CARTOGRAPHIC REGRESSION ANALYSIS OF CERTAIN TRACTS OF LAND LOCATED IN T. 11 S. AND 12 S., R. 15 E. (Southeastern Land District West of the Mississippi River), St. James Parish Louisiana

Coastal Environments, Inc. 1260 Main Street Baton Rouge, Louisiana 70802

Submitted to:

The Center for Constitutional Rights 666 Broadway, 7th. Floor New York, New York 10012

February 19, 2020

Acadia Plantation Cemetery Elina and Lauderdale Plantation Cemeteries Buena Vista Plantation Cemetery Othr Possible Cemeteries

CARTOGRAPHIC REGRESSION ANALYSIS OF CERTAIN TRACTS OF LAND LOCATED IN T. 11 S AND T. 12 S., R. 15 E. (SOUTHEASTERN LAND DISTRICT WEST OF THE MISSISSIPPI RIVER), ST. JAMES PARISH, LOUISIANA

ACADIA PLANTATION CEMETERY ELINA AND LAUDERDALE PLANTATION CEMETERIES BUENA VISTA PLANTATION CEMETERY OTHER POSSIBLE CEMETERIES

February 19, 2020

Coastal Environments, Inc. 1260 Main Street Baton Rouge, Louisiana. 70802

Submitted to:

The Center for Constitutional Rights 666 Broadway, 7th Floor New York, New York. 10012

TABLE OF CONTENTS

List of Figures	v
List of Tables	xi
Introduction	1
Documents and Repositories	3
Methodology	7
Part 1: Acadia Plantation Cemetery Introduction Historical Context Previous Cultural Resources Investigations Cartographic Regression Analysis Conclusions Recommendations	9 9 10 16 20 34
Part 2: Elina and Lauderdale Plantation Cemeteries Introduction Historical Context Elina Plantation Lauderdale Plantation Previous Research Cartographic Regression Analysis Conclusions Elina Plantation Cemetery Lauderdale Plantation Cemetery Recommendations Elina Plantation Cemetery Elina Plantation Cemetery Lauderdale Plantation Cemetery	 35 35 35 39 40 40 53 53 61 61 61
Part 3: Buena Vista Plantation Cemetery Introduction Historical Context Previous Research Cartographic Regression Analysis Conclusions Recommendations	63 63 66 69 87 87

Part 4: Other Possible Cemeteries	91
Introduction	91
The Anomalies	92
Identified Anomalies	111
Anomalies A, C, E, F, I, J, K, M	111
Unidentified Anomalies—Possible Cemeteries	111
Anomaly B	111
Anomaly D	112
Anomaly G	112
Anomaly H	112
Anomaly L	121
Conclusions	121
Recommendations	121
References	132
Appendix A: Research at the National Archives	131

LIST OF FIGURES

1-1.	Aerial photograph showing the locations of the first set of trenches excavated by TerraXplorations, Inc., in 2018 in an attempt to locate the Acadia Plantation Cemetery	12
1-2.	Site sketch map of the Acadia Cemetery site (Archaeological Site 16SJ118) attached to site form submitted by TerraXplorations, Inc., to the Louisiana Division of Archaeology showing the locations of the 2018 and 2019 investigations	13
1-3.	Aerial photograph showing the proposed locations of the second set of trenches excavated by TerraXplorations, Inc., in 2019 in an attempt to locate the Acadia Plantation Cemetery	14
1-4.	Aerial photograph showing the second set of trenches actually excavated by TerraXplorations, Inc., in 2019 in an attempt to locate the Acadia Plantation Cemetery	15
1-5.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville, LA</i> quadrangle showing the location and coverage of the detailed overlays relating to the Acadia Plantation Cemetery	17
1-6.	A portion of the 1878 U.S. Coast Survey manuscript map showing the Acadia Plantation Cemetery with a central cross	18
1-7.	A portion of the 1878 U.S. Coast Survey published map showing the Acadia Plantation Cemetery with a central cross	19
1 -8.	A portion of the 1894 Mississippi River Commission map showing the location of the Acadia Plantation Cemetery	21
1-9.	A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic showing the location of the Acadia Plantation Cemetery	22
1-10.	A portion of the 1947 U.S. Geological Survey <i>Donaldsonville</i> , <i>LA</i> quadrangle showing the location of the Acadia Plantation Cemetery	23
1-11.	A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic showing the location of the Acadia Plantation Cemetery	24

1-12.	A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic showing the location of the Acadia Plantation Cemetery	25
1 -13.	A portion of the 1961 U.S. Geological Survey Aerial Photograph showing the location of the Acadia Plantation Cemetery	26
1-14.	A portion of the 1971 U.S. Department of Agriculture Aerial Photograph showing the location of the Acadia Plantation Cemetery	27
1-15.	A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic showing the location of the Acadia Plantation Cemetery	28
1-16.	A portion of the 1998 Strategic Online Natural Resources (SONRIS) Aerial Photograph showing the location of the Acadia Plantation Cemetery	29
1-17.	A portion of the 2008 Strategic Online Natural Resources (SONRIS) Aerial Photograph showing the location of the Acadia Plantation Cemetery	30
1-18.	A portion of the 2013 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph showing the location of the Acadia Plantation Cemetery	31
1-19.	A portion of the 2016 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph showing the location of the Acadia Plantation Cemetery	32
1-20.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville</i> , <i>LA</i> quadrangle showing the location of the Acadia Plantation Cemetery	33
2-1.	A portion of the 1878 U.S. Coast Survey manuscript map showing the Lauderdale and Elina plantation anomalies	36
2-2.	A portion of the 1858 Norman's Chart of the Lower Mississippi River showing the Lauderdale, Bertaud Brothers, and Eloy Hebert plantations	38
2-3.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville</i> , <i>LA</i> quadrangle showing the location and coverage of the detailed overlays relating to the Elina and Lauderdale Plantation cemeteries	41
2-4.	A portion of the 1878 U.S. Coast Survey manuscript map showing the Lauderdale and Elina plantation anomalies	42

2-5.	A portion of the 1878 U.S. Coast Survey published map showing the locations of the Lauderdale and Elina plantation anomalies	44
2-6.	A portion of the 1894 Mississippi River Commission map showing the locations of the Lauderdale and Elina plantation anomalies	45
2-7.	A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic showing the locations of the Lauderdale and Elina plantation anomalies	46
2-8.	A portion of the 1947 U.S. Geological Survey <i>Donaldsonville</i> , <i>LA</i> quadrangle showing the locations of the Lauderdale and Elina plantation anomalies	47
2-9.	A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic showing the locations of the Lauderdale and Elina plantation anomalies	48
2-10.	A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic showing the locations of the Lauderdale and Elina plantation anomalies	49
2-11.	A portion of the 1961 U.S. Geological Survey Aerial Photograph showing the locations of the Lauderdale and Elina plantation anomalies	50
2-12.	A portion of the 1971 U.S. Department of Agriculture Aerial Photograph showing the locations of the Lauderdale and Elina plantation anomalies	51
2-13.	A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic showing the locations of the Lauderdale and Elina plantation anomalies	52
2-14.	A portion of the 1998 Strategic Online Natural Resources (SONRIS) Aerial Photograph showing the locations of the Lauderdale and Elina plantation anomalies	54
2-15.	A portion of the 2005 U.S. Geological Survey <i>Donaldsonville</i> , <i>LA</i> quadrangle showing the locations of the Lauderdale and Elina plantation anomalies	55
2-16.	A portion of the 2008 Strategic Online Natural Resources (SONRIS) Aerial Photograph showing the locations of the Lauderdale and Elina (plantation anomalies	56
2-17.	A portion of the 2013 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph showing the locations of the Lauderdale and Elina plantation anomalies	57
2-18.	A portion of the 2016 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph showing the locations of the Lauderdale and Elina plantation anomalies	58

Cartographic Regression Analysis

2-19.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville, LA</i> quadrangle showing the locations of the Lauderdale and Elina plantation anomalies	59
2-20.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville, LA</i> quadrangle showing the locations of the Lauderdale and Elina plantation anomalies	60
3-1.	Aerial photograph showing the proposed locations of trenches to be excavated at the Buena Vista Plantation Cemetery by TerraXplorations, Inc., in 2019	67
3-2.	Aerial photograph showing the locations of trenches actually excavated by TerraXplorations, Inc., at the Buena Vista Plantation Cemetery	68
3-3.	Photograph showing the flooded trenches being excavated by TerraXplorations, Inc., at the Buena Vista Plantation Cemetery in 2019	69
3-4.	A portion of the 2018 U.S. Geological Survey aerial photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville, LA</i> quadrangle showing the location and coverage of the detailed overlays relating to the Buena Vista Plantation Cemetery	71
3-5.	A portion of the 1878 U.S. Coast Survey manuscript map showing the Buena Vista Plantation Cemetery with a central cross	72
3-6.	A portion of the 1878 U.S. Coast Survey published map showing the Buena Vista Plantation Cemetery with a central cross	73
3-7.	A portion of the 1894 Mississippi River Commission map showing the location of the Buena Vista Plantation Cemetery	74
3-8.	A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic showing the location of the Buena Vista Plantation Cemetery	75
3-9.	A portion of the 1947 U.S. Geological Survey <i>Donaldsonville</i> , <i>LA</i> quadrangle showing the location of the Buena Vista Plantation Cemetery	76
3-10.	A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic showing the location of the Buena Vista Plantation Cemetery	77
3-11.	A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic showing the location of the Buena Vista Plantation Cemetery	78

3-12.	A portion of the 1961 U.S. Geological Survey Aerial Photograph showing the location of the Buena Vista Plantation Cemetery	79
3-13.	A portion of the 1971 U.S. Department of Agriculture Aerial Photograph showing the location of the Buena Vista Plantation Cemetery	80
3-14.	A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic showing the location of the Buena Vista Plantation Cemetery	81
3-15.	A portion of the 1998 Strategic Online Natural Resources (SONRIS) Aerial Photograph showing the location of the Buena Vista Plantation Cemetery	82
3-16.	A portion of the 2008 Strategic Online Natural Resources (SONRIS) Aerial Photograph showing the location of the Buena Vista Plantation Cemetery	83
3-17.	A portion of the 2013 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph showing the location of the Buena Vista Plantation Cemetery	84
3-18.	A portion of the 2016 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph showing the location of the Buena Vista Plantation Cemetery	85
3-19.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville, LA</i> quadrangle showing the location of the Buena Vista Plantation Cemetery	86
3-20.	Aerial photograph showing TerraXplorations' "newly defined limits of the Buena Vista Cemetery"	88
4 -1.	A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978	93
4-2.	A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey <i>Donaldsonville, LA</i> quadrangle showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978	95
4-3.	A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978	97
4-4.	A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978	99

Cartographic Regression Analysis

4-5.	A portion of the 1961 U.S. Geological Survey Aerial Photograph showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978	101
4-6.	A portion of the 1971 U.S. Department of Agriculture Aerial Photograph showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978	103
4-7.	A portion of the 1978 Louisiana Department of Transportation	
	and Development Aerial Photograph Mosaic showing the	
	locations of anomalies depicted on historic aerial photographs	105
	dating between 1940 and 1978	105
1-8	A portion of the 1878 U.S. Coast Survey manuscript man	
 0.	showing the locations of anomalies depicted on historic aerial	
	photographs dating between 1940 and 1978	107
	photographs during occurrent is to und is formation in the second s	
4-9.	A portion of the 1878 U.S. Coast Survey published map	
	showing the locations of anomalies depicted on historic aerial	
	photographs dating between 1940 and 19781	109
4-10.	A portion of the 1894 Mississippi River Commission map	
	showing the locations of anomalies depicted on historic aerial	
	photographs dating between 1940 and 1978	113
1 11	A portion of the 1047 U.S. Geological Survey Donaldsonville	
4-11.	I A quadrangle showing the locations of anomalies depicted on	
	historic aerial photographs dating between 1940 and 1978	117
	instone dendi photographis duting between 1910 and 1970	
4-12.	A portion of the 2018 U.S. Geological Survey Aerial	
	Photograph attached to the 2018 U.S. Geological Survey	
	Donaldsonville, LA quadrangle showing identifications of	
	some of the anomalies depicted historic aerial photographs	
	dating between 1940 and 1978 1	119

LIST OF TABLES

4-1.	Anomalies Recorded on Historic Aerial Imagery Dating	
	Between 1940 and 1978	115

INTRODUCTION

Coastal Environments, Inc. (CEI), under contract with the Center for Constitutional Rights of New York City, conducted cartographic regression analysis of certain tracts of land containing approximately 3,785 acres located on the west bank of the Mississippi River about 5.3 miles southeast of Donaldsonville, Louisiana. The study area is located within portions of Townships 11 and 12 South, Range 15 East (Southeastern Land District, West of the Mississippi River) in St. James Parish, Louisiana. The study area encompasses the site of the proposed Sunshine Project (FG LA LLC) being developed by Formosa Plastics plus adjoining properties that may be acquired for future plant expansion.

The work done under the present contract included two major tasks. The first involved precisely pinpointing the locations of the Acadia Plantation Cemetery (Archaeological Site 16SJ118) and the Buena Vista Plantation Cemetery (Archaeological Site 16SJ119) through cartographic regression analysis. CEI was also to review the previous archaeological research conducted in relation to each site to determine whether the actual site location had been examined and evaluate whether that work had been sufficient to determine the limits of each cemetery.

The second task was to preform additional cartographic analysis of the entire project area to determine, to the extent possible, if there were any other unmarked cemeteries within the study area. No archaeological field investigations were conducted by CEI as a part of this research.

The present document is a combination of four separate reports submitted to the Center for Constitutional Rights. Those individual submissions have been reformatted herein and include discussions of the cartographic sources examined in this study and a listing of the related repositories. The methodology used to prepare the general overlays, which served as the basis for subsequent detailed cartographic analyses, is discussed. Individual sections of this report detail the research conducted at the Acadia Plantation Cemetery, the Elina and Lauderdale plantation cemeteries, and the Buena Vista Plantation Cemetery and give recommendations for further work at those locations. Finally, historic aerial photographs dating between 1940 and 1978 were used to identify "anomalies" in the plowed agricultural fields that possibly represent other unmarked plantation cemeteries. There have been no substantial changes to the text, figures, and tables as originally submitted, and the conclusions and recommendations for each cemetery location remain unchanged.

DOCUMENTS AND REPOSITORIES

This study used cartographic data (i.e., historic maps and aerial imagery) obtained from numerous sources and repositories. The two most valuable documents were maps prepared by the U.S. Coast Survey in the 1870s. There were two sets of these maps, one a manuscript edition and the other a published edition. There are 13 maps in each set that cover the lower Mississippi River from Point Houmas (just below Donaldsonville, Louisiana) to the mouth or the river. Digital copies of these maps were obtained from the Office of the Coast Survey, National Oceanic and Atmospheric Administration (NOAA), in Silver Spring, Maryland, and the Historic Map Collection of the University of Alabama, Tuscaloosa, Alabama.

The present study area appears on sheets T-1481-B and T-1481A of the manuscript set, portions of which were combined as a composite by CEI and referenced herein as U.S. Coast Survey 1878a. Along the west bank of the Mississippi River, Sheet T-1481-B covers the area from Point Houmas to St. Victoire plantation and only includes those portions of Acadia, Buena Vista, and St. Victoire plantations that front on the river. It does not depict the cemeteries on Acadia and Buena Vista. Sheet T-1481-A shows the back portions of these three plantations and illustrates the graveyards on both Acadia and Buena Vista. Notations on Sheet-1481-B indicate that it was based on surveys by C. H. Boyd and B. Bradbury conducted in May and June 1877, while the map was "Inked and Lettered" in the Drawing Division in July 1879. The title block on Sheet T-1481-A indicates that sheet was based on surveys by those same men conducted in March and April 1877. Thus, the information on these two maps dates to the spring and summer of 1877. These maps are very detailed and show buildings, fields, crops, ditches, roads, railroads, waterbodies, plantation names, and, in some instances, cemeteries.

Sheet 13 of the published series covers the same area as the two unpublished manuscript sheets discussed above. However, Sheet T-1481-A of the unpublished series also includes a larger area that extends down to Armand Plantation on the west bank. The title block on Sheet 13 indicates that the triangulation and illustrated topography were based on surveys conducted by C. H. Boyd in 1877 and hydrology by Lieutenant Commander C. M. Chester, U.S. Navy, in 1879. Therefore, the topography depicted on this sheet also reflects the landscape as it was in the spring and summer of 1877. The published map was issued in May 1878 and reissued in November 1880. It is referenced in the present study as U.S. Coast Survey 1878b.

As described above, individual sheets within each set do not necessarily cover the same area along the river, although each set was drawn at a scale of 1:20,000. The other major difference between the two sets is that the published edition does not display crop types or ground cover, which are shown in the manuscript series. In most instances, however, the buildings, plantation names, and property owners shown on one set are also depicted on the other. There are exceptions to this, as will be noted in a subsequent report in relation to the two apparent cemeteries on Lauderdale and Elina Plantations depicted on the manuscript series.

Cartographic Regression Analysis

From the onset of this study, it was essential to attempt to locate the fieldnotes of C. H. Boyd and B. Bradbury, who did the initial triangulation and recorded the topography depicted on these maps. The fieldnotes could contain additional cartographic information that was not depicted on the resulting maps, particularly in regard to cemeteries. Previously, CEI contacted the Office of the Coast Survey at NOAA to determine if they had copies of these fieldnotes, which they did not have. As a part of this contractor, CEI hired a research specialist to visit the National Archives and Records Administration in College Park, Maryland, to attempt to locate the Coast Survey fieldbooks. Those records could not be found. A summary of this National Archives research is presented as Appendix A of this report.

The two U.S. Coast Survey maps discussed above were the earliest maps located that depict the study area in detail. Earlier surveys conducted along the river in this area include the 1821 Young and Poussin survey (Young and Poussin 1821:Sheet 42), the 1851 Humphries and Abbott survey (Humphries and Abbott 1851:Sheet 18), the ca. 1866 Board of Levee Commissioner maps (Board of Levee Commissioners ca. 1866:Sheet 10U), and the 1874 Sutter Survey (Sutter 1874:Sheet 29). These, however, lack sufficient detail and/or typically only depict cultural or natural features nearest the channel of the river. Thus, they were of little value in the present research.

Another map used in this study was prepared by the Mississippi River Commission. The current study area is illustrated on Sheet 70, which used triangulation made by the U.S. Coast Survey in 1877. The details on this map are based on topography recorded in February and April 1894, so that Sheet 70 reflects the landscape of the study area at that time. Thus, this map is referenced as Mississippi River Commission 1894. The map is very detailed and depicts buildings, roads, ditches, plantation names, landowners, elevation contour lines, crops, levees, waterbodies, and channel depths of the Mississippi River. Mississippi River Commission maps made during the late 1800s and early 1900s seldom show cemeteries. These maps are useful, however, because they are very accurate in the placement of buildings, ditches, and roads, which are essential in determining how previous natural and cultural features correlate to the modern landscape.

The Mississippi River Commission also produced a later set of maps (Mississippi River Commission 1921). Sheet 70 of that series depicts a small part of the present study area, the topography recorded in December 1921. This series of maps also illustrates the same sorts of cultural and natural features as the 1894 edition, but the map coverage is confined to the river channel and the surrounding banks. Consequently, much of the present study area is not illustrated on this series of maps.

Copies of several Louisiana Department of Public Works levee set-back maps were obtained from the Louisiana Department of Transportation and Development in Baton Rouge. The ones detailing portions of the current study area date between 1872 and 1952. These include segments of the Mississippi River bankline on Buena Vista (Winchester), Acadia, Minnie, and New Hope plantations. They do not cover property away from the river, including large parts of the current project area. In most instances, these maps show changes in various levee alignments that were necessary as the channel of the river migrated to the southwest through time. Frequently, the Department of Public Works maps show buildings, roads, and landowners; occasionally, they will also show graveyards. The maps obtained from the Louisiana Department of Transportation and Development for this study are listed in the References section of this report (Louisiana Department of Public Works 1872, 1880, 1902, 1907, 1925, 1927, 1928, 1931, 1952). All of these maps were examined, but none illustrated other cemeteries or graveyards along the river.

Records of the Louisiana State Land Office in Baton Rouge were also examined as a part of this research. These include numerous "Old" and "Official" township maps for Townships 11 and 12 South, Range 15 East (Southeastern Land District, West of the Mississippi River), of which the study area is part. Generally, these maps only show the divisions of the township into sections that are related to either 1) claims to properties made before Louisiana became a territory of the United States or 2) government lands purchased by individuals from the Federal Government. Sometimes, these maps also depict streams and other waterbodies, roads, and larger buildings. Examination of State Land Office township maps has already led to the discovery of one unmarked plantation cemetery in St. James Parish (not in the current study area). The State Land Office township maps covering the present study area do not show the possible locations of plantation cemeteries.

This study also utilized digital copies of various U.S. Geological Survey quadrangles, all editions of the *Donaldsonville*, *LA*., quadrangle produced at either 1:24,000, 1:31,680, or 1:62,500 scales (U.S. Geological Survey 1892, 1939, 1947, 1962a, 1962b, 1965, 1999, 2005, 2012, 2015, 2018). Although the earliest edition of these maps, the 1892 quadrangle was the least useful due to numerous inaccuracies in the locations of cultural (i.e., structures, roads, and canals) and natural features. The 1947 and 2005 editions were used in the overlays to aid in determining property, section, and township lines. The aerial photograph constituting the base of the 2018 digital quadrangle was employed to depict the modern landscape. All quadrangle maps were examined to determine whether they had information regarding cemetery locations within the study area; none did. With the exception of the 1892 quadrangle, all others were used in ascertaining whether any of the anomalies depicted on historic aerial photographs (discussed in a subsequent report) were related to structures.

This study also examined digital copies of historic and modern aerial photography dating between 1940 and 2018. Most of the images were acquired from the Cartographic Information Center at Louisiana State University (LSU) in Baton Rouge. These dated between 1940 and 1978 and were selected because of their scale (1:20,000 or 1:40,000) and the fact that aerial coverage for a particular year included all of the current study area. The LSU images were flown for the U.S. Department of Agriculture (1940, 1953, 1957, 1971) and the Louisiana Department of Transportation and Development (1978). Aerial coverage of the study area for a particular year might consist of several images (1:20,000 scale), which were combined by CEI to form a mosaic (U.S. Department of Agriculture 1940, 1953, 1957; Louisiana Department of Transportation and Development 1978). The 1971 imagery was a single frame with a scale of 1:40,000 (U.S. Department of Agriculture 1971). These images were especially important in the overlays for correlating elements of the former landscape with the modern topography.

One of the aerial images CEI examined was obtained from the U.S. Geological Survey (1961). It does not cover the entire study area but was useful, because it depicts both the Acadia and Buena Vista cemetery locales and illustrates roughly when the trees were removed from both locations.

More recent (i.e., 1998-2016) digital aerial imagery was obtained online from Strategic Online Natural Resources Information (SONRIS) maintained by the Louisiana Department of Natural Resources in Baton Rouge. This imagery showed how historic cultural and natural features related to the modern landscape have changed over the past two decades.. These images are listed in the References section of this report as SONRIS 1998, 2008, 2012, 2013, 2016.

METHODOLOGY

Cartographic Regression Analysis uses a series of maps and aerial imagery dating back through time to determine how past landscape elements correspond to those in the modern world. Basically, an older cartographic image is overlaid on more recent one. Adjustments are then made to get the two images to the same scale and orientation while also correcting any distortion that may have occurred during or after the image was captured or created. This process is repeated for each of the progressively earlier images so that the locations of previous landscape elements can be pinpointed in relation to the modern setting.

In the present study, the aerial image depicted in the digital version of the 2018 U.S. Geological Survey *Donaldsonville*, *LA*., quadrangle (U.S. Geological Survey 2018) serves as the base for the overlays and represents the modern landscape. An initial set of overlays was prepared wherein progressively older cartographic images were overlaid on that 2018 aerial image. These included the 1978 aerial mosaic (Louisiana Department of Transportation and Development 1978), the 1971 aerial photograph (U.S. Department of Agriculture 1971), the 1961 aerial photograph (U.S. Geological Survey 1961), the 1957 aerial mosaic (U.S. Department of Agriculture 1957), the 1953 aerial mosaic (U.S. Department of Agriculture 1957), the 1940 aerial mosaic (U.S. Department of Agriculture 1953), the 1947 quadrangle (U.S. Geological Survey 1947), the 1940 aerial mosaic (U.S. Department of Agriculture 1940), the 1894 Mississippi River Commission map (Mississippi River Commission 1894), and the 1878 U.S. Coast Survey maps (U.S. Coast Survey 1878a, 1878b).

Each of these layers was adjusted so that landscape elements common to each were positioned on top of each other, to the extent possible. Topographical features matched include railroads, highways, waterbodies, sugarhouse complexes, plantation quarters complexes, plantation main house locations, field roads, ditches, and, in some instances, cemeteries. This initial set of overlays provided a general understanding of where those features once existed in regard to the modern landscape. They also served as a basis for identifying anomalies that appeared both on the U.S. Coast Survey maps and on historic aerial images.

In this study, the term "anomaly" refers to things that appear to be out-of-place in an agricultural setting typified by sugarcane fields. Clumps of trees or other unplowed areas typically correspond to the former locations of landscape elements, such as sugarhouse ruins, ponds associated with sugarhouses, cemeteries, etc. Generally speaking, farmers did not plow certain areas for a reason. For example, ground containing the massive brick foundations of a former sugarhouse (not visible on the surface) would be avoided to prevent damage to farm equipment. A low, wet area with willow trees in an otherwise plowed field could be all that remains of a former sugarhouse pond. Likewise, a small stand of trees in a plowed field might be avoided because it contained headstones or was known to have been a cemetery.

PART I: ACADIA PLANTATION CEMETERY

Introduction

Both the manuscript and published versions of the U.S. Coast Survey maps (U.S. Coast Survey 1878a, 1878b) (discussed below) show the Acadia Plantation Cemetery as roughly rectangular-shaped area with a central cross situated in the middle of fields isolated from other plantation structures. In 2018 and 2019, TerraXplorations, Inc., (Jackson et al. 2019; Peebles 2019) conducted mechanical trenching to locate the graveyard and define its limits. The present research uses cartographic regression analysis to verify the site location and assesses the previous archaeological research conducted at the cemetery location.

Historical Context

The land that formed Acadia (sometimes "Arcadia") Plantation is located on the west bank of the Mississippi River approximately 5.3 miles southeast of Donaldsonville, Louisiana, in St. James Parish. During much of the nineteenth century, this property was owned by members of the Mire family, headed by Jean Baptiste Mire, the son of Joaquin Mire and Magdalena Malanson. Jean Baptiste Mire was born in St James Parish around 1776 and married Ester Arsenaux in 1799 (Catholic Diocese of Baton Rouge 1980:548).

The few available sugar records for the late 1820s and 1830s do not list Jean Baptist Mire or any of his family members as producing sugar in St. James Parish (*The Louisiana Planter and Sugar Manufacturer* 1892:65; Delegos 1831). In the 1830 U.S. Census, however, Baptiste Mire was recorded as owning 23 slaves, his son Evareste (Jean Baptiste Evariste Mire), living down river, owned 6 (U.S. Census 1830). The number of slaves owned by the Mires indicates that they were likely involved in some type of agriculture by that time, possibly cotton.

Jean Baptiste Mire died in February 1836 (Catholic Diocese of Baton Rouge 1984:450-451), and his son Jean Baptiste Everiste Mire took over the management of the plantation. In 1840, Jean Baptiste Everiste Mire owned 38 slaves, while his mother, the Widow J. B. Mire (Ester Arcenaux), owned 13 (U.S. Census 1840).

The earliest evidence that the Mires were growing sugarcane appears in sugar production records for the 1843-1844 growing season. That document lists Evariste Mire (Jean Baptiste Everiste Mire) as producing sugar on the right descending bank (west bank) of the Mississippi River. He had not produced sugar that season but was noted as expecting to make a crop the following year (Champomier 1844:3). The Mire's entry into sugarcane agriculture necessitated an increase in the number of slaves to clear fields, plant additional acreage,

and harvest and process an increasing amount of sugarcane. In 1850, the Mire family, in aggregate, owned 93 slaves (U.S. Census 1850a); by 1860 that number had risen to 149 (U.S. Census 1860a).

Louisiana's agricultural economy was devastated by the Civil War, and planters along the lower Mississippi River were desperate for laborers after Emancipation. Congress established the Bureau of Refugees, Freedmen and Abandoned Lands in 1865 to assist former slaves in finding jobs and housing, establishing schools, and obtaining legal services. The Freedmen Bureau also settled labor disputes and insured that the freedmen were being paid by their employers. It was not unusual for freedmen to work on the same plantations where they had formerly labored as slaves. In March 1865, Jean Baptiste Everiste Mire employed 17 freedmen on Acadia Plantation (Freedmen Bureau 1865a). By May 1865, that number had risen to 33 (Freedmen Bureau 1865b).

The Mires continued to produce sugar on Acadia Plantation until 1872 (Bouchereau, 1872:20). Jean Baptiste Evariste Mire died at the age of 74 on May 22, 1874 (Catholic Diocese of Baton Rouge 1993:433). After his death, his son Evariste Camile Mire continued to manage the property. Acadia was subsequently acquired by Lebermuth & Israel. In 1900, Acadia consisted of 1,200 acres with 1,000 acres under cultivation. The average annual production was 1,500,000 pounds of sugar (Rightor 1900:701).

During the seven decades that the Mires owned Acadia, their numerous slaves and, later freedmen employees, labored in the sugarcane fields. Scores of these people undoubtedly perished while working and/or living on the land during the nineteenth (and possibly the early twentieth) century and were almost certainly buried on the property.

Sugarcane plantations in Louisiana were known to have been extremely harsh work environments, and some planters lost scores of slaves from disease or injuries suffered in the fields or in the sugarhouses during grinding season. For example, 63 slaves died in 1850 alone on Mrs. Pedesclaux plantation on the right bank of the Mississippi River just below Point Houmas (U.S. Census 1850b). Forty-one deaths occurred in June, most resulting from cholera. These people ranged in age from 4 months to 70 years, the average age being 18 years. An equal percentage of males (30) and females (33) are represented in these statistics (U.S. Census 1850b). Still births probably were not recorded, so the infant mortality rate was probably much higher than the documents suggest. A decade later, 22 slaves died on former South Carolina Governor John L. Manning's plantations in Ascension Parish (U.S. Census 1860b). More than half of these were slaves recently brought from South Carolina, who were not acclimatized to the harsh weather and diseases common in southeastern Louisiana. The average age of these 22 slaves — 11.67 years — indicates a very high child and infant mortality rate, resulting in part from teething, scarlet fever, whooping cough, cholera, worms, typhoid fever, and dropsy. Most of the deaths (n=12) occurred in May, the remainder in April and June (U.S. Census 1860b). While the number of individuals (either slaves, freedmen or later tenants or employees working on the plantation) who died and were buried on Acadia Plantation is not known, that number could have been quite substantial.

Previous Cultural Resources Investigations

In the spring of 2017, Cox/McLain Environmental Consulting, Inc., of Tulsa Oklahoma, conducted Phase I and Phase II cultural resources investigations for the proposed construction of the FG LA LLC Project in St. James Parish (Rush et al. 2018). The study apparently did not use historic or aerial images to pinpoint probable site locations. Only two historic maps, the 1894 Mississippi River Commission map (incorrectly assigned an 1877 date) (Russ et al. 2018:Figure 5) and the 1892 U.S. Geological Survey *Donaldsonville*, *La*. quadrangle (Russ et al. 2018:Figure 6) were presented to illustrate that the study area encompassed portions of Acadia and Buena Vista (Winchester) plantations.

The survey of the 2,375-acre tract included the area now believed to be the location of the Acadia Plantation Cemetery. As Cox/McLain considered that portion of the survey area to have a low potential for site occurrence, shovel testing was conducted at 50-m intervals on transects spaced 50 m apart (as per Louisiana Division of Archaeology guidelines). There is no mention in that report regarding ground surface visibility. Because the survey was conducted between March and May, it is presumed that ground surface visibility would have been good to excellent. During that time of year, the young sugarcane would have just started to sprout, and there would have been minimal ground cover. When Cox/McLain surveyed the Acadia Plantation Cemetery area, several borrow

pits were present, and their line of shovel tests spaced, at 50-m intervals, was positioned along the western edge of the road between two borrow pits. Three shovel tests (JC073, JC075, and SS127) were excavated in close proximity to the cemetery location. All were negative (Russ et al. 2018:Appendix A).

It was later observed that the Cox/McLain survey area encompassed the locations of the Acadia and Buena Vista plantation cemeteries as illustrated on the 1878 U.S. Coast Survey maps (U.S. Coast Survey 1878a, 1878b). The Louisiana Division of Archaeology was notified in July 2018 that these cemeteries were not addressed in the Cox/McLain report. Subsequently, a 1940 aerial photograph was overlaid on the U.S. Coast Survey map (U.S. Coast Survey 1878b), and it was noted that two small clumps of trees on the aerial image corresponded to the both 1878 cemetery locations. That information was also provided to the Louisiana Division of Archaeology, which, in turn, notified Cox/McLain.

In October 2018, TerraXplorations, Inc., of Tuscaloosa, Alabama, conducted mechanical trenching to look for physical evidence of the Acadia Plantation Cemetery (Pebbles 2019). Five trenches were cut adjacent to an existing borrow pit (Figure 1-1). Reportedly, trenching was done in 5- to 10-cm slices using a 3-foot-wide bucket along the lengths of the trenches. However, the lengths of the trenches described in the report do not match the lengths of the trenches illustrated on the site map (Peebles 2019:Figure 6.1). For example, Trench II was described as being approximately 300 m long (Peebles 2019:17). However, the scaled length of Trench II in Figure 6.1 was less than 90 m long. Similar large discrepancies were also noted in regard to the lengths of Trench III (Peebles 2019:20), Trench IV (Peebles 2019:20), and Trench V (Peebles 2019:20). Consequently, the level of effort during this work is unclear.

The 2018 excavations uncovered an undisclosed number of features, some of which were described as "linear discolorations that cut perpendicularly through the trench" (Peebles 2019:17). Some were "determined" to be "Likely fallows [furrows ?] or drainages" (Peebles 2019:17). In Trench V, "Linear discolorations similar to Features 1 and 2 [in Trench 2] were noted in the trench, but were not documented" (Peebles 2019:20). No photographs or sketches of any features were provided in the report, nor were the locations of the features depicted on the site map. Only photographs of Trench II were included in the project report (Peebles 2019:Figures 1.3-1.5). The omission of this pertinent information makes it impossible to evaluate the conclusions presented in that report.

The 2018 excavations found no evidence of a cemetery in the area investigated. Peebles (2019:25) concluded; "It is probable that if the cemetery was ever in use, any remains within were destroyed during the construction of the borrow pit or pond." TerraXplorations recommended no "further testing or excavation" in that area (Peebles 2019:25).

In the introduction to this report (Peebles 2019), it was stated that the "1878 Mississippi River Map" showed the cemetery location "east of the main field road, and 490 meters northeast of the New Orleans, Mobile, and Texas Railroad (Peebles 2019:1)." The report does not, however, specify or describe how the location investigated was actually determined. No map overlays were provided in that report.

It was subsequently noted that the area where the trenching occurred was 86 m north of the probable cemetery location suggested by the 1940 aerial imagery and the U.S. Coast Survey maps. Although not stated in the report, the location that TerraXplorations examined was probably based on latitude/longitude lines present on the 1878 maps. These latitude/longitude lines were added to the manuscript version maps at a later date and not lines that were surveyed in the field in 1877. In fact, some sheets of the manuscript series have multiple sets of latitude/longitude lines—an initial set and a "corrected" set, neither of which is necessarily accurate.

After the Division of Archaeology was notified of this discrepancy, TerraXplorations was asked to return and to conduct additional excavations to locate the Acadia Plantation Cemetery (Jackson et al 2019). The Introduction to that report states that the location initially examined was selected by overlaying the 1878 map (incorrectly identified as the "1886 Mississippi River Map of St. James Parish") on the modern quadrangle. The authors suggest the error in location "might have been caused by a scaling issue or warping of the original [1878?] map when it was digitized" (Jackson et al. 2019:1-7).



Figure 1-1. Aerial photograph showing the locations of the first set of trenches excavated by TerraXplorations, Inc., in 2018 in an attempt to locate the Acadia Plantation Cemetery (after Peebles 2019:Figure 6.1).



Figure 1-2. Site sketch map of the Acadia Cemetery site (Archaeological Site 16SJ118) attached to site form submitted by TerraXplorations, Inc., to the Louisiana Division of Archaeology showing the locations of the 2018 and 2019 investigations.



·····

0 20 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 Feet

Figure 1-3. Aerial photograph showing the proposed locations of the second set of trenches excavated by TerraXplorations, Inc., in 2019 in an attempt to locate the Acadia Plantation Cemetery (after Jackson et al. 2019:Figure 5.2).



Figure 1-4. Aerial photograph showing the second set of trenches actually excavated by TerraXplorations, Inc., in 2019 in an attempt to locate the Acadia Plantation Cemetery (after Jackson et al. 2019:Figure 6.2).

The second area examined by TerraXplorations was approximately 100 m southeast of the location of the 2018 investigations (Figure 1-2). In the second report, there is, again, no explanation of how the "Acadia Cemetery New Location" was determined. Sixteen trenches (Figure 1-3) were initially planned (Jackson et al. 2019:Figure 5.2), but only eight (see Figures 1-2, 1-4) were dug (Jackson et al. 2019:Figure 6.18), because "it was determined additional trench excavation was unnecessary" (Jackson et al. 2019:25). Also note that the numbers and locations of the trenches actually excavated do not correspond in Figures 1-2 thru 1-4. The cartographic regression analysis presented below assumes that the trenches depicted in Figures 1-2 and 1-4 represent the correct number and locations of the ones actually excavated. The methodology used to investigate this area again consisted of mechanical trenching only. No archaeological features, human burials, or artifacts were encountered. In Trench 2, "soil changes that required further examination" were determined to be "subtle lenses from previous flooding events, not cultural or man-made features" (Jackson et al 2019:53). No photographs or plans of these "soil changes" were presented in the report, and only a single photograph of Trench 3 was included (Jackson et al. 2019:Figure 6.17). It was not stated how these determinations were made.

TerraXplorations concluded: "It seems apparent, if the location was ever actually used as a cemetery, any physical evidence of this, including human remains and coffin materials, have been destroyed by the multitude of ground disturbances at the location. Previous and current trenching in and around the proposed location of the cemetery demonstrated that no evidence of the cemetery remains" (Jackson et al 2019:55).

Cartographic Regression Analysis

CEI conducted cartographic regression analysis for the area encompassing the probable location of the Acadia Plantation Cemetery. Working from the general overlays discussed above research focused on the area surrounding the location of the Acadia Plantation Cemetery as depicted on the 1878 U.S. Coast Survey maps (Figure 1-5). More recent aerial images were added to the original overlays, including the SONRIS aerial photographs dating 1998, 2008, 2013, and 2016.

CEI began the analysis by overlaying the 2016 SONRIS aerial photograph on the 2018 aerial photograph from the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle, which represents the modern landscape. The 2016 image was adjusted in regard to orientation and scale, and any distortion in the 2016 image was removed so that the topographic features displayed on each aerial (i.e., roads, ditches, ponds) aligned. Then, the 2013 aerial photograph was overlaid on the 2016 image, and similar adjustments made. This process was repeated for each progressively older aerial image or cartographic resource.

It was readily apparent that the clump of trees shown on the early aerial photographs corresponded to the location of the cemetery as depicted on the U.S. Coast Survey maps. The limits of the tree clump were added to the overlays, because they were believed to reflect the probable limits of the cemetery. Likewise, CEI added the locations of TerraXplorations' trenches to the overlays for subsequent interpretation and evaluation.

The manuscript version of the 1878 U.S. Coast Survey map (U.S. Coast Survey 1878a) (Figure 1-6) shows the cemetery as a roughly rectangular area with a central cross. As depicted on that map, the graveyard measured approximately 40 m (136 feet) southwest-northeast by about 35 m (115 feet) northwest-southeast. It was then situated in a sugarcane field along what appears to have been a ditch located approximately 80 m southeast of the main plantation road. The cemetery was positioned about midway between the railroad and the Acadia Sugarhouse Complex. (The location of the Acadia Plantation Surgarhouse Complex was identified archaeologically as Locality 3 of Site 16SJ109 by Cox/McLain in 2017 [Rush et al. 2018].)

The published version of the 1878 U.S. Coast Survey map (U.S. Coast Survey 1878b) shows the same features but does not show crops (Figure 1-7). The distinctive bend in the main plantation road is shown northeast of the cemetery location on this version of the map. This feature is not clearly visible on the manuscript version (see Figure 1-6). The road ran from the river past the sugarhouse complex and cemetery and then abruptly turned to the southeast, avoiding the graveyard, and then turned back to the southwest to run to the rear of the property.



Figure 1-5. A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the location and coverage of the detailed overlays relating to the Acadia Plantation Cemetery.



Figure 1-6. A portion of the 1878 U.S. Coast Survey manuscript map (U.S. Coast Survey 1878a) showing the Acadia Plantation Cemetery with a central cross (highlighted in red). The buildings illustrated to the northeast of the cemetery constitute the Acadia Plantation sugarhouse complex. The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-7. A portion of the 1878 U.S. Coast Survey published map (U.S. Coast Survey 1878b) showing the Acadia Plantation Cemetery with a central cross (highlighted in red). The buildings illustrated to the northeast of the cemetery constitute the Acadia Plantation sugarhouse complex. The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.

The 1894 Mississippi River Commission map (Mississippi River Commission 1894) does not depict the cemetery location, instead indicating that the area was planted in sugarcane (Figure 1-8). As noted above, this series of maps seldom depict cemeteries. The distinctive bend in the main plantation road persisted into this period, and the apparent ditch line depicted on the 1878 maps had become a road.

The 1940 aerial photograph mosaic (U.S. Department of Agriculture 1940) clearly illustrates a clump of trees in the cemetery location—a distinctive anomaly in the surrounding cultivated fields (Figure 1-9). The bend in the main plantation road still existed at that time. The large anomaly visible in the field to the northeast of the cemetery is the site of the former location of the Acadia Plantation Sugarhouse Complex.

The 1947 quadrangle (U.S. Geological Survey 1947) lacks the detail of the 1940 aerial and provides no useful information in regard to the location of the cemetery (Figure 1-10). However, the distinctive bend in the main plantation road was still extant.

The 1953 (U.S. Department of Agriculture 1953) (Figure 1-11), 1957 (U.S. Department of Agriculture 1957) (Figure 1-12), and 1961 (U.S. Geological Survey 1961) (Figure 1-13) aerials mirror each other, as well as the 1940 aerial (see Figure 1-9), in relation to the locations of roads, ditches, the railroad, and tree lines. All continue to show the cemetery area as a small clump of trees—an anomaly in the surrounding plowed sugarcane fields.

By 1971 (Figure 1-14), the landscape in the cemetery area had been significantly altered. By that date, all of the trees had been removed and the main plantation road straightened. As a result, the road the passed through the northeastern third of the cemetery; it no longer curved around the cemetery as in earlier cartographic sources. Based upon the available information these changes must have occurred between 1961 and 1971.

The aerial images dating between 1978 and 2013 (Louisiana Department of Transportation and Development 1978; SONRIS 1998, 2008, 2013) (Figures 1-15 thru 1-18) illustrate that the landscape surrounding the cemetery location remained unchanged from 1971. The cemetery location remained partially beneath the realigned main plantation road, the remainder in the sugarcane field to the east of the road.

By 2016 (SONRIS 2016), several large borrow pits had been excavated around the cemetery location, one potentially impacting or destroying the approximate southeastern two thirds of the graveyard (Figure 1-19). A review of historic Google Earth aerial imagery indicates that excavation of these borrow pits commenced prior to January 2014 and had been completed before January 2015. During that time, the property was owned by IMCO Agrico Chemical Company (Jackson et al. 2019:Table 3.1). The volume of soil removed suggests that it was likely used for a very large-scale construction project, such as levee work. There are no cultural resources reports on file at the Louisiana Division of Archaeology relative to these excavations.

Conclusions

CEI's research has determined that the Acadia Plantation Cemetery was centered near UTM coordinates 15 R 700410.50 E, 3326623.97 N (NAD 83) (Figure 1-20). Historic aerial imagery dating between 1940 and 1961 shows a rectangular clump of trees at that location, encompassing an area measuring approximately 40 m (136 feet) southwest-northeast by 35 m (115 feet) northwest-southeast. This area closely corresponds to the cemetery location depicted on the 1878 U.S. Coast Survey maps. While the trees generally mark the probable cemetery location, it is very possible that the graveyard once covered an area larger than that indicated by the 1878 U.S. Coast Survey maps or suggested by the trees once covering the site.

The overlays CEI prepared through cartographic regression analysis show that neither set of trenches previously excavated by TerraXplorations fell within the limits of the cemetery location. If all of the trenches proposed (see Figure 1-3) in 2019 had been excavated, at least the two running along the main plantation road would have crossed the area that possibly still contains graves.



Figure 1-8. A portion of the 1894 Mississippi River Commission map (Mississippi River Commission 1894) showing the location of the Acadia Plantation Cemetery (highlighted in red). The buildings illustrated to the northeast of the cemetery constitute the Acadia Plantation sugarhouse complex. The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-9. A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1940) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.


Figure 1-10. A portion of the 1947 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:31,680 series) (U.S. Geological Survey 1947) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-11. A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1953) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-12. A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1957) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1 -13. A portion of the 1961 U.S. Geological Survey Aerial Photograph (U.S. Geological Survey 1961) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-14. A portion of the 1971 U.S. Department of Agriculture Aerial Photograph (U.S. Department of Agriculture 1971) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-15. A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic (Louisiana Department of Transportation and Development 1978) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-16. A portion of the 1998 Strategic Online Natural Resources (SONRIS) Aerial Photograph (SONRIS 1998) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-17. A portion of the 2008 Strategic Online Natural Resources (SONRIS) Aerial Photograph (SONRIS 2008) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-18. A portion of the 2013 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph (SONRIS 2013) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure 1-19. A portion of the 2016 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph (SONRIS 2016) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.



Figure A-20. A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the location of the Acadia Plantation Cemetery (highlighted in red). The trenches excavated by TerraXplorations, Inc., in 2018 (blue lines) and 2019 (yellow lines) are also shown.

Recommendations

Additional archaeological investigations are required at the Acadia Plantation Cemetery to determine if human remains and associated artifacts are still present at the location identified above and to delineate the limits of those remains, if they are still extant. Any fieldwork should include several complimentary techniques. Initially, a metal detector scan should be made along 1) the roadbed of the main plantation road, 2) the road running along the northern limits of the adjacent pond, and 3) the surrounding slopes to determine whether nails or coffin hardware are present. Secondly, additional mechanical trenching or stripping should be conducted in those three locations, limiting those on the slopes of the borrow pits to the higher elevations. These excavations should be conducted in good weather conditions, so that the bottoms and sides of the trenches can be carefully examined without the interference of standing or seeping water. The excavation should proceed slowly and in levels not exceeding 5 cm in depth. Intensive probing at not more than 20-cm intervals should be conducted in the bottoms of the trenches as the stripping proceeds to 1) prevent inadvertent disturbance of human remains and to 2) identify possible grave locations that are not clearly visible. Probing should be initiated immediately after the road surface has been removed. Additional metal detector scans should be conducted in the bottoms of the trenches as excavations proceed to determine if coffin nails or hardware are present. Trenching should proceed at least to 1 m below the existing ground surface or until visible pit outlines or burials are encountered. The fieldcrew conducting these investigations should have extensive experience in delineating historic cemeteries in Lower Mississippi Valley alluvial settings. In addition, cadaver dogs should be used in this examination, as they have successfully located graves up to 3,000 years old in a number of archaeological investigations.

Finally, extensive historical research should be conducted in an attempt 1) to identify individuals interred in this cemetery and 2) to identify possible descendants of those individuals. Names and ages of individuals identified in slave lists attached to conveyances, mortgages, or other plantation records should be correlated with those of people working on the plantation during Reconstruction (obtained from payrolls, tax rolls, or other documents found in the Freedmen records). These in, turn, can be correlated with the names of individuals living on the plantation during the late nineteenth and early twentieth centuries enumerated in federal census documents for those years. This information must be supplemented by oral interviews obtained from individuals residing in the community today.

PART 2: ELINA AND LAUDERDALE PLANTATION CEMETERIES

Introduction

The manuscript edition of the 1878 U.S. Coast Survey maps (U.S. Coast Survey 1878a) shows two apparent cemeteries, one situated on Lauderdale Plantation and the other on Elina Plantation (Figure 2-1). Both appear as irregularly shaped, isolated anomalies surrounded by sugarcane fields. Although difficult to see, both appear to have central crosses, signifying they represent graveyards. Only the Elina Plantation Cemetery falls within the limits of the current study area. However, both are in close proximity to one another, and both show up on the overlays prepared for the Elina Plantation Cemetery. Thus, it was deemed important to examine both through cartographic regression analysis to pinpoint their actual locations and to determine whether human interments might still exist in those two burial grounds.

Historical Context

Elina Plantation

The name Elina Plantation is an appellation that first appears in the sugar records for the 1875-76 growing season (L. Bouchereau 187). It refers to a tract of land lying on the west bank of the Mississippi River about 4.5 miles southeast of Donaldsonville in St. James Parish, Louisiana. The plantation adjoined Lauderdale on its lower side and belonged to family members of A. P. Bertaud between ca. 1845 and 1866. Sugar records for the 1845-46 growing season are the first to list the Bertauds growing sugarcane in St. James Parish (Champomier 1846).

In the 1850 Census, the Widow A. Bertaud was recorded as owning 53 slaves at what would become Elina; other Bertaud family members owned 27 (U.S. Census 1850a). In 1860, A. P. Bertaud & Sons were enumerated as owning 70 slaves (U.S. Census 1860a). At the conclusion of the Civil War, the Bertaud family continued to operate their sugar plantation with the help of between 16 and 19 freedmen laborers at least through January 1866 (Freedmen Bureau 1865c, 1866a).

In 1866, the Bertaud plantation was sold at a sheriff's sale. This was apparently because the family could not make payments on a pre-Civil War mortgage made on property, including 63 slaves, who were later freed as a result of Emancipation. The advertisement for that sale describes the property as follows:



Figure 2-1. A portion of the 1878 U.S. Coast Survey manuscript map (U.S. Coast Survey 1878a) showing the Lauderdale (left) and Elina (right) plantation anomalies. Each has what appear to be a central cross. The red line represents study area boundary. The Elina anomaly is within the current study area.

A habitation established in sugar, situated on the right [descending] side of the Mississippi River about 71 miles from New Orleans described as follows: 1) a tract of land having 3 and one-half arpents front [on the river] by 120 arpents deep, bordered [above] by the land of LaPice & Wilson, and [below] by land belonging to Eloi Hebert & Co.; 2) a tract of land having 2 arpents 5 toises front [on the river] with a depth of 100 aprents, bordered by the land of Eloi Hebert & Co.; 3) 160 acres of land situated in the rear of the habitation of Eloi Hebert & Co., at 60 arpents from the river; with a sugarhouse, vapor machine, Negro cabins and other dependencies, 4 carts, 4 plows, 4 mules and all the rights and actions which result from the emancipation of 63 Negro salves, attached to the said habitation at the start of the war [L'Avant-Coureur 1866].

As a result of this sale, P. J. Pavy (probably the New Orleans firm of P. J. Pavy & Co.) became the owner of the former Bertaud property. Sugar Records pertaining to the growing seasons between 1870-71 and 1874-75 list that property as Pavy Plantation (L. Bouchereau 1871, 1872, 1873, 1874, 1875).

Paul De Verges was listed in the sugar records as the owner or proprietor of the property for the 1875-76 growing season, and the plantation was then, and for the first time, referred to as "Elina" (L. Bouchereau 1876). De Verges continued to own the plantation until about 1885 when it was sold to J. B. Ferchaud (A. Bouchereau 1886), who, in turn, sold it to his brother, Jules Ferchaud in 1908 (*The New Orleans Item* 1908:9).

Sugar records for the mid 1840s list three sugar producers between the Bertaud Plantation and Acadia Plantation (owned by the Mires). These included Zenon Blouen, Evariste Blouen, and Eloy Hebert (Champomier 1846). By the 1850-51 growing season, the Blouens no longer appear in the sugar records (Champomier 1851), and it is presumed that their property was acquired either by the Bertauds (residing above) or by the Heberts (living below). After 1851, the Eloy Hebert family was the only sugar producer between the Bertaud and Acadia plantations.

The 1858 Persac map (Figure 2-2) (Persac 1858) shows the Estate of E. Hebert and his partner E. Mire as owning two small tracts of land. One fronted on the river and was bordered on three sides by property owned by the Bertaud Brothers. The second track was situated along the lower line of Bertauds' plantation, just above Acadia, owned by the Mire family.

The Eloy Hebert plantation was not a large-scale sugar producer, as compared to its neighbors. In fact, the sugar records dating between the growing seasons of 1851-52 and 1857-58 indicate that the Heberts' sugarhouse was horse powered, unlike those of most of their neighbors, which were steam powered. Likewise, the Hebert's average sugar production for those years was only 109 hogsheads, significantly lower than most of the adjacent planters (Champomier 1852, 1853, 1854, 1855, 1856, 1857, 1858). This is reflected in the number of slaves owned by the family. In 1850, the heirs of Eloy Hebert owned 37 slaves, and their business partner Elpsege Mire owned 6 (U.S. Census 1850a). In 1860, the Heberts owned 38 (U.S. Census 1860a).

There is no record of the Eloy Hebert family using freedmen laborers after the Civil War. In 1869, the Hebert plantation was sold at a sheriff's sale, evidently to settle the estate of Eloy Hebert. As advertised, the plantation included the following:

[1st] A tract of land or plantation, situated in the Parish of Saint James on the right bank of the Mississippi river, at about 71 miles above the city of New Orleans, measuring two arpents more or less front on said river by ninety-five arpents more or less in depth on the upper line, and ninety arpents more or less on the lower line, and opening in the rear; bounded above by the property of P. J. Pavy, and below by that of B. C. Mire,—together with the dwelling houses and all the other buildings and improvements thereon and thereunto belonging. [2nd] A tract of land situated in the parish of St. James, on the right bank of the Mississippi river, at about 71 miles above the city of New Orleans, measuring two arpents more or less front on said river, by sixty arpents in depth, opening in the rear, bounded above and below by lands of Mr. P. J. Pavy, together with all buildings thereon; under the reservation of the buildings erected on a





lot of ground of one arpent and a half front to the public road by one hundred and thirty feet in depth, which said lot of ground is leased to Louis Rey until April, 1869—with the privilege of removing said buildings and fences, (with the exception of the front fence) at the expiration of said lease [The Louisianian 1869].

Subsequent owners or proprietors of the old Eloy Hebert plantation included V. A. Anderson (L. Bouchereau 1874), V. E. M. Anderson (L. Bouchereau 1876), Leon Godchaux (A. Bouchereau 1882), and J. A. Burbank (A. Bouchereau 1883). Burbank apparently gave the old Eloy Hebert tract of land the name of Lena Plantation, as indicated by sugar records pertaining to the 1885-86 growing season (A. Bouchereau 1886). The 1894 Mississippi River Commission map shows the property between Acadia and Lauderdale plantations as being Elina Plantation. Thus, it appears that the old Eloy Hebert tract (Lena Plantation) had been absorbed into Elina Plantation then owned by the Ferchaud Brothers.

Lauderdale Plantation

For nearly two decades, Robert C. Nicholas, a native of Virginia and a War of 1812 veteran, owned what would eventually become Lauderdale Plantation, situated on the right descending (west) bank of the Mississippi River in St. James Parish about 4 miles southeast of Donaldsonville. After coming to Louisiana, Nicholas eventually served as a U.S. Senator and the State Superintendent of Public Schools (*The Daily Picayune* 1851a).

Nicholas was growing sugarcane in St. James Parish as early as 1828 (*The Louisiana Planter and Sugar Manufacturer* 1892:65). During the growing seasons between 1844-45 and 1849-50, sugar production for Lauderdale is given under the names of Nicholas & Bell, Col. R. C. Nicholas & Mrs. Bell & Son, or Col. R. C. Nicholas Bell & Co. (Champomier 1845, 1846, 1850). The average annual production for those seasons was 480 hogsheads (i.e., a barrel containing roughly 1,200 pounds of raw sugar). A large labor force was required to plant, harvest, grind, and produce that much sugar. In 1850, R. C. Nicholas owned 236 slaves (U.S. Census 1850a).

In June 1851, Nicholas offered to sell a number of his slaves, evidently prior to moving to another one of his plantations in Terrebonne Parish:

On Thursday, the 19th June, 1851, at 10 o'clock A. M. the undersigned will offer for sale at public auction on the premises of R. C. Nicolas [sic], in the Parish of St. James, 101 Slaves, attached to said Nicholas's plantation, amongst which are some very valuable, being well acquainted with the cultivation of cane; and there is a good blacksmith and engineer, coopers, rough carpenters, sugar makers, and a brick layer capable of setting kettles, &c. The above negroes are, with the exception of a few, either creoles or came to the country very young [The Daily Picayune 1851b:3].

Sugar production for Lauderdale Plantation for the next five growing seasons (i.e., those ending in 1852, 1853, 1854, 1855, and 1856) are listed under the name of E. B. Donelson or Mrs. E.B. Donelson (Champomier 1852, 1853, 1854, 1855, 1856). Little has been learned of Lauderdale during the proprietorship of Mrs. Donelson. Sugar production during those years averaged 311 hogsheads, which would have entailed a large slave labor force.

From 1857 until the turn of the twentieth century, Lauderdale was owned by Mathew Watson and Bergondy LaPice. Pierre Michel La Pice de Bergondy was born ca. 1797 in Santo Domingo prior to his family fleeing that country during the 1803 slave rebellion. He fought with Andrew Jackson during the Battle of New Orleans. During the following years he acquired seven or eight cotton and sugarcane plantations in Louisiana and Mississippi. In 1877, LaPice went to Java and brought back a variety of sugarcane that could be grown in Louisiana, which later became known as "LaPice cane." He was also credited as the first planter in Louisiana to produce white sugar (*The National Republican* 1884).

In 1860, the Lapice Brothers owned 245 slaves at Lauderdale (U.S. Census 1860a), a number comparable to the plantation's previous owners. In the years immediately after Emancipation, between 42 and 90 Freedmen were employed on the plantation (Freedmen Bureau 1865d).

Lapice died at the age of 87 on February 17, 1884, at his home on Lauderdale Plantation. Ironically, his brother-n-law and partner, Mathew Watson, age 84, died that same day at Lauderdale (*The Times-Picayune* 1884). Both were probably buried in the family plot in Nashville, Tennessee, where Lapice's son was buried in 1904 (*The Donaldsonville Chief* 1904)

The Lapice family continued to own Lauderdale until 1907. A sales advertisement appearing in the December 22, 1906, edition of the *Donaldsonville Chief* provides a good description of the plantation at that time:

The Well-Known Lauderdale Plantation. Situated in St. James parish on the west bank of the Mississippi river, six miles below Donaldsonville, at the head of the Mississippi and Lafourche Drainage District, containing nearly 1600 acres of land—1000 of which are in high state of cultivation. Balance in woodlands, with considerable cypress timber. This money-making plantation, with all necessary adjuncts—mules, implements, carts, etc.—will have enough corn and hay for its requirements until the new crop of 1907. Half of the cane crop will be D.74. Texas and Pacific station and Lauderdale postoffice [sic] on plantation. A large modern cottage, surrounded by live oaks, magnolias and forty grafted bearing pecan trees, makes a picturesque home. Offered for sale on account of departure of owners. Apply on premises or to E. B. LaPiece, Commercial-Germania Trust and Savings Bank, New Orleans, LA [The Donaldsonville Chief 1906].

Lauderdale was sold to Jacob Lebermuth, the president of the Salsburg Refining Company for \$52,000 (*The Donaldsonville Chief* 1907).

Previous Research

The Division of Archaeology's Cultural Resources Map database indicates that the area containing the Elina Plantation Cemetery was surveyed by Earth Search, Inc., in 2009 (Harlan et al. 2009) for a proposed INCA Refining facility. The area in which the 1878 U.S. Coast Survey map shows the Elina Cemetery was designated as having a low potential for site occurrence (Harlan et al. 2009:Figures 19-20). Consequently, that portion of the Earth Search project area was investigated by shovel tests excavated 50 m apart on transects spaced at 50-m intervals, in accordance with Louisiana Division of Archaeology guidelines. As that survey was conducted in March, the sugarcane had just started to sprout. Ground surface visibility, however, was obscured by standing water and sugarcane chaff remaining from the previous season's harvest (Harlan et al. 2009:94). The cemetery was not located during that survey possibly 1) because there was no surface expression, 2) ground surface visibility was poor, 3) the survey transects were spaced too far apart, and/or 4) systematic shovel testing alone is not a good technique for locating historic cemeteries.

The Louisiana Division of Archaeology records indicate no cultural resources surveys have encompassed the area of the Lauderdale Plantation Cemetery. This property is now part of the Mosaic Faustina plant facility, which began operations in 1968. In 1975, George Castille conducted a reconnaissance survey of portions of the plant facility for a proposed 12-inch-diameter gas delivery pipeline (Castille 1975), but that survey did not include the Lauderdale Cemetery location.

Cartographic Regression Analysis

The cartographic regression analysis conducted in relation to the Lauderdale and Elina Plantation cemeteries used the same procedures and sources employed in the examination of the Acadia Plantation Cemetery (discussed in Part 1 of the current report). The location and aerial coverage of the detailed overlays discussed below are shown in Figure 2-3.

After all of the cartographic images were adjusted to correlate past and modern landscape features and corrected for distortion, the locations of the Lauderdale and Elina Plantation cemeteries, as depicted on the manuscript version of the 1878 U.S. Coast Survey map (see Figures 2-1, 2-4), were added to the overlays and highlighted in yellow. Additionally, the sugarhouse complexes shown on that map at Lauderdale, Elina, and Acadia







Figure 2-4. A portion of the 1878 U.S. Coast Survey manuscript map (U.S. Coast Survey 1878a) showing the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.

plantations were superimposed on these images and highlighted in orange to pinpoint the locations of other potential cultural resources.

The manuscript edition of the 1878 U.S. Coast Survey maps (see Figures 2-1, 2-4) (U.S. Coast Survey 1878a) shows the Lauderdale Plantation Cemetery as roughly oval in plan and oriented northeast-southwest. As depicted, it covered an area measuring approximately 80 m long by 30 m wide. It was situated on the southeast bank of a ditch, well removed from other plantation structures and surrounded by sugarcane fields. The graveyard was centered roughly 120 m northwest of the property line then separating Elina and Lauderdale plantations and about 100 m south of a field road running northwest-southeast. The cemetery was located approximately 650 m west, southwest of the Elina sugarhouse complex.

As drawn, the Elina Plantation Cemetery was irregular in shape and oriented northwest -southeast. Its maximum dimensions were roughly 50 m by 30 m (see Figures 2-1, 2-4). The graveyard was also isolated in a field that was either pasture or planted in crops other than sugarcane, well away from other plantation structures. Its was positioned immediately adjacent to a field road running northeast-southwest at the road's juncture with a second, perpendicular field road. The cemetery was centered approximately 400 m south of the Elina sugarhouse complex.

The published version of the 1878 U.S. Coast Survey map (Figure 2-5) (U.S. Coast Survey 1878b) does not illustrate the two cemeteries. Additionally, it does not show crops or ground cover. Otherwise, the topographical features penned on both (i.e., roads, ditches, and sugarhouse complexes) are identical.

The 1894 Mississippi River Commission map (Mississippi River Commission 1894) (Figure 2-6) also does not show the two cemeteries. At that time, the Lauderdale Plantation Cemetery location remained isolated in planted sugarcane fields. For the most part, the field roads depicted on the earlier maps (see Figures 2-4 and 2-5) correlate well with the ones shown on the 1894 map (see Figure 2-6). A field road south of the Lauderdale Plantation Cemetery had been added, and the apparent ditch shown on the 1878 maps (see Figures 2-4 and 2-5) was no longer present. The area surrounding the Elina Plantation Cemetery, then planted in sugarcane, is also drawn much as it had been on the 1878 maps. A field road had been extended southeast along the southern margin of the Elina graveyard location. In 1894, structures were still standing at the three plantation sugarhouse complexes (see Figure 2-6).

The 1940 aerial photograph mosaic (U.S. Department of Agriculture 1940) (Figure 2-7) shows no anomalies at either cemetery location. The cultural landscape had not changed over the past 46 years, with the main field roads and ditches remaining basically the same as depicted on the earlier maps (cf. Figures 2-1, 2-4 thru 2-7). Smaller ditches, not illustrated on the earlier cartographic sources, are clearly visible in the fields containing both graveyard locations on the 1940 photographs (see Figure 2-7). Anomalies associated with the three former sugarhouse complexes are obvious on the 1940 areal mosaic (see Figure 2-7).

A portion of the 1947 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:31,680 series) (U.S. Geological Survey 1947) was included in the overlays (Figure 2-8). Although it shows little detail, as compared to the earlier and later cartographic sources, it does illustrate the landscape in regard to section and township lines. The Lauderdale Plantation Cemetery would have been on the section line dividing irregular Sections 12 and 13, T. 12 S., R. 15 E., (Southeastern Land District West of the Mississippi River). The location of the Elina Plantation Cemetery would be positioned about midway between the northwestern and southeastern boundaries of Section 10, T. 12 S., R. 15 E., in the same land district. This map provides no additional information on these two burial sites; however, it indicates that all of the buildings associated with the three former sugarhouse complexes had been torn down or removed by 1947.

Subsequent aerial images dating between 1953 and 1978 (Figures 2-9 thru 2-13) (U.S. Department of Agriculture 1953, 1957, 1971; U.S. Geological Survey 1961; Louisiana of Transportation and Development 1978) illustrate the areas surrounding the two cemetery locations as basically unchanged. Both remained isolated in cultivated fields with virtually no change in ditches or roads.



Figure 2-5. A portion of the 1878 U.S. Coast Survey published map (U.S. Coast Survey 1878b) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-6. A portion of the 1894 Mississippi River Commission map (Mississippi River Commission 1894) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. Th red line represents the study area boundary.



Figure 2-7. A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1940) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-8. A portion of the 1947 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:31,680 series) (U.S. Geological Survey 1947) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. Th red line represents the study area boundary.



Figure 2-9. A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1953) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-10. A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1957) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.

Cartographic Regression Analysis



Figure 2-11. A portion of the 1961 U.S. Geological Survey Aerial Photograph (U.S. Geological Survey 1961) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-12. A portion of the 1971 U.S. Department of Agriculture Aerial Photograph (U.S. Department of Agriculture 1971) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-13. A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic (Louisiana Department of Transportation and Development 1978) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies high-lighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.

By 1998, the topography surrounding the location of the Lauderdale Plantation Cemetery had changed significantly. The 1998 SONRIS aerial (Figure 2-14) (SONRIS 1998) shows that a large retention pond had been built on the Mosaic Faustina property. The levee of the retention pond covered most, if not all, of the Lauderdale graveyard. Exactly when when the pond was built has not been determined. However, a review of the Louisiana Division of Archaeology's Cultural Resources Map indicates that no cultural resources survey was conducted prior to construction.

In 1998, the area surrounding the location of the Elina Plantation Cemetery remained unchanged (see Figure 2-14). It was still in cultivated agricultural fields, and the alignments of the roads and ditch lines remained much as they had been over the previous 120 years.

A portion of the 2005 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2005) (Figure 2-15) was added to the overlays to more clearly illustrate changes in the topography at the location of the Lauderdale Plantation Cemetery. This map clearly illustrates that the cemetery location was then partially under the retention pond levee and partially within the limits of what appears to be an exterior drainage ditch (see Figure 2-15). Furthermore, this map indicates that additional retention ponds, adjacent to the first, had been built, again, with no cultural resources survey conducted prior to construction. The areas encompassing the locations of the Lauderdale and Elina sugarhouse complexes remained unaffected in 2005, as did the area surrounding the location of the Elina Plantation cemetery.

Aerial photography dating between 2008 and 2018 (Figures 2-16 thru 2-19) (SONRIS 2008, 2013, 2016, U.S. Geological Survey 2018) show no significant landscape changes in the overlay area. No additional construction had taken place in the vicinity of the Lauderdale Plantation Cemetery, while the Elina Plantation Cemetery location was, and remains, in cultivated agricultural fields.

Conclusions

Elina Plantation Cemetery

CEI's research has determined that the location of the Elina Plantation Cemetery, as depicted on the manuscript version of the 1878 U.S. Coast Survey map (U.S. Coast Survey 1878a) (see Figures 2-1, 2-4) is centered at U.T.M. coordinates 15R, 700480.38 E., 3327647.75 N. Here, again, this map was the only cartographic source to indicate the presence of a graveyard at this location. As illustrated on the 1878 map, the cemetery was irregular in shape, oriented roughly northwest-southeast, measured roughly 50 m by 30 m, and was isolated in a field far removed from any plantation structure. Once more, it should be emphasized, that the cemetery's dimensions, plan, and orientation might have changed after 1878, if there were subsequent interments. Like at Lauderdale, discussed below, no surface expression of the Elina burial ground appears on any of the examined aerial images dating between 1940 and 2018. CEI has examined (either archaeologically and/or cartographically) several of the cemeteries or anomalies depicted on the U.S. Coast Survey maps covering parts of Ascension and St. James parishes. In most instances, historic aerial photography has shown anomalies, usually clumps of trees, present at those locations well into the twentieth century. However, archaeological investigations have verified the presence of graves in one cemetery (Whitmer 1991) depicted on the 1878 U.S. Coast Survey maps, which had no twentieth-century surface expression.

The cartographic regression analysis indicates that the Elina Plantation Cemetery has been located in plowed agricultural fields since 1877. The surrounding roads and ditch lines have not changed appreciably since then, suggesting that any human burials at that location have not been impacted and could remain relatively intact.

Lauderdale Plantation Cemetery

The research conducted by Coastal Environments, Inc. (CEI), has determined that the Lauderdale Plantation Cemetery, as depicted on the manuscript version of the 1878 U.S. Coast Survey map (U.S. Coast Survey 1878a) was centered near UTM coordinates 15R, 69989.89 E, 3327823.94 N (NAD 83) (Figure 2-20). The only cartographic source that depicts a cemetery at this location is that particular map (see Figures 2-1, 2-4) (U.S.



Figure 2-14. A portion of the 1998 Strategic Online Natural Resources (SONRIS) Aerial Photograph (SONRIS 1998) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-15. A portion of the 2005 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2005) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-16. A portion of the 2008 Strategic Online Natural Resources (SONRIS) Aerial Photograph (SONRIS 2008) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-17. A portion of the 2013 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph (SONRIS 2013) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-18. A portion of the 2016 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph (SONRIS 2016) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.


Figure 2-19. A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.



Figure 2-20. A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the locations of the Lauderdale (left) and Elina (right) plantation anomalies highlighted in yellow. The locations of the Lauderdale (upper right), Elina (central), and Acadia (lower right) sugarhouse complexes are highlighted in orange. The red line represents the study area boundary.

Coast Survey 1878a). That source indicates that the graveyard was roughly oval in plan, oriented generally northeast-southwest, covered an area measuring approximately 80 m long and 30 m wide, and was isolated in a sugarcane field well away from any plantation structure. It should be noted, however, that those dimensions and placement represent what the surveyors recorded at a specific point in time. Additional burials could have been made in subsequent years, so that the cemetery's size, plan, and spatial extent could have could have changed significantly. Aerial photographic imagery dating between 1940 and 2018 shows no topographic anomalies at this location to suggest the presence of a burial ground.

At some time between 1978 and 1998, a large retention pond was excavated on the Mosaic Faustina property at the Lauderdale Plantation Cemetery location. The present overlays indicate the area is now partially beneath the levee and exterior drainage of that pond. Prior to 2005, a second series of ponds was excavated. It is not known how these plant enlargements impacted the cemetery location. It is possible that burials are still present underneath the levee, while others may have been destroyed by the exterior drainage ditch and/or second set of ponds.

Recommendations

Elina Plantation Cemetery

The Elina Plantation Cemetery location lies within the boundaries of the current study area. Archeological investigations are necessary to physically verify the cemetery location identified by the present cartographic regression analysis. The archaeological examination should not be confined to the area identified above but should be extended into the adjacent fields to insure that possible human interments were not made outside the area illustrated on the 1878 map at some previous or subsequent point in time.

The fieldwork should include several complimentary techniques. Initially, a metal detector scan should be made 1) over the surface of the cemetery location, 2) along the banks of the surrounding ditches, and 3) in the surrounding fields to determine whether coffin nails, coffin hardware, or metallic grave markers or offerings are present. Second, an intensive surface survey should be made in the cemetery location and the surrounding fields to determine if there is an associated artifact scatter like the one reported at the Buena Vista Cemetery (Jackson et al. 2019). Third, mechanical trenching or stripping should be conducted at the cemetery location and in the surrounding fields. These excavations should be conducted in good weather conditions, so that the bottoms and sides of the trenches can be carefully examined without the interference of standing or seeping water. The excavation should proceed slowly and in levels not exceeding 5 cm in depth. Intensive probing at not more than 20-cm intervals should be conducted in the bottoms of the trenches as the stripping proceeds to 1) prevent inadvertent disturbance of human remains and to 2) identify possible grave locations that are not clearly visible. Probing should be initiated immediately after the plow zone has been removed. Additional metal detector scans should be conducted in the bottoms of the trenches as excavations proceed to determine if coffin nails, hardware, or metallic markers or offerings are present. Trenching should proceed to at least 1 m below the existing ground surface or until visible pit outlines or burials are encountered. The fieldcrew conducting these investigations should have extensive experience in delineating historic cemeteries in Lower Mississippi Valley alluvial settings. In addition, cadaver dogs should be used in this examination, as they have successfully located graves up to 3,000 years old in a number of archaeological investigations.

Lauderdale Plantation Cemetery

The location of the Lauderdale Plantation Cemetery is outside the limits of the current study area. It is situated on the Mosiac Faustina property bordering the project area on its upriver (i.e., northwestern) side. As noted above, plant expansion prior to 1998 and, again, prior to 2005 may have impacted the cemetery location. It is entirely possible that intact portions of the cemetery still exist under the levee of the retention pond built prior to 1998. It is recommended that the Louisiana Division of Archaeology be notified of these findings. Furthermore, the Louisiana Division of Archaeology should be aware of the possible existence of archaeological remains associated with the Lauderdale and Elina plantation sugarhouse complexes, both located on parts of the Mosaic Faustina property, which have not been surveyed for cultural resources and lie outside the limits of the current study area.

PART 3: BUENA VISTA PLANTATION CEMETERY

Introduction

Both the manuscript and published versions of the U.S. Coast Survey maps (U.S. Coast Survey 1878a, 1878b) (discussed below) show the Buena Vista Plantation Cemetery as an oval-shaped area with a central cross situated in the middle of fields isolated from other plantation structures. In 2019, TerraXplorations, Inc., (Jackson et al. 2019) conducted mechanical trenching to locate the graveyard and define its limits. The present research uses cartographic regression analysis to verify the site location and assesses the previous archaeological research conducted at the cemetery location.

Historical Context

Buena Vista plantation was owned by the Winchester family for at least four decades. As early as the 1828-29 growing season, the Winchesters, headed by Benjamin Landry Winchester, were growing sugarcane on the right descending (west) bank of the Mississippi River (*The Louisiana Planter and Sugar Manufacturer* 1892:65). Benjamin Winchester was born ca. 1790 in Baltimore County, Maryland, and lived in Virginia and Kentucky prior to moving to Louisiana in 1813. He was a lawyer by profession, served several terms in the Louisiana Legislature, and was a State District Judge. In 1819, he married Carmelite Constant, and together they had ten children (*The Advocate* 1968, p. 1-E; *The Times-Picayune* 1844:2).

Benjamin Winchester was a large-scale sugar planter in St. James Parish, as indicated by the number of slaves he owned. As early as 1830, Winchester owned 82 slaves (U.S. Census 1830). Within a decade, that number had increased to 133 (U.S. Census 1840). Slave schedules attached to the 1850 U.S. Census enumerate Benjamin Winchester as owning 197 slaves. Demographics derived from census data indicate that the 1850 Buena Vista slave population included 107 males (54.31 percent) and 90 females (45.59 percent). The male slaves ranged in age from 2 months to 65 years old (average 25.69 years), while the females were between 2 months and 60 years old (average 20.42 years) (U.S. Census 1850a). Three women and two men were enumerated as being mulattos; the remainder were listed as black.

Benjamin Winchester died while visiting Havana, Cuba, on March 14, 1852, and was subsequently buried in Lafayette Cemetery No. 1 in New Orleans (*The New Orleans Weekly Delta* 1852:8; Find A Grave 2020). However, his widow and son, William Winchester, continued to operate the plantation after his death. The 1860 U.S.

Cartographic Regression Analysis

Census places the Winchester household directly downriver from Acadia Plantation. It was headed by William Winchester (58), who was listed as having real estate worth \$111,000 and personal property valued at \$186,112. Household members included Dick Winchester (27 and plantation manager), Mary Winchester (21), Sidney Winchester (18), Ruth Winchester (13), and gardener Louis Perram (38) (U.S. Census 1860c).

The slave schedules of the 1860 U.S. Census list the Widow Benjamin Winchester as owning 223 slaves. Demographics derived from these data indicate the slave population on Buena Vista at that time included 109 males (48.88 percent) and 114 females (51.12 percent). The male population ranged in age from 10 months to 60 years (average 25.20 years), while the females were between 10 months and 60 years of age (average 25.15 years). The 1860 slave schedules list 100 percent of the male slaves as being black, whereas 18 percent of the females were enumerated as mulattos (U.S. Census 1860a).

During the decade between the 1850 and 1860 censuses, the slave population at Buena Vista increased by 26, or 13 percent. The percentage of males dropped nearly 5 percent during this time, while the percentage of females increased 12 percent. While the average age of the males remained almost the same, the average age of the females at Buena Vista increased from 20 to 25 years. Comparison of the numbers enumerated in the two censuses indicates a 14 percent increase in the number of mulatto women at Buena Vista.

Sugar records for the 1865-66 growing season, list Carmelite Winchester (the Widow Benjamin Winchester) as owning Buena Vista Plantation and producing 140 hogsheads (a barrel containing approximately 1,200 pounds) of sugar that season (*Commercial Bulletin, Price-Current and Shipping List* 1866:3). The land-use history of Buena Vista plantation during the years immediately following the end of the Civil War are not clear. In December 1865 there were 57 freedmen employed on Buena Vista Plantation. The pay roll for December 30, 1865, lists G. Culbertson as the employer (Freedmen Bureau 1865e). A paragraph appearing in J. T. Throwbridge's *The South: A Tour of its Battle-fields and Ruined Cities…* gives an account of the freedmen employed on Buena Vista sometime around 1865:

Occasionally I heard of one who had taken a sugar plantation. Mr.———, a merchant of New York, told me he had for two years been working the Buena Vista plantation, in St. James Parish. He employed an agent, visited the place himself once a year. There were twelve hundred acres under cultivation, for which he paid an annual rent of sixteen thousand dollars. There was one hundred thousand dollars' worth of machinery on the plantation. He employed sixty freedmen. They worked faithfully and well, but needed careful management. During the past year but one had deserted, while two had been discharged. They received one third of their wages monthly, and the remainder at the end of the year. If they were paid in full as fast as their work was done, when sugar-making season comes they would be apt to quit, the labor is so hard,—though we pay them then fifty cents a night extra [Throwbridge 1866:411].

The unnamed individual in this account was, undoubtedly, Culbertson, and it appears that he paid the Winchester's rent on this property.

As early as April 1866, there was a freedmen school on Buena Vista being operated by the federal government to provide basic education to the newly freed slave population (Freedmen Bureau 1866b). The Buena Vista School was one of only four operated by the Freedmen Bureau in Ascension and St. James parishes. It was open at least until August 1868 (Freedmen Bureau 1868).

In 1868, William Henry Aymar purchased Buena Vista Plantation for \$130,000 (*The Times-Picayune* 1868:2). Aymar was a native of St. Andrews, New Brunswick, born on May 24, 1833. He married Elizabeth Sparks, born is Sicily, in New Orleans on June 23, 1866 (Huguenot Society of America 1899:209). He was a commission merchant in New Orleans and made Buena Vista his home while continuing his work in New Orleans (*The Times-Picayune* 1872:16).

Like many planters throughout the South after the Civil War, Aymar had difficulty securing labor to work Buena Vista. Several planters along the lower Mississippi River tried (many unsuccessfully) to find alternatives to the local black population, including the use of immigrant Sicilians and Chinese. An article in the December 6, 1870, edition of *The New Orleans Republican* is the only evidence yet found of Aymar attempting to use Chinese labor on Buena Vista:

Mr. A. Kissam, who was connected with *Mr.* Gardner in the conveyance of some number of Chinamen from the Pacific coast to New Orleans, has recently arrived here from Texas, bringing with him one hundred and ten Celestials, with whom he made a contract in that State. Of this new arrival fifty-eight are engaged for the Buena Vista plantation, belonging to *Mr.* W. H. Aymar, and the remainder, fifty-two in number, for the plantation of *Mr.* William Stackhouse [The New Orleans Republican 1870:4].

It is not known if these Chinese laborers ever arrived at Buena Vista, or, if they did, how long they remained there.

By 1872, Aymar had 800 acres in cultivation on Buena Vista—480 acres in sugarcane and the remainder in corn (*The Times-Picayune* 1872:16). However, Aymar was unable to pay the taxes on the plantation, which was put up for sheriff's sale in August 1872, "to be sold in lots of ten and fifty acres" (*Le Louisianais* 1872:2). The sales advertisement describes the property as follows:

A certain tract of land containing three thousand and seven hundred acres, established as a sugar plantation, together with the sugar house and all buildings and improvements thereunto belonging, bounded above by the lands of Boyd and Martin, and below by those of J. A. Gaudet & Co. fronting on the Mississippi river, about seventy miles above New Orleans, on the right bank of the Parish of St. James, and known as the "Winchester" or "Buena Vista" Plantation, being now the property of William H. Aymar [Le Louisianais 1872:2]

Aymar made several appeals to have his taxes lowered, and evidently the 1873 tax sale was postponed for over a year until another sheriff's sale was advertised in November 1873:

....sale for non payment of taxes for the years between 1869 and 1873, by the tax collector John Kerrigan, Saturday, November 22, noon, at the Courthouse, the here-described properties of W. H. Aymar: 1st. the habitation Buena Vista, situated on the right [descending] side of the Mississippi, measuring 13 arpents font on the river, with a double concession; bordered on one side by Evariste Mire and on the other by Mme. Valery Gaudet; 2nd a tract of land having 1,427 superficial acres at the rear of the first; 3rd another tract of land having 641 acres, old concession made to Mme Benjamin Winchester; 4th another tract of land having 364 acres, together with 5th 49 mules and 6 carts, complete [Le Meschacebe 1873:2].

Apparently, Aymar was able to maintain ownership of Buena Vista. However, his tax problems were not his only source of worry. In February 1875, there was a dispute between some of the laborers on Buena Vista and a storekeeper named Chiquet. According to an account appearing in the February 20, 1875, edition of the *Donald-sonville Chief*, Chiquet had advanced supplies to some of the sharecroppers working on Buena Vista. However, when the agreed time for payment arrived, the workers were not able to settle their debts. As a consequence, Chiquet "sequestered sugar owned by his debtors to secure his claims against them." Notwithstanding, the laborers were able to take some of the sugar and ship it to New Orleans where it was sold. To prevent that from happening again, the merchant got Deputy Sheriff Adam Travis to organize a posse of six men to seize the remaining hogsheads of sugar. The report of this incident continues:

The laborers on the place learned of the approach of the Deputy Sheriff, and arming themselves they attacked and fired upon the posse, killing a colored man named Eugene Eller and wounding four others severely. Messrs. Chiquet, Travis and one Arthur Leander were captured and held in custody by the infuriated rioters, and rumors of terrible punishment being inflicted upon the prisoners circulated, but proved entirely erroneous. When news of the fight reached the Court-House another posse was formed, under the lead of the chef Deputy Sheriff J. P. Landry, and to this body no resistance was made. The ringleaders of the rioters, Wm. *Riley and Harry Ross, were arrested and taken to jail. A preliminary examination of the case before the Parish Judge was fixed for yesterday, the result of which we have not yet learned [The Donaldsonville Chief* 1875:3].

In February 1885, Buena Vista was, once more, put up for sheriff's sale as a result of a lawsuit brought against Aymar by John W. Platt (*The Donaldsonville Chief* 1885:1). Again, Aymar appears to have retained ownership of Buena Vista, because in December 1893 he advertised the upper part of the plantation for sale:

The upper part of Buena Vista plantation, parish of St. James, consisting about 400 arpents, high, sandy land, all cleared, fronting Mississippi river. There are forty arpents stubble cane, and over fifty arpents have been planted in peas this season. Cane for planting can be purchased in neighborhood. Winchester Station and Texas and Pacific switch on the plantation [The Times-Picayune 1893:5].

William Henry Aymar died in Covington, Louisiana, on March 25, 1900. His body was returned to New Brunswick where it was buried in a rural cemetery (Huguenot Society of America 1899:209). That same year, Barton & Himel were listed as the proprietors of Buena Vista (Rightor 1900;700).

Previous Research

The 2017 Cox/McLain survey area (discussed more fully in Part 1 of the current report) included the Buena Vista Plantation Cemetery location. The graveyard location was within the high-probability area for site occurrence (Rush et al. 2018:Figure 7). Thus, shovel testing was conducted at 30-m intervals on survey transects spaced 30 m apart, in accordance with Louisiana Division of Archaeology guidelines. Because the survey was undertaken between March and May, it is presumed that ground surface visibility was good to excellent. During that time of year, the young sugarcane would have just started to sprout, and there would have been minimal ground cover. Numerous shovel tests were excavated in the Buena Vista Cemetery location (Rush et al. 2018:Appendix A: Sheet 6). All were negative. Additionally, no artifacts were recorded in that area.

In October 2019, when TerraXplorations, Inc., conducted their initial investigations for the Acadia Plantation Cemetery (Peebles 2019) (see Part 1 of the current report), no archaeological excavations were undertaken to locate and delineate the Buena Vista Plantation Cemetery. This was evidently done because the probable graveyard location fell within a planned green space along the downriver margin of the proposed Formosa plant. Apparently, inaccurate latitude/longitude lines added to the 1878 U.S. Coast Survey maps were used to pinpoint the suspected location of the Buena Vista Cemetery, and the dimensions of the cemetery were scaled off the 1878 maps. The inaccurate location and the scaled dimensions were used to fence off an area to prevent inadvertent disturbance of graves during planned construction.

When it was noted that TerraXploration's initial excavations at the Acadia Plantation Cemetery had been made in the wrong location, that company returned to conduct additional trenching (discussed fully in Part 1 of the current report). It was also realized that the fences at Buena Vista had probably been erected some distance away from the actual cemetery location. As a result, TerraXplorations also conducted trenching at Buena Vista to actually pinpoint the location of the graveyard and define its limits (Jackson et al. 2019).

Seventeen trenches were initially planned for the excavations at Buena Vista (Figure 3-1) (Jackson et al. 2019:Figure 5.3). However, only 8 trenches (some only segments of trenches) were dug (Figure 3-2) (Jackson et al.2019:Figure 6.2). The reason given for the reduction in the number of trenches actually excavated was "to limit physical impacts to the cemetery and possible human remains" (Jackson et al. 2019:31).

The archaeological techniques employed at Buena Vista were confined to mechanical trenching alone. Metal detector scans and probing in the trenches were not conducted. Additionally, some of the trenches flooded while digging was underway (Figure 3-3) (Jackson et al. 2019: Figure 6.1), thus severely limiting visibility. In spite of these deficiencies, four "burials," eight "potential grave shafts," and 14 "posts or post holes" were located (Jackson et al. 2019:31). If the excavations had been conducted during better field conditions, and if complementary



Figure 3-1. Aerial photograph showing the proposed locations of trenches to be excavated at the Buena Vista Plantation Cemetery by TerraXplorations, Inc., in 2019 (after Jackson et al. 2019:Figure 5.3).



Figure 3-2. Aerial photograph showing the locations of trenches actually excavated by TerraXplorations, Inc., at the Buena Vista Plantation Cemetery (after Jackson et al. 2019:Figure 6.2).



Figure 3-3. Photograph showing the flooded trenches being excavated by TerraXplorations, Inc., at the Buena Vista Plantation Cemetery in 2019 (after Jackson et al. 2019:Figure 6.1).

techniques had been used (i.e., metal detector scans, probing, and cadaver dogs), the number of burials and associated features identified might have been greater. In many instances, it is difficult to visually detect possible grave shafts, as they frequently occur as very subtle soil discolorations. Therefore, it is entirely possible that there were grave shafts in the outlying trenches that were not detected visually or were obscured by standing water.

Since no photographs of any of the burials, potential grave shafts or posts (and only one photograph of a trench) were presented in the report, it is impossible to assess the interpretations presented by Jackson et al. (2019). For example, 14 posts were reported. It was suggested (Jackson et al. 2019:33) that these were possibly associated with an artifact scatter at the cemetery location. The artifact scatter was not reported in the original Cox/McLain report. None of these posts were evidently cross sectioned. At least two of these features "Wood Post 1" and "Wood Post 2", were described as being 5 x 15 cm in plan (Jackson et al. 2019:35), which is equivalent to a 2 x 6-inch board, not a typical fence post size. It is possible that those "posts" may have served as grave markers.

The artifact scatter mentioned above was described as "a heavy concentration of brick fragments, metal, glass, and animal bone....nearest the east-west road, on either side" (Jackson et al. 2019:33). The 2018 Cox/Mc-Lain survey did record this scatter as an archaeological site. During TerraXplorations' work at Buena Vista, the limits of this scatter were not delineated, as is required by the Louisiana Division of Archaeology during a Phase I survey. Jackson et al. (2019:33) state, without supporting evidence, that "the recovered artifacts are undoubtedly associated with the cemetery but to what extent is unclear." Correlating the limits of the scatter with those of the cemetery is an essential step in determining whether the two are actually related. Also, an assessment of the age of the scatter is necessary for meaningful interpretation. That information is not provided in their report.

Cartographic Regression Analysis

The cartographic regression analysis conducted in relation to the Buena Vista Plantation Cemetery used the same procedures and sources employed in the examination of the Acadia (discussed in Part 1 of the current re-

port), Elina, and Lauderdale (both discussed in Part 2 of the current report) plantation cemeteries. The location and aerial coverage of the detailed overlays discussed below are shown in Figure 3-4.

After all of the cartographic images were adjusted to correlate past and modern landscape features and corrected for distortion, the location of the Buena Vista Cemetery was added to the overlays and highlighted in blue. This blue rectangle in Figures 3-5 to 3-19 corresponds with the limits of a clump of trees shown on the 1940 U.S. Department of Agricultural aerial photograph, which corresponds to the cemetery location shown on the 1878 U.S. Coast Survey maps discussed below. The locations of TerraXplorations' trenches have been added for subsequent interpretation.

The manuscript version of the U.S. Coast Survey maps (Figure 3-5) (U.S. Coast Survey 1878a) shows the Buena Vista Plantation Cemetery as an oval with a central cross, signifying that it was a burial ground. It measured approximately 45 m northwest-southeast by roughly 30 m northeast-southwest in 1877. It was then situated in a field (either pasture or planted in crops other than sugarcane) and isolated well away from any plantation structure. The cemetery was positioned on the south side of a field road and centered on a ditch that ran to the south, south west.

The published version of the 1878 U.S. Coast Survey map (Figure 3-6) (U.S. Coast Survey 1878b) illustrates the Buena Vista Plantation Cemetery in the same manner as the manuscript version discussed above (see Figure 3-5). An apparent tear in the original map shifts the cemetery location slightly to the southeast, but, overall, the two maps are identical with the exception of the ground cover not illustrated in the published version (see Figure 3-6).

The 1894 Mississippi River Commission map (Figure 3-7) (Mississippi River Commission 1894) does not show the graveyard. The cemetery location was then depicted as being in a fallow field, when Buena Vista Plantation belonged to W. H. Aymar. The field roads to the north and south of the cemetery location, shown on the 1878 maps, were not illustrated on the 1894 map (cf., Figures 3-5 thru 3-7). The adjacent main field roads running northeast-southwest on the 1878 maps were, however, depicted on the 1894 map (cf., Figures 3-5 thru 3-7).

The 1940 U.S. Department of Agriculture aerial photograph mosaic (Figure 3-8) (U.S. Department of Agriculture 1940) shows a clump of trees that corresponds to the location of the cemetery depicted on the 1878 maps. That cluster of trees was rectangular in plan and measured approximately 60 m northwest-southeast by about 45 m northeast-southwest. It was bordered on the north by a field road and on the west by a ditch. Two large trees were growing on the opposite bank of the ditch, each near the northeastern and southeastern corners of the adjacent clump of trees. The main field roads and ditch lines match those depicted on the 1878 maps (cf. Figures 3-5, 3-6, 3-8). By 1940, a smaller road ran through the eastern margin of the trees and probably provided access to the cemetery (see Figure 3-8).

A portion of the 1947 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:31,680 series) (U.S. Geological Survey 1947) was included in the overlays (Figure 3-9). Although it shows little detail, compared to earlier and later cartographic sources, it does illustrate the landscape in regard to section and township lines. The Buena Vista Cemetery location is in Section 5, T. 12 S., R. 15 E. The western margin of the clump of trees shown on the 1940 aerial imagery (see Figure 3-8) would have been on the line dividing Sections 5 and 6.

By 1953, trees no longer covered the entire cemetery location (Figure 3-10). Rather, there was a line of trees on the opposite side of the ditch bordering the cemetery's western margin and another line of trees on its eastern side. What appears to be either a ditch or a small road ran from the southwestern corner of the cemetery location northwest through the field to connect to a main plantation road.

The 1957 aerial photograph mosaic (Figure 3-11) (U.S. Department of Agriculture 1957) shows no evident changes in the topography surrounding the cemetery location since 1953. However, by 1961 (Figure 3-12), the road along the northern margin of the cemetery location no longer ran entirely across the fields to connect to the main plantation roads to the east and west. Additionally, a road or ditch had been established along the southern margin of the cemetery location, which ran to the main plantation road to the east (see Figure 3-12). The 1971 aerial photograph (Figure 3-13) (U.S. Department of Agriculture 1971) shows basically the same topography.



Figure 3-4. A portion of the 2018 U.S. Geological Survey aerial photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the location and coverage of the detailed overlays relating to the Buena Vista Plantation Cemetery.



Figure 3-5. A portion of the 1878 U.S. Coast Survey manuscript map (U.S. Coast Survey 1878a) showing the Buena Vista Plantation Cemetery with a central cross (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-6. A portion of the 1878 U.S. Coast Survey published map (U.S. Coast Survey 1878b) showing the Buena Vista Plantation Cemetery with a central cross (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-7. A portion of the 1894 Mississippi River Commission map (Mississippi River Commission 1894) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-8. A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1940) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-9. A portion of the 1947 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:31,680 series) (U.S. Geological Survey 1947) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-10. A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1953) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-11. A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1957) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-12. A portion of the 1961 U.S. Geological Survey Aerial Photograph (U.S. Geological Survey 1961) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-13. A portion of the 1971 U.S. Department of Agriculture Aerial Photograph (U.S. Department of Agriculture 1971) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-14. A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic (Louisiana Department of Transportation and Development 1978) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-15. A portion of the 1998 Strategic Online Natural Resources (SONRIS) Aerial Photograph (SONRIS 1998) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., 2019 (yellow lines) are also shown.



Figure 3-16. A portion of the 2008 Strategic Online Natural Resources (SONRIS) Aerial Photograph (SONRIS 2008) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-17. A portion of the 2013 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph (SONRIS 2013) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-18. A portion of the 2016 Strategic Online Natural Resources (SONRIS) Color Infrared Aerial Photograph (SONRIS 2016) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.



Figure 3-19. A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the location of the Buena Vista Plantation Cemetery (highlighted in blue). The trenches excavated by TerraXplorations, Inc., in 2019 (yellow lines) are also shown.

By 1978, the Buena Vista Cemetery location had been cleared of trees, and the site area plowed into cultivated fields (Figure 3-14). The road bordering the graveyard area on the north had been reestablished, and the small roads or ditches running to and from the southern corners of the cemetery location were no longer present.

Aerial photographs dating between 1998 and 2018 (Figures 3-15 thru 3-19) show no changes in the topography surrounding the Buena Vista Plantation Cemetery location since 1978. All of the major roads and drainages did not change during that period. The site of the graveyard remained in plowed agricultural fields.

Conclusions

The research conducted by Coastal Environments, Inc. (CEI) has determined that the Buena Vista Plantation Cemetery, as depicted on the 1878 U.S. Coast Survey maps (U.S. Coast Survey 1878a, 1878b) was centered near UTM coordinates 15R, 701405.91 E., 3326920.89 N. (NAD 83). A rectangular stand of trees depicted on 1940 aerial imagery (see Figure 3-8), which corresponds to the 1878 cemetery location (see Figures 3-5 and 3-6), measured roughly 60 m northwest-southeast by approximately 45 m northeast-southwest. The overlays prepared for this study indicate that the landscape in the cemetery location has remained largely unchanged, with the exception of the removal of trees sometime between 1971 and 1978.

The cartographic regression analysis has also determined that the trenches excavated by TerraXplorations were dug in the correct location and extended well beyond the tree line shown on historic aerial imagery. Although not clearly indicated in the TerraXplorations report, specifically in Jackson et al. 2019:Figure 7.1 (Figure 3-20), the eastern limits of the cemetery remain undetermined. That is because no right-of-entry was acquired for the adjacent property onto which the cemetery may extend.

Note that the 1878 U.S. Coast Survey maps (see Figures 3-5 and 3-6) depict the Buena Vista Plantation Cemetery as it was in 1877. Earlier burials with no surface expression may have occurred outside the cemetery boundaries depicted by the surveyors. Likewise, later interments could have occurred outside these 1877 boundaries, making the cemetery larger than it was depicted in 1877.

As previously noted, the 2019 by TerraXplorations excavations were conducted under less than ideal field conditions, which hampered close examination and recordation of trench floors and made the identification of grave shafts and associated features difficult. Also, mechanical stripping was the only archaeological technique employed, and none of the more subtle and less invasive techniques (I.e., metal detector scans, probing, and cadaver dogs) were used. These techniques have proven effective for locating graves and may have revealed additional interments here.

Recommendations

In a recent meeting with the Louisiana Division of Archaeology, it was disclosed that the Buena Vista Plantation Cemetery location investigated by TerraXplorations is within a 300-foot-wide buffer or green space on the downriver side of the planned Formosa plant. The original fence has been relocated to the proper location and encloses the site on three sides and includes a 25-foot-wide buffer zone. The fence is open on its eastern side where it adjoins the neighboring property and has gaps in its northern and southern sided where an existing pipeline crosses the cemetery. Aerial photography (see Figure 3-16) suggests the pipeline was built prior to 2008; its construction undoubtedly impacted some of the interments in the graveyard.

Of concern is Formosa's either recent or planned acquisition of the adjoining property. If there are plans to expand the proposed plant facility, how this will affect the green space surrounding the graveyard and how this will limit access to the cemetery by descendants of those buried there must be determined. If future plant expansion occurs in the cemetery area, additional excavations must be conducted to more precisely define the limits of the graveyard, particularly along its eastern side.



Figure 3-20. Aerial photograph showing TerraXplorations' "newly defined limits of the Buena Vista Cemetery" (after Jackson et al. 2019:Figure 7.1). Note that the western limits of the graveyard were not determined archaeologically, because TerraXplorations did not have right-of-entry to conduct trenching on the adjacent property.

Archaeological examination should extend into the adjacent fields to insure that possible human interments were not made outside the area illustrated on the 1878 map at some previous or subsequent point in time. The area where TerraXplorations' outlying trenches are located should be reexamined to ensure that possible interments were not missed in those areas. Also, the eastern limits of the graveyard should be determined archaeologically.

The fieldwork should include several complimentary techniques. Initially, a metal detector scan should be made 1) over the surface of the cemetery location, 2) along the banks of the surrounding ditches, and 3) in the surrounding fields to determine whether coffin nails, coffin hardware, or metallic grave markers or offerings are present. Second, mechanical trenching or stripping should be conducted in the surrounding fields. These excavations should be conducted in good weather conditions, so that the bottoms and sides of the trenches can be carefully examined without the interference of standing or seeping water. The excavation should proceed slowly and in levels not exceeding 5 cm in depth. Intensive probing at not more than 20-cm intervals should be conducted in the bottoms of the trenches as the stripping proceeds to 1) prevent inadvertent disturbance of human remains and to 2) identify possible grave locations that are not clearly visible. Probing should be initiated immediately after the plow zone has been removed. Additional metal detector scans should be conducted in the bottoms of the trenches as excavations proceed to determine if coffin nails, hardware, or metallic markers or offerings are present. Trenching should proceed to at least 1 m below the existing ground surface or until visible pit outlines or burials are encountered. The fieldcrew conducting these investigations should have extensive experience in delineating historic cemeteries in Lower Mississippi Valley alluvial settings. In addition, cadaver dogs should be used in this examination, as they have successfully located graves up to 3,000 years old in a number of archaeological investigations.

Additionally, the limits of the surface artifact scatter identified by Jackson et al. 2019 should be delineated to see if it corresponds to the limits of the cemetery. Artifact analysis is required to ascertain whether the scatter and cemetery are contemporary. If it is determined that the scatter is related to the cemetery, this type of surface expression might be found on other unmarked cemeteries, particularly those not depicted on historic maps or not recognized as anomalies on historic aerial imagery.

PART 4: OTHER POSSIBLE CEMETERIES

Introduction

One of the tasks outlined for the current project was to identify other possible cemetery locations within the project area, which were not shown on historic maps. Some might question the rational for this undertaking, especially since graveyards have already been identified (either cartographically or archaeologically) on the former Lauderdale, Elina, Acadia, and Buena Vista plantations, which make up the project area. Why would there be more than one cemetery for slaves or laborers on a single plantation?

There are several reasons to expect that a plantation might have more than one cemetery. First, plantation boundaries were not static, and land use and settlement patterns along the lower Mississippi River changed through time. The Acadian exiles who were settled along the river in St. James Parish during the late eighteenth century normally received small land grants from the Spanish Government. These were narrow tracts, typically having between 6 and 8 arpents frontage on the river (one arpent equaling approximately 192 feet) and extending back an "ordinary depth" of 40 arpents (7,680 feet or nearly 1.5 miles) into the often-flooded cypress backswamps (Kniffen 1968:128). These Acadians were usually small-scale farmers who grew cotton, rice, indigo, and tobacco on the higher natural levees of the river. Many also owned a few African or, sometimes, Native American slaves (Marchand 1943). When these slaves died, their Acadian owners would have designated a place to bury the dead. Thus, each of these small "*habitations*," likely had their own slave graveyards.

In the late 1820s and early 1830s, scores of Anglo-American planters started moving into southeast Louisiana to seek their fortunes in the burgeoning agricultural economy that had shifted from cotton and tobacco to sugarcane. The Anglo-Americans and some Creole families who were descendants of the original Acadian "*habitants*," started amassing tracts of land along the river by purchasing the smaller Acadian *habitations* and consolidating them into larger plantations, each with an increasingly larger slave population, and each with a place set aside to bury deceased slaves.

During the two decades prior to the Civil War, land holdings increased in size in proportion to increased planter wealth. Adjacent plantations were often purchased to boost acreage and sugarcane production. Thus, a single antebellum plantation might consist of several earlier, smaller plantations, as well as sundry former Acadian *habitations*, each with its own cemetery (Rehder 1971).

There is another reason to expect that a single plantation might have more than one graveyard used to inter deceased slaves or workers. During the latter part of the eighteenth century, Spanish authorities required that individuals receiving government land grants clear and plant their properties, minimally a distance of two arpents from the river (Beers 1989:114; Marchand 1943:43). These early settlers' fields would have only extended back a short distance from the river. It is probable that the graveyards set aside for slaves would have been on the margins of the cultivated fields, perhaps in the woods behind the cultivated land. As more acreage to the rear of the plantation was put into cultivation through time, the locations of these early graveyards could have been surrounded by cropland. Allowing additional interments in these early cemeteries would have caused them to increase in size, thus reducing the amount of land available for cultivation. Conceivably, planters could have refused to allow additional burials in the early cemeteries and required their slaves to select other burial locations on less agriculturally desirable lands, farther back from the river. Thus, a large nineteenth-century plantation might have numerous locations where deceased slaves or workers were buried over the course of time, theoretically, those burials closest to the river being older than those farther removed.

The Anomalies

The graveyards on Acadia, Buena Vista, Elina, and Lauderdale plantations were depicted on the 1878 U.S. Coast Survey charts, as discussed in other parts of this report. In historic aerial photographs, the Acadia and Buena Vista plantation cemeteries also appeared as isolated "anomalies" or clumps of trees surrounded by plowed agricultural fields. Similar clumps of trees did not appear on these aerial images at the Elina and Lauderdale cemetery locations.

While preparing the general overlays, CEI noted other "anomalies" within, and immediately adjacent to, the current study area. In some instances, it was relatively easy to identify the source of the anomalies. Cartographic regression analysis determined that some were the locations of former sugarhouse complexes, which probably included not only the archaeological remains of the sugarhouse, but also purgeries, mule barns, blacksmith shops, cane sheds, mill ponds, and, sometimes, workers' quarters. Massive, underground brick foundations associated with former sugarhouses have the potential to damage farm equipment, and it is usually easier for the farmer to plow around these obstacles rather than attempt to remove them. Frequently, these sites become overgrown with dense vegetation or become hard-packed areas where sugarcane is now loaded on trucks for transport to present-day mills. The sources of other anomalies, however, could not be determined by cartographic analysis alone, and require archaeological investigations to ascertain the reasons why those areas were not being plowed in earlier years.

The 1940 U.S. Department of Agriculture aerial photograph mosaic (U.S. Department of Agriculture 1940) (Figure 4-1) shows 13 anomalies in the plowed agricultural fields within and surrounding the current project area. These were assigned alphabetical designations (A-M) for the purpose of discussion, and the locations in regard to the modern landscape are illustrated in Figure 4-2.

Table 4-1 lists each of the anomalies. It shows the years that each appears on historic aerial images dating between 1940 and 1978. Remarks are also included in Table 4-1 regarding whether the anomaly occurs on subsequent aerial images dating between 1998 and 2016 and not included in the general overlays. Some of the anomalies could have been related to structures or buildings that were not clearly visible in the aerial photographs. To ascertain possible relationships to structures, U.S. Geological Survey quadrangles dating between 1939 and 2005 were examined to see if buildings were present at the anomaly locations. To ascertain whether a particular anomaly could be related to a known oil or natural gas well site, the Strategic Online Natural Resources Information System (SONRIS) Oil and Gas Interactive Maps were examined. This information is also included in Table 4-1. While the sources of some the 13 anomalies could be identified, others could not. Where a particular anomaly could be identified, the sources of that information are also provided in Table 4-1.

Most of these 13 anomalies appear on aerial imagery dating between 1940 and 1978 (see Figures 4-1, 4-3 thru 4-7). However, those images do not provide information concerning possible sources. The manuscript and published versions of the 1878 U.S. Coast Survey maps (U.S. Coast Survey 1878a, 1878b) (Figures 4-8, 4-9) and the 1894 Mississippi River Commission map (Mississippi River Commission 1894) (Figure 4-9) do, however, aid in the identification of some of the anomalies, six of which correlate to the locations of former sugarhouse complexes.



A portion of the 1940 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1940) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-1.


Figure 4-2. A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources.





A portion of the 1953 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1953) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-3.



A portion of the 1957 U.S. Department of Agriculture Aerial Photograph Mosaic (U.S. Department of Agriculture 1957) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-4.



A portion of the 1961 U.S. Geological Survey Aerial Photograph (U.S. Geological Survey 1961) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-5.





A portion of the 1971 U.S. Department of Agriculture Aerial Photograph (U.S. Department of Agriculture 1971) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-6.



A portion of the 1978 Louisiana Department of Transportation and Development Aerial Photograph Mosaic (Louisiana Department of Transportation and Development 1978) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-7.







A portion of the 1878 U.S. Coast Survey published map (U.S. Coast Survey 1878b) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-9.

Identified Anomalies

Anomalies A, C, E, F, I, J, K, M

Anomaly A, which is located outside the current project area and on the adjacent Mosaic Faustina property, correlates with the Lauderdale sugarhouse complex (see Figures 4-8 thru 4-10; Table 4-1). Anomaly C corresponds to the old Elina Plantation sugarhouse, associated buildings, and mill pond, located outside the current study area, also on the Mosaic Faustina property. The former Acadia Plantation sugarhouse complex is the source of Anomaly E. It corresponds to Locus 3 of archaeological site 16SJ109 recorded by Cox/McLain in 2017 (Rush et al. 2018). Anomaly I is related to the old Buena Vista sugarhouse complex. Anomaly J is associated with the St. Victoire sugarhouse complex. Both Anomalies I and J are located within that portion of the study area, which has not been surveyed for cultural resources. Anomaly K, corresponding to the location of the St. Alice sugarhouse and associated buildings, is located outside, but adjacent to, the current study area.

Two anomalies appearing on the historic aerial imagery correspond to the locations of former plantation cemeteries. Anomaly F (see Figures 4-1 thru 4-10, Table 4-1) correlates with the Acadia Plantation Cemetery. TerraXplorations, Inc., twice conducted archaeological investigations at that location but failed to find evidence of the graveyard (Peebles 2019; Jackson et al. 2019). Current interpretations presented in Part 1 of this report suggest that none of the trenches excavated by TerraXplorations were located within in the cemetery boundaries. Anomaly M (see Figures 4-1 thru 4-10, Table 4-1) corresponds to the location of the Buena Vista Plantation Cemetery. The source of that anomaly was verified archaeologically by TerraXplorations in 2019 (Jackson et al. 2019), although some question remains as to whether the cemetery's boundaries were adequately defined (see Part 3 of the current report).

Unidentified Anomalies—Possible Cemeteries

Aerial imagery (historic, recent, and modern), historic maps, U.S. Geological Survey quadrangles, and SON-RIS oil and gas well locational information do not provide data that can be used to identify the sources for the remaining five anomalies, four of which fall within the current study area.

Anomaly B

Anomaly B is located in the northeastern corner of the present study area, centered in Section 54, T. 11 S., R. 15 E., some 600 m southeast of the current Mississippi River bankline (see Figures 4-1 thru 4-7, 4-10). It appears on historic aerial imagery dating between 1940 and 1978 (see Figures 4-1, 4-2 thru 4-7), but not on recent and modern aerial photographs (see Figure 4-2, Table 4-1). On the 1940 aerial photograph mosaic (see Figure 4-1), Anomaly B appears as a rectangular area that measures approximately 50 m (northwest-southeast) by roughly 20 to 25 m (northeast-southwest). In subsequent aerial imagery (see Figures 4-3 thru 4-7), Anomaly B appears less than half that size, possibly marked by one or more fair-sized trees. In all these images, Anomaly B was located immediately adjacent to the main field road that ran from River Road southeast to the Texas and Pacific Railroad tracks.

No archaeological site was recorded in the Anomaly B location in 2009 when Earth Search, Inc., conducted a Phase I cultural resources survey for the proposed INCA Refining facility (Harlan et al. 2009). The Anomaly B location was in the high probability area for site occurrence as illustrated by Harlan et al. (2009:Figures 19-20). Consequently, shovel tests were conducted at 30-m intervals on transects spaced 30 m apart, in accordance with Louisiana Division of Archaeology guidelines. The Earth Search report (Harlan et al. 2009) did employ historic maps to develop a land use history for the property, but did not use historic aerial imagery to pinpoint possible site locations. As that survey was conducted in March, the sugarcane had just started to sprout. Ground surface visibility, however, was obscured by standing water and sugarcane chaff remaining from the previous season's harvest (Harlan et al. 2009:94). It is entirely possible that a site was not recorded at this location in 2009 because ground cover restricted visibility. Additionally, Anomaly B, due to its relatively small size, could have fallen between shovel tests excavated at 30 m intervals.

In late August 2018, TerraXplorations, Inc., surveyed a 32.38-acre tract that included the Anomaly B Location (Jackson et al. 2018), which had been previously surveyed by Earth Search, Inc. in 2009 (Harlan et al 2009). At the time of the 2018 survey, the fields surrounding the Anomaly B location were fallow and covered by "tall grass and weeds" (Jackson et al. 2018:1). The survey area was considered to have a high potential for cultural resources and was shovel tested at 30-m intervals on transects spaced 30 m apart, in accordance with Louisiana Division of Archaeology guidelines. Several of the shovel tests fell within the Anomaly B Location (Jackson et al. 2018:Figure 6.1). None produced artifacts or any indication of the probable source of Anomaly B. However, systematic shovel testing required for a Phase I survey, is not, unto itself, an effective technique for locating unmarked cemeteries, and Anomaly B could have fallen between shovel tests, as noted above.

Anomaly D

Anomaly D is located within the current study area (see Figure 4-2). Historic aerial imagery dating between 1940 and 1953 (see Figures 4-1, 4-3) shows Anomaly D as an irregularly shaped area situated on the northeastern side of, and immediately adjacent to, the main field road running from River Road across Acadia Plantation southeast to the Texas and Pacific Railroad tracks. The Acadia Plantation road runs along the line dividing Sections 8 and 9, T. 12 S., R. 15 E. (Southeastern Land District West of the Mississippi River). As depicted on these two areal photographs, Anomaly D measured roughly 40 m (northeast-southwest) by about 25 m (northwest-southeast). Subsequent aerial images do not depict anything at this specific location (see Table 4-1).

The Anomaly D location was included in the 2017 Cox/McLain Phase I cultural resources survey for the proposed Formosa Plant (Rush et al. 2018). It fell within an area considered as having a high potential for site occurrence (Rush et al. 2018:Figure 7). Consequently, CoxMcLain's field crew conducted shovel testing on 30-m intervals on transects spaced 30-m apart. As the survey was conducted between March and May 2017, the sugarcane would have just started to sprout, providing good to excellent ground surface visibility. Cox/McLain's field crew did excavate several shovel tests in the Anomaly D location (CC314, CC313, DS506, JM406, BD008, and GD007), all of which were negative (Rush et al. 2018:Appendix A, Sheet 5).

Anomaly G

Anomaly G is located outside of, but adjacent to, the current study area on the Mosaic Faustina property (see Figures 4-1 thru 4-10, Table 4-1). It is situated immediately south of the Texas and Pacific Railroad tracks, which, in 1878, were owned by the New Orleans, Mobile & Texas Rail Road Company (see Figures 4-8, 4-9). Anomaly G is located on the line separating Sections 21 and 22, T. 12 S., R. 15 E (Southwestern Land District West of the Mississippi River) (Figure 4-11). On historic aerial imagery dating between 1940 and 1971 (see Figures 4-1, 4-2 thru 4-7), Anomaly G appears as a rectangular-shaped area, measuring approximately 100 m long (north-east-southwest) by about 40 m wide (northwest-southeast). No cultural resources surveys have been conducted in the Anomaly G location.

Anomaly H

Today, the Anomaly H location is situated on the northeastern side, and immediately adjacent to, the main Acadia Plantation road, on the line dividing Sections 77 and 78, T. 12 S., R. 15 E. (Southeastern Land District West of the Mississippi River) (see Figures 4-2; 4-11). Current aerial imagery (see Figure 4-2) indicates that the Anomaly H location is probably now used to load sugarcane into trucks for transport to modern-day mills.

Anomaly H is not clearly evident on the 1940 aerial photograph mosaic (see Figure 4-1) (U.S. Department of Agriculture 1940). However, when the image is enlarged, a rectangular area not under cultivation appears on the south side of a ditch at its intersection with the main Acadia Plantation road. Anomaly H was on the northeastern side of the road, approximately 500 m southeast of the Texas and Pacific Railroad tracks.

In the aerial photographs dating between 1953 and 1961, Anomaly H is clearly visible (see Figures 4-3 thru 4-5). It appears rectangular in plan, covering an area measuring a maximum of roughly 50 m (northeast-south-



A portion of the 1894 Mississippi River Commission map (Mississippi River Commission 1894) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-10.

Anomaly	1940	Appears on Historic Aerial Imagery				1978	Structures Present on U.S.G.S. <i>Donaldsonville, La</i> , Quadrangle Sheets SONRIS Oil/Gas						SONRIS Oil/Gas Well	Association	Map Source Used to Locate or Identify Anomaly Source 1 Source 2 Source 3			Remarks
A	1940	1953	1957	*	1971	1978	1939	_	_	_	_	_		Lauderdale Sugarhouse Complex	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	Mississippi River Commission 1894	No 1961 Photographic Coverage. Apparent cane loading area depicted on 1998, 2008, 2013, 2016, 2018 aerials.
В	1940	1953	1957	*	1971	1978	—	-	-	-	-	-	-	Unknown	-	-	-	No 1961 Aerial Coverage. Does not show on subsequent aerial photographs.
с	1940	1953	1957	*	1971	1978	_	-	1962	1965	1999	_	_	Elina Sugarhouse Complex	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	Mississippi River Commission 1894	No 1961 Aerial Coverage. Shown on 1998, 2008, 2013, 2016, and 2018 aerials.
D	1940	1953	—	—	—	—	—	_	—	—	—	—	—	Unknown	—	—	—	—
E	1940	1953	1957	1961	1971	-	-	-	-	-	-	-	-	Acadia Sugarhouse Complex	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	Mississippi River Commission 1894	Does not show on subsequent aerial photographs.
F	1940	1953	1957	1961	—	-	—	—	—	—	-	-	—	Acadia Cemetery	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	—	-
G	1940	1953	1957	1961	-	-							_	Unknown	-	-	_	-
н	1940	1953	1957	1961	-	_	—	—	-	—	-	2005	-	Unknown	-	-	-	2005 quadrangle shows spoil pile and structure in this location.
1.0	1940	1953	1957	1961	1971	-	-	-	—	-	-	-	-	Buena Vista Sugarhouse Complex	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	-	Does not show on subsequent aerial photographs.
L	1940	1953	1957	1961	1971	1978	-	-	-	-	1999	2005	-	St. Victoire Sugarhouse Complex	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	Mississippi River Commission 1894	Shown on 1998, 2008, 2013, 2016, and 2018 aerials.
к	1940	1953	1957	1961	1971	1978	_	_	1962	1965	1999	_	_	St. Alice Sugarhouse Complex	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	Mississippi River Commission 1894	Shown on 1998, 2008, 2013, and 2018 aerials. Not apparent on 2016 aerial photograph.
L	1940	1953	1957	1961	1971	—	-	-	-	-	-	-	-	Unknown	-	-	_	Does not show on subsequent aerial photographs.
М	1940	1953	1957	1961	1971	-	-	—	—	-	—	-	—	Buena Vista Cemetery	U.S. Coast Survey 1878a	U.S. Coast Survey 1878b	<u> </u>	

 Table 4-1.
 Anomalies Recorded on Historic Aerial Imagery Dating Between 1940 and 1978.

No Shading: Outside study area.

Yellow Shading: Unknown anomaly inside study area.

Green Shading: Identified anomalies inside study area.

Quadrangles after 2005 do not show structures.

1892 Quadrangle not included because of inaccuracies.

Note: U.S.G.S. quadrangles were examined to see if structures were present at the anomaly locations.



A portion of the 1947 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:31,680 series) (U.S. Geological Survey 1947) showing the locations of anomalies depicted on historic aerial photographs dating between 1940 and 1978. The study area outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-11.



A portion of the 2018 U.S. Geological Survey Aerial Photograph attached to the 2018 U.S. Geological Survey *Donaldsonville*, *LA* quadrangle (1:24,000 series) (U.S. Geological Survey 2018) showing identifications of some of the anomalies depicted historic aerial photographs dating between 1940 and 1978. The study area is outlined in red. Purple shading represents areas previously surveyed for cultural resources. Figure 4-12.

west) by about 30 m (northwest-southeast). Anomaly H does not appear on aerial photographs post-dating 1961 (see Table 4-1).

The Anomaly H location was within the 2017 Cox/McLain Phase I cultural resources survey area. It fell within a low-probability area for site occurrence (Rush et al. 2018:Figure 7). Consequently, shovel testing was conducted at 50-m intervals on transects spaced 50 m apart. Four shovel tests were excavated around the Anomaly H location — BB204, BB194, CG035, CG034 (Rush et al. 2018:Appendix A, Sheet 14). None, however, were located within the confines of Anomaly H as depicted on the historic aerial photographs reviewed for the current study.

Anomaly L

On modern aerial imagery (see Figure 4-2), the Anomaly L location is situated on, and immediately adjacent to, the main plantation road running from River Road through the former Buena Vista Plantation to Louisiana Highway 3127. On aerial imagery dating between 1940 and 1961 (see Figures 4-1, 4-3 thru 4-5), Anomaly L is situated on both sides of a small field road that runs southeast to northwest, on the eastern side of the Buena Vista Plantation road. It was located approximately 700 m southwest of the Texas and Pacific Railroad tracks. Anomaly L lies just south of the center of Section 27, T. 12 S., R. 15 E. (Southeastern Land District, West of the Mississippi River) (see Figure 4-11).

On aerial imagery dating prior to 1971, Anomaly L straddles the small road described above. It appears to measure roughly 100 m long (southwest-northeast) by about 40-50 m wide (northeast-southwest). It was rectangular in plan with approximately equal parts being northeast and southwest of the smaller road. By 1971, only the southern portion of Anomaly L is evident on the aerial photograph (see Figure 4-6). In 1978, the Anomaly L location is in cultivated fields with no surface expression (see Figure 4-7).

The Anomaly L location was encompassed by Cox/McLain's 2017 Phase I cultural resources survey for the proposed Formosa plant facility (Rush et al. 2018). It was in an area considered to have a low potential for site occurrence (Rush et al. 2018:Figure 7). Several shovel tests were located on the apparent margins of Anomaly L (JM448, BD054, BD055, BD053, BD069, and CC340) (Rush et al. 2018:Appendix A, Sheet 15). None, however, seem to have been within the confines of Anomaly L as identified by the present research. None of those shovel tests produced artifacts, and none provided information regarding the probable source of Anomaly L.

Conclusions

The research conducted by Coastal Environments, Inc. (CEI), located 13 anomalies on historic aerial imagery dating between 1940 and 1978. The sources of eight anomalies were identified, including six that are related to former sugarhouse complexes and two are associated with historic, unmarked plantation cemeteries (Figure 4-12). The sources of the five remaining anomalies could not be identified cartographically. The current research has ruled out the possibility of these five anomalies being related to 1) oil or natural gas wells, 2) structures shown on U.S. Geological Survey quadrangles, or 3) sugarhouse complexes depicted on historic maps. It is possible that some of these anomalies represent additional unmarked burial sites, which must be verified archaeologically. Four of these unidentified anomalies fall within the current study area (B, D, H, and L), while one (G) is located immediately outside the area of present consideration on the adjacent Mosaic Faustina property.

Recommendations

CEI recommends that the four unidentified anomalies within the study area be examined archaeologically to determine their probable sources. This should be accomplished using several complementary techniques. Initially, metal detector scans should be conducted 1) over the surface of the anomaly location, 2) along the banks of any surrounding ditches, and 3) in the surrounding fields to determine whether coffin nails, coffin hardware, or metallic grave markers or offerings are present. Second, if artifacts are exposed on the surface, collections should be made to delineate the limits of the scatter and to obtain a sample of the materials for functional and chronological analysis. Third, mechanical trenching or stripping should be conducted. These excavations should be undertaken in good weather conditions, so that the bottoms and sides of the trenches can be carefully examined without the

Cartographic Regression Analysis

interference of standing or seeping water. The excavation should proceed slowly and in levels not exceeding 5 cm in depth. Intensive probing at not more than 20-cm intervals should be conducted in the bottoms of the trenches as the stripping proceeds to 1) prevent inadvertent disturbance of human remains and to 2) identify possible grave locations that are not clearly visible. Probing should be initiated immediately after the plow zone has been removed. Additional metal detector scans should be conducted in the bottoms of the trenches as excavations proceed to determine if coffin nails, hardware, or metallic markers or offerings are present. Trenching should proceed to at least 1 m below the existing ground surface or until visible pit outlines or burials are encountered. The field crew conducting these investigations should have extensive experience in delineating historic cemeteries in Lower Mississippi Valley alluvial settings. In addition, cadaver dogs should be used in this examination, as they have successfully located graves up to 3,000 years old in a number of archaeological investigations.

If the source of the anomaly is determined to be a cultural resource that is not associated with a burial ground. It should be treated as any other archaeological site encountered during a Phase I investigation in accordance with guidelines established by the Louisiana Division of Archaeology. Its limits should be determined, preliminary assessments of National Register eligibility should be made, and recommendations made for further work.

REFERENCES

The Advocate	e [Baton Rouge, Louisiana]		
1968	Buena Vista: A Southern Plantation of Yesteryear.	Sunday, April 14, p.	1-E.

L'Avent-Coureur [Lucy, Louisiana]

1866 St. Jacques. Saturday, November 3, p. 1.

Beers, Henry Putney

1989 French and Spanish Records of Louisiana: A Bibliographical Guide to Archive and Manuscript Sources. L.S.U. Press, Baton Rouge.

Board of Levee Commissioners

 ca. 1866. Untitled and undated map covering the area along the Mississippi River roughly between Baton Rouge and Dunboyne and Live Oak plantations, Jefferson Parish, Louisiana. Map LD 5 Z001 (19 Sheets). Louisiana and Lower Mississippi Valley Collections, L.S.U. Libraries, Louisiana State University, Baton Rouge.

Bouchereau, A.

- 1882 Statement of the Sugar and Rice Crops Made in Louisiana in 1881-82. L. Graham & Son, New Orleans.
- 1883 Statement of the Sugar and Rice Crops Made in Louisiana in 1882-83. L. Graham & Son, New Orleans.
- 1886 Statement of the Sugar and Rice Crops Made in Louisiana in 1885-86. L. Graham & Son, New Orleans.

Bouchereau, L.

- 1871 Statement of the Sugar and Rice Crops Made in Louisiana in 1870-71. Bronze Pen Steam Book and Job Office, New Orleans.
- 1872 The Louisiana Sugar Report. Pelican Book and Job Printing Office, New Orleans.
- 1873 Statement of the Sugar and Rice Crops Made in Louisiana in 1872-73. Pelican Book and Job Printing Office, New Orleans.

- 1874 Statement of the Sugar and Rice Crops Made in Louisiana in 1873-74. Pelican Book and Job Printing Office, New Orleans.
- 1875 Statement of the Sugar and Rice Crops Made in Louisiana in 1874-75. Pelican Book and Job Printing Office, New Orleans.
- 1876 Statement of the Sugar and Rice Crops Made in Louisiana in 1875-76. Pelican Book and Job Printing Office, New Orleans.

Castille, George

1975 Archaeological Assessment of the Proposed Extension of the Faustina Plant Gas Delivery System in St. James Parish, Louisiana. Louisiana Division of Archaeology. (Division of Archaeology Report No. 22-0036.)

Catholic Diocese of Baton Rouge

- 1980 Diocese of Baton Rouge Catholic Church Records, Volume 2 (1770-1803). Department of Archives, Catholic Diocese of Baton Rouge, Baton Rouge, Louisiana.
- 1984 Diocese of Baton Rouge Catholic Church Records Volume 5 (1830-1839). Department of Archives, Diocese of Baton Rouge, Baton Rouge, Louisiana.
- 1993 Diocese of Baton Rouge Catholic Church Records Volume 13 (1874-1876). Department of Archives, Diocese of Baton Rouge, Baton Rouge, Louisiana.

Champomier, P.A.

1845	Statement of Sugar Made in Louisiana in 1844. Cook, Young & Co., New Orleans.
1846	Statement of Sugar Made in Louisiana in 1845-46. Cook, Young & Co., New Orleans.
1850	Statement of the Sugar Crop Made in Louisiana in 1849-50. Cook, Young & Co., New Orleans.
1851	Statement of the Sugar Crop Made in Louisiana in 1850-51. Cook, Young & Co., New Orleans.
1852	Statement of the Sugar Crop Made in Louisiana in 1851-52. Cook, Young, & Co., New Orleans.
1853	Statement of the Sugar Crop Made in Louisiana in 1852-53. Cook, Young, & Co., New Orleans.
1854	Statement of the Sugar Crop Made in Louisiana in 1853-54. Cook, Young, & Co., New Orleans.
1855	Statement of the Sugar Crop Made in Louisiana in 1854-55. Cook, Young, & Co., New Orleans.
1856	Statement of the Sugar Crop Made in Louisiana in 1855-56. Cook, Young, & Co., New Orleans.
1857	Statement of the Sugar Crop Made in Louisiana in 1856-57. Cook, Young, & Co., New Orleans.
1858	Statement of the Sugar Crop Made in Louisiana in 1857-58. Cook, Young, & Co., New Orleans.
Commercia	I Bulletin, Price-Current and Shipping List [New Orleans, Louisiana]

Sugar Crop of Louisiana for 1865-6. Saturday, February 14, p. 3. 1866

The Daily Picayune [New Orleans, Louisiana]

1851a Appointment. Friday, August 15, p. 1.

1851b Important Sale. Wednesday, June 11, p. 3.

Delegos, Pierre A.

1831 Statement of the Sugar Made in Louisiana in the Year 1831. Benjamin Levy, New Orleans.

The Donaldsonville Chief [Donaldsonville, Louisiana]

1875 Riot in St. James. Saturday, February 20, p. 3.

1885 St. James Items. Saturday, February 14, p. 1.

Find A Grave

2020 Find A Grave: Benjamin Landry Winchester. Electronic Document, http/search.ancestry.com/cgibin/sse.dll?indiv=1&dbid=60525&h=102124681&tid=&pid=&usePUB=true&_phsrc=epm1&_ phstart=successSource, accessed February 4, 2020.

Freedmen Bureau

- 1865a Tax Roll. Acadia Plantation, Parish of St. James Worked by Evariste Mire. Microcopy 1905, Roll 72, frames 176-178. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- 1865b Pay Roll of Laborers Employed by Evariste Mire on Acadia Plantation, Parish of St. James, May 1, 1865. Microcopy 1905, Roll 72, frames 417-422. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- 1865c Pay Rolls of Laborers Employed by A. P. Bertaud on Bertaud Plantation, Parish of St. James, March 13, August 5, and November 1, 1865. Microcopy 1905, Roll 36, frames 485-488, 489-492, 496-496. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- 1865d Pay Rolls of Laborers Employed by A. C. Goddin on Lauderdale Plantation, Parish of St. James, May 1, August 1, and November 1, 1865. Microcopy 1905, Roll 37, frames 452-454, 467-471, 472-474, 475-477, 478-480. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- 1865e Pay Roll of Laborers Employed by G. Culbertson on Buena Vista Plantation, Parish of St. James, December 30, 1865. Microcopy 1905, Roll 36, frames 595-603. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- 1866a Pay Rolls of Laborers Employed by A. P. Bertaud on Bertaud Plantation, Parish of St. James, January 30, 1865. Microcopy 1905, Roll 36, frames 497-499. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- 1866b Monthly Freedmen Report, Buena Vista Plantation, April 1866. Microcopy 1905, Roll 72, frames 216-218. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.

- 1868 Buena Vista School, August 1868. Microcopy 1905, Roll 73, frame 410. Records of the Field Offices for the State of Louisiana, Bureau of Refugees, Freedmen, and Abandoned Lands, 1863-1871. Record Group 105. National Archives and Records Administration, Washington, D.C.
- Harlan, David, Aubra Lee, Dayna Bowker Lee, Jeanne Marquez, an Elyene Parish
 - 2009 Phase I Cultural Resources Surveys of the Proposed INCA Refining, LLC, Project Area, St. James Parish, Louisiana. Earth Search Inc. Submitted to INCA Refining, LLC, Houston, Texas. (Division of Archaeology Report No. 22-3273.)
- Huguenot Society of America
 - 1899 *Huguenot Society of America. Abstract of Proceedings, Number One.* Reprint. Originally published 1884. The Knickerbocker Press, New York.
- Humphries, A. A., and H. L. Abbott
 - 1851 *Mississippi River from Red River Landing to Carrolton*. Record Group 77, MD1-30. National Archives, Washington, D.C.
- Jackson, Paul D., Nicole DeFrancisco, and Shanda Davidson
 - 2018 A Phase I Cultural Resources Survey for the West Bank/INCA Tract in Welcome in St. James Parish, Louisiana. TerraXplorations, Inc. Submitted to Providence Engineering and Environmental Group LLC, Baton Rouge. (Division of Archaeology Report No. 22-6110).
- Jackson, Paul D., Abigail Peeples, and Kay McKenna.
 - 2019 Archaeological Monitoring and Mechanical Stripping of the Acadia and Buena Vista Cemeteries, St. James Parish, Louisiana. TerraXplorations, Inc. Submitted to Providence Engineering and Environmental Group LLC, Baton Rouge. (Division of Archaeology Report No. 22-6279.)

Kniffen, Fred B.

1968 Louisiana: It's Land and People. Louisiana State University, Baton Rouge.

Louisiana Department of Public Works

- 1872 *Buena Vista Levee Par. Of St. James R. B.* Levee District No. 6. Drawing No. LD6-1186-2. Louisiana Department of Transportation and Development, Baton Rouge.
- 1880 *Acadia Levee Parish of St. James Miss. River Rt. Bk.* Levee District No. 5. Drawing No. LD5-1239-2. Louisiana Department of Transportation and Development, Baton Rouge.
- 1902 *Acadia New Levee, St. James Parish.* Levee District 6. Drawing No. LD6-1590-4. Louisiana Department of Transportation and Development, Baton Rouge.
- 1907 *Acadia Levee, St. James Parish.* Levee District 6. Drawing No. LD6-1029-1. Louisiana Department of Transportation and Development, Baton Rouge.
- 1925 *Minnie to Point Brilliant*. Levee District 6. Drawing No. LD6-1688-T. Two Sheets. Louisiana Department of Transportation and Development, Baton Rouge.
- 1927 Map Showing Area of Land Used or Damaged in the Construction of the U.S. Minnie-New Hope New Levee and Highway, St. James Parish. Levee District 6. Drawing No. LD6-1121-1. Louisiana Department of Transportation and Development, Baton Rouge.
- 1928 *Winchester Plantation: Land Damaged by Construction of New Levee*. Levee District No. 6. Drawing No. LD6-1496-2. Louisiana Department of Transportation and Development, Baton Rouge.

- 1931 Map Showing Area of Land Used or Damaged in the Construction of the U.S. Winchester New Levee, St. James Parish. Levee District 6. Drawing No. LD6-1155-1. Louisiana Department of Transportation and Development, Baton Rouge.
- 1952 Map Showing Area of Land Used or Damaged in the Construction of the U.S. Winchester Loop, St. James Parish, La. Levee District 6. Drawing No. LD6-1508-2. Louisiana Department of Transportation and Development, Baton Rouge.
- Louisiana Department of Transportation and Development
 - 1978 Aerial Photograph Mosaic. Compiled from images 563-28 563-29, 563-57, and 563-55. 1:20,000 scale. Cartographic Information Center, Louisiana State University, Baton Rouge.
- The Louisiana Planter and Sugar Manufacturer
 - 1892 Statement of Sugar Made in Louisiana in 1828 and 1829 by Pierre A. Degelos. *The Louisiana Planter and Sugar Manufacturer* 9(4):65-68.
- The Louisianian [Convent, Louisiana]
 - 1869 State of Louisiana Fourth Judicial District Court, Parish of St. James, Eloy Hebert et al. vs. Widow Camile Hebert, Tutrix. Saturday, January 9, p. 5.

1872 Tax Collector's Sales. Saturday, August 24, p. 2.

Le Meschacebe [Edgar, Louisiana]

1873 St. Jacques. Sunday, November 15, p. 2.

Marchand, Sidney A.

1943 Acadian Exiles in the Golden Coast of Louisiana. Privately published, Donaldsonville, Louisiana.

- Mississippi River Commission
 - 1894 *Survey of the Mississippi River*. 1:20,000 series. Chart No. 70. Mississippi River Commission, Vicksburg, Mississippi.
 - 1921 Survey of the Mississippi River Made Under the Direction of the Mississippi River Commission 1921. 1:20,000 series. Chart No. 70. Mississippi River Commission, Vicksburg, Mississippi.
- The National Republican [Washington, D.C.]1884 Current Gossip. Saturday, March 1, p. 4.
- The New Orleans Item [New Orleans, Louisiana]1908 Famous Elina Plantation is Sold by Ferchaud Brothers. Sunday, January 19, p. 9.
- *The New Orleans Republican* [New Orleans, Louisiana] 1870 Untitled article. Tuesday, December 6, p. 4.
- *The New Orleans Weekly Delta* [New Orleans, Louisiana] 1852 Died. Sunday, March 28, p. 8.

Peeples, Abigail

2019 Archaeological Monitoring and Mechanical Stripping of the Acadia Cemetery in the Acadia Plantation, St. James Parish, Louisiana. TerraXplorations, Inc. Submitted to Providence Engineering and Environmental Group, LLC, Baton Rouge. (Division of Archaeology Report No. 22-6141.)

Persac, A.

1858 *Norman's Chart of the Lower Mississippi River*. B. M. Norman, New Orleans, Louisiana. Catalog Number 78692178. Library of Congress, Washington, D.C.

Rehder, John Burkhardt

1971 Sugar Plantation Settlements of Southern Louisiana: A Cultural Geography. Unpublished Ph.D. dissertation. Department of Geography and Anthropology, Louisiana State University, Baton Rouge.

Rightor, Henry

- 1900 Standard History of New Orleans, Louisiana. The Lewis Publishing Company, Chicago.
- Rush, Haley, David Sandrock, Heather Stettler, Matthew C. Stotts, Scotty More, Emily Reed, Robert Rogers, and Al Cote
 - 2018 Phase I Archaeological Survey of the Proposed FG LA LLC Project Site with Phase II Testing at 16SJ109, St. James Parish, Louisiana. Cox/McLain Environmental Consulting, Inc. Submitted to Zephyr Environmental Corporation, Austin, Texas. (Division of Archaeology Report No. 22-5780.)

Strategic Online Natural Resources Information (SONRIS)

- 1998 Aerial Photograph (1998). Louisiana Department of Natural Resources, Baton Rouge.
- 2008 South LA Photography (2008 TC). Louisiana Department of Natural Resources, Baton Rouge.
- 2012 South LA Photography (2012 CIR). Louisiana Department of Natural Resources, Baton Rouge.
- 2013 Aerial Photograph (2013 NIR CIR). Louisiana Department of Natural Resources, Baton Rouge.
- 2016 South LA Photography (2016 CIR). Louisiana Department of Natural Resources, Baton Rouge.

Sutter, Major Charles R.

1874 *Map of a Reconnaissance of the Mississippi River from Cairo, Ill's. to New Orleans, La.* U.S. Corps of Engineers, Washington, D.C.

The Times-Picayune [New Orleans, Louisiana]

- 1844 Brief Biographical Sketches of the Louisiana State Convention. Wednesday, September 11, p. 2.
- 1868 Louisiana. Wednesday, December 30, p. 2.
- 1872 Cane Crop on the Coast. Sunday, May 12, p. 16.
- 1884 Died. Tuesday, February 19, p. 4.
- 1893 Land for Sale. Friday, December 29, p. 5.

Throwbridge, J. T.

1866 The South: A Tour of its Battle-Fields and Ruined Cities, A Journey Through the Desolate States, and Talks with the People. L. Stebbins, Hartford, Connecticut.

U.S. Census

- 1830 General Population Schedules, St. James Parish, Louisiana.
- 1840 General Population Schedules, St. James Parish, Louisiana.

- 1850a Slave Schedules, St. James Parish, Louisiana.
- 1850b Mortality Schedules, Ascension Parish, Louisiana.
- 1860a Slave Schedules, St. James Parish, Louisiana.
- 1860b Mortality Schedules, Ascension Parish, Louisiana.
- 1860c General Population Schedules, St. James Parish, Louisiana

U.S. Coast Survey

- 1878a Composite map compiled by CEI from portions of two adjoining sheets: Mississippi River Louisiana from Brilliant Point to Point Houmas, Louisiana (Register No. 1481b) and Mississippi River from Vacherie Road to Brilliant Point, Louisiana (Register No. 1481a). U.S. Coast Survey, Silver Spring, Maryland.
- 1878b *Mississippi River Louisiana from St. James Estate to Point Houmas Including Brilliant Point and White Hall.* Sheet No. 13. 1:20,000 Scale. U.S. Coast Survey, Silver Spring, Maryland.
- U.S. Department of Agriculture
 - Aerial Photograph Mosaic. Compiled from images CEJ-19-64, CEJ-19-66, CEJ-20-23, CEJ-20-21, and CEJ-20-20. 1:20,000 scale. Cartographic Information Center, Louisiana State University, Baton Rouge.
 - Aerial Photograph Mosaic. Compiled from images CEJ-1K-8, CEJ-1K-29, and CEJ-1K-27.
 1:20,000 scale. Cartographic Information Center, Louisiana State University, Baton Rouge.
 - 1957 Aerial Photograph Mosaic. Compiled from images CEJ-4T-217, CEJ-4T-216, CEJ-4T-199, and CEJ-4T-201. 1:20,000 scale. Cartographic Information Center, Louisiana State University, Baton Rouge.
 - 1971 Aerial Photograph. Image CQE-2MM-94. 1:40,000 scale. Cartographic Information Center, Louisiana State University, Baton Rouge.

U.S. Geological Survey

- 1892 Donaldsonville, LA. quadrangle (1:62,500 series). U.S. Geological Survey, Denver, Colorado.
- 1939 Donaldsonville, LA. quadrangle (1:62,500 series). U.S. Geological Survey, Denver, Colorado.
- 1947 Donaldsonville, LA. quadrangle (1:31,680 series). U.S. Geological Survey, Denver, Colorado.
- 1961 Aerial Photograph. Image No. ARIVA9900060082, April 29, 1961. 1:22,000 scale. Earth Explorer. U.S. Geological Survey, Denver, Colorado.
- 1962a Donaldsonville, LA. quadrangle (1:62,500 series). U.S. Geological Survey, Denver, Colorado.
- 1962b Donaldsonville, LA. quadrangle (1:62,500 series). U.S. Geological Survey, Denver, Colorado.
- 1965 Donaldsonville, LA. quadrangle (1:62,500 series). U.S. Geological Survey, Denver, Colorado.
 - 1999 Donaldsonville, LA. quadrangle (1:24,000 series). U.S. Geological Survey, Denver, Colorado.

2005	Donaldsonville, LA. quadrangle (1:24,000 series). U.S. Geological Survey, Denver, Colorado.
2012	Donaldsonville, LA. quadrangle (1:24,000 series). U.S. Geological Survey, Denver, Colorado.
2015	Donaldsonville, LA. quadrangle (1:24,000 series). U.S. Geological Survey, Denver, Colorado.
2018	Donaldsonville, LA. quadrangle (1:24:000 series). U.S. Geological Survey, Denver Colorado.

Whitmer, Ann

1991 Star Enterprise Cemetery, 16SJ54, St. James Parish, Louisiana. Louisiana Division of Archaeology Site Files, Louisiana Division of Archaeology, Baton Rouge.

Young, Captain H., and Captain W. T. Poussin

1821 Map of Reconnaissance of Mississippi River Made During October, November and December 1821. Mississippi River Commission, Vicksburg, Mississippi.
APENDIX A: RESEARCH AT THE NATIONAL ARCHIVES

On January 28-30, 2020, a visit was made to the National Archives and Records Administration (NARA), College Park, Maryland, by Coastal Environments, Inc.'s, Research Specialist to examine records of the U.S. Coast and Geodetic Survey held at that facility. The objective was to try to locate field reports and other records maintained by the survey party working along the Lower Mississippi River during the U.S. Coast Survey's 1876-1877 survey made in and near St. James Parish, Louisiana. Two sets of topographic maps produced from this survey depict several cemeteries in St. James Parish in the vicinity of the project area. One set consists of "manuscript" maps that represent the preliminary printed maps intended for publication. This set, known as "T-Charts," contain some handwritten notes and corrections on the printed maps that, apparently, were incorporated into the final "published" set of maps. These "published" maps, based on the T-Charts, are designated by a "Sheet" number, rather than a "T" number. These sets of maps represent among the earliest accurate depictions of cemeteries in the area, cemeteries that were obviously visible and marked in some manner in the 1870s, but which were forgotten over time and are unmarked today. It was hoped that field notes and other records from the 1876-1877 survey would provide some level of description of these cemeteries, such as size, number and types of interments, age of the cemetery, etc.

Prior to the visit, online records of the NARA were examined and it was determined the Coast Survey records were in Record Group 23, which are housed at the NARA facility in College Park, Maryland. In addition, personnel at the NARA were contacted by email and by telephone about their Coast Survey holdings and we were assured that the College Park facility did hold the nineteenth-century field survey notes and records of the U.S. Coast and Geodetic Survey.

The visit to the Archives uncovered three sets of records containing what was hoped to be relevant information. One set of records consist of what are identified as "Topographic Survey Descriptive Reports," consisting of brief notes describing the conduct of the survey and events affecting the progress and accuracy of the topographic surveys. Occasionally, they include information on terrain and landscape features, persons contacted during the survey, and the like. These Reports are cataloged by T-Chart number and are maintained in the Cartographic Branch of the NARA. Of particular interest were the Reports associated with T-Charts covering St. James Parish and vicinity. These consist of charts T-1481-A, T-1481-B, T-1480-A, and T-1480-B. Unfortunately, none of the Descriptive Reports for the 1876-1877 survey are extant in these records. In fact, no Descriptive Reports for any of the Coast Survey's projects along the lower Mississippi River in the 1870s and 1880s were found in these records, although hundreds of sets of notes from other nineteenth-century surveys from all over the country are extant. Personnel at the NARA had no idea why the Descriptive Reports for this particular survey are missing from their records. The Cartographic Branch does hold the original T-Charts produced from the 1876-1877 survey, and it was thought that the Descriptive Survey Notes might be incorrectly stored with the maps themselves. However, this did not prove to be the case. Copies of the T Charts of interest are available as scanned files online (at the NOAA website) and have been downloaded; but the online versions are not particularly clear. It was hoped that the original T charts of interest could be examined so clear copies of them could be made. However, the NARA does not allow handling of the original T Charts because they are too fragile, but they do provide very clear "Reference Negatives" of each T Chart for examination. Reference negatives for the four charts of particular interest were examined and close-up photographs of these were made which provide images that are clearer than those available online.

NARA personnel located two other sets of documents that should contain field notes and records from the 1876-1877 survey along the Lower Mississippi River. These consist of "Descriptions of Stations, 1834-1937" and the "Reconnaissance Notes, 1843-1912." Both of these sets of documents are held in the Textual Branch of the College Park NARA.

The Reconnaissance Notes provide information on the topography of the area being surveyed, journals of operations, information on suitable survey stations, etc., and often contain sketches and maps of topographic features of interest. The NARA has prepared a listing of these Notes arranged by geographic area and year. An examination of this list of holdings revealed that none of the Reconnaissance Notes for any of the surveys conducted by the Coast Survey along the Lower Mississippi River in the 1870s and 1880s are in the NARA holdings. This absence of records reflects the situation found for the Topographic Survey Descriptive Reports mentioned above; i.e. none of the survey notes and similar field records for the Coast Survey's work along the lower Mississippi River in the 1870s and 1880s are in the NARA holdings. Or, if they are in their holdings, they are not cataloged in the same manner as field notes and records from other Coast Survey work conducted in the same time period in other parts of the country. NARA personnel had no idea why this is the case.

The second set of Coast Survey records held in the Textual Branch consist of what are identified as "Descriptions of Stations," which consist of field notes containing narrative descriptions of the various principal survey stations established during a survey, and include sketch maps and drawings depicting the location of the survey stations, as well as nearby natural and cultural features. The NARA Textual Branch does have the Description of Stations records for the 1876-1877 Coast Survey's work along the lower Mississippi River, including the area of St. James Parish and vicinity. The sketch maps contained in these records provide a considerable amount of information on the locations of specific cultural and natural features, often including the names of owners or occupants of depicted buildings. Digital photographs were taken of the sketch maps and narrative notes for all of the survey stations in St. James Parish and surrounding areas along the river. Although these records provide interesting information on cultural and natural features in the near vicinity of established survey stations, none of the sketches or narratives contained any information on cemeteries identified during the surveys. NARA personnel could not explain why they hold the Description of Stations notes for the 1876-1877 lower Mississippi River survey, but none of the other field records generated from that work. They suggest several possibilities: 1) the records have been lost over time; 2) the records were turned over to another agency at some time in the past and are not now in NARA holdings, or 3) the records are in NARA holdings, but have been incorrectly cataloged and are misfiled. The general consensus among NARA personnel is that the first possibility; i.e., the records have been lost, is the least likely scenario given that so many other U.S. Coast Survey records from the same time period and from other areas are extant. One of the archivist at NARA, Eugene Morris, has indicated that he will try to find out if the Coast Survey records have been transferred to another agency or might be misfiled.

NARA personnel contacted during this research:

Richard Peuser (Textual Branch)

Eugene Morris (Textual Branch)

Brandi Oswald (Cartographic Branch

Corbin Apkin (Cartographic Branch)