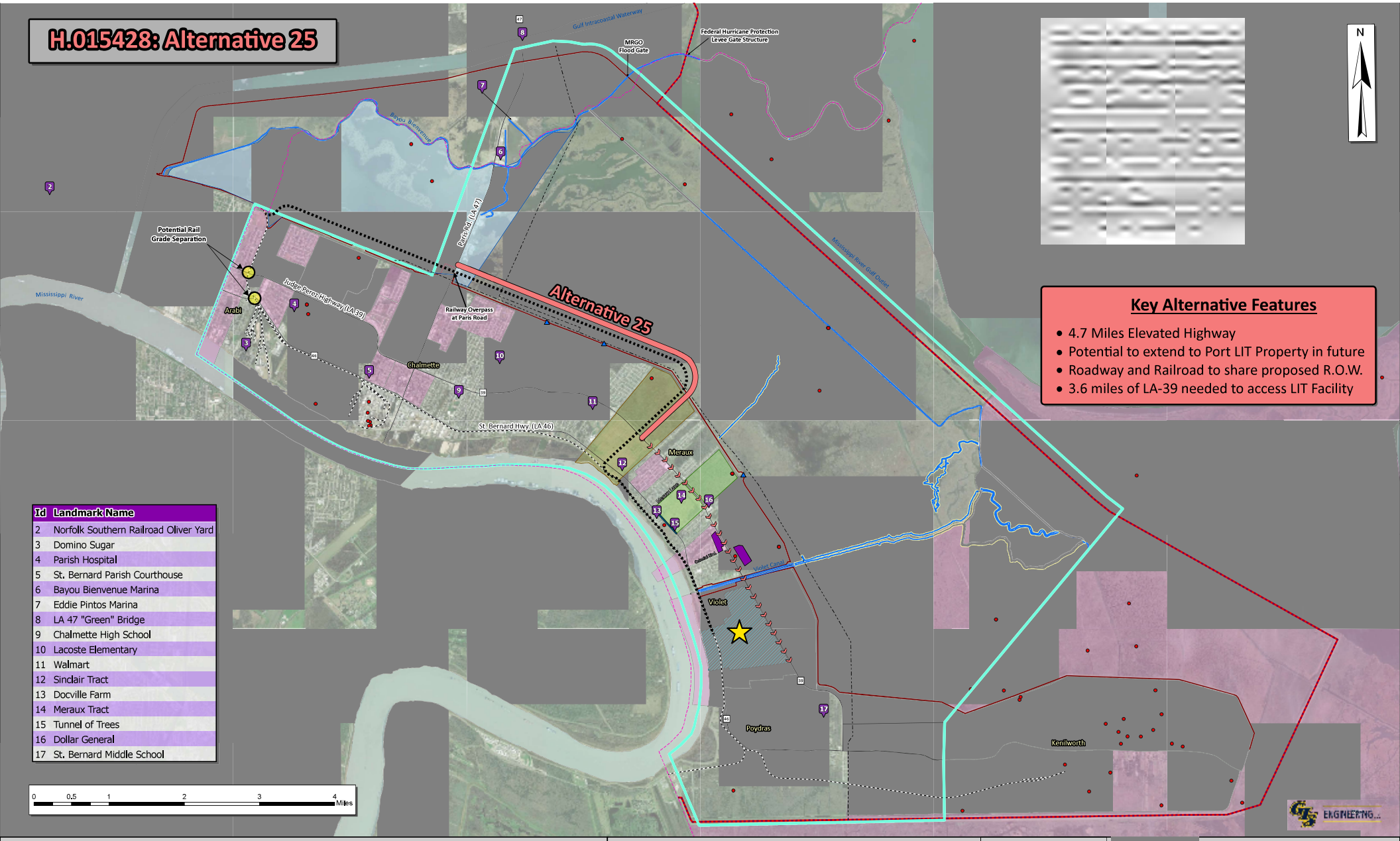
Figure 02-C

Alternative 25 (G-E-S)



Id	Landmark Name
2	Norfolk Southern Railroad Oliver Yard
3	Domino Sugar
4	Parish Hospital
5	St. Bernard Parish Courthouse
6	Bayou Bienvenue Marina
7	Eddie Pintos Marina
8	LA 47 "Green" Bridge
9	Chalmette High School
10	Lacoste Elementary
11	Walmart
12	Sinclair Tract
13	Docville Farm
14	Meraux Tract
15	Tunnel of Trees
16	Dollar General
17	St. Bernard Middle School

Legend

- St. Bernard Parish Boundary
- RPC Study Area
- Proposed LIT Facility
- Oil & Gas Wells
- Existing Pump Station
- Sinclair Tract
- Meraux Tract
- Central Wetlands Marsh Creation
- Proposed School Locations
- Vulnerable Communities
- St. Bernard Scenic Rivers
- Navigable Waterways
- Federal Hurricane Protection Levee
- Levee Alignment
- High Voltage Transmission Line
- State Highways in Study Area
- St. Bernard Parish Railroads
- Potential Rail
- LA-39 Roadway Improvements

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Alternative 25

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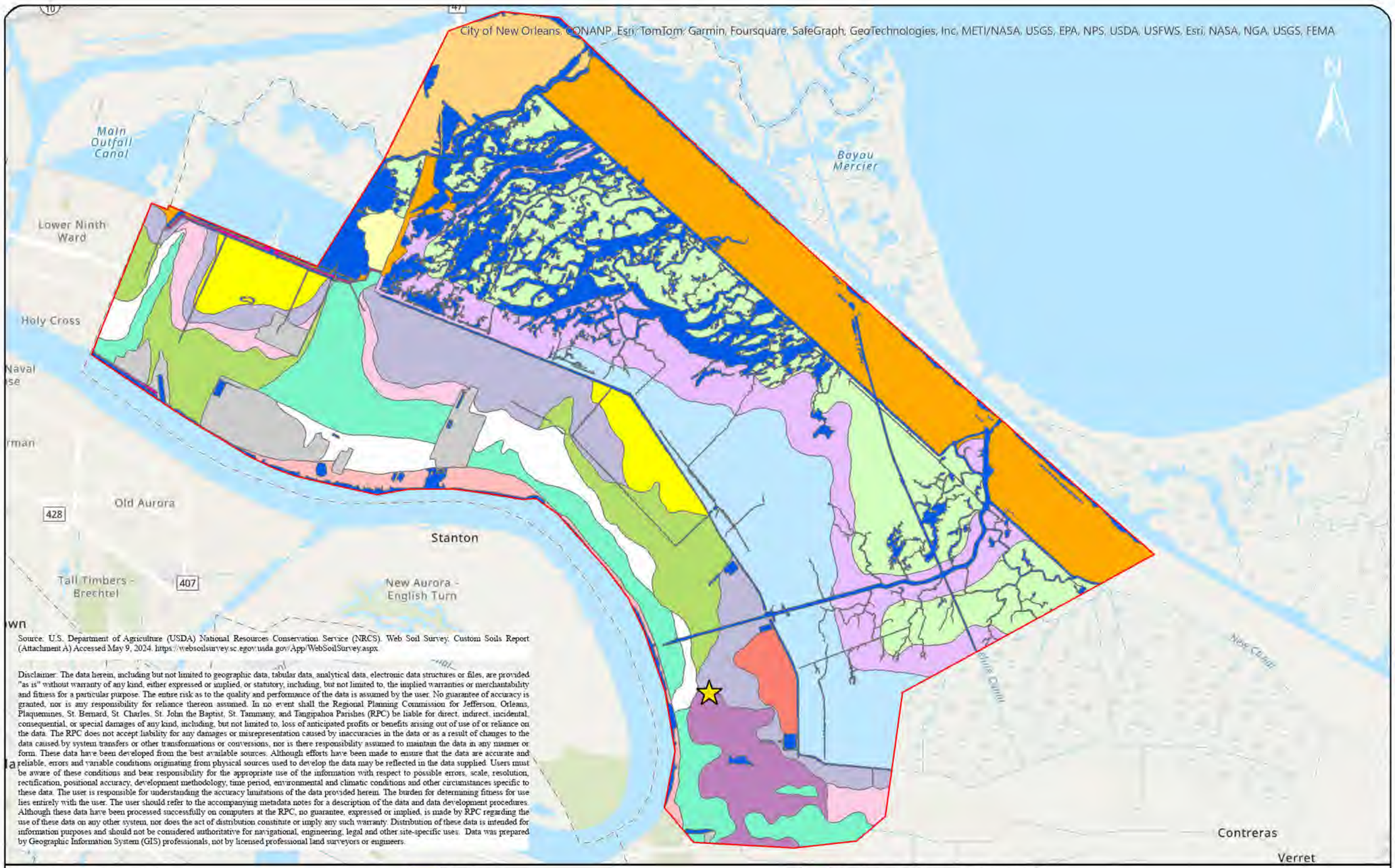
Figure 03

NRCS Soil Types



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STATE PROJECT NO. H.015428
LOWER ST. BERNARD TRANSPORTATION NETWORK FEASIBILITY STUDY

NRCS SOIL TYPES

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03

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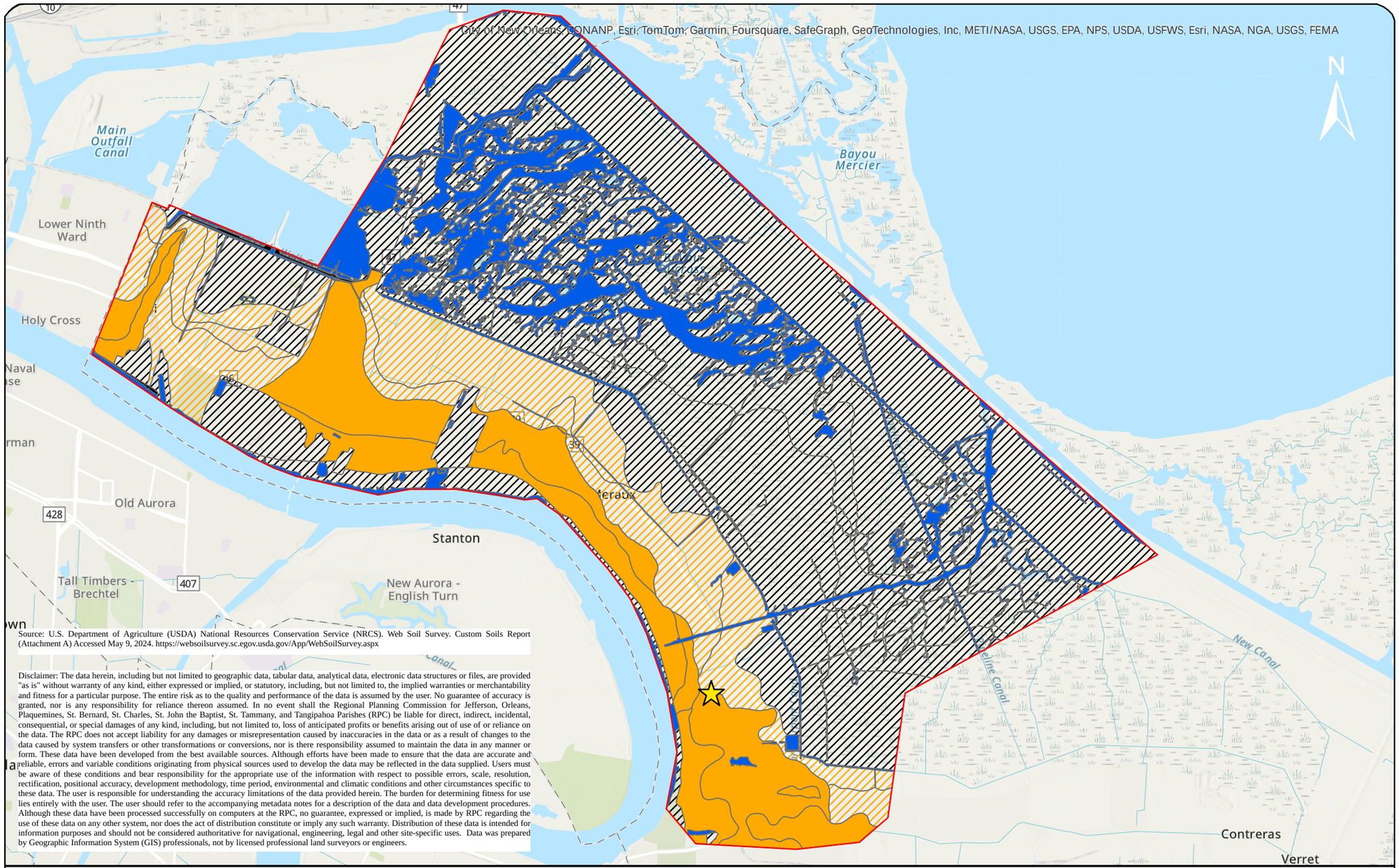
Figure 04

NRCS Prime Farmland and Hydric Soils



Source: U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS). Web Soil Survey. Custom Soils Report (Attachment A) Accessed May 9, 2024. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

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Soil Survey Map Units

- AD - Hydric, NOT prime farmland
- AT - Hydric, NOT prime farmland
- BB - Hydric, NOT prime farmland
- CE - Hydric, NOT prime farmland
- CS - Hydric, NOT prime farmland
- Cm - NOT hydric, Prime Farmland
- Co - NOT hydric, Prime Farmland
- Dp - Hydric, NOT prime farmland
- Ha - Hydric & Prime Farmland
- Hf - Hydric, NOT prime farmland
- LF - Hydric, NOT prime farmland
- LV - Majority NOT hydric, NOT prime farmland
- Sh - Hydric & Prime Farmland
- Sk - Hydric & Prime Farmland
- Ub - Hydric, NOT prime farmland
- Va - NOT hydric, Prime Farmland
- W - Water
- Ww - Hydric, NOT prime farmland
- Study Area
- Proposed LIT Facility

Scale: 1:75,000

0 3,000 6,000 12,000 18,000 24,000 Feet

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NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD TRANSPORTATION NETWORK FEASIBILITY STUDY

NRCS PRIME FARMLAND & HYDRIC SOILS

Project Number	39130-1459
Date	JULY 2024
Designed by	XXX
Drawn by	AFC
Checked by	XXX
Checked by	XXX
Date Printed:	July 3, 2024

04

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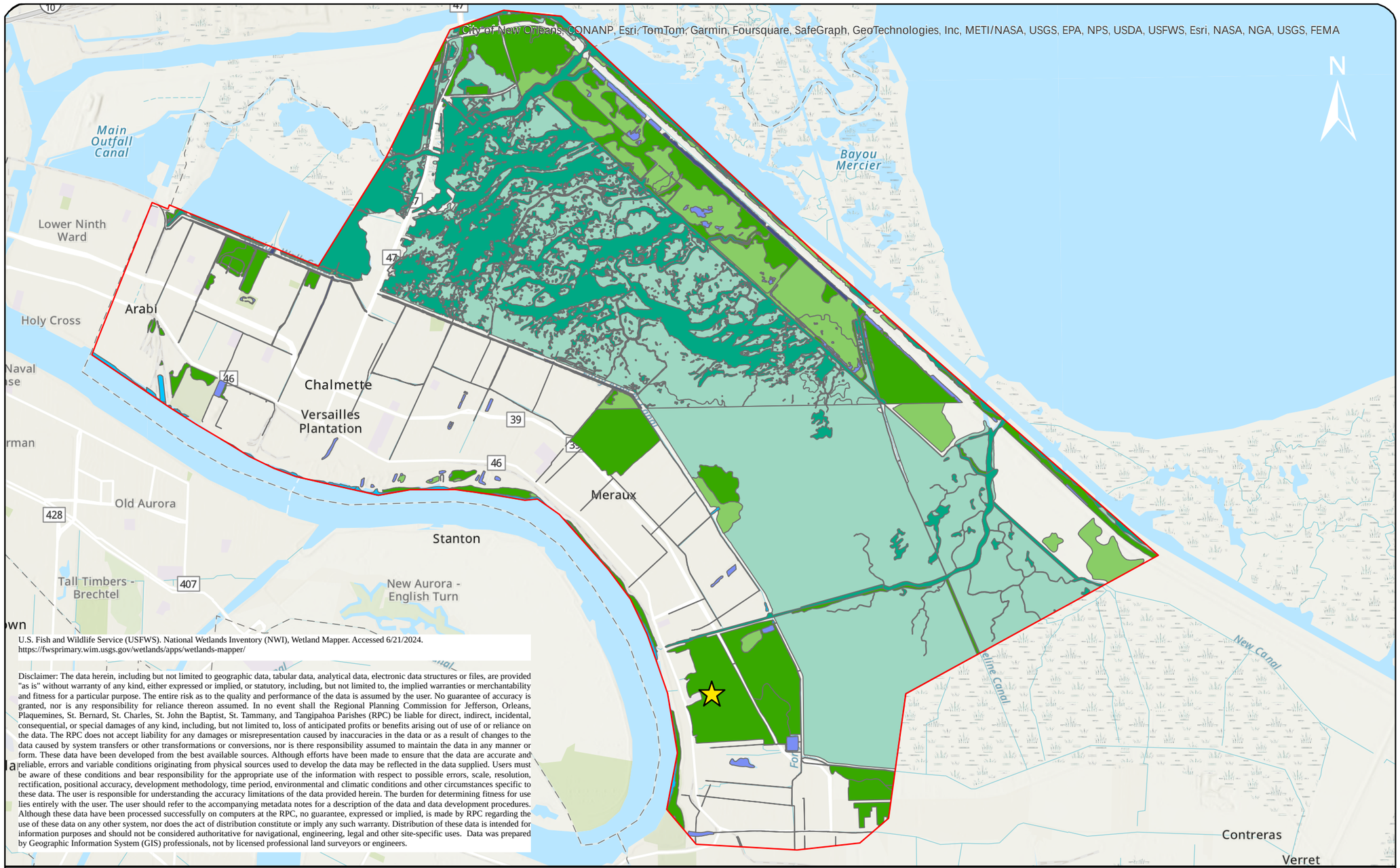
Figure 05

NWI Wetland Types



U.S. Fish and Wildlife Service (USFWS). National Wetlands Inventory (NWI), Wetland Mapper. Accessed 6/21/2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

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Wetland Type

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Study Area
- Proposed LIT Facility

Scale: 1:75,000

0 3,000 6,000 12,000 18,000 24,000 Feet

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NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

NWI WETLANDS

Project Number	39130-1459
Date	JULY 2024
Designed by	XXX
Drawn by	AFC
Checked by	XXX
Checked by	XXX
Date Printed:	July 3, 2024

05

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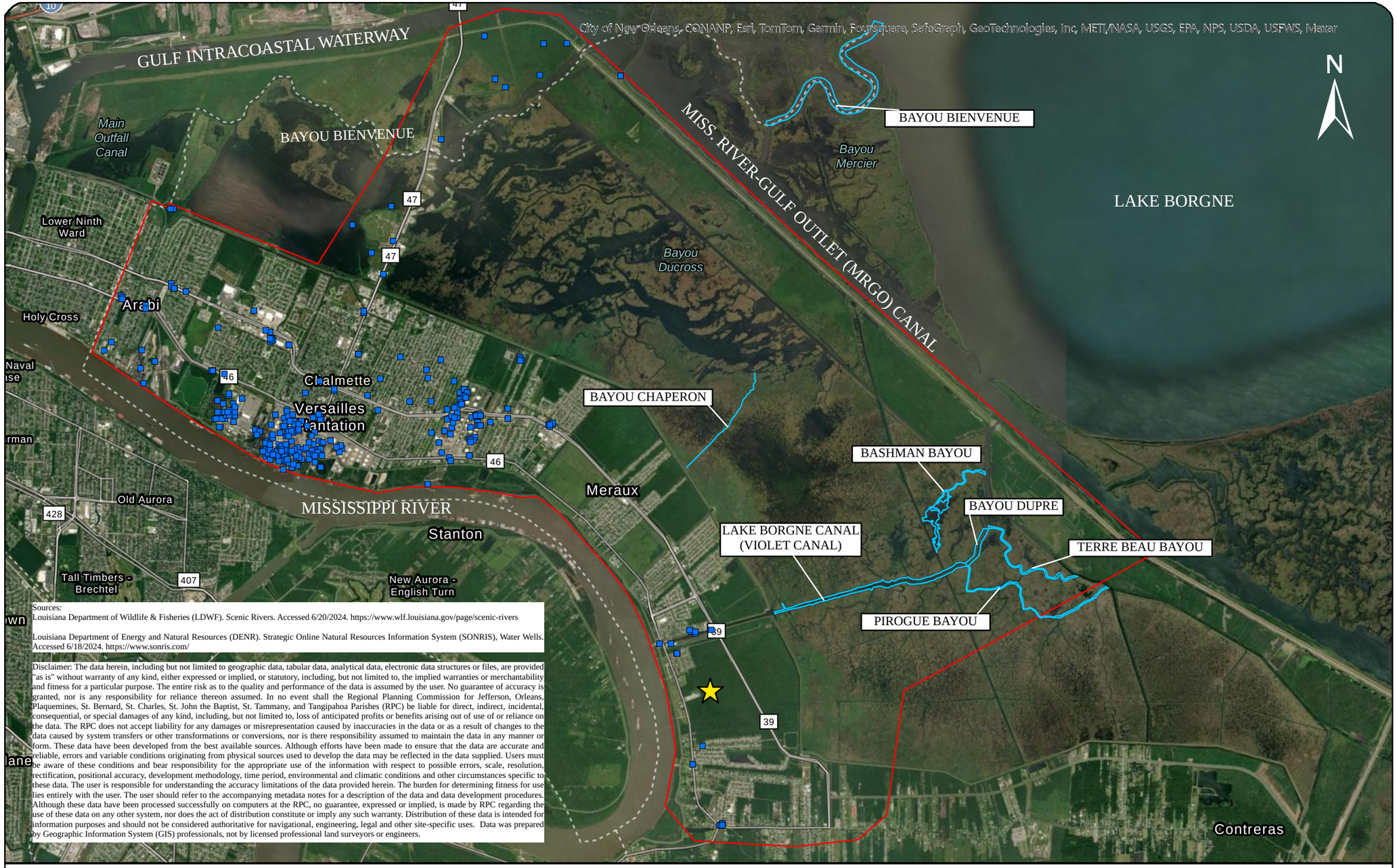
Figure 06

LDWF and DENR Water Resources



Sources:
Louisiana Department of Wildlife & Fisheries (LDWF). Scenic Rivers. Accessed 6/20/2024. https://www.wlf.louisiana.gov/page/scenic-rivers

Louisiana Department of Energy and Natural Resources (DENR). Strategic Online Natural Resources Information System (SONRIS), Water Wells. Accessed 6/18/2024. https://www.sonris.com/

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- DENR Water Wells
- LDWF Scenic & Natural Rivers
- Study Area
- Proposed LIT Facility

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

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REVISIONS

No.	Description	Date

TRANSPORTATION STUDY
Planning For Future St. Bernard

NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

LDWF & DENR
WATER RESOURCES

Project Number	39130-1459
Date	JULY 2024
Designed by	XXX
Drawn by	AFC
Checked by	XXX
Checked by	XXX
Date Printed:	July 3, 2024

06

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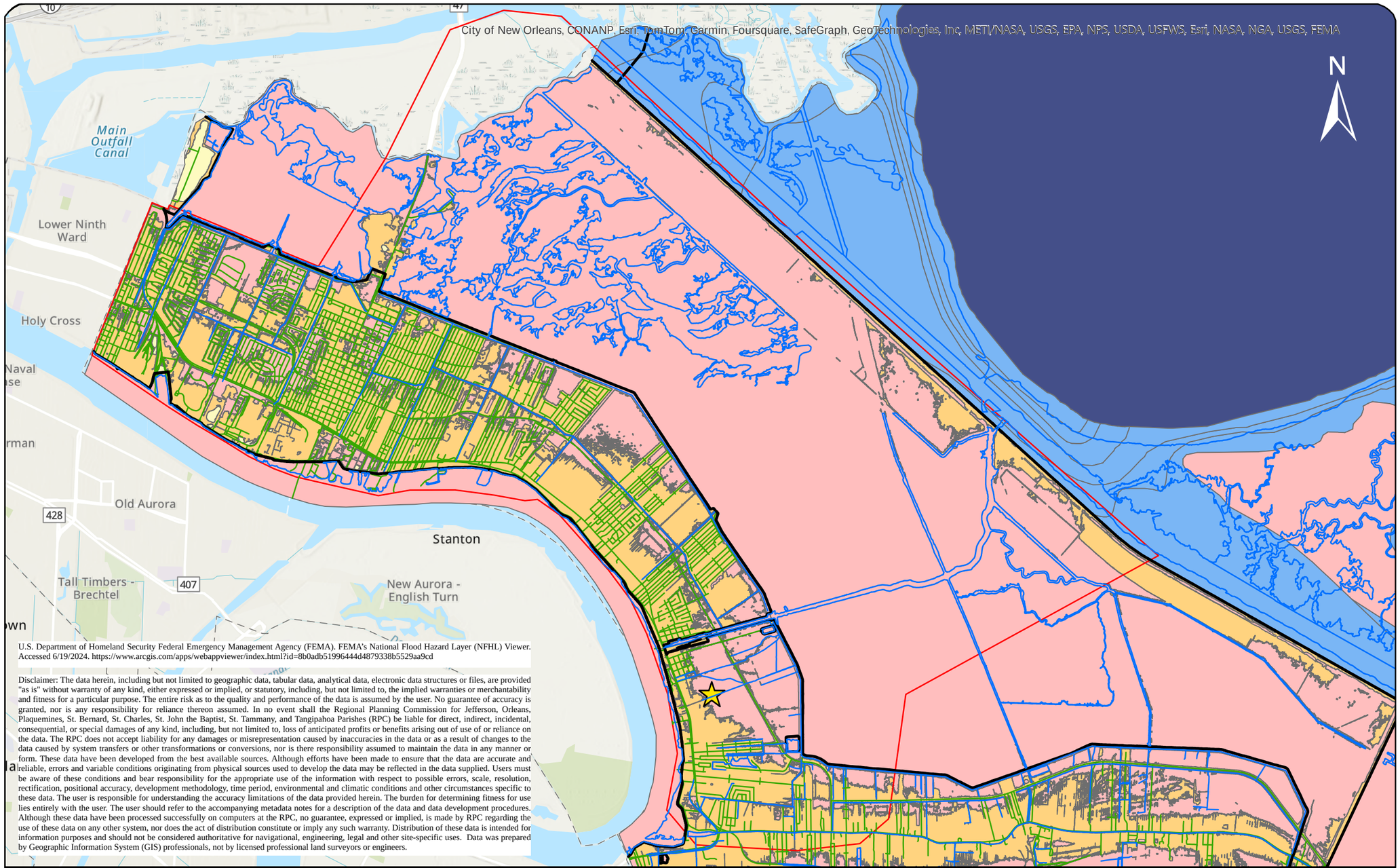
Figure 07

FEMA Flood Hazard Zones



U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA). FEMA's National Flood Hazard Layer (NFHL) Viewer. Accessed 6/19/2024. https://www.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

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FEMA Flood Hazard Zones

- Zone AE - Area inundated by the Base Flood (1% annual chance of flooding) with no Base Flood Elevations determined
- Zone V - Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined
- Zone VE - Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined
- Zone X (0.2%) – Area with 0.2% annual chance flood hazard
- Zone X - Area with reduced flood risk due to levee
- Levees

- Transportation Features
- Hydrologic Features Outline
- Study Area
- Proposed LIT Facility

Scale: 1:75,000

0 3,000 6,000 12,000 18,000 24,000 Feet

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LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

FEMA FLOOD HAZARD ZONES

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Designed by	**XXX**
Drawn by	**AFC**
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Checked by	**XXX**
Date Printed:	**July 3, 2024**

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Figure 08

LDEQ Underground Storage Tanks and DENR Oil & Gas Wells

Sources:
Louisiana Department of Environmental Quality (LDEQ). Louisiana Department of Environmental Quality Interactive Map, LDEQ TEMPO Underground Storage Tanks. Accessed 6/19/2024. https://experience.arcgis.com/experience/2cca66ba6cab415290b95de181a633b4

Louisiana Department of Energy and Natural Resources (DENR). Strategic Online Natural Resources Information System (SONRIS), Oil & Gas Wells. Accessed 6/18/2024. https://www.sonris.com/

U.S. Environmental Protection Agency (EPA). Superfund Enterprise Management Systems (SEMS) database search. Accessed 7/1/2024. https://enviro.epa.gov/envirofacts/sems/search

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- LDEQ - Underground Storage Tanks (USTs)
- DENR - Oil & Gas Wells
- Study Area
- Proposed LIT Facility

ID	EPA - SEMS Results with Known Location
1	Arabi Mercury Spill
2	Calciner Ind/Kaiser Aluminum/Chem Corp.
3	Chalmette Mercury Spill
4	Clean Company Inc
5	Norfolk Southern Railway
6	Recoil Corporation

ID	EPA - SEMS Results with Known Location
7	St. Bernard Parish Jail Complex
8	St. Bernard Parish Landfill
9	Tenneco Oil Company
10	ARCO Sinclair Gulf Corp Refinery
11	Murphy Oil Corp

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

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NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD TRANSPORTATION NETWORK FEASIBILITY STUDY

LDEQ UNDERGROUND STORAGE TANKS, DENR OIL & GAS WELLS, EPA SEMS RESULTS

Project Number	**39130-1459**
Date	**JANUARY 2025**
Designed by	
Drawn by	**AF**
Checked by	**BF**
Checked by	**SM**
Date Printed:	**January 29, 2025**

08

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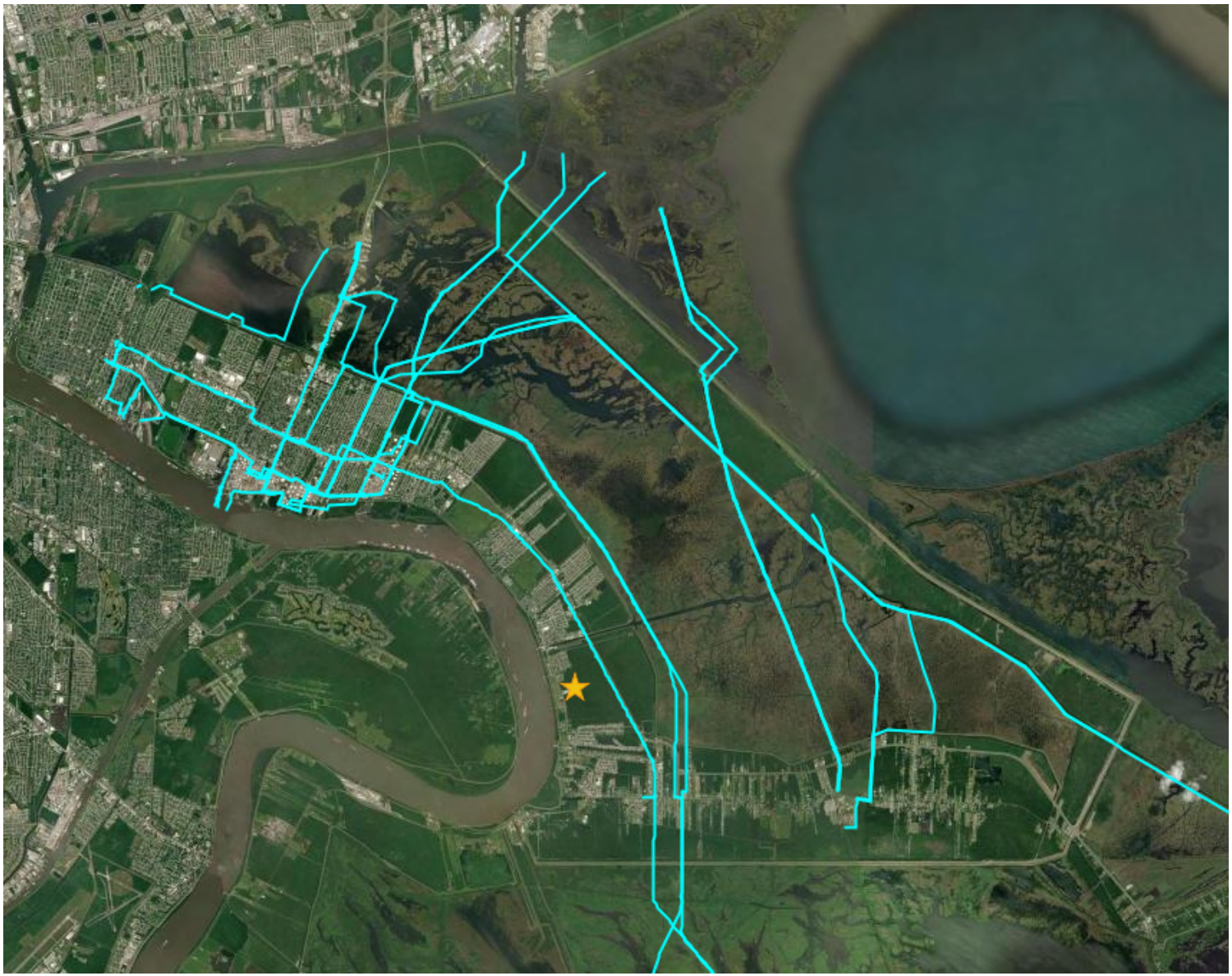
Figure 09

DOT National Pipeline Mapping System

Pipeline and Hazardous Materials Safety Administration

NATIONAL PIPELINE MAPPING SYSTEM



Legend

Query Pipelines

Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to npms@dot.gov.

Projection: Geographic

Datum: NAD83

Map produced by the Public Viewer application at www.npms.phmsa.dot.gov

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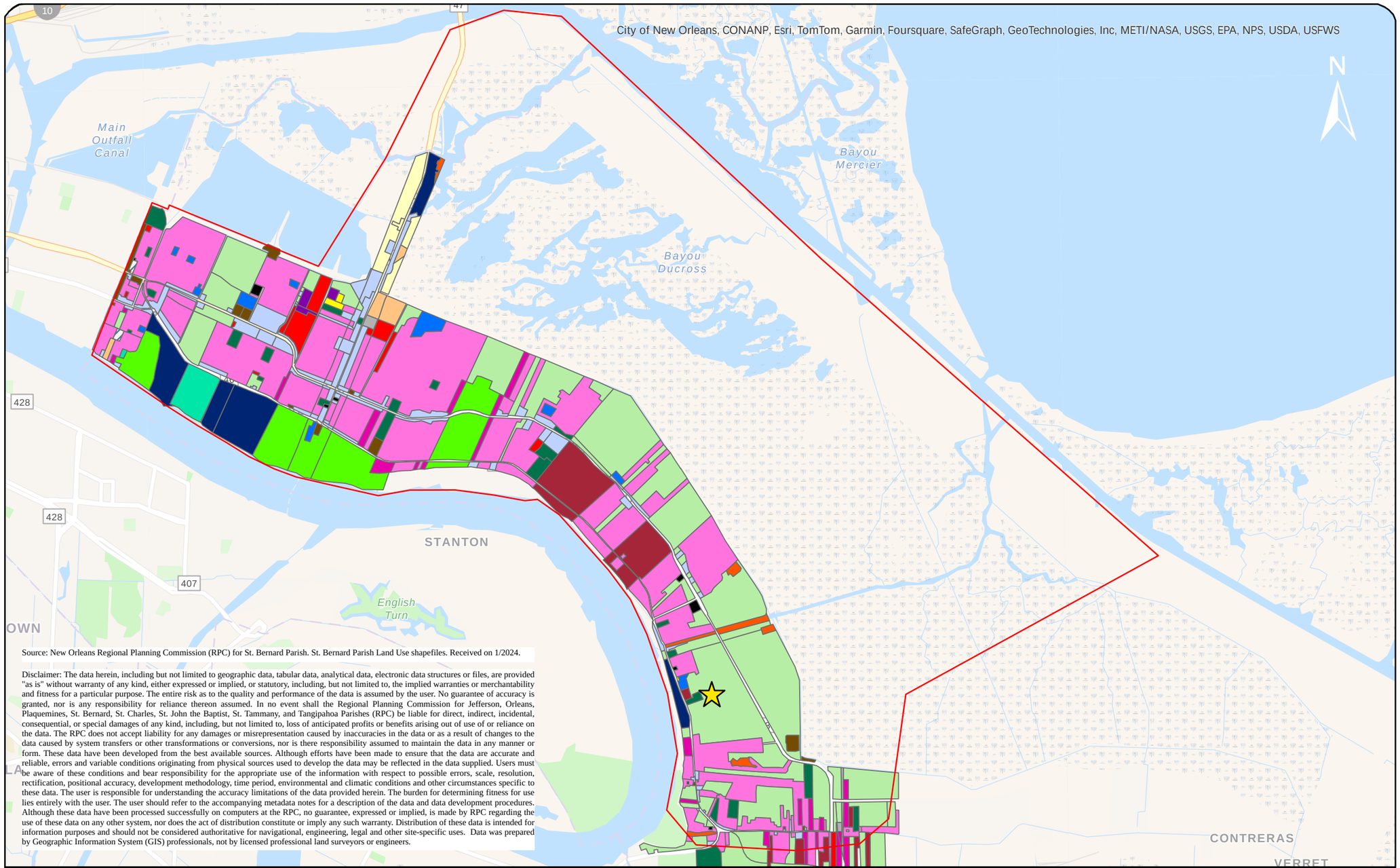
Date Printed: Jun 18, 2024

811 Know what's below. Call before you dig.

Figure 10

RPC Land Use



Source: New Orleans Regional Planning Commission (RPC) for St. Bernard Parish. St. Bernard Parish Land Use shapefiles. Received on 1/2024.

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Land Use

- Agriculture
- Church
- Funeral Home/Graveyard
- Government Buildings
- Historic Preserv. Site
- Hospital/Medical
- Local Business
- Manufacturing & Refining
- Multiple Family
- Parks & Recreation
- Ports & Harbors
- Powerline ROW/Power Plant
- Schools & Libraries
- Single Family Detached
- Trailer/Mobile Home Park
- Underdeveloped
- Vacant
- Warehouse & Distribution
- Waterways/Lakes
- Woodland
- Study Area
- Proposed LIT Facility

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

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NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

RPC LAND USE

Project Number	39130-1459
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Drawn by	AF
Checked by	BF
Checked by	SM
Date Printed:	January 24, 2025

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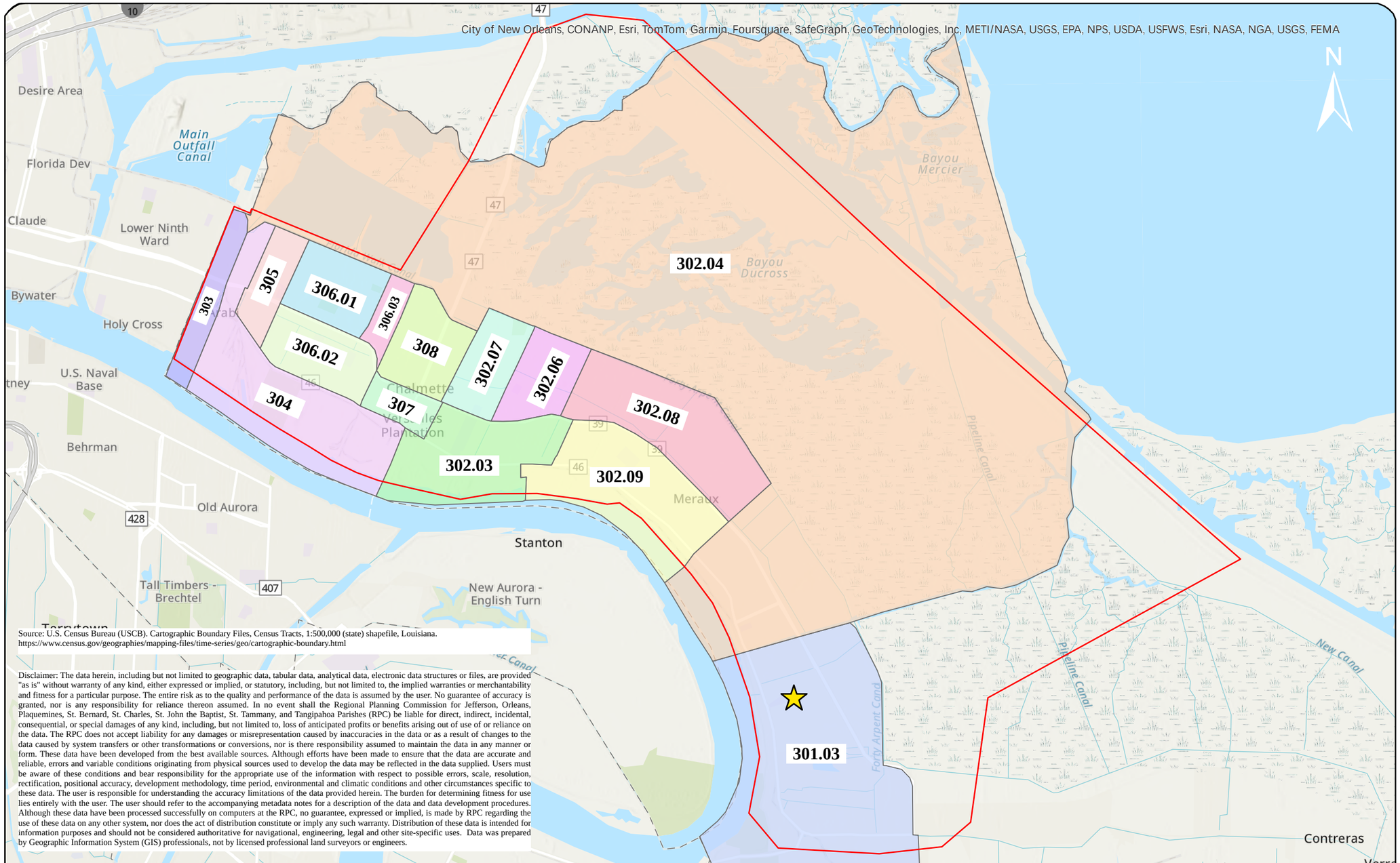
Figure 11

USCB Census Tracts



Source: U.S. Census Bureau (USCB). Cartographic Boundary Files, Census Tracts, 1:500,000 (state) shapefile, Louisiana.
https://www.census.gov/geographies/mapping-files/time-series/geo/cartographic-boundary.html

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2020 USCB Census Tract

- 301.03
- 302.03
- 302.04
- 302.06
- 302.07
- 302.08
- 302.09
- 303
- 304
- 305
- 306.01
- 306.02
- 306.03
- 307
- 308
- Study Area
- Proposed LIT Facility

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

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LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

USCB
CENSUS TRACTS

Project Number	39130-1459
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Drawn by	AF
Checked by	BF
Checked by	SM
Date Printed:	January 24, 2025

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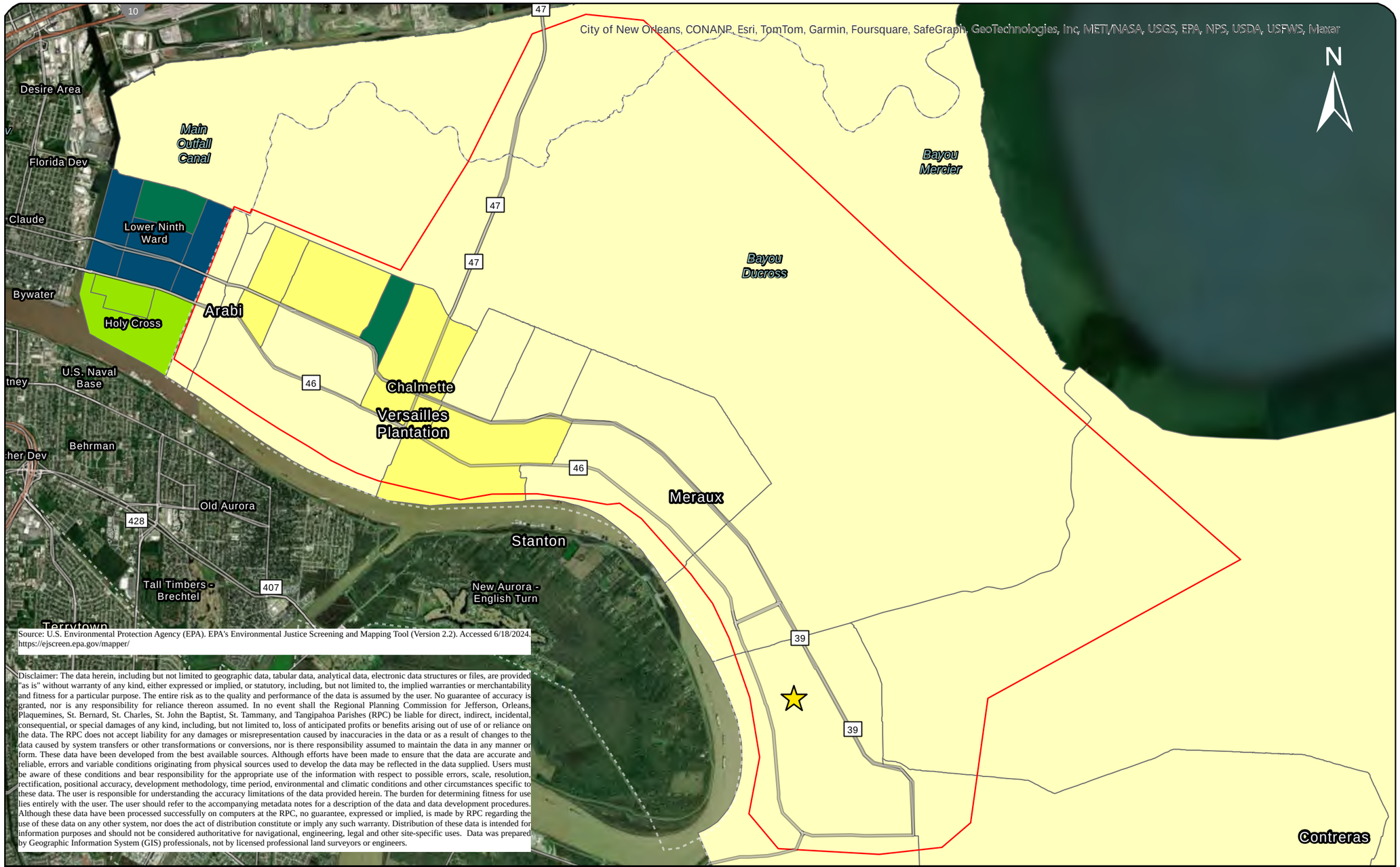
Figure 12

EPA Environmental Justice Indexes Above 80th Percentile



Source: U.S. Environmental Protection Agency (EPA). EPA's Environmental Justice Screening and Mapping Tool (Version 2.2). Accessed 6/18/2024. https://ejscreen.epa.gov/mapper/

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EPA EJScreen

EJ Indexes Over 80 Percentile

- 0 - 1
- 2 - 4
- 5 - 7
- 8 - 10
- 11 - 13

- Study Area
- Proposed LIT Facility

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

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STATE PROJECT NO. H.015428
LOWER ST. BERNARD TRANSPORTATION NETWORK FEASIBILITY STUDY

EPA EJ INDEXES ABOVE 80TH PERCENTILE

Project Number	39130-1459
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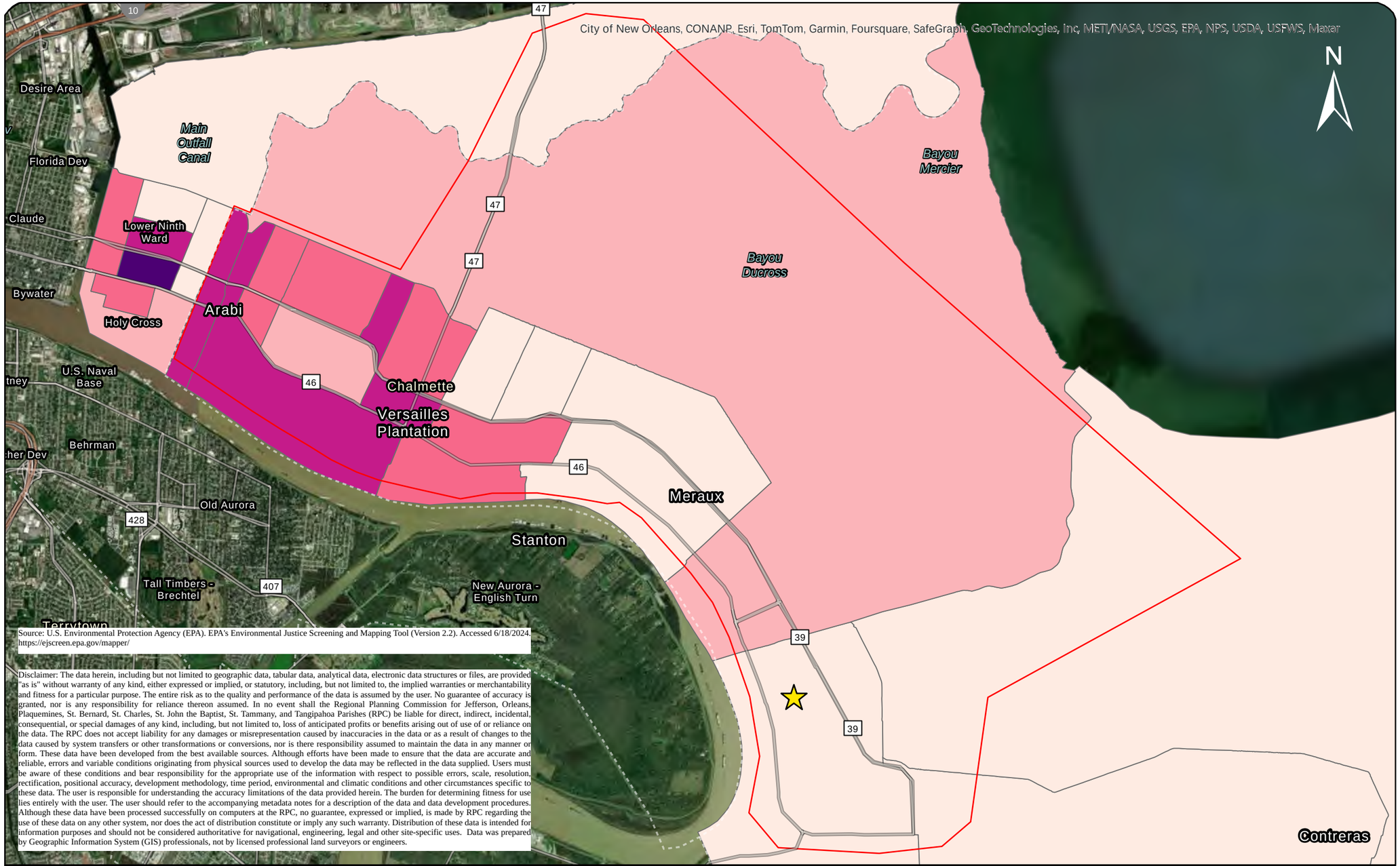
Figure 13

EPA Supplemental Indexes Above 80th Percentile



Source: U.S. Environmental Protection Agency (EPA). EPA's Environmental Justice Screening and Mapping Tool (Version 2.2). Accessed 6/18/2024. https://ejscreen.epa.gov/mapper/

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EPA EJScreen

Supplemental Indexes Over 80 Percentile

- 0 - 1
- 2 - 4
- 5 - 7
- 8 - 10
- 11 - 13

Study Area

Proposed LIT Facility

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

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NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

EPA SUPPLEMENTAL INDEXES ABOVE 80TH PERCENTILE

Project Number	39130-1459
Date	JANUARY 2025
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Drawn by	AF
Checked by	BF
Checked by	SM
Date Printed:	January 28, 2025

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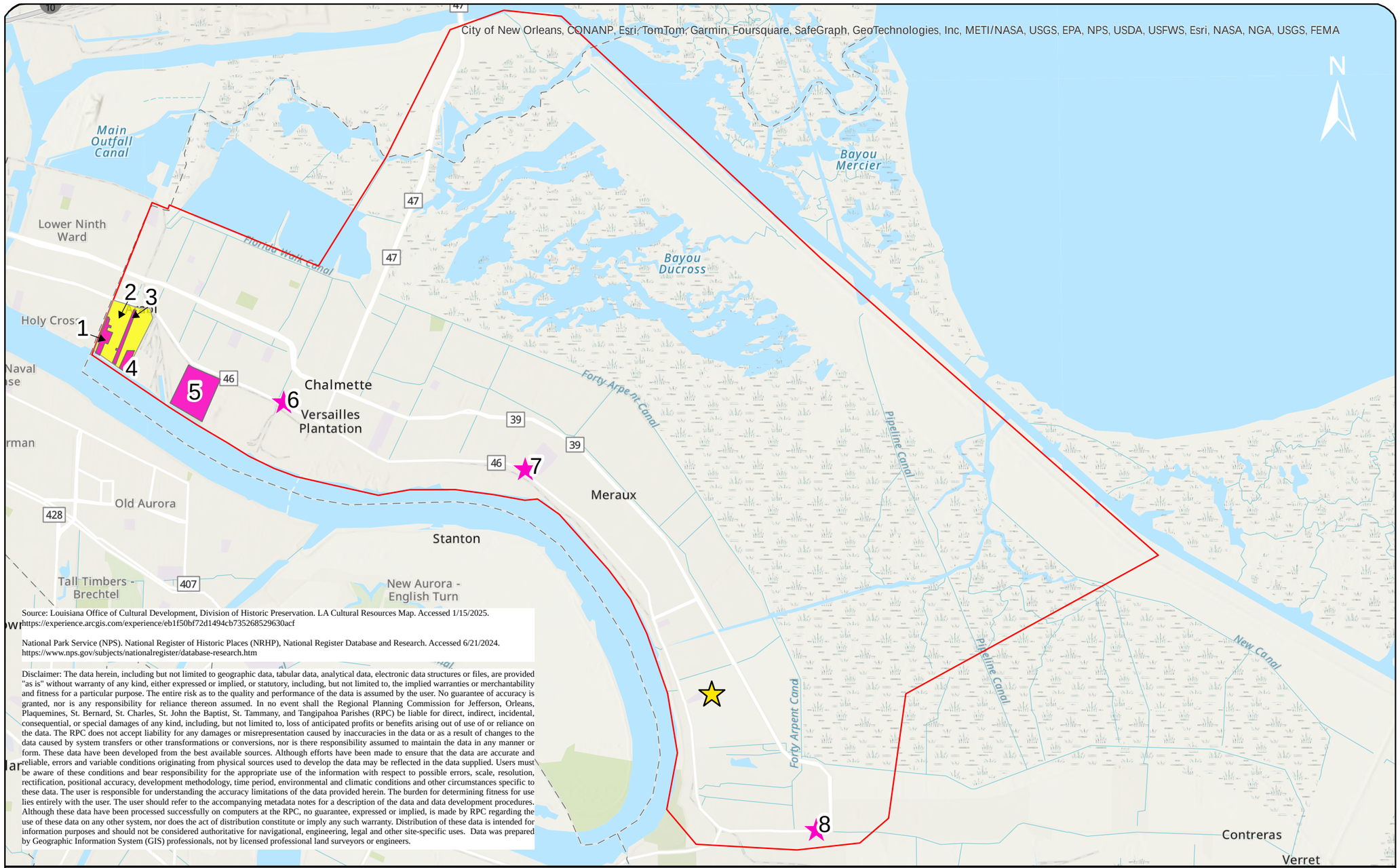
Figure 14

NRHP Cultural Resources



Source: Louisiana Office of Cultural Development, Division of Historic Preservation. LA Cultural Resources Map. Accessed 1/15/2025. https://experience.arcgis.com/experience/eb1f50bf72d1494cb735268529630acf

National Park Service (NPS). National Register of Historic Places (NRHP), National Register Database and Research. Accessed 6/21/2024. https://www.nps.gov/subjects/nationalregister/database-research.htm

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- National Register Individual Listings
- National Register Districts
- Cultural District Boundaries
- Study Area
- Proposed LIT Facility

Id	Place of Interest
1	Old Arabi Historic District
2	Old Arabi Cultural District
3	Friscoville Street Historic DIstrict
4	Ford Motor Company Assembly Plant
5	Chalmette Unit of Jean Lafitte National Historical Park Historic District
6	St. Bernard Parish Courthouse
7	Pecan Grove Plantation
8	Sebastopol Plantation House

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

GIS ENGINEERING LLC
Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000
ENGINEERING ● PLANNING ● ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

TRANSPORTATION STUDY
Planning For Future St. Bernard

NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD TRANSPORTATION NETWORK FEASIBILITY STUDY

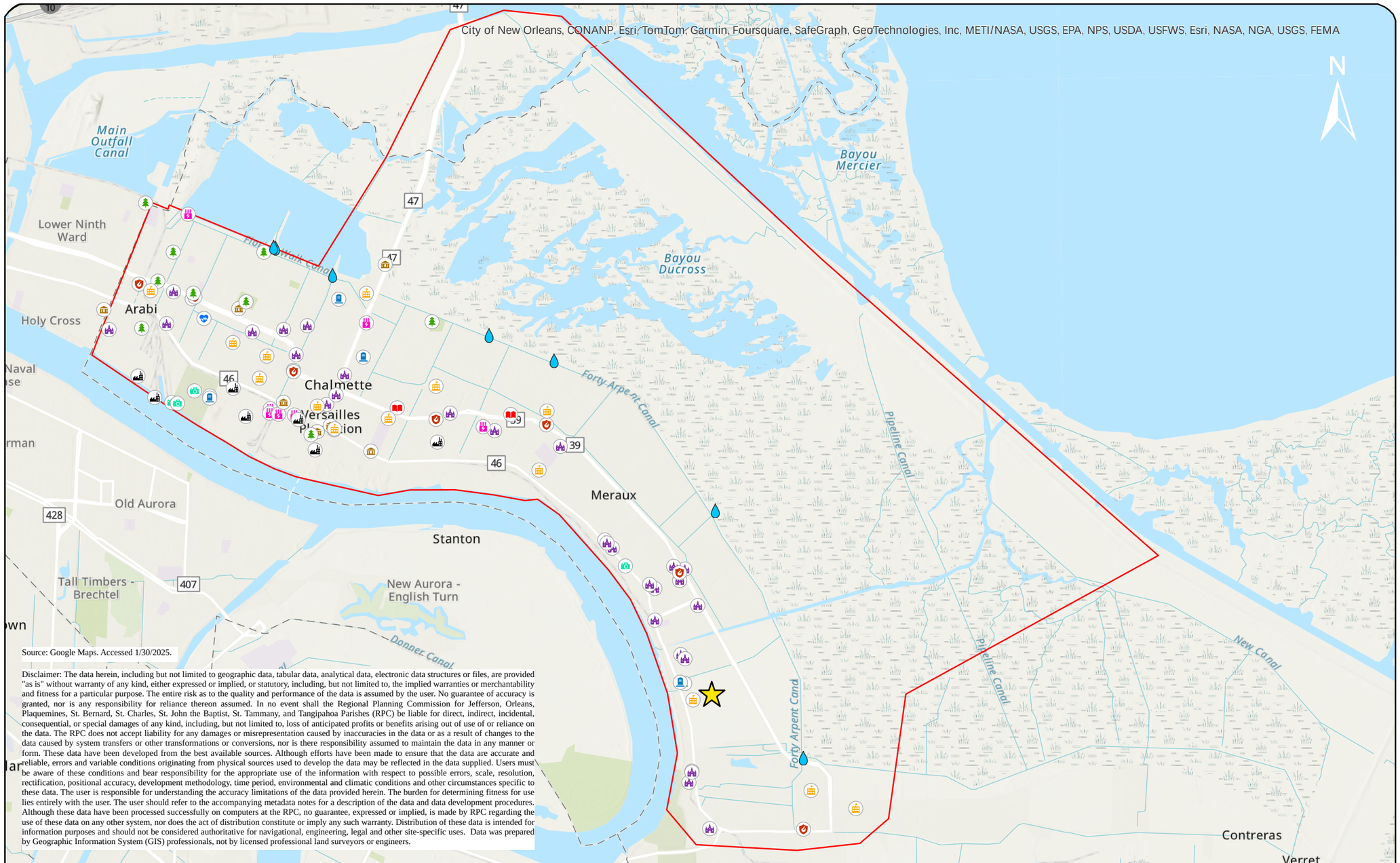
CULTURAL RESOURCES

Project Number	39130-1459
Date	JANUARY 2025
Designed by	
Drawn by	AF
Checked by	BF
Checked by	SM
Date Printed:	January 30, 2025

Path: M:\Department 39\Client\NORPC - New Orleans Regional Planning Commission\1459 Louisiana International Terminal\400 Execution\430 Environmental\Reports\ArcGIS Maps\LIT Maps\Cultural Resources 11x17.aprx

Figure 15

Community Facilities



Source: Google Maps. Accessed 1/30/2025.

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- Study Area
- Proposed LIT Facility
- Cemeteries
- Churches
- Electrical Power Stations
- Fire Stations
- Government
- Historical Landmarks
- Hospitals
- Industry
- Libraries
- Nature Areas or Parks
- Pump Stations
- Schools

0 3,000 6,000 12,000 18,000 24,000 Feet

Scale: 1:75,000

GIS ENGINEERING LLC
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197 Elysian Drive
Houma, Louisiana 70363
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REVISIONS

No.	Description	Date

TRANSPORTATION STUDY
Planning For Future St. Bernard

NEW ORLEANS REGIONAL PLANNING COMMISSION

STATE PROJECT NO. H.015428
LOWER ST. BERNARD
TRANSPORTATION NETWORK
FEASIBILITY STUDY

COMMUNITY FACILITIES

Project Number	39130-1459
Date	JANUARY 2025
Designed by	
Drawn by	AF
Checked by	BF
Checked by	SM
Date Printed:	January 30, 2025

Path: M:\Department 39\Client\NOPC - New Orleans Regional Planning Commission\1459 Louisiana International Terminal\400 Execution\430 Environmental\Reports\ArcGIS Maps\LIT Maps\Community Facilities.aprx

Attachment A

NRCS Custom Soils Report

United States Department of Agriculture

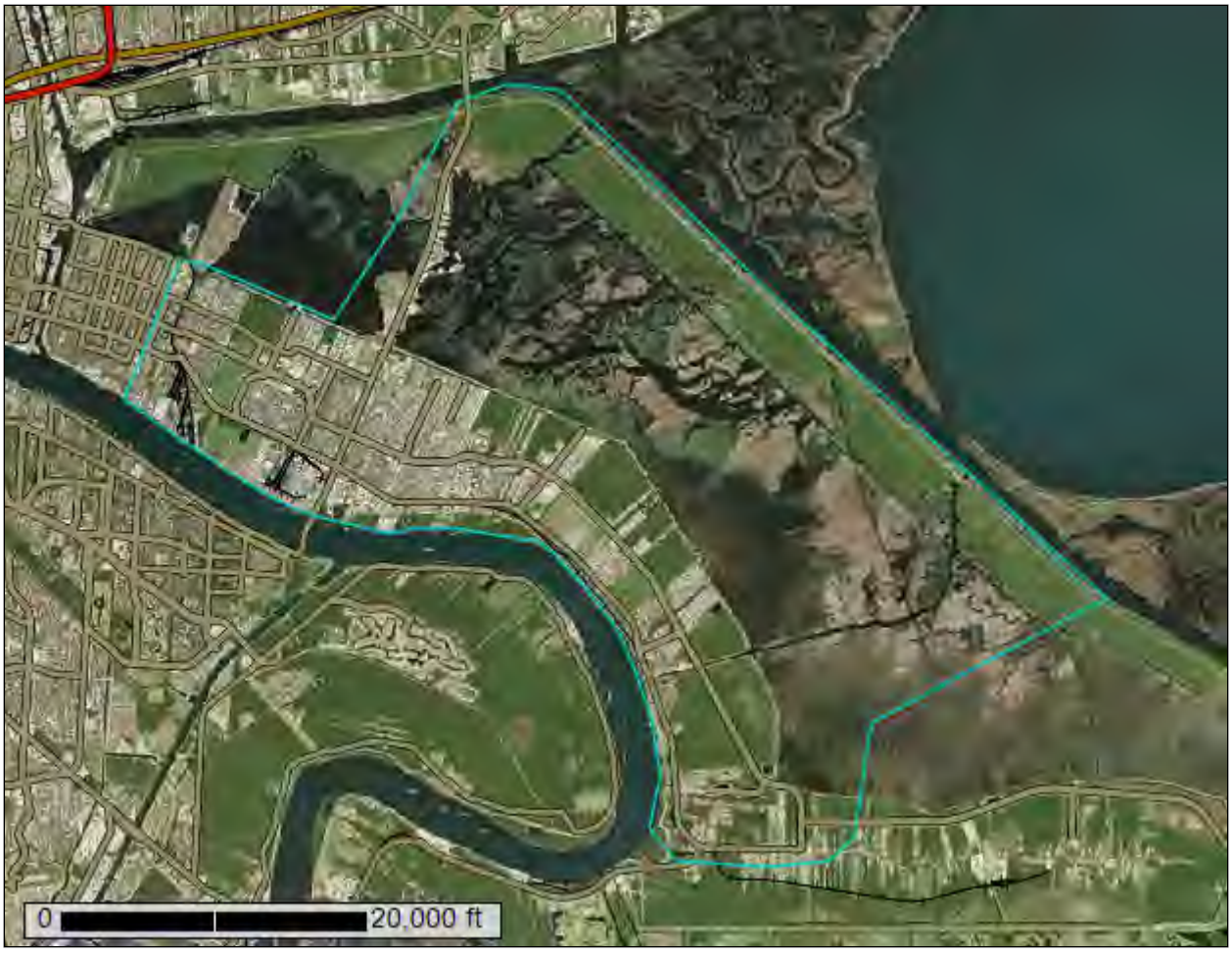
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Orleans Parish, Louisiana, and St. Bernard Parish, Louisiana

Louisiana International Terminal



May 9, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

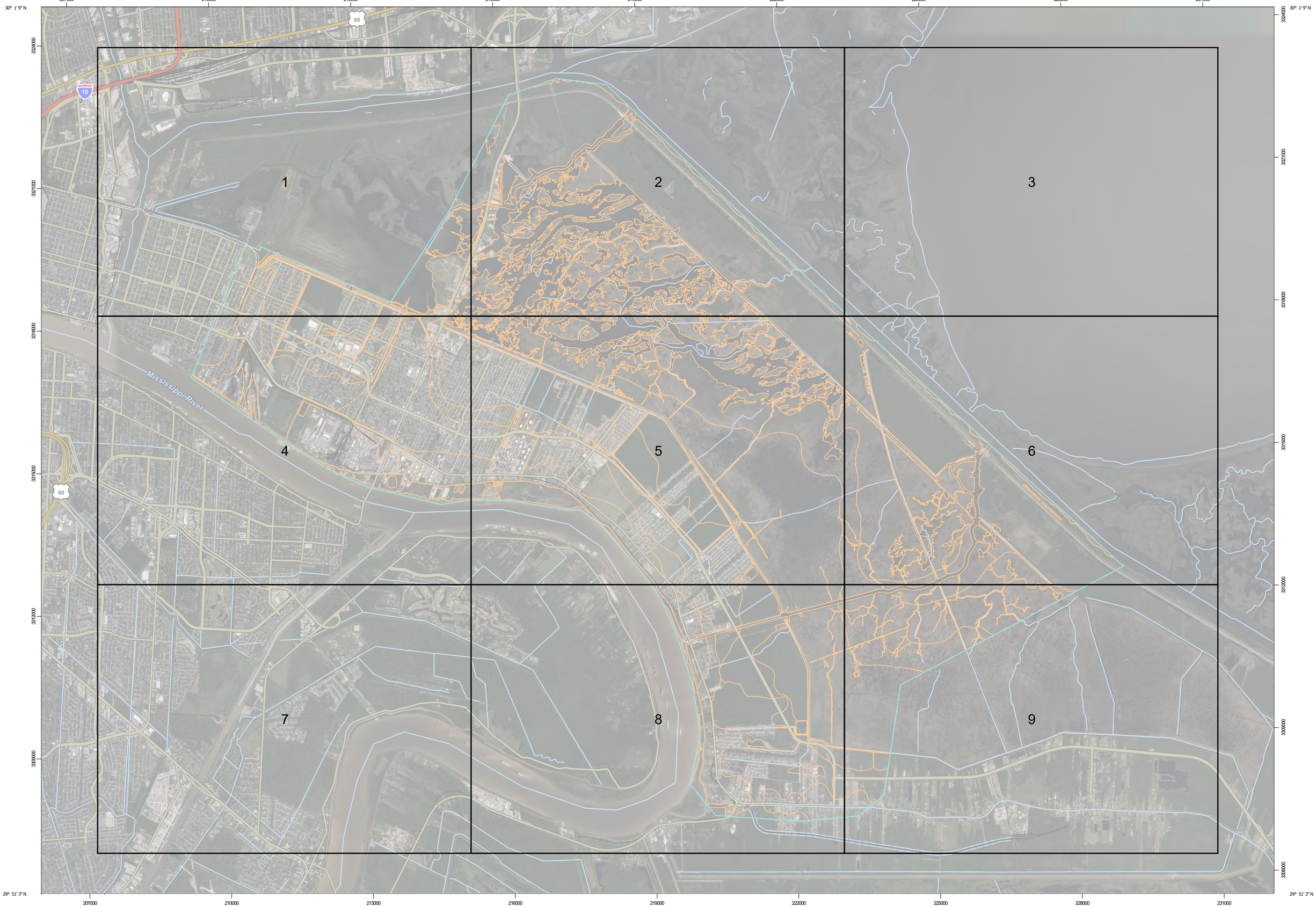
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map
Index Sheet



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N

0 500 1000 2000 3000 Meters

0 2500 5000 10000 15000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84


90° 1' 51" W
89° 56' 57" W
30° 0' 41" N
29° 57' 38" N
207900
208800
209700
210600
211500
212400
213300
214200
215100
3322700
3322800
3321900
3321000
3320100
3319200
3318300
Joins sheet 2
Joins sheet 4
Joins sheet 5
Almonaster
Dale St
Gentilly
Wisteria St
Sage Ave
Terminal Rd
Jourdan Rd
France Rd
Ramp
Harbor Rd
France
Surekote Rd
Andry
Caffin
Alabo
Florida
Galvez
Poland
Tupelo
Delery
Jourdan
Angela St
Angela
Rose St
Coney Dr
Patricia
90
10
39
46
47
AT
AD
W
Ha
LF
LV
Co
Cm
Sh
Sk
Ww
Dp
CE

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.

Meters: 0, 200, 400, 800, 1200

Feet: 0, 500, 1000, 2000, 3000

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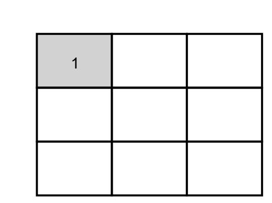
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



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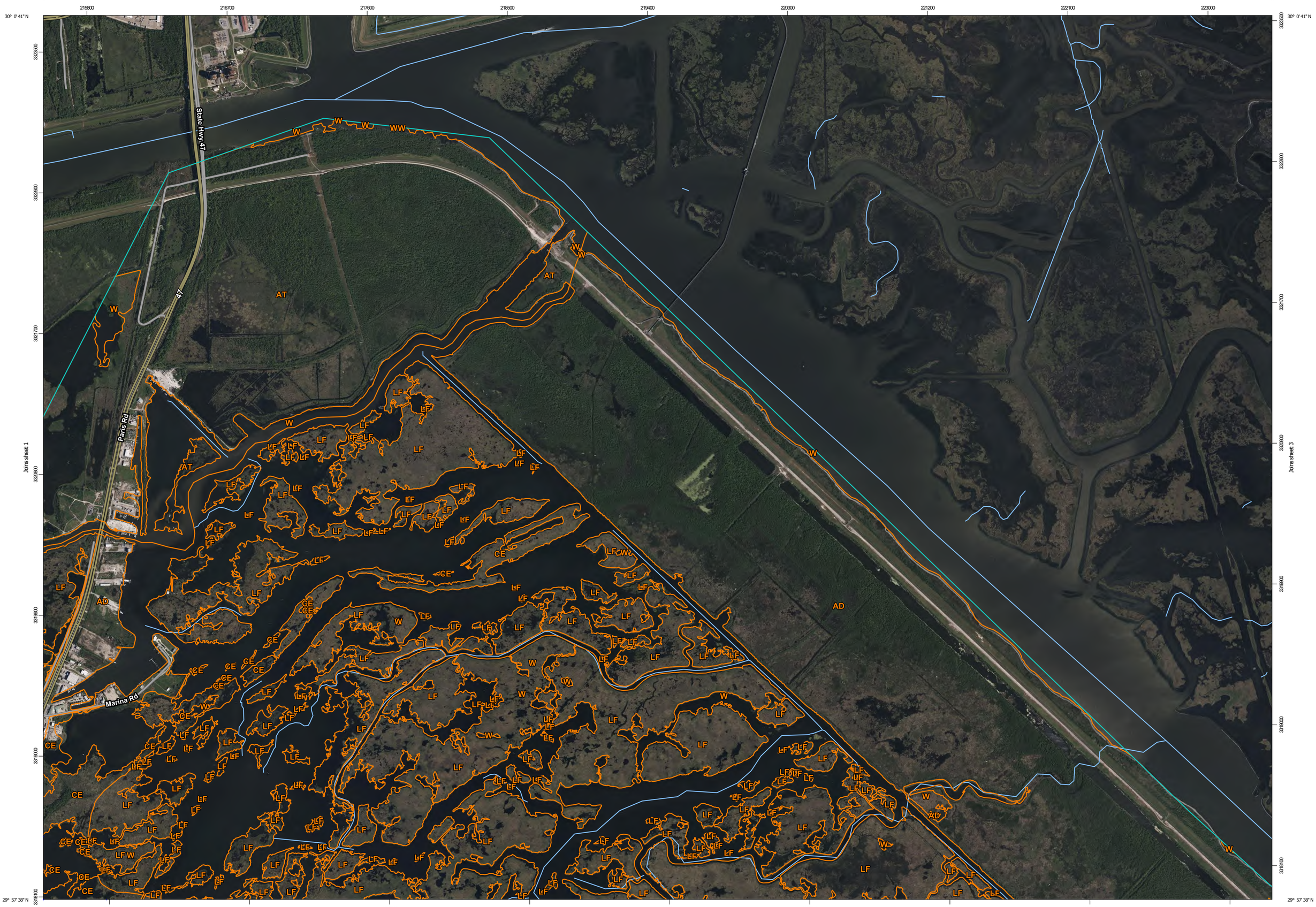

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Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Map Sheet Location

89° 52' 2"W
89° 47' 8"W
30° 0' 41" N
29° 57' 38" N
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224600
225500
226400
227300
228200
229100
230000
230900
3322300
3322400
3321500
3320600
3319700
3318800
3317900
Joins sheet 2
Joins sheet 5
Joins sheet 6
AD

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.
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Feet 0 500 1000 2000 3000
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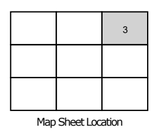
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



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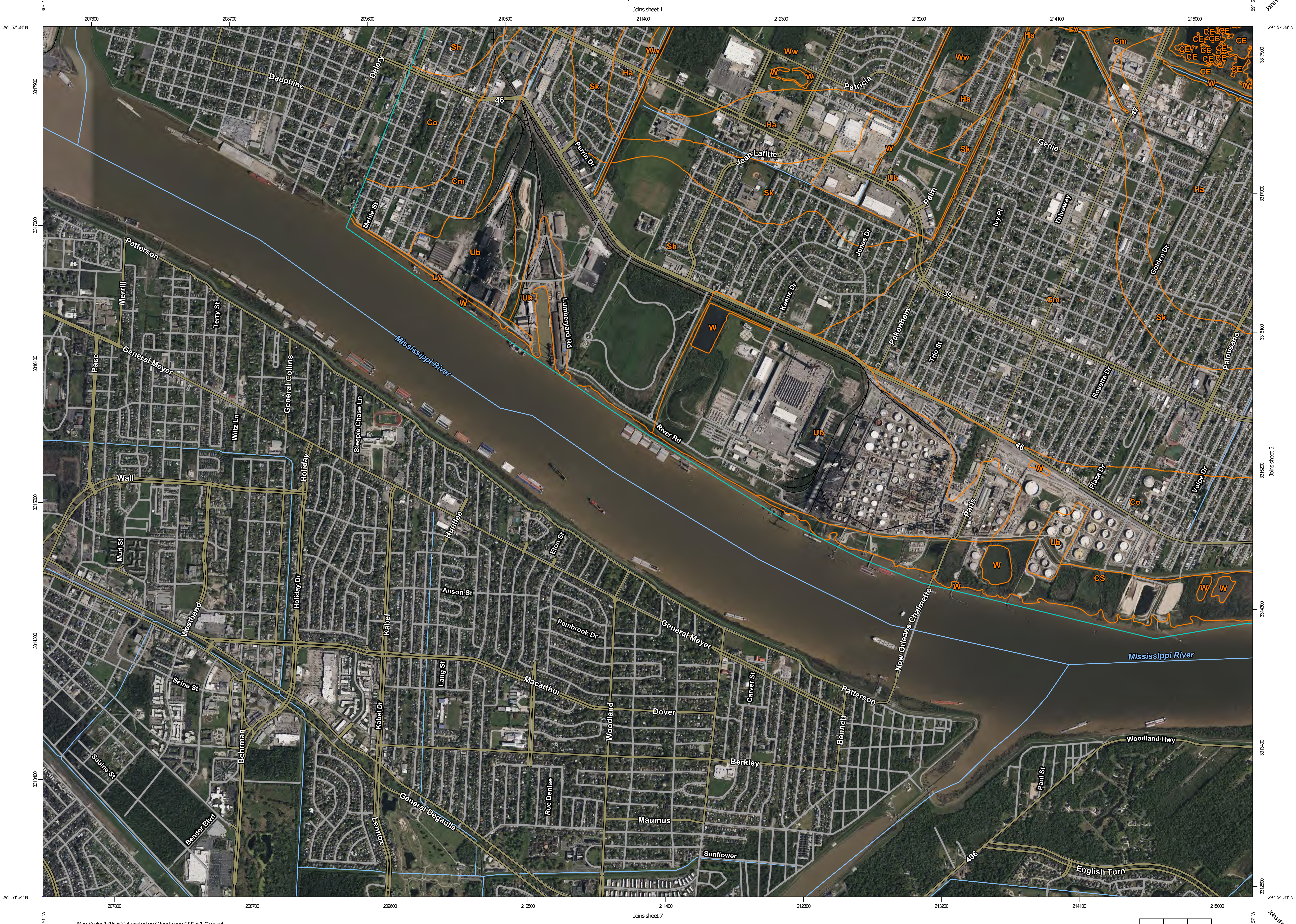
Joins sheet 1
Joins sheet 2
Joins sheet 5
Joins sheet 7
Joins sheet 8
90° 1' 51" W
89° 56' 57" W
29° 57' 38" N
29° 54' 34" N
207800
208700
209600
210500
211400
212300
213200
214100
215000
3317900
3317000
3316100
3315200
3314300
3313400
3312500
Mississippi River
Dauphine
Delery
Jean Lafitte
Patricia
Genie
Perrin Dr
Mehle St
Lumberyard Rd
River Rd
Jones Dr
Keane Dr
Pakenham
Palm
Ivy Pl
Driveway
Golden Dr
Trio St
Rosetta Dr
Palmisano
Plaza Dr
Vope Dr
Paris
New Orleans Chalmette
Patterson
Merrill
Terry St
General Meyer
Pace
Wiltz Ln
General Collins
Steeple Chase Ln
Holiday
Wall
Murl St
Holiday Dr
Westbend
Huntlee
Eton St
Anson St
Pembrook Dr
Seine St
Kabel
Kabel Dr
Lang St
Macarthur
Woodland
Dover
Carver St
Bennett
Behrman
Sabine St
Berkley
Bender Blvd
General Degaulle
Lennox
Rue Denise
Maumus
Sunflower
Woodland Hwy
Paul St
English Turn
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47
39
406
Sh
Ww
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Sk
Co
Cm
Ub
Lv
W
CE
CS

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.

0 200 400 800 1200 Meters

0 500 1000 2000 3000 Feet

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Map Sheet Location

Joins sheet 1
Joins sheet 2
Joins sheet 3
Joins sheet 4
Joins sheet 6
Joins sheet 7
Joins sheet 8
Joins sheet 9

89° 56' 57" W
89° 52' 2" W
29° 57' 38" N
29° 54' 34" N
215700
216600
217500
218400
219300
220200
221100
222000
222900
3317700
3316800
3315900
3315000
3314100
3313200

Volpe Dr
Corinne
Palmisano
Jacob Dr
Gallo Dr
Bartolo St
Mary Ann Dr
Deboutchel
Walkers Ln
Archbishop Hannan
Nancy St
Meraux Ln
Meadow Dr
Livaccari Dr
Guerra Dr
Moss Ln
Patterson Rd
Stanton Rd
E Saint Bernard Hwy
Mississippi River
39
46
406

AD
BB
CE
CS
Cm
Co
Ha
Sh
Sk
Ub
Ww
W
LF

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.
Meters: 0 200 400 800 1200
Feet: 0 500 1000 2000 3000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Map Sheet Location

Custom Soil Resource Report
Soil Map
Map sheet 6 of 9

Joins sheet 2
Joins sheet 3
Joins sheet 5
Joins sheet 8
Joins sheet 9

89° 52' 2" W
89° 47' 8" W
29° 57' 38" N
29° 54' 34" N
223500
224400
225300
226200
227100
228000
228900
229800
230700
3317500
3316600
3315700
3314800
3313900
3313000
3312100

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.

N

0 200 400 800 1200 Meters

0 500 1000 2000 3000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Map Sheet Location

Joins sheet 4
Joins sheet 5
Joins sheet 8

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89° 56' 57" W
29° 54' 34" N
29° 51' 31" N

207600 208500 209400 210300 211200 212100 213000 213900 214800

3312400 3311500 3310600 3309700 3308800 3307900 3307000

Terry
Dover Ln
Tullis
Lennox
Mimosa Dr
Tullis Dr
General Degaulle
Woodland
Pinehurst Dr
E Marlin Ct
Newport Cir
Carol Sue
Lamar Ave
Morningside Dr
Trianon Sq
Park Ln
406
F Edward Hebert Blvd
Armadillo Rd
Peter St
State Hwy 406
Main St
Behrman
Lapalco
Mildred St
Driveway
Mississippi River
English Turn Rd
Gwens Ln
Timber Ridge St
E X St
Willowbrook Dr
Cambridge St
Bazile Dr
23
Q St
Engineers
M St
Theta St
H St
E 3rd St
Highway 39
39
Wyndham S
Engineers Rd
Mu St
396

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.

N

Meters
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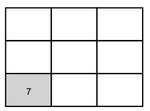
Feet
0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



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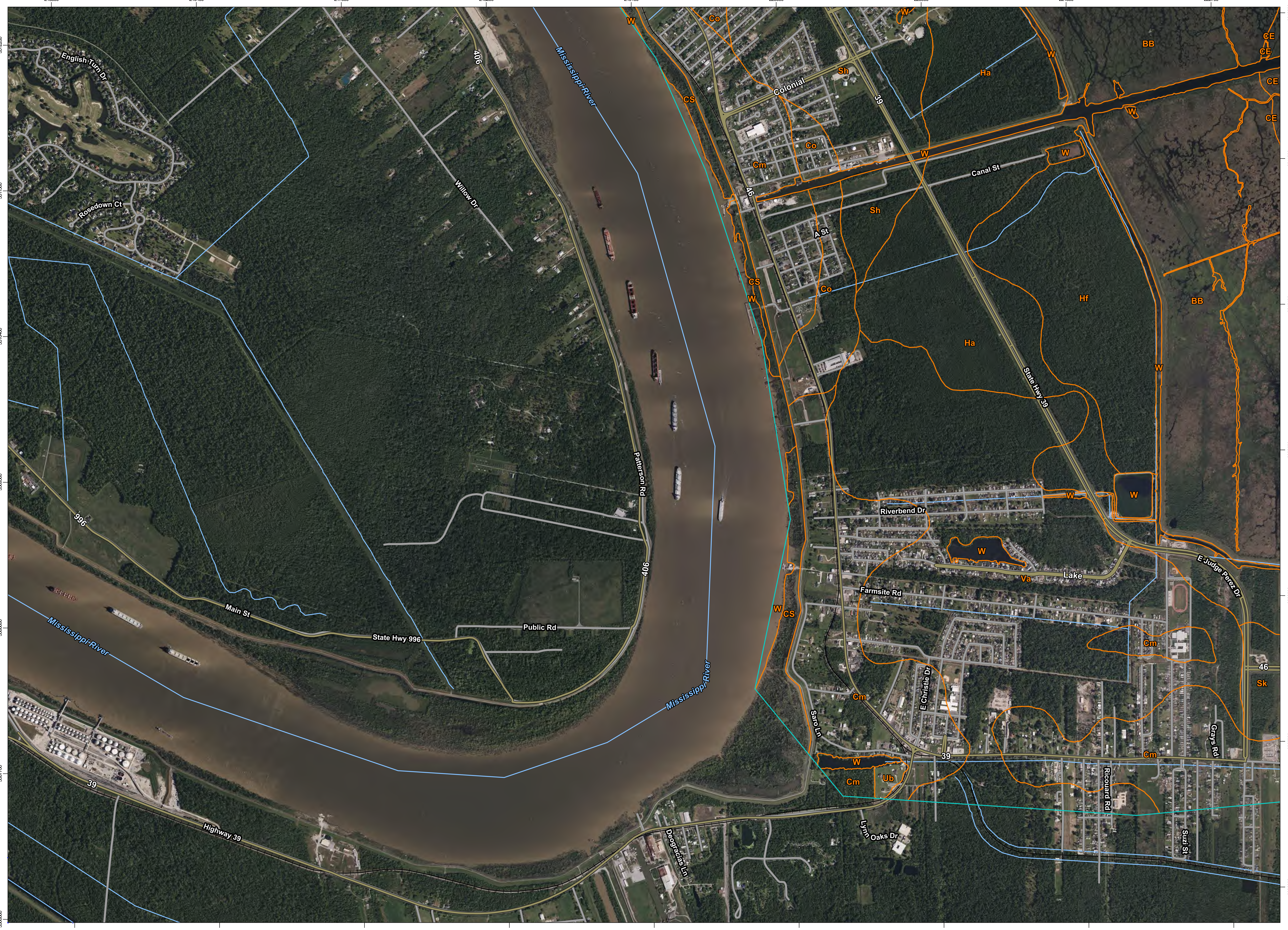
Joins sheet 4
Joins sheet 5
Joins sheet 6
Joins sheet 7
Joins sheet 9
29° 54' 34" N
29° 51' 31" N
89° 56' 57" W
89° 52' 2" W
Mississippi River
English Turn Dr
Rosedown Ct
Willow Dr
Patterson Rd
Main St
State Hwy 996
Public Rd
Highway 39
Deogracias Ln
Colonial
Canal St
A St
State Hwy 39
Riverbend Dr
Lake
Farmsite Rd
E Judge Perez Dr
E Christie Dr
Saro Ln
Lynn Oaks Dr
Ricouard Rd
Grays Rd
Suzi St
Co
Sh
Ha
BB
CE
W
CS
Cm
Hf
Va
Sk
Ub

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Map Sheet Location

Custom Soil Resource Report
Soil Map
Map sheet 9 of 9

Joins sheet 5

Joins sheet 6

Joins sheet 8

89° 52' 2" W

89° 47' 8" W

29° 54' 34" N

29° 51' 31" N

223400 224300 225200 226100 227000 227900 228800 229700 230600

3312000 3311100 3310200 3309300 3308400 3307500 3306600

BB CE W LF AD Ha Sk Cm

E La 46 46 W Sylvia Sylvia Blvd Triffany Ct Bayou Rd Neihlig Ln Callais Ln Billiot Dr Neal Ln Di Carlo Mobile Home Park Russell Dr

Map Scale: 1:15,800 if printed on C landscape (22" x 17") sheet.

Meters 0 200 400 800 1200

Feet 0 500 1000 2000 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Map Sheet Location

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orleans Parish, Louisiana
Survey Area Data: Version 18, Sep 12, 2023

Soil Survey Area: St. Bernard Parish, Louisiana
Survey Area Data: Version 19, Sep 12, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 12, 2023—Mar 22, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AT	Aquents, dredged, frequently flooded	1,170.7	3.6%
Ha	Harahan clay, 0 to 1 percent slopes	0.8	0.0%
W	Water	202.3	0.6%
Subtotals for Soil Survey Area		**1,373.8**	**4.2%**
Totals for Area of Interest		**32,656.9**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AD	Aquents, dredged, frequently flooded	4,015.1	12.3%
BB	Barbary clay	3,347.8	10.3%
CE	Clovelly muck, 0 to 0.2 percent slopes, very frequently flooded	2,902.9	8.9%
Cm	Cancienne silt loam, 0 to 1 percent slopes	2,430.5	7.4%
Co	Cancienne silty clay loam, 0 to 1 percent slopes	1,125.6	3.4%
CS	Cancienne and Schriever soils, frequently flooded	465.0	1.4%
Dp	Dumps	148.3	0.5%
Ha	Harahan clay, 0 to 1 percent slopes	2,432.6	7.4%
Hf	Harahan clay, frequently flooded	300.7	0.9%
LF	Lafitte muck, 0 to 0.2 percent slopes, very frequently flooded	4,485.6	13.7%
LV	Levees-Borrow pits complex, 0 to 25 percent slopes	51.6	0.2%
Sh	Schriever silty clay loam, 0 to 1 percent slopes	1,852.7	5.7%
Sk	Schriever clay, 0 to 1 percent slopes, rarely flooded	663.7	2.0%
Ub	Urban land	959.6	2.9%
Va	Vacherie silt loam, 0 to 3 percent slopes	915.3	2.8%
W	Water	4,196.0	12.8%
Ww	Westwego clay, 0 to 0.5 percent slopes	989.5	3.0%
Subtotals for Soil Survey Area		**31,282.6**	**95.8%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Totals for Area of Interest		**32,656.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Orleans Parish, Louisiana

AT—Aquents, dredged, frequently flooded

Map Unit Setting

National map unit symbol: m406
Elevation: -20 to 70 feet
Mean annual precipitation: 51 to 75 inches
Mean annual air temperature: 63 to 79 degrees F
Frost-free period: 294 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Marshes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None

Minor Components

Minor components

Percent of map unit: 10 percent
Hydric soil rating: No

Ha—Harahan clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tpcc
Elevation: 0 to 50 feet
Mean annual precipitation: 54 to 72 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 265 to 315 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Harahan and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Harahan

Setting

Landform: Backswamps
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Nonfluid over fluid clayey alluvium

Typical profile

A - 0 to 4 inches: clay
Bg - 4 to 20 inches: clay
Ab - 20 to 32 inches: clay
Cg - 32 to 75 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 8 to 16 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F131AY501LA - Delta Plain - Frequently Flooded Ponded Very Poorly Drained Oxbows and Swales
Hydric soil rating: Yes

Minor Components

Westwego

Percent of map unit: 5 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Schriever

Percent of map unit: 5 percent
Landform: Backswamps
Landform position (three-dimensional): Talf

Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: 1jfqd
Mean annual precipitation: 51 to 75 inches
Mean annual air temperature: 63 to 79 degrees F
Frost-free period: 294 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Water, large: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

St. Bernard Parish, Louisiana

AD—Aquents, dredged, frequently flooded

Map Unit Setting

National map unit symbol: dlkz
Elevation: 0 to 30 feet
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Marshes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None

Minor Components

Minor components

Percent of map unit: 10 percent
Hydric soil rating: No

BB—Barbary clay

Map Unit Setting

National map unit symbol: dll0
Elevation: 0 to 50 feet
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Barbary and similar soils: 86 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Barbary

Setting

Landform: Swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Fluid clayey backswamp deposits

Typical profile

Ag - 0 to 6 inches: clay
Cg - 6 to 60 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: D
Ecological site: F131AY501LA - Delta Plain - Frequently Flooded Ponded Very Poorly Drained Oxbows and Swales
Hydric soil rating: Yes

Minor Components

Minor components

Percent of map unit: 14 percent
Hydric soil rating: No

CE—Clovelly muck, 0 to 0.2 percent slopes, very frequently flooded

Map Unit Setting

National map unit symbol: 2tpng
Elevation: 0 feet
Mean annual precipitation: 43 to 75 inches
Mean annual air temperature: 57 to 79 degrees F

Frost-free period: 219 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Clovelly, very frequently flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Clovelly, Very Frequently Flooded

Setting

Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Moderately thick herbaceous organic material over very fluid clayey alluvium

Typical profile

Oa - 0 to 28 inches: muck
Cg - 28 to 79 inches: clay

Properties and qualities

Slope: 0 to 0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.05 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: Frequent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: C/D
Ecological site: R151XY004LA - Brackish Fluid Marsh 60-64 PZ
Hydric soil rating: Yes

Minor Components

Scatlake, very frequently flooded

Percent of map unit: 10 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R151XY002LA - Saline Marsh 55-64 PZ
Hydric soil rating: Yes

Bancker, very frequently flooded

Percent of map unit: 3 percent
Landform: Marshes

Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R151XY004LA - Brackish Fluid Marsh 60-64 PZ
Hydric soil rating: Yes

Gentilly, frequently flooded

Percent of map unit: 2 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R151XY005LA - Brackish Firm Mineral Marsh 55-64 PZ
Hydric soil rating: Yes

Cm—Cancienne silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2s8sq
Elevation: 0 to 50 feet
Mean annual precipitation: 50 to 69 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 240 to 365 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cancienne and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cancienne

Setting

Landform: Natural levees
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap - 0 to 23 inches: silt loam
Bg - 23 to 67 inches: silty clay loam
BCg - 67 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: About 18 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Minor Components

Carville

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Thibaut

Percent of map unit: 3 percent
Landform: Natural levees
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: No

Gramercy

Percent of map unit: 2 percent
Landform: Natural levees
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Co—Cancienne silty clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2qr6x
Elevation: 0 to 50 feet
Mean annual precipitation: 50 to 75 inches

Mean annual air temperature: 57 to 79 degrees F
Frost-free period: 258 to 321 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cancienne, sicl, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cancienne, Sicl

Setting

Landform: Natural levees
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap - 0 to 7 inches: silty clay loam
Bg - 7 to 43 inches: silty clay loam
2BCg - 43 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 43 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Available water supply, 0 to 60 inches: Very high (about 12.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Minor Components

Gramercy

Percent of map unit: 10 percent
Landform: Natural levees
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Thibaut

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: No

CS—Cancienne and Schriever soils, frequently flooded

Map Unit Setting

National map unit symbol: dll3
Elevation: 0 to 120 feet
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Cancienne and similar soils: 51 percent
Schriever and similar soils: 35 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cancienne

Setting

Landform: Natural levees
Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 36 inches: silt loam
H3 - 36 to 60 inches: stratified very fine sandy loam to silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 48 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 12.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: Yes

Description of Schriever

Setting

Landform: Backswamps
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

H1 - 0 to 4 inches: silty clay loam
H2 - 4 to 43 inches: clay
H3 - 43 to 60 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Minor Components

Minor components

Percent of map unit: 14 percent
Hydric soil rating: No

Dp—Dumps

Map Unit Setting

National map unit symbol: dll6
Mean annual precipitation: 47 to 74 inches

Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition
Dumps: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dumps

Setting
Landform: Flood plains

Ha—Harahan clay, 0 to 1 percent slopes

Map Unit Setting
National map unit symbol: 2tpcc
Elevation: 0 to 50 feet
Mean annual precipitation: 54 to 72 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 265 to 315 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Harahan and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Harahan

Setting
Landform: Backswamps
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Nonfluid over fluid clayey alluvium

Typical profile
A - 0 to 4 inches: clay
Bg - 4 to 20 inches: clay
Ab - 20 to 32 inches: clay
Cg - 32 to 75 inches: clay

Properties and qualities
Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 8 to 16 inches
Frequency of flooding: Rare

Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F131AY501LA - Delta Plain - Frequently Flooded Ponded Very Poorly Drained Oxbows and Swales
Hydric soil rating: Yes

Minor Components

Schriever

Percent of map unit: 5 percent
Landform: Backswamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: Yes

Westwego

Percent of map unit: 5 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Hf—Harahan clay, frequently flooded

Map Unit Setting

National map unit symbol: dllb
Elevation: 0 feet
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Harahan and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Harahan

Setting

Landform: Backswamps
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Nonfluid over fluid clayey alluvium

Typical profile

H1 - 0 to 4 inches: clay
H2 - 4 to 27 inches: clay
H3 - 27 to 62 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: F131AY501LA - Delta Plain - Frequently Flooded Ponded Very Poorly Drained Oxbows and Swales
Hydric soil rating: Yes

Minor Components

Minor components

Percent of map unit: 10 percent
Hydric soil rating: No

LF—Lafitte muck, 0 to 0.2 percent slopes, very frequently flooded

Map Unit Setting

National map unit symbol: 2tpbw
Elevation: 0 feet
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 290 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Lafitte, very frequently flooded, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lafitte, Very Frequently Flooded

Setting

Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Herbaceous organic material over clayey alluvium

Typical profile

Oa - 0 to 75 inches: muck
Cg - 75 to 79 inches: clay

Properties and qualities

Slope: 0 to 0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.28 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Very high (about 19.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Ecological site: R151XY004LA - Brackish Fluid Marsh 60-64 PZ
Hydric soil rating: Yes

Minor Components

Clovelly, very frequently flooded

Percent of map unit: 15 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R151XY004LA - Brackish Fluid Marsh 60-64 PZ
Hydric soil rating: Yes

Kenner, very frequently flooded

Percent of map unit: 5 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear

Ecological site: R151XY008LA - Fresh Fluid Marsh 60-64 PZ
Hydric soil rating: Yes

LV—Levees-Borrow pits complex, 0 to 25 percent slopes

Map Unit Setting

National map unit symbol: 1j7gt
Elevation: 0 to 450 feet
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Arents and similar soils: 60 percent
Aquents and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arents

Setting

Landform: Levees
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: High
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A/D
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Description of Aquents

Setting

Landform: Natural levees
Down-slope shape: Convex
Across-slope shape: Linear

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Depth to water table: About 0 to 12 inches
Frequency of flooding: Rare
Frequency of ponding: None

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: D
Ecological site: F131AY501LA - Delta Plain - Frequently Flooded Ponded Very Poorly Drained Oxbows and Swales
Hydric soil rating: Yes

Sh—Schriever silty clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tpcn
Elevation: 0 to 50 feet
Mean annual precipitation: 54 to 70 inches
Mean annual air temperature: 64 to 75 degrees F
Frost-free period: 235 to 350 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Schriever and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Schriever

Setting

Landform: Backswamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium

Typical profile

Ap - 0 to 5 inches: silty clay loam
Bssg1 - 5 to 33 inches: clay
Bssg2 - 33 to 60 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Forage suitability group: Unnamed (G131AY001LA)
Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: Yes

Minor Components

Cancienne, sicl

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Gramercy

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: No

Sk—Schriever clay, 0 to 1 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2qr6r
Elevation: 0 to 20 feet
Mean annual precipitation: 53 to 70 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 258 to 321 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Schriever and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Schriever

Setting

Landform: Backswamps on flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium

Typical profile

Ap - 0 to 8 inches: clay
Bssg1 - 8 to 39 inches: clay
Bssg2 - 39 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Forage suitability group: Unnamed (G131AY001LA)
Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: Yes

Minor Components

Thibaut

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: No

Gramercy

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Ub—Urban land

Map Unit Setting

National map unit symbol: dllj
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Flood plains

Va—Vacherie silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tpcy
Elevation: 10 to 50 feet
Mean annual precipitation: 60 to 67 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 246 to 365 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Vacherie, gently undulating, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vacherie, Gently Undulating

Setting

Landform: Natural levees
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty alluvium over clayey alluvium

Typical profile

Ap - 0 to 24 inches: silt loam
2Agb - 24 to 33 inches: silty clay
2Bgb - 33 to 60 inches: clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 9 to 28 inches to strongly contrasting textural stratification
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 9 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Minor Components

Cancienne

Percent of map unit: 5 percent
Landform: Natural levees
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F131AY503LA - Delta Plain - Somewhat Poorly Drained Bottomland Hardwoods
Hydric soil rating: No

Schriever

Percent of map unit: 5 percent
Landform: Backswamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp

Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: Yes

W—Water

Map Unit Setting
National map unit symbol: 1j7gv
Mean annual precipitation: 47 to 74 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 272 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition
Water, large: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Ww—Westwego clay, 0 to 0.5 percent slopes

Map Unit Setting
National map unit symbol: 2tpcs
Elevation: -20 to 0 feet
Mean annual precipitation: 51 to 72 inches
Mean annual air temperature: 59 to 79 degrees F
Frost-free period: 265 to 315 days
Farmland classification: Not prime farmland

Map Unit Composition
Westwego and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Westwego

Setting
Landform: Backswamps
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Semifluid clayey alluvium over herbaceous organic material

Typical profile
A - 0 to 3 inches: clay
Bg - 3 to 15 inches: clay
Agb - 15 to 17 inches: clay
Bgb - 17 to 21 inches: clay
2Ogb - 21 to 36 inches: muck
3Cgb - 36 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 19 to 26 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 12.0
Available water supply, 0 to 60 inches: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Hydric soil rating: Yes

Minor Components

Schriever

Percent of map unit: 4 percent
Landform: Backswamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY502LA - Delta Plain - Poorly Drained Backswamp
Other vegetative classification: Unnamed (G131AY001LA)
Hydric soil rating: Yes

Harahan

Percent of map unit: 3 percent
Landform: Backswamps
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F131AY501LA - Delta Plain - Frequently Flooded Ponded Very Poorly Drained Oxbows and Swales
Hydric soil rating: Yes

Allemands, very frequently flooded

Percent of map unit: 3 percent
Landform: Marshes
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R151XY008LA - Fresh Fluid Marsh 60-64 PZ
Hydric soil rating: Yes

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands–Orleans Parish, Louisiana		
Map Symbol	**Map Unit Name**	**Farmland Classification**
AT	Aquents, dredged, frequently flooded	Not prime farmland
Ha	Harahan clay, 0 to 1 percent slopes	All areas are prime farmland
W	Water	Not prime farmland

Prime and other Important Farmlands–St. Bernard Parish, Louisiana		
Map Symbol	**Map Unit Name**	**Farmland Classification**
AD	Aquents, dredged, frequently flooded	Not prime farmland
BB	Barbary clay	Not prime farmland
CE	Clovelly muck, 0 to 0.2 percent slopes, very frequently flooded	Not prime farmland
Cm	Cancienne silt loam, 0 to 1 percent slopes	All areas are prime farmland
Co	Cancienne silty clay loam, 0 to 1 percent slopes	All areas are prime farmland
CS	Cancienne and Schriever soils, frequently flooded	Not prime farmland
Dp	Dumps	Not prime farmland
Ha	Harahan clay, 0 to 1 percent slopes	All areas are prime farmland
Hf	Harahan clay, frequently flooded	Not prime farmland
LF	Lafitte muck, 0 to 0.2 percent slopes, very frequently flooded	Not prime farmland
LV	Levees-Borrow pits complex, 0 to 25 percent slopes	Not prime farmland
Sh	Schriever silty clay loam, 0 to 1 percent slopes	All areas are prime farmland
Sk	Schriever clay, 0 to 1 percent slopes, rarely flooded	All areas are prime farmland
Ub	Urban land	Not prime farmland
Va	Vacherie silt loam, 0 to 3 percent slopes	All areas are prime farmland
W	Water	Not prime farmland
Ww	Westwego clay, 0 to 0.5 percent slopes	Not prime farmland

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are

either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–LA071-Orleans Parish, Louisiana					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
AT: Aquents, dredged, frequently flooded	Aquents	90	Marshes	Yes	2,4
	Minor components	10	—	No	—
Ha: Harahan clay, 0 to 1 percent slopes	Harahan	85-100	Backswamps	Yes	2
	Westwego	5-10	Marshes	Yes	2
	Schriever	5-10	Backswamps	Yes	2
W: Water	Water-Large	100	—	No	—

Hydric Soil List - All Components–LA087-St. Bernard Parish, Louisiana					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
AD: Aquents, dredged, frequently flooded	Aquents	90	Marshes	Yes	2,4
	Minor components	10	—	No	—
BB: Barbary clay	Barbary	86	Swamps	Yes	2,3,4
	Minor components	14	—	No	—
CE: Clovelly muck, 0 to 0.2 percent slopes, very frequently flooded	Clovelly-Very frequently flooded	80-91	Marshes	Yes	1,3,4
	Scatlake-Very frequently flooded	5-12	Marshes	Yes	2,3,4
	Bancker-Very frequently flooded	1-5	Marshes	Yes	2,3,4
	Gentilly-Frequently flooded	0-3	Marshes	Yes	2,3,4
Cm: Cancienne silt loam, 0 to 1 percent slopes	Cancienne	85-98	Natural levees	No	—
	Carville	2-10	Natural levees	No	—
	Thibaut	1-5	Natural levees	No	—
	Gramercy	1-5	Natural levees	Yes	2
Co: Cancienne silty clay loam, 0 to 1 percent slopes	Cancienne-Sicl	65-95	Natural levees	No	—
	Gramercy	2-15	Natural levees	Yes	2
	Thibaut	1-10	Natural levees	No	2
CS: Cancienne and Schriever soils, frequently flooded	Cancienne	51	Natural levees	Yes	4
	Schriever	35	Backswamps	Yes	2,4
	Minor components	14	—	No	—
Dp: Dumps	Dumps	100	Flood plains	Yes	2
Ha: Harahan clay, 0 to 1 percent slopes	Harahan	85-100	Backswamps	Yes	2
	Schriever	5-10	Backswamps	Yes	2
	Westwego	5-10	Marshes	Yes	2
Hf: Harahan clay, frequently flooded	Harahan	90	Backswamps	Yes	2,4
	Minor components	10	—	No	—
LF: Lafitte muck, 0 to 0.2 percent slopes, very frequently flooded	Lafitte-Very frequently flooded	80	Marshes	Yes	1,3,4
	Clovelly-Very frequently flooded	5-20	Marshes	Yes	1,3,4
	Kenner-Very frequently flooded	0-5	Marshes	Yes	1,2,3,4
LV: Levees-Borrow pits complex, 0 to 25 percent slopes	Arents	60	Levees	No	—
	Aquents	40	Natural levees	Yes	2,3

Hydric Soil List - All Components–LA087-St. Bernard Parish, Louisiana					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
Sh: Schriever silty clay loam, 0 to 1 percent slopes	Schriever	85-100	Backswamps	Yes	2
	Cancienne-Sicl	0-10	Natural levees	No	—
	Gramercy	0-10	Natural levees	No	2
Sk: Schriever clay, 0 to 1 percent slopes, rarely flooded	Schriever	85-98	Backswamps on flood plains	Yes	2
	Thibaut	0-7	Natural levees	No	—
	Gramercy	2-8	Natural levees	Yes	2
Ub: Urban land	Urban land	100	Flood plains	Yes	2
Va: Vacherie silt loam, 0 to 3 percent slopes	Vacherie-Gently undulating	85-100	Natural levees	No	—
	Cancienne	3-10	Natural levees	No	—
	Schriever	2-7	Backswamps	Yes	2
W: Water	Water-Large	100	—	No	—
Ww: Westwego clay, 0 to 0.5 percent slopes	Westwego	85-100	Backswamps	Yes	2
	Schriever	4-5	Backswamps	Yes	2
	Harahan	2-5	Backswamps	Yes	2
	Allemands-Very frequently flooded	2-5	Marshes	Yes	1,3,4

Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national

list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1

through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties–Orleans Parish, Louisiana

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Ha—Harahan clay, 0 to 1 percent slopes														
Harahan	90	D	0-4	Clay	OH, CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	70-79-89	32-45-58
			4-20	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	79-86-94	51-55-60
			20-32	Clay	CH	A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	85-93-97	56-58-59
			32-75	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	99-100-100	80-86-87	52-56-56

Engineering Properties–St. Bernard Parish, Louisiana

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
BB—Barbary clay														
Barbary	86	D	0-6	Clay	MH, OH	A-7-5, A-8	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	71-105-137	42-53-63
			6-60	Mucky clay, clay	MH, OH	A-7-5, A-8	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	67-103-137	43-53-63

Engineering Properties–St. Bernard Parish, Louisiana														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
CE—Clovelly muck, 0 to 0.2 percent slopes, very frequently flooded														
Clovelly, very frequently flooded	85	C/D	0-28	Muck	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			28-79	Clay, silty clay, mucky clay	CL, MH, ML, CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	95-100-100	91-99-100	70-84 -133	44-54-60
Cm—Cancienne silt loam, 0 to 1 percent slopes														
Cancienne	90	C	0-23	Silt loam	CL	A-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	98-100-100	92-95-99	29-36 -47	12-15-20
			23-67	Silty clay loam, silt loam, loam	CL	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	88-98-100	75-91-100	31-41 -58	13-21-35
			67-80	Silty clay loam, silt loam, loam	CL, CL-ML, ML	A-4, A-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	92-100-100	86-98-100	25-37 -49	4-18-28
Co—Cancienne silty clay loam, 0 to 1 percent slopes														
Cancienne, sicl	85	C	0-7	Silty clay loam	CL	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	91-100-100	90-96-100	38-47 -57	19-23-28
			7-43	Silt loam, silty clay loam	CL, ML	A-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	88-98-100	85-91-100	30-38 -60	13-18-35
			43-79	Silty clay loam, silty clay loam, silty clay	CL, CH	A-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	92-100-100	75-88-100	31-39 -46	13-19-25

Engineering Properties–St. Bernard Parish, Louisiana														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
CS—Cancienne and Schriever soils, frequently flooded														
Cancienne	51	C	0-9	Silt loam	CL, CL-ML, ML	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	75-88-100	25-35-45	4-14-18
			9-36	Silty clay loam, silt loam, loam	CL	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	85-93-100	26-39-51	9-18-28
			36-60	Stratified very fine sandy loam to silty clay	CL, CL-ML, ML	A-4, A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	75-88-100	25-37-49	4-18-28
Schriever	35	D	0-4	Silty clay loam	CL	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	38-46-53	19-22-25
			4-43	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	68-86-105	44-56-68
			43-60	Clay, silty clay loam, silt loam	CH, CL	A-6, A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	37-66-95	11-35-50
Ha—Harahan clay, 0 to 1 percent slopes														
Harahan	90	D	0-4	Clay	CH, OH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	70-79-89	32-45-58
			4-20	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	79-86-94	51-55-60
			20-32	Clay	CH	A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	85-93-97	56-58-59
			32-75	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	99-100-100	80-86-87	52-56-56

Engineering Properties–St. Bernard Parish, Louisiana														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Hf—Harahan clay, frequently flooded														
Harahan	90	D	0-4	Clay	CH, MH, OH	A-7-5, A-7-6, A-8	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	64-109-151	36-52-66
			4-27	Clay, silty clay	CH, MH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	60-75-90	35-43-50
			27-62	Clay, silty clay, mucky clay	CH, MH, OH	A-8, A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	60-75-90	35-43-50
LF—Lafitte muck, 0 to 0.2 percent slopes, very frequently flooded														
Lafitte, very frequently flooded	80	A/D	0-75	Muck	PT	A-8	0- 0- 0	0- 0- 0	—	—	—	—	—	—
			75-79	Clay, silty clay, silty clay loam	CH, CL	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	68-96-100	59-87-100	38-75-111	21-41-61
Sh—Schriever silty clay loam, 0 to 1 percent slopes														
Schriever	90	D	0-5	Silty clay loam, silty clay	CL, CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	91-100-100	88-95-100	41-46-70	24-27-44
			5-33	Clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	98-100-100	97-100-100	86-87-87	60
			33-60	Clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	96-100-100	94-100-100	76-80-86	52-55-60

Engineering Properties–St. Bernard Parish, Louisiana														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Sk—Schriever clay, 0 to 1 percent slopes, rarely flooded														
Schriever	90	D	0-8	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	100-100 -100	95-98-100	71-97 -104	44-59-63
			8-39	Clay, silty clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	100-100 -100	95-98-100	66-96 -102	41-64-68
			39-80	Clay, silty clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	100-100 -100	95-98-100	66-75 -102	41-48-68
Va—Vacherie silt loam, 0 to 3 percent slopes														
Vacherie, gently undulating	90	C	0-24	Silt loam	CL-ML, CL	A-6, A-4	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	95-99-100	85-91-96	24-29 -36	4-9 -15
			24-33	Clay, silty clay	CL, CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	92-97-100	82-89-98	47-50 -70	29-31-42
			33-60	Clay, silty clay	CL, CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	87-95-100	73-84-97	49-58 -81	30-37-54

Engineering Properties–St. Bernard Parish, Louisiana														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
Ww—Westwego clay, 0 to 0.5 percent slopes														
Westwego	90	D	0-3	Clay	CH	A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	85-93-97	56-58-59
			3-15	Clay	CH	A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	79-86-94	51-55-60
			15-17	Clay	CH	A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	85-93-97	56-58-59
			17-21	Clay	CH	A-7-5	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	79-86-94	51-55-60
			21-36	Muck	PT	A-8	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	100-100-100	—	—
			36-80	Clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	100-100-100	95-98-100	80-86-87	52-56-56

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Attachment B

USFWS IPaC Preliminary Report

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Orleans and St. Bernard counties, Louisiana

Local office

Louisiana Ecological Services Field Office

(337) 291-3100
(337) 291-3139

200 Dulles Drive

Lafayette, LA 70506

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

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

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Tricolored Bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered
West Indian Manatee Trichechus manatus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4469	Threatened Marine mammal

Birds

NAME	STATUS
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened

Reptiles

NAME	STATUS
Alligator Snapping Turtle Macrochelys temminckii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

Fishes

NAME	STATUS
Pallid Sturgeon Scaphirhynchus albus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7162	Endangered

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Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-

golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence

in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

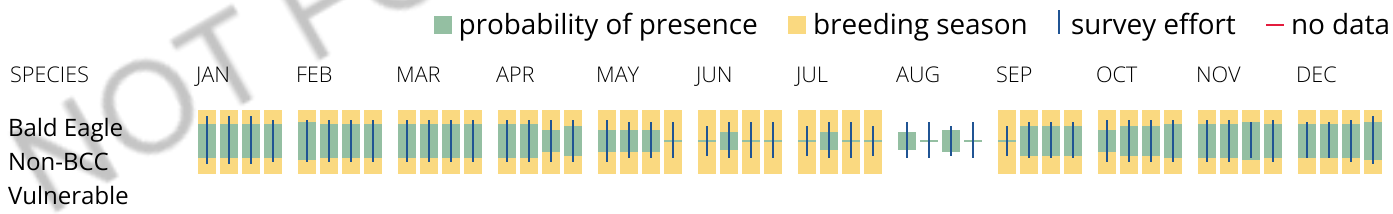
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



NOT FOR CONSULTATION

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON
American Golden-plover Pluvialis dominica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Cerulean Warbler Setophaga cerulea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 25 to Jul 20
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

Dickcissel Spiza americana — Breeds May 5 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Forster's Tern Sterna forsteri — Breeds Mar 1 to Aug 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Gull-billed Tern Gelochelidon nilotica — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9501

Kentucky Warbler Geothlypis formosa — Breeds Apr 20 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

King Rail Rallus elegans — Breeds May 1 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8936

Least Tern Sternula antillarum antillarum — Breeds Apr 25 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Little Blue Heron Egretta caerulea — Breeds Mar 10 to Oct 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

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Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Painted Bunting Passerina ciris — Breeds Apr 25 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Pectoral Sandpiper Calidris melanotos — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Loggerhead Shrike Lanius ludovicianus excubitorides — Breeds Feb 1 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8833

Prairie Warbler Setophaga discolor — Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red Knot Calidris canutus roselaari — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8880

Reddish Egret Egretta rufescens — Breeds Mar 1 to Sep 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/7617

Ruddy Turnstone Arenaria interpres morinella — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

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Sandwich Tern Thalasseus sandvicensis This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 31
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Swallow-tailed Kite Elanoides forficatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Whimbrel Numenius phaeopus hudsonicus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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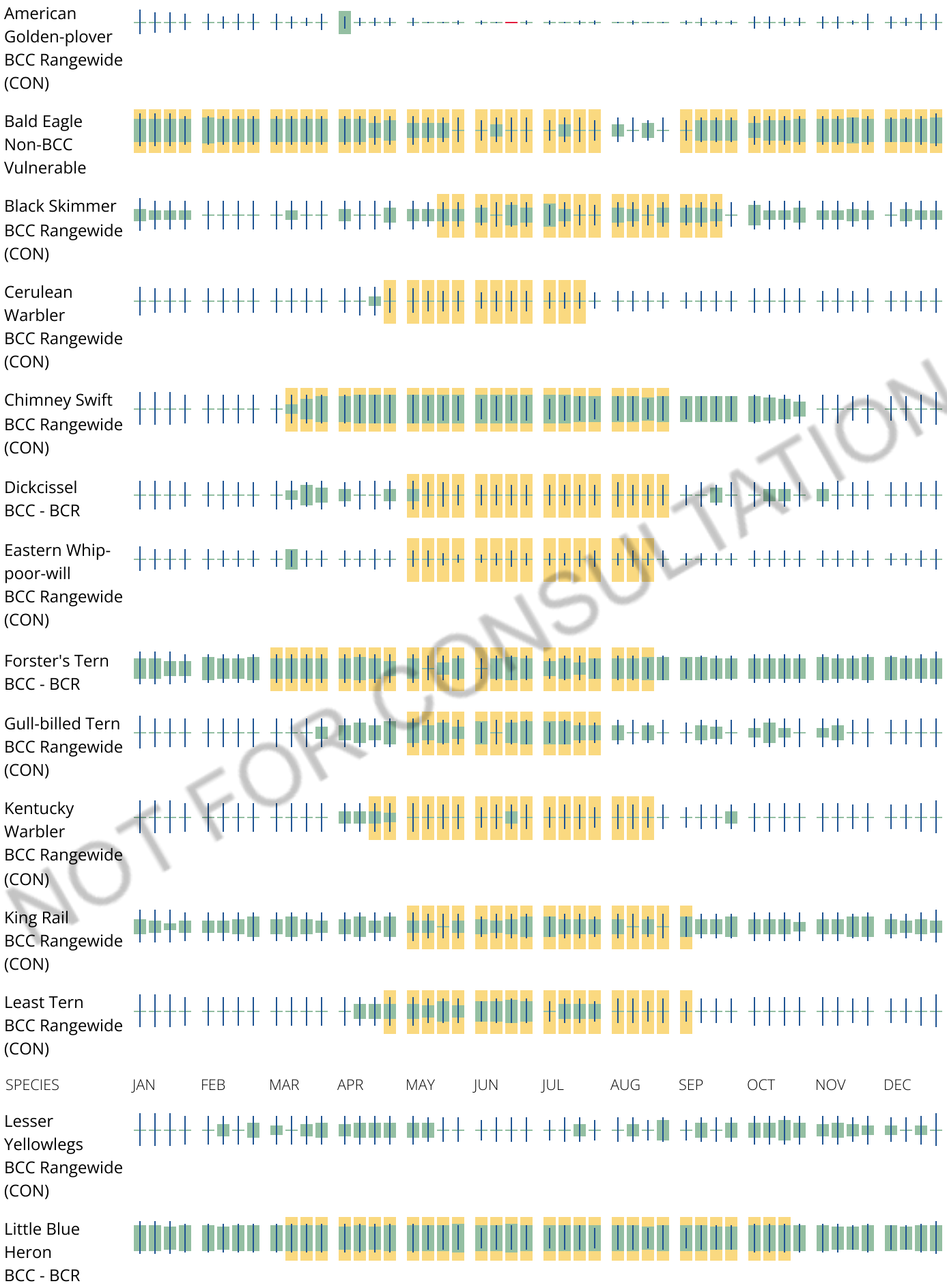

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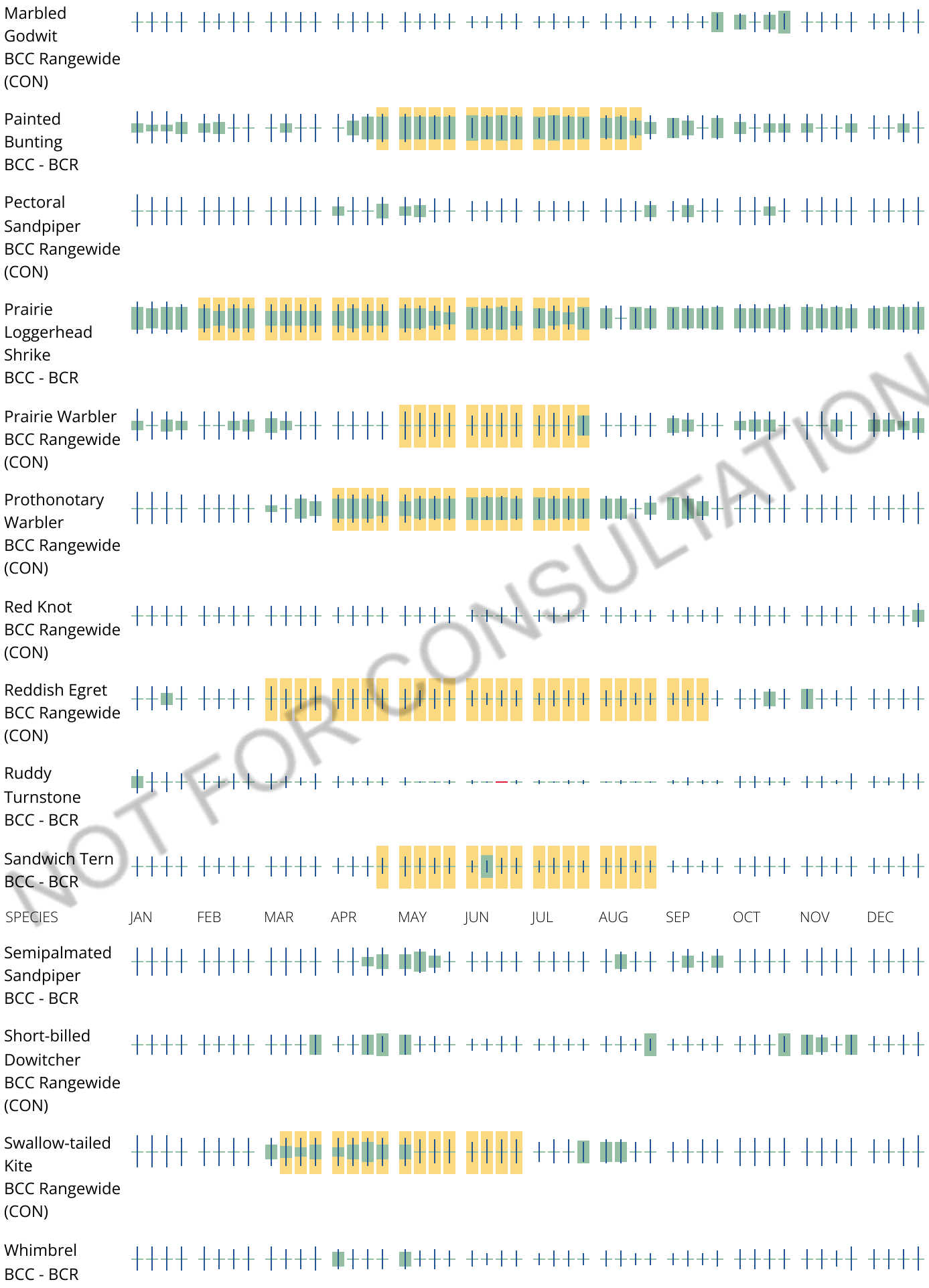

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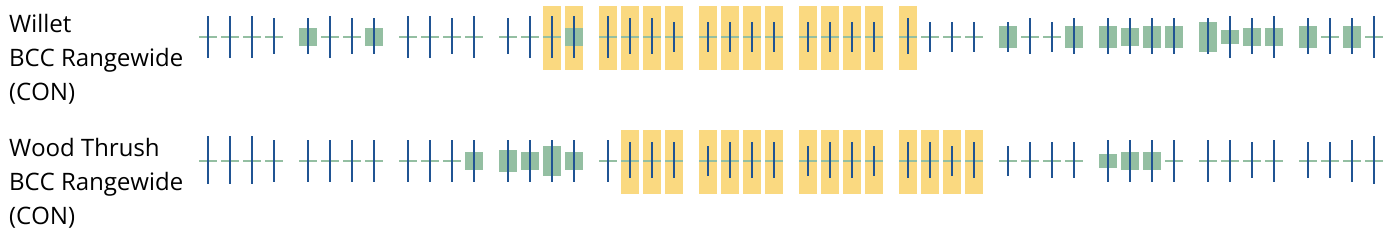

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of

NOT FOR CONSULTATION

presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee *Trichechus manatus*
https://ecos.fws.gov/ecp/species/4469

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

NOT FOR CONSULTATION

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

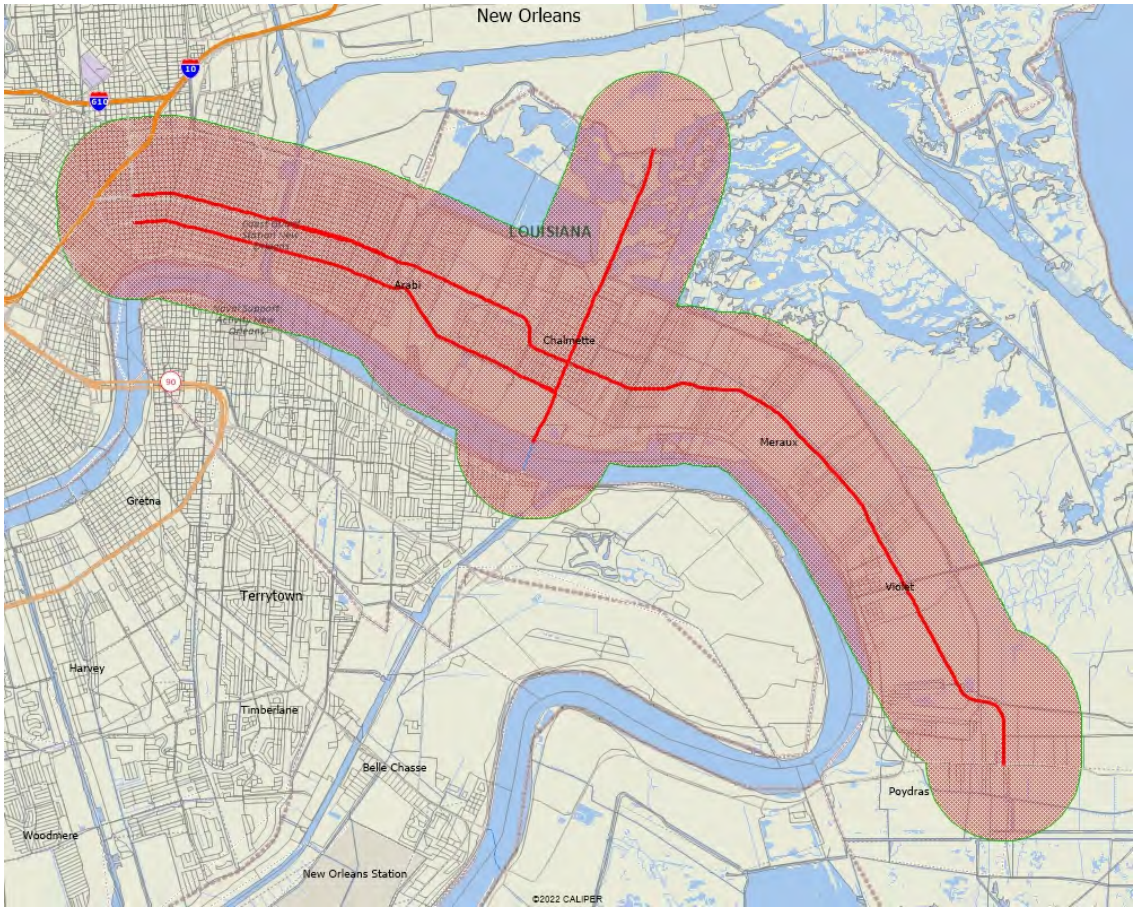
NOT FOR CONSULTATION

Attachment C

FHWA Screening Tool for Equity Analysis of Projects (STEAP) Report

Screening Tool for Equity Analysis of Projects (STEAP)
Project Buffer Analysis Profile Report

Data Source: American Community Survey 2016-2020
Prepared by FHWA Office of Planning



Analysis of 1 Buffer of Size 1.0 Miles

Reference Layers
City/Town: New Orleans LA
County: St. Bernard LA
State: Louisiana

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

1.0 Miles Buffer Analysis Summary Report

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
General Buffer Area Statistics					
Land Area (in square miles)	34		169	378	43,210
Population	89,701		391,249	46,694	4,664,616
Housing Units	44,762		192,012	17,151	2,074,664
Households	35,151		154,826	15,165	1,751,956
Families	16,933		71,567	10,361	1,116,752
Population by Race					
Total	89,701	100%	391,249	46,694	4,664,616
Population Reporting One Race	87,163	97%	97%	97%	97%
White	44,290	49%	33%	69%	61%
Black	39,541	44%	59%	23%	32%
American Indian	257	0%	0%	0%	1%
Asian	1,648	2%	3%	3%	2%
Pacific Islander	21	0%	0%	0%	0%
Some Other Race	1,407	2%	2%	2%	2%
Population Reporting Two or More Races	2,538	3%	3%	3%	3%
Population by Ethnicity					
Total	89,701	100%	391,249	46,694	4,664,616
Hispanic Origin	6,266	7%	5%	10%	5%
Not Hispanic	83,434	93%	95%	90%	95%
Total Non-Hispanic Population					
Total	83,434	100%	369,797	41,965	4,421,244
White Alone	40,491	49%	32%	69%	62%
Black or African American Alone	39,142	47%	62%	26%	34%
American Indian & Alaska Native Alone	129	0%	0%	0%	1%
Asian Alone	1,618	2%	3%	3%	2%
Native Hawaiian & Other Pacific Islander Alone	13	0%	0%	0%	0%
Some other Race Alone	301	0%	1%	0%	0%
Two or More Race	1,740	2%	2%	2%	2%

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
Total Hispanic Population *					
Total	6,266	100%	21,452	4,729	243,372
Hispanic – Mexican	1,358	22%	23%	20%	36%
Hispanic – Puerto Rican	344	5%	4%	5%	6%
Hispanic – Cuban	445	7%	8%	5%	5%
Hispanic – Other	4,119	66%	64%	70%	53%
Total American Indian Population *					
Total	257	100%	723	186	25,938
American Indian-Cherokee	3	1%	7%	2%	8%
American Indian-Chippewa		0%	1%	0%	0%
American Indian-Navajo		0%	0%	0%	1%
American Indian-Sioux		0%	0%	0%	0%
Population by Sex					
Total	89,701	100%	391,249	46,694	4,664,616
Male	44,545	50%	47%	49%	49%
Female	45,155	50%	53%	51%	51%
Population by Age					
Total	89,701	100%	391,249	46,694	4,664,616
Age 0-17 (children)	19,374	22%	20%	27%	24%
Age 18-64 (Adult)	57,574	64%	65%	62%	61%
Age 65+ (Senior Population)	12,753	14%	15%	11%	15%
Age 5+ (used for “language spoken at home”)	84,439	94%	94%	93%	93%
Age 16+ (used for “Labor Forces”)	72,166	80%	82%	76%	79%
Age 18+ (Used for “voting age”)	70,327	78%	80%	73%	76%
Age 25+ (used for “Education Attainment”)	64,163	72%	71%	66%	67%
Employed Population Age 16+ Years					
Total	72,166	100%	321,207	35,503	3,688,107
In Labor Force	43,144	60%	61%	60%	59%
Civilian Unemployed in Labor Force	4,783	7%	5%	5%	4%
Not in Labor Force	29,023	40%	39%	40%	41%

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
Population 25+ by Educational Attainment					
Total	64,163	100%	279,378	30,710	3,139,520
Less than 9th Grade	3,186	5%	4%	6%	5%
9th - 12th Grade, No Diploma	7,705	12%	9%	14%	9%
High School Graduate	18,091	28%	23%	32%	33%
Some College, No Degree	15,941	25%	22%	27%	21%
Associate Degree	4,507	7%	5%	7%	7%
Bachelor's Degree or more	14,733	23%	38%	14%	25%
Households by Household Size					
Total Households	35,151	100%	154,826	15,165	1,751,956
1-person households	15,578	44%	46%	27%	31%
2-person households	9,626	27%	29%	29%	33%
3-person households	4,954	14%	13%	19%	16%
4-person households	2,737	8%	8%	12%	12%
5-person households	1,236	4%	2%	7%	5%
6-person households	689	2%	1%	4%	2%
7+ person households	330	1%	1%	2%	1%
Households by Household Type (including Living Alone)					
Total Households	35,151	100%	154,826	15,165	1,751,956
Married-Couple family households	9,761	28%	26%	43%	43%
Male householder, no spouse present family households	1,593	5%	3%	6%	5%
Female householder, no spouse present family households	5,579	16%	17%	19%	15%
Householder living alone – nonfamily households	15,578	44%	46%	27%	31%
Householder not living alone – nonfamily households	2,640	8%	7%	5%	6%
Household Type for Children Under 18 years in Households *					
Total Population under 18 years in households (excluding householders, spouse and unmarried partners)	19,338	100%	77,839	12,372	1,094,979
Married-couple household	8,318	43%	39%	55%	57%
Cohabiting couple household	2,248	12%	9%	11%	8%
In male householder, no spouse/partner present household	704	4%	4%	3%	5%

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
In female householder, no spouse/partner present household	8,068	42%	47%	30%	30%
Households by Household Income					
Household Income Base	35,151	100%	154,826	15,165	1,751,956
< $15,000	7,592	22%	20%	17%	14%
$15,000 - $25,000	5,280	15%	13%	11%	12%
$25,000 - $35,000	4,003	11%	11%	10%	10%
$35,000 - $50,000	4,311	12%	11%	13%	12%
$50,000 - $75,000	5,065	14%	14%	16%	16%
$75,000 +	8,901	25%	31%	32%	34%
Selected Monthly Owner Costs as a % of Household Income in the past 12 months (with or without mortgage)					
Total Owner-Occupied Housing Units	18,958	100%	77,066	10,828	1,167,628
Less than 10.0%	4,440	23%	21%	29%	32%
10.0 to 14.9%	3,516	19%	15%	19%	19%
15.0 to 19.9%	2,393	13%	13%	13%	15%
20.0 to 24.9%	1,582	8%	11%	8%	10%
25.0 to 29.9%	1,250	7%	7%	8%	6%
30.0 to 34.9%	865	5%	5%	4%	4%
35.0 to 39.9%	543	3%	4%	2%	3%
40.0 to 49.9%	1,024	5%	7%	3%	3%
50.0% or more	2,606	14%	15%	9%	7%
Not computed	739	4%	3%	5%	1%
Gross Rent as a % of Household Income in the past 12 months					
Total Renter-Occupied Housing Units	16,193	100%	77,760	4,337	584,328
Less than 10.0%	669	4%	3%	6%	4%
10.0 to 14.9%	869	5%	6%	8%	8%
15.0 to 19.9%	1,011	6%	10%	9%	10%
20.0 to 24.9%	1,380	9%	9%	9%	9%
25.0 to 29.9%	1,219	8%	9%	7%	8%
30.0 to 34.9%	958	6%	7%	5%	8%
35.0 to 39.9%	922	6%	6%	6%	6%

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
40.0 to 49.9%	1,790	11%	8%	12%	8%
50.0% or more	5,596	35%	33%	29%	24%
Not computed	1,779	11%	10%	8%	14%
Monthly Housing Cost *					
Total Occupied Housing Units	35,151	100%	154,826	15,165	1,751,956
Less than $199	1,512	4%	2%	9%	6%
$200 to $399	4,143	12%	10%	14%	17%
$400 to $599	3,787	11%	10%	11%	12%
$600 to $799	4,446	13%	11%	12%	12%
$800 to $999	5,962	17%	14%	17%	13%
$1000 to $1499	8,698	25%	26%	24%	21%
$1500 to $1999	3,481	10%	12%	9%	9%
$2000 to $2499	1,163	3%	6%	2%	4%
$2500 to $2999	358	1%	3%	0%	1%
$3000 or more	447	1%	5%	0%	2%
No Cash Rent	1,153	3%	3%	1%	4%
Population in Poverty by Race *					
Total (Population for whom poverty status is determined)	89,022	100%	377,648	46,330	4,532,187
People in Poverty - White Alone	8,221	9%	4%	13%	8%
People in Poverty - Black or African American Alone	13,949	16%	18%	8%	10%
People in Poverty - American Indian & Alaska Native Alone	19	0%	0%	0%	0%
People in Poverty - Asian Alone	364	0%	0%	1%	0%
People in Poverty - Native Hawaiian & other Pacific Islander Alone	1	0%	0%	0%	0%
People in Poverty - Some Other Race Alone	324	0%	1%	0%	0%
People in Poverty - Two or More Race	849	1%	0%	1%	1%
Population in Poverty by Age *					
Total (Population for whom poverty status is determined)	89,022	100%	377,648	46,330	4,532,187
People in Poverty – Age 0-5	2,228	3%	2%	2%	2%
People in Poverty – Age 6-17	4,725	5%	5%	5%	4%
People in Poverty – Age 18-24	1,678	2%	2%	2%	2%
People in Poverty – Age 25-64	11,957	13%	11%	11%	8%
People in Poverty – Age 65+	3,139	4%	3%	3%	2%

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
Vehicle Ownership					
Total Households	35,151	100%	154,826	15,165	1,751,956
Zero Vehicle Households	6,830	19%	18%	7%	8%
One Vehicle Households	15,817	45%	48%	40%	37%
Two Vehicle Households	8,911	25%	26%	36%	37%
Three or More Vehicle Households	3,594	10%	8%	17%	18%
Foreign Born Population *					
Total (regardless of citizenship status)	4,140	100%	21,313	2,225	193,041
Foreign Born – Europe	474	11%	13%	3%	8%
Foreign Born – Asia	1,187	29%	35%	35%	31%
Foreign Born – Africa	142	3%	5%	3%	5%
Foreign Born – Oceania	14	0%	0%	0%	0%
Foreign Born – Latin America	2,243	54%	44%	58%	54%
Foreign Born – Northern America	80	2%	3%	0%	1%
Population Age 5+ Years by Ability to Speak English					
Total	84,439	100%	368,304	43,344	4,359,716
Speak only English	77,336	92%	91%	90%	92%
Non-English at Home	7,103	8%	9%	10%	8%
Speak English "very well"	4,675	6%	6%	6%	5%
Speak English "well"	1,572	2%	2%	2%	1%
Speak English "not well"	760	1%	1%	1%	1%
Speak English "not at all"	97	0%	0%	0%	0%
Linguistically Isolated Households (Household Limited English Speaking Status)					
Total Households	35,151	100%	154,826	15,165	1,751,956
Speak Spanish	322	1%	1%	1%	1%
Speak Other Indo-European Languages	31	0%	0%	0%	0%
Speak Asian-Pacific Island Languages	104	0%	1%	0%	0%
Speak Other Languages	28	0%	0%	0%	0%

Note:, *: The variables marked with an asterisk are estimated from Census Tract data. More information on the disaggregation method can be found on the "Help" tab of the Screening Tool for Equity Analysis of Projects webpage.

	Buffer Estimates	Percent	City/Town New Orleans LA	County St. Bernard LA	State Louisiana
Other Vulnerable Populations or Households					
Total Population	70,237	100%	311,964	34,268	3,547,913
Number of Veterans (18+)	4,198	6%	5%	5%	7%
Number of People with Disabilities (Civilian Non-Inst) *	14,815	21%	17%	22%	20%
Total Households	35,151	100%	154,826	15,165	1,751,956
Number of Households with no Computers	5,014	14%	11%	11%	12%
Number of Households with no Internet Connection	7,818	22%	19%	18%	18%

Attachment D

SHPO Solicitation of Views Letter

BILLY NUNGESSER
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT

KRISTIN P. SANDERS
ASSISTANT SECRETARY

June 5, 2024

Andy Fontenot Cassaway, E.I.
Engineer Intern II
4171 Essen Lane, Suite 700
Baton Rouge, Louisiana 70809
andyfontenot@gisy.com

Re: SOLICITATION OF VIEWS
STATE PROJECT NO. H.015428
LOUISIANA INTERNATIONAL TERMINAL - REGIONAL PLANNING COMMISSION
ST. BERNARD PARISH, LOUISIANA

Dear Mr. Cassaway,

Thank you for your letter received May 20, 2024, regarding the Solicitation of Views (SOV) for the above referenced project. Due to the early request with limited data concerning the proposed project, our office offers the following comments.

The Division of Archaeology has reviewed your SOV and has the following comments to offer. This project is located in an area considered to have a high probability for archaeological sites and there are several previously recorded archaeological sites within the study area boundary.

The Division of Historic Preservation has additional comments to offer. The study area highlighted in the submitted map contains several National Register Historic Districts and individually listed National Register properties. This information does represent all eligible National Register properties in this area, only those known by our office.

Given the preliminary information provided within the submission, we will wait until consultation is initiated on this project before offering comments concerning an effect determination. If you have questions or concerns, please contact Rachel Watson at rwatson@crt.la.gov or Sadie Whitehurst at swhitehurst@crt.la.gov in our Division of Archaeology or Jennie Garcia with our Division of Historic Preservation at jgarcia@crt.la.gov.

Sincerely,

Kristin Sanders
State Historic Preservation Officer

Attachment E

AECOM Cultural Resources Report

Cultural Background and Previous Investigations

Cultural Background

The cultural context of the Study Area is based on background research conducted from the database of the Louisiana Office of Cultural Development (LAOCD) and previously conducted survey reports. The prehistoric periods or stages include the Paleoindian, Archaic, and Mississippian, with each stage displaying unique patterns of subsistence, social organization, and material culture associated with the Lower Mississippi valley cultural traditions. These temporal divisions have been established based on broad changes in technology, subsistence strategy, settlement pattern, and regional interaction. Historic-era sites consist of exploration and settlement, pre- and post-Civil War, and late 19th and early 20th century Industrial periods as observed in the archaeological record in Louisiana and the greater southeast.

AECOM Technical Services, Inc. (AECOM) reviewed the Study Area for previous cultural resources investigations, previously identified archaeological sites, historic cemeteries, previously recorded historic standing structures, as well as any of these cultural resources listed, eligible, or potentially eligible for listing in the National Register of Historic Places (NRHP). The review was based on information available through the online cultural resources map maintained by the LAOCD Division of Archaeology. Included below are previously conducted cultural resources investigations within the Study Area; previously identified archaeological sites within the Study Area and within one mile of the Study Area; historic cemeteries within and adjacent to the Study Area; and previously identified historic standing structures within and adjacent to the Study Area (**Figure 1** and **Figure 2**).

Previously Conducted Cultural Resources Investigations

The background review revealed a total of 13 cultural resources investigations have occurred between 1999 and 2022 within or partially within the Study Area. **Table 1** below identifies the LAOCD survey number, the agency or sponsor of the investigation, survey report title and date of the investigation, and the results of the investigation that pertain to the Study Area. These investigations were conducted for the U. S. Army Corps of Engineers (USACE), New Orleans District (N=7); the Louisiana Department of Transportation (LDOT) (N=1); the St. Bernard Parish Government (N=1); the St. Bernard Economic Development Foundation (N=1); and private entities (N=3).

Table 1. Previously Conducted Cultural Resources Investigations within the Study Area

Report Number	Agency and/or Sponsor	Survey Report Title (Date)	Survey Results
22-2356	Lockheed Martin	*Phase I Archaeological Survey of the NASA Michoud Assembly Facility, New Orleans, Louisiana* (1999)	30-acre survey area; discovery of site 16OR149 and revisit of site 16OR65; no further work
22-2638	LDOT; U. S. Coast Guard; Homeland Security	*Phase I Cultural Resources Survey of the Proposed New Florida Avenue Bridge Over the Inner Harbor Navigation Canal (IHNC) Project (State Project Number 700-19-0108) in Orleans and St. Bernard Parishes, Louisiana* (2005)	282.21-acre survey area; 870 structures recorded; Florida Avenue Railroad Bridge; Pumping Station 5; Central Power Station; Johnson C. Lockett Elementary School recommended eligible
22-3140	USACE, New Orleans District	*Phase I Cultural Resource Investigation at Lake Pontchartrain & West Bank Vicinity Area Individual Environmental Report #24, Orleans and St. Bernard Parishes, Louisiana (2009)*	628.45-acre survey area; 14 stockpile locations; two standing structures; no further work
22-3143	USACE, New Orleans District	*Phase I Cultural Resources Survey of the Proposed Gray and Crovetto/Kenilworth Borrow Areas, St. Bernard Parish, Louisiana* (2008)	21.56-acre survey area; two borrow areas; no cultural materials; no further work
22-3165	USACE, New Orleans District	*Management Summary: Phase I Cultural Resources Survey and Inventory Performed for Lake Pontchartrain and Vicinity Project, Individual Environmental Report Area 10 (IER#10), St. Bernard Parish, Louisiana* (2008)	22 miles of levee and floodwall to be augmented; revisit of sites 16SB160 and 16SB161; no further work
22-3165-1	USACE, New Orleans District	*Cultural Resources Investigations, IER #10, Chalmette Loop – Expanded APE, LPV 145 Project Area, Hurricane and Storm Damage Risk Reduction System, Orleans Parish, Louisiana* (2009)	420.1-acre and 3.5-mile survey area; revisit of sites 16OR40 and 16OR41; no further work
22-3476	Royal Engineers & Consultants	*Phase I Cultural Resources Survey and Archeological Inventory of Two Proposed Borrow Areas, Plaquemines and St. Bernard Parishes, Louisiana* (2012)	986.7-acre survey area; no cultural materials; no further work

Report Number	Agency and/or Sponsor	Survey Report Title (Date)	Survey Results
22-3804	USACE, New Orleans District	*Phase I Cultural Resources Investigations for the Lake Pontchartrain and Vicinity Project Area, in St. Charles, Jefferson, Orleans, and St. Bernard Parish, Louisiana* (2012)	21,779.8-acre terrestrial survey; 6,371.2-acre underwater survey; 26 terrestrial sites; 6 underwater sites; 14 historic districts; Sites 16OR15, 16OR97, 16OR445, 16OR448, 16OR449, 16OR451, and 16OR452 potentially eligible
22-4550	Environmental Engineers, Inc.	*A Negative Findings Phase I Cultural Resources Survey of the Proposed Judge Perez Telecommunications Tower, St. Bernard Parish, Louisiana* (2014)	Monopole Structure survey; no cultural materials; no further work
22-5413	St. Bernard Economic Development Foundation	*A Phase I Cultural Resources Survey for the Sinclair Site Near Meraux in St. Bernard Parish, Louisiana* (2016)	263-acre survey area; revisit of sites 16SB170 and 16SB179; potentially eligible; further testing recommended
22-5579	St. Bernard Parish Government; US Department of Housing and Urban Development	*Phase I Marine Archaeological Survey for the Harbor of Refuge Project, Violet Canal, St. Bernard Parish, Louisiana* (2017)	170.2-acre survey area; four significant magnetic anomalies; further work recommended
22-6334	USACE, New Orleans District; Entergy Louisiana, L.L.C.	*Phase I Cultural Resources Survey of the Munster Substation Project in St. Bernard Parish, Louisiana (Negative Findings Report*) (2019)	32-acre survey area; no cultural materials; no further work
22-7118	USACE, New Orleans District	*Phase I Cultural Resource Assessment Survey for the Proposed Louisiana International Terminal Project in Violet, St. Bernard Parish, Louisiana* (2022)	600-acre survey area; revisit of site 16SB102; newly discovered sites 16SB209 and 16SB210 (Merrit Cemetery); 12 historic structures; structures 44-00528 and 44-00534 potentially eligible; further work recommended

Source: LAOCD 2024

Previously Recorded Archaeological Sites and Cemeteries

A total of 31 previously recorded archaeological sites and three historic cemeteries, one of which is also classified as an archaeological site (16SB210 [Merrit Cemetery]), were identified within the Study Area or within one mile of the Study Area (**Table 2**). Twenty-one of the sites are historic in age, dating from the late 18th to early 20th centuries. The NRHP-listed Chalmette Unit – Jean Lafitte National Historic Park (N.H.P.) (16SB147) is located approximately 0.7 miles west of the Study Area. Five historic archaeological sites and one historic cemetery were identified within, or partially within, the Study Area; the Michoud Plantation (16OR65), the Michoud Assembly Facility (M.A.F.) (15OR149), the Lake Borgne Canal Lock (16SB105), the Guichard Plantation Mill Remains (16SB123), the Saxonholm Plantation / Story Plantation (16SB179), and the historic Ellen Cemetery (ca. 1909 to 2015). Site 16SB179 has been determined potentially eligible for listing in the NRHP. The remaining four historic archaeological sites and the historic Ellen Cemetery have been determined not eligible or have an unknown NRHP eligibility (LAOCD 2024).

The remaining ten archaeological sites consist of eight prehistoric sites and two sites with prehistoric and historic components. Of the eight prehistoric sites, Site 16SB140, a shell midden recommended eligible for listing in the NRHP in 1992, is within the Study Area. Site 16SB148, a prehistoric camp and historic artifact scatter recommended not eligible, is also within the Study Area (LAOCD 2024). No additional archaeological sites or cemeteries are within the Study Area.

Table 2. Archaeological Sites and Cemeteries within the Study Area and One Mile Buffer

Site Number / Cemetery	Site / Cemetery Description	NRHP Eligibility	Location Relative to Study Area
16OR40 / Linsley Site	Prehistoric; Poverty Point Period; inundated shell middens; site destroyed	Not eligible	0.75 miles east
16OR41 / Paris Road Site	Prehistoric; Tchefuncte Period; inundated shell midden; site destroyed	Not eligible	0.13 miles west
16OR55 / Atlatl Weight Site	Prehistoric; unknown; surface collection; atlatl weight, fossil bones	Unknown	0.24 miles east

Site Number / Cemetery	Site / Cemetery Description	NRHP Eligibility	Location Relative to Study Area
16OR65 / Michoud Plantation	Historic; 19th century cattle and sugar plantation; wood lined privy, 2 standing sugar house chimneys, midden; highly disturbed	Not eligible	Within Study Area
16OR149 / M.A.F. Field Office Building Site	Historic; 20th century WWII brick and mortar foundation	Not eligible	Within Study Area
16SB40 / Dupre Site	Prehistoric; Early Baytown and Coles Creek; surface artifact scatter, shell midden; Baytown Plain pottery	Not eligible	0.66 miles east
16SB67 / Bob Neuman Site	Prehistoric; Mississippian Period campsite; surface pottery scatter; site destroyed	Not eligible	0.85 miles west
16SB71 / Lake Borgne-Bayou Dupre	Prehistoric; Coles Creek/Mississippian; surface scatter Historic; late 19th – early 20th century; surface scatter, glass, brick, stoneware	Not eligible	0.94 miles east
16SB84 / Battery Bienvenue	Historic; pre-Civil War coastal battery; surface scatter, historic ruins	Eligible	0.35 miles south
16SB85 / Martello Castle	Historic; pre-Civil War masonry structure; destroyed in 2005 (Hurricane Katrina)	Potentially eligible	0.47 miles east
16SB88 / De La Ronde Plantation	Historic; 1800s plantation; structure in ruins	Unknown	0.43 miles south
16SB89 / Lake Borgne Canal Redoubt	Historic; 1800s American gun emplacement or redoubt	Unknown	0.46 miles southwest
16SB100 / Horseshoe Bayou	Prehistoric; camp; midden, pottery sherds, bone	Not eligible	0.71 miles east
16SB101 / Reunion Plantation	Historic; 18th to 20th century; sugar cane and rise plantation	Not eligible	0.43 miles southwest
16SB102 / Merits Plantation	Historic; 1800s plantation site; midden, bricks, ceramics, glass, personal items	Not eligible	0.7 miles west
16SB104	Historic; brick scatter, metal fragments	Unknown	0.45 miles west
16SB105 / Lake Borgne Canal Lock	Historic; boat lock	Unknown	Partially within Study Area
16SB123 / Guichard Plantation Mill Remains	Historic; late 19th century sugar mill structure; concrete, brick	Unknown	Within Study Area
16SB140	Prehistoric; shell midden	Eligible	Within Study Area
16SB146	Historic; two ca. 1820s structures	Unknown	0.47 miles northeast
16SB147 / Chalmette Unit – Jean Lafitte N.H.P.	**Historic; Antebellum 1803-1860; military use structures and battlefield**	**Listed**	**0.68 miles west**
16SB148	Prehistoric; camp, surface scatter, pottery, bone Historic; unknown, surface scatter, glass	Not eligible	Within Study Area
16SB154 / Two Points Site	Prehistoric; Coles Creek/Mississippian; camp	Potentially eligible	0.46 miles northeast
16SB156 / 910 Bayou Road Borrow Site	Historic; 19th or 20th century home; sugar cane field, glass, ceramic, brick, metal	Not eligible	0.32 miles northeast
16SB169 / Los Islenos Complex	Historic; homestead; brick piers, standing structure, midden, surface artifact scatter	Unknown	0.66 miles northeast
16SB176 / Old St. Bernard Courthouse / Beauregard School	Historic; Exploration (1541-1803); Antebellum (1803-1860); War and Aftermath (1860-1890); Industrial (1890+), ceramic, glass, gunflints, brick, metal	Not eligible	0.71 miles northeast
16SB179 / Saxonholm Plantation / Story Plantation	Historic; Antebellum (1803-1860); War and Aftermath (1860-1890); Industrial (1890+); plantation main house and tenant houses, brick, ceramic, glass, bone, metal	Potentially eligible	Within Study Area
16SB195 / 804 Bayou Road	Historic; 19th or 20th century home	Unknown	0.53 miles west
16SB209 / Violet Port-1	Historic; Antebellum (1803-1860); War and Aftermath (1860-1890); Industrial (1890+); artifact scatter	Not eligible	0.72 miles west
16SB210 / Merrit Cemetery	Historic; cemetery 1913 to present	Unknown	0.57 miles southwest
16SB211 / Violet's Brick	Historic; 2 brick features	Unknown	0.34 miles south
Ellen Cemetery	Historic; cemetery; 200 interments (1909 to 2015)	Unknown	Within Study Area
Saint Bernard Memorial Gardens	Historic; cemetery; 13,500+ interments (1864 to present)	Unknown	Adjacent to west of Study Area

Source: LAOCD 2024

Previously Recorded Historic Standing Structures

The background review of the Study Area revealed 22 historic standing structure locations have been previously recorded within, or immediately adjacent to, the Project Study Area (**Table 3**). Twenty of the structures have been determined not eligible for listing in the NRHP. Structure 36-01804, the Gulf Outlet Canal Bridge, has been determined Eligible for listing in the NRHP under Criterion C for design and engineering. Structure 44-00089, also recorded as an archaeological site (16SB85), the Lake Borgne Martello Castle has been determined potentially eligible for listing in the NRHP. Currently consisting of ruins, the Martello Castle was destroyed by Hurricane Katrina in 2005. The location of Structure 44-00089 appears to be mis-plotted on the Cultural Resources Map and is located approximately 0.8 miles to the northeast (LAOCD 2024).

Table 3. Historic Standing Structures within the Study Area

Historic Standing Structure #	Address / Name	Parish	Date	Description	NRHP Eligibility
36-01536	Coast Guard Machine Shop	Orleans	ca. 1935-1945	Industrial complex, inter-harbor canal; example of mid-to late 20th century industrial structures	Not eligible
36-01804	Gulf Outlet Canal Bridge	Orleans	1967	Steel High Truss, Warren Truss, Cantilevered Through Truss	Eligible
44-00088	Pumping Station #2	St. Bernard	1958	Pump station clad in sheet metal with front gable, metal roof	Not eligible
44-00089 / 16SB85	Lake Borgne / Martello Castle	St. Bernard	ca. 1830	Pre-Civil War masonry structure; abandoned as a fort in 1880s; destroyed in 2005 (Hurricane Katrina)	Potentially eligible
44-00360	227 W. Genie	St. Bernard	ca. 1930-40	1-story gabled-roof shotgun bungalow residence; stucco cladding	Not eligible
44-00368	115 W. Morales	St. Bernard	ca. 1900	1-story Late Victorian cottage residence; gabled roof; two center chimneys; asbestos siding	Not eligible
44-00382	2727 Paris Road	St. Bernard	ca. 1940	1 ½-story, multi-gabled roof bungalow residence; aluminum siding	Not eligible
44-00384	2801 Paris Road	St. Bernard	ca. 1930	1 ½-story, gabled roof central hall residence; cement veneer designed to resemble stone	Not eligible
44-00385	2911 Paris Road / Vinceneau	St. Bernard	ca. 1920-30	1 ½-story, gabled roof side hall residence; clapboard siding	Not eligible
44-00386	2926 Paris Road	St. Bernard	ca. 1930-40	1 ½-story, gabled roof bungalow residence; clapboard siding	Not eligible
44-00387	2930 Paris Road	St. Bernard	ca. 1920-30	1 ½-story, gabled roof bungalow residence; clapboard siding	Not eligible
44-00388	3025 Paris Road / Balloon Fantasies	St. Bernard	ca. 1930	1-story gabled roof bungalow residence/commercial; clapboard siding	Not eligible
44-00389	3117 Paris Road	St. Bernard	ca. 1870	1 ½-story gabled-roof Late Victorian shotgun bungalow residence; clapboard siding	Not eligible
44-00390	3201 Paris Road / Chalmette Decorating Shoppe	St. Bernard	ca. 1920	1- story gabled roof shotgun residence/commercial; clapboard siding	Not eligible
4400391	3417 Paris Road / Chalmette Welding Supply	St. Bernard	unknown	1-room commercial structure with tile roof and stucco siding	Not eligible
44-00392	3428 Paris Road	St. Bernard	ca. 1940	1-story gabled roof shotgun residence; two center chimneys; clapboard siding	Not eligible
44-00393	3506 Paris Road / Blanchard	St. Bernard	ca. 1900	1-story, gabled roof Victorian central hall residence; cement veneer designed to resemble stone	Not eligible
44-00394	3508-10 Paris Road	St. Bernard	ca. 1930-40	1 ½-story, hipped roof simplified Spanish Revival residence; stucco exterior	Not eligible
44-00395	3511 Paris Road / Henry Ponstein	St. Bernard	1928	1-story, hipped roof modified Bungalow residence; brick veneer	Not eligible

Historic Standing Structure #	Address / Name	Parish	Date	Description	NRHP Eligibility
44-00396	3600 Paris Road / Allwood by Norwood	St. Bernard	ca. 1930	1-story gabled roof Modern style residence/commercial; asbestos siding	Not eligible
44-00439	Murphy Oil / Sinclair Oil	St. Bernard	ca. 1925	1-story Modern style commercial; brick exterior	Not eligible
44-00491	2005-07 Canal Street / Melerine	St. Bernard	ca. 1910	1-story Victorian Vernacular cottage residence; clapboard siding	Not eligible

Source: LAOCD 2024

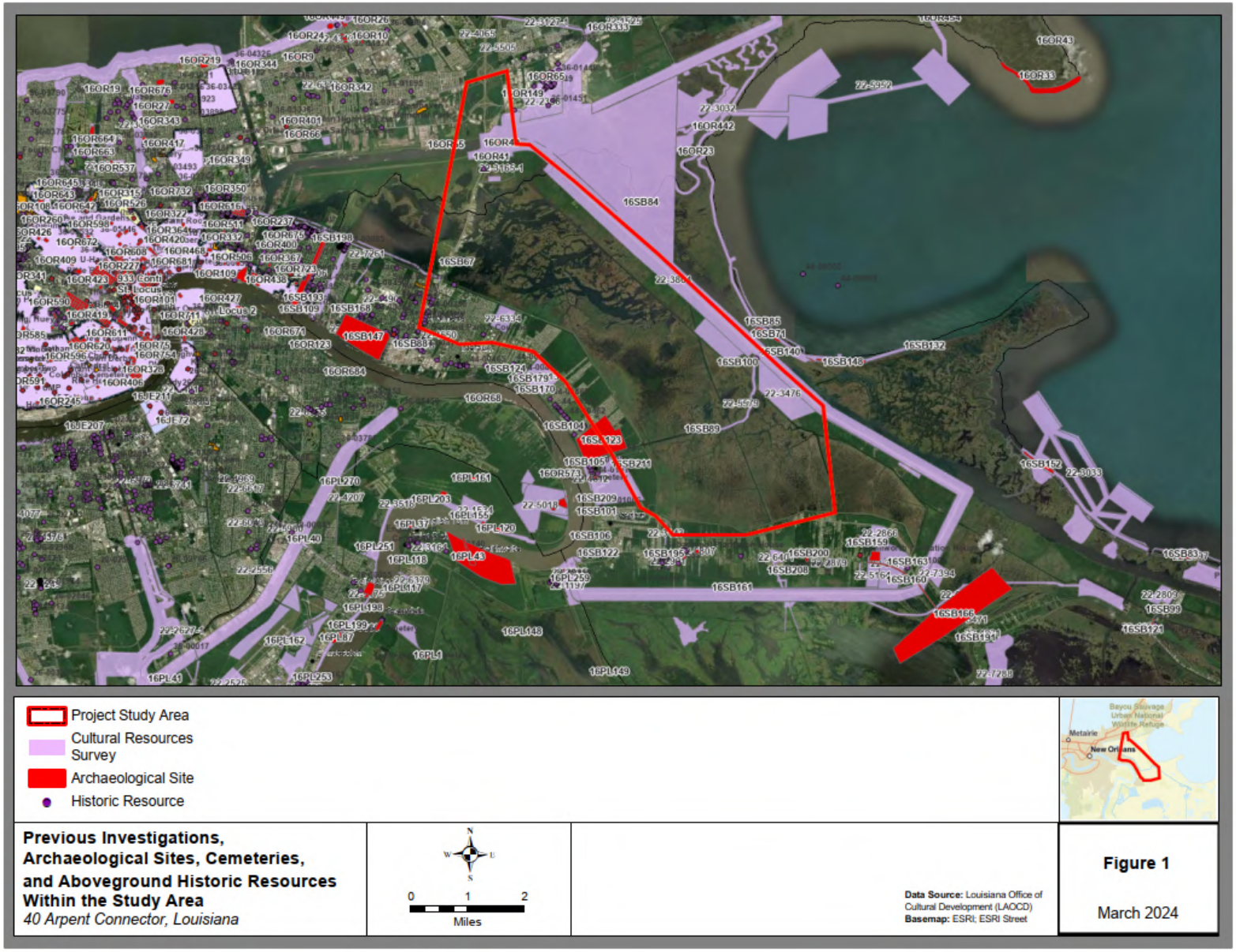


Figure 1. Aerial Image of Project Area

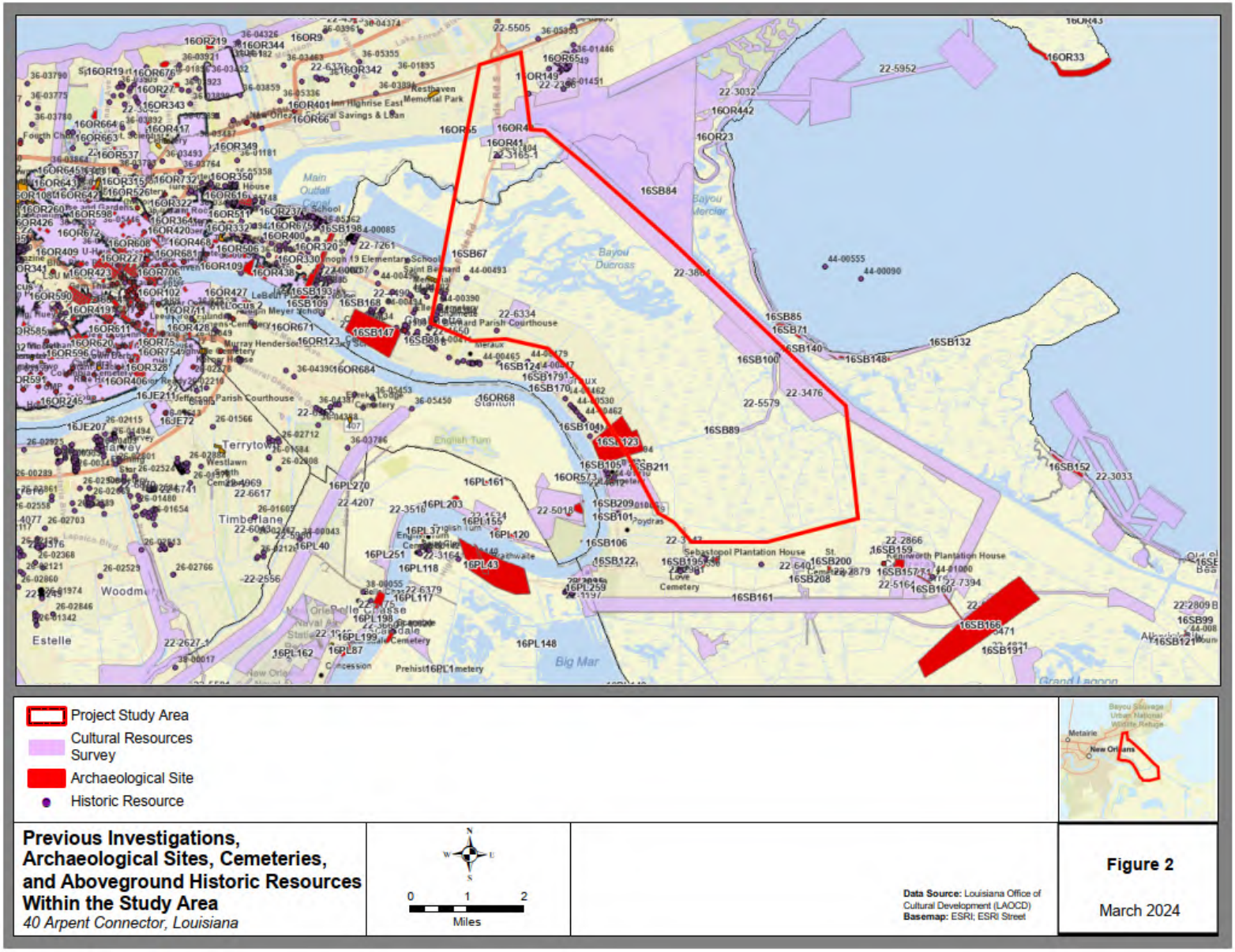


Figure 2. Topographic Map of Project Area