

### **Environmental Assessment**

# USDA Sugarcane Research Laboratory 501 Bull Run Road Schriever, Louisiana 70395

Terrebonne Parish, LA *March 2024* 



## **NEPA ENVIRONMENTAL ASSESSMENT**

On

## USDA Sugarcane Research Laboratory 501 Bull Run Road Schriever, LA 70395

Prepared For:



## **Agricultural Research Service**

March 2024

Prepared By:





TBS Project No. 2023.0013



### Date of EA: Mar. 2024

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### **ACRONYMS**

ACM Asbestos-Containing Material
ARS Agriculture Research Service
AST Aboveground Storage Tank

ASTM American Society for Testing and Materials

BFE Base Flood Elevation
BMP Best Management Practice
BOD biochemical oxygen demand

CAA Clean Air Act

CbA Cancienne silt loam
CdA Cancienne silty clay loam

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CFR Code of Federal Regulations

CH<sub>4</sub> methane

CO<sub>2</sub> Carbon Dioxide CO Carbon Monoxide

CREC Controlled Recognized Environmental Condition

CUP Coastal Use Permit CWA Clean Water Act

DA Department of the Army
EA Environmental Assessment

EDMS Electronic Document Management System

EDR Environmental Data Resources, Inc EIS Environmental Impact Statement EPA Environmental Protection Agency

ESA Endangered Species Act

FEMA Federal Emergency Management Agency

FIRM Flood Insurance Rate Map
FONSI Finding of no Significant Impact

GHG Greenhouse Gas

GWP Global Warming Potential

H<sub>2</sub>0 Water

HREC Historical Recognized Environmental Condition

LAC Louisiana Administrative Code

LDEQ Louisiana Department of Environmental Quality
LDNR Louisiana Department of Natural Resources
LDWF Louisiana Department of Wildlife and Fisheries
LDPES Louisiana Pollutant Discharge Elimination System

LSU Louisiana State University
MAP Mississippi Alluvial Plain

MMTCO<sub>2</sub>Eq Million Metric Tons of Carbon Dioxide Equivalents

MSDS Materials Safety Data Sheet

NAAQS National Ambient Air Quality Standards
NEPA National Environmental Policy Act
NHPA National Historic Preservation Act

NO<sub>2</sub> Nitrogen Dioxide

NPDES National Pollutant Discharge Elimination System

NRCS Natural Resources Conservation Service

NRHP National Register of Historic Places



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NWI National Wetlands Inventory

O<sub>3</sub> Ozone

OCM Office of Coastal Management

OSHA Occupational Safety and Health Administration

Pb Lead

PCB Polychlorinated biphenyl

PM Particulate Matter

PPE Personal Protective Equipment

RCRA Resource Conservation and Recovery Act
REC Recognized Environmental Condition
RECAP Risk Evaluation/Corrective Action Program

SHPO State Historic Preservation Office

SLECA South Louisiana Electric Cooperative Association

SO<sub>2</sub> sulfur dioxide

SOV Solicitation of Views

SPCC Spill Prevention Control and Countermeasure Plan

SRL Sugarcane Research Laboratory
SWPPP Storm water Pollution Prevention Plan
TDAT Tribal Directory Assessment Tool

TSS Total Suspended Solids

Unit Ardoyne Farm Sugarcane Research Unit

USACE U.S. Army Corps of Engineers
USDA U.S. Department of Agriculture
USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey
UST Underground Storage Tank



#### 1.0 INTRODUCTION

#### 1.1 BACKGROUND

The United States Department of Agriculture's (USDA) Agriculture Research Service (ARS) is proposing to build a new Sugarcane Research Laboratory (SRL) at its Ardoyne Farm Sugarcane Research Unit (the Unit) located at 501 Bull Run Road in Schriever, Louisiana. The proposed project area is located in Section 40, T16S-R16E and is on approximately 2.69 acres (Appendix 1).

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The Unit is situated in the middle of sugarcane fields in a rural area of Terrebonne Parish. The USDA signed an agreement with the American Sugar Cane League and the Louisiana State University (LSU) Ag Center in the 1920s when the Louisiana sugar industry was rapidly declining due to disease. The agreement, which is still in effect today, was designed to improve sugarcane production through research and variety development. According to the USDA ARS, the Sugarcane Research Unit leads sustainable sugarcane research and variety development using breeding, geonomics, precision agriculture, integrated pest management, soil science, and plant physiology. The Unit's mission is to provide research-based solutions that enhance the viability of sugarcane as a sugar and/or biofuels feedstock utilizing a multidisciplinary approach to develop improved varieties and environmentally friendly production strategies that ensure industry profitability, expand cropping range, and combat a constantly evolving pest complex that includes diseases, insects, and weeds. There are four (4) original buildings on this Unit dating back to the 1930s. Five (5) additional buildings were added to the Unit between 2010 and 2013, and the proposed project would include the development of two (2) greenhouse buildings on the Unit, with future plans for further expansion.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality regulations to implement NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), the ARS NEPA regulations at 7 CFR Part 520, and other relevant federal and state laws and regulations.

The purpose of this EA is to analyze the potential environmental impacts of the project. USDA ARS will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

#### 1.2 PROJECT SETTING

The Project Area being evaluated in this EA is located in a rural area of Schriever, Terrebonne Parish, Louisiana. The approximate center point of the Project Area is located at 29.30443° N, 94.78348° W, and the northern and southern limits are situated at approximately 29.31413°N, 94.78567°W and 29.29751°N, 94.78348°W respectively. Figure 1 depicts the general location and boundaries of the Project Area being assessed.



USDA Sugarcane Research Laboratory

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Figure 1. Project Boundary Map





#### 1.3 PROJECT DESCRIPTION

The USDA ARS is proposing the construction of two (2) new greenhouse buildings at its Ardoyne Farm Sugarcane Research Unit. The Project Area is situated approximately 1.7 miles off of Louisiana Highway 311 and is surrounded by sugarcane fields. The area is rural and isolated from both residential and commercial developments. All proposed activities would be confined to USDA owned lands. Currently, greenhouse facilities utilized by the Unit are located approximately 9 miles south-southeast of the Ardoyne Farm compound near downtown Houma. The goal of the project is to improve connectivity and collaboration by having all SRLs at the Ardoyne Farm Sugarcane Research Unit, as well as improving the quality of the greenhouses, as the existing facilities are out of date and in poor condition. The facility layout with the proposed expansion is depicted in Figure 2.

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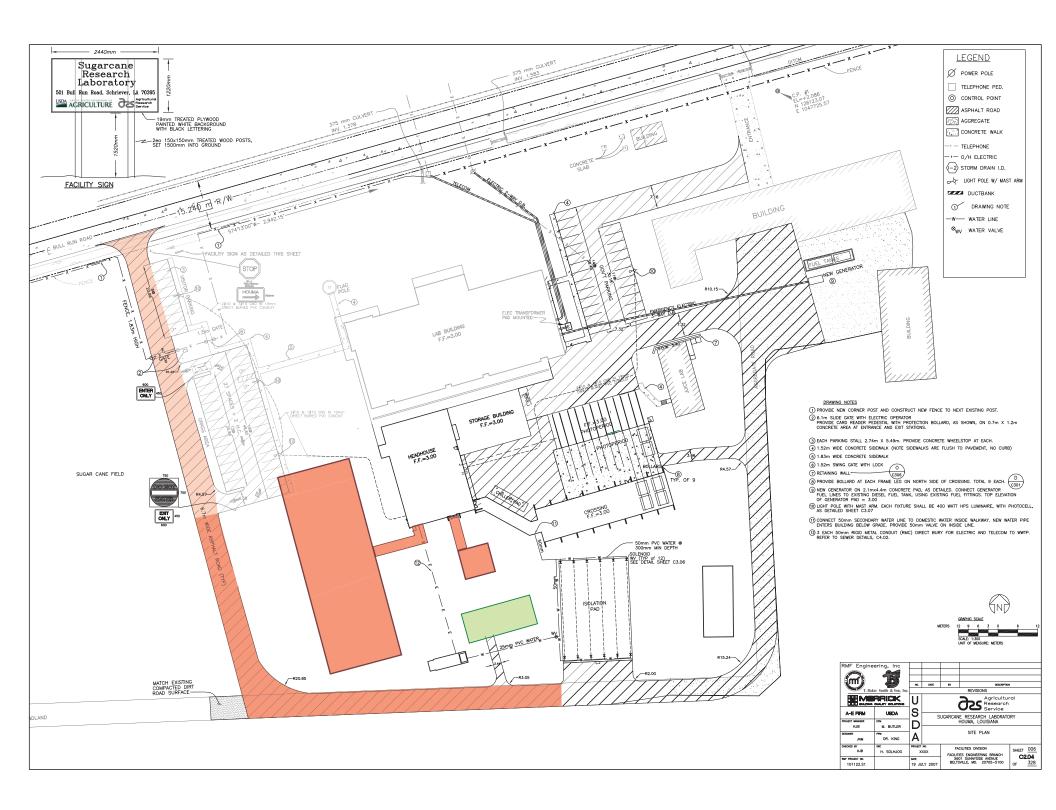
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Figure 2. Facility Layout with Proposed Expansion Map





#### 2.0 **PURPOSE AND NEED**

#### 2.1 PROJECT PURPOSE

The purpose of the proposed action is to consolidate the SRL in one locale, to improve efficiency and to provide and updated facility with more space for the research efforts of the USDA SRL. These objectives would allow for the current research projects to expand and explore new sugarcane varieties.

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#### 2.2 PROJECT NEED

The greenhouse facilities currently utilized by the Unit are located approximately 9 miles south-southeast of the Unit near downtown Houma, Louisiana and are in poor condition. In an effort to improve efficiency, connectivity, and quality of operations, all SRLs are being consolidated to one locale. Currently the SRL is capable of supporting a varietal development program with emphasis exclusively on increases in per acre yields of sugar. This facility is too small to support new directions of research such as "energy canes" and "pharma-cane." This type of research is estimated to require expansion of the SRL facilities by approximately 25%, as well as an increase in staff.

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#### 3.0 ALTERNATIVES

#### 3.1 ALTERNATIVE 1: NO ACTION ALTERNATIVE

Under the "No-Action Alternative", the two (2) proposed greenhouse buildings would not be constructed at the Ardoyne Farm Sugarcane Research Unit. This would not alter current operations at the Unit; however, this alternative would not support new research efforts as space is limited. Connectivity issues would not be addressed, and the quality of the existing greenhouses would remain in poor condition.

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## 3.2 ALTERNATIVE 2 (PROPOSED): CONSTRUCTION OF TWO (2) NEW GREENHOUSE BUILDINGS

Under the "Proposed Action Alternative", the USDA would construct two (2) new greenhouse buildings on the Ardoyne Farm Sugarcane Research Unit. The construction of the new greenhouses would support the expansion of research into energy cane and pharma-cane. The addition of greenhouses on the Unit improves efficiency, connectivity, and quality of operations. This expansion also creates new employment opportunities for the public. All construction activities would take place on USDA owned land.

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#### 4.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

#### 4.1 PHYSICAL RESOURCES

#### 4.1.1 GEOLOGY, SOILS, AND SEISMICITY

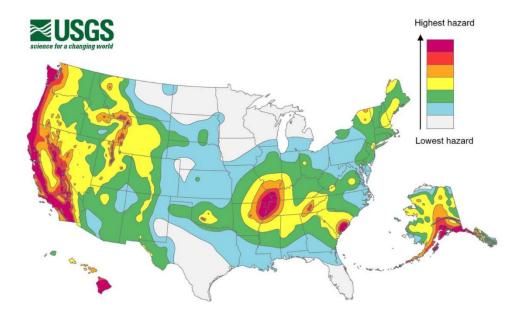
The Study Area is located in the Coastal Plain physiographic province. This is the flattest province and stretches from Cape Cod to the Mexican border. The plain slopes gently seaward from inland highlands in a series of terraces and continues sloping far into the Atlantic and Gulf of Mexico, forming the continental shelf. The Coastal Plain is divided into six sections, and the Subject Property is located in the Mississippi Alluvial Plain (MAP). The MAP is one of the most productive agricultural region in the Nation and extends along the Mississippi River from the confluence of the Ohio and Mississippi Rivers to the Gulf of Mexico. The MAP is nearly flat and is characterized by clayey, poorly drained soils.

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The soils on site are classified as Cancienne silt loam (CbA) and Cancienne silty clay loam (CdA). Cancienne Series soils consist of very deep, level to gently undulating, somewhat poorly drained mineral soils that are moderately slowly permeable. These soils formed in loamy and clayey alluvium and are on high and intermediate positions on natural levees and deltaic fans of the Mississippi River and its distributaries. Slopes range from 0 to 3 percent. Appendix 3 contains the soils map with a complete list of soil property data.

The U.S. Geological Survey (USGS) National Seismic Hazard Maps display earthquake ground motions for various probability levels across the United States and are applied in seismic provisions of building codes, insurance rate structures, risk assessments, and other public policy. A seismicity map depicting "2018 Long-term National Seismic Hazards" across the United States was reviewed and revealed the second lowest probability for earthquake ground motions in the Study Area. The USGS map reviewed for this EA is provided in Figure 3.

Figure 3. 2018 Long-Term National Seismic Hazard Map





#### NO ACTION ALTERNATIVE

Under the No Action Alternative, construction activities associated with the proposed project would not be conducted. No soil disturbing activities that could potentially affect the geology. soils, and seismicity would take place.

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#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, activities associated with the construction of two new greenhouse buildings on the Unit would consist of marking and grading the area, pouring concrete foundations, tying into existing utility and plumbing lines, erecting the greenhouse structures, and roof laying.

The primary pollutant expected to potentially impact storm water runoff from the construction activities would be suspended sediments from soil erosion. Should the area of disturbance exceed one acre, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared in accordance with the requirements of the Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water General Permit for Small Construction Activities (Permit No. LAR200000). The objective of the storm water plan is the reduction or elimination of surface water pollution through implementation of best management practices (BMPs). BMPs may include, but are not limited, to silt fencing, erosion control mats, maintaining established vegetation, and vehicle track pads.

Contaminants that could potentially affect surface soils include diesel, oil, and grease from heavy equipment and any temporary storage tanks associated with construction equipment, which may be released during various stages of construction. Depending on the aggregate aboveground storage capacity at the project site and its location relative to navigable waters of the United States, a Spill Prevention Control and Countermeasure Plan (SPCC) for the job site may be required. The SPCC plan would establish inspection and spill response procedures to ensure that the potential for release of these products and/or effects of releases on surface soils is minimized to the best extent possible.

In the event that the contaminants listed above should be released into the surface soils of the Project Area, affected soil would be removed and disposed of according to local, state, and federal regulations. If volumes of contaminants should be released in quantities that are above what could be considered de minimus, the appropriate regulatory agencies would be notified. Contaminated material would be removed and disposed of according to local, state, and federal regulations, and confirmatory sampling would be conducted to verify that identified concentrations fall below the Louisiana Department of Environmental Quality's (LDEQ) Risk Evaluation/Corrective Action Program (RECAP) Screening Standards established by the LDEQ.

Correspondence was sent to the USDA – Natural Resources Conservation Service (NRCS) on July 27, 2023 requesting review and comment on the proposed action. A response was received on August 8, 2023 indicating that the proposed project construction area may potentially impact approximately 2.7 acres of prime or unique farmland soils consisting of Cancienne silt loam and Cancienne silty clay loam. An AD-1006 Farmland Conversion Impact Rating form was included with the response and the agency stated that they do not predict impacts to NRCS work in the vicinity of the proposed project area. Appendix 2 contains copies of the request letter and agency response.



No permanent impacts to the geology, soils, and seismicity would occur as a result of the Proposed Action Alternative.

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#### 4.1.2 AIR QUALITY

The Clean Air Act (CAA) was established to protect public health and welfare nationwide and requires Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for certain common and widespread pollutants based on the latest science. EPA has set air quality standards for six common "criteria pollutants" which consist of particulate matter (PM), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), and lead (Pb) under NAAQS.

Currently, Terrebonne Parish is in attainment with the NAAQS meaning that he ambient concentrations of regulated pollutants do not exceed the air quality standards established. Because the proposed project is located within an attainment parish with regard to the criteria pollutants, it is not subject to more stringent air quality requirements.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, construction activities associated with the proposed project would not be conducted. No soil disturbing activities that would contribute to releases of airborne particulates would be conducted.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, a temporary increase in airborne PM would result from construction activities in the project area. Ground disturbing activities and vehicular traffic on unpaved roadways or roadways laden with dry sediment would result in the release of PM. Operation of construction equipment driven by internal combustion engines would also result in a temporary increase in emissions of pollutants such as CO, NO<sub>2</sub>, O<sub>3</sub>, and PM. No significant impacts to air quality are expected due to the anticipated duration (approximately 12 months) of the project and the minimal number of operating hours of the equipment (approximately 8-10 hours per day).

The LDEQ regulates activities that generate emissions of criteria pollutants and require that an Air Quality Permit be obtained prior to commencing operations. Several sources and/or activities that produce emissions of these pollutants can qualify for an exemption from the permitting requirements. Mobile sources such as automobiles, trucks, and construction equipment are not required to obtain an air quality permit in order to operate.

Correspondence was sent to the LDEQ Air Quality Division on July 27, 2023. In a response dated August 25, 2023, LDEQ stated that the agency had "no objections" to the proposed actions. The response also stated that Terrebonne Parish is currently classified as in attainment with the National Ambient Air Quality Standards and has no general conformity determination obligations. The Unit (Agency ID #178464) has no associated air permits in the LDEQ Electronic Document Management System (EDMS), and furthermore, there are no anticipated significant impacts to air quality as a result of the Proposed Action Alternative. Short-term localized adverse effects on air quality would be transient and there are no long-



term adverse impacts to air quality would be expected to persist under the Proposed Action Alternative.

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#### 4.1.3 CLIMATE CHANGES

Climate change is defined as "a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. It may be a change in average weather conditions, or in the distribution of weather around the average conditions (i.e., more or fewer extreme weather events). Climate change is caused by factors that include oceanic processes (such as oceanic circulation), biotic processes, variations in solar radiation received by Earth, plate tectonics and volcanic eruptions, and human-induced alterations of the natural world."

The phenomenon that occurs when heat is retained by Earth's atmosphere is referred to as the greenhouse effect. Greenhouse gases (GHGs) like water vapor (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), and methane (CH<sub>4</sub>) absorb energy preventing the loss of heat to space which contributes to "greenhouse effect".

The Carbon Dioxide Equivalent is a metric measure used to compare the emissions from various GHGs based upon their global warming potential. Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents (MMTCO<sub>2</sub>Eq)". The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated global warming potential (GWP). The EPA has determined that any source with the potential to emit a total 25,000 tons per year of CO<sub>2</sub> equivalents has the potential to contribute to climate change.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, construction activities associated with the proposed project would not be conducted. No noticeable changes to average weather conditions due to impacts to oceanic processes, biotic processes, solar radiation, plate tectonics, and volcanic eruptions would occur due to no construction activities taking place.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, construction activities associated with the proposed project would not cause noticeable changes to average weather conditions due to impacts to oceanic processes, biotic processes, solar radiation, plate tectonics, and volcanic eruptions. The effects of climatic conditions as a result of this project would be negligible.

#### 4.2 WATER RESOURCES

#### 4.2.1 WATER QUALITY

The EPA and the State of Louisiana have established regulations under the Clean Water Act (CWA) to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

Pollutants regulated under the CWA consist of "priority" pollutants, which include various toxic pollutants, "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges.

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Louisiana's Water Quality Regulations (Louisiana Administrative Code [LAC] Title 33:Chapter IX) require permits for the discharge of pollutants from any point source into waters of the state of Louisiana. This surface water discharge permitting system is administered under the LPDES program.

There are two (2) named waterbodies near the Project Area. Little Bayou Black is located +/-1.7 miles east and Bayou Black is located +/-1.94 miles south of the Project Area.

The listing of water bodies which fail to meet water quality standards is required by section 303(d) of the CWA. EPA regularly works with states and local governments to reduce pollution, protect public health, and provide for healthy aquatic life in our nation's waters. Surface water at the Project Area flows south into drainage ditches which ultimately discharge into Bayou Black. According to the "2022 Section 303(d) Louisiana Water Quality Integrated Report" (EPA 2022), the portion of Bayou Black from Intracoastal Waterway to Houma (water body segment code 120202) is impaired for fish and wildlife propagation and as a drinking water source. The suspected cause of impairment of is color. For fish and wildlife propagation, the suspected source of impairment is "natural sources". For drinking water supply, the source of impairment is "silviculture harvesting".

In 1970, the Louisiana Legislature created the Louisiana Natural and Scenic Rovers System. The System was developed for the purpose of preserving, protecting, developing, reclaiming, and enhancing the wilderness qualities, scenic beauties, and ecological regimes of certain free-flowing Louisiana streams. A review of the "Louisiana Natural and Scenic Rivers Descriptions and Map" did not identify any waterbodies classified as "scenic" near the Project Area. A copy of the Louisiana Natural and Scenic Rivers Descriptions and Map is included in Appendix 4.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no construction activities would occur resulting in zero impacts to the surface waters directly adjacent to and downstream of the Project Area.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, temporary effects on surface waters directly adjacent to and downstream of the project area could potentially occur. Potentially impacted waters would include roadside drainage ditches.

The nearest named waterbodies are Little Bayou Black, located+/-1.7 miles east and Bayou Black located +/-1.94 miles south of the Project Area. There is potential for sediment runoff from construction activities; however, there is significant distance between the Project Area and the two bayous, which swamp land acting as a filter between the two areas.

The primary pollutant with potential to impact storm water runoff from the construction activity would be suspended sediments from soil erosion. A SWPPP would be prepared in accordance with the requirements of the LPDES Storm Water General Permit for Small Construction Activities (Permit No. LAR200000). The objective of the storm water plan would

be the reduction or elimination of surface water pollution through implementation of BMPs. BMPs may include, but are not limited to, silt fencing, erosion control mats, maintaining established vegetation, and vehicle track pads. This would also ensure that the nearby receiving waterbody currently listed as being impaired for color would not be affected by the proposed action.

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No sanitary wastewater would be discharged from the construction areas. Portable sanitary units would be temporarily placed on site and waste would be removed from the property by licensed septage disposal contractors.

Correspondence was sent to the LDEQ Water Quality Division on July 27, 2023 requesting review and comment on the proposed action. In a response dated August 25, 2023, LDEQ stated that the agency had "no objections" to the proposed actions. The response also included a list of general comments in regard to water quality which indicated that a LPDES permit may need to be obtained and/or revised and a Sewerage Sludge and Biosolids Use or Disposal Permit may be required if not already acquired. Appendix 2 contains copies of the request and response letters.

#### 4.2.2 WETLANDS

Jurisdictional wetlands are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA. In order for an area to be classified as a wetland, an area must contain hydrophytic vegetation, hydric soils, and wetland hydrology, per the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic Gulf Coastal Plain Region. Data was collected at the site I order to evaluate the presence or absence of hydrophytic vegetation, hydric soils, and wetland hydrology.

A Wetland Delineation was conducted on July 18, 2023. A total area of +/-2.69 acres was delineated in order to identify wetland located within the proposed project area. Preliminary data on soils was taken from the Soil Survey of Terrebonne Parish, Louisiana (Web Soil Survey Data), and from the list of hydric soils for Louisiana. The vegetative indicator status was determined using the National Wetland Plant List (Lichvar, Banks, Melvin, Kirchner, 2016). No wetlands were identified, and 0.01-acre of waters were identified within the delineated area. A request for a jurisdictional determination for the delineation completed on July 18, 2023 was submitted to the Department of the Army, New Orleans District, Corps of Engineers on August 21, 2023 and is currently pending. The wetland delineation report and a copy of the request for a jurisdictional determination for the project area are located in Appendix 5.

According to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), there are no wetlands identified within the project area. The NWI map generated for the study area is located in Appendix 4.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no impacts to jurisdictional wetland areas within the proposed project footprint would occur.



#### PROPOSED ACTION ALTERNATIVE

According to the NWI, no wetlands are located within the study area for the proposed project. A Wetland Delineation was conducted on July 18, 2023 to verify that no wetlands are present in the project area.

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Correspondence was sent to the Department of the Army, New Orleans District, Corps of Engineers on July 27, 2023 requesting review and comment on the proposed action. A response has not yet been received from the agency; however, should correspondence be received that infers concern or objection to the Proposed Project, and addendum to this document will be prepared. Appendix 2 contains a copy of the request letter.

#### 4.2.3 FLOODPLAINS

Executive Order 11988 requires federal agencies to avoid, to the extent possible, adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of development in floodplains wherever there is a practicable alternative.

The Federal Emergency Management Agency (FEMA) has delineated both the special hazard areas and the risk premium zones applicable to communities participating in the NFIP through its Flood Insurance Rate Maps (FIRM). The Base Flood Elevations (BFEs) are depicted on the FIRM's and represent the elevation to which floodwater is anticipated to rise during the base flood. FIRM's also depict floodplain boundaries within a given area which are classified based on 1 percent and 0.2 percent annual flood chance as well as minimal flood risk areas. Flood insurance premiums are dependent upon a structure's elevation in comparison to the BFE and floodplains for that area.

The digital FIRM database for Terrebonne Parish was reviewed for the Project Area. The Project Area was found to fall within the boundaries of FIRM 2252060420C (Effective May 1, 1985). According to the digital FIRM, the Project Area is situated within "Zone C", areas of minimal flooding. The area south of the proposed project lies within "Flood Zone A", areas of the 100-year flood where base elevations and flood hazard factors have not been determined. The FIRM for the project area is located in Appendix 4.

#### NO ACTION ALTERNATIVE

Under the No-Action Alternative, the two (2) proposed greenhouse buildings would not be constructed at the Ardoyne Farm Sugarcane Research Unit. This would not alter current operations at the Unit; however, this alternative would not support new research efforts as space is limited. Connectivity issues would not be addressed, and the quality of the existing greenhouses would remain in poor condition. No construction activities would take place.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, the USDA would construct two (2) new greenhouse buildings on the Ardoyne Farm Sugarcane Research Unit. The construction of the new greenhouses would support the expansion of research into energy cane and pharma-cane. The addition of greenhouses on the Unit improves efficiency, connectivity, and quality of operations. This expansion would also create new employment opportunities for the public. All construction activities would take place on USDA owned land. The Project Area is not

located within the 100-year flood zone, thus no impact to floodplains would be anticipated with the Proposed Action Alternative.

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Correspondence was sent to the Terrebonne Parish Consolidated Government Department of Floodplain Management on July 27, 2023 requesting review and comment on the proposed action. In a response dated August 22, 2023, the department stated that the agency had "no objections" to the proposed actions under the condition that there would be no creation of flooding where there was no flooding prior to construction. The department also stated that it was the responsibility of the applicant to clear debris so as not to interfere with natural floodplain functions. Appendix 2 contains copies of the request letter and response.

#### 4.3 COASTAL RESOURCES

The Coastal Use Permitting (CUP) process is part of the Louisiana Department of Natural Resources (LDNR) Coastal Resources Program which has been established to preserve, restore, and enhance Louisiana's valuable coastal resources. The guidelines of the permit have been established to ensure that development taking place within the coastal zone can be accomplished with the greatest benefit and the least amount of negative impacts. CUP applications must be submitted for projects that could impact coastal waters and involve dredging and filling, water control structures, bulkheads, oil and gas facilities, marinas, or residential development. Permit Applications are sent to the LDNR Office of Coastal Management (OCM) through a joint application system which allows comments to be solicited from multiple regulatory agencies from a single submittal. Any impacts to coastal waters caused by the proposed project will dictate conditions of the CUP. Mitigation of wetland areas is a potential "mitigating action" required by the CUP to offset impacts.

If mitigation of wetlands if requires during the CUP process, one of the following compensatory mitigation options may be followed:

- Purchase habitat credits from an OCM approved mitigation bank
- Purchase credits from an approved In-Lieu fee Mitigation Program
- Implementation of individual mitigation project
- Other options determined to be appropriate by the secretary which fully compensate for list habitat values.

The Louisiana Coastal Zone boundary is established in Louisiana Revised Statutes Article 49 § 214.24. The western and eastern boundaries are the LA borders with Texas and Mississippi and the southern boundary is the state 3-mile line offshore. The inland boundary meanders and is based using a wide variety of parameters, including but not limited to tidal influence, sheet flow, soils, salinity, vegetation, fish and wildlife, topography, geology, geography, economy, and recreation. The Louisiana Coastal Zone Boundary was most recently updated in 2012 and encompasses a total of twenty coastal parishes including Terrebonne Parish in its entirety. Appendix 6 depicts the location of the Louisiana Coastal Zone Boundary.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, there would be no impacts to coastal resources within the proposed project footprint.



#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, significant impacts to coastal resources are not anticipated. The Project Area is located entirely within the Coastal Management Zone Boundary, thus there are no alternatives for not disturbing the area. All proposed activities would be conducted in the middle of agriculture fields in a rural area. All construction would take place on a +/- 2.69-acre portion of the Ardoyne Research Farm where several other USDA research buildings have previously been developed. No impacts from the proposed actions are currently anticipated with regards to natural storm barriers, wildlife habitat, aquatic resources, aesthetic value, and quality of life for future generations.

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Correspondence was sent to the LDNR OCM on July 27, 2023, requesting review and comment on the proposed action. A Solicitation of Views response was received on August 3, 2023. The response states that the project areas was found to be located within the boundaries of the Coastal Zone and that submittal of a CUP application would be necessary in order to obtain any Coastal Use Permits that may be required for the proposed project. A CUP application will be submitted for this project during the permitting stage. Appendix 2 contains a copy of the request letter and response.

#### 4.4 BIOLOGICAL RESOURCES

#### 4.4.1 THREATENED AND ENDANGERED SPECIES AND CRITICAL HABITAT

In 1973, Congress passed the Endangered Species Act (ESA), recognizing that "various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untampered by adequate concern and conservation, other species of fish, wildlife and plants have been so depleted in numbers that they are in danger of or threatened with extinction, and these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the United States and its people". The ESA is intended to recognize and protect threatened and endangered species and the habitats that support them. Under the ESA (16 U.S.C. §1531), potential effects of the proposed action and alternative on ESA-listed species and critical habitats must be evaluated.

The "Threatened and Endangered Species of Louisiana, Parish List" (updated through November 6, 2020) depicts the following federally listed or proposed U.S. species located in Terrebonne Parish:



Table 1. LDWF List of Endangered, Threatened, and Candidate Species in Terrebonne Parish

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Parish	Group	Inventory Name	Occurrence	Status
	Mammal	West Indian Manatee	Seasonal	Threatened
	Bird	Red Knot	Known	Threatened
	Bird	Piping Plover	Known	Threatened with Critical Habitat
Tarrahanna	Bird	Eastern Black Rail	Possible	Threatened
Terrebonne	Reptile	Green Sea Turtle	Known	Threatened
	Reptile	Hawksbill Sea Turtle	Known	Endangered
	Reptile	Kemp's Ridley Sea Turtle	Known	Endangered
	Reptile	Leatherback Sea Turtle	Known	Endangered
	Reptile	Loggerhead Sea Turtle	Known	Threatened

On June 19, 2023, the USFWS, through its on-line Endangered Species Act and Migratory Bird Act Project Review tool indicated that there are two threatened, endangered, or candidate species on the species list for the proposed project footprint: (1) the proposed threatened alligator snapping turtle (*Macrochelys temminkckii*) and (2) the candidate Monarch Butterfly (*Danaus plexippus*). This review indicated that there are no critical habitats within the project area. A copy of the IPaC review is included in Appendix 7.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no impacts to threatened and endangered species and/or critical habitat would occur due to construction activities not being conducted.

#### PROPOSED ACTION ALTERNATIVE

The Project Area is situated in the middle of agricultural fields on a currently undeveloped portion of a USDA owned parcel housing the Ardoyne Farm Sugarcane Research Unit and its associated buildings. All proposed activities will occur within the boundary of the previously established Unit and are anticipated adversely impact any listed species inhabiting the Project Area; however, it should be noted that the Project Area is a vacant grassy lot surrounded by sugarcane fields and is not a well-suited habitat which would support threatened, endangered, or rare species and/or critical habitats. Lack of vegetative cover in comparison to surrounding areas, paired with the activity on site from farming operations would not be ideal habitats for most species.

Preventative measures discussed in earlier sections will be implemented throughout the duration of the construction activities to ensure that the quality of surface water and aquatic species habitat is not compromised.

#### 4.4.2 WILDLIFE AND FISH

The Louisiana Department of Wildlife and Fisheries (LDWF) is the state agency responsible for management of the state's renewable natural resources including all wildlife and all aquatic life. The agency's objective is to manage, conserve, and promote wise utilization of Louisiana's renewable fish and wildlife resources and their supporting habitats through replenishment, protection, enhancement, research, development, and education for the social and economic

benefit of current and future generations, to provide opportunities for knowledge of and use and enjoyment of these resources, and to promote a safe and healthy environment for the users of the resources.

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#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no impacts to indigenous species, critical habitat, or scenic streams would occur due to construction activities not being conducted.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, the USDA would construct two (2) new greenhouse buildings on the Ardoyne Farm Sugarcane Research Unit. All construction activities would take place on USDA owned land.

The Project Area is situated in the middle of agricultural fields on a currently undeveloped portion of a USDA owned parcel housing the Ardoyne Farm Sugarcane Research Unit and its associated buildings. All proposed activities would occur within the boundary of the previously established Unit and are anticipated adversely impact any listed species inhabiting the Project Area; however, it should be noted that the Project Area is a vacant grassy lot surrounded by sugarcane fields and is not a well-suited habitat which would support threatened, endangered, or rare species and/or critical habitats. Lack of vegetative cover in comparison to surrounding areas, paired with the activity on site from farming operations would not be ideal habitats for most species.

Preventative measures discussed in earlier sections will be implemented throughout the duration of the construction activities to ensure that the quality of surface water and aquatic species habitat is not compromised.

Correspondence was sent to the LDWF Habitat Section of the Coastal & Nongame Resources Division on July 27, 2023, requesting review and comment on the proposed action. In an SOV response dated August 3, 2023, the LDWF stated that no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state wildlife refuges, wildlife management areas, or scenic streams are known to occur at the specified site within Louisiana's boundaries. No other impact to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. Appendix 2 contains copies of the request letters and responses.

#### 4.5 CULTURAL RESOURCES

Cultural resources can be defined as physical evidence or place of past human activity or a site, object, landscape, structure, landscape, or natural feature of significance to a group of people traditionally associated with it. The remains of past human activity are known as archaeological resources, while sites, structures, etc. that hold significance to a traditionally associated group of people is known as ethnographic resources. Historic resources are those extend the limits of human capabilities of a particular time.

The National Historic Preservation Act (NHPA) of 1966, Section 106, requires that federal agencies or their applicants take into account the effects of their undertakings on historic structural and archeological properties. The Section 106 review process must be completed prior to the

spending of federal funds for any project that has the potential to affect historic properties that are listed in or eligible for listing in the National Register of Historic Places (NRHP).

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The Louisiana Office of Cultural Development is given the role of the State Historic Preservation Office (SHPO). Within the SHPO there are two (20 offices that conduct Section 106 reviews on a joint basis (Division of Archaeology and Division of Historic Preservation). The potential for Cultural Resources located within or affected by the proposed actions was evaluated through the Section 106 process.

#### 4.5.1 HISTORICAL PROPERTIES

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no impacts to archeological sites and/or registered historic properties would occur due to construction activities not being conducted.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, no impacts to archeological sites and/or registered historic properties are anticipated. The Project Area has been heavily disturbed as it was previously used for farming agricultural row crops.

TBS consulted the GIS database maintained by the Louisiana Divisions of Historic Preservation and Archaeology on July 5, 2023, to determine if any historic properties, including archaeological sites or standing structures eligible for or listed on the NRHP, are located within or adjacent to the proposed project (Appendix 8). There was one (1) Phase I Cultural Resource Survey conducted on the Project Area in 2004 by Goodwin & Associates; however, no evidence of intact cultural deposits were discovered and there were no historic standing structures on or immediately adjacent to the Project Area. Because this assessment has already been conducted, it is not anticipated that any new discoveries should be made during the proposed activities.

A response has not been received at the time of this document's submittal; however, should correspondence be received that infers concern in regard to the Proposed Project, an addendum would be prepared. Appendix 2 contains a copy of the request letter.

Although it is unlikely that archaeological resources would be discovered during the proposed action alternative, in the event the inadvertent discovery of previously unknown historic, cultural, or archaeological remains and/or artifacts occur during the proposed construction, the district engineer would be notified without delay and the area would be avoided until the required coordination has been completed.

## 4.5.2 AMERICAN INDIAN/NATIVE HAWAIIAN/NATIVE ALASKAN CULTURALLY SIGNIFICANT SITES

In addition to protecting historical and archeological properties, the NHPA of 1966 requires federal agencies or their applicants to take into account the effects of their undertakings on historic properties of traditional religious and cultural importance to Indian tribes, Native Alaskans, and Native Hawaiian organizations.



#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no impacts to sites of cultural or religious importance to tribes would occur due to construction activities not being conducted.

Date of EA: Mar.2024

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, no impacts to sites of cultural or religious importance to tribes are anticipated.

Correspondence was sent to all tribes included on the Tribal Directory Assessment Tool (TDAT) as well as the Office of Indian Affairs requesting review and comment on the proposed action. Letters were sent via mail and electronically on July 27, 2023.

The Chitimacha Tribe of Louisiana responded on August 10, 2023 stating that their records and traditions do not indicate that a specific archaeological site or Traditional Cultural Property is within the project's footprint and could be affected, thus the have no objection to the proposed project. The response also states that should human remains or cultural resources be discovered during construction, all work should stop immediately and the tribe and the Louisiana State Historic Preservation Office should both be contacted. No there responses were received at the time of this document's submittal. Appendix 2 contains copies of the request letters and responses.

In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and the applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant will inform SHPO or Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the NHPA.

#### 4.6 SOCIOECONOMIC RESOURCES

#### 4.6.1 **ENVIRONMENTAL JUSTICE**

Executive Order 12898 (U.S. Department of Housing and Urban Development) states that each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

The Project Area is situated in the middle of agricultural fields in a rural area. Schriever and the City of Houma, Louisiana are the nearest inhabited areas. According to demographic data available online for Schriever (U.S. Census Bureau, 2023), the town has an approximate population of 6,711 as of the April 1, 2020 census, a total land area of 14.25 square miles, and a population density of 470.8 people per square mile. The proposed construction activities would not affect any residential dwellings. The median household income for Schriever is \$54,956 with approximately 21.6% falling below the poverty line. The City of Houma has an approximate population of 31,775 as of the July 1, 2022 census data. Houma has a total land area of 14.47 square miles with a population density of 2,309.1 people per square mile. The median household



income in Houma is \$48,688 with approximately 19.5% falling below the poverty line. It should be noted that the statewide median household income for Louisiana is \$53,571 and for Terrebonne Parish is \$57,940.

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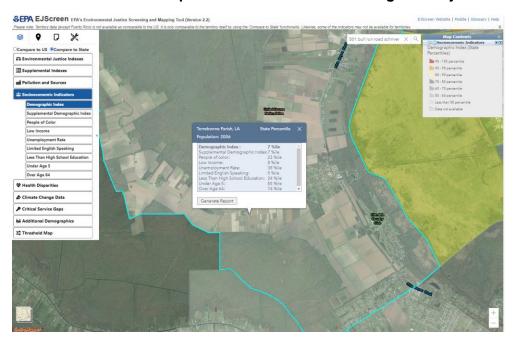
The race demographics of Terrebonne Parish, Schriever, and Houma Louisiana are depicted in Table 2 below.

Table 2.Terrebonne Parish Demographic Breakdown (U.S. Census Bureau, 2023)

Race	Percent Residing in Schriever, LA	Percent Residing in Houma, LA
White	55.2%	66.2%
Hispanic or Latino	5.0%	5.2%
African American	33.8%	21.7%
American Indian or Alaska Native	3.2%	4.9%
Asian	1.1%	0.7%
Two or More	6.4%	4.0%

The USEPA "EJ Screen" mapping tool was utilized to compare populations residing in the vicinity of the Project Area to the state average established for socioeconomic indicators (Figure 4).

Figure 4. USEPA EJ Screen Map of Communities Surrounding the Project Area



The neighborhoods and residential properties scattered around the Project Area returned "People of Color" and "Low Income" within the 23rd and 8th percentile respectively (compared to rest of Louisiana) The Demographic Index, which is a combination of percent low-income and percent minority, fell within the 7<sup>th</sup> percentile in comparison to the rest of the state, indicating this area is not a Historically Disadvantaged Community.



#### NO ACTION ALTERNATIVE

Under the No-Action Alternative, the two (2) proposed greenhouse buildings would not be constructed at the Ardoyne Farm Sugarcane Research Unit. This would not alter current operations at the Unit; however, this alternative would not support new research efforts as space is limited. Connectivity issues would not be addressed, and the quality of the existing greenhouses would remain in poor condition. No new employment opportunities would be created for the public.

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#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, surrounding communities would benefit from a potential increase in employment opportunity as well as from the new research efforts which could have a positive impact on the local economy. Socioeconomic factors such as demographics and income levels did not dictate the manner in which the engineering design was conducted in any way.

All construction activities would be conducted on USDA owned property within the Ardoyne Farm Sugarcane Research Unit; therefore, no low income or minority families would be displaced.

Appendix 9 contains documentation supporting statistics presented in this section.

The demographic populations of areas surrounding the project area estimated in this section demonstrate that the proposed activities would not impact a disproportionate number of minority or low-income residents.

#### 4.6.2 HAZARDOUS MATERIALS

A material can be defined as hazardous if it meets the established criteria for reactivity, corrosivity, toxicity, and ignitibility. The federal program established to regulate hazardous materials is the Comprehensive Environmental Response, Compensation Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). Management of hazardous materials and waste is regulated on the state level by the LDEQ. Releases of hazardous materials can result in contamination of surface soils, surface water, and groundwater.

A Phase I Environmental Site Assessment was performed in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Standard Practice E1527-21 and the EPA Standards and Practices for All Appropriate Inquiries [40 CFR Part 312]. The specific scope of work included the following: an environmental database records review, prior use history review, property/site reconnaissance, environmental setting, underground storage tanks (UST) and above ground storage tanks (AST) search, polychlorinated biphenyl (PCB) search, preliminary asbestos containing materials (ACM) evaluation, and interviews with property owners and local and state agencies. A copy of the full Phase I Environmental Site Assessment is included in Appendix 10.



#### NO ACTION ALTERNATIVE

Under the No Action Alternative, construction activities would not be conducted, thus no impacts to the Project Area would occur from the handling, storage, or release of hazardous materials on site.

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#### PROPOSED ACTION ALTERNATIVE

A Phase I Environmental Site Assessment was conducted on the +/- 2.69-acre property located at 501 Bull Run Road in Schriever, Louisiana. The purpose of the assessment was to provide and objective professional opinion of the potential environmental risks, if any, associated with the Project Area including recognized environmental conditions (RECs), historical recognized environmental conditions (HRECs), and controlled recognized environmental conditions (CRECs).

The term REC means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

The term CREC refers to a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

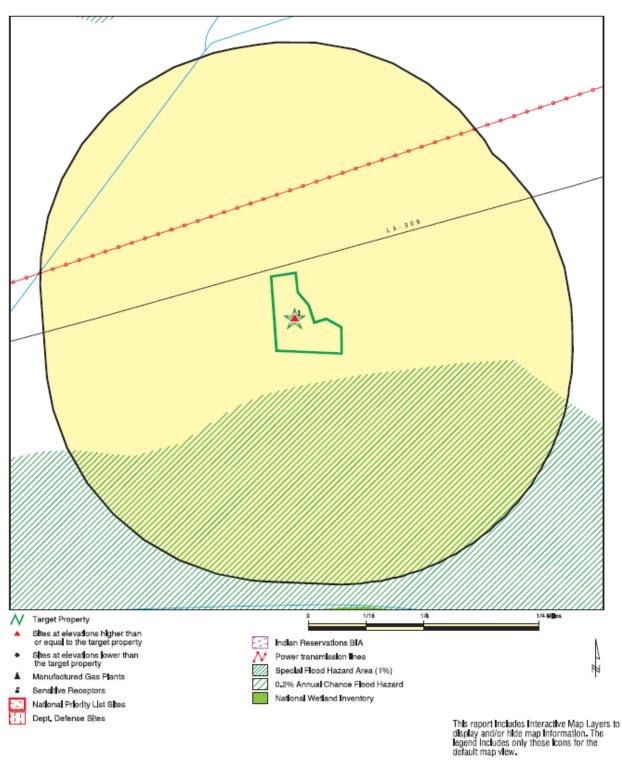
The term HREC refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

Portions of the Phase I Environmental Site Assessment which are relevant to this Section (Hazardous Materials) include the environmental database review under which records are obtained and reviewed to identify activities and/or facilities at or near the Subject Property which have the potential to impact the Project Area. The database information was obtained from Environmental Data Resources, Inc (EDR). The plotting of the sites in the database was done through geo-coding and the location provided are approximations. Each plotted facility is assigned an identification number and is mapped for geographical reference (See Figure 5) below).

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Figure 5. EDR Detail Map





Listed sites in the supplemental databases or those located beyond the required search radii are generally not considered RECs and are not of concern unless a specific impact to the Project Area has been identified.

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Table 3. Database Search Results Returned by EDR

DATABASE	RADIUS (In miles)	NUMBER OF SITES
National Priority List (NPL) and Proposed NPL	1.0	0
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	1.0	0
CERCLIS No Further Remedial Action Planned (CERC-NFRAP)	1.0	0
Resource Conservation and Recovery Act (RCRA) Corrective Actions (CORRACTS),	1.0	0
RCRA Treatment, Storage and Disposal Facilities (TSDF)	0.5	0
RCRA Large Quantity Generators (LQG), and RCRA Small Quantity Generators (SQG), including Conditionally Exempt Small Quantity Generators (CESQG) and Very Small Quantity Generators (VSQG), and RCRA NonGen/NLR	0.25	0
Emergency Notification Response System (ERNS)	Target Property	0
Facility Index System (FINDS), Toxic Release Inventory Database (TRIS), and other Supplemental Federal ASTM databases (nongenerators and other Federal databases etc.).	1.0	0
State Hazardous Waste Sites (State equivalent of CERCLIS and NPL)	1.0	0
State Solid Waste Facilities/Landfill Database (SWF/LF)	0.5	0
Leaking Petroleum Storage Tank Sites (LPST)	0.5	0
Underground Storage Tanks (UST)	0.25	0
Additional State ASTM databases (VCP, Priority Dry Cleaner, Industrial Hazardous Waste (IHW) & etc.); includes Aboveground Storage Tanks (AST), Dry Cleaner, Historic Auto Facilities, State Spill Lists (SPILLS), Remediation Services Database (REM), Mining Sites, National Pollutant Discharge Elimination System (NPDES), Listing of Institutional and/or Engineering Controls (AUL), EPA Fuels Program Registered Listing (FUELS PROGRAM), Open Dump Inventory (ODI)	varies	1 (NPDES)
Supplemental State or Local databases including, Petroleum Storage Tank Non-Registered (NON-REGIST PST)	varies	0

The EDR report returned one listing for the Project Area. The Subject Property listed as "USDA-Sugarcane Research Unit Ardoyne Farm" appears on the National Pollutant Discharge Elimination System (NPDES) database for LPDES General Sanitary Class I Permit (LAG535559) which was issued on February 21,2018. Due to the nature of the listing and regulatory status, this listing does not represent a REC.



No RECs, HRECs or CRECs were identified in the Phase I Environmental Site Assessment; however, TBS noted the following housekeeping and/or developmental condition that should be addressed in the event that the findings conflict with the proposed actions:

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1. A sewer treatment plant was observed on the southern portion of the Subject Property. Future development must be designed in a manner preventing damage to the system and associated piping.

Under the Proposed Action Alternative, handling and storage of hazardous materials would not be anticipated. Materials such as diesel fuel, lubricating oils, and hydraulic oils are not classified as hazardous; however, a release of these substances could cause adverse impacts to the surface soils, groundwater, and surface water. These petroleum-based products would be used for the operation of construction equipment on site.

In the event that the contaminants listed above should be released into the surface soils of the Project Area, affected soil would be removed and disposed of according to local, state, and federal regulations. If volumes of contaminants should be released in quantities that are above what could be considered de minimis, the appropriate regulatory agencies would be notified. Contaminated material would be removed and disposed of according to local, state, and federal regulations, and confirmatory sampling would be conducted to verify that identified concentrations fall below the RECAP standards established by LDEQ.

The Proposed Action Alternative is not likely to cause adverse impacts to the Project Area with regards to hazardous materials due to the preventative measures that would be implemented throughout the duration of construction activities and related to permanent structures proposed to be constructed as a part of this project.

#### 4.6.3 NOISE

The presence of unwanted sound is typically referred to as "noise". Background noise is the "normal" noise level experienced in the local environment. EPA's Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to establish a means for effective coordination of Federal research and activities in noise control, authorize the establishment of Federal noise emission standards for products distributed in commerce; and provide information to the public respecting the noise emission and noise reduction characteristics of such products. EPA has given the authority to regulate noise pollution to the local and state governments.

Terrebonne Parish Chapter 14 Nuisance Abatement, Article X-Excessive Noises cites Ordinance 8747 which states excessive noise as it pertains to commercial structures means "sound produced by radio, television, loudspeakers, musical equipment or devices, within the interior or on the exterior of commercial buildings, which is audible at a distance of seven and one-half (7.5) meters or exceeds 70 decibels in volume". The ordinance does not apply if the department of planning and zoning has issued a permit which is not to exceed three days.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no increase in noise levels would occur due to construction activities not being conducted.



#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, temporary increases in noise levels would occur periodically throughout the duration of the proposed construction activities. It should be noted that the Project Area is in a fairly isolated rural setting. Construction equipment such as earth moving equipment, large trucks, pile drivers, etc. are expected to cause increases in normal background noise levels of the Project Area, but all construction activities would take place during normal business hours and would be conducted across an overall short period of time. In an effort to reduce the nuisance levels of this additional noise, contractors would not operate this equipment outside of the restricted hours established in the Terrebonne Parish noise ordinance.

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With the implementation of the aforementioned mitigation measures, no adverse impacts to the ambient sound quality of the nearby residents would be anticipated. Although temporary increases in noise levels are expected to result from the Proposed Action Alternative, no longterm impacts to ambient sound quality is expected.

#### 4.6.4 TRAFFIC

The transportation infrastructure providing access to the Project Area is comprised of a two-lane rural road (Bull Run Road) with single-family residences sparsely scattered on either side of the roadway which traverses through agricultural fields. The road is not a highly trafficked throughway and does not traverse through the footprint of the proposed Project Area.

#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no impacts to the existing traffic volume would occur due to no construction activities being conducted.

#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, temporary increases in vehicular traffic volume would occur throughout the duration of the proposed construction activities. Overall daily traffic volume would likely increase as a result of construction materials, equipment, and personnel being transported to and from the project site; however, considering the relatively small footprint of the proposed construction activities along with the rural location of the roadway, it is not anticipated that any significant disruption to normal traffic patterns would be experienced as a result of the proposed action. No work is proposed on or along the roadway adjacent to the Project Area and all equipment and personnel would be staged and operate within the Unit's property boundary. No traffic detours would be necessary and traffic volumes are expected to return to pre-construction levels following completion of the proposed project. No permanent effects on transportation are expected as a result of the proposed action.

#### 4.6.5 UTILITIES

The Project Area consists of a +/-2.69-acre portion of the Ardoyne Farm Sugarcane Research Unit property which has established utility and sewerage systems in place. Solid waste disposal and water is provided by Terrebonne Parish, and electricity is provided by South Louisiana Electric Cooperative Association (SLECA) Amelia. A sewer treatment plant is located on the

southeastern portion of the Project Area and operates under LPDES General Sanitary Class I Permit (No. LAG535559). During previous expansions at the Unit, a pad-mounted transformer was installed on the central eastern portion of the Project Area in anticipation of the currently proposed activities. The two (2) new proposed greenhouse structures will tie into existing utilities available on the Unit and present in the Project Area.

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#### NO ACTION ALTERNATIVE

Under the No Action Alternative, there would be no anticipated impact to the Project Area as no construction would take place. All utilities at the Unit would remain in the current state with no disturbances.

#### PROPOSED ACTION ALTERNATIVE

All utilities would be located during the design phase of the Proposed Action to ensure that any potential damage would be avoided throughout the duration of the Project and a "Louisiana 811" One Call Notification would be made prior to commencement of construction activities. Overall, minor increases in electricity and water usage would be expected as two additional buildings would contribute to the usage of each; however, no significant adverse impacts are anticipated.

During the proposed construction activities, waste dumpsters may be temporarily located in the Project Area to collect construction related waste and debris generated by the Proposed Action but would be removed upon completion of the construction. No adverse impacts would be expected to occur regarding the disposal of solid waste during construction.

As a result of the proposed construction activities, the sewer treatment plant and resulting wastewater discharges are likely to increase. The current LPDES permit allows discharge of less than 5,000 gallons per day of treated sanitary wastewater and the proposed addition of two greenhouse structures is not anticipated to generate discharges which would exceed the permitted allowance.

Overall, the Proposed Action would be expected to have temporary minor impacts solid waste during the construction period as construction debris would be accumulated during this time period. Long-term impacts to electricity and wastewater would be negligible as the facility has the infrastructure to handle increased electrical and wastewater loads.

#### 4.6.6 PUBLIC HEALTH AND SAFETY

The safety and health of both the general public and personnel engaged in construction activities must be taken into account when considering the proposed actions related to the USDA Sugarcane Research Laboratory Expansion. Congress created the Occupational Safety and Health Administration (OSHA) in 1970 for the purpose of ensuring safe work environments by way of enforceable standards required in the workplace.

Fire protection and law enforcement are an additional means of ensuring safety and security to construction workers and local residents.



#### NO ACTION ALTERNATIVE

Under the No Action Alternative, no threat to the safety of the general public and construction workers would occur due to construction activities not being conducted.

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#### PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, temporary safety hazards would exist in the form of heavy equipment operation, materials delivery, and increased activity in the rural project area. Contractors would conduct operations under strict adherence to applicable OSHA standards which would include but not be limited to use of all appropriate Personal Protection Equipment (PPE) such as hard hats, safety toes, gloves, safety glasses, etc.

Material Data Safety Sheets (MSDS) for all chemicals and or petroleum-based products would be readily available on site in the event that workers should be exposed to harmful levels of these materials. MSDS sheets list handling procedures, physical properties, spill handling procedures, first aid requirements, and PPE needed if for respective chemicals.

The Proposed Action Alternative is not anticipated to have significant impacts on the safety and health of the public as all construction activities are proposed within a fenced in portion of the parcel owned by the USDA. There is potential for temporary minor adverse effects incurred from increased traffic and noise in the general vicinity of the Project Area which may inconvenience the general public; however, the impacts would be temporary and negligible.

#### 4.7 SUMMARY TABLE

The following table depicts the possible impacts of the Proposed Action Alternative and Mitigating Actions proposed to ensure that effects of impacts remain minimal:

Geology, Soils, & Seismicity			
Proposed Impacts	Mitigating Actions		
<ul> <li>A temporary increase in the potential for erosion of exposed soils is expected to occur during construction</li> <li>Contaminants that could potentially affect surface soils include diesel, oils, grease from heavy equipment, and temporary storage tanks</li> </ul>	Activities (Permit No. LAR200000)  • Depending on the aggregate aboveground		

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Air Q	In the event that the contaminants listed above are released into the surface soils of the project area, affected soil will be removed and disposed of according to local, state, and federal regulations uality	
Proposed Impacts	Mitigating Actions	
A temporary increase in airborne particulate matter (PM) would result from construction activities in the project area. Ground disturbing activities and vehicular traffic on unpaved roadways or roadways laden with dry sediment would result in the release of PM.	<ul> <li>Unpaved roads would be sprayed with water by the contractor(s) to ensure that airborne particulates are kept to a minimum.</li> </ul>	
	Changes	
Proposed Impacts	Mitigating Actions	
<ul> <li>Under the Proposed Action Alternative effects of climatic conditions as a result of this project would be negligible</li> </ul>	None	
Water Quality		
Proposed Impacts	Mitigating Actions	
<ul> <li>A temporary increase in the primary pollutant expected to potentially impact storm water runoff from the construction activity is suspended sediments from soil erosion</li> <li>Contaminants that could potentially affect surface and ground water include diesel, oils, and grease from heavy equipment and temporary storage tanks</li> <li>Illicit sanitary discharges from constructions sites</li> </ul>	<ul> <li>Should disturbance resulting from construction activities exceed one acre, a SWPPP will be prepared in accordance with the requirements of the Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water General Permit for Small Construction Activities (Permit No. LAR200000)</li> <li>Best Management Practices (BMPs) would be implemented (maintaining existing vegetative buffers) to reduce and/or eliminate surface water pollution from construction site runoff</li> <li>Portable sanitary units will temporarily be placed on site and waste will be removed from the property by licensed septage disposal contractors</li> </ul>	
Proposed Impacts	Mitigating Actions	
<ul> <li>According to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), there are no wetlands identified within the project area</li> <li>According to a wetland delineation conducted by TBS in July 2023, there are no wetlands located within the project area. A request for a</li> </ul>	■ None	

## NEPA Environmental Assessment USDA Sugarcane Research Laboratory

Date of EA: Mar.2024

	jurisdictional determination from the USACE was submitted and is currently pending.						
	Flood	nla	aine				
	Proposed Impacts	ρiα	Mitigating Actions				
	<u> </u>		imagamig Acadene				
•	The proposed project will not involve construction activities taking place within the 100-year floodplain.	I ■ None					
	Biological	Re	sources				
	Proposed Impacts		Mitigating Actions				
-	The Project Area is located in a primarily rural and agricultural area of Terrebonne Parish, and all proposed work activities would take place within a portion of the USDA owned Ardoyne Farm Sugarcane Research Unit. The Project Area is not well suited to support threatened, endangered, or rare species and/or critical habitats due to its lack of vegetative cover in comparison to the surrounding agricultural fields and increased human activity and farming operations.		All construction activities will be confined to the Project Area designated for such activities.				
	Correspondence from the LDWF Habitat Section of the Coastal & Nongame Resources Division indicated that no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state wildlife refuges, wildlife management areas, or scenic streams are known to occur at the Project Area within Louisiana's boundaries.	•	Preventative measures discussed in earlier sections will be implemented throughout the duration of the construction activities to ensure that the quality of surface water and aquatic species habitat are not compromised.				
•	Species indigenous to the Project Area include common species which have adapted to areas with significant human activity such as pigeons, rodents, squirrels, rabbits, raccoons, alligators, and feral animals.						
	Coastal R	es					
Proposed Impacts			Mitigating Actions				
•	No impacts to natural storm barriers, wildlife habitat, aquatic resources, aesthetic value, and quality of life for future generations will be incurred as a result of the proposed action		Project will comply with all federal, state, and local laws that protect fish and wildlife.				

## NEPA Environmental Assessment USDA Sugarcane Research Laboratory

Date of EA: Mar.2024

Historical Properties & American Indian/Native Hawaiian/Native Alaskan Cultural Religious Sites					
Proposed Impacts	Mitigating Actions				
<ul> <li>Under the Proposed Action Alternative, no impacts to sites of cultural or religious importance to tribes are anticipated.</li> </ul>	■ In the event that archaeological deposits, including any Native American pottery, tools, other artifacts, or human remains are uncovered during the proposed action, all work in the vicinity of the discovery will be stopped immediately and all appropriate agencies/organizations will be notified.				
Environme	ental Justice				
Proposed Impacts	Mitigating Actions				
<ul> <li>Under the Proposed Action Alternative, surrounding communities would benefit from a potential increase in employment opportunity as well as from the new research efforts which could have a positive impact on the local economy.</li> </ul>	■ None				
	us Material				
Proposed Impacts	Mitigating Actions				
<ul> <li>Storage and use of hazardous materials not anticipated during the Proposed Action. Non-hazardous materials in the form of diesel fuel and engine oils could potentially be temporarily stored on construction sites</li> <li>Non-Hazardous industrial materials could be released into surface soils, groundwater, and/or surface waters.</li> </ul>	<ul> <li>Depending on the aggregate aboveground storage capacity of the project site and the project's location relative to navigable waters of the United States, a SPCC for the job site may be required. The SPCC plan will establish inspection and spill response procedures to ensure that the potential for release of these products and/or effects of releases on surface soils is minimized to the best extent possible.</li> <li>Solid waste and/or contaminated soils will be removed and disposed of according to local, state, and federal regulations.</li> </ul>				
N					
Proposed Impacts	oise Mitigating Actions				
Short term increases to noise levels are expected during operation of construction equipment and increased vehicular traffic	<ul> <li>Contractors will conduct construction activities in compliance with Terrebonne Parish Ordinance 8747 pertaining to noise and nuisance abatement.</li> </ul>				
Tr	affic				
Proposed Impacts	Mitigating Actions				
Temporary increases in local vehicular traffic volume would occur throughout the duration of the proposed construction activities due to construction materials, equipment, and crews accessing the project area.	<ul> <li>All work is to be conducted within the fenced in USDA parcel and no equipment or personnel will be staged alongside or on the public roadway adjacent to the project area.</li> </ul>				

# NEPA Environmental Assessment USDA Sugarcane Research Laboratory

Public Services and Utilities					
Proposed Impacts	Mitigating Actions				
<ul> <li>Temporary minor impacts to solid waste would occur during the construction period as construction related solid waste would be generated and collected on site.</li> <li>Long-term negligible impacts to electricity and wastewater would occur due to the increased electrical and wastewater treatment needs that come with facility expansion.</li> </ul>	Solid waste dumpsters would be temporarily stored on site and all contents would be disposed of in accordance with all local, state, and federal laws and regulations. The dumpsters would be removed upon completion of the proposed project.  There is existing infrastructure at the Project Site to support the increase in electrical usage and wastewater treatment.				
Public Hea	Ith and Safety				
Proposed Impacts	Mitigating Actions				
Temporary safety hazards would exist in the form of heavy equipment operation, open excavations and trenches, overhead crane operation, etc. associated with construction activities.	<ul> <li>Contractors will conduct construction operations under strict adherence to applicable OSHA standards which would include by not be limited to use of all appropriate Personal Protection Equipment.</li> </ul>				
Potential for harmful exposure of contractors to chemicals/petroleum products to	MSDS of all chemicals and or petroleum-based products will be readily available on site in the event that workers are exposed to harmful levels of these materials.				

Date of EA: Mar.2024

Consideration of the activities involved in the proposed construction of two (2) new greenhouse buildings at the Ardoyne Farm Sugarcane Research Unit, as outlined in the table above, have been determined to have no significant impact on the quality of the human environment or on local natural resources. As a result of this EA, it is determined that an EIS is not required for the Proposed Action; therefore a FONSI is being recommended.



#### 5.0 **CUMULATIVE IMPACTS**

The combined, incremental effects of human activity, referred to as cumulative impacts, pose a serious threat to the environment. While they may be insignificant by themselves, cumulative impacts accumulate over time, from one or more sources, and can result in the degradation of important resources. Because federal projects cause or are affected by cumulative impacts, this type of impact must be assessed in documents prepared under the NEPA. The assessment of cumulative impacts in NEPA documents is required by Council on Environmental Quality (CEQ) regulations (CEQ, 1987).

Date of EA: Mar.2024

The Proposed Action Alternative involves the construction of two (2) new greenhouse buildings on a portion of the USDA Ardoyne Farm Sugarcane Research Unit. Temporary impacts to shallow soils, air quality, water quality, noise levels, and traffic are anticipated as a result of the proposed action. Due to the effects on these resources being isolated to the timeframe of the proposed project, no long-term cumulative impacts would occur. The potential for effects on physical resources and water quality exist as a result of the proposed action and are discussed in Sections 4.1 and 4.2. Mitigative procedures are addressed in these sections to ensure that long term cumulative impacts to these resources are avoided to the best extent possible. In addition, the proposed activities will take place in a vacant grassy portion of the currently developed USDA Ardoyne Farm Sugarcane Research Unit which is located in a rural area consisting of agricultural fields and sparsely scattered single family residential, thus no cumulative impacts on biological resources will occur as the Project Area is not well suited to support threatened. endangered, or rare biological resources.

Long term positive cumulative impacts are anticipated as a result of the proposed action. The proposed expansion of the Unit would consolidate operations into one locale, would improve efficiency, and would provide an updated facility with more space for the research efforts of the USDA SRL. These efforts would also allow for current research project to expand and would support new directions of research including "energy cane" and "pharma-cane". Additionally, the expansion of the Unit could provide employment opportunities to residents and generate a positive impact to the local economy.



#### 6.0 PUBLIC INVOLVEMENT

The USDA ARS has been delegated the authority to approve the EA before its release for public review. NEPA requires that the USDA ARS make a "diligent" effort to involve the interested and affected public on a proposal for which an EA is prepared, which includes but is not limited to, public review of Draft EAs, responses to comments.

Date of EA: Mar.2024

The Draft EA will be sent out for public review for a minimum of 30 days. The notice that an EA is available for review will, at a minimum, be published in the local newspaper of record. The notice will appear in a visible location in the paper, and anyone who requests a copy of the EA should receive one, until a reasonable number of copies have been distributed. Those who request a copy after this time should be referred to the nearest library or other government office that has a record copy. It is acceptable to send an electronic copy or make an electronic copy available if the person requesting has access to such a сору.

All public comments will be addressed prior to finalizing the EA.



#### 7.0 AGENCY COORDINATION AND PERMITS

The following agencies and organizations were sent requests for review and comment via letters and attached maps/drawings of the proposed action. Copies of the letters and responses can be found in Appendix 2:

Date of EA: Mar.2024

Agency	Office	Address			
Apache Tribe of Oklahoma	N/A	620 E Colorado Ave. Anadarko, OK 73005			
Chitimacha Tribe of Louisiana	N/A	P.O. Box 661			
	IN/A	Charenton, LA 70523			
Coushatta Tribe of Louisiana	N/A	P.O. Box 818			
		Elton, LA 70532			
Louisiana Department of	Office of Soil/Water	5852 Florida Blvd., Suite 7000			
Agriculture & Forestry	Conservation	Baton Rouge, LA 70806			
Louisiana Department of Culture,		P.O. Box 44247			
Recreation, & Tourism	Division of Archaeology	Baton Rouge, LA 70804			
·		* email submittal			
Louisiana Department of	N/A	Email submittal			
Environmental Quality	. 47.1				
Louisiana Department of	Air Quality Division	P.O. Box 4313			
Environmental Quality		Baton Rouge, LA 70821			
U.S. Army Corps of Engineers	Department of the Army	7400 Leake Ave.			
, ,		New Orleans, LA 70118			
Louisiana Floodplain	DOTD Section 64	P.O. Box 94245			
Management Program		Baton Rouge, LA 70804 14025 HWY 84 W			
Jean Band of Choctaw Indians	N/A	Trout, LA 71371			
Louisiana Danartment of Natural		P.O. Box 94275			
Louisiana Department of Natural Resources	Office of Conservation	Baton Rouge, LA 70804-9275			
Louisiana Department of Natural	Coastal Zone				
Resources	Management	Online submittal			
	Management	P.O. Box 98000			
Louisiana Department of Wildlife	Wildlife Diversity Program	Baton Rouge, LA 70898			
& Fisheries		*email submittal			
Mississippi Band of Choctaw	NI/A	101 Industrial Road			
Indians	N/A	Choctaw, MS 39350			
Natural Resources Conservation	State Conservationist	3737 Government Street			
Service	State Conservationist	Alexandria, LA 71302			
Office of Indian Affairs	Director	P.O. Box 94095			
Office of Indian Affairs	Director	Baton Rouge, LA 70804			
Terrebonne Parish Consolidated	N/A	8026 W. Main Street, Suite 101			
Government	IN/A	Houma, LA 70360			
Terrebonne Parish Government	Floodplain Administrator	P.O. Box 2768			
		Houma, LA 70361			
US Environmental Protection	Sole Source Aquifer	1201 Elm Street, Suite 500			
Agency, Region 6	Coordinator	Dallas, TX 75270			
United Houma Nation	N/A	2986 HWY 1			
		Golden Meadow, LA 70357			
US Fish and Wildlife Service	N/A	Online project review			
US Geological Survey	N/A	3535 S. Sherwood Forest, Suite 120			
		Baton Rouge, LA 70806			



#### 8.0 **REFERENCES**

- EPA Causes of Climate Change http://www.epa.gov/climatechange/science/causes.html
- EPA Clean Water Act http://www.epa.gov/agriculture/lcwa.html
- EPA Noise Control Act http://www2.epa.gov/laws-regulations/summary-noise-control-act
- FEMA Executive Order 12898 (Environmental Justice for Low Income & Minority Populations, http://www.fema.gov/environmental-planning-and-historic-preservationprogram/executive-order-12898-environmental-justice

Date of EA: Mar.2024

- HUD Tribal Directory Assessment Tool (TDAT) https://egis.hud.gov/tdat/
- Louisiana Department of Wildlife and Fisheries (LDWF) Rare species and Natural Communities By Parish (Terrebonne Parish). https://www.wlf.louisiana.gov/page/rare-speciesand-natural-communities- by-parish
- National Park Service (NPS) *Tribal Preservation Program* http://www.nps.gov/tribes/Tribal Historic Preservation Officers Program.htm
- NPS Series: Physiographic Provinces.https://www.nps.gov/articles/coastalplain.htm
- U.S. Census Bureau. 2020. State & County QuickFacts: Houma, Louisiana; Schriever CDP, Louisiana; Terrebonne Parish, Louisiana. Accessed July 5, 2023. Retrieved from https://www.census.gov/quickfacts/.
- U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
- U.S. EPA, Office of Federal Activities Consideration of Cumulative Impacts in EPA Review of NEPA Documents - May 1999
- U.S. Fish & Wildlife Service Information for Planning and Consultation (IPaC) https://ipac.ecosphere.fws.gov/
- U.S. Fish & Wildlife Service National Wetlands Inventory (Wetland Mapper) http://www.fws.gov/wetlands/Data/Mapper.html
- U.S. Geological Survey National Seismic Hazard Mapping Project Earthquake Hazards Program http://earthquake.usgs.gov/hazards/



#### 9.0 LIST OF PREPARERS

Cy J. Toups, PE Lead Professional T. Baker Smith, LLC

Samantha Ordoyne Environmental Professional T. Baker Smith, LLC



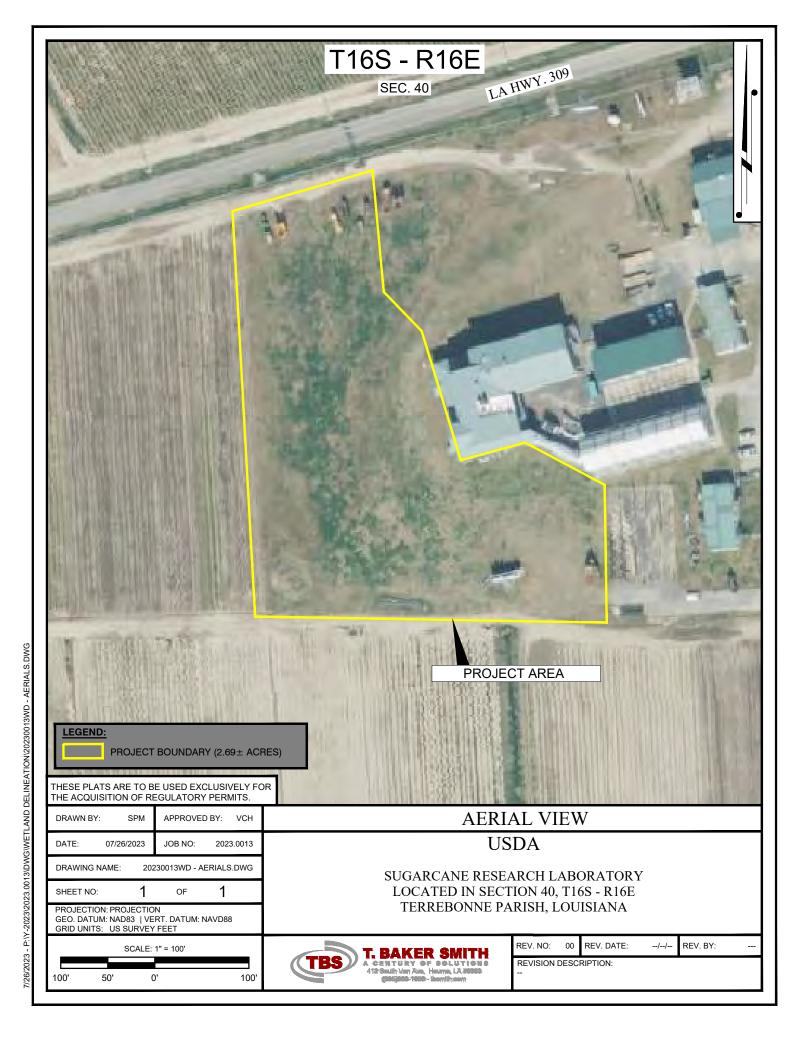
#### 10.0 APPENDICES



# Appendix No. 1

**Project Overview Maps** 

7/26/2023 - P.\Y-2023\2023.0013\DWG\WETLAND DELINEATION\20230013WD - VICINITY.DWG





## Appendix No. 2

Solicitation of Views



985.868.1050 (P) 1.866.357.1050 (TF) www.tbsmith.com 985.868.5843 (F)

July 27, 2023

8th Coast Guard District (Mo) Commander

Email: <u>Eric.Washburn@Uscg.Mil</u> 1222 Spruce Street, Suite 7.103

St. Louis MO 63103-2382

Re: Solicitation of Views

United States Department of Agriculture Ardoyne Farm Sugarcane Research Laboratory Expansion 501 Bull Run Road, Schriever, Terrebonne Parish, Louisiana

Early in the planning stages of an environmental assessment, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the United States Department of Agriculture, Agricultural Research Service (USDA ARS) with the early identification of possible adverse economic, social, or environmental effects or concerns. This Solicitation of Views is being requested in order to comply with National Environmental Policy Act Requirements (NEPA) and your assistance in this regard will be appreciated.

The USDA ARS is proposing the construction of two (2) new Sugarcane Research Laboratory (SRL) greenhouse structures at its Ardoyne Farm Sugarcane Research Unit (the Unit) located at 501 Bull Run Road in Schriever, Louisiana. The Unit is situated in the middle of sugarcane fields in a rural area of Terrebonne Parish. There are four (4) original buildings on this Unit dating back to the 1930s. Five (5) additional buildings were added to the Unit between 2010 and 2013, and the proposed project would include the development of two (2) greenhouse buildings on the Unit, with future plans for further expansion. The USDA signed and agreement with the American Sugar Can League Foundation and the LSU Ag Center in the 1920s when the Louisiana sugarcane industry was rapidly declining due to disease. This agreement, which is still in effect today, was designed to improve sugarcane production through research and variety development. The Unit's mission is to provide research-based solutions that enhance the viability of sugarcane as a sugar and/or biofuels feedstock utilizing a multidisciplinary approach to develop improved varieties and environmentally friendly production strategies that ensure industry profitability, expand cropping range, and combat constantly evolving pest complex including diseases, insects, and weeds. The goal of the proposed project is to improve connectivity and collaboration by having all SRLs at the Ardoyne Farm Sugarcane Research Unit, as well as improving the quality of the greenhouses, as the existing facilities are out of date and in poor condition.

It is requested that you review the attached information and furnish us with your views and comments by August 27, 2023. Please reference the above Project in your reply. Replies should be addressed to the attention of, Cy Toups, T. Baker Smith, LLC, P.O. Box 2266, Houma, LA 70361 or via email at Cy.Toups@tbsmith.com.

Sincerely,

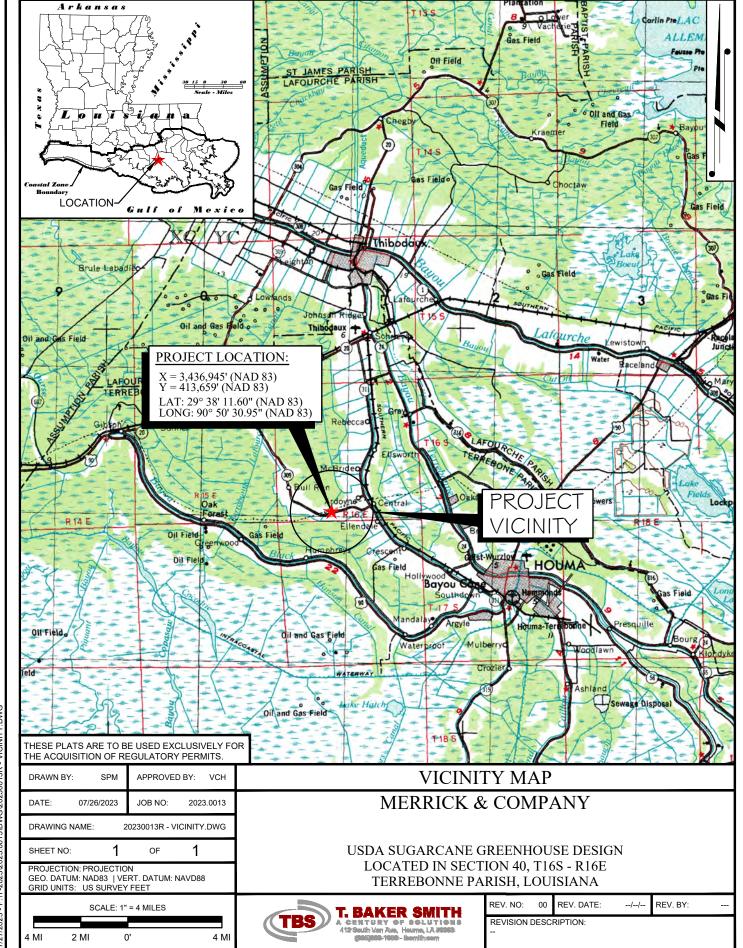
T. BAKER SMITH, LLC.

Cy J. Toups, P.E.

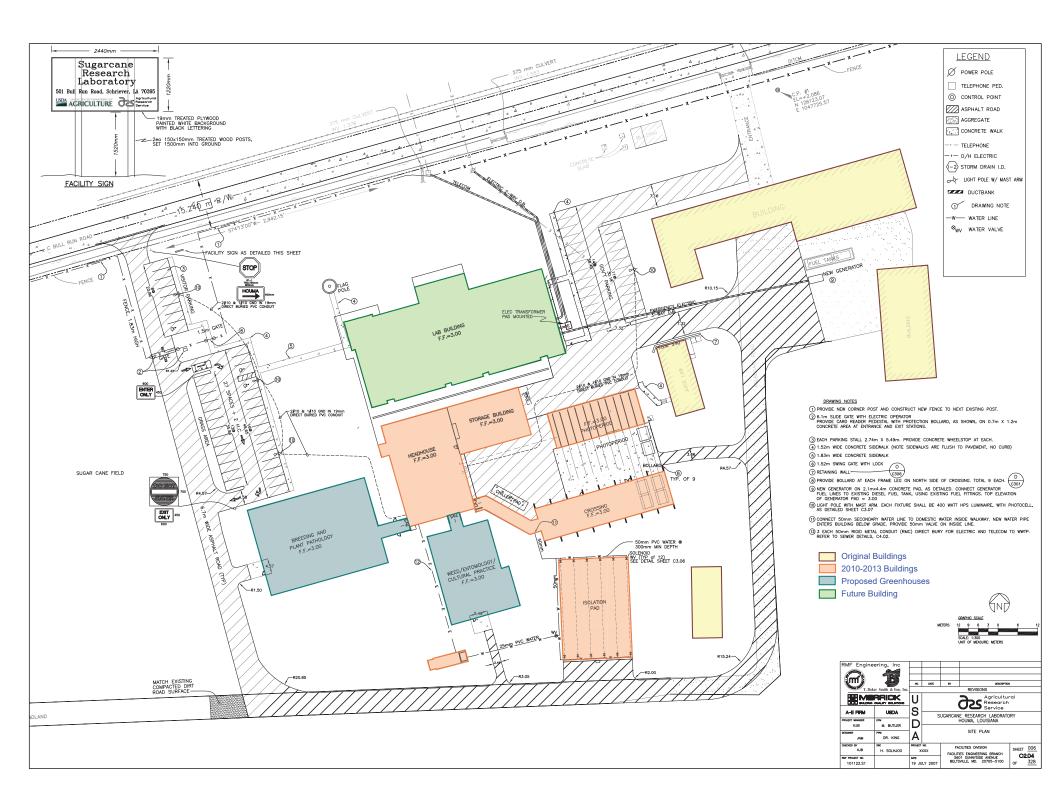
Lead Professional, Environmental Discipline

Enclosure(s)





7/27/2023 - P:\Y-2023\2023.0013\DWG\20230013R - VICINITY.DWG



Title
Attn: Air Quality Division
La. Dept. of Environmental Quality
P.O. Box 4313
Baton Rouge, LA 70821
Attn: Water Quality Division
La. Dept. of Environmental Quality
Via Email: <u>Linda.Piper@la.gov</u>
Baton Rouge, LA 70821
Attn: Floodplain Manager
Terrebonne Parish Government
P.O. Box 2768
Houma, LA 70361
Terrebonne Parish Consolidated Government
8026 W Main Street Ste 101
Houma, LA 70360
U.S. Fish & Wildlife Service
Please Use Project Review!!
Www.Fws.Gov/Southeast/Lafayette/
Project-Review/
Lafayette La 70506
Carolyn Michon
Wildlife Diversity Program
La. Dept Of Wildlife & Fisheries
P O Box 98000
Baton Rouge LA 70898
Department of Agriculture & Forestry
Office of Soil/Water Cons
5825 Florida Blvd., Suite 7000
Baton Rouge LA 70806
Department of Culture Recreation & Tourism
Division of Archaeology
Via Email: section106@crt.la.gov
Office of Indian Affairs
Director
P.O. Box 94095
Baton Rouge, LA 70804
Chitimacha Tribe of Louisiana

Title
PO Box 661
Charenton, LA 70523
United Houma Nation
2986 Hwy. 1
Golden Meadow, LA 70357
Apache Tribe of Oklahoma
620 E Colorado Ave
Anadarko, OK 73005
Coushatta Tribe of Louisiana
P.O. Box 818
Elton, LA 70532
Jena Band of Choctaw Indians
14025 Hwy 84 W
Trout, LA 71371
Mississippi Band of Choctaw Indians
101 Industrial Road
Choctaw, MS 39350
U.S. Army Corps of Engineers
7400 Leake Ave
New Orleans, LA 70118
La. Dept. of Natural Resources – Submit Online
Coastal Zone Management
P.O. Box 44487
Baton Rouge, LA 70804
U.S. Environmental Protection
Agency, Region 6
Sole Source Aquifer Coordinator
Via Email: Martinez.Omar@epa.gov
1201 Elm Street, Suite 500
Mail Code: WDDG
Dallas TX 75270
Natural Resources Conservation Svc
Attn: State Conservationist
3737 Government St
Alexandria LA 71302
La. Dept. of Natural Resources
Office of Conservation

Title
P O Box 94275
Baton Rouge LA 70804-9275
U.S. Geological Survey
3535 S Sherwood Forest Ste 120
Baton Rouge LA 70806
Floodplain Management Program
DOTD Section 64
P.O. Box 94245
Baton Rouge LA 70804-9245
8th Coast Guard District (Mo)
Commander
Email: Eric.Washburn@Uscg.Mil
1222 Spruce Street, Suite 7.103
St. Louis MO 63103-2382



Post Office Box 2266, Houma, LA 70361 412 South Van Avenue, Houma, LA 70363

985.868.1050 (P) 1.866.357.1050 (TF) www.tbsmith.com 985.868.5843 (F)

July 27, 2023

RECE

Chitimacha Tribe of Louisiana PO Box 661 Charenton, LA 70523

Our records and oral traditions do not indicate that a specifi Chitimacha archaeological site or Traditional Cultural Property is within the APE and could be affected; therefore we have no objection to the implementation of the propose activity; however, if human remains or cultural resources ar discovered, you should stop immediately and contact me and the Louisiana State Historic Preservation Office.

Kimberly S. Walden, THPO

Solicitation of Views Re:

> United States Department of Agriculture Ardoyne Farm Sugarcane Research Laboratory Expansion 501 Bull Run Road, Schriever, Terrebonne Parish, Louisiana

Early in the planning stages of an environmental assessment, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the United States Department of Agriculture, Agricultural Research Service (USDA ARS) with the early identification of possible adverse economic, social, or environmental effects or concerns. This Solicitation of Views is being requested in order to comply with National Environmental Policy Act Requirements (NEPA) and your assistance in this regard will be appreciated.

The USDA ARS is proposing the construction of two (2) new Sugarcane Research Laboratory (SRL) greenhouse structures at its Ardoyne Farm Sugarcane Research Unit (the Unit) located at 501 Bull Run Road in Schriever, Louisiana. The Unit is situated in the middle of sugarcane fields in a rural area of Terrebonne Parish. There are four (4) original buildings on this Unit dating back to the 1930s. Five (5) additional buildings were added to the Unit between 2010 and 2013, and the proposed project would include the development of two (2) greenhouse buildings on the Unit, with future plans for further expansion. The USDA signed and agreement with the American Sugar Can League Foundation and the LSU Ag Center in the 1920s when the Louisiana sugarcane industry was rapidly declining due to disease. This agreement, which is still in effect today, was designed to improve sugarcane production through research and variety development. The Unit's mission is to provide research-based solutions that enhance the viability of sugarcane as a sugar and/or biofuels feedstock utilizing a multidisciplinary approach to develop improved varieties and environmentally friendly production strategies that ensure industry profitability, expand cropping range, and combat constantly evolving pest complex including diseases, insects, and weeds. The goal of the proposed project is to improve connectivity and collaboration by having all SRLs at the Ardoyne Farm Sugarcane Research Unit, as well as improving the quality of the greenhouses, as the existing facilities are out of date and in poor condition.



# LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY MIKE STRAIN DVM COMMISSIONER



08/22/2023

Agricultural & Environmental Sciences Suite 3000

Suite 3000 (225) 925-3770 Fax: 925-3760

Agro-Consumer Services Suite 5000 (225) 922-1341 Fax: 923-4877

Animal Health & Food Safety Suite 4000 (225) 925-3962 Fax: 925-4103

Forestry Suite 6000 (225) 925-4500 Fax: 922-1356

Management & Finance Suite 1000 (225) 922-1255 Fax: 925-6012

Soil & Water Conservation Suite 7000 (225) 922-1269 Cy Toups T. Baker Smith, LLC P.O. Box 2266 Houma, Louisiana 70361

RE: Ardoyne Farm Sugarcane Research Laboratory Expansion

Dear Mr. Toups, I have no objection or further comment at this time regarding the above referenced project.

Sincerely,

Graph C. Summer Si

Joey Breaux
Assistant Commissioner,
LDAF/Office of Soil & Water Conservation
Director, LA Soil & Water Conservation Commission
225.922.1269

JCB: CB

## JOHN BEL EDWARDS GOVERNOR



THOMAS F. HARRIS
SECRETARY

08/03/2023

OFFICE OF COASTAL MANAGEMENT

T. BAKER SMITH, LLC PO BOX 2266 HOUMA, LA 70361 Attn: Cy Toups

**RE:** P20230617, Solicitation of Views

**MERRICK & COMPANY** 

**Description:** United States Department of Agriculture, Ardoyne Farm Sugarcane Research Laboratory Expansion. Proposed project is to improve connectivity and collaboration by having all SRLs at the Ardoyne Farm Sugarcane Research Unit, as well as improving the quality of the greenhouses, as the existing facilities are out of date and in poor condition.

Location: Lat. 29° 38' 11.60"N, Long. 90° 50' 30.95"W; Section 40 T16S-

R16E; 501 Bull Run Road, Schriever

Terrebonne Parish, LA

#### Dear Cy Toups:

We have received your Solicitation of Views for the above referenced project, which has been found to be inside the Louisiana Coastal Zone. In order for us to properly review and evaluate this project, we require that a complete Coastal Use Permit Application packet (Joint Application Form, locality maps, project illustration plats with plan and cross section views, etc.) along with the appropriate application fee be submitted to our office. Using your complete application, we can provide you with an official determination, and begin the processing of any Coastal Use Permit that may be required for your project. You may obtain a free application packet by calling our office at (225) 342-7591 or (800)-267-4019, or by visiting our website at

#### Applying for a Coastal Use Permit

We recommend that, during your planning process, you make every effort to minimize impacts to vegetated wetlands. As our legislative mandate puts great emphasis on avoiding damages to these habitats, in many cases the negotiations involved in reducing such disturbances and developing the required mitigation to offset the lost habitat values delay permit approval longer than any other factor. Additionally, the following sensitive features may require additional processing time by the appropriate resource agencies:

-Chitimacha Aboriginal Grounds

P20230617, Solicitation of Views MERRICK & COMPANY 08/03/2023 Page 2

Should you desire additional consultation with our office prior to submitting a formal application, we recommend that you call and schedule a pre-application meeting with our Permit Section staff. Such a preliminary meeting may be helpful, especially if a permit application that is as complete as possible is presented for evaluation at the pre-application meeting.

If you have any questions, would like to request an application packet or would like to schedule a pre-application meeting, please contact Emily Eley at (225) 342-7942 or Emily. Eley@la.gov.

Sincerely,

Kyle F. Balkum Administrator

Kyle F. Balkum/ee

Attachments

P20230617, Solicitation of Views MERRICK & COMPANY 08/03/2023 Page 3

#### **Final Plats:**

1) P20230617 Final Plats 08/02/2023

cc: Jordan Cobbs, OCM w/plats Rod Pierce, CMD/FI w/plats Terrebonne Parish w/plats MERRICK & COMPANY w/plats

#### JOHN BEL EDWARDS GOVERNOR



#### ROBERT SHADOIN SECRETARY

#### PO BOX 98000 | BATON ROUGE LA | 70898

Date August 3, 2023

Name Tracy Pellegrin

**Company** T Baker Smith

Street Address P.O. Box 2266

City, State Zip Houma, LA 70361

**Project** Ardoyne Farm Sugarcane Research Laboratory Expansion

501 Bull Run Road, Schriever, Terrebonne Parish, Louisiana

**Project ID** 

Invoice Number 23080308

Personnel of the Louisiana Wildlife Diversity Program (WDP) have reviewed the preliminary data for the captioned project. After careful review of our database, no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state wildlife refuges or wildlife management areas are known to occur at the specified site within Louisiana's boundaries.

The Wildlife Diversity Program (WDP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. WDP reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the WDP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. WDP reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. WDP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time WDP tracked species are encountered within the project area, please contact the WDP Data Manager at 225-763-3554. If you have any questions, or need additional information, please call 337-735-8734.

Sincerely,

for Carolyn Michon

Nicole Lorenz, Program Manager Wildlife Diversity Program August 8, 2023

Cy Toups, P.E. T. Baker Smith, LLC P.O. Box 2266 Houma, LA 70361

RE: Solicitation of Views

United States Department of Agriculture

Ardoyne Farm Sugarcane Research Laboratory Expansion 501 Bull Run Road, Schriever, Terrebonne Parish, Louisiana

Cy:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resources Conservation Service projects in the immediate vicinity.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and narrative submitted with your request indicates that the proposed construction area will potentially impact the following prime or unique farmland soils:

Soil Mapunit Symbol and Name	Acres	RV
CbA – Cancienne silt loam, 0 to 1 percent slopes	0.8	90.1
CdA – Cancienne silty clay loam, 0 to 1 percent slopes	1.9	100.0

Total Acres: 2.7 Weighted Average RV: 97.1

Please find attached an 'AD-1006 Farmland Conversion Impact Rating' form with our agency's information completed. Furthermore, we do not predict impacts to NRCS work in the vicinity.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location: http://websoilsurvey.nrcs.usda.gov/

For more information on FPPA requirements or the process to receive a Farmland Conversion Impact Rating (Form AD-1006 or CPA-106) please visit the following location: http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/



Natural Resources Conservation Service State Office 3737 Government Street Alexandria, Louisiana 71302 Voice: (318) 473-7751 Fax: (844) 325-6947 Please direct all future correspondence to me at the address shown below.

Respectfully,

Brandon Waltman

Assistant State Soil Scientist

Attachment

F.	U.S. Departmen			ATING					
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request						
Name of Project	Federal /	Agency Involved	<u>·</u>						
Proposed Land Use			County and State						
PART II (To be completed by NRCS)		Date Request Received By NRCS			Person C	Person Completing Form:			
Does the site contain Prime, Unique, Statev	·	? \	YES NO	Acres Irrigated Average Far			Farm Size		
(If no, the FPPA does not apply - do not complete additional parts of this form)									
Major Crop(s)	Farmable Land In Govt.	Jurisdiction	1	Amount of Farmland As Defined in FPPA			PA		
	Acres: %			Acres: %					
Name of Land Evaluation System Used	Name of State or Local Site Assessment Syst			Date Land Evaluation Returned by NRCS					
PART III (To be completed by Federal Age	ncy)					e Site Rating			
A. Total Acres To Be Converted Directly	•			Site A	Site B	Site C	Site D		
B. Total Acres To Be Converted Indirectly							+		
C. Total Acres In Site									
PART IV (To be completed by NRCS) Lan	d Evaluation Information								
A. Total Acres Prime And Unique Farmland									
B. Total Acres Statewide Important or Local									
C. Percentage Of Farmland in County Or Lo	•								
D. Percentage Of Farmland in Govt. Jurisdi		ve Value							
PART V (To be completed by NRCS) Land		ve value							
Relative Value of Farmland To Be Co	onverted (Scale of 0 to 100 Points	s)							
PART VI (To be completed by Federal Age		004 400	Maximum Points	Site A	Site B	Site C	Site D		
(Criteria are explained in 7 CFR 658.5 b. For 1. Area In Non-urban Use	Corridor project use form NRCS-	CPA-106)	(15)				+		
Perimeter In Non-urban Use			(10)				+		
Perimeter in Non-urban ose     Percent Of Site Being Farmed			(20)						
Protection Provided By State and Local	Government		(20)						
Distance From Urban Built-up Area			(15)						
6. Distance To Urban Support Services			(15)						
7. Size Of Present Farm Unit Compared To	) Average		(10)						
Creation Of Non-farmable Farmland			(10)						
9. Availability Of Farm Support Services			(5)						
10. On-Farm Investments			(20)						
11. Effects Of Conversion On Farm Suppor	t Services		(10)						
12. Compatibility With Existing Agricultural	Jse		(10)						
TOTAL SITE ASSESSMENT POINTS			160						
PART VII (To be completed by Federal A	gency)								
Relative Value Of Farmland (From Part V)			100						
Total Site Assessment (From Part VI above or local site assessment)			160						
TOTAL POINTS (Total of above 2 lines)			260						
Site Selected: Date Of Selection				Was A Local Site Assessment Used?  YES NO					
Reason For Selection:						- <u> </u>			
Name of Federal agency representative comp	oleting this form:				D	ate:			

#### STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.
- Step 2 Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at <a href="http://offices.usda.gov/scripts/ndISAPI.dll/oip\_public/USA\_map">http://offices.usda.gov/scripts/ndISAPI.dll/oip\_public/USA\_map</a>, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office
- Step 7 The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

#### INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

**Part I**: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

- 1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
- 2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

- 1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighted a maximum of 25 points and criterion #11 a maximum of 25 points.
- 2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

**Part VII:** In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

 $\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$ 

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.



#### Office of Public Works and Water Resources PO Box 94245 | Baton Rouge, LA 70804-9245 ph: 225-379-3005 | fx: 225-379-3002

August 22, 2023

United States Department of Agriculture Ardoyne Farm Sugarcane Research Laboratory Expansion 501 Bull Run Road Shriever, Louisiana Parish: Terrebonne

T. Baker Smith, LLC Mr. Cy. J. Toups, P.E. 412 South van Avenue Houma, LA 70363

**Subject: Solicitation of Views** 

Dear Mr. Toups:

Enclosed is a copy of Terrebonne Parish's Flood Insurance Rate Map (FIRM) indicating the proposed project site.

During the construction, in particular the additional work needed, there must be allowance for the adequate flow of water and assurance that there will be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction. At this time, consideration must also be given to the responsibility for clearing debris and keeping the surrounding area clear so as not to interfere with its function.

In order to assure compliance with the Parish's requirements for the National Flood Insurance Program (NFIP), and ensure that appropriate permits are obtained, please contact the floodplain administrator for Terrebonne Parish. The contact person for Terrebonne Parish is: Lisa Ledet, P.O. Box 6097, Houma, LA, 70361, telephone no. 985-873-6357, and email: lisaledet@tpgov.org.

In addition to local requirements, please be advised that additional permits may be required from other government agencies.

We thank you for the opportunity to comment on this project. If you need additional information, please contact our office, (225) 379-3005.

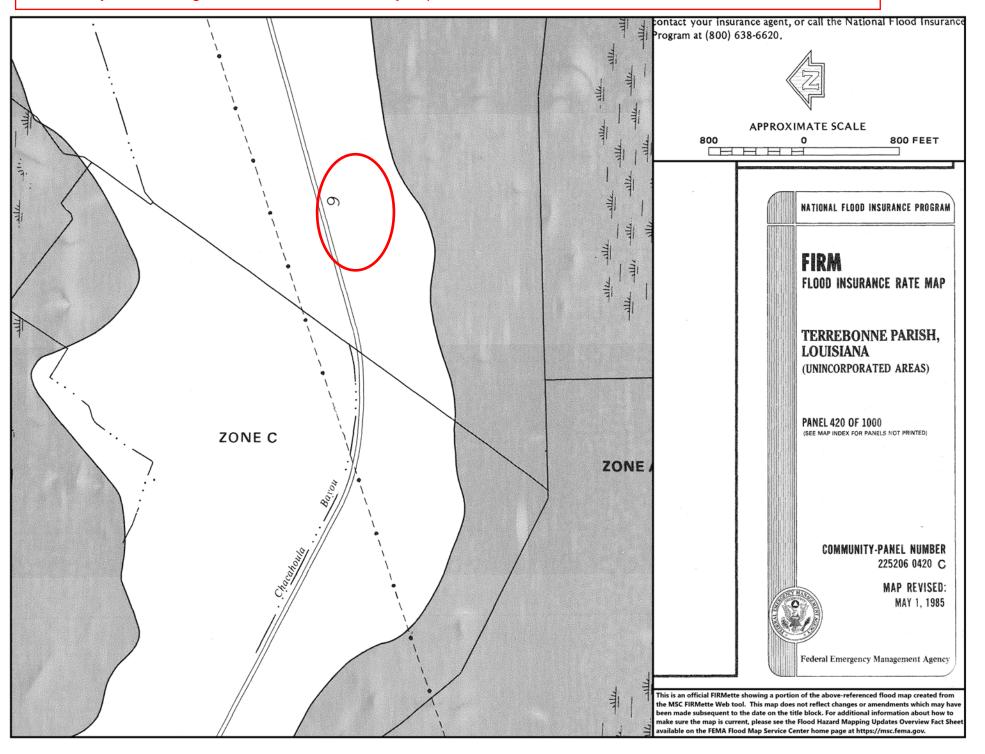
Sincerely,

Angela Gil Angela Gil

Floodplain Management Program Specialist

Enclosures

cc: Lisa Ledet, FPA Terrebonne Parish



From: <u>Tracy Pellegrin</u>
To: <u>DCRT Section 106</u>

Subject: Solicitation of Views – United States Dept of Agriculture

**Date:** Friday, July 28, 2023 1:04:29 PM

Attachments: image001.png

2023.0013 Sugarcane Lab Exp SOV Submittal Package LDCRT-SHPO.pdf

EXTERNAL EMAIL Please do not click on links or attachments unless you know the content is safe.

On behalf of our client, Merrick & Company for United States Dept of Agriculture, please see the attached SOV package for your review and comments.

Should you have any questions, please contact us.

#### Thank you,



Tracy Pellegrin
Project Assistant
T. Baker Smith, LLC
985.223.9232 | Direct
Tracy.Pellegrin@tbsmith.com
www.tbsmith.com

This email has been scanned for email related threats and delivered safely by Mimecast. For more information please visit <a href="http://www.mimecast.com">http://www.mimecast.com</a>



July 27, 2023

Department of Culture Recreation & Tourism Division of Archaeology

Via Email: section106@crt.la.gov

Re: Solicitation of Views

United States Department of Agriculture Ardoyne Farm Sugarcane Research Laboratory Expansion 501 Bull Run Road, Schriever, Terrebonne Parish, Louisiana

Early in the planning stages of an environmental assessment, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the United States Department of Agriculture, Agricultural Research Service (USDA ARS) with the early identification of possible adverse economic, social, or environmental effects or concerns. This Solicitation of Views is being requested in order to comply with National Environmental Policy Act Requirements (NEPA) and your assistance in this regard will be appreciated.

The USDA ARS is proposing the construction of two (2) new Sugarcane Research Laboratory (SRL) greenhouse structures at its Ardovne Farm Sugarcane Research Unit (the Unit) located at 501 Bull Run Road in Schriever, Louisiana. The Unit is situated in the middle of sugarcane fields in a rural area of Terrebonne Parish. There are four (4) original buildings on this Unit dating back to the 1930s. Five (5) additional buildings were added to the Unit between 2010 and 2013, and the proposed project would include the development of two (2) greenhouse buildings on the Unit, with future plans for further expansion. The USDA signed and agreement with the American Sugar Can League Foundation and the LSU Ag Center in the 1920s when the Louisiana sugarcane industry was rapidly declining due to disease. This agreement, which is still in effect today, was designed to improve sugarcane production through research and variety development. The Unit's mission is to provide research-based solutions that enhance the viability of sugarcane as a sugar and/or biofuels feedstock utilizing a multidisciplinary approach to develop improved varieties and environmentally friendly production strategies that ensure industry profitability, expand cropping range, and combat constantly evolving pest complex including diseases, insects, and weeds. The goal of the proposed project is to improve connectivity and collaboration by having all SRLs at the Ardoyne Farm Sugarcane Research Unit, as well as improving the quality of the greenhouses, as the existing facilities are out of date and in poor condition.

It is requested that you review the attached information and furnish us with your views and comments by August 27, 2023. Please reference the above Project in your reply. Replies should be addressed to the attention of, Cy Toups, T. Baker Smith, LLC, P.O. Box 2266, Houma, LA 70361 or via email at <a href="mailto:Cy.Toups@tbsmith.com">Cy.Toups@tbsmith.com</a>.

Sincerely,

T. BAKER SMITH, LLC.

Cy J. Toups, P.E.

Lead Professional, Environmental Discipline

Enclosure(s)

No known historic properties will be affected by this undertaking. Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.

Kristin P. Sanders

State Historic Preservation Officer

Date 8/29/2023





## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### REGION 6 1201 ELM STREET, SUITE 500 DALLAS, TEXAS 75270

August 29, 2023

Mr. Cy J. Toups, P.E., Project Manager TBS: T. BAKER SMITH, LLC, A Century Of Solutions Post Office Box 2266 Houma, LA 70361

Dear Mr. Toups:

cc:

We have received your July 27, 2023, letter requesting our evaluation of the potential environmental impacts which might result from the following project:

Propose Construction of Two (2) New Sugarcane Research Laboratory Greenhouse Structures (Ardoyne Farm), Funded By The United States Department of Agriculture (USDA) /// 501 Bull Run Road: (29.636556, -90.841931), Cross Streets: Goldsby Drive & Longdale Drive, Schriever, Terrebonne Parish, Louisiana, LA 70395

In administering the sole source aquifer (SSA) program under Section 1424 of the Safe Drinking Water Act our Office performs evaluations of projects with federal financial assistance which are located over a designated sole source aquifer.

Based on the information provided, we have concluded that the project does not lie within the boundaries of a designated sole source aquifer and is thus not eligible for review under the SSA program.

EPA intends to evaluate and respond to all projects submitted for formal review or evaluation purposes within forty-five (45) calendar days, from the Stamped Date the project is received by the EPA. However, if EPA is unable to complete its review within that timeframe, no assumption of a determination of a lack of impacts can be made. EPA acknowledges our approval is not required by law for the project to proceed with funding.

If you did not include a project description, project location, the parish, area map, plat and the federal funding agency if available, please do so in future Sole Source Aquifer correspondence.

If you have any questions on this letter or the SSA program please contact me at (214) 665-8485.

Sincerely yours

Omar T. Martinez, Coordinator

Sole Source Aquifer Program

Ground Water/UIC Section

Tracy L. Pellegrin, Group/Project Assistant, Environmental, T. BAKER SMITH, LLC Jesse Means, LDEQ

**Date: August 29, 2023** 

FYI: We have moved and have a New Address & Mail Code, please see below.

Omar T. Martinez, Environmental Scientist Sole Source Aquifer Program Coordinator Ground Water/UIC Section (Mail Code: WDDG) U.S. Environmental Protection Agency, Region 6 1201 Elm Street, Suite 500 Dallas, Texas 75270

Date of EA: Mar. 2024



# **Appendix No. 3**

Physical Resources



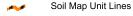
#### **MAP LEGEND**

#### Area of Interest (AOI)

Area of Interest (AOI)

#### Soils

Soil Map Unit Polygons



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 SpotSandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

#### OLIND

Spoil Area

Stony Spot

Very Stony Spot

₩ Wet Spot

Other

Special Line Features

#### Water Features

Δ

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.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale

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: Terrebonne Parish, Louisiana Survey Area Data: Version 18, Sep 8, 2022

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

Date(s) aerial images were photographed: Jan 13, 2021—Mar 6, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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		
CbA	Cancienne silt loam, 0 to 1 percent slopes	0.4	17.4%		
CdA	Cancienne silty clay loam, 0 to 1 percent slopes	1.8	82.6%		
Totals for Area of Interest	-	2.2	100.0%		



You are here: EPA Home > Green Book > National Area and County-Level Multi-Pollutant Information > Louisiana Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

### Louisiana Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of May 31, 2023

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

\* The 1997 Primary Annual PM-2.5 NAAQS (level of 15  $\mu$ g/m³) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:

LOUISIANA 

✓ GO

Important Notes   Download National Dataset: dbf   xls   Data dictionary (PDF)								
County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
LOUISIANA								
Ascension Parish	1-Hour Ozone (1979)-NAAQS revoked	Baton Rouge, LA	92939495969798990001020304	//	Severe-15	Whole	107,215	22/005
Ascension Parish	8-Hour Ozone (1997)-NAAQS revoked	Baton Rouge, LA	04050607080910	12/30/2011	Moderate	Whole	107,215	22/005
Ascension Parish	8-Hour Ozone (2008)	Baton Rouge, LA	1213141516	03/21/2017	Marginal	Whole	107,215	22/005
Beauregard Parish	1-Hour Ozone (1979)-NAAQS revoked	Beauregard Parish, LA	929394	10/17/1995	Incomplete Data	Whole	35,654	22/011
Calcasieu Parish	1-Hour Ozone (1979)-NAAQS revoked	Lake Charles, LA	9293949596	06/02/1997	Marginal	Whole	192,768	22/019
East Baton Rouge Parish	1-Hour Ozone (1979)-NAAQS revoked	Baton Rouge, LA	92939495969798990001020304	//	Severe-15	Whole	440,171	22/033
East Baton Rouge Parish	8-Hour Ozone (1997)-NAAQS revoked	Baton Rouge, LA	04050607080910	12/30/2011	Moderate	Whole	440,171	22/033
East Baton Rouge Parish	8-Hour Ozone (2008)	Baton Rouge, LA	1213141516	03/21/2017	Marginal	Whole	440,171	22/033
Evangeline Parish	Sulfur Dioxide (2010)	Evangeline Parish (Partial), LA	181920212223	//		Part	124	22/039
Grant Parish	1-Hour Ozone (1979)-NAAQS revoked	Grant Parish, LA	929394	10/17/1995	Incomplete Data	Whole	22,309	22/043
Iberville Parish	1-Hour Ozone (1979)-NAAQS revoked	Baton Rouge, LA	92939495969798990001020304	//	Severe-15	Whole	33,387	22/047
Iberville Parish	8-Hour Ozone (1997)-NAAQS revoked	Baton Rouge, LA	04050607080910	12/30/2011	Moderate	Whole	33,387	22/047
Iberville Parish	8-Hour Ozone (2008)	Baton Rouge, LA	12 13 14 15 16	03/21/2017	Marginal	Whole	33,387	22/047

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Parish	1-Hour Ozone (1979)-NAAQS revoked	New Orleans, LA	929394	12/01/1995	Section 185A	Whole	432,552	22/051
Parish	1-Hour Ozone (1979)-NAAQS revoked	Lafayette, LA	929394	10/17/1995	Section 185A	Whole	221,578	22/055
Parish	1-Hour Ozone (1979)-NAAQS revoked	Lafourche Parish, LA	92939495969798990001	02/25/2002	Incomplete Data	Whole	96,318	22/057
Parish	1-Hour Ozone (1979)-NAAQS revoked	Baton Rouge, LA	92939495969798990001020304	//	Severe-15	Whole	128,026	22/063
Parish	8-Hour Ozone (1997)-NAAQS revoked	Baton Rouge, LA	04050607080910	12/30/2011	Moderate	Whole	128,026	22/063
Parish	8-Hour Ozone (2008)	Baton Rouge, LA	1213141516	03/21/2017	Marginal	Whole	128,026	22/063
Orleans Parish	1-Hour Ozone (1979)-NAAQS revoked	New Orleans, LA	929394	12/01/1995	Section 185A	Whole	343,829	22/071
Pointe Coupee	1-Hour Ozone (1979)-NAAQS revoked	Pointe Coupee Parish, LA	92939495	12/20/1996	Marginal	Whole	22,802	22/077
St. Bernard	1-Hour Ozone (1979)-NAAQS revoked	New Orleans, LA	929394	12/01/1995	Section 185A	Whole	35,897	22/087
	Sulfur Dioxide (2010)	St. Bernard Parish, LA	13 14 15 16 17 18 1920212223	//		Whole	35,897	22/087
	1-Hour Ozone (1979)-NAAQS revoked	New Orleans, LA	929394	12/01/1995	Section 185A	Whole	52,780	22/089
St. James Parish	1-Hour Ozone (1979)-NAAQS revoked	St. James Parish, LA	929394	11/13/1995	Incomplete Data	Whole	22,102	22/093
St. Mary Parish	1-Hour Ozone (1979)-NAAQS revoked	St. Mary Parish, LA	929394	10/17/1995	Incomplete Data	Whole	54,650	22/101
Rouge Parish	1-Hour Ozone (1979)-NAAQS revoked	Baton Rouge, LA	92939495969798990001020304	//	Severe-15	Whole	23,788	22/121
Rouge Parish	8-Hour Ozone (1997)-NAAQS revoked	Baton Rouge, LA	04050607080910	12/30/2011	Moderate	Whole	23,788	22/121
Rouge Parish	8-Hour Ozone (2008)	Baton Rouge, LA	1213141516	03/21/2017	Marginal	Whole	23,788	22/121
Important Note	S							

Connect. Ask. Discover. Follow.

2023-05-31

Date of EA: Mar. 2024



# Appendix No. 4

Water Resources

# U.S. Fish and Wildlife Service **National Wetlands Inventory**

# 501 Bull Run Road NWI Map



June 23, 2023

#### Wetlands\_Alaska

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Riverine

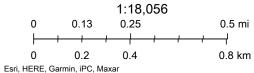
Other

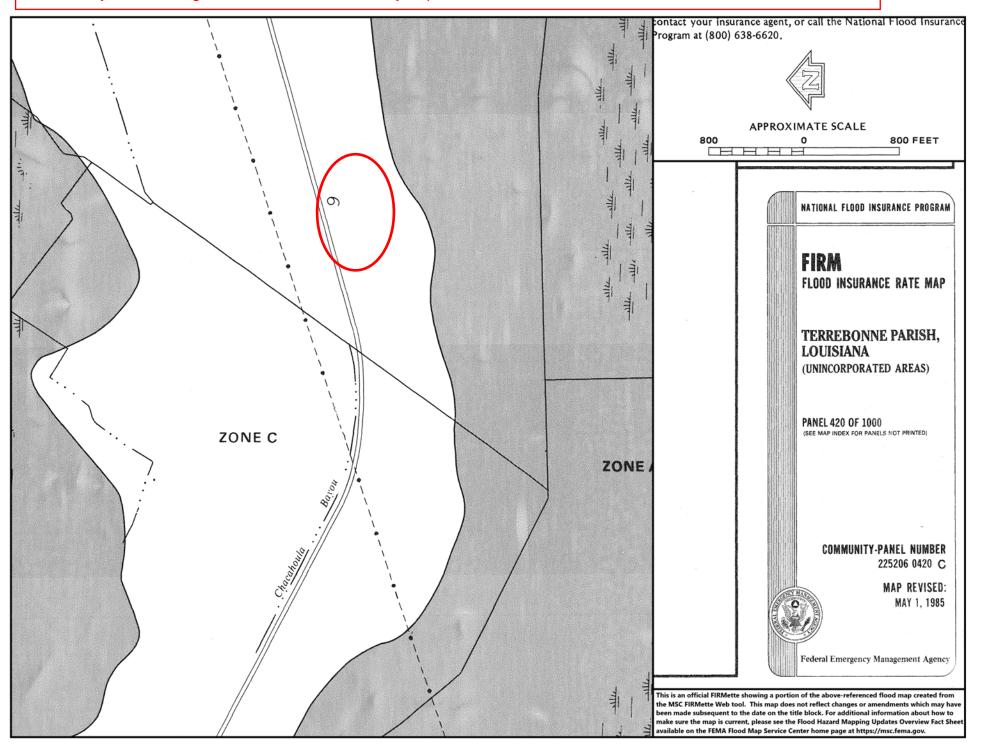
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# 501 Bull Run Road Scenic Rivers Map



8/28/2023, 10:58:50 AM





Date of EA: Mar. 2024



# Appendix No. 5

Wetland Delineation

# **WETLAND DELINEATION REPORT**

For:

# USDA – Sugarcane Greenhouse Expansion Tract

Located in Terrebonne Parish, Louisiana Sections 40 Township 16S-Range 16E

Prepared For:

Merrick & Company

August 2023

TBS Project Number 2023.0013



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CONCLUSION	5
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#### INTRODUCTION

T. Baker Smith, LLC (TBS) provided the following wetland delineation of the project site in Terrebonne Parish, Louisiana (**Appendix A**). The project site can be accessed from Bull Run Road via Louisiana Highway 311 in Schriever, Louisiana. The total area delineated was approximately 2.69 acres. Refer to the delineation maps in **Appendix B** for details. As required by the U.S. Army Corps of Engineers, New Orleans District Regulatory Branch, current true color aerial imagery maps (**Appendix C**), infrared aerial imagery (**Appendix D**), USGS Topographic Maps (**Appendix E**), and LiDAR/Elevation Maps (**Appendix F**) are included for review.

#### **METHODS**

On July 18, 2023, TBS biologists conducted a wetland delineation of the project area. The delineation method described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* was used in determining and delineating wetlands within the proposed project site. Preliminary data on soils was taken from the *Soil Survey of Terrebonne Parish, Louisiana* (Web Soil Survey Data), and from the list of hydric soils for Louisiana. The vegetative indicator status was determined using the *National Wetland Plant List* (U.S. Army Corps of Engineers, 2020).

Two (2) sampling points were collected within the project area (**Appendix G**). At each sample point, soil plots were dug to a depth of at least 20 inches. The soil profile sample was examined and photographed (**Appendix H**). Data collected on the soil, hydrology, and vegetation were recorded on U.S. Army Corps of Engineers Wetland Determination Data Forms for the Atlantic and Gulf Coastal Plain Region (**Appendix I**). Positioning in the field was attained through the use of a Trimble<sup>™</sup> DA2 GNSS antenna paired with ESRI Survey123 iOS app<sup>™</sup> software to collect data observations. TBS used AutoCAD<sup>™</sup> 2017 to create the attached maps based on collected positions from sampling points and wetland boundaries.

#### **RESULTS**

The delineated area is described below by the sampling points. Plant communities, hydrology, and soils for the sampling points are discussed in detail. The wetlands are classified according to the comprehensive classification system described in the *Classification of Wetland and Deepwater Habitats of the U.S.* (Cowardin, Carter, Golet, & LaRoe, 1979). The classifications of



wetlands under the Cowardin system relevant to this project are listed in Table 1.

**Table 1. Cowardin System Classification** 

SYSTEM	CLASS
P = Palustrine	EM = Emergent
	SS = Scrub Shrub
	FO = Forested

The delineated property totaled  $\pm$  2.69 acres. Wetland types are typically classified by acreage; however, no wetlands were identified within the delineated property boundary as depicted in **Appendix B**.

#### **Plant Communities**

The indicator status for the dominant plants observed during the wetland delineation was recorded from the National Wetland Plant List (U.S. Army Corps of Engineers, 2020). The list describes the indicator status as follows:

OBL Obligate Wetland (greater than 99 percent occurrence in wetlands)

FACW Facultative Wetland (67-99 percent occurrence in wetlands)

FAC Facultative (34-66 percent occurrence in wetlands)

FACU Facultative Upland (1-33 percent occurrence in wetlands)

NI Non Indicator

<u>Non-Wetlands.</u> Sampling Points 101 and 102 are associated with non-wetland areas within the proposed project area. The dominant plants observed are listed in **Table 2**.

**Table 2. Dominant Species Found in Non-wetland areas** 

Stratum	Common Name	Scientific Name	Indicator
	Bahia Grass	Paspalum notaum	FACU
Herbaceous	Narrow-Leaf Carpet Grass	Axonopus fissifolius	FACW
	Bermuda Grass Cynodon dactylon		FACU



#### **Hydrology**

Methods outlined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region (USACE, 2010) were used to determine the presence of wetland hydrology indicators in the field. A wetland must have one primary indicator or two secondary indicators to meet the hydrology requirements.

The entire project area consists of a vacant grassy lot, which was formerly used for agricultural purposes through October 2012. Hydrology of the project area is affected by storm water, stormwater catch basins, and ditches. No primary or secondary hydrology indicators were observed within the delineation boundary.

#### **Mapped Soil Types**

The Soil Survey for Terrebonne Parish, Louisiana describes two (2) soil types within the project area: Cancienne silty clay loams (CdA) and Cancienne silt loam (CbA). The soil types are mapped in **Appendix J**.

#### Cancienne silty clay loams (CdA) & Cancienne silt loam (CbA)

The Cancienne series consists of very deep, level to gently undulating, somewhat poorly drained mineral soils that are moderately slowly permeable. These soils formed in loamy and clayey alluvium. They are on high and intermediate positions on natural levees and deltaic fans of the Mississippi River and its distributaries. Slopes range from 0 to 3 percent.

#### **Observed Soil Types**

The soils observed within the project area met the criteria for hydric soils provided by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region*. The presence of any hydric soil indicator signifies that a hydric soil exists at that sample point. Soils within the project area were described using the Munsell 10YR Soil-Color Chart 2009 Revision.

The observed soil color in the matrices ranged from very dark gray to dark gray (10YR 3/1 to 4/2). The redox concentrations within the matrices consisted of 15 to 20% of the total soil color and ranged from dark yellowish brown to yellowish brown (10YR 3/6 to 5/6). The soil texture was silty



clay loam throughout both samples. Soils with 60 percent of a chroma of two or less and minimum thickness of six inches starting within 10 inches of the soil surface meet the hydric soil indicator (F3) Depleted Matrix.

#### **WATERBODIES**

One (1) waterbody was observed within the project area consisting of approximately 0.01 acres. This waterbody (WB-1) began forming at a fork from the nearby dirt road and has the characteristics of an ephemeral ditch. The waterbody continued southwesterly to a culvert which connected to subsurface drainage that flowed southward. The ditch functions as drainage for the site and surrounding areas. The waterbody observed in the project is shown as water and mapped in **Appendix B**. A detailed description of the waterbodies observed is shown below in **Table 3**.

Table 3. Waterbodies Within the Project Area

Waterbody ID	Waterbody Type	Waterbody Name	Jurisdictional (Y/N)
WB-1	Ditch	None	N

#### **JURISDICTIONAL STATUS**

The waterbody within the project footprint was reviewed in accordance with the January 18, 2023, Navigable Waters Protection Rule (NWPR). The USACE Antecedent Precipitation Tool (APT) was used to determine the "typical year" for the site. The APT tool determined that the site conditions were drier than normal (Appendix K).

The waterbody found in the project area does not satisfy any of the parameters to be considered "Waters of the United States". This waterbody is considered a drainage feature that does not have enough flow to be considered a traditional navigable water or even a tributary, thus does not meet qualifications of a jurisdictional waterbody and is determined to be non-jurisdictional. The waterbody is mapped in **Appendix B**.

The entire project site was determined to consist of non-wetland areas. The extent of the project boundary has been previously under common agricultural practice. Based on a review of historical imagery, the entire delineated area consisted of agricultural crop fields since at least 1989 through



approximately 2012. From 2012 to present day, the delineated area has been a vacant grassy lot. Sample areas were chosen based on geomorphic features, LiDAR, and aerial imagery. For example, the area surrounding SP101 represented low areas on the south side of the project boundary because the elevation sloped downward and away from the center of the project area. The area surrounding SP102 from north to south represented low areas on the east and north side of the project boundary because the elevation sloped downward and away from the center of the project area. The vegetation was also more diverse in the area of SP102. All sample locations were chosen due to their potential representation of the entire site. No samples were collected in the center of the project area due to the elevation increase in the center. None of the sample locations exhibited all three of the required wetland characteristics. The Wetlands and Waterbodies Map can be found in **Appendix B**.

#### CONCLUSION

TBS biologists delineated approximately 2.69 acres in Terrebonne Parish, Louisiana. No wetlands were observed within the project boundaries and TBS identified approximately 0.01 acres of waters. All features are mapped in **Appendix B**. It should be noted that this report is the professional opinion of TBS biologists, and that the U.S. Army Corps of Engineers has final authority over jurisdictional wetland determinations.



#### **REFERENCES**

- Cowardin, L.M, V. Carter, F. C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. FWS/OBS-79/31. U.S. Department of the Interior. 131pp.
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- NRCS Web Soil Survey of Terrebonne Parish, Louisiana, United States Department of Agriculture.
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- USDA, NRCS. 2011. The PLANTS Database (<a href="http://plants.usda.gov">http://plants.usda.gov</a>, 15 July 2023). National Plant Data Center, Baton Rouge, LA 70874-4490 USA
- USDA, NRCS.2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils
- USDA, NRCS. 2018 List of Hydric Soils (<a href="https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soil/hydric-soils">https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soil/hydric-soils</a>, 15 July 2023).



## **APPENDIX A**

# **VICINITY MAP**

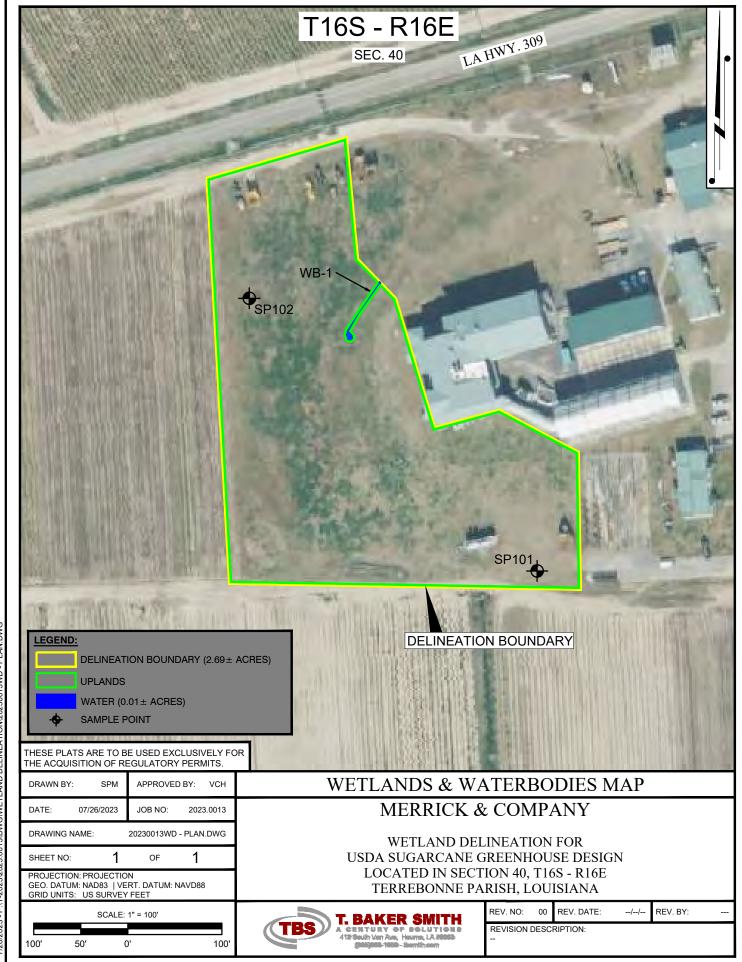


7/26/2023 - P:\Y-2023\2023.0013\DWG\WETLAND DELINEATION\20230013WD - VICINITY.DWG

# **APPENDIX B**

# **WETLAND DELINEATION MAP**



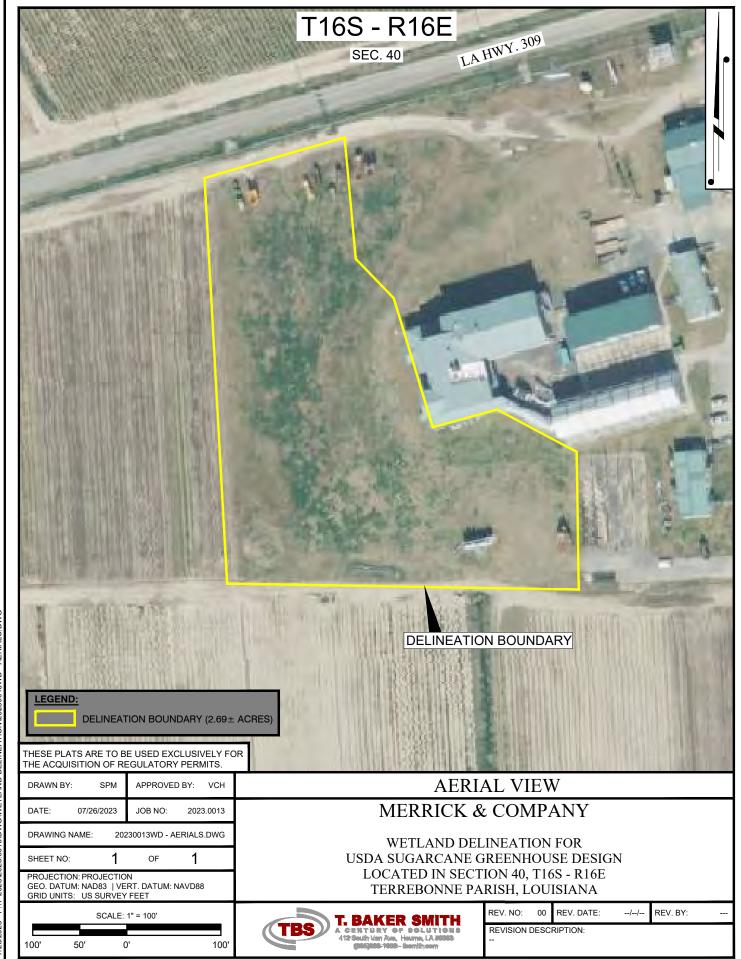


7/26/2023 - P.\Y-2023\2023.0013\DWG\WETLAND DELINEATION\20230013WD - PLAN.DWG

## **APPENDIX C**

# **AERIAL MAP**



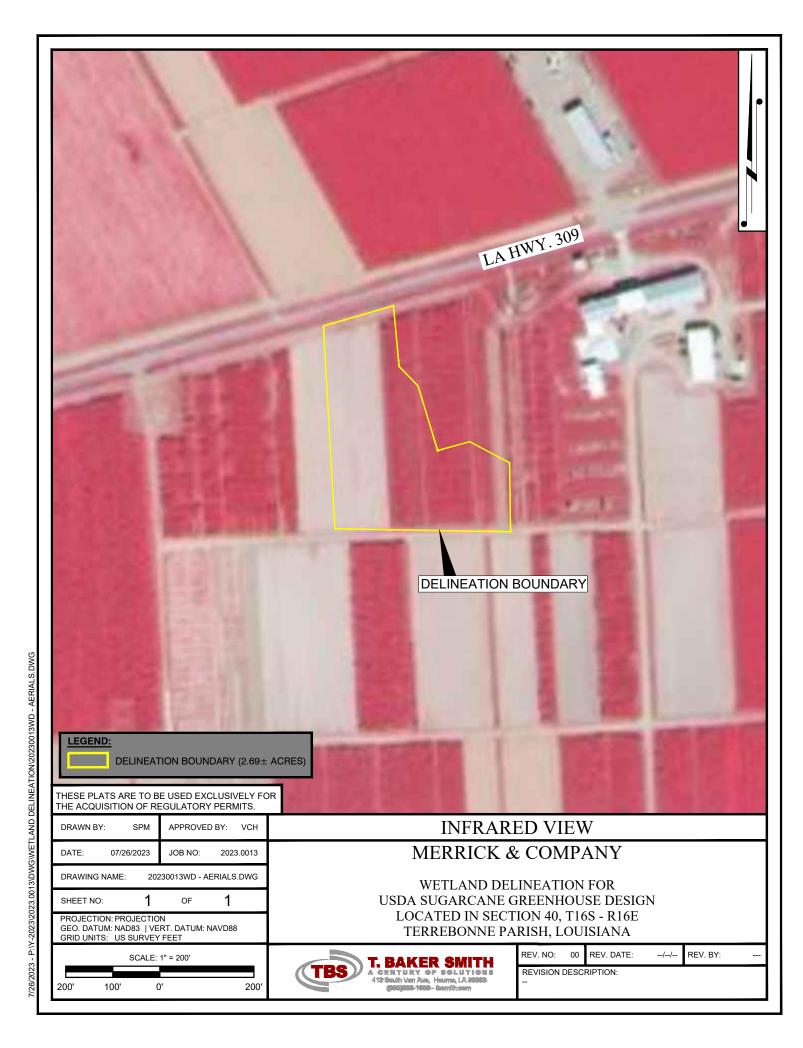


7/26/2023 - P:IY-2023/2023.0013/DWG\WETLAND DELINEATION\20230013WD - AERIALS.DWG

# **APPENDIX D**

# **INFRARED AERIAL MAP**

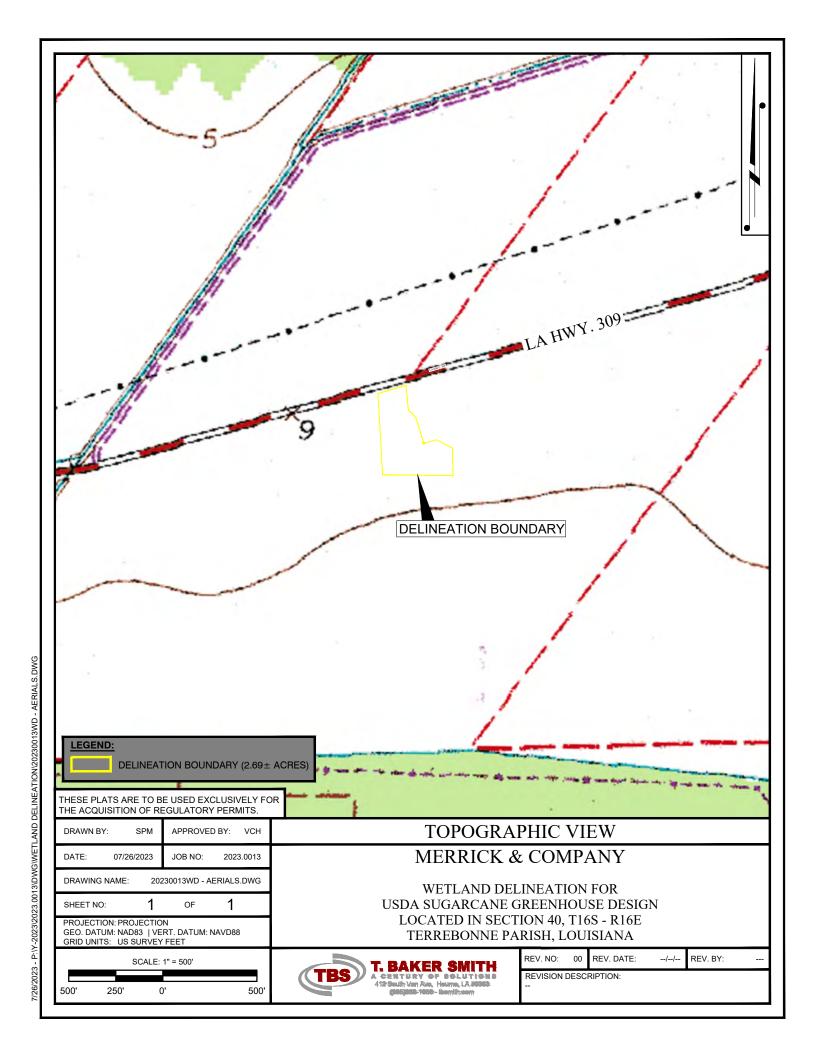




# **APPENDIX E**

# **TOPOGRAPHIC MAP**





# **APPENDIX F**

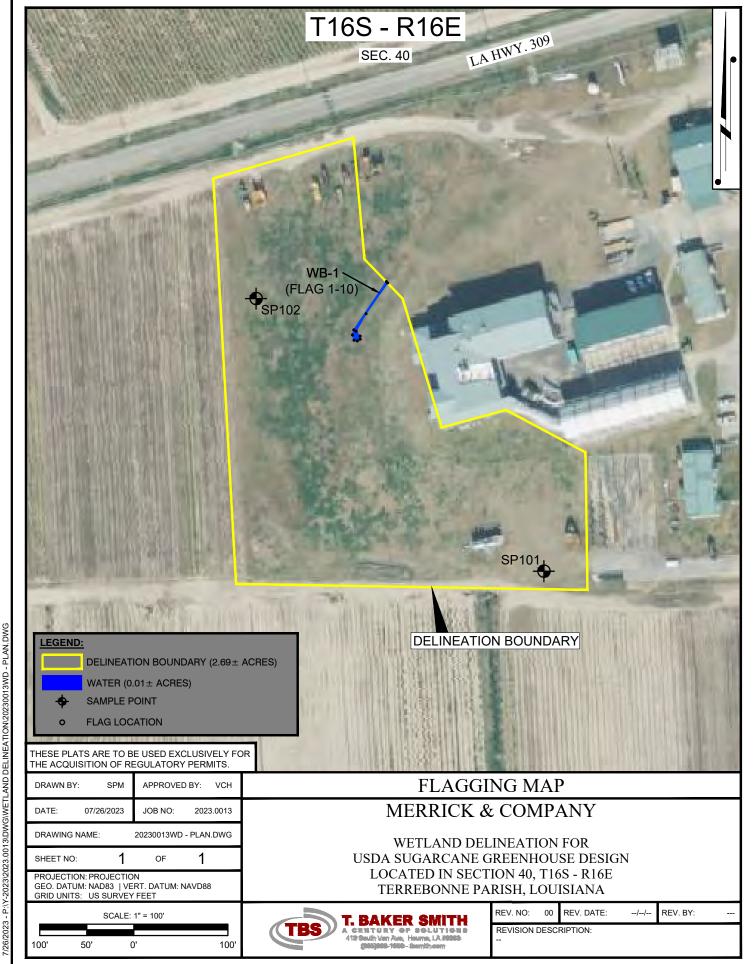
# **LIDAR/ELEVATION MAP**



# **APPENDIX G**

# **FLAGGING KEY MAP**





Mark In a discontinuity and in international accordance to the conditions

## **APPENDIX H**

# **PHOTOGRAPHS**





Photo 1: View of soil sample from Sample Point 1 (TBS Photo 18 July 2023).



Photo 2: View of area surrounding sampling point 1 (TBS Photo 18 July 2023).



Photo 3: View of soil sample from Sample Point 2 (TBS Photo 18 July 2023).



Photo 4: View of area surrounding sampling point 2 (TBS Photo 18 July 2023).



Photo 5: View of Waterbody 1 (TBS Photo 18 July 2023).



## **APPENDIX I**

## **WETLAND DATA SHEETS**

Wetland Delineation
USDA Sugarcane Greenhouse Expansion Tract
Terrebonne Parish, Louisiana



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: USDA Sugarcane Greenhouse Design	City/County: Schriev	ver/Terrebonne	Sampling Date: 2023-07-18		
Applicant/Owner: Merrick & Company		State: Louisiana			
vestigator(s): VH; SO Section, Township, Range: 40, 16S, 16E					
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Convex Slope (%					
Subregion (LRR or MLRA): O 131A Lat: 2					
		=			
Are climatic / hydrologic conditions on the site typical for this time					
Are Vegetation, Soil, or Hydrology signifi					
Are Vegetation, Soil, or Hydrology natura		eeded, explain any answers			
SUMMARY OF FINDINGS – Attach site map sho					
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks:	•	and? Yes	No		
Upland point. Lowest point sloping downwarow. Soil is extremely hard, vegetative continues drier than normal)					
HYDROLOGY					
Wetland Hydrology Indicators:			ors (minimum of two required)		
Primary Indicators (minimum of one is required; check all that a		Surface Soil C			
Surface Water (A1) Aquatic Faun			<ul><li>Sparsely Vegetated Concave Surface (B8)</li><li>Drainage Patterns (B10)</li></ul>		
	High Water Table (A2)  Marl Deposits (B15) (LRR U)				
Saturation (A3) Hydrogen Su			Moss Trim Lines (B16)		
	zospheres along Living Root		Vater Table (C2)		
	Reduced Iron (C4)	Crayfish Burro			
	Reduction in Tilled Soils (C6)		sible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Thin Muck Si		Geomorphic F			
Iron Deposits (B5) Other (Explai	n in Remarks)	Shallow Aquit			
Inundation Vis ble on Aerial Imagery (B7)		FAC-Neutral			
Water-Stained Leaves (B9) Field Observations:		Spriagrium me	oss (D8) <b>(LRR T, U)</b>		
	achao):				
Water Table Present? Yes No Depth (ii					
Saturation Present? Yes No Depth (in (includes capillary fringe)	iches): We	etland Hydrology Present	? Yes No		
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections	s), if available:			
Remarks:					

'EGETATION (Five Strata) – Use scientific nar	nes of pla	ants.		Sampling Point: SP101
20.4-		Dominant		Dominance Test worksheet:
Tree Stratum         (Plot size: 30 ft r )           1		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2.				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 (A/B)
6				Bassalanas la dassas da la seria
	:	= Total Cov	er er	Prevalence Index worksheet:
50% of total cover:	20% of	total cover	·	Total % Cover of:         Multiply by:           OBL species         0         x 1 = 0
Sapling Stratum (Plot size: 30 ft r )				FACW species 0 x 2 = 0
1				FAC species 10 x 3 = 30
2				FACU species 90 x 4 = 360
3				UPL species 0 x 5 = 0
4				100
5				Column Totals: 100 (A) 390 (B)
6				Prevalence Index = B/A = $3.9$
		= Total Cov	er er	Hydrophytic Vegetation Indicators:
50% of total cover:	20% of	total cover	·	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				
4				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
		= Total Cov		Tree – Woody plants, excluding woody vines,
50% of total cover:	20% of	total cover	·	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r )	6E		FAOLI	(7.6 cm) or larger in diameter at breast height (DBH).
1. Paspalum notatum	65		FACU	Sapling – Woody plants, excluding woody vines,
2. Cynodon dactylon	15		FACU FAC	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3. Paspalum dilatatum Trifolium repens	10			
··· <del></del>			FACU	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
5				
6				<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
7.				plants, except woody vines, less than approximately
8				3 ft (1 m) in height.
9.				<b>Woody vine</b> – All woody vines, regardless of height.
10				
11	100%			
<b>700</b> 64 4 4 <b>50</b> 0		= Total Cov		
50% of total cover: 50.0	20% of	total cover	20.0	
Woody Vine Stratum (Plot size: 30 ft r )				
1				
2.				
3				
4				
5				Hydrophytic Vegetation
50% of total cover:				Present? Yes No

SOIL Sampling Point: SP101

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u> </u>	Color (moist)	<u> %</u>	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	<u>Remarks</u>
0 - 7	10YR 4/2	85	10YR 5/6	15	<u>C</u>	M	Silty Clay Loam	Soil appears hydric but area drains very well.
7 - 20	10YR 6/1	85	10YR 4/6	15	С	PL / M	Silty Clay Loam	
-								
_								
				_				
		_		_	-			
	-			_				
			=Reduced Matrix, M			ains.		PL=Pore Lining, M=Matrix.
•		cable to all	LRRs, unless othe					for Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Polyvalue Be					Muck (A9) (LRR O)
Histic Ep	oipedon (A2)		Thin Dark Si Loamy Muck					Muck (A10) (LRR S) sed Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gley			(0)		ont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		✓ Depleted Ma		( )			alous Bright Loamy Soils (F20)
Organic	Bodies (A6) (LRR F	P, T, U)	Redox Dark	Surface (	F6)		(MLI	RA 153B)
	icky Mineral (A7) <b>(L</b>							arent Material (TF2)
	esence (A8) (LRR l	J)	Redox Depr		<del>-</del> 8)			Shallow Dark Surface (TF12)
	ick (A9) <b>(LRR P, T)</b> d Below Dark Surfac	o (Δ11)	Marl (F10) <b>(I</b> Depleted Oc		/MI DA 1	51)	Other	(Explain in Remarks)
	ark Surface (A12)	<i>(</i> A11)	Iron-Mangar				T) <sup>3</sup> Indic	cators of hydrophytic vegetation and
·	, ,	MLRA 150	A) Umbric Surfa					tland hydrology must be present,
Sandy M	lucky Mineral (S1) (	LRR O, S)	Delta Ochric	(F17) <b>(M</b>	LRA 151)		unle	ess disturbed or problematic.
-	Gleyed Matrix (S4)		Reduced Ve					
-	Redox (S5)		Piedmont Fl					4500)
	Matrix (S6) rface (S7) <b>(LRR P,</b> 3	S T II)	Anomalous I	Bright Loa	imy Soils (	(F20) <b>(MLR</b>	A 149A, 153C	s, 153D)
	_ayer (if observed)							
Type:	,							
	ches):						Hydric Soil	Present? Yes V No
Remarks:							1 ,	
· tomanto								

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: USDA Sugarcane Greenhouse Design	City/County: Schrie	ever/Terrebonne	Sampling Date: 2023-07-18		
Applicant/Owner: Merrick & Company		State: Louisiana			
Investigator(s): VH; SO					
Landform (hillslope, terrace, etc.):			Slope (%): 1		
Subregion (LRR or MLRA): O 131A Lat: 29.6					
Soil Map Unit Name: Cancienne silt loam (CbA)		NWI classifica			
Are climatic / hydrologic conditions on the site typical for this time of					
	-				
Are Vegetation, Soil, or Hydrology significant					
Are Vegetation, Soil, or Hydrology naturally p		f needed, explain any answers			
SUMMARY OF FINDINGS – Attach site map showin	ig sampling poin	t locations, transects,	important features, etc.		
Hydrophytic Vegetation Present? Yes No	Is the Samp	led Area			
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes No  Yes No	within a Wet		No V		
	_				
Remarks: Upland sample point. Lowest point of proj	ect area Soil	is darker. Plants ar	re more diverse. No		
		is darker. Flames an	c more diverse. No		
primary or secondary hydrology indicators	s observed.				
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicat	ors (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply	<i>y</i> )	Surface Soil 0			
Surface Water (A1) Aquatic Fauna (B	313)		etated Concave Surface (B8)		
High Water Table (A2)  Marl Deposits (B	•	Drainage Patt			
Saturation (A3) Hydrogen Sulfide		Moss Trim Lir			
	oheres along Living Ro		Dry-Season Water Table (C2)		
Sediment Deposits (B2) Presence of Red	uced Iron (C4)	Crayfish Burro	ows (C8)		
Drift Deposits (B3) Recent Iron Redu	uction in Tilled Soils (C	(6) Saturation Vis	sible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Thin Muck Surface	ce (C7)	Geomorphic F	Position (D2)		
Iron Deposits (B5) Other (Explain in	Remarks)	Shallow Aquit	ard (D3)		
Inundation Vis ble on Aerial Imagery (B7)		FAC-Neutral 7	Test (D5)		
Water-Stained Leaves (B9)		Sphagnum m	oss (D8) <b>(LRR T, U)</b>		
Field Observations:					
Surface Water Present? Yes No Depth (inche	es):				
Water Table Present? Yes No Depth (inche	es):				
Saturation Present? Yes No Depth (inche	es):	Wetland Hydrology Present	? Yes No		
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos previous inspectir	ons) if available:			
Describe recorded Bata (officially gauge, monitoring wen, dental pric	nos, previous mopesus	ono), ii avallabio.			
Remarks:					

#### VEGETATION (Five Strata) - Use scientific names of plants.

= 20% of = 2	= Total Cover:	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 1
= 20% of t	= Total Covers	rer	That Are OBL, FACW, or FAC:         1         (A)           Total Number of Dominant Species Across All Strata:         2         (B)           Percent of Dominant Species That Are OBL, FACW, or FAC:         50         (A/B)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         0         x 1 = 0           FACW species         17         x 3 = 51           FACU species         50         x 4 = 200           UPL species         0         x 5 = 0           Column Totals:         100         (A)         317         (B)           Prevalence Index = B/A = 3.2           Hydrophytic Vegetation Indicators:           1 - Rapid Test for Hydrophytic Vegetation
= 20% of t	= Total Cover:	rer	Species Across All Strata:         2         (B)           Percent of Dominant Species That Are OBL, FACW, or FAC:         50         (A/B)           Prevalence Index worksheet:         Multiply by:         Multiply by:           OBL species         0         x 1 = 0           FACW species         17         x 3 = 51           FACU species         50         x 4 = 200           UPL species         0         x 5 = 0           Column Totals:         100         (A)         317         (B)           Prevalence Index = B/A =         3.2           Hydrophytic Vegetation Indicators:         1 - Rapid Test for Hydrophytic Vegetation
= 20% of	= Total Covers	er e	Percent of Dominant Species
= 20% of t	= Total Cover:	er	That Are OBL, FACW, or FAC: $\underline{50}$ (A/B)  Prevalence Index worksheet: $\underline{\text{Total \% Cover of:}}$ $\underline{\text{Multiply by:}}$ OBL species $\underline{0}$ $\underline{\text{X 1 = 0}}$ FACW species $\underline{17}$ $\underline{\text{X 3 = 51}}$ FACU species $\underline{50}$ $\underline{\text{X 4 = 200}}$ UPL species $\underline{0}$ $\underline{\text{X 5 = 0}}$ Column Totals: $\underline{100}$ (A) $\underline{317}$ (B)  Prevalence Index = B/A = $\underline{3.2}$ Hydrophytic Vegetation Indicators: $\underline{\text{1 - Rapid Test for Hydrophytic Vegetation}}$
= 20% of = = 20% of = = 20% of = = 20% of = = = 20% of = = = = = = = = = = = = = = = = = =	= Total Cover:	er	Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species $0$
= 20% of :	= Total Cover:	er	
= 20% of	= Total Cover:	er	OBL species $0$ $x 1 = 0$ FACW species $33$ $x 2 = 66$ FAC species $17$ $x 3 = 51$ FACU species $50$ $x 4 = 200$ UPL species $0$ $x 5 = 0$ Column Totals: $100$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$
= 20% of	= Total Cov	er	FACW species $\frac{33}{17}$
= 20% of	= Total Cov	er	FAC species $\frac{17}{50}$ $\times$ 3 = $\frac{51}{200}$ $\times$ 4 = $\frac{200}{200}$ UPL species $\frac{0}{100}$ $\times$ 5 = $\frac{0}{317}$ (B)  Prevalence Index = B/A = $\frac{3.2}{1.500}$ Prevalence Indicators:  1 - Rapid Test for Hydrophytic Vegetation
= 20% of	= Total Cov	er	FACU species $\frac{50}{0}$ x 4 = $\frac{200}{0}$ UPL species $\frac{0}{0}$ x 5 = $\frac{0}{317}$ (B)  Prevalence Index = B/A = $\frac{3.2}{1.00}$ Republic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation
= 20% of	= Total Cov total cover:	er	UPL species $0$ $x = 5 = 0$ Column Totals: $0$ $A$ $x = 0$ $0$ $x$
= 20% of	= Total Cov total cover:	er	Column Totals: 100 (A) 317 (B)  Prevalence Index = B/A = 3.2  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation
= = 20% of	= Total Cov total cover	er	Prevalence Index = B/A = 3.2  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation
======================================	= Total Cov total cover:	:	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
20% of	total cover	:	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
			1 - Rapid Test for Hydrophytic Vegetation
			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
			Definitions of Five Vegetation Strata:
,			Tree – Woody plants, excluding woody vines,
20% of	total cover:		approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
0	./	EAC\M	
<u></u> . 5			Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
<u>.</u> 5			than 3 in. (7.6 cm) DBH.
<u>,</u> 5			Shrub Woody plants evaluding woody vines
<u>,</u> )			Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
<u> </u>			
<del></del> -		FAC	<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
			plants, except woody vines, less than approximately 3 ft (1 m) in height.
			3 it (1 iii) iii neight.
			Woody vine – All woody vines, regardless of height.
00% =	Total Cov	er	
			Hydrophytic
=	= Total Cov	er	Vegetation
20% of	total cover	:	Present? Yes No
			1
	= 20% of D = 20% of =	= Total Coverse	= Total Cover  20% of total cover:  FACW FACU FACU FACU FACU FACW FACU FACW FACO FACW FACO FACO FACO FACO FACO FACO FACO FACO

SOIL Sampling Point: SP102

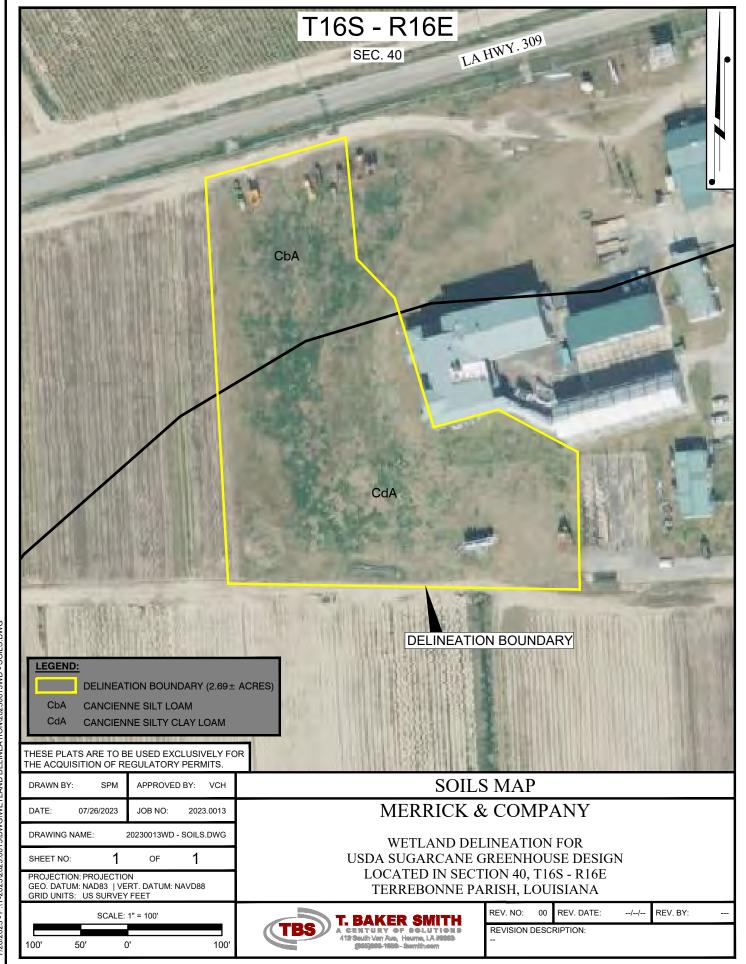
Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the	indicator	or confirm	n the absence o	of indicato	ors.)	
Depth	Matrix			x Feature						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>		Remarks	
0 - 10	10YR 3/1	80	10YR 3/6	20	<u>C</u>	M	Silty Clay Loam			
10 - 20	10YR 4/2	80	10YR 3/6	20	C	М	Silty Clay Loam			
-										
_										,
		_		_						
	-			_		·	-			
	-		-	_						
				_						
			=Reduced Matrix, M			ains.			ining, M=Matrix	
_		able to all	LRRs, unless othe						matic Hydric S	Soils*:
Histosol	` '		Polyvalue Be					. , .	•	
Histic Ep	oipedon (A2)		Thin Dark Su Loamy Muck					uck (A10) (	(LRR S) (18) <b>(outside N</b>	II PA 150A B)
	n Sulfide (A4)		Loamy Gleye			(0)			ain Soils (F19)	
	Layers (A5)		Depleted Ma		()				Loamy Soils (F	
	Bodies (A6) (LRR F	P, T, U)	Redox Dark		F6)			A 153B)	,	,
5 cm Mu	cky Mineral (A7) (L	RR P, T, U	) Depleted Da	rk Surfac	e (F7)			rent Mater		
	esence (A8) (LRR I	J)	Redox Depre		<del>-</del> 8)				Surface (TF12	2)
	ck (A9) <b>(LRR P, T)</b> I Below Dark Surfac	o (A11)	Marl (F10) <b>(I</b> Depleted Oc		(MI DA 4	E4\	Other (I	Explain in f	Remarks)	
	rk Surface (A12)	e (ATT)	Iron-Mangan				T) <sup>3</sup> Indica	ators of hyd	drophytic veget	ation and
		MLRA 150	A) Umbric Surfa						ogy must be pr	
	lucky Mineral (S1)							-	d or problemat	
-	leyed Matrix (S4)		Reduced Ve							
-	edox (S5)		Piedmont Flo							
	Matrix (S6)	S T IIV	Anomalous E	Bright Loa	amy Soils (	(F20) <b>(MLF</b>	RA 149A, 153C,	153D)		
	face (S7) (LRR P, a sayer (if observed)									
Type:	ayer (ii observed)	•								
	ches):						Hydric Soil I	Prosent?	Yes	No
Remarks:							Tiyano com i	10001111		
rtomants.										

## **APPENDIX J**

## **SOILS MAP**

Wetland Delineation
USDA Sugarcane Greenhouse Expansion Tract
Terrebonne Parish, Louisiana





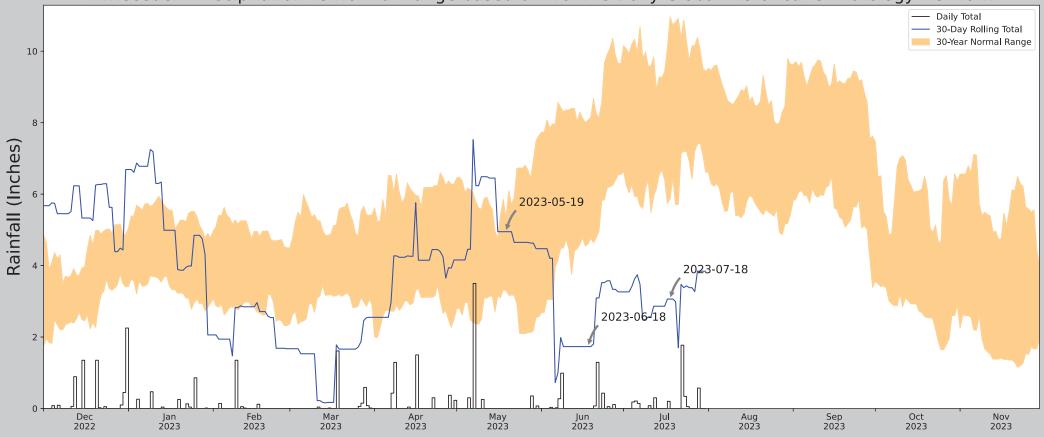
7/26/2023 - P.\Y-2023/2023.0013\DWG\WETLAND DELINEATION\20230013WD - SOILS.DWG

#### **APPENDIX K**

# ANTECEDENT PRECIPITATION TOOL Wetland Delineation USDA Sugarcane Greenhouse Expansion Tract Terrebonne Parish, Louisiana

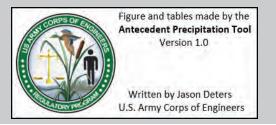


# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	29.635775, -90.841994
Observation Date	2023-07-18
Elevation (ft)	4.851
Drought Index (PDSI)	Severe drought (2023-06)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-07-18	5.877166	10.959449	3,062992	Dry	1	3	3
2023-06-18	4.61063	8.072835	1.732284	Dry	1	2	2
2023-05-19	3.296457	5.322835	4.948819	Normal	2	1	2
Result							Drier than Normal - 7



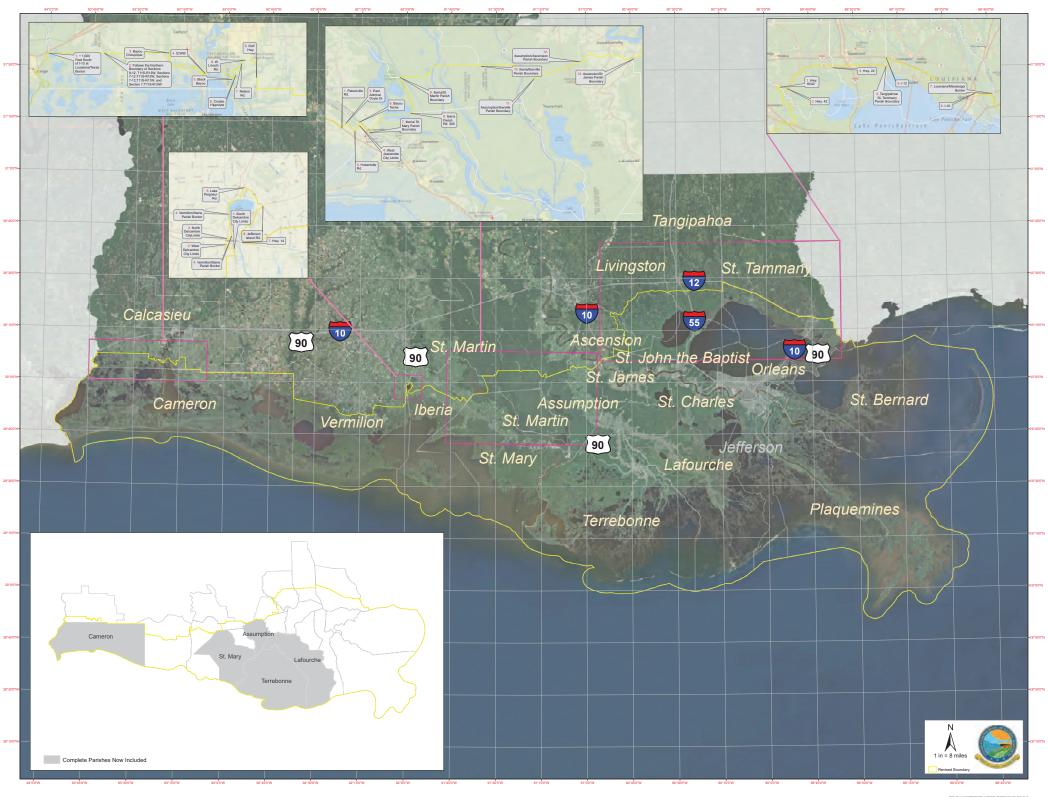
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted A	Days Normal	Days Antecedent
THIBODAUX 4 SE	29.7547, -90.7747	15,092	9.156	10,241	4.214	9810	90
GRAY 0,5 ENE	29.6791, -90.7728	6.89	5,225	8,202	2.394	1166	0
HOUMA	29.6408, -90.8161	7,874	8,253	7,218	3,773	34	0
HOUMA 6.5 WNW	29.6282, -90.799	4,921	8,861	10.171	4.078	1	0
RACELAND 1.8 WSW	29.7056, -90.6224	0.0	9,747	15.092	4,533	42	0
THIBODAUX 7.8 NNE	29.8978, -90.78	2,953	9,892	12.139	4.571	2	0
LABADIEVILLE 0,9 NNW	29.8348, -90.9629	9,843	12.569	5,249	5.722	67	0
CONVENT 2S	29.9953, -90.8178	24.934	16.823	9,842	7.736	182	0
NAPOLEONVILLE	29.9342, -91.0164	24.934	19.069	9,842	8.769	15	0
LUTCHER	30.0389, -90.6936	20.013	20,228	4.921	9.202	3	0
MORGAN CITY	29.6833, -91.1761	4.921	24.586	10.171	11.314	31	0

Date of EA: Mar. 2024



# Appendix No. 6

**Coastal Resources** 



Date of EA: Mar. 2024



# Appendix No. 7

**Biological Resources** 

PARISH†/SPECIES	OCCURRENCE	GROUP	<u>STATUS</u>
TENSAS  Pot Northern Long gorad	Possible	Mammal	T
Bat, Northern Long-eared	Known	Mollusk	E
Mussel, Fat Pocketbook Pearly Sturgeon, Pallid	Known	Fish	E E
<b>e</b> ,	Known	Bird	E E
Tern, Interior Least TERREBONNE	Kilowii	DIIU	E
Manatee, West Indian	Seasonal	Mammal	T
	Known	Bird	T
Knot, Red	Known	Bird	
Plover, Piping	Possible	Bird	T, CH T
Rail, Eastern Black			T
Turtle, Green Sea	Known	Reptile	
Turtle, Hawksbill Sea	Known Known	Reptile	E E
Turtle, Kemp's Ridley Sea		Reptile	
Turtle, Leatherback Sea	Known	Reptile	E
Turtle, Loggerhead Sea	Known	Reptile	T
UNION Bat, Northern Long-eared	Known	Mammal	T
Woodpecker, Red-cockaded	Known	Bird	E
VERMILION	Kilowii	Dita	L
Crane, Whooping	Known	Bird	NEP
Manatee, West Indian	Seasonal	Mammal	T
Knot, Red	Known	Bird	T
Plover, Piping	Known	Bird	T, CH
Rail, Eastern Black	Known	Bird	T
Turtle, Green Sea	Known	Reptile	T
Turtle, Hawksbill Sea	Known	Reptile	Ë
Turtle, Kemp's Ridley Sea	Known	Reptile	E
Turtle, Leatherback Sea	Known	Reptile	E
Turtle, Loggerhead Sea	Known	Reptile	T
VERNON	Kilowii	керине	1
Snake, Louisiana Pine	Known	Reptile	T
Woodpecker, Red-cockaded	Known	Bird	Ë
WASHINGTON	Kilowii	Bird	L
Mussel, Alabama Heelsplitter	Known	Mollusk	T
Quillwort, Louisiana	Known	Plant	Ē
Sturgeon, Atlantic (Gulf subspecies)	Known	Fish	T, CH
Tortoise, Gopher	Known	Reptile	T
Turtle, Ringed Map	Known	Reptile	T
WEBSTER	Kilowii	перше	•
Bat, Northern Long-eared	Possible	Mammal	T
Woodpecker, Red-cockaded	Known	Bird	Ē
WEST BATON ROUGE		Bird	-
Manatee, West Indian	Seasonal	Mammal	T
Sturgeon, Pallid	Known	Fish	Ē
WEST CARROLL			_
Bat, Northern Long-eared	Possible	Mammal	Т
WEST FELICIANA			
Sturgeon, Pallid	Known	Fish	E
WINN (cont. on next page)			
Bat, Northern Long-eared	Known	Mammal	T

PARISH†/SPECIES	<b>OCCURRENCE</b>	<b>GROUP</b>	<b>STATUS</b>
WINN (cont.)			
Earth Fruit	Known	Plant	T
Sturgeon, Pallid	Possible	Fish	E
Tern, Interior Least	Possible	Bird	E
Woodpecker, Red-cockaded	Known	Bird	E

- \* Endangered (E) any species which is in danger of extinction throughout all or a significant portion of its range.
- \* Threatened (T) any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- \* Proposed (P) any species which is proposed for listing under the Endangered Species Act.
- \* <u>Candidate</u> (C) plant and animal taxa considered for possible addition to the List of Endangered and Threatened Species. These are taxa for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.
- \* Critical Habitat (CH) for listed species consists of: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Act, on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.
- \* Non-Essential Experimental Population (NEP) A reintroduced population believed not to be essential for the survival of the species, but important for its full recovery and eventual removal from the endangered and threatened list. These populations are treated as "threatened" species except that the ESA's section 7 consultation regulations (requiring consultation with the U.S. Fish and Wildlife Service to reduce adverse impacts from Federal actions) do not apply (except where the species occurs within National Parks or National Wildlife Refuges) and critical habitat cannot be designated. †If a Parish is not listed here, there are no known occurrences of a threatened, endangered, proposed, or candidate species, or their critical habitat, for that Parish.

#### THREATENED AND ENDANGERED SPECIES

<u>SPECIES</u>	<b>STATUS</b>	GENERAL DISTRIBUTION IN LOUISIANA
MAMMALS		
Bat, Northern Long-eared (Myotis septentrionalis)	Threatened	Known to occur in Bossier, Grant, LaSalle, Ouachita, Rapides, Richland, Union, and Winn parishes; possible in Avoyelles, Bienville, Caddo, Caldwell, Catahoula, Claiborne, Concordia, DeSoto, East Carroll, Franklin, Jackson, Lincoln, Madison, Morehouse, Natchitoches, Red River, Tensas, Webster, and West Carroll parishes
Manatee, West Indian ( <i>Trichechus manatus</i> )	Threatened	Lake Pontchartrain and tributaries on North Shore; rare along Gulf coast
Panther, Florida (Felis concolor coryi)	Endangered <sup>1</sup>	Entire state
Whale, Finback (Balaenoptera physalus)	Endangered	Coastal waters
Whale, Humpback (Megaptera novaeangliae)	Endangered <sup>2</sup>	Coastal waters
Whale, Right (Eubalaena glacialis)	Endangered <sup>2</sup>	Coastal waters
Whale, Sei (Balaenoptera borealis)	Endangered <sup>2</sup>	Coastal waters
Whale, Sperm ( <i>Physeter catodon</i> )	Endangered <sup>2</sup>	Coastal waters
Wolf, Red (Canis rufus)	Endangered <sup>1</sup>	Cameron and Calcasieu parishes
BIRDS		
Crane, Whooping (Grus americana)	Non-essential Experimental Population	White Lake Management Area (WMA), Vermilion Parish
Curlew, Eskimo (Numenius borealis)	Endangered <sup>1</sup>	Entire state
Knot, Red (Calidris canutus rufa)	Threatened	Coast
Plover, Piping (Charadrius melodus)	Threatened	Coast
Rail, Eastern Black (Laterallus jamaicensis jamaicensis)	Threatened	Known to occur in Cameron and Vermilion parishes; possible in Iberia, Jefferson, Lafourche, Plaquemines, St. Bernard, St. Mary, and Terrebonne parishes
Tern, Interior Least (Sterna antillarum)	Endangered	Mississippi River north of Baton Rouge; Red River north of Colfax
Warbler, Bachman's (Vermivora bachmanii)	Endangered <sup>3</sup>	Entire state
Woodpecker, Ivory-billed (Campephilus principalis)	Endangered <sup>1</sup>	Entire state
Woodpecker, Red-cockaded (Picoides borealis)	Endangered	Pine forests throughout the state

SPECIES REPTILES	<b>STATUS</b>	GENERAL DISTRIBUTION IN LOUISIANA
Alligator, American (Alligator mississippiensis)	Threatened (S/A) <sup>4</sup>	Entire state
Snake, Louisiana Pine ( <i>Pituophis ruthveni</i> )	Threatened	Bienville, Natchitoches, Sabine, and Vernon parishes
Tortoise, Gopher (Gopherus polyphemus)	Threatened	St. Tammany, Tangipahoa, and Washington parishes
Turtle, Green Sea (Chelonia mydas)	Threatened <sup>5</sup>	Coastal waters
Turtle, Hawksbill Sea (Eretmochelys imbricata)	Endangered <sup>5</sup>	Coastal waters
Turtle, Kemp's (Atlantic) Ridley Sea (Lepidochelys kempii)	Endangered <sup>5</sup>	Coastal waters
Turtle, Leatherback Sea (Dermochelys coriacea)	Endangered <sup>5</sup>	Coastal waters
Turtle, Loggerhead Sea (Caretta caretta)	Threatened <sup>5</sup>	Coastal waters
Turtle, Ringed Map (= sawback) (Graptemys oculifera)	Threatened	Pearl and Bogue Chitto Rivers
FISH		
Sawfish, Smalltooth ( <i>Pristis pectinata</i> )	Endangered <sup>2</sup>	Gulf of Mexico from Texas to Florida
Sturgeon, Atlantic (Gulf subspecies) (Acipenser oxyrhynchus desotoi)	Threatened <sup>5</sup>	Pearl River and tributaries; Lake Pontchartrain and tributaries
Sturgeon, Pallid (Scaphirhynchus albus)	Endangered	Mississippi River and tributaries
Sturgeon, Shovelnose (Scaphirhynchus platorynchus)	Threatened (S/A) <sup>6</sup>	Mississippi River and tributaries
INVERTEBRATES		
Mussel, Alabama heelsplitter (= inflated) (Potamilus inflatus)	Threatened	Amite River, possible in Pearl River
Mussel, Fat Pocketbook Pearly ( <i>Potamilus capax</i> )	Endangered	Mississippi River
Mussel, Louisiana Pearlshell (Margaritifera hembeli)	Threatened	Bayous Boeuf, Rapides, and Rigolette drainages in Rapides and Grant parishes
Mussel, Pink Mucket Pearly ( <i>Lampsilis abrupta</i> )	Endangered	Bayou Bartholomew
Mussel, Rabbitsfoot (Quadrula cylindrica)	Threatened	Bayou Bartholomew
PLANTS		
Chaffseed, American (Schwalbea americana)	Endangered	Allen and Beauregard parishes
Earth Fruit (Geocarpon minimum)	Threatened	Known to occur in Caddo, DeSoto, and Winn parishes; possible in Bienville, Caldwell, Morehouse, and Sabine parishes
Quillwort, Louisiana (Isoetes louisianensis)	Endangered	St. Tammany and Washington parishes

<sup>&</sup>lt;sup>1</sup> The Florida panther, red wolf, Eskimo curlew, and ivory-billed woodpecker are presumed to be extinct in the state. <sup>2</sup> The National Marine Fisheries Service, St. Petersburg, Florida, has consultation authority for these species.

- <sup>3</sup> There has been no confirmed Bachman's Warbler U.S. nesting ground sighting since the mid-1960s. The last confirmed sighting anywhere in the U.S. was 1988. This species may be extirpated in Louisiana.
- <sup>4</sup> For law enforcement purposes the alligators in Louisiana are classified as "Threatened due to Similarity of Appearance." They are biologically neither endangered nor threatened. Regulated harvest is permitted under State law, September 21, 1998.
- <sup>5</sup> The U.S. Fish and Wildlife Service and the National Marine Fisheries Service share consultation authority for these species.
- <sup>6</sup> For law enforcement purposes shovelnose sturgeon are classified as "Threatened due to Similarity of Appearance" wherever they coexist with the endangered pallid sturgeon. They are biologically neither endangered nor threatened but this designation extends the ESA take prohibitions to shovelnose sturgeon, shovelnose-pallid sturgeon hybrids and their roe when associated with a commercial fishing activity.



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

Louisiana Ecological Services Field Office 200 Dulles Drive Lafavette, LA 70506

Phone: (337) 291-3100 Fax: (337) 291-3139

In Reply Refer To: June 19, 2023

Project Code: 2023-0095125

Project Name: USDA Sugarcane Research Laboratory Project

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and candidate species, as well as designated and proposed critical habitat that may occur within the boundary of your proposed project and may be affected by your proposed project. The Fish and Wildlife Service (Service) is providing this list under section 7 (c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Changes in this species list may occur due to new information from updated surveys, changes in species habitat, new listed species and other factors. Because of these possible changes, feel free to contact our office (337-291-3109) for more information or assistance regarding impacts to federally listed species. The Service recommends visiting the ECOS-IPaC site or the Louisiana Ecological Services Field Office website (https://www.fws.gov/ southeast/lafayette) at regular intervals during project planning and implementation for updated species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)).

Bald eagles have recovered and were removed from the List of Endangered and Threatened Species as of August 8, 2007. Although no longer listed, please be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 et seq.).

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The Service developed the National Bald Eagle Management (NBEM) Guidelines to provide landowners, land managers, and others with information and recommendations to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance", which is prohibited by the BGEPA. A copy of the NBEM Guidelines is available at: https://www.fws.gov/migratorybirds/pdf/management/nationalbaldeaglenanagementguidelines.pdf

Those guidelines recommend: (1) maintaining a specified distance between the activity and the nest (buffer area); (2) maintaining natural areas (preferably forested) between the activity and nest trees (landscape buffers); and (3) avoiding certain activities during the breeding season. Onsite personnel should be informed of the possible presence of nesting bald eagles within the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest occurs or is discovered within or adjacent to the proposed project area, then an evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles. That evaluation may be conducted on-line at: https://www.fws.gov/southeast/our-services/eagle-technical-assistance/. Following completion of the evaluation, that website will provide a determination of whether additional consultation is necessary. The Division of Migratory Birds for the Southeast Region of the Service (phone: 404/679-7051, e-mail: SEmigratorybirds@fws.gov) has the lead role in conducting any necessary consultation.

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

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

Additional information on Federal trust species in Louisiana can be obtained from the Louisiana Ecological Services website at: https://www.fws.gov/southeast/lafayette

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

#### Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

06/19/2023

# **OFFICIAL SPECIES LIST**

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

This species list is provided by:

Louisiana Ecological Services Field Office 200 Dulles Drive Lafayette, LA 70506 (337) 291-3100 06/19/2023 2

# **PROJECT SUMMARY**

Project Code: 2023-0095125

Project Name: USDA Sugarcane Research Laboratory Project

Project Type: New Constr - Above Ground

Project Description: The USDA's Agriculture Research Service is proposing to build a new

Sugarcane Research Laboratory at its Ardoyne Farm located at 501 Bull

Run Road, in Schriever, Louisiana.

## **Project Location:**

The approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@29.6357977,-90.84199260056991,14z">https://www.google.com/maps/@29.6357977,-90.84199260056991,14z</a>



Counties: Terrebonne County, Louisiana

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#### **ENDANGERED SPECIES ACT SPECIES**

There is a total of 2 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

#### **REPTILES**

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4658">https://ecos.fws.gov/ecp/species/4658</a>	Proposed Threatened

#### **INSECTS**

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i>	Candidate

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

#### CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

06/19/2023

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> 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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

06/19/2023

# **IPAC USER CONTACT INFORMATION**

Agency: T Baker Smith, LLC
Name: Samantha Ordoyne
Address: 412 south van ave

City: Houma State: LA Zip: 70363

Email samantha.ordoyne@tbsmith.com

Phone: 9852239283

Date of EA: Mar. 2024

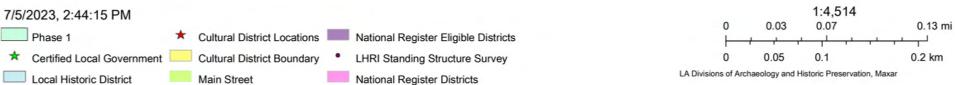


# **Appendix No. 8**

**Cultural Resources** 

# 501 Bull Run Road LA Cultural Resources Map





# **Database Search Results**

• New Search

**♠** Home

w   50	50 v entries Sear				Search Within Results:		
iew	Historic Name	Other Names	City	Parish	Associated Files	Date on Register	
'iew	Lapeyrouse Grocery	Cecil Lapeyrouse Grocery	Chauvin vicinity	Terrebonne	Documents: 1 Images: 70 Maps: 4	2020/10/21	
/iew	Daigleville School	Daigleville Indian High School	Houma	Terrebonne	Documents: 1 Images: 20 Maps: 3	2020/10/21	
/iew	Fifth District High School	Houma Academy; Finding our Roots African American Museum	Houma	Terrebonne	Documents: 1 Images: 17 Maps: 2	2018/06/18	
/iew	Houma Elementary School	N/A	Houma	Terrebonne	Documents: 1 Images: 33 Maps: 3	2015/06/15	
View	Residence Plantation House		Houma	Terrebonne	Documents: 1 Images: 4 Maps: 2	2001/09/08	
View	Polmer Store		Schriever	Terrebonne	Documents: 1 Images: 3 Maps: 2	1996/05/30	
View	Herman Albert Cook House		Houma	Terrebonne	Documents: 1 Images: 2 Maps: 1	1995/02/24	
View	Argyle		Houma	Terrebonne	Documents: 1 Images: 2 Maps: 2	1994/07/01	
View	Montegut School	Montegut Elementary School	Montegut	Terrebonne	Documents: 1 Images: 3 Maps: 1	1993/10/07	
View	St. Matthew`s Episcopal Church DELISTED 2015		Houma	Terrebonne	Documents: 1 Images: 3 Maps: 2	1989/05/01	
View	Clifford Percival Smith House	Walker House	Houma	Terrebonne	Documents: 1 Images: 2 Maps: 2	1989/04/20	
View	Gibson Methodist Episcopal Church	Gibson United Methodist Church	Gibson	Terrebonne	Documents: 1 Images: 2 Maps: 2	1986/05/08	

View	Historic Name	Other Names	City	Parish	Associated Files	Date on Register
View	Ducros Plantation House		Thibodaux	Terrebonne	Documents: 1 Images: 3 Maps: 1	1985/11/07
View	Armitage		Schriever	Terrebonne	Documents: 1 Images: 1 Maps: 2	1984/04/12
View	Houma Historic District		Houma	Terrebonne	Documents: 3 Images: 38 Maps: 2	1983/12/08
View	Magnolia		Schriever	Terrebonne	Documents: 1 Images: 2 Maps: 2	1983/08/04
View	Ardoyne Plantation House		Houma	Terrebonne	Documents: 1 Images: 1 Maps: 2	1982/11/01
View	St. George Plantation House		Schriever	Terrebonne	Documents: 1 Images: 2 Maps: 2	1982/10/05
View	Wesley House		Houma	Terrebonne	Documents: 1 Images: 3 Maps: 2	1982/08/11
View	Orange Grove Plantation House		Houma	Terrebonne	Documents: 2 Images: 2 Maps: 1	1980/03/26
View	Southdown Plantation House		Houma	Terrebonne	Documents: 1 Images: 1 Maps: 1	1974/01/18

Showing 1 to 21 of 21 entries

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1

Next

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Date of EA: Mar. 2024



# Appendix No. 9

Socioeconomic Resources

Houma city, Louisiana

Schriever CDP, Louisiana

Te

Pa

An official website of the United States government

Population Estimates, July 1, 2022, (V2022)

**1** 31,775

⚠ X



#### **QuickFacts**

Houma city, Louisiana; Schriever CDP, Louisiana; Terrebonne Parish, Louisiana

QuickFacts provides statistics for all states and counties, and for cities and towns with a population of 5,000 or more.

#### **Table**

Population			
Population Estimates, July 1, 2022, (V2022)	<b>△</b> 31,775	<b>∆</b> X	<b>104,786</b>
Population estimates base, April 1, 2020, (V2022)	<b>△</b> 33,404	ΔX	<b>1</b> 09,583
Population, percent change - April 1, 2020 (estimates base) to July 1, 2022, (V2022)	<b>△</b> -4.9%	ΔX	<b>^</b> -4.4%
Population, Census, April 1, 2020	33,406	6,711	109,580
Population, Census, April 1, 2010	33,727	6,853	111,860
Age and Sex			
Persons under 5 years, percent	<b>△</b> 9.3%	<b>A</b> 7.5%	▲ 6.4%
Persons under 18 years, percent	₫ 26.3%	<b>1</b> 8.5%	<b>1</b> 24.6%
Persons 65 years and over, percent	<b>1</b> 5.7%	<b>1</b> 3.9%	<b>1</b> 6.1%
Female persons, percent	₫ 51.2%	<b>1</b> 49.9%	<b>△</b> 50.4%
Race and Hispanic Origin			
White alone, percent	₫ 66.2%	₫ 55.2%	<b>1</b> 70.8%
Black or African American alone, percent (a)	<b>1</b> 21.7%	₫ 33.8%	<b>△</b> 18.8%
American Indian and Alaska Native alone, percent (a)	<b>4</b> .9%	▲ 3.2%	▲ 6.2%
Asian alone, percent (a)	▲ 0.7%	<b>1</b> .1%	<b>1</b> .1%
Native Hawaiian and Other Pacific Islander alone, percent (a)	▲ 0.0%	▲ 0.0%	▲ 0.1%
Two or More Races, percent	<b>4</b> .0%	▲ 6.4%	▲ 3.0%
Hispanic or Latino, percent (b)	▲ 5.2%	▲ 5.0%	△ 5.7%
White alone, not Hispanic or Latino, percent	<b>△</b> 64.8%	₫ 50.9%	₫ 66.1%

Is this page helpful?





Population Characteristics			Houma city, Louisiana	Schriever CDP, Louisiana
Veterans, 2017-2021				
	Population Estimates, July 1, 2022, (V2022)		<b>△</b> 31,775	
Housing				
Housing units, July 1, 2022, (V2022)	X	X	47,808	
Owner-occupied housing unit rate, 2017-2021	67.3%	76.5%	72.7%	
Median value of owner-occupied housing units, 2017-2021	\$169,600	\$153,300	\$160,600	
Median selected monthly owner costs -with a mortgage, 201		\$1,203	\$1,376	
Median selected monthly owner costs -without a mortgage, 2021	\$350	\$274	\$319	
Median gross rent, 2017-2021	\$838	\$862	\$913	
Building permits, 2022	X	X	375	
Families & Living Arrangements				
Households, 2017-2021	13,474	2,554	41,960	
Persons per household, 2017-2021	2.47	2.21	2.59	
Living in same house 1 year ago, percent of persons age 1 ye 2017-2021	ear+, 86.7%	80.6%	88.0%	
Language other than English spoken at home, percent of perage 5 years+, 2017-2021	rsons 6.2%	4.9%	8.5%	
Computer and Internet Use				
Households with a computer, percent, 2017-2021	87.4%	89.9%	89.9%	
Households with a broadband Internet subscription, percent 2021	t, 2017-	73.7%	82.2%	
Education				
High school graduate or higher, percent of persons age 25 ye 2017-2021	ears+, 83.8%	84.1%	81.1%	
Bachelor's degree or higher, percent of persons age 25 years 2017-2021	s+, 19.4%	18.2%	16.5%	
Health				
With a disability, under age 65 years, percent, 2017-2021	12.6%	18.1%	13.3%	
Persons without health insurance, under age 65 years, perce	ent <b>A</b> 7.6%	<b>1</b> 0.1%	<b>△</b> 12.8%	
Economy				
In civilian labor force, total, percent of population age 16 year 2017-2021	ars+, 58.8%	58.6%	58.0%	
In civilian labor force, female, percent of population age 16 y 2017-2021	years+, 53.6%	52.0%	52.4%	
Total accommodation and food services sales, 2017 (\$1,000	0) (c) 81,867	NA	259,876	
Total health care and social assistance receipts/revenue, 20 (\$1,000) (c)	17 428,631	D	773,623	
Total transportation and warehousing receipts/revenue, 201 (\$1,000) (c)	7 293,588	30,223	694,889	Is this page he
Total retail sales, 2017 (\$1,000) (c)	428,492	118,215	1,860,352	io ano page ne
Total retail sales per capita, 2017 (c)	\$12,879	NA	\$16,628	Yes (

Transportation			Houma city,	Schriever CDP,	Te
Mean travel time to work (minutes), workers age 16 years+, 2021			Louisiana	Louisiana	Pa
	Population Estimates, July 1, 2022, (V	2022)	<b>4</b> 31,775	<b>∆</b> X	
Income & Poverty					
Median household income (in 2021 dollars), 2017-2021	\$48,688	\$54,956	\$57,940		
Per capita income in past 12 months (in 2021 dollars), 2017	7-2021 \$31,246	\$28,497	\$29,885		
Persons in poverty, percent	<b>1</b> 9.5%	<b>1</b> 21.6%	<b>1</b> 6.9%		
BUSINESSES					
Businesses					
Total employer establishments, 2021	X	X	2,662		
Total employment, 2021	X	X	41,463		
Total annual payroll, 2021 (\$1,000)	X	X	2,178,477		
Total employment, percent change, 2020-2021	X	X	-6.2%		
Total nonemployer establishments, 2019	X	X	8,326		
All employer firms, Reference year 2017	1,071	94	2,445		
Men-owned employer firms, Reference year 2017	555	52	1,386		
Women-owned employer firms, Reference year 2017	139	S	266		
Minority-owned employer firms, Reference year 2017	S	S	133		
Nonminority-owned employer firms, Reference year 2017	797	76	1,914		
Veteran-owned employer firms, Reference year 2017	46	S	90		
Nonveteran-owned employer firms, Reference year 2017	782	74	1,889		
⊕ GEOGRAPHY					
Geography					
Population per square mile, 2020	2,309.1	470.8	89.1		
Population per square mile, 2010	2,339.4	478.9	90.8		
Land area in square miles, 2020	14.47	14.25	1,229.85		
Land area in square miles, 2010	14.42	14.31	1,231.82		
FIPS Code	2236255	2268300	22109		

Houma city,

Schriever CDP,

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Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. ] Click the Quick Info 1 icon to the left of each row in TABLE view to learn about sampling error.

In Vintage 2022, as a result of the formal request from the state, Connecticut transitioned from eight counties to nine planning regions. For more details, please see the Vintage 2022 release notes available here: Release Notes.

The vintage year (e.g., V2022) refers to the final year of the series (2020 thru 2022). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2017-2021 ACS 5-year estimates to other ACS estimates. For more information, please visit the 2021 5-year ACS Comparison Guidance page.

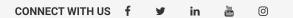
#### **Fact Notes**

- (a) Includes persons reporting only one race
- (c) Economic Census Puerto Rico data are not comparable to U.S. Economic Census data
- (b) Hispanics may be of any race, so also are included in applicable race categories

#### Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open ended distribution.
- **F** Fewer than 25 firms
- **D** Suppressed to avoid disclosure of confidential information
- N Data for this geographic area cannot be displayed because the number of sample cases is too small.
- **FN** Footnote on this item in place of data
- X Not applicable
- S Suppressed; does not meet publication standards
- NA Not available
- **Z** Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.



 $Information\ Quality\ |\ Data\ Linkage\ Infrastructure\ |\ Data\ Protection\ and\ Privacy\ Policy\ |\ Accessibility\ |\ FOIA\ |\ Inspector\ General\ |\ No\ FEAR\ Act\ |\ U.S.\ Department\ of\ Commerce\ |\ USA.gov\ Policy\ |\ Accessibility\ |\ FOIA\ |\ Inspector\ General\ |\ No\ FEAR\ Act\ |\ U.S.\ Department\ of\ Commerce\ |\ USA.gov\ Policy\ |\ Po$ 

Measuring America's People, Places, and Economy



## Appendix No. 10

Date of EA: Mar. 2024

Phase I Environmental Site Assessment

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

Property Located At 501 Bull Run Road Schriever, Louisiana 70395

Prepared For:

Merrick & Company 5970 Greenwood Plaza Blvd. Greenwood Village, Colorado 80111

July 2023



## PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Concerning

Property Located At 501 Bull Run Road Schriever, Louisiana 70395

For

Merrick & Company 5970 Greenwood Plaza Blvd. Greenwood Village, Colorado 80111

**July 2023** 

**TBS Project Number 2023.0013** 

Prepared by



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#### **APPENDICES**

Appendix 1 Scope of Services
------------------------------

**Appendix 2** Property Maps and Drawings

Site Location Map

Parcel Map and Information

Historical Topographic Maps

**Appendix 3** Property Photographs

**Appendix 4** State & Federal Database and Record Searches

**Appendix 5** Soil Survey Maps & Soil Descriptions

**Appendix 6** Regulatory Agency Correspondence

**Appendix 7** Owner Interview Form & User Questionnaire

**Appendix 8** Aerial Photographs

**Appendix 9** Personnel Qualifications



#### 1.0 EXECUTIVE SUMMARY

T. Baker Smith, LLC (TBS) was retained by Merrick & Company (Client) to conduct a Phase I Environmental Assessment on a +/- 2.69-acre vacant portion of the government-owned property located at 501 Bull Run Road in Schriever, Louisiana. The purpose of the assessment was to provide an objective, independent, professional opinion of the potential environmental risks, if any, associated with the Subject Property. This report documents the findings of the Phase I Environmental Site Assessment (ESA) performed in conformance with the scope and limitations of ASTM Standard Practice E1527-21, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) [40 Code of Federal Regulations (CFR) Part 312] and the Clients Scope of Work. Any exceptions to, or deletions from, this practice are described in Section 1.3 and 2.3 of this report.

#### 1.1 Property Summary

Property Name: USDA Sugarcane Greenhouse

Property Address: 501 Bull Run Road

City/County/State/Zip Code: Schriever, Terrebonne Parish, Louisiana 70395

Property Usage: The subject property is an undeveloped portion of the USDA

owned Ardoyne Farm Sugarcane Research Unit property which

houses Sugarcane Research Laboratory Units.

The Subject Property is approximately 2.69 acres and is located at 501 Bull Run Road in Section 40, Township 16 South, Range 16 East with approximate center point coordinates of 29° 35' 41.45" N, -90° 44' 23.63" W. The Subject Property is located on Terrebonne Parish parcel number 41787 and is owned by American Sugar Cane League Foundation.

#### 1.2 Assumptions and Limitations

TBS relied on information derived from secondary sources and has made no independent investigation as to the accuracy and completeness of the information provided by respective secondary sources.

#### 1.3 Deviations/Limiting Conditions

TBS has performed this ESA in conformance with the scope and limitations of ASTM Standard E 1527-21 and the scope of work provided by the Client. No deviations from the recommended scope of ASTM Standard E 1527-21 were performed as part of this Phase I ESA. In addition to the scope outlined in ASTM Standard E 1527-21, TBS did not perform a cursory evaluation of non-ASTM Scope issues including suspect asbestos-containing materials (ACM), lead-based paint (LBP), radon, lead in drinking water, and per-and polyfluorinated substances (PFAS). A cursory evaluation of these non-ASTM Scope issues can be requested by the Client and TBS shall perform the proper testing for these parameters. TBS has performed services applicable to ASTM Standard E 1527-21 and prepared this report in accordance with generally accepted consulting practices, and makes no other warranties, either expressed or implied, as to the character and nature of such services or product.

TBS, its officers, and its employees have no present or contemplated interest in the property. Our employment and compensation for preparing this report are not contingent upon our observations or conclusions.



This ESA is not a guarantee or warranty concerning the presence or absence of environmental conditions that may affect the property. Findings, conclusions, and recommendations stated in this report are based upon industry-accepted practices for such services that existed at the time this report was prepared. All information, findings, conclusions, and any recommendations provided in this report are based on the data, secondary information, visual observations and conditions that existed on the date and time of the Property visit.

#### 1.4 Data Gaps

Data gaps occur when information required or requested is not readily available within the time constraints provided, despite good faith efforts to gather such information.

Data failure is one type of data gap. ASTM Standard E 1527-21 requires that historical sources be researched to document property use back to the property's first developed use or back to 1940, whichever is earlier. If this information were not readily available, then this would be considered Data Failure. Data Failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. The following data gaps were identified during the course of this investigation:

A second type of data gap is a significant data gap. A significant data gap is defined as a data gap that affects the ability of the environmental professional to identify a recognized environmental condition (REC). Should a significant data gap be present, the environmental professional must provide a comment on the impact of the data gap on the professional's ability to identify RECs.

■ TBS was not able to document the history of the Property at five-year intervals. However, based on the similar usage during the gaps, this data gap is not expected to alter the conclusions of this report.

#### 1.5 Findings, Conclusions and Recommendations

- T. Baker Smith, LLC has not identified RECs or HRECs that require further investigation of the Subject Property. No CRECs that cause property use restrictions, activity use limitations, institutional controls, or engineering controls were identified; however, TBS noted the following housekeeping and/or developmental conditions for the Subject Property:
  - A sewer treatment plant was observed on the southern portion of the Subject Property.
     Future development must be designed in a manner preventing damage to the system and
     associated piping.

#### 1.6 Reliance

Merrick & Company (Client) engaged TBS to perform this assessment in accordance with an agreement governing the nature, scope and purpose of the work as well as other matters critical to the engagement. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with TBS granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against TBS, its officers, employees, vendors, successors or assigns.

#### 1.7 Report Validity Period

ASTM Standard E 1527-21 specifies that a Phase I report will be valid for up to one year if completed no more than 180 days prior to the date of the Subject Property acquisition, or if the



following five components of the report have been updated: (1) interviews with landowners, operators, and occupants; (2) searches for recorded environmental cleanup liens; (3) Review of governmental records; (4) visual inspections of the subject property and adjoining properties; and (5) declaration by the environmental professional responsible for the assessment or update. In addition, the standard mandates that the dates of completion for each of the five components be included in the Phase I report and that the 180-day or one-year time period begins with the completion of the first of these components.

This report's time clock begins on July 10, 2023.



#### 2.0 PURPOSE, SCOPE AND LIMITATIONS

#### 2.1 Purpose

Merrick & Company retained TBS to conduct a Phase I ESA of the Subject Property to assist in determining the environmental conditions at the site. The assessment was designed to provide an objective, independent, professional opinion of the potential environmental risks, if any, associated with the Subject Property. The purpose of this environmental assessment was to identify RECs at the Subject Property.

The term REC means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimus* conditions are not RECs.

The term CREC refers to a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

The term HREC refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

#### 2.2 Scope of Work

The assessment was conducted in accordance with American Society for Testing and Materials (ASTM) Standard Guide for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-21, Standard & Poor's Environmental Criteria, the scope of work provided by the Client, and generally accepted industry standards.

The detailed scope of work is included in Appendix 1 of this report.

#### 2.3 Limitations

TBS has performed the services and prepared this report in accordance with generally accepted consulting practices, and makes no other warranties, either expressed or implied, as to the character and nature of such services or product.

TBS, its officers, and its employees have no present or contemplated interest in the property. Our employment and compensation for preparing this report are not contingent upon our observations or conclusions.

No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. This study is designed to reduce, but not eliminate uncertainty regarding the existence of such conditions in a manner that recognizes reasonable limits of time and cost. Based on the scope of work, TBS cannot warrant subsurface conditions. In addition, any testing results obtained are for the personal use of the Client, their successors and assigns, per the reliance in Section 2.5 only.



#### 2.4 Property Access and Non-Access Disclosure

Inspector/Environmental Samantha Ordoyne (Inspector/Environmental Professional),

Professional: Victor Hernandez (Environmental Professional)

A copy of the environmental professional's qualifications is

included in Appendix 9.

Date of Inspection:

Property Contact:

Dr. Paul White

Property Escort:

Harold Callahan

Property Interviews: Details located in Section 5.1.

Questionnaire Results: See Appendix 7

Areas Accessed: The Subject Property was accessed in its entirety.

Inaccessible Areas: N/A

Exceptions/Deletions from Scope: None

#### 2.5 User Reliance

The investigation was conducted on behalf of and for the exclusive use of Merrick & Company (Client) solely for use in an environmental evaluation of the Subject Property. This report and findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party, in whole or in part without prior written consent of TBS. TBS acknowledges and agrees that the report may be conveyed to, and relied upon by Client, or any of their Assigns.



#### 3.0 PROPERTY DESCRIPTION

#### 3.1 Property Details

Property Size: Approximately 2.69 acres

Source: Google Earth

Property Usage: The Subject Property consists of an undeveloped portion of the

Ardoyne Farm Sugarcane Research Unit.

Number of Buildings: 0

Date of Construction: N/A

Gross Building Size: N/A

Property Diagram: Appendix 2

#### 3.2 Current Uses of Adjoining Properties and Surrounding Areas

North: The Subject Property is bounded to the north by Bull Run Road with agricultural

fields beyond.

East: The Subject Property is bounded to the east by the Ardoyne Farm Sugarcane

Research Unit and associated research facilities and laboratories with

agricultural fields beyond.

South: The Subject Property is bounded to the south by agricultural fields.

West: The Subject Property is bounded to the west by agricultural fields.

Observations of the adjoining properties did not reveal evidence of RECs.



#### 4.0 ENVIRONMENTAL SETTING

TBS attempted to determine the general environmental setting of the Subject Property. Information regarding topography, surface water, geology and hydrology are used to evaluate the likelihood of hazardous substances or petroleum products migrating onto the Subject Property, or within or from the Subject Property, into groundwater or soil.

#### 4.1 Topography

Property Elevation: 6 feet above mean sea level (MSL).

Topography: The topography of the Subject Property is relatively flat with a

general slope towards the east.

Source: Environmental Data Resources, Inc. (EDR) Geocheck Physical

**Setting Source Summary** 

EDR Geocheck: A copy of the Geocheck Physical Setting Source Summary is

included in Appendix 4.

Property Drainage: The Subject Property drains north into a road-side drainage ditch.

#### 4.2 Surface Water Bodies

On-Site Water Bodies: There are no on-site waterbodies.

Nearest Surface Water Body: Little Bayou Black is located approximately 1.7 miles east of the

Subject Property and Bayou Black is located approximately 1.94

miles south.

Flood Plain Designation: The Subject Property is located within Zone C, an area of minimal

flooding.

Source: EDR Detail Map (See Radius Map Report in Appendix 4)

Indication of Wetlands: The EDR Detail map did not depict National Wetland Inventory

(NWI) data on Subject Property.

#### 4.3 Geology and Hydrology

Geology:

The Subject Property is located in the Gulf Coastal Plains

physiographic province is located in the Coastal Plain physiographic province. This is the flattest province and stretches from Cape Cod to the Mexican border. The plain slopes gently seaward from inland highlands in a series of terraces and continues sloping far into the Atlantic and Gulf of Mexico, forming the continental shelf. The Coastal Plain is divided into six sections, and the Subject Property is located in the Mississippi Alluvial Plain (MAP). The MAP is one of the most productive agricultural region in the Nation and extends along the Mississippi River from the confluence of the Ohio and Mississippi Rivers to the Gulf of Mexico. The MAP is nearly flat and is

characterized by clayey, poorly drained soils.

Soil Type: The Subject Property is underlain by Cancienne silt loam (CbA)

and Cancienne silty clay loam (CdA) 0-3% slopes.



Source: Web Soil Survey (Natural Resources Conservation Service)

Estimated Depth to

Groundwater: Cancienne silty clay loam - >31 inches

Anticipated Flow Direction: East

Basis of Flow Direction: Based upon available topographic map information, the direction

of groundwater flow beneath the Subject Property is inferred to be generally east. Aerial photography reveals that all drainage/flow of major bayous and/or canals in the area ultimately channel southeasterly towards the Gulf of Mexico.

#### 4.4 Minerals Exploration/Production

Oil & Gas Wells: There were no oil or gas wells observed on the Subject Property

and wells were not depicted on the EDR Historical Topographic Map. On-site reconnaissance did not identify any active oil and gas equipment on the Property. According to Louisiana Department of Natural Resources' (LDNR) GIS website, there are no wells on the Subject Property nor adjacent properties.

Pipelines: According to the National Pipeline Mapping System (NPMS),

there are no pipelines within 0.5 mile of the Subject Property. No pipeline markers were observed within the Subject Property boundaries to indicate that the line(s) run through the property. No subsurface investigations to locate additional pipelines not

visibly marked aboveground were conducted.

Mining Activities: There were no indications of mining activities on the Subject

Property.



#### 5.0 PRIOR USE HISTORY

The objective of consulting historical sources is to develop a history of the previous uses of the Subject Property, adjoining properties, and surrounding area in order to help identify the likelihood of past uses having led to RECs in connection with the Subject Property. Copies of prior use support documentation, when available, are included in the Appendices.

#### 5.1 Interviews with Past and Present Owners and Occupants

TBS attempted to obtain, contact or interview the sources of information listed below in order to determine the prior use history of the Subject Property and identify historical or existing RECs, if any, at the subject or adjacent properties.

 Dr. Paul White USDA Ardoyne Farm Sugarcane Research Unit Research Leader July 31, 2023

Dr. Paul White participated in an interview in reference to the Subject Property. He indicated that the Subject Property is currently an undeveloped portion of the Ardoyne Farm Sugarcane Research Unit. He was not aware of the Subject Property ever being utilized as a motor repair facility, chemical manufacturing plant, petroleum delivery/storage facility, commercial printing facility, dry cleaners, photo developing facility, junkyard/landfill, or waste storage/disposal site. Dr. White had no knowledge of the Subject Property being used for waste treatment or disposal and was not aware of any damaged or discarded automotive batteries, pesticides, paints, or chemicals used or stored on the property in containers above 5 gallons or 50 gallons in aggregate. It should be noted that the Subject Property is an undeveloped portion of an operational Sugarcane Research Unit and Dr. White did indicate that there are herbicides, fungicides, insecticides, and other chemicals used for sugarcane research stored within other portions of the Unit. He also stated there is one (1) gasoline and one (1) diesel aboveground storage tank located outside of the farm shop, but this portion of the Unit is not included in the Subject Property boundary. Dr. White also informed TBS of a pit used to collect sugarcane juice which is situated on a portion of the Unit outside of the Subject Property boundary. He indicated that this pit can at times emit a foul odor as the sugarcane juice ferments. TBS did not note any foul odor during site reconnaissance. Dr. White had no knowledge of industrial drums or sacks of chemically laden material, PCB containing materials, pits/ponds/lagoons used for waste treatment, large oil/fuel spills, fill dirt originating from unknown or contaminated sites, stained soils, or contaminated water wells on the Subject Property. No oil and gas pipelines and/or wells ever existed on the property to Dr. White's knowledge. He was also not aware of any environmental liens, violations of environmental laws, environmental related lawsuits or environmental assessments conducted that identified any environmental issues.

#### 5.2 Interviews with State and/or Local Government Officials

 Mr. Benjamin Walker Terrebonne Parish Office of Emergency Preparedness July 13, 2023

Mr. Walker was emailed regarding his agency's knowledge of or awareness of any releases or hazardous materials incidents at the Subject Property. A response from Mr. Walker was received on July 13, 2023 indicating there have been no hazmat situations or releases on the Subject Property since he has been in his position with the OEP.

 Mr. Tad Loupe Louisiana Department of Environmental Quality July 13, 2023



Mr. Loupe was emailed regarding his knowledge of or awareness of any releases, complaints, waste fires, enforcement action, USTs, or other environmental issues at the Subject Property. On July 13, 2023, a response was received stating that the LDEQ agency identification number (Al#) associated with the Subject Property is 178464. He indicated that the LDEQ is not aware of any outstanding issues with the Subject Property, but he did advise that there were enforcement actions in 2017 which have been addressed.

#### 5.4 Historical Maps for Subject Property

A number of publishers formerly produced maps that showed the location and use of structures on a property at a given point in time. These maps were widely available for areas that were significantly developed during the late 1800s through the 1950s, though coverage exists for some areas through the 1990s. EDR provided a review of their Sanborn Fire Insurance Maps.

No historical Sanborn maps were identified. A copy of the "unmapped property" notification is included in Appendix 4.

The EDR Historical Topographic Map Report was reviewed for the Subject Property. A review of the historical topographic maps available from the years 1892, 1897, 1939, 1941, 1944, 1963, 1964, 1972, 1980, 1998, 2012, 2015, 2018, and 2020 identified a railroad crossing through the Subject Property in the 1939 historical topographic map. The railroad appears through the 1944 map, and is no longer depicted beginning in the 1963-1964 historical topography maps. The historical topography maps did not depict the presence of pipelines on the Subject Property. The historical topographic maps are located in Appendix 2.

#### 5.5 Aerial Photographs for Subject Property

Aerial photography from the EDR database was reviewed for the years 1970, 1972, 1983, 1989, 1998, 2004, 2007, 2010, 2015, and 2019. Aerial photographs from Google Earth for the years 1989, 1998, 2004-2007, 2010-2012, 2014, 2015, 2017, and 2019-2022 were also reviewed. The aerial photographs are located in Appendix 8. Listed below are the descriptions of the aerial photographs reviewed and none indicated a REC on the property.

YEAR	SOURCE	DESCRIPTION
1970	EDR	The Subject Property consists of agricultural fields.
1972	EDR	The Subject Property consists of agricultural fields.
1983	EDR	The Subject Property consists of agricultural fields.
1989	EDR;Google Earth	The Subject Property consists of agricultural fields.
1998	EDR;Google Earth	There is no change in the development of the Subject Property.
2004	EDR;Google Earth	There is no change in the development of the Subject Property.
2005	Google Earth	There is no change in the development of the Subject Property.
2006	Google Earth	There is no change in the development of the Subject Property.
2007	EDR;Google Earth	There is no change in the development of the Subject Property.
2010	EDR;Google Earth	There is no change in the development of the Subject Property.
2011	Google Earth	There is no change in the development of the Subject Property.



YEAR	SOURCE	DESCRIPTION
2012	Google Earth	The Subject Property no longer appears to be agricultural field, is graded , and a sanitary waste water treatment plant first appears on the southeastern corner of the Subject Property.
2014	Google Earth	There has been no change in development of the Subject Property, and it resembles that of present day.
2015	EDR;Google Earth	The Subject Property resembles that of present day.
2017	Google Earth	The Subject Property resembles that of present day.
2019	EDR;Google Earth	The Subject Property resembles that of present day.
2020	Google Earth	The Subject Property resembles that of present day.
2021	Google Earth	The Subject Property resembles that of present day.
2022	Google Earth	The Subject Property resembles that of present day.

#### 5.6 Aerial Photographs for Adjoining Properties

Based on the review of readily available historical aerial photographs, areas surrounding the Subject Property in 1970 appear to consist of agricultural fields. Bull Run Road is adjacent to the north of the Subject Property. By the 1983 aerial photograph, four structures appear to the east of the Subject Property has been further developed with gravel pathways and parking lots and an addition appears to have been developed between two of the existing structures in the 1989 aerial photograph. In the 1998 aerial photograph, additional structures have been developed to the east of the Subject Property and a portion of the agricultural field located northeast of the Subject Property has been developed with a structure and gravel pad. In the 2010 aerial photograph, the area to the east of the Subject Property has been further developed with additional structures and a concrete pad. The area to the east has expanded and additional structures have been developed in the 2015 aerial photograph. There are no changes across the remaining aerial photographs and the adjoining properties appear as they do in present day. Although TBS did not identify a previous use of the surrounding properties that would represent a REC to the Subject Property.

It should be noted that based on the historical use of the Subject Property and surrounding areas as agricultural land, it is possible that environmentally persistent pesticides and/or herbicides have been applied to crops grown on and around the Subject Property. Normal use and application of agricultural chemicals generally does not trigger enforcement actions, assessments by regulatory agencies, or the recommendation for further assessment of the Subject Property unless there is evidence which indicates misuse, dumping, or improper storage of chemicals.

#### 5.7 City Directories

The EDR City Directory report was reviewed for the years 1966, 1971, 1975, 1980, 1985, 1990, 1992, 1995, 2000, 2005, 2010, 2014, 2017, and 2020. According to the City Directory, the Subject Property was occupied by "United States Government" in 2017. In 2010 and 1995, the Subject Property is occupied by "U.S. Agricultural Department". In 2005, the Subject Property is listed as being occupied by "US Sugarcane Research Unit" and in 2000 the Subject Property is listed as being occupied by "United States Government Agriculture Department". The City Directory Image Report is included in Appendix 4.



#### 5.8 User Provided Information

User provided information is intended to help identify the possibility of RECs in connection with the Subject Property. According to ASTM E1527-21 and Environmental Protection Agency's (EPA) All Appropriate Inquiries (AAI) Rule, the following items should be researched by the prospective landowner or grantee, and the results of such inquiries may be provided to the environmental professional. The responsibility for qualifying for Landowner Liability Protections (LLPs) by conducting the following inquiries ultimately rests with the User and providing the following information to the environmental professional would be prudent if such information is available. A non-scope "Phase I Environmental Site Assessment User Questionnaire" was sent to Dr. Paul White and was completed on July 31, 2023. A copy of the completed questionnaire is included in Appendix 7.

#### 5.8.1 Environmental Liens

TBS was not informed by the User of any environmental cleanup liens encumbering the Subject Property that are filed or recorded under federal, tribal, state or local law. An EDR Environmental Lien Report was completed, and no liens have been placed upon this property. A copy of the EDR Environmental Lien Report is included in Appendix 4.

#### 5.8.2 Chain of Title

Under ASTM Standard E 1527-21, title records must be researched back to 1980 and any available land title records should be provided to the Environmental Professional by the User. A chain of title was not provided by the User, nor was one readily available for TBS's review. Based on the historical data reviewed and the limited information typically provided in a chain of title, it is TBS's opinion that a chain of title would not have provided any significant additional information. The EDR Environmental Lien Report provide limited title information that assisted the environmental professional in determining historical use and the presence of any environmental liens and/or activity and use limitations (AULs) associated with the property.

#### 5.8.3 Activity and Land Use Limitations

TBS was not informed by the User of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the Subject Property and/or have been filed or recorded in a registry under federal, tribal, state or local law. An EDR Environmental Lien Report was completed, and it was found that AULs are in place for the Subject Property.

The United States Department of Agriculture conveyed its interest in the parcel which contains the Subject Property to the American Sugar Cane League Foundation in a quitclaim deed dated September 19, 2005. There are no documented AULs with regard to environmental contamination associated with the property.

A copy of the EDR Environmental Lien Report is included in Appendix 4.

#### 5.8.4 Specialized Knowledge

Dr. Paul White participated in a non-scope "Phase I Environmental Site Assessment User Questionnaire". A copy of the completed questionnaire is included in Appendix 7.

#### 5.8.5 Value Reductions for Environmental Issues

The User did not indicate to TBS any information to suggest that the valuation of the Subject Property is significantly less than the valuation for comparable properties due to environmental issues.



#### 5.8.6 Commonly Known or Reasonably Ascertainable Information

The User did not inform TBS of any commonly known or reasonably ascertainable information about the Subject Property which aided TBS in identifying conditions indicative of a release or threatened release.

#### 5.8.7 Knowledge of Presence or Likely Presence of Contamination

The User was not aware of any obvious indicators that point to the presence or likely presence of contamination at the Subject Property.



#### 6.0 ENVIRONMENTAL DATABASE REVIEW

The purpose of the environmental database review is to obtain and review records that will help identify environmental impacting activities at the Subject Property or surrounding properties. The database information was obtained from Environmental Data Resources, Inc. A detailed description of the databases reviewed and a listing of all sites identified are provided in Appendix 4. The plotting of the sites in the database is done through geo-coding and the locations provided are approximations. TBS has expanded the number of databases searched, and the search radii for a number of the individual databases, beyond the scope of work and/or ASTM requirements due to the inherent inaccuracies of geo-coding and regulatory listings. Listed sites in the supplemental databases or those located beyond the required search radii are generally not considered RECs and are not discussed below unless a potential concern or impact to the Subject Property has been identified.

DATABASE	SECTION	RADIUS (In miles)	NUMBER OF SITES
National Priority List (NPL) and Proposed NPL	6.2	1.0	0
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	6.2	0.50	0
CERCLIS No Further Remedial Action Planned (CERC-NFRAP)	6.2	0.50	0
Resource Conservation and Recovery Act (RCRA) Corrective Actions (CORRACTS)	6.3	1.0	0
RCRA Treatment, Storage and Disposal Facilities (RCRA-TSDF)	6.3	0.50	0
RCRA Large Quantity Generators (RCRA LQG), RCRA Very Small Quantity Generators (RCRA-VSQG), and Small Quantity Generators (RCRA SQG), including Conditionally Exempt Small Quantity Generators (CESQG)	6.3	0.25 / Target property	0
Emergency Notification Response System (ERNS)	6.4	Target property	0
Facility Index System (FINDS), Toxic Release Inventory Database (TRIS), Enforcement and Compliance History Online (ECHO), and other Supplemental Federal ASTM databases (non-generators and other Federal databases etc.).	6.5	0.250	0
State Hazardous Waste Sites (State equivalent of CERCLIS and NPL)	6.6	1.0	0
State Solid Waste Facilities/Landfill Database (SWF/LF)	6.7	0.50	0
Leaking Underground Storage Tanks (LUST) / HIST LUST	6.8	0.50	0
Underground Storage Tanks (UST)	6.8	0.25	0



DATABASE	SECTION	RADIUS (In miles)	NUMBER OF SITES
Additional State ASTM databases (VCP, Priority Dry Cleaner, Industrial Hazardous Waste (IHW) & etc.); includes Aboveground Storage Tanks (AST), Dry Cleaner, Historic Auto Facilities, State Spill Lists (SPILLS), Remediation Services Database (REM), Mining Sites, National Pollutant Discharge Elimination System (NPDES), Listing of Institutional and/or Engineering Controls (AUL), EPA Fuels Program Registered Listing (FUELS PROGRAM), Open Dump Inventory (ODI)	6.9	varies	1 (NPDES)
Supplemental State or Local databases	6.10	varies	0

#### 6.1 Subject Property

The EDR report returned one listing for the Subject Property. The Subject Property, listed as USDA-Sugarcane Research Unit Ardoyne Farm appears on the NPDES database for a Louisiana Pollutant Discharge Elimination System (LPDES) General Sanitary Class I Permit (LAG535559) which was issued on February 21, 2018. Due to the nature of the listing and regulatory status, this listing does not represent a REC.

The Detail Map returned for the Subject Property did not depict the presence of any manufactured gas plants, Indian reservations, or oil and gas pipelines on or adjacent to the Subject Property. There were no indications of oil wells, gas wells, or water wells on the EDR Detail Map. A copy of the EDR Detail Map Report is located in Appendix 4.

#### 6.2 NPL, Proposed NPL, CERCLIS & NFRAP Sites

No NPL, Proposed NPL, CERCLIS, or NFRAP sites were identified within the study radii.

#### 6.3 RCRA Facilities

No CORRACTS, RCRA-TSDF, RCRA-CESQG, RCRA-VSQG, RCRA-SQG, or RCRA LQGs were identified within the study radii or at the Subject Property.

#### 6.4 ERNS Incidents

No ERNS sites were identified on the Subject Property.

#### 6.5 FINDS and TRIS and other Supplemental Federal Database sites

No FINDS or TRIS database sites were identified near or on the Subject Property.

#### 6.6 SHWS Database

No SHWS sites were identified within the search radii.

#### 6.7 SWF/LF Facilities

No SWF/LF sites were identified within the search radii.



#### 6.8 LUST & UST Sites

No LUST or UST sites were identified within the search radii.

#### 6.9 Additional EDR Proprietary Database Sites

Other than the Subject Property (discussed in Section 6.1), there were no additional EDR Proprietary Database Sites found within the search radii.

#### 6.10 Additional & Supplemental State or Local Sites

The LDNR Strategic Online Natural Resources Information System (SONRIS) oil and gas well search was reviewed and there is no record of oil and gas wells or reserve pits being located on the Subject Property.

The LDNR water well search was reviewed, and no record of registered water wells located on the Subject Property was found in the SONRIS database. A copy of the GIS generated images from the computerized searches for LDNR is located in Appendix 4.

The Louisiana Department of Environmental Quality (LDEQ) online EDMS was reviewed in reference to the Subject Property (Al# 178464). Records include a LPDES permit, as discussed in Section 6.1 above. Records also revealed there was enforcement action in 2017 in regard to an inspection conducted on April 17,2017. The facility failed to renew their LPDES permit within the required timeframe, failed to submit semi-annual and quarterly Discharge Monitoring Reports (DMRs), and failed to submit Section II of the LPDES application form in the proper timeframe. A notice of deficiency was sent/received on June 1, 2017, and a Deficiency Clear Letter was issued on June 29, 2017.



#### 7.0 PROPERTY RECONNAISSANCE

During the property visit, attempts were made to observe the Subject Property and improvements. The purpose of the property reconnaissance is to obtain information indicating the likelihood of RECs in connection with the Subject Property.

#### 7.1 Visual Observations

The +/- 2.69-acre Subject Property consisted of an undeveloped portion of the USDA owned Ardoyne Farm Sugarcane Research Unit property which houses Sugarcane Research Laboratory Units (Photos 1-10). The northern portion of the Subject Property was secured by cyclone security fencing (Photos 17 & 18).

Farm equipment was parked along the northern boundary of the Subject Property (Photos 11-13) and an electrical power pole was observed on the northeastern corner (Photo 16).

A swale was observed along the northeastern portion of the Subject Property, (See Photos 23-25).

A subsurface utility vault was observed along the eastern boundary of the Subject Property (Photo 26).

Five (5) HVAC units associated with the laboratory and research facilities adjacent to the Subject Property were observed along the eastern border of the Subject Property (Photos 32-34).

One (1) pad-mounted transformer was observed on the central eastern portion of the Subject Property. The transformer appeared to be in good condition and was labeled as "non-PCB" (Photos 29-31).

A sewer treatment plant was observed on the southeastern portion of the Subject Property (Photos 41-44). Associated sewer manholes were also observed near the treatment plant (Photos 45 & 46).

A sewer cleanout was observed on the southeastern portion (Photos 46, 49, & 50).

A soil stockpile was observed near the southwestern corner of the Subject Property (Photo 55). The stockpile was overgrown with vegetation and was left over from previous construction activities on the Research Unit. Wooden poles/pilings were observed along the central portion of the southern boundary of the Subject Property (Photos 53 & 54) and were also left over from previous construction activities at the Unit.

Two (2) grated stormwater drains were observed on the Subject Property; one located near the southeastern corner and the other located near the central portion of the southern boundary (Photos 48 & 52) and two (2) manholes were also observed; one was situated on the central eastern portion of the property and the second was on the southeastern portion (Photos 28 & 51).

No underground storage tanks were observed on the Subject Property. No evidence of any pesticides, paints, or chemical being stored on the property were observed. No evidence of ponds or lagoons used for waste management treatment or disposal, large areas of stained soil, or fill dirt originating from unknown or contaminated sites was observed on the Subject Property. In addition, no evidence of industrial drums, vent pipes, or foul odors were observed on site. No oil and gas wells were observed on the Subject property, and no pipelines or pipeline markers were observed.

During the property reconnaissance, TBS looked for the following visual indications of potential environmental concerns at the Subject Property.

#### POTENTIAL CONCERNS

#### **COMMENTS**

- Hazardous or regulated None observed materials stored on the property
- Medical/biological wastes stored on the property



	POTENTIAL CONCERNS	<u>COMMENTS</u>
•	X-ray or other radioactive activities conducted on the property	None observed
•	Activities likely to generate, store or use hazardous materials	None observed
•	Operations that result in a wastewater or air discharge	A sewer treatment plant was observed on the southeastern portion of the Subject Property.
•	Interior stains or corrosion	None observed
•	Water damage/Mold growth	None observed
•	Strong, pungent or noxious odors	None detected
•	Discolored drains or sumps	None observed
•	Pits, ponds or lagoons	None observed
•	Stained soil or pavement	None observed
•	Stressed vegetation	None observed
•	Improperly stored solid waste	A soil stockpile was observed near the southwestern corner of the Subject Property. The stockpile was overgrown with vegetation and was left over from previous construction activities on the Research Unit. Wooden poles/pilings were also observed along the central portion of the southern boundary of the Subject Property.
•	Wells or septic systems on the property	A sewer treatment plant was observed on the southeastern portion of the Subject Property.

During the property reconnaissance, TBS looked for the following visual indications of potential environmental concern at adjacent properties.

ldentified Yes No		Observation
$\boxtimes$		Hazardous Substances and/or Petroleum Products in Connection with Property Use
$\boxtimes$		Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)
	$\boxtimes$	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use
	$\boxtimes$	Unidentified Substance Containers
$\boxtimes$		Electrical or Mechanical Equipment Likely to Contain Fluids
	$\boxtimes$	Interior Stains or Corrosion
	$\boxtimes$	Strong, Pungent or Noxious Odors
	$\boxtimes$	Pool of Liquid
	$\boxtimes$	Drains and Sumps
	$\boxtimes$	Pits, Ponds and Lagoons



$\boxtimes$	Stained Soil or Pavement
$\boxtimes$	Stressed Vegetation
$\boxtimes$	Solid Waste Disposal or Evidence of Fill Materials
$\boxtimes$	Waste Water Discharges
$\boxtimes$	Wells
$\boxtimes$	Septic Systems

The following developmental conditions were observed for the adjacent properties:

• The property adjacent to the Subject Property is a part of the Ardoyne Farm Sugarcane Research Unit. Several above ground storage tanks (ASTs) were observed around the Unit and were used for fertilizer storage. A 1,000-gallon gasoline AST and a 3,000-gallon diesel AST were observed inside of a concrete secondary containment structure. There was also mechanical and farm equipment likely housing fuel and hydraulic fluids staged and operating throughout the entire Unit. Agricultural chemicals including herbicides, pesticides, and fertilizers were stored inside of warehouse buildings on the Unit. There were no sign of staining, leakage, or spills observed on portions of the Unit adjacent to the Subject Property. There were no features of the adjacent property that represented RECs to the Subject Property.

#### 7.2 Storage Tanks

An effort was made to identify all ASTs, USTs, or vent pipes, fill pipes or access ways indicating USTs. Available information from local records and historical maps and information regarding storage tanks and heating sources were reviewed.

	<b>POTENTIAL CONCERNS</b>	<u>COMMENTS</u>
•	Visual indication of ASTs	None observed
•	Visual indications of USTs	None observed
•	Records of USTs/ASTs	No record of USTs or ASTs formerly or currently on the Subject Property were identified.
•	Current heating source	N/A
•	Historical usage heating oil	There is no indication that the Subject Property ever used heating oil as a heat source.

#### 7.3 PCB-Containing Equipment

TBS relied on visual observations and interviews with the property contacts and/or the utility company to identify known or potential PCB-containing electrical or hydraulic equipment. Where identified, efforts were made to determine ownership and to identify indications of leakage.

	POTENTIAL CONCERNS	<u>COMMENTS</u>
•		No pole-mounted transformers were observed on the Subject Property; however, several were observed to be in good condition adjacent to the north and east of the Subject Property.
•	Pad-mounted Transformers	One (1) pad-mounted transformer was observed on the central eastern portion of the Subject Property. The transformer appeared to be free of leaks in good condition and was labeled as "non-PCB".



No evidence of hydraulic lifts or elevators was observed on the Hydraulic Elevators or Lifts

Subject Property.

No other concerns relating to PCBs were identified on the Subject Other

Property.

#### 7.4 **Preliminary Asbestos Evaluation**

A comprehensive asbestos survey by a certified inspector is outside the scope of a Phase I ESA and thus was not conducted during this assessment. A finding of "no further action is warranted" or "ACM is not a significant concern" cannot be interpreted, as the Subject Property is asbestos free. The level of this evaluation is not sufficient for such a determination; however, no structures were observed on the Subject Property at the time of site reconnaissance.

#### 7.5 Radon Review

Radon Zone The Subject Property is located in Radon Zone 3, which has a predicted average indoor screening level of less than 2

picocuries per liter (pCi/L). Louisiana is in a low area of concern

for radon emittance. The USEPA action level for radon is 4 pCi/L. Are There Regularly

Occupied Subsurface or Ground Level Residential Units

No residential units are present on the Subject Property.

Results of Previous Tests on None conducted the Property

Findings: Radon testing was not conducted.

Recommendations: None

#### 7.6 **Potential Vapor Encroachment**

The scope of this screening was limited to visual observations and review of the environmental database report and did not include the collection and laboratory analysis of air samples to confirm the presence of airborne contaminants by vapor encroachment.

A "Tier I (non-intrusive) Vapor Encroachment Screening (VES)" on the Subject Property in accordance with the methodology set forth in ASTM Standard E 2600-22 "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" was conducted. The purpose of the Tier I VES is to conduct an initial screen to identify, to the extent feasible, the potential vapor encroachment condition (VEC) in connection with the Subject Property with respect to chemicals of concern that may migrate as vapors into existing or planned structures on a property due to contaminated soil and groundwater on the property or within close proximity to the Subject Property.

Based on ASTM Standard E 2600-22 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, the critical distance is equal to 100 feet, with the exception of dissolved petroleum hydrocarbons, which have a critical distance of 30 feet. If nonaqueous phase petroleum hydrocarbons are present, the 100 feet distance is utilized.

This VEC utilized readily available data sources previously discussed in this Phase I ESA to include the type of soils, geology and groundwater characteristics of the Subject area (refer to Section 4.3)



as well as known or potentially contaminated sites as identified on Federal, State, tribal and local databases. TBS also utilized previously discussed standard historical sources of information to identify potential historical sources of contamination on the Subject and surrounding properties, which may be indicative of a VES. This data collection and analysis was coupled with TBS's site reconnaissance of the Subject and surrounding properties. Based upon the results of TBS's data collection, reconnaissance and analysis, a summary of TBS's Tier I VES findings is presented in the below:

Findings: Based on information reviewed for this assessment, none of the Subject

Property is suspected of having petroleum or chemical contaminant plumes that would be identified as a VEC or warrant an additional Tier II Vapor Encroachment Screening. There are no records of vapor intrusion concerns

within 100 feet of an occupied structure.

Recommendations: Based upon our analysis and Tier I VES there is low potential for a VEC at

the Subject Property. No additional actions or investigations are warranted

at this time with regards to vapor intrusion.



#### 8.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

- T. Baker Smith, LLC has not identified RECs or HRECs that require further investigation of the Subject Property. No CRECs that cause property use restrictions, activity use limitations, institutional controls, or engineering controls were identified; however, TBS noted the following housekeeping and/or developmental conditions for the Subject Property:
  - 1. A sewer treatment plant was observed on the southern portion of the Subject Property. Future development must be designed in a manner preventing damage to the system and associated piping.



#### 9.0 SIGNATURES AND AAI STATEMENT

TBS has performed a Phase I ESA of +/-2.69-acre government property located at 501 Bull Run Road in Schriever, Louisiana in general conformance with the scope and limitations of the protocol and the limitations stated earlier in this report. Exceptions to or deletions from this protocol are discussed earlier in this report.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312; and, we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

I hereby certify that I have examined the facility and said property as herein described and to the best of my knowledge and belief, the facts and data developed with respect to this Phase I ESA are true and accurate. No material facts have been suppressed, misstated or misrepresented based on currently accepted and available information as of the date of this assessment.

CY J. TOUPS License No. 33966 REGISTERED PROFESSIONAL ENGINEER IN	GAT
Seal	Signature of Environmental Professional
August 28, 2023	Cy J. Toups, P.E.
Date	Print Name

**Registrations and/or Certifications** 

Registered Environmental Engineer (P.E.) – Certification #33966



**Appendix 1:** 

**Scope of Services** 

#### Scope of Work

The assessment was conducted in accordance with American Society for Testing and Materials (ASTM) Standard Guide for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-21, Standard & Poor's Environmental Criteria, the scope of work provided by the Client, and generally accepted industry standards.

The specific scope of work included the following:

Environmental Database Records Review - Reasonably ascertainable environmental databases were reviewed to determine whether the Subject Property or any neighboring properties were suspected of having or known to have environmental concerns likely to adversely impact the Subject Property. The databases reviewed and the radii chosen are based on the ASTM Standard E 1527-21 and the Client's scope of work. It is important to note the scope of this investigation is limited to a visual inspection to identify areas of potential concern to the real property and a review of readily accessible government databases. The inspection does not include a regulatory compliance audit of the facility. There are detailed regulations concerning the proper use, storage and disposal of hazardous and regulated material. These regulations include, but are not limited to, permitting, paper keeping and manifesting requirements, as well as community and employee right-to-know laws. It is typically the responsibility of the tenant(s) to maintain their space(s) in compliance with such regulations.

Prior Use History Review - Attempts were made to identify the prior usage of the property back to the earlier of the property's first developed use or 1940, using as many sources that were both reasonably ascertainable and likely to be useful. Record information that is reasonably ascertainable means information that is publicly available, information that is obtainable from its source within reasonable time and cost constraints (i.e. the information will be provided by the source within 20 calendar days of receiving a written, telephone, or in-person request at no more than a nominal cost intended to cover the source's cost of retrieving and duplicating the information), and information that is practically reviewable (i.e. the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data). Standard historical sources include any or all of the following: aerial photographs, historical maps, tax information, land title records, topographic maps, and local street directories, building department records, zoning/land use records, prior reports and interviews with local agencies.

<u>Property/Site Reconnaissance</u> - A reconnaissance of the property, consisting of a visual inspection of the Subject Property and neighboring properties as observable from the Subject Property, was conducted to identify RECs associated with the Subject Property, to the extent not obstructed by bodies of water, adjacent buildings or other obstacles. Observations are conducted at the property for potential RECs as well as, and including, to the presence of roadways and structures, potable water supply and sewage disposal, current and past uses of the subject and adjoining properties, hazardous substances and petroleum products, storage tanks, odors, pools of liquid, drums, unidentified substance containers, PCBs, stains or corrosion, drains and sumps, pits, ponds and lagoons, stained soil or pavement, stressed vegetation, solid waste, waste water, water wells, dry wells and septic systems.

**Environmental Setting** - Efforts were made to determine the environmental setting of the Subject Property with respect to topography, surface water bodies, flood plain, wetlands, soil type, depth to groundwater and direction of groundwater flow. "Wetlands" is a general term used to describe a variety of ecosystems, which may include prairie potholes, marshes, fens, bogs, wet meadows and swamps. It is not part of this assessment to conduct a formal wetland determination utilizing the defined criteria, but to determine if additional work should be considered based on TBS's observations.



<u>UST and AST Search</u> - Attempts were made to identify any aboveground storage tanks (ASTs) containing hazardous or regulated materials, and to identify visual indications of underground storage tanks (USTs), such as fill and vent pipes, or volume gauges. In addition to the visual inspection, state databases of facilities with registered USTs were reviewed, and the property contact and local regulatory officials were interviewed regarding any knowledge of ASTs or USTs.

<u>PCB Search</u> - An attempt was made to identify electrical or hydraulic equipment known to or likely to contain polychlorinated biphenyls (PCBs), identify the condition of such equipment and to determine the ownership of the equipment. Per ASTM guidelines, fluorescent light ballasts likely to contain PCBs are not addressed due to the limited quantity of PCB materials contained.

Preliminary Asbestos Containing Material (ACM) Evaluation - Efforts were made to visually identify the presence of the most obvious and common ACM. It should be noted that an asbestos survey by a certified inspector is outside the scope of a Phase I ESA, but in the event that general observation would have revealed the presences of material suspected to contain asbestos, T. Baker Smith, LLC would have recommended further investigation. A finding of "no further action is warranted" or "ACM is not a significant concern" cannot be interpreted, as the Subject Property is asbestos free. The level of this evaluation is not sufficient for such a determination.

<u>Interviews</u> - Efforts were made to contact and interview the property owner and current/past occupants. TBS requested that a person with good knowledge of the uses and physical characteristics of the property be identified, such as the property manager or head maintenance person.

Where readily available, TBS reviewed the following documents and information that may be in the possession of or provided by the owner, owner's representative, user, or combination thereof: previous ESA reports, environmental audit reports, environmental permits, registrations for storage tanks, material safety data sheets, community right to know plan, safety and spill prevention plans, reports regarding hydrogeological conditions, notices or other governmental correspondence for any past or current violations of environmental law, hazardous waste site generator notices or reports, geotechnical studies, knowledge of any pending, threatened or past litigation or administrative proceedings relevant to hazardous substances or petroleum products.

Efforts were made to contact and interview local agency officials, local or regional state health agency, local or regional state agency with jurisdiction over hazardous waste disposal as to any information relative to past or current potential RECs at the property.

Photographs representative of TBS's observations are collected. In addition to visual observations, TBS relied on the sources and contacted the individuals listed in the ESA report. Letters to and responses from municipal and regulatory agencies are included in report when available. If and when applicable, additional forms and checklists required by the Client are also included in the appendices.



# **Appendix 2:**

**Property Maps and Drawings** 

USDA Ardoyne Farm Sugarcane Research Unit 501 Bull Run Road Houma, LA 70360

Inquiry Number: 7385261.4

July 10, 2023

# **EDR Historical Topo Map Report**

with QuadMatch™



#### **EDR Historical Topo Map Report**

07/10/23

Site Name: Client Name:

USDA Ardoyne Farm Sugarcar

T. Baker Smith, LLC

501 Bull Run Road

PO Box 2266

Houma, LA 70360

Houma, LA 70361

EDR Inquiry # 7385261.4 Contact: Samantha Ordoyne



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by T. Baker Smith, LLC were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:		Coordinates:	Coordinates:	
P.O.#	NA	Latitude:	29.635785 29° 38' 9" North	
Project:	2023.0013	Longitude:	-90.841981 -90° 50' 31" West	
-		UTM Zone:	Zone 15 North	
		UTM X Meters:	708917.19	
		UTM Y Meters:	3280374.57	
		Elevation:	6.00' above sea level	
Maps Provid	ded:			

2020	1963, 1964
2018	1944
2015	1941
2012	1939
1998	1897
1980	1892
1972	
1964	

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#### Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

#### 2020 Source Sheets



Gray 2020 7.5-minute, 24000



Humphreys 2020 7.5-minute, 24000

#### 2018 Source Sheets



Gray 2018 7.5-minute, 24000



Humphreys 2018 7.5-minute, 24000

#### **2015 Source Sheets**



Gray 2015 7.5-minute, 24000



Humphreys 2015 7.5-minute, 24000

#### 2012 Source Sheets



Gray 2012 7.5-minute, 24000



Humphreys 2012 7.5-minute, 24000

#### Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

#### 1998 Source Sheets



Humphreys 1998 7.5-minute, 24000 Aerial Photo Revised 1980



Gray 1998 7.5-minute, 24000 Aerial Photo Revised 1998

#### 1980 Source Sheets



Gray 1980 7.5-minute, 24000 Aerial Photo Revised 1978



Humphreys 1980 7.5-minute, 24000 Aerial Photo Revised 1978

#### 1972 Source Sheets



Gray 1972 7.5-minute, 24000 Aerial Photo Revised 1963

#### 1964 Source Sheets



Gibson 1964 15-minute, 62500

# Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

# 1963, 1964 Source Sheets



Gray 1963 7.5-minute, 24000 Aerial Photo Revised 1963



Humphreys 1964 7.5-minute, 24000 Aerial Photo Revised 1963

## 1944 Source Sheets



Gibson 1944 15-minute, 62500

## 1941 Source Sheets



Gibson 1941 15-minute, 62500

#### 1939 Source Sheets



Gibson 1939 15-minute, 62500

# Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

## 1897 Source Sheets

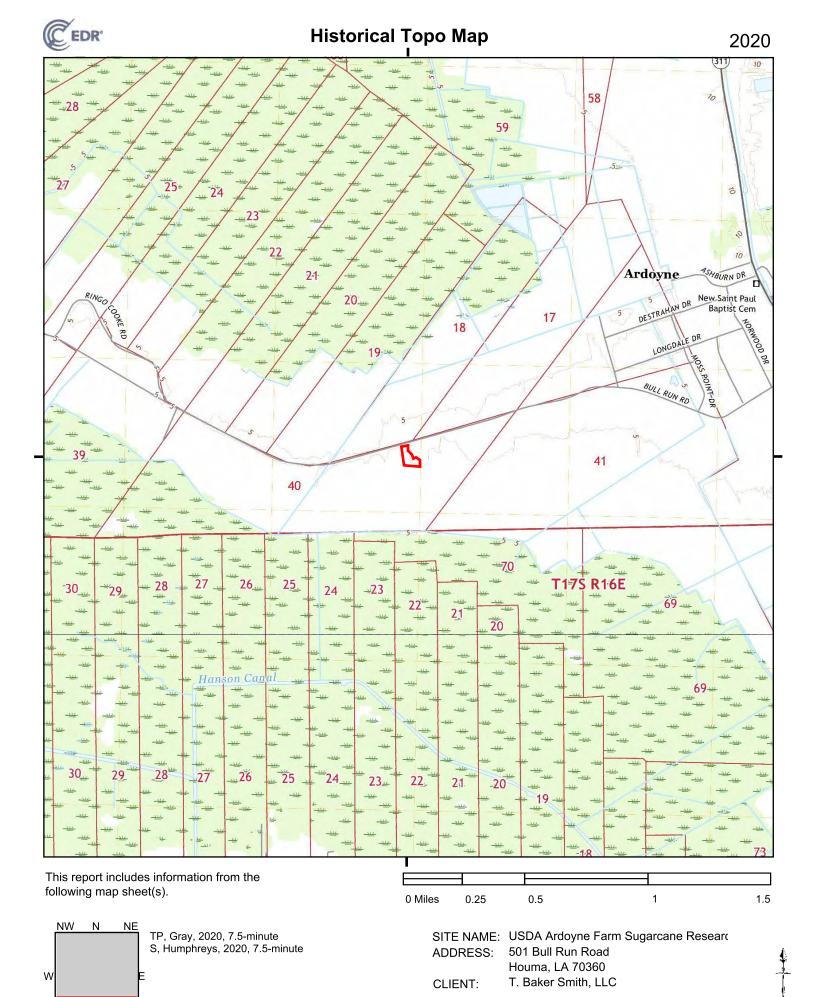


Gibson 1897 15-minute, 62500

## 1892 Source Sheets



Gibson 1892 15-minute, 62500

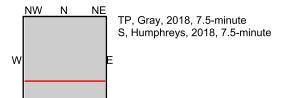


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This report includes information from the following map sheet(s).

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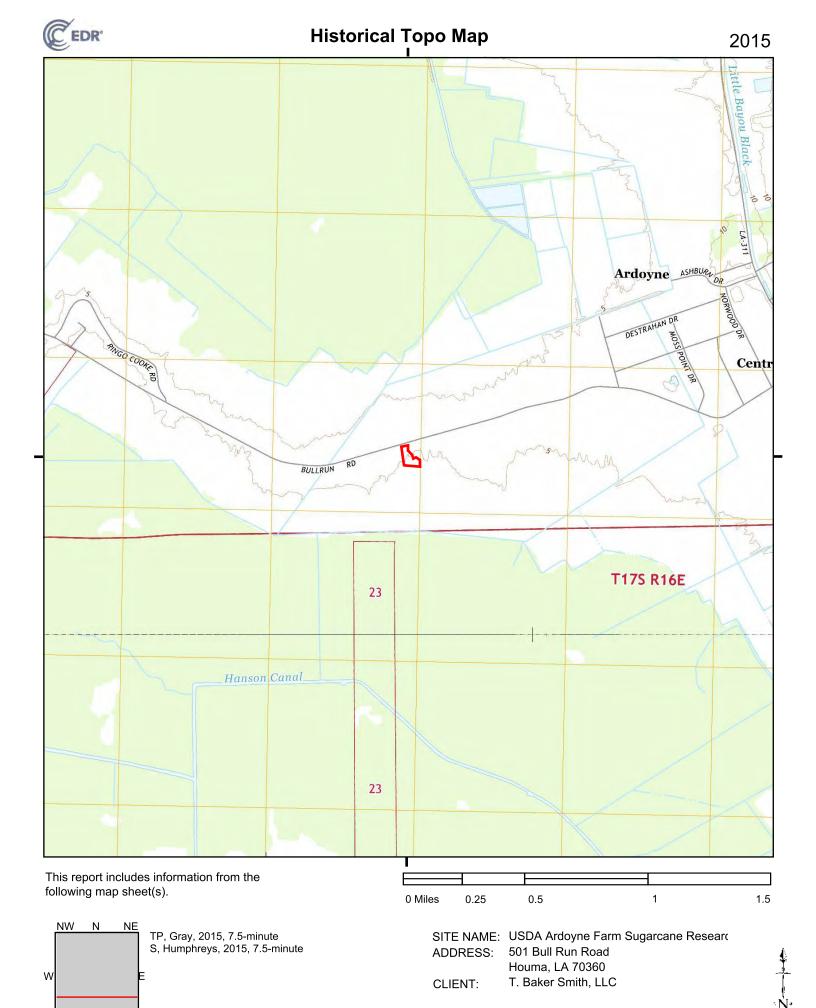
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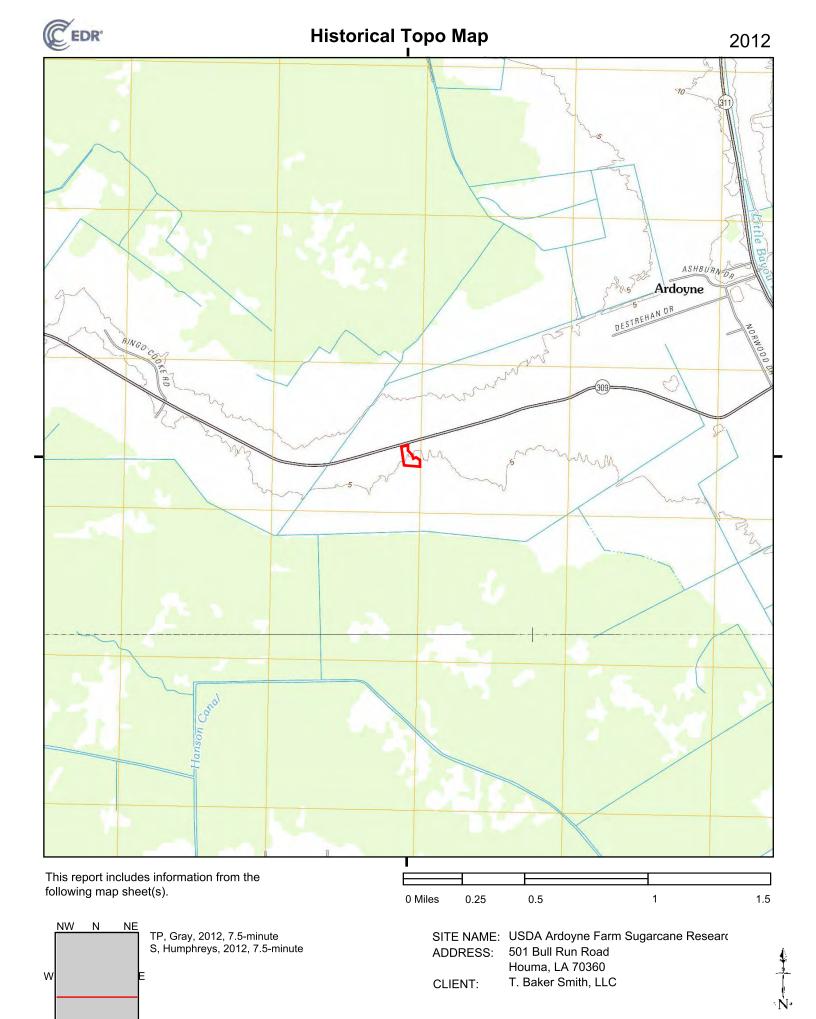
Houma, LA 70360

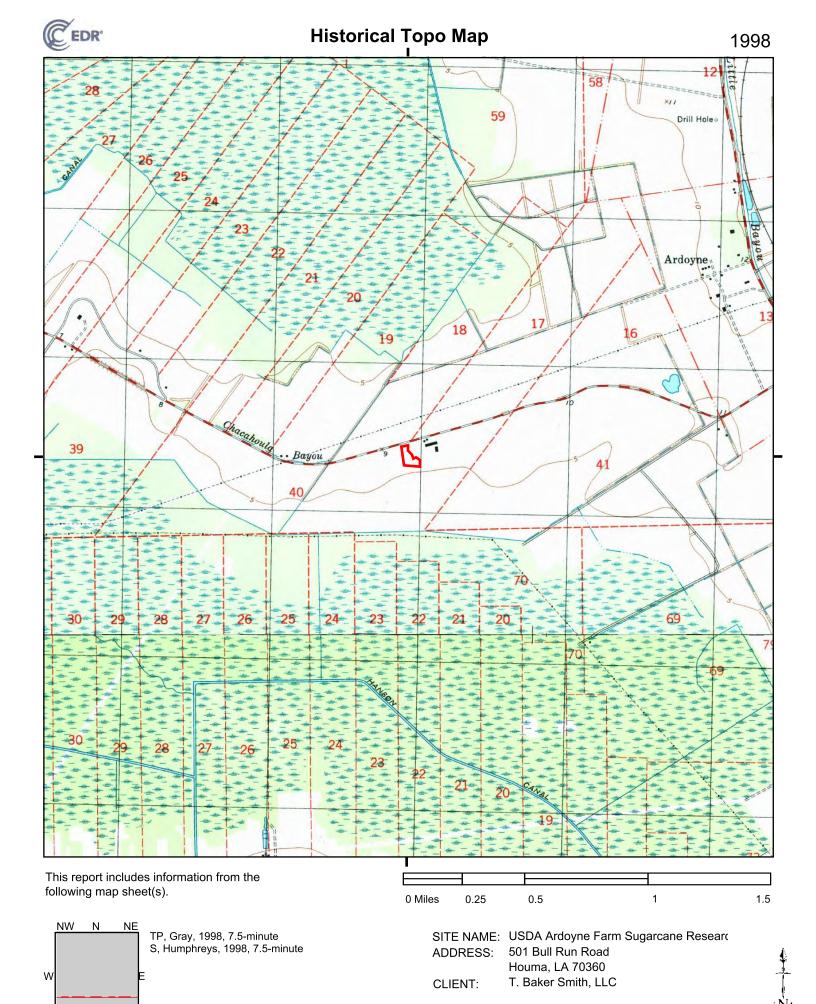
CLIENT: T. Baker Smith, LLC

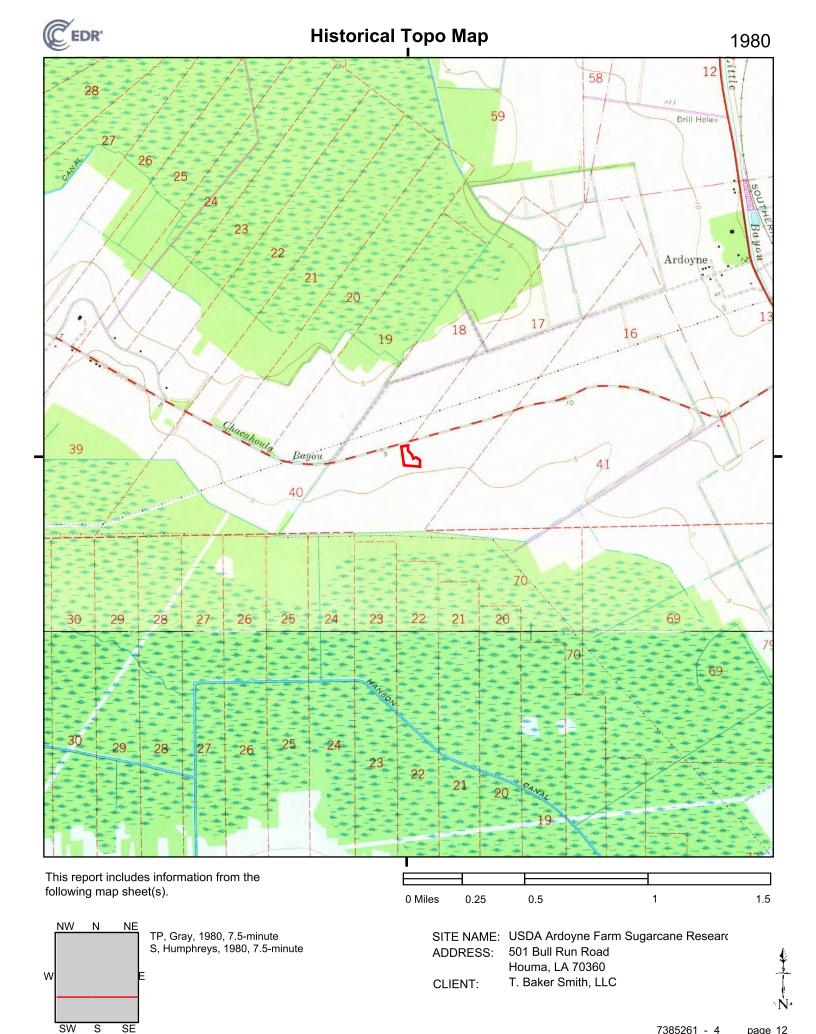


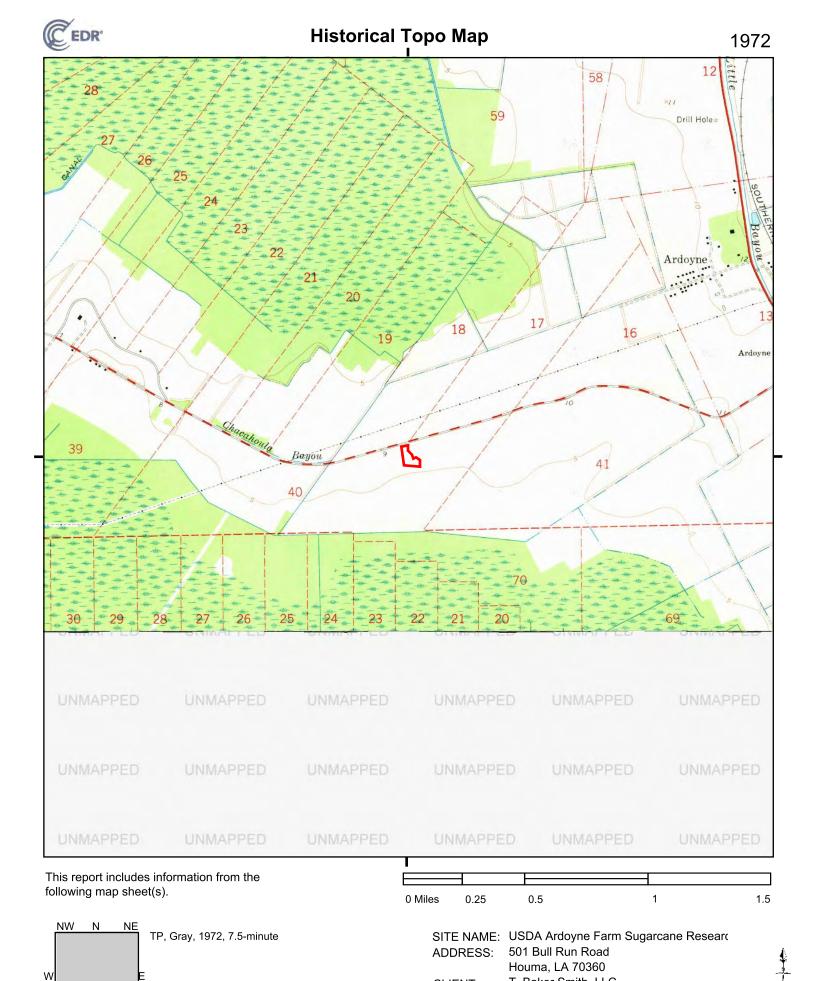
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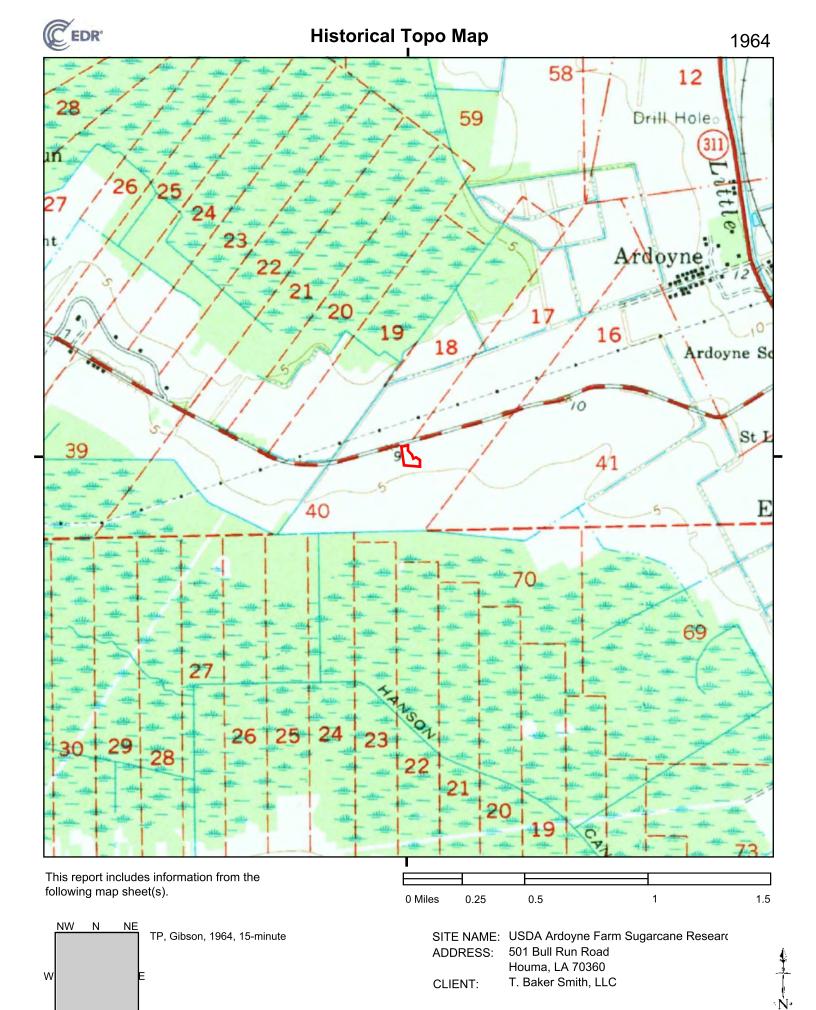


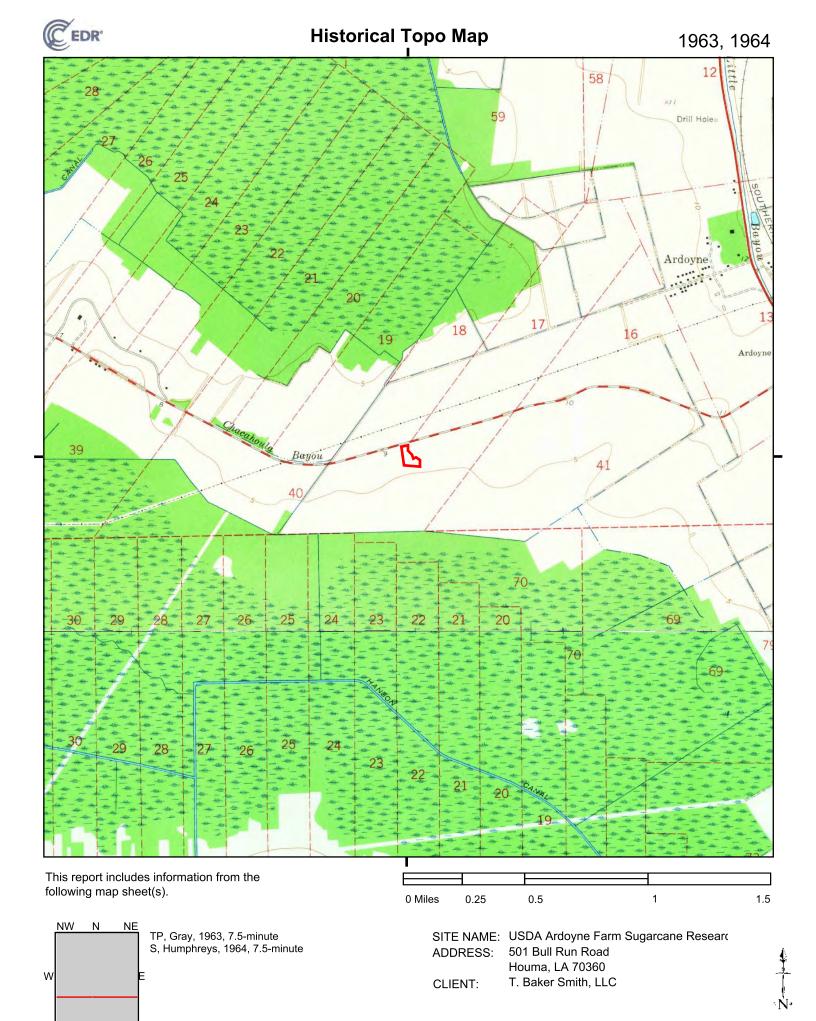


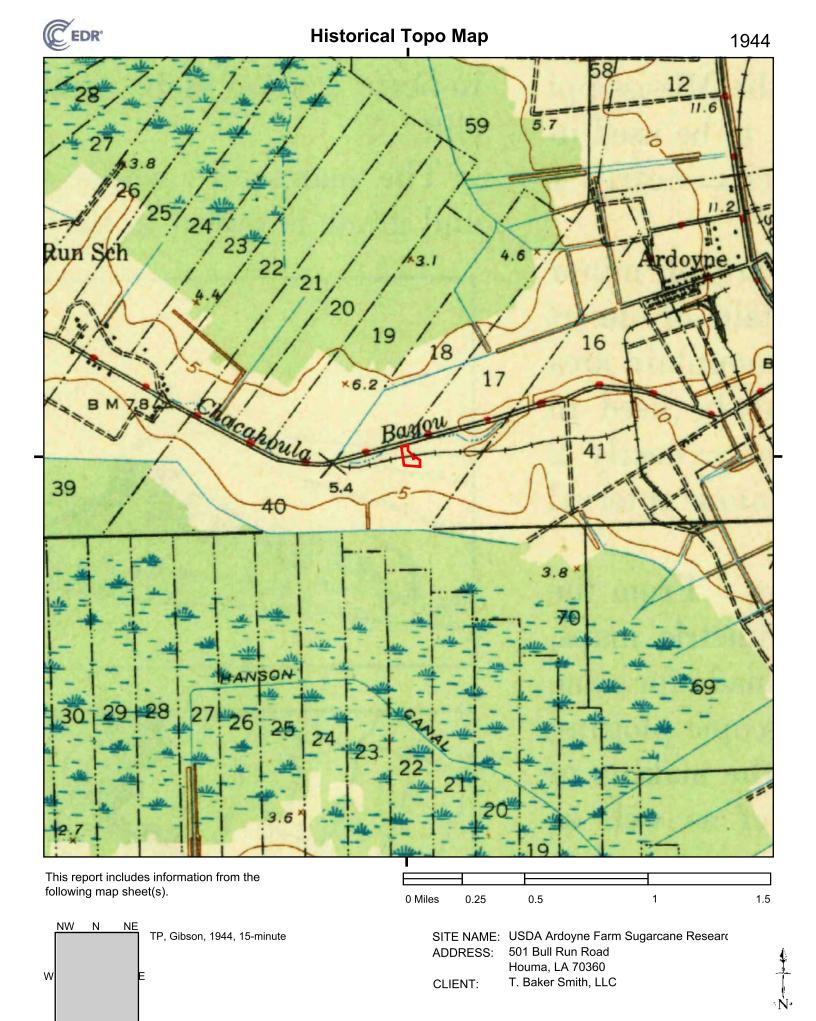


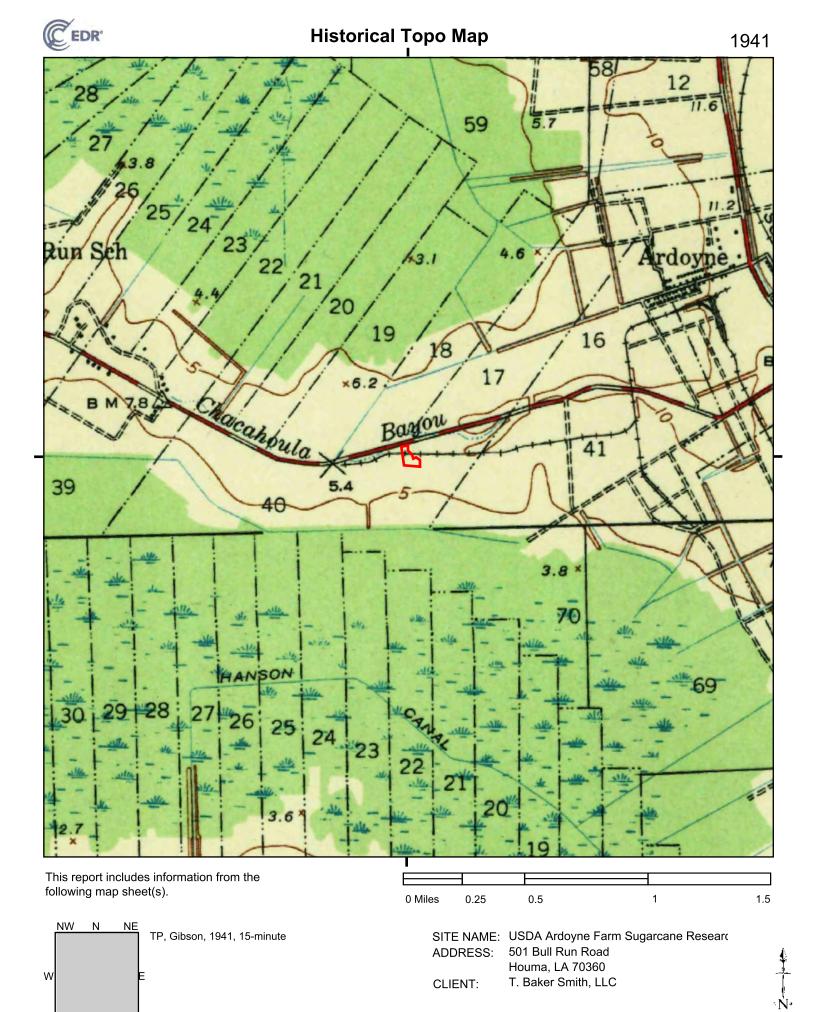
T. Baker Smith, LLC

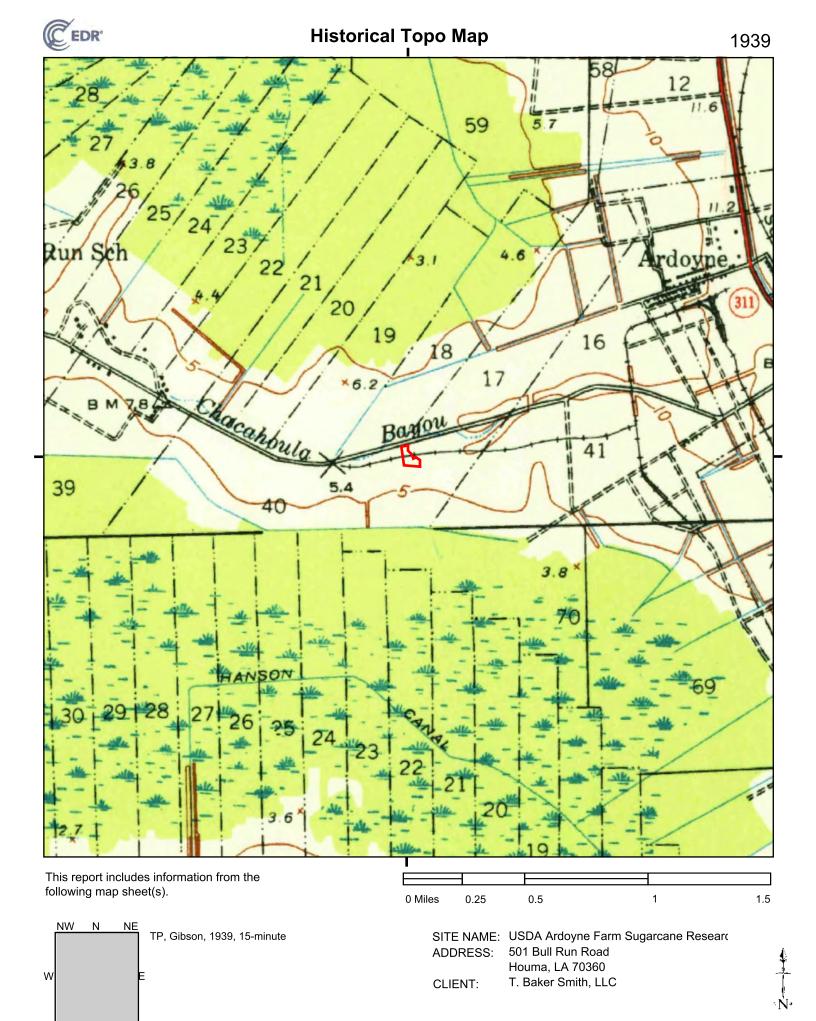
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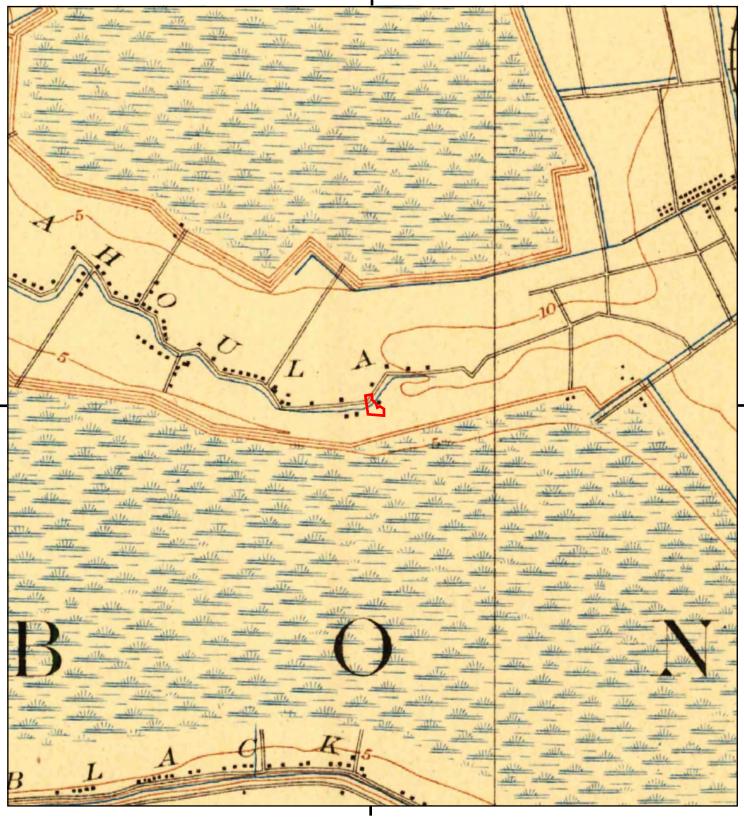




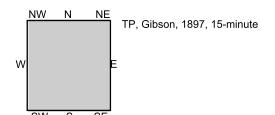








This report includes information from the following map sheet(s).



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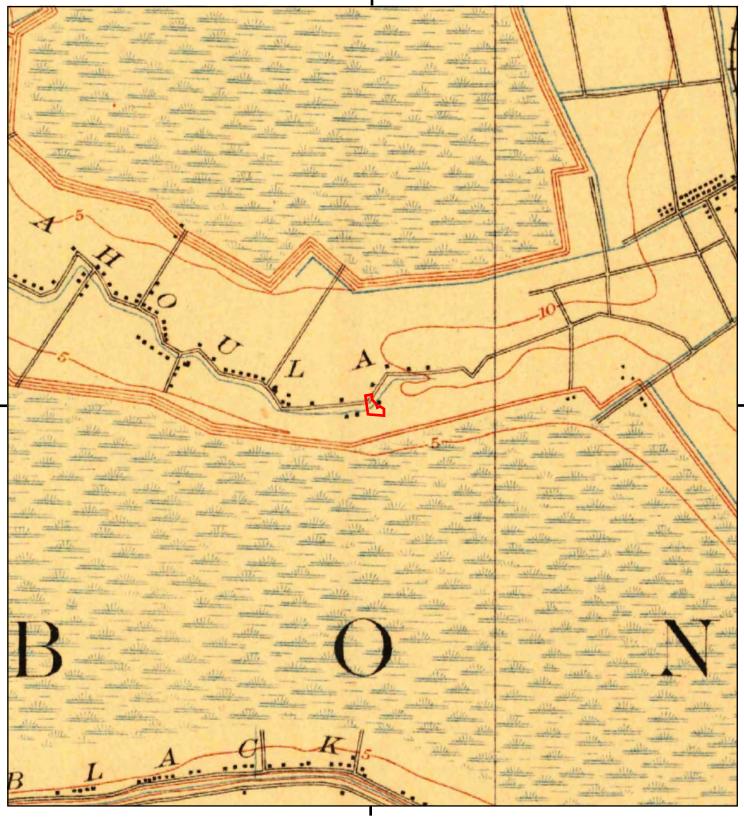
ADDRESS: 501 Bull Run Road

Houma, LA 70360

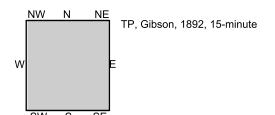
CLIENT: T. Baker Smith, LLC







This report includes information from the following map sheet(s).



0 Miles 0.25 0.5 1 1.5

SITE NAME: USDA Ardoyne Farm Sugarcane Researc

ADDRESS: 501 Bull Run Road

Houma, LA 70360

CLIENT: T. Baker Smith, LLC



Image Provided By ESRI Street Map Schri ever [20] Lafourche Terrebonne Gray Donner 3052 3052 Bay ou Blue Rd United Houma [660] Wellands Cultural Tri Bayou Cane N Hollywood Q Mandalay National Mandalay National



#### STREET MAP

Wildlife Refuge

MERRICK & COMPANY-USDA SUGARCANE GREENHOUSE DESIGN
501 Bull Run Road
Houma, Louisiana 70360

Esri, HERE, Garmin, INCREMENT P, NGA, USGS

PREPARED FOR:

**Boundaries are approximate** 

PROJ. MGR: Cy Toups DATE: 7/13/2023
DRAWN BY: Cy Toups PROJ. #: 2023.0013

**Appendix 3:** 

**Property Photographs** 



Photo 1. View of the northern portion of the Subject Property.



Photos 2. View of the Subject Property facing south from the central portion of the property.



Photo 3. View of the Subject Property facing west.



Photo 4: View of the Subject Property facing west from the northeastern corner.



Photo 5: View of the Subject Property facing west-southwest from the northeastern corner.



Photo 6: View of the southern portion of the Subject Property.



Photo 7. View of the southern portion of the Subject Property, facing southwest.



Photo 8: View of the northern portion of the Subject Property, facing west.



Photo 9: View of the northern boundary of the Subject Property.



Photo 10. View of the northwestern corner of the Subject Property.



Photo 11. View of agricultural equipment observed on the northwestern portion of the Subject Property.



Photo 12. View of farm equipment observed on the northwestern portion of the Subject Property.



Photo 13: View of farm equipment stored on the northern portion of the Subject Property.



Photo 14. View of the northern boundary of the Subject Property, facing east.



Photo 15. View of the Subject Property from the northern boundary facing south.



Photo 16. View of a power pole observed on the northeastern portion of the Subject Property.



Photo 17. View of security fencing observed along the northern boundary of the Subject Property.



Photo 18. View of the security fencing observed along the northern boundary of the Subject Property.



Photo 19. View of the eastern portion of the Subject Property.



Photo 20. View of the eastern boundary of the Subject Property, facing north.



Photo 21. View of the eastern boundary of the Subject Property, facing south.



Photo 22: View of the eastern boundary of the Subject Property facing south.



Photo 23. View of a swale observed along the northeastern boundary of the Subject Property.



Photo 24. View of the swale ditch observed along the northeastern boundary of the Subject Property.



Photo 25: View of the swale located on the northeastern portion of the Subject Property.



Photo 26: View of a utility vault observed on the eastern portion of the Subject Property.



Photo 27. View of the northeastern corner of the Subject Property.



Photo 28. View of a drain manhole observed on the eastern portion of the Subject Property.



Photo 29. View of a pad mounted transformer observed on the central eastern portion of the Subject Property.



Photo 30. View of a pad mounted transformer observed on the central eastern portion of the Subject Property.



Photo 31: View of the "Non-PCB" label observed on the pad mounted transformer.



Photo 32. View of the back side of the building adjacent to the east of the Subject Property boundary. Note the small HVAC units.



Photo 33. View of the HVAC units located on the eastern portion of the Subject Property.



Photo 34. View of the HVAC units located on the eastern boundary of the Subject Property.



Photo 35: View of the eastern boundary of the Subject Property facing south.



Photo 36. View of the eastern-most boundary of the Subject Property, facing north.



Photo 37: View of the southeastern portion of the Subject Property, facing north.



Photo 38: View of the southeastern corner of the Subject Property.



Photo 39. View of the southern boundary of the Subject Property, facing west.



Photo 40. View of the southern boundary of the Subject Property, facing east.



Photo 41. View of a sewerage treatment plant observed on the southeastern portion of the Subject Property.



Photo 42. View of a sewer treatment plant observed on the southeast portion of the Subject Property.



Photo 43. View of electrical panel/control box associated with the sewer treatment plant.



Photo 44: View of the sewer treatment plant observed on the southeastern portion of the Subject Property.



Photo 45. View of a sewer manhole located adjacent to the north of the sewer treatment plant.



Photo 46: View of a sewer drain vault observed on the southeastern portion of the Subject Property.



Photo 47. View of a storm water drain observed on the southeast corner of the Subject Property.



Photo 48. View of a stormwater drain observed on the central portion of the southern boudnary of the Subject Property.



Photo 49. View of a sewer cleanout observed on the southeastern portion of the Subject Property.



Photo 50. View of the sewer cleanout observed on the southeastern portion of the Subject Property.



Photo 51: View of a drain manhole observe don the southeastern portion of the Subject Property.



Photo 52: View of a grated storm drain observed on the southeastern corner of the Subject Property.



Photo 53. View of a debris pile consisting of wooden poles or pilings located along the southern boundary of the Subject Property. The



Photo 54. An up close view of the wooden poles/pilings observed near the southern boundary of the Subject Property.



Photo 55. View of a soil stockpile observed on the southwestern portion of the Subject Property.



Photo 56. View of the western boundary of the Subject Property, facing north.



Photo 57. View of the western boundary of the Subject Property, facing south.



Photo 58. View of the Subject Property from the southwestern corner, facing northeast.



Photo 59. View of the southwestern portion of the Subject Property.



Photo 60. View of the laboratory building located adjacent to the east of the Subject Property.



Photo 61: View of the Sugarcane Isolation Pad located adjacent to the east of the Subject Property.



Photo 62. View of the eastern boundary of the Subject Property and the adjacent laboratory buildings.



Photo 63: View of the Sugar Cane Isolation Pad and associated famring equipment located to the adjacent east of the Subject Property.



Photo 64: View of a 1,400-gallon aboveground storage tank observed adjacent to the east of the Subject Property.



Photo 65. View of the agricultural fields adjacent to the south of the Subject Property.



Photo 66. View of the dirt road and agricultural fields adjacent to the west of the Subject Property.



Photo 67: View of the agricultural fields adjacent to the west of the Subject Property.



Photo 68: View of tarped sugarcane located adjacent to the northeast of the Subject Property.



Photo 69: Close-up of the tarped sugarcane observed adjacent to the northeast of the Subject Property.



Photo 70: View of bagged sugarcane observed adjacent to the northeast of the Subject Property.



Photo 71: View of the laboratory located adjacent to the east of the Subject Property.



Photo 72: View of research facilities and laboratories located adjacent to the east of the Subject Property boundary.



Photo 73: View of a large fertilizer storage tank located adjacent to the east of the Subject Property boundary.



Photo 74: View of the research facility/laboratory located adjacent to the east of the Subject Property.



Photo 75: View of the facilities located adjacent to the east of the Subject Property.



**State & Federal Database and Record Searches** 

### **USDA Ardoyne Farm Sugarcane Research Unit**

501 Bull Run Road Houma, LA 70360

Inquiry Number: 7385261.2s

July 10, 2023

# **EDR Summary Radius Map Report**



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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### **EXECUTIVE SUMMARY**

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### **ADDRESS**

501 BULL RUN ROAD HOUMA, LA 70360

### **COORDINATES**

Latitude (North): 29.6357850 - 29° 38' 8.82" Longitude (West): 90.8419810 - 90° 50' 31.13"

Universal Tranverse Mercator: Zone 15 UTM X (Meters): 708921.4 UTM Y (Meters): 3280196.0

Elevation: 6 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: TF

Source: U.S. Geological Survey

Target Property: S

Source: U.S. Geological Survey

### **AERIAL PHOTOGRAPHY IN THIS REPORT**

Portions of Photo from: 20190707, 20190902

Source: USDA

### MAPPED SITES SUMMARY

Target Property Address: 501 BULL RUN ROAD HOUMA, LA 70360

Click on Map ID to see full detail.

MAP				RELATIVE	DIST (ft. & mi.)
ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	<b>ELEVATION</b>	DIRECTION
1	USDA - SUGARCANE RES	501 BULL RUN RD	NPDES		TP

### **EXECUTIVE SUMMARY**

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site Database(s) EPA ID

USDA - SUGARCANE RES 501 BULL RUN RD SCHRIEVER, LA 70395 NPDES Facility Id: 178464 N/A

### **SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were not identified.

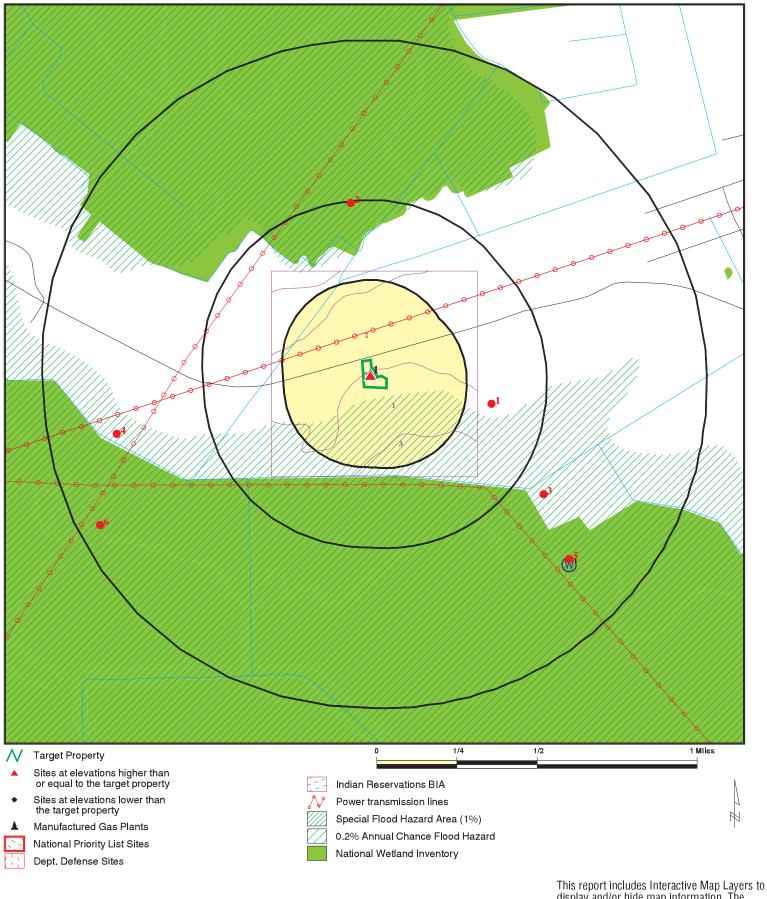
Unmappable (orphan) sites are not considered in the foregoing analysis.

Count: 0 records. ORPHAN SUMMARY

City EDR ID Site Name Site Address Zip Database(s)

NO SITES FOUND

### **OVERVIEW MAP - 7385261.2S**



display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: USDA Ardoyne Farm Sugarcane Research Unit

29.635785 / 90.841981

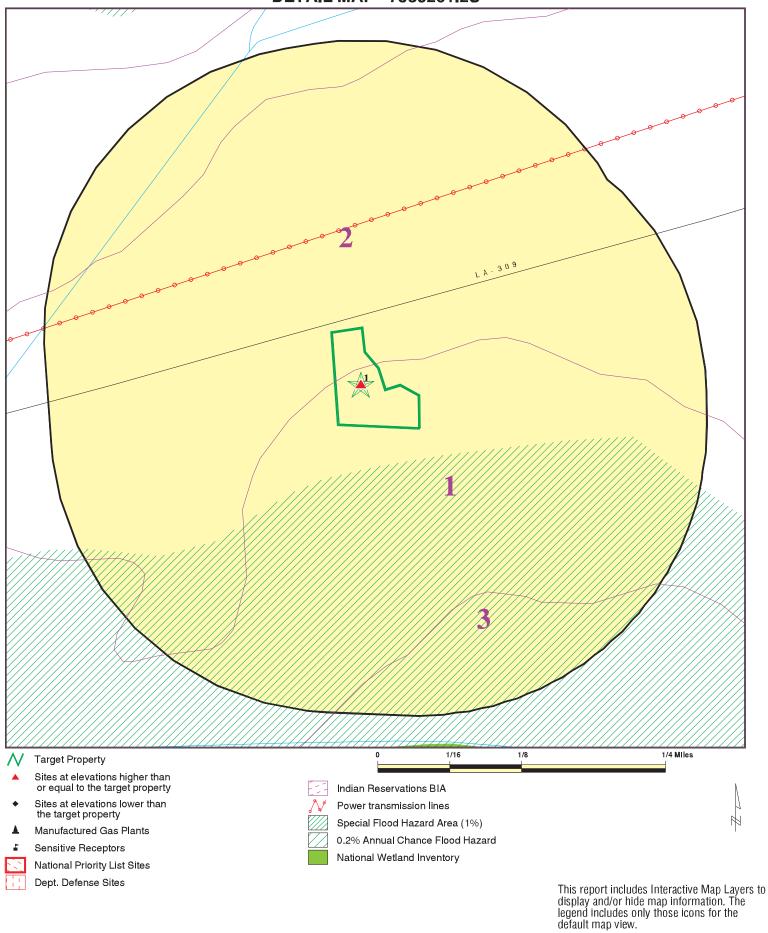
ADDRESS: 501 Bull Run Road Houma LA 70360

LAT/LONG:

CLIENT: T. Baker Smith, LLC CONTACT: Samantha Ordoyne INQUIRY#: 7385261.2s

DATE: July 10, 2023 1:20 pm

### **DETAIL MAP - 7385261.2S**



SITE NAME: USDA Ardoyne Farm Sugarcane Research Unit
ADDRESS: 501 Bull Run Road
Houma LA 70360
LAT/LONG: 29.635785 / 90.841981

CLIENT: T. Baker Smith, LLC
CONTACT: Samantha Ordoyne
INQUIRY #: 7385261.2s
DATE: July 10, 2023 1:21 pm

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	<u>1/2 - 1</u>	> 1	Total Plotted
STANDARD ENVIRONMENT	AL RECORDS							
Lists of Federal NPL (Su	perfund) site	s						
NPL Proposed NPL NPL LIENS	1.000 1.000 1.000		0 0 0	0 0 0	0 0 0	0 0 0	NR NR NR	0 0 0
Lists of Federal Delisted	NPL sites							
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites sul CERCLA removals and C		rs						
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Lists of Federal CERCLA	sites with N	FRAP						
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA fa undergoing Corrective A								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA To	SD facilities							
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA go	enerators							
RCRA-LQG RCRA-SQG RCRA-VSQG	0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 0 0
Federal institutional con engineering controls reg								
LUCIS US ENG CONTROLS US INST CONTROLS	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilitie	es							
SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal la and solid waste disposal								
SWF/LF DEBRIS HIST DEBRIS	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Lists of state and tribal le	eaking storag	ge tanks						
LUST	0.500		0	0	0	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST HIST LUST	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Lists of state and tribal re	egistered sto	rage tanks						
FEMA UST UST INDIAN UST	0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 0 0
State and tribal institution control / engineering con		es						
AUL	0.500		0	0	0	NR	NR	0
Lists of state and tribal v	oluntary clea	nup sites						
VCP INDIAN VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Lists of state and tribal b	rownfield sit	es						
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMEN	TAL RECORDS	<u>s</u>						
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / S Waste Disposal Sites	olid							
SWRCY INDIAN ODI ODI DEBRIS REGION 9 IHS OPEN DUMPS	0.500 0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 0 0	NR NR NR NR NR	NR NR NR NR NR	0 0 0 0
Local Lists of Hazardous Contaminated Sites	waste /							
US HIST CDL CDL DEL SHWS US CDL	0.001 0.001 1.000 0.001		0 0 0 0	NR NR 0 NR	NR NR 0 NR	NR NR 0 NR	NR NR NR NR	0 0 0 0
Local Land Records								
LIENS LIENS 2	0.001 0.001		0 0	NR NR	NR NR	NR NR	NR NR	0 0
Records of Emergency R	elease Repo	rts						
HMIRS SPILLS SPILLS 90	0.001 0.001 0.001		0 0 0	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
Other Ascertainable Reco	ords							
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		Ö	Ö	Ö	Ö	NR	Ö
SCRD DRYCLEANERS	0.500		Ö	Ö	Ö	NR	NR	Ö
US FIN ASSUR	0.001		0	NR	NR	NR	NR	Ō
EPA WATCH LIST	0.001		Ö	NR	NR	NR	NR	Ö
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP UMTRA	1.000 0.500		0 0	0 0	0 0	0 NR	NR NR	0 0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	Ö	NR	NR	NR	0
FINDS	0.001		0	NŘ	NR	NR	NR	0
ECHO	0.001		Ŏ	NR	NR	NR	NR	Ŏ
UXO	1.000		Ŏ	0	0	0	NR	Ŏ
DOCKET HWC	0.001		Ō	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAININ			0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT			0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0 ND	NR	NR	NR	0
AIRS	0.001		0	NR NB	NR NB	NR	NR	0
ASBESTOS	0.001		0	NR	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	<u>&gt; 1</u>	Total Plotted
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
REM	0.500		0	0	0	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORIC								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVER	<u> </u>	<u>/ES</u>						
			•	ND	ND	ND	ND	•
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0 0	NR NB	NR NB	NR NR	NR NR	0 0
RGA LUST	0.001		U	NR	NR	INIX	INIX	U
- Totals		1	0	0	0	0	0	1

### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction

MAP FINDINGS

Distance Elevation Site EDR ID Number Database(s) EPA ID Number

1 USDA - SUGARCANE RESEARCH UNIT ARDOYNE FARM NPDES S111768249
Target 501 BULL RUN RD N/A

Target 501 BULL RUN RD Property SCHRIEVER, LA 70395

Nedeshere for full text details

Actual: Facility Id 178464

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
LA	AIRS	Air Permit List	Department of Environmental Quality	02/20/2023	02/23/2023	05/17/2023
LA	AQUEOUS FOAM	A listing of reported incidents involving firefighting foam.	Department of Environmental Quality	02/06/2023	02/07/2023	04/26/2023
LA	ASBESTOS	Asbestos Projects List	Department of Environmental Quality	12/31/2022	02/09/2023	04/26/2023
LA	AUL	Listing of Institutional and/or Enginnering Controls	Department of Environmental Quality	09/28/2022	09/28/2022	12/13/2022
LA	BROWNFIELDS	Brownfields Inventory	Department of Environmental Quality	04/08/2023	04/11/2023	06/27/2023
LA	CDL	Clandestine Drug Lab	Department of Environmental Quality	02/21/2023	02/22/2023	05/11/2023
LA	COAL ASH	Coal Ash Disposal Sites	Department of Environmental Quality	04/10/2018	04/12/2018	04/26/2018
LA	DEBRIS	LDEQ Approved Debris Sites	Department of Environmental Quality	03/06/2023	03/07/2023	05/25/2023
LA	DEL SHWS	Deleted Potential & Confirmed Sites	Department of Environmental Quality	04/08/2023	04/11/2023	06/27/2023
LA	DRYCLEANERS	Drycleaner Facility Listing	Department of Environmental Quality	04/06/2023	04/11/2023	06/27/2023
LA	Financial Assurance 1	Financial Assurance Information	Department of Environmental Quality	02/09/2023	02/09/2023	04/26/2023
LA	Financial Assurance 2	Financial Assurance Information Listing	Department of Environmental Quality	02/09/2023	02/09/2023	04/26/2023
LA	HIST DEBRIS	LDEQ Approved Debris Sites	Department of Environmental Quality	02/07/2007	11/14/2008	11/21/2008
LA	HIST LUST	Underground Storage Tank Case History Incidents	Department of Environmental Quality	11/01/1999	02/16/2000	05/01/2000
LA	LIENS	Environmental Liens	Department of Environmental Quality	03/23/2023	04/06/2023	06/27/2023
LA	LUST	Leaking Underground Storage Tanks	Department of Environmental Quality	04/08/2023	04/11/2023	06/27/2023
LA	NPDES	LPDES Permits Database	Department of Environmental Quality	04/24/2023	04/26/2023	04/27/2023
LA	PFAS	Per- and Polyfluoroalkyl Substances (PFAS) Data	Department of Environmental Quality	01/30/2023	01/31/2023	04/20/2023
LA	REM	Division of Remediation Services Database	Department of Environmental Quality	04/08/2023	04/11/2023	06/27/2023
LA	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Quality		07/01/2013	01/03/2014
LA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Environmental Quality		07/01/2013	01/15/2014
LA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environmental Quality		07/01/2013	01/03/2014
LA	SHWS	Potential and Confirmed Sites List	Department of Environmental Quality	04/08/2023	04/11/2023	06/27/2023
LA	SPILLS	Emergency Response Section Incidents	Department of Environmental Quality	02/06/2023	02/07/2023	04/26/2023
LA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	10/30/2012	01/03/2013	03/07/2013
LA	SWF/LF	Landfill List	Department of Environmental Quality	03/20/2023	03/21/2023	06/06/2023
LA	SWRCY	Recycling Directory	Department of Environmental Quality	03/17/2023	03/21/2023	06/06/2023
LA	UIC	Underground Injection Wells Listing	Department of fNatural Resources	12/24/2022	02/22/2023	05/11/2023
LA	UST	Louisiana Underground Storage Tank Database	Department of Environmental Quality	04/08/2023	04/11/2023	06/27/2023
LA	VCP	Voluntary Remediation Program Sites	Department of Environmental Quality	04/10/2023	04/11/2023	06/27/2023
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	03/17/2023	03/17/2023	05/30/2023
US	AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing	Environmental Protection Agency	04/27/2023	04/27/2023	05/02/2023
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2021	03/09/2023	03/20/2023
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2020	11/30/2021	02/22/2022
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2022	01/12/2023	04/07/2023
US	CORRACTS	Corrective Action Report	EPA	03/06/2023	03/09/2023	03/20/2023
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	04/26/2023	05/02/2023	05/17/2023
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	03/25/2023	03/31/2023	06/09/2023
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR. Inc.	00,20,2020	30,0 1,2020	30,00,2020
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
		EBITT Tophictary Manufactured Odo Flanto	2514, 1110.			

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	03/20/2023	03/21/2023	05/30/2023
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	03/26/2023	03/28/2023	05/30/2023
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	03/08/2023	03/09/2023	05/30/2023
US	FINDS	Facility Index System/Facility Registry System	EPA	02/02/2023	02/28/2023	03/24/2023
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	02/01/2023	02/14/2023	05/02/2023
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/13/2023	02/14/2023	04/19/2023
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	03/03/2023	03/03/2023	06/09/2023
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/19/2023	03/21/2023	05/30/2023
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/19/2022	12/06/2022	03/03/2023
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	11/23/2022	12/06/2022	04/19/2023
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	11/26/2022	12/06/2022	03/03/2023
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/14/2022	12/06/2022	03/03/2023
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	11/23/2022	12/06/2022	03/03/2023
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/14/2022	12/06/2022	03/03/2023
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	11/23/2022	12/06/2022	03/03/2023
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	11/23/2022	12/06/2022	03/03/2023
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/19/2022	12/06/2022	03/03/2023
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	11/23/2022	12/06/2022	04/19/2023
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	11/23/2022	12/06/2022	03/03/2023
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	10/14/2022	12/06/2022	03/03/2023
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	11/23/2022	12/06/2022	03/03/2023
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/14/2022	12/06/2022	03/03/2023
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	11/23/2022	12/06/2022	03/03/2023
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	11/23/2022	12/06/2022	03/03/2023
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisiting  Voluntary Cleanup Priority Lisiting	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	04/26/2023	05/02/2023	05/17/2023
US	LEAD SMELTER 2	Lead Smelter Sites Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	04/26/2023	05/02/2023	05/17/2023
US	LUCIS	Land Use Control Information System	Department of the Navy	02/08/2023	02/09/2023	05/02/2023
US	MINES MRDS	Mineral Resources Data System	USGS	08/23/2022	11/22/2022	02/28/2023
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	04/03/2023	04/04/2023	06/09/2023
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	04/03/2023	03/21/2023	05/30/2023
US	NPL	National Priority List	EPA	03/15/2023	05/02/2023	05/30/2023
US	NPL NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/2023	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
	PADS	PCB Activity Database System	EPA	03/20/2023	04/04/2023	06/09/2023
US	FADO	FOD ACTIVITY DATABASE SYSTEM	LFA	03/20/2023	04/04/2023	00/09/2023

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PFAS ATSDR	PFAS Contamination Site Location Listing	Department of Health & Human Services	06/24/2020	03/17/2021	11/08/2022
US	PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	03/30/2023	03/30/2023	04/03/2023
US	PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	03/30/2023	03/30/2023	04/03/2023
US	PFAS FEDERAL SITES	Federal Sites PFAS Information	Environmental Protection Agency	03/30/2023	03/30/2023	04/07/2023
US	PFAS NPDES	Clean Water Act Discharge Monitoring Information	Environmental Protection Agency	03/30/2023	03/30/2023	04/07/2023
US	PFAS NPL	Superfund Sites with PFAS Detections Information	Environmental Protection Agency	06/07/2023	06/08/2023	06/09/2023
US	PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing	Environmental Protection Agency	03/30/2023	03/30/2023	04/03/2023
US	PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing	Environmental Protection Agency	03/30/2023	03/30/2023	05/02/2023
US	PFAS TRIS	List of PFAS Added to the TRI	Environmental Protection Agency	06/07/2023	06/08/2023	06/09/2023
US	PFAS TSCA	PFAS Manufacture and Imports Information	Environmental Protection Agency	03/30/2023	03/30/2023	06/09/2023
US	PFAS WQP	Ambient Environmental Sampling for PFAS	Environmental Protection Agency	03/30/2023	03/30/2023	05/02/2023
US	PRP	Potentially Responsible Parties	EPA	04/26/2023	05/02/2023	05/17/2023
US	Proposed NPL	Proposed National Priority List Sites	EPA	04/26/2023	05/02/2023	05/17/2023
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	03/06/2023	03/09/2023	03/20/2023
US	RMP	Risk Management Plans	Environmental Protection Agency	04/27/2022	05/04/2022	05/10/2022
US	ROD	Records Of Decision	EPA	04/26/2023	05/02/2023	05/17/2023
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	07/30/2021	02/03/2023	02/10/2023
US	SEMS	Superfund Enterprise Management System	EPA	04/26/2023	05/02/2023	05/17/2023
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/26/2023	05/02/2023	05/17/2023
US	SSTS	Section 7 Tracking Systems	EPA	01/17/2023	01/18/2023	04/19/2023
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2021	02/16/2023	05/02/2023
US	TSCA	Toxic Substances Control Act	EPA	12/31/2020	06/14/2022	03/24/2023
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	04/06/2023	04/13/2023	04/19/2023
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	01/06/2023	02/02/2023	02/10/2023
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/20/2023	02/21/2023	05/02/2023
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	03/13/2023	03/21/2023	05/30/2023
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	01/06/2023	02/02/2023	02/10/2023
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/20/2023	02/21/2023	05/02/2023
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/02/2023	02/22/2023	05/17/2023
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	01/07/2022	02/24/2023	05/17/2023
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	11/09/2021	10/20/2022	01/10/2023

<u>St</u>	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	11/16/2022	11/16/2022	02/06/2023
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	10/29/2021	01/19/2022
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
US	Topographic Map	,	U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line D	Data	Endeavor Business Media			

### STREET AND ADDRESS INFORMATION

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### **GEOCHECK®-PHYSICAL SETTING SOURCE ADDENDUM**

#### **TARGET PROPERTY ADDRESS**

USDA ARDOYNE FARM SUGARCANE RESEARCH UNIT 501 BULL RUN ROAD HOUMA, LA 70360

### **TARGET PROPERTY COORDINATES**

Latitude (North): 29.635785 - 29° 38' 8.83" Longitude (West): 90.841981 - 90° 50' 31.13"

Universal Tranverse Mercator: Zone 15 UTM X (Meters): 708921.4 UTM Y (Meters): 3280196.0

Elevation: 6 ft. above sea level

#### **USGS TOPOGRAPHIC MAP**

Target Property Map: 16395285 GRAY, LA

Version Date: 2020

South Map: 16395291 HUMPHREYS, LA

Version Date: 2020

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

- 1. Groundwater flow direction, and
- 2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

### **GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

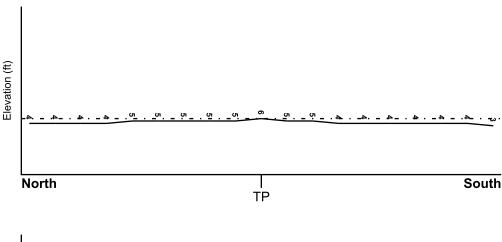
### **TOPOGRAPHIC INFORMATION**

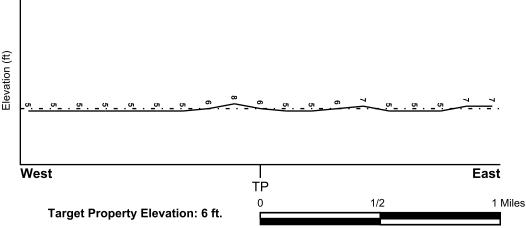
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

#### TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General East

#### SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

### HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

#### **FEMA FLOOD ZONE**

Flood Plain Panel at Target Property FEMA Source Type

2252060420C FEMA Q3 Flood data

Additional Panels in search area: FEMA Source Type

2252060440C FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property Data Coverage

GRAY YES - refer to the Overview Map and Detail Map

#### HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### Site-Specific Hydrogeological Data\*:

Search Radius: 1.25 miles Status: Not found

#### **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

LOCATION GENERAL DIRECTION

MAP ID FROM TP GROUNDWATER FLOW

Not Reported

### **GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

### **GEOLOGIC AGE IDENTIFICATION**

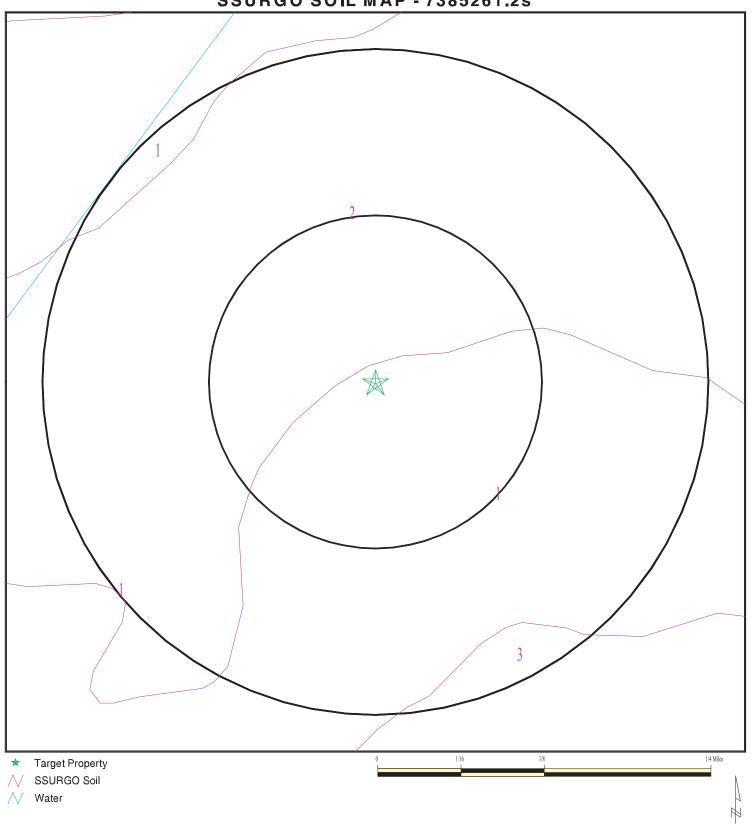
Era: Cenozoic Category: Stratifed Sequence

System: Quaternary Series: Holocene

Code: Qh (decoded above as Era, System & Series)

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### **SSURGO SOIL MAP - 7385261.2s**



SITE NAME: USDA Ardoyne Farm Sugarcane Research Unit ADDRESS: 501 Bull Run Road Houma LA 70360 LAT/LONG: 29.635785 / 90.841981

CLIENT: T. Baker Smith, LLC CONTACT: Samantha Ordoyne INQUIRY #: 7385261.2s

DATE: July 10, 2023 1:21 pm

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: CANCIENNE

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 84 inches

			Soil Laye	r Information			
	Bou	ındary		Classi	fication	Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 1.41	Max: 8.4 Min: 6.6
2	7 inches	22 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 1.41	Max: 8.4 Min: 6.6
3	22 inches	75 inches	sr to very fine sandy loam to silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 1.41	Max: 8.4 Min: 6.6

Soil Map ID: 2

Soil Component Name: CANCIENNE

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 84 inches

			Soil Laye	r Information			
	Boundary			Classi	fication	Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 1.41	Max: 8.4 Min: 6.6
2	3 inches	44 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 1.41	Max: 8.4 Min: 6.6
3	44 inches	79 inches	sr to very fine sandy loam to silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 1.41	Max: 8.4 Min: 6.6

Soil Map ID: 3

Soil Component Name: SCHRIEVER

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high

water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information									
Layer	Boundary			Classification		Saturated hydraulic			
	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec			
1	0 inches	5 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.41 Min: 0.42	Max: 8.4 Min: 6.6		
2	5 inches	61 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.41 Min: 0.42	Max: 8.4 Min: 6.6		
3	61 inches	79 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.41 Min: 0.42	Max: 8.4 Min: 6.6		

### LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

### WELL SEARCH DISTANCE INFORMATION

DATABASE SEARCH DISTANCE (miles)

Federal USGS 1.000

Federal FRDS PWS Nearest PWS within 1 mile

State Database 1.000

FEDERAL USGS WELL INFORMATION

MAP ID WELL ID LOCATION FROM TP

### FEDERAL USGS WELL INFORMATION

MAP ID WELL ID LOCATION FROM TP

No Wells Found

### FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID WELL ID FROM TP

No PWS System Found

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

MAP ID WELL ID FROM TP

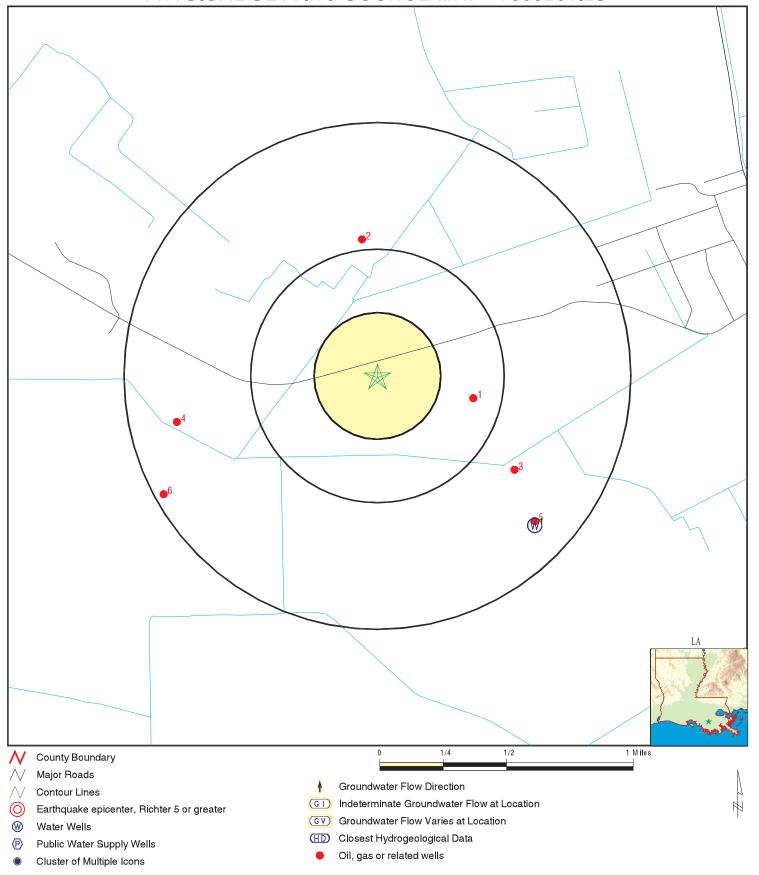
1 LATD60000136134 1/2 - 1 Mile SE

### **OTHER STATE DATABASE INFORMATION**

### STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	LAOG13000127454	1/4 - 1/2 Mile ESE
2	LAOG13000162248	1/2 - 1 Mile North
3	LAOG13000145486	1/2 - 1 Mile SE
4	LAOG13000099470	1/2 - 1 Mile WSW
5	LAOG13000231670	1/2 - 1 Mile SE
6	LAOG13000025463	1/2 - 1 Mile WSW

### PHYSICAL SETTING SOURCE MAP - 7385261.2s



### No contour lines were detected within this map area.

CLIENT: CONTACT: SITE NAME: USDA Ardoyne Farm Sugarcane Research Unit T. Baker Smith, LLC ADDRESS: 501 Bull Run Road Samantha Ordovne Houma LA 70360 INQUIRY#: 7385261.2s LAT/LONG: 29.635785 / 90.841981

July 10, 2023 1:21 pm DATE:

### **GEOCHECK®-PHYSICAL SETTING SOURCE MAP FINDINGS**

Map ID Direction Distance Elevation		Database	EDR ID Number
1 ESE 1/4 - 1/2 Mile	Click here for full text details	OIL_GAS	LAOG13000127454
2 North 1/2 - 1 Mile	Click here for full text details	OIL_GAS	LAOG13000162248
3 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	LAOG13000145486
4 WSW 1/2 - 1 Mile	Click here for full text details	OIL_GAS	LAOG13000099470
5 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	LAOG13000231670
6 WSW 1/2 - 1 Mile	Click here for full text details	OIL_GAS	LAOG13000025463
1 SE 1/2 - 1 Mile Lower	Click here for full text details	LA WELLS	LATD60000136134

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

### AREA RADON INFORMATION

State Database: LA Radon

Radon Test Results

Parish Avg pCi/L Total Sites

TERREBONNE 0.40286 35

Federal EPA Radon Zone for TERREBONNE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 70360

Number of sites tested: 7

Area Average Activity % <4 pCi/L % 4-20 pCi/L % >20 pCi/L

Living Area - 1st Floor 0.543 pCi/L 100% 0% 0%

Living Area - 2nd Floor Not Reported Not Rep

### PHYSICAL SETTING SOURCE RECORDS SEARCHED

#### **TOPOGRAPHIC INFORMATION**

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

#### **HYDROLOGIC INFORMATION**

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

### HYDROGEOLOGIC INFORMATION

AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

### **GEOLOGIC INFORMATION**

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

### PHYSICAL SETTING SOURCE RECORDS SEARCHED

#### **LOCAL / REGIONAL WATER AGENCY RECORDS**

#### FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

#### STATE RECORDS

Louisiana Public Water Supply Wells Source: Office of Public Health Telephone: 504-568-5101

Water Well Registration Data File

Source: Department of Transportation and Development

Telephone: 225-274-4172

### OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database

Source: Department of Natural Resources

Telephone: 225-342-1977

Oil and gas well locations in Louisiana.

#### **RADON**

State Database: LA Radon

Source: Department of Environmenal Quality

Telephone: 225-925-1752

Radon Levels

Area Radon Information Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency

(USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

**EPA Radon Zones** 

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor

radon levels.

### PHYSICAL SETTING SOURCE RECORDS SEARCHED

### OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared

in 1975 by the United State Geological Survey

### STREET AND ADDRESS INFORMATION

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USDA Ardoyne Farm Sugarcane Research Unit 501 Bull Run Road Houma, LA 70360

Inquiry Number: 7385261.3

July 10, 2023

# **Certified Sanborn® Map Report**



### **Certified Sanborn® Map Report**

07/10/23

Site Name: Client Name:

USDA Ardoyne Farm Sugarcar

T. Baker Smith, LLC

501 Bull Run Road

PO Box 2266

Houma, LA 70360

Houma, LA 70361

EDR Inquiry # 7385261.3 Contact: Samantha Ordoyne



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by T. Baker Smith, LLC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

#### Certified Sanborn Results:

Certification # 8300-4D34-94AA

PO# NA

**Project** 2023.0013

#### **UNMAPPED PROPERTY**

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: 8300-4D34-94AA

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

✓ Library of Congress

University Publications of America

EDR Private Collection

The Sanborn Library LLC Since 1866™

#### **Limited Permission To Make Copies**

T. Baker Smith, LLC (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

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### **USDA ARDOYNE FARM SUGARCANE RESEARCH UNIT** 501 BULL RUN ROAD HOUMA, LA 70395

**Inquiry Number: 7385261.7S** JULY 10, 2023

# **EDR Environmental Lien and AUL Search**



The EDR Environmental Lien Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, parish clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

### Thank you for your business.

Please contact EDR at 1-800-352-0050 with any questions or comments.

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#### **TARGET PROPERTY INFORMATION**

#### **ADDRESS**

USDA ARDOYNE FARM SUGARCANE RESEARCH UNIT 501 BULL RUN ROAD HOUMA, LA 70395

### **RESEARCH SOURCE**

JUDICIAL RECORDS **NOT** SEARCHED. BASED ON AVAILABLE INFORMATION EVALUATED BY THE TITLE SEARCH PROFESSIONAL, THE JURISDICTION **DOES NOT** REQUIRE A SEARCH OF JUDICIAL RECORDS IN ORDER TO IDENTIFY ENVIRONMENTAL LIENS.

Source 1: TERREBONNE PARISH RECORDER'S OFFICE

Source 2: LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Source 3: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### **PROPERTY INFORMATION**

Legal Description: A TRACT ON BULL RUN ROAD AS SHOWN ON "PRUDENTIAL SOUTHDOWN

PARTNERSHIP PROPOSED 150 ACRE SALE TO THE USDA, LOCATED IN SECTIONS 40 &

41, T16S - R16E & SECTION 70, T17S - R16E."

Current Owner: AMERICAN SUGAR CANE LEAGUE FOUNDATION

Property Identifiers: 41787

A-02-41787

Comments: NA

Deed 1

Type of Deed: QUIT CLAIM DEED

Title is vested in: AMERICAN SUGAR CANE LEAGUE FOUNDATION

Title received from: UNITED STATES OF AMERICA

 Date Executed:
 09/19/2005

 Date Recorded:
 10/10/2005

 Book:
 1937

 Page:
 830

 Volume:
 NA

 Instrument#:
 1221063

 Docket:
 NA

Land Record Comments: AUL FOUND ON DEED. SEE ATTACHED DEED COPY RECORDED ON 10/10/2005

Miscellaneous Comments: NA

<u>ENVIRONMENTAL LIE</u>	<u> </u>			
Environmental Lien:	Found		Not Found	X
Comments:	NONE IDE	NTIFIED.		

### **OTHER ACTIVITY AND USE LIMITATIONS (AULS)**

Other AUL's: Found X Not Found If Found:

1st Party: UNITED STATES OF AMERICA

2<sup>nd</sup> Party: AMERICAN SUGAR CANE LEAGUE FOUNDATION

 Dated:
 09/19/2005

 Recorded:
 10/10/2005

 Book:
 1937

 Page:
 830

 Docket:
 NA

 Volume:
 NA

 Instrument #:
 1221063

Instrument Type: QUIT CLAIM DEED

Comments: FOR ADDITIONAL AUL DETAILS SEE ATTACHED DEED COPY RECORDED 10/10/2005

Miscellaneous: NA

### **MISCELLANEOUS**

Type of Instrument: LEASE

First Party: AMERICAN SUGAR CANE LEAUGE FOUNDATION

Second Party: U.S. DEPARTMENT OF AGRICULTURE

Date Executed: 10/07/2005

Date Recorded: 01/30/2006

Instrument #: NA

 Instrument #:
 NA

 Book:
 1953

 Page:
 433

Comments:

Type of Instrument: LEASE

First Party: AMERICAN SUGAR CANE LEAUGE FOUNDATION

Second Party: AGRICULTURAL RESEARCH SERVICE

 Date Executed:
 10/07/2005

 Date Recorded:
 12/12/2005

 Instrument #:
 1225533

 Book:
 1946

 Page:
 807

Comments:

# **MISCELLANEOUS EXHIBIT**

### **USDAArdoyne Farm Sugarcane Research Unit**

501 Bull Run Road Houma, LA 70360

Inquiry Number: 7385261.5

July 12, 2023

# **The EDR-City Directory Image Report**



### **TABLE OF CONTENTS**

### **SECTION**

**Executive Summary** 

**Findings** 

**City Directory Images** 

Thank you for your business.

Please contact EDR at 1-800-352-0050 with any questions or comments.

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### **EXECUTIVE SUMMARY**

### **DESCRIPTION**

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

### **RECORD SOURCES**

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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### RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

<u>Year</u>	Target Street	Cross Street	<u>Source</u>
2020	$\overline{\checkmark}$		EDR Digital Archive
2017	$\overline{\checkmark}$		ColeInformation
2014	$\checkmark$		ColeInformation
2010	$\overline{\checkmark}$		ColeInformation
2005	$\checkmark$		ColeInformation
2000	$\overline{\checkmark}$		ColeInformation
1995	$\overline{\checkmark}$		Cole Information
1992	$\overline{\checkmark}$		Cole Information
1990			POLK DIRECTORY CO
1985			POLK DIRECTORY CO
1980			POLK DIRECTORY CO
1975			POLK DIRECTORY CO
1971			POLK DIRECTORY CO
1966			POLK DIRECTORY CO

### **FINDINGS**

### TARGET PROPERTY STREET

501 Bull Run Road Houma, LA 70360

<u>Year</u>	<u>CD Image</u>	<u>Source</u>	
BULL RU	N RD		
2020	pg A1	EDR Digital Archive	
2017	pg A2	ColeInformation	
2014	pg A3	Cole Information	
2010	pg A4	ColeInformation	
2005	pg A5	ColeInformation	
2000	pg A6	Cole Information	
1995	pg A7	ColeInformation	
1992	pg A8	ColeInformation	
1990	-	POLK DIRECTORY CO	Street not listed in Source
1985	-	POLK DIRECTORY CO	Street not listed in Source
1980	-	POLK DIRECTORY CO	Street not listed in Source
1975	-	POLK DIRECTORY CO	Street not listed in Source
1971	-	POLK DIRECTORY CO	Street not listed in Source
1966	-	POLK DIRECTORY CO	Street not listed in Source

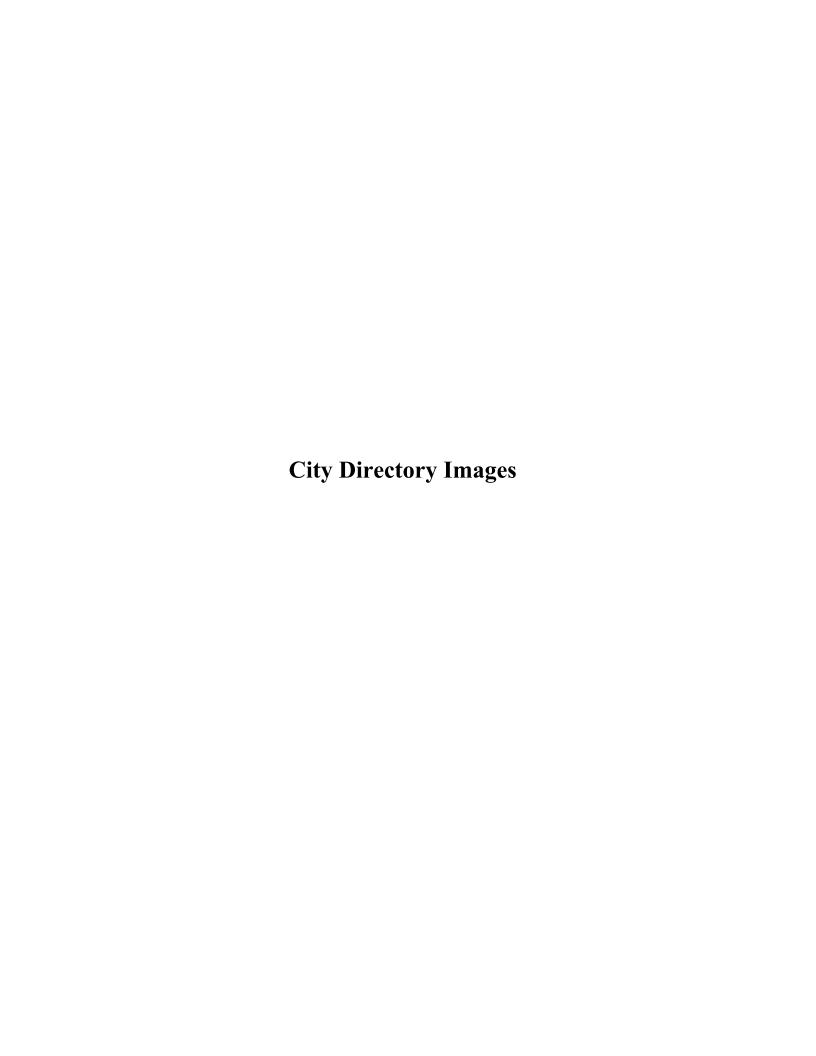
7385261-5 Page 2

### **FINDINGS**

### **CROSS STREETS**

No Cross Streets Identified

7385261-5 Page 3



Target Street Cross Street Source

- EDR Digital Archive

### BULL RUN RD 2020

212 AMY DONALDSON MORGAN DONALDSON NORMA DONALDSON RAE DONALDSON RICHARD DONALDSON 594 **LOUIS RUSSO RICKY ROGERS** 794 FLETCHER WALLACE JOHN GUIDRY

	DOLL KON KD 2011
212 501 594 600 700	DONALDSON, RICHARD R UNITED STATES GOVERNMENT RUSSO, JOHN P ASSISI BRIDGE HOUSE NAQUIN, LINDA

	DOLL NOW NO ZOTT
040	DONAL DOON, DIGUADD D
212 594	DONALDSON, RICHARD R RUSSO, DAVID P
595	RUSSO, LOUIS
600	ASSISI BRIDGE HOUSE
700	NAQUIN, LINDA

	BULL KUN KU	2010	
212 501 594 600	DONALDSON, RICHARD R US AGRICULTURAL DEPT ROGERS, RICKY R ASSISI BRIDGE HOUSE		
700	NAQUIN, LINDA		

201 501 594 600	OCCUPANT UNKNOWN, US SUGARCANE RESEARCH UNIT RUSSO, LOUIS J ASSISI BRIDGE HO
700	DIAZ, REUBEN

	BULL RUN RD 2000
201 501 600 700	REEVES, ROBERT H UNITED STATES GOVERNMENT AGRICULTURE DEPARTMENT OF ASSISI BRIDGE HOUSE BROWN, DWAYNE

	DOLL KON KD	1999
501 594	US AGRICULTURE DEPT ROGERS, RICKY	
600 700	ASSISI BRIDGE HOUSE PUCKETT, DON	

12: 13:	32 02	LEBLANC, RESONIE BROWN, JAMES C



mi Relative Scale: 1 inch = 817 feet

Disclaimer: This data is not to be used for legal purposes.



# **Appendix 5:**

**Soil Survey Maps & Soil Descriptions** 



#### 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



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.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale

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: Terrebonne Parish, Louisiana Survey Area Data: Version 18, Sep 8, 2022

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

Date(s) aerial images were photographed: Jan 13, 2021—Mar 6, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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
CbA	Cancienne silt loam, 0 to 1 percent slopes	0.6	25.2%
CdA	Cancienne silty clay loam, 0 to 1 percent slopes	1.8	74.8%
Totals for Area of Interest	1	2.5	100.0%

# **Appendix 6:**

**Regulatory Agency Correspondence** 

### Samantha Ordoyne

From: Tad Loupe <Tad.Loupe@LA.GOV>
Sent: Thursday, July 13, 2023 9:33 AM

**To:** Samantha Ordoyne

**Subject:** RE: Property Info Inquiry-501 Bull Run Rd Schriever, USDA facility

Hey Sam,

We have an AI 178464 for the US Department of Agriculture at 501 Bull Run Rd. We are not aware of any outstanding issues at this time. There were enforcement actions in 2017 but seem to have been addressed.

From: Samantha Ordoyne <Samantha.Ordoyne@tbsmith.com>

**Sent:** Thursday, July 13, 2023 8:31 AM **To:** Tad Loupe <Tad.Loupe@LA.GOV>

Subject: Property Info Inquiry-501 Bull Run Rd Schriever, USDA facility

**EXTERNAL EMAIL:** Please do not click on links or attachments unless you know the content is safe.

### Morning Tad,

I am conducting a Phase I ESA on the property located at 501 Bull Run Road in Schriever (See attached map).

I am reaching out to you as part of the due diligence process to learn if you or your department have any knowledge or awareness of any releases, complaints, waste fires, enforcement actions, USTs, etc. at the Subject Property that may be valuable to my assessment.

Your help is appreciated! Thanks,

Sam



Samantha Ordoyne
Environmental Professional
T. Baker Smith, LLC
<;815561<5;6##\$1hfw
<;81;3613;<;##P relb
Vdp dqwkdR ugr | qhC vevp lwk1frp #
z z z lwevp lwk1frp #

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### Samantha Ordoyne

From: Benjamin Walker <bwalker@tpcg.org>
Sent: Thursday, July 13, 2023 3:58 PM

**To:** Samantha Ordoyne

**Subject:** Re: Property Info Request\_501 Bull Run Rd Schriever, LA

Good afternoon Samantha,

There have been no releases at that address regarding hazmat since I have been in this job.

Thanks and have a great day,

Benjamin Walker

**Assistant Director** 

Terrebonne Parish Office of Homeland Security and Emergency Preparedness

101 Government Street, Gray LA 70359

Email: <a href="mailto:bwalker@tpcg.org">bwalker@tpcg.org</a>
Cell: 985-232-9988

Direct: 985-655-9314

Main: 985-873-6357

Fax: 985-850-4643

From: Samantha Ordoyne <Samantha.Ordoyne@tbsmith.com>

**Date:** Thursday, July 13, 2023 at 8:29 AM **To:** Benjamin Walker < bwalker@tpcg.org>

Subject: Property Info Request 501 Bull Run Rd Schriever, LA

### **External Sender**

This email is from a sender outside of Terrebonne Parish Consolidated Government's email system. **DO NOT** click on any links, open any attachments, or reply unless you trust the sender and know the content is safe. If you are unsure or have questions, please contact Information Technology for assistance.

Good Morning Ben,

I am conducting a Phase I ESA on the property located at 501 Bull Run Road in Schriever (See attached map).

I am reaching out to you as part of the due diligence process to learn if you or your department have any knowledge or awareness of any releases, complaints, waste fires, enforcement actions etc. at the Subject Property that may be valuable to my assessment.

Your help is appreciated,

Samantha



Samantha Ordoyne
Environmental Professional
T. Baker Smith, LLC
<;815561<5;6##31hfw
<;81;3613;<;##P relbn
Vdp dqwkdT ugr | qhC wevp lwk1frp #
z z z lwevp lwk1frp #

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Owner Interview Form & User Questionnaire

### Phase I Environmental Site Assessment User Questionnaire

Client/User of Phase I ESA:

Subject Property: 501 Bull Run Road

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

	NO YES If yes, please describe:
2.	Are you aware of any activity and use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state or local laws?
	NO TYES If yes, please describe:
3.	As the user of this Phase I Environmental Site Assessment, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?  NO XYES If yes, please describe:  Sugurante forming to
4.	Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property.
	☐ NO ☐ YES If yes, please describe:
	N/A Property owned by american Sugar Come League in Thibolaux, LA for at least 20 years

			-	please desc		vgared	ne pi	oduct	im at	-l
o. Do	•			ic chemica						-
NO NO	otici igas	YES Des	If yes,	please descri	ribe: H	Chem	des	fungic	ides fo	7
. Do	V			or other						the
X NC	) [	YES	If yes,	please descr	ribe:					
l. Do	you kno	ow of	any envi	ironmental	cleanups	that have	taken p	lace at the	propert	y?
NC NC	) [	YES	If yes, 1	please descr	ribe:					
nd ex	perienc	e relat	ted to th	Environme e property of contami	are there	any obvi	ous indic	d on your	knowle point to	dge the
NO NO	) [	YES	If yes, j	please desci	ribe:					=
	s for Dh	ase I l	Environ	mental Site	Assessm	ent: No	ew l	oustr	uction	n ·

9. Do you agree with the scope of servi Services"? Yes NO If no, p.	ices in the "Letter Agreement for Professional lease describe:
on whether any considerations beyond	ction have a required standard scope of services the requirements of ASTM Practice 1527-05 are d delineation, sampling and/or compliance with
☐ NO ☐ YES If yes, please descri	ibe: N/A
11. Identification of all parties who will rel report: T. Baker Smith, L USDA-ARS Sugarcane	y on the Phase I Environmental Site Assessment  LC; American Sugar Care Leag  Research Writ; Merchick
12. Property Contact Person: Paul U Contact Address: USOA-ARS 58 Telephone Number: 985-872 Cell Phone Number: 985-772	383 USDA Koad, Howna, LA 7030
3. Any special terms or conditions whice professional?   NO YES If you	th must be agreed upon by the environmental es, please describe:
environmental professional (for examp	with the property that may be pertinent to the ole, copies of any available prior environmental respondence, etc.), concerning the property and
NO YES If yes, please descri	be:
Pay White	best of my ability, in good faith to the extent of  Besearch Leader
Paul White	Title
Print Name	



	ase i ESA Questionnaire indowner / Occupant Interview)	
Pro	ject Name: <b>501 Bull Run Road</b>	
Per	son Interviewed <u>: Dr. Paul White</u>	
Dat	re: 7/31/2023	
1.	Is or has the property or adjoining property ever beel  Gasoline station  Motor repair facility  Chemical manufacturing plant  Petroleum deliver/storage facility  Commercial printing facility  Dry cleaners  Photo developing laboratory  Junkyard/landfill  Waste treatment/storage/disposal	n used as:  Y/N  Y/N  Y/N  Y/N  Y/N  Y/N  Y/N  Y/
2.	Any damaged or discarded automotive batteries, pes containers above 5 gallons or 50 gallons in aggregate	-
3.	Any hazardous substances or petroleum products, was waste materials ever buried, burned or dumped on p	
4.	Any industrial drums or sacks of chemically laden ma located in controlled-access pesticide storage building	

5. Any transformers, capacitors, or hydraulic equipment or equipment with PCB's? No.

6.	Any fill dirt brought in from a contaminated site or site of unknown origin? <b>No.</b>
7.	Any pits, ponds, lagoons used for waste treatment or disposal on site? We have a pit in the back of the farm that collects drainage from our sugarcane juice lab each year during harvest.
8.	Any knowledge of current or past stained soil existing on property? Any major spills of potential pollutants (fuel, oils, waste, etc.)? <b>No.</b>
9.	Any flooring, drains, or walls that are stained by substances other than water or emitting foul odors? <b>Yes, drains leading from juice lab. The juice can at times ferment producing foul odors.</b>
10.	Any above or underground tanks (registered or unregistered) existing on the property currently or in the past? Yes one gasoline and one diesel aboveground storage tank located outside the farm shop.
11.	Any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground that might indicate presence of underground tanks? <b>No</b>
12.	Does property discharge wastewater on or adjacent to the subject property other than storm water into a storm sewer or sanitary sewer system? <b>Yes</b>
13.	Any knowledge of contaminated waterwells on property? <b>No</b>
14.	Any knowledge of oil and gas pipelines and/or wells ever on the property? <b>No</b>

	ledge of environmental liens, violations of environmental laws, nding environmental related lawsuits? <b>No</b>
	ental assessments (Phase I / Phase II) conducted on the property? If so, intal issues found? If so, can I get a copy of report(s)? <b>No issues reported n or construction.</b>
17. Does the property h	ave activity and use limitations (AUL's) <b>No</b>
	y environmental cleanup liens against the property that are filed or real, tribal, state, or local law? <b>No</b>
Additional Comments: <b>N/A</b>	

**Appendix 8:** 

**Aerial Photographs** 

# **USDA Ardoyne Farm Sugarcane Research Unit**

501 Bull Run Road Houma, LA 70360

Inquiry Number: 7385261.11

July 11, 2023

# The EDR Aerial Photo Decade Package



## **EDR Aerial Photo Decade Package**

07/11/23

Site Name: Client Name:

USDA Ardoyne Farm Sugarcar
501 Bull Run Road
Houma, LA 70360
T. Baker Smith, LLC
PO Box 2266
Houma, LA 70361

EDR Inquiry # 7385261.11 Contact: Samantha Ordoyne



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

#### Search Results:

Year	Scale	Details	Source
	<del></del>	<del></del>	<del></del>
2019	1"=500'	Flight Year: 2019	USDA/NAIP
2015	1"=500'	Flight Year: 2015	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2007	1"=500'	Flight Year: 2007	USDA/NAIP
2004	1"=500'	Acquisition Date: January 01, 2004	USGS/DOQQ
1998	1"=500'	Acquisition Date: January 01, 1998	USGS/DOQQ
1989	1"=500'	Acquisition Date: January 01, 1989	USGS/DOQQ
1983	1"=500'	Flight Date: November 29, 1983	USDA
1972	1"=500'	Flight Date: March 17, 1972	USGS
1970	1"=500'	Flight Date: October 31, 1970	USGS

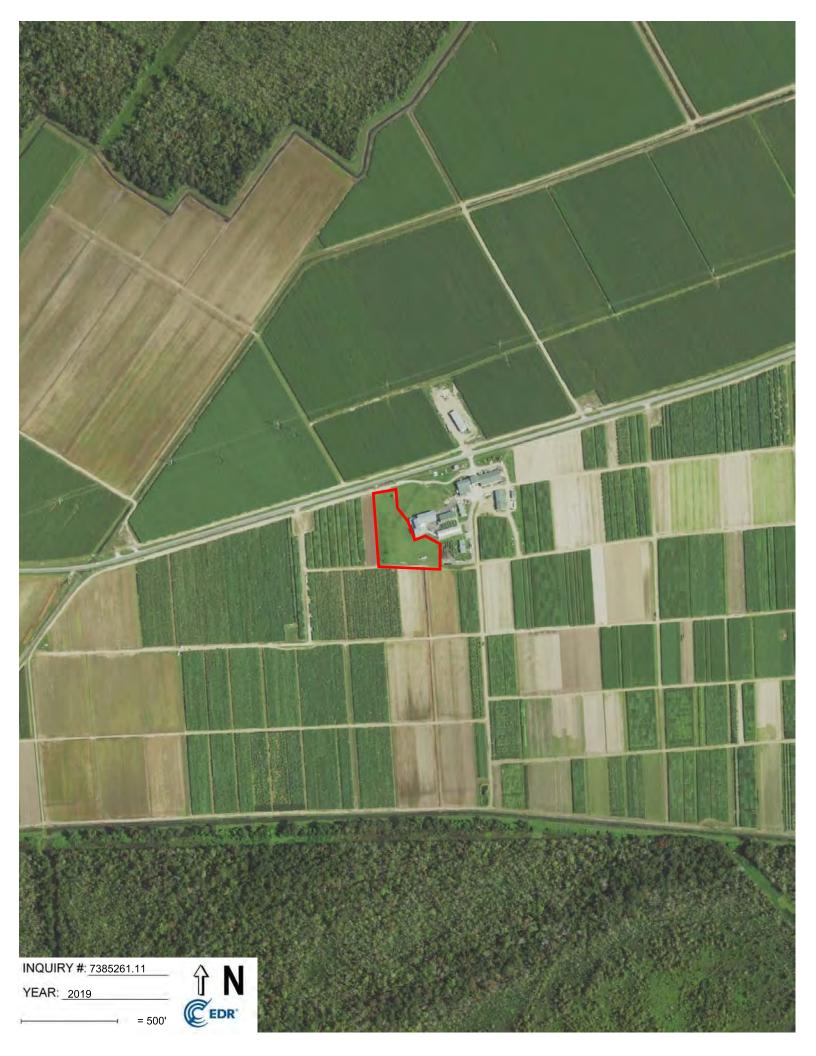
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

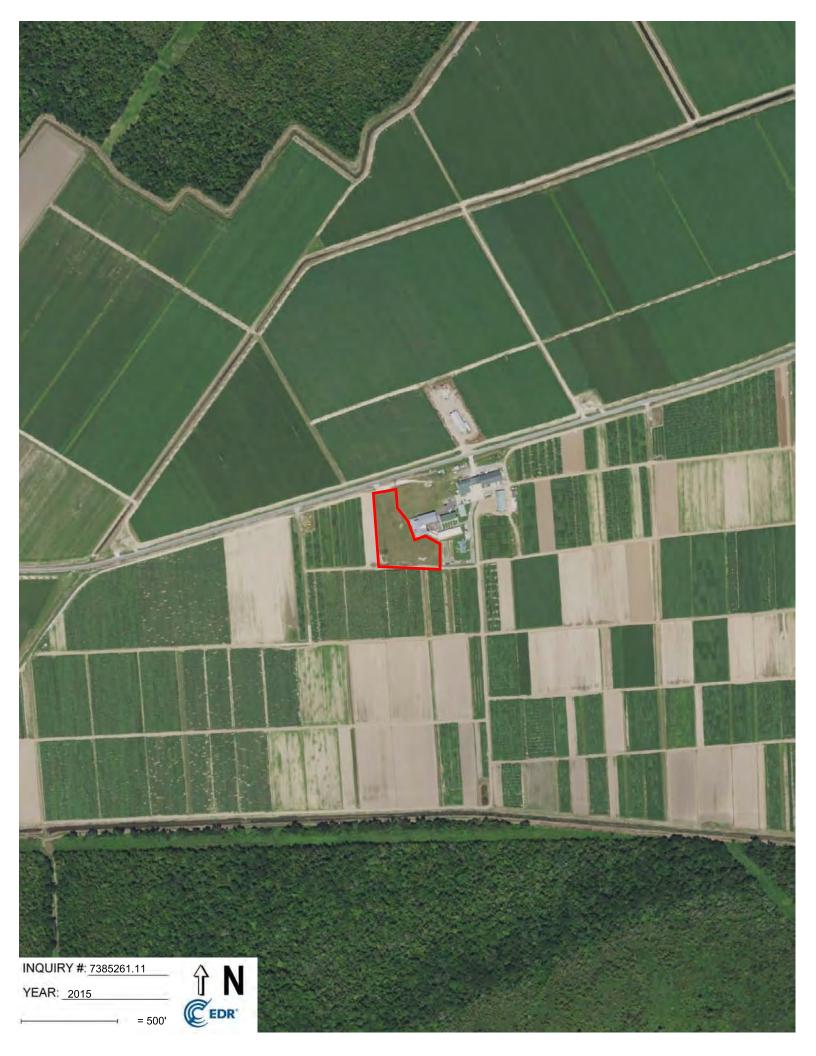
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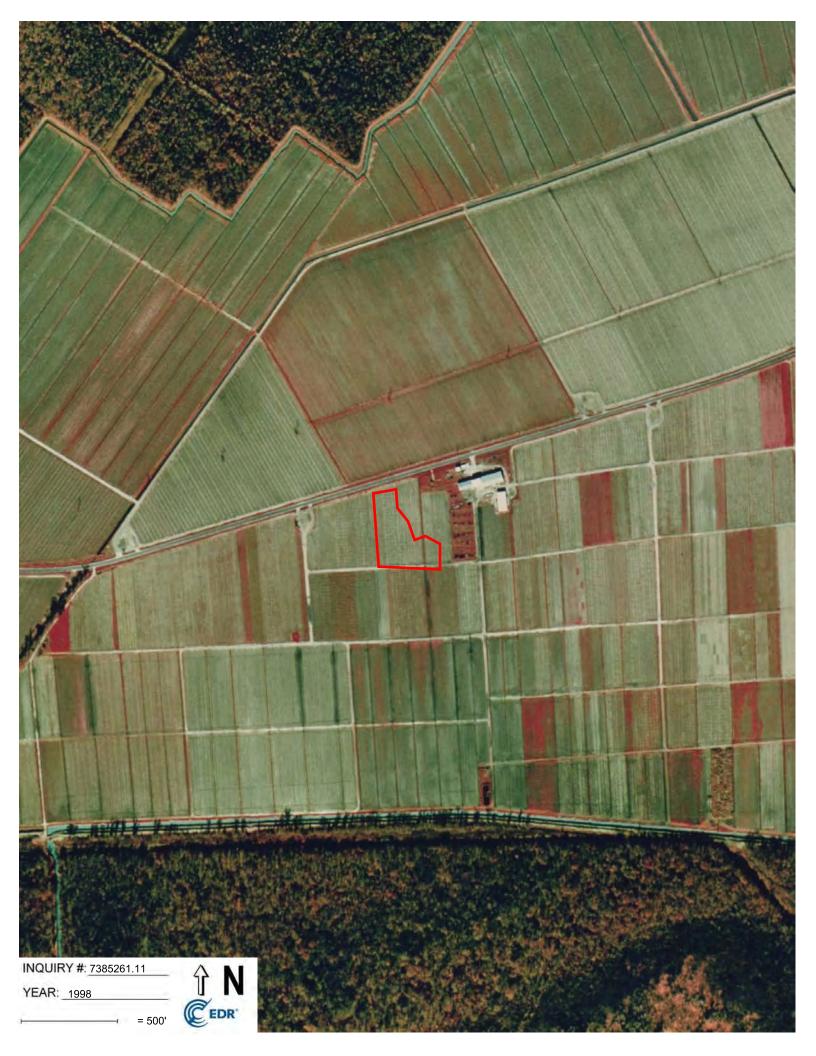


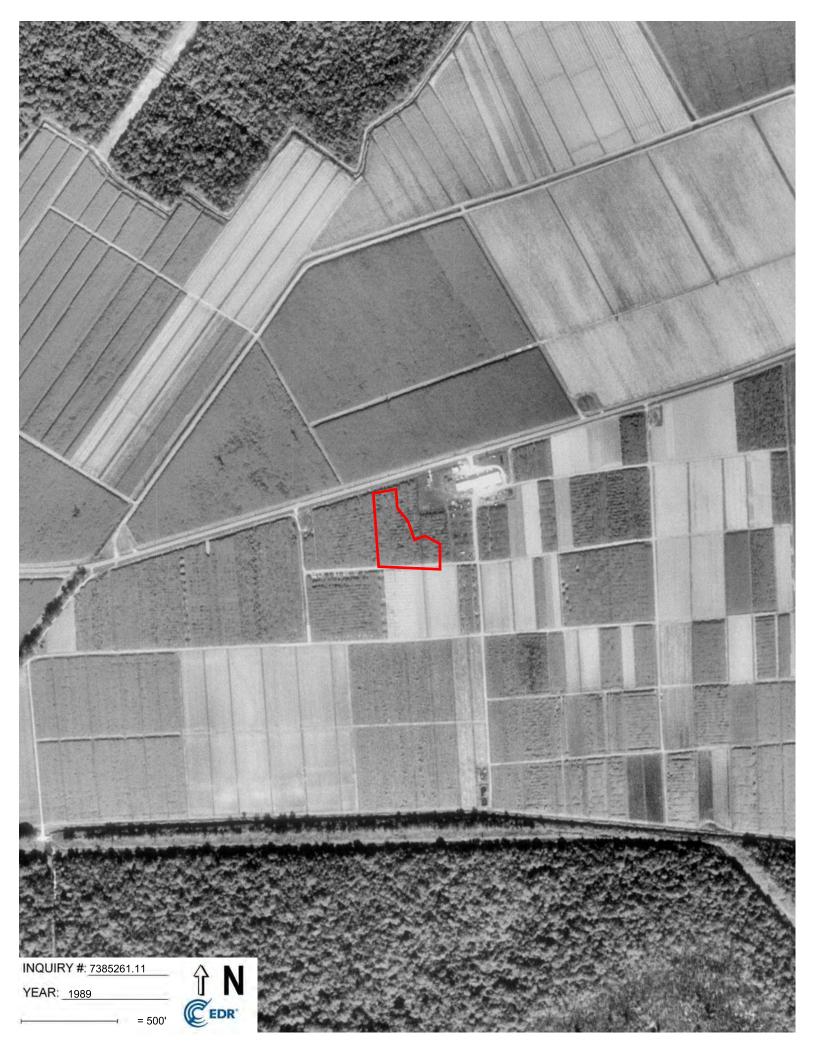


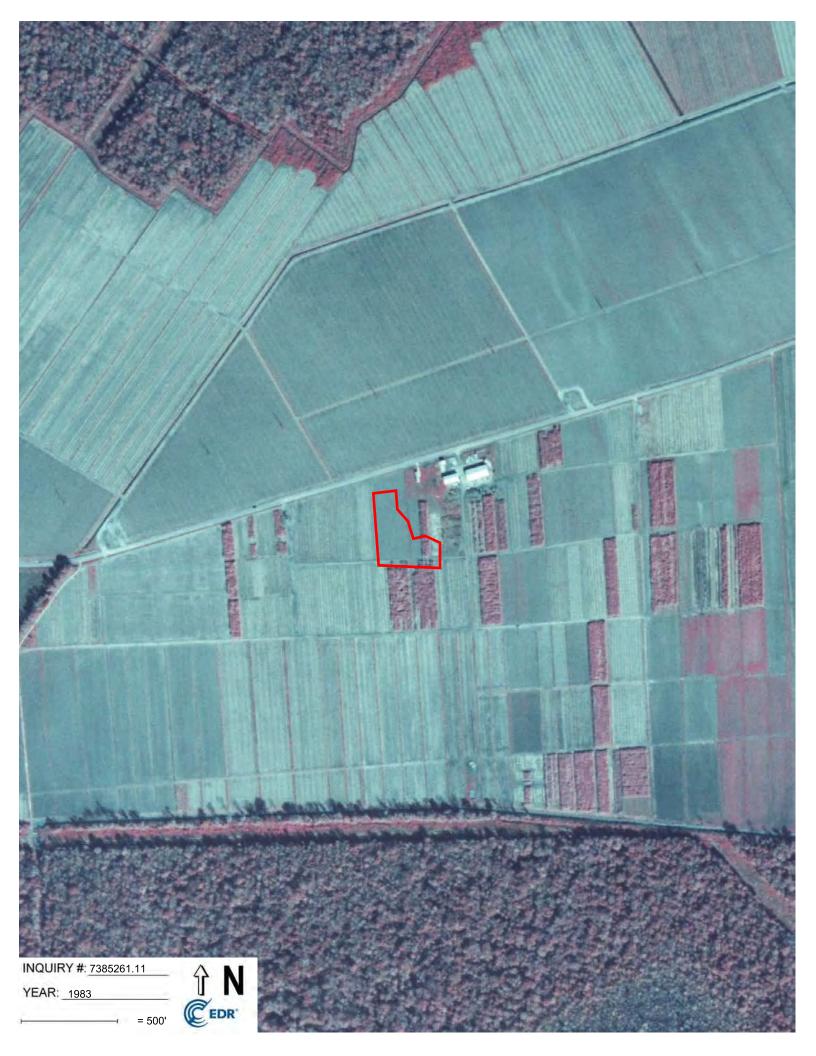




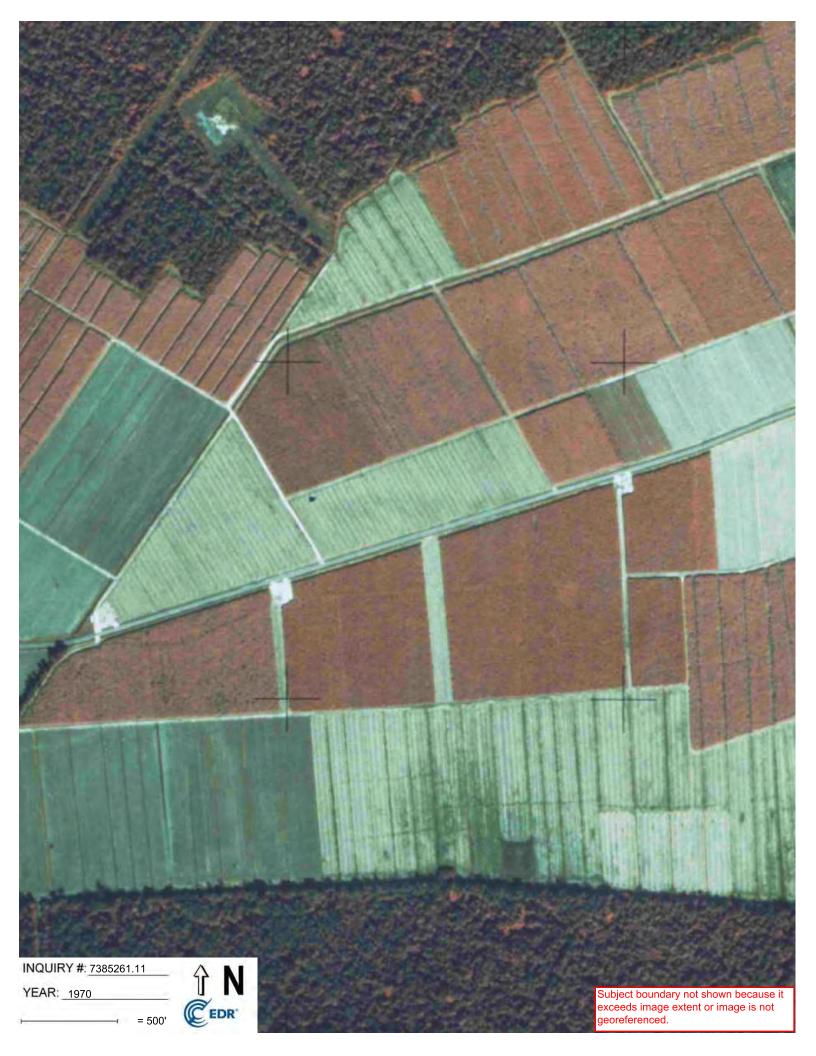












**Appendix 9:** 

**Personnel Qualifications** 

# CY J. Toups, P.E.

### **ENVIRONMENTAL ENGINEER**



#### Education

Bachelor of Science, Environmental Engineering, Louisiana State University, 2002

**Years of Experience at T. Baker Smith:** 17 years **In the Environmental Consulting Field:** 20 years

## **Training and Certifications**

 Registered Professional Environmental Engineer in The State of Louisiana, (#33966)

#### **Professional Qualifications**

Mr. Toups is a senior project manager at T. Baker Smith, LLC with 11 years of experience as a consulting environmental engineer. His focus is primarily in regulatory compliance. Most of his project experience has involved assisting clients by evaluating property for recognized environmental conditions in order to facilitate the sale or lease of the property. Mr. Toups has also gained knowledge in generating plans for oilfield facilities and construction sites that conform to state and federal regulations set forth by regulatory agencies, such as the United States Coast Guard (USCG), the Louisiana Department of Environmental Quality (LDEQ), the Environmental Protection Agency (EPA), and the Louisiana Department of Transportation and Development (DOTD). Mr. Toups has prepared numerous written plans, such as Integrated Contingency Plans (ICP), Spill Prevention Control and Countermeasure Plans (SPCC), and Oil Transfer Manuals (OTM) for a variety of facilities. Mr. Toups has also prepared Storm Water Pollution Prevention Plans as required by LDEQ to provide best management practices for pollutants associated with stormwater run-off occurring during construction activity.

## **Project Experience**

- Performed Phase I and Phase II Environmental Site Assessments
- Evaluated properties through the LDEQ Risk Evaluation Corrective Action Plan (RECAP) protocol
- Preparation of NPDES Permit Applications and permit modifications and renewals
- Completion and submittal of Discharge Monitoring Reports (DMR) required by NPDES Permits
- Preparation and Implementation of Storm Water Pollution Prevention Plans (SWPPP) in accordance with the LPDES Multi-Sector General and Construction Storm Water Permits
- Preparation and Implementation of Spill Prevention Control & Countermeasure Plans (SPCC),
   Facility Response Plans (FRP), Integrated Contingency Plans (ICP), and Oil Transfer Manuals
- Regulatory Compliance Audits and Regulatory Enforcement Actions Assistance(EPA & LDEQ)
- Conducted NEPA Environmental Assessments for federally funded projects
- Prepared Minor Source Air Quality Permit Applications for both Oil & Gas and Painting & Blasting Facilities
- Performed design calculations and prepared engineering plans and specifications for mechanical sewer treatment plant systems and lift stations for subdivisions and commercial buildings
- Provided oversight to projects involving Wetland Delineations and coordinated with the U.S.
   Army Corps of Engineers for the purposes of obtaining Jurisdictional Determinations