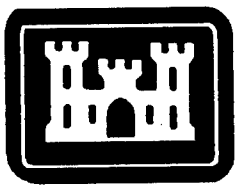

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US Army Corps of Engineers
New Orleans District

CULTURAL RESOURCES SURVEY OF A BORROW AREA FOR THE WEST ATCHAFALAYA BASIN PROTECTION LEVEE ITEM W-123, ST. MARY PARISH, LOUISIANA

Final Report

September 1998

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13. ABSTRACT (Maximum 200 words)

This report presents the results of cultural resources investigations of a 40-acre borrow area for the West Atchafalaya Basin Protection Levee Item W-123 in Patterson, St. Mary Parish, Louisiana. Fieldwork consisted of a program of shovel testing within the proposed borrow area and the adjoining access road. In addition to the shovel tests, two backhoe trenches were excavated in the northeast corner of the borrow area. No sites were observed during survey. No standing structures were present in the borrow area. No further work is recommended.

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REPLY TO
ATTENTION OF:

Planning Division
Environmental Analysis Branch

To the Reader:

The following report describes a cultural resources survey of a 40-acre tract, near the Town of Patterson, in St. Mary Parish, Louisiana. The land is under consideration for use as a borrow pit from which fill would be removed for modifying and up-grading a nearby part of the West Atchafalaya Basin protection levee. Based on the survey and testing described in this report, the authors conclude that no cultural resources will be effected by the proposed excavation of the borrow pit. Both the U.S. Army Corps of Engineers and the Louisiana State Historic Preservation Officer concur in this finding of "no effect."

This research was designed, funded, and directed by the U.S. Army Corps of Engineers, New Orleans District, as part of our cultural resources management program. We commend the contractor's meticulous and professional effort.

Michael E. Stout
Technical Representative

Kenneth A. Ashworth
Contracting Officer's
Representative

R. H. Schroeder, Jr.
Chief, Planning Division

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CHAPTER 1
INTRODUCTION

This report details the results of cultural resources investigations by Earth Search, Inc. (ESI), of the West Atchafalaya Basin Protection Levee (WABPL) at a proposed borrow area for Item W-123, St. Mary Parish, Louisiana (Figure 1). In support of the enlargement of the WABPL, ESI was contracted by the New Orleans District, U.S. Army Corps of Engineers (NODCOE), to perform historical research and pedestrian survey of the proposed tract of land to be used as a borrow area.

Project Description

The tract of land to be utilized as a borrow area for the enlargement of the WABPL is located along the right descending bank of the Lower Atchafalaya River on the distal flank of the Bayou Teche natural levee. Background research consisted of the examination of primary and secondary source documents including site files and cultural resource reports and records at the Division of Archaeology. The purpose of this research was to reconstruct the historic land-use of the project area and to identify areas with high probability for containing archeological remains.

Fieldwork, which was conducted during March and April 1998, consisted of a program of shovel testing within the proposed borrow area and adjoining access road. In addition, two backhoe trenches were excavated in the northeast corner of the borrow pit to provide information on deeply buried deposits.

Report Organization

Chapter 2 provides an environmental overview of the region. Chapters 3 and 4 present discussions of the prehistory and history of St. Mary Parish, respectively. Chapter 5 summarizes the previous archeological investigations in the vicinity of the project area. Chapter 6 provides a discussion of field methodology and the results of the field investigations. Recommendations are presented in Chapter 7.

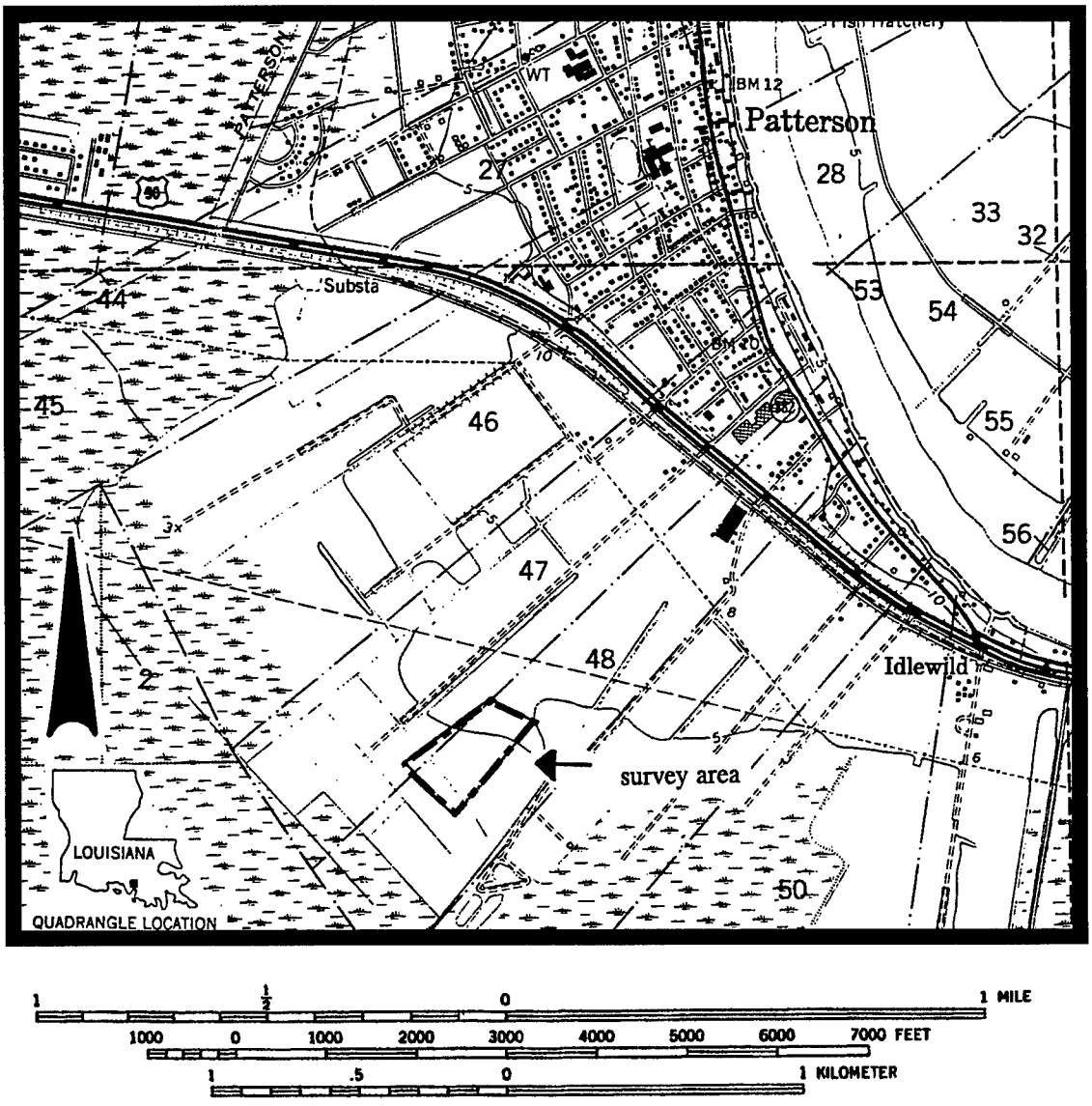


Figure 1. Excerpt from the 7.5' *Patterson, LA* (1966) USGS quadrangle showing the location of the survey area.

CHAPTER 2
ENVIRONMENTAL SETTING

Geological History

The dominant process shaping the geological history of the project area is deltaic growth. Several active and inactive deltaic complexes have been identified in the Mississippi River deltaic plain. Seven deltaic complexes, corresponding to changes in the course of the Mississippi River, have been delineated and include, from oldest to youngest, the Outer Shoal, Maringouin, Teche, St. Bernard, Lafourche, Plaquemine, and the Atchafalaya (Saucier 1994:276-286).

The Mississippi River created the Maringouin Delta Complex during a temporary stasis of sea level fluctuation between approximately 8,000 and 6,000 B.P. (Frazier 1967; Smith et al. 1986; Kuttruff et al. 1993). Most of the surface of the Maringouin Delta Complex was deeply eroded after it was created and later submerged due to the continued rise of sea level. The maximum extent of the Maringouin delta reached a point approximately 75 to 80 km (46.6 to 49.7 mi) south of Point Chevreuil along the coast of St. Mary Parish (Penland 1990, Kuttruff et al. 1993). Most research agrees that four distinct stream courses are discernible in this deltaic complex, which include the Sale course 3, the Sale course 4, North Bend, and Clausen-Possum Point (Van Lopik 1955; Kearns 1985; Smith et al. 1986; Kuttruff et al. 1993). The presently buried natural levee surfaces of these Maringouin distributaries were once stable and exposed for hundreds of years. This situation would allow for these surfaces to be utilized by Archaic period cultures and could result in the formation of the earliest archeological deposits.

The subsequent Teche Delta Complex was formed between 5800 and 3900 years B.P. after the sea level had stabilized. Within the study area, the Teche complex has buried the intact surface of the Maringouin Delta Complex. Major distributaries identified in the Teche system include Bayou Sale and Bayou Cypremort (Smith et al. 1986). Based on recent geomorphic reconstructions, the Teche system distributaries would have been available for use during the Tchefuncte and Marksville Periods (Smith et al. 1986; Saucier 1994).

Atchafalaya Basin

The Atchafalaya Basin is a lens-shaped, shallow backswamp that lies within the lower Mississippi Alluvial Valley. It is about 175 km long, north-northwest by southeast, and 55 km wide (west/east) at the latitude of Baton Rouge. The basin is bounded by the natural levees of active and relict Mississippi River meander belts. The modern Mississippi River meander belt, designated Meander Belt No. 1 by Autin et al. (1991), forms the northeastern and eastern boundaries of this basin. The natural levees of Meander Belt No. 1 rise as much as 10 m above backswamps of the Atchafalaya Basin. Major distributary channels, such as Bayou Latenache, Bayou Fordoche, Bayous Grosse Tete and Blue, and others, extend from abandoned or active channels within Meander Belt No. 1, and flow into the Atchafalaya Basin. To the south, the main channel of the Lafourche Delta Complex, Bayou Lafourche, and its distributaries, comprise the southeastern boundaries of this basin. The western and southern boundaries of the Atchafalaya Basin are defined by an abandoned meander belt of the Mississippi River now occupied by Bayou Teche and designated Meander Belt No. 3 by Autin et al. (1991). The natural levees of Meander Belt No. 3 are generally 5 to 6 m higher than the adjacent backswamps of the Atchafalaya Basin as far south as Centerville, Louisiana. A relict Red River meander belt bridges the 25 km space between Meander Belt No. 1 and Meander Belt No. 3 to form the northern boundary of the Atchafalaya Basin (Lenzer 1981; Saucier and Snead 1989; Smith et al. 1986).

Soils

Baldwin and Cypremort soils have developed within the frontslopes and crests of the natural levees of the project area. Backslopes within the natural levees consist of Baldwin soils, and the relict crevasse splays and lower backslopes of the natural levees consist of Iberia and Jeanerette soils. Cypremort silt loam and very fine sandy loam, and Baldwin silt loam indicate that the current project area lies within the frontslopes and crests of the Bayou Teche natural levees.

Climate

The climate in St. Mary Parish is like that of the rest of coastal Louisiana. This is a subtropical region characterized by long, hot, humid summers and short, mild, humid winters (Lytle et al. 1956; Murphy et al. 1977). Rainfall is frequent throughout the year, with slightly less precipitation in the fall. October is in general the driest month. Temperatures range from 40°-60°F in the winter to 80°-90°F in the summer (Lytle et al. 1956; Murphy et al. 1977). Hurricanes and storm surges occur intermittently, and these have profound effects on floral, faunal, and human communities within the parish and the larger Atchafalaya Basin.

Plant Communities

Prior to European occupation of the area, little is known of the natural levee vegetation. Comparisons with present-day plant communities indicate these natural levees are covered by an oak forest floral assemblage. The dominating flora of the natural levees would have been live oak (*Quercus virginiana*), Nuttal oak (*Quercus nuttalli),* water oak (*Quercus nigra*), hackberry (*Celtis laevigata*), cottonwood (*Populus deltoides*), and sweetgum (*Liquidambar styraciflua*). The understory elements would have included wax myrtle (*Myrica cerifera*), elderberry (*Sambucus canadensis*), and hawthorn (*Crataegus* sp.).

Animal Communities

A variety of mammals, birds, and reptiles were undoubtedly supported by the different ecological niches found in the Mississippi River Deltaic Plain. Mammals such as opossum (*Didelphis virginiana*), bobcat (*Lynx rufus*), squirrels (*Scirus* spp.), raccoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*) occur in the area. Birds are also abundant, including marsh hawk (*Cirus cyaneus*), woodcock (*Philohela minor*), and wild turkey (*Meleagris gallopavo*) to name a few. A variety of species of reptiles and amphibians also thrive in the area. The abundant waters and the lesser backswamp contain the most common fishes including bowfin (*Amia calva*), buffalo (*Ectiobus* spp.), garfish (*Lepisosteus* spp.), sunfish (*Lepomis* spp.), catfish (*Ictalurus* spp.), and drum (*Aplodinotus grunniens*).

CHAPTER 3
PREHISTORIC OVERVIEW

Introduction

The Atchafalaya Basin is a unique, circumscribed, alluvial floodplain. The optimal locations for occupation by prehistoric peoples in and around the Atchafalaya Basin were the natural levees. These areas were preferred because they provided optimum soil drainage, natural resource availability, proximity to transportation routes, and protection from natural hazards (Smith et al. 1986:73). As expected, archeological research to date indicates that these natural levees contain at least 40 percent of the known sites. Smith et al. (1986:73) reported that 22 of 55 sites reported were located on natural levees, suggesting that prehistoric peoples located their more permanent settlements on natural levees.

Tchula Period (500 B.C.-A.D. 1)

In the Lower Mississippi River Valley, this period is characterized primarily by widespread pottery manufacture and the integration of food production. Also notable during this period is an increase in population as well as inter-regional relationships. Originally defined in southern Louisiana (Ford and Quimby 1945), these developments exist in the southern portion of the valley in an archeological culture called Tchefuncte (Weinstein and Kelley 1992). Ceramics are the diagnostic artifacts of this and most of the succeeding prehistoric cultures. Pottery attributed to Tchefuncte occupations has a seemingly non-tempered, laminated paste, probably due to minimal preparation of the raw clay before firing. Other attributes frequently associated with Tchefuncte pottery are podal supports and jab-and-drag incising (Kelley 1989:19). Common decorations appearing on these vessels include punctations, fabric and cord impressions, narrow and wide line incisions, and simple rocker stamping (Goodwin et al. 1990:25). The dominant Tchula period ceramic types are Tchefuncte Plain, Tchefuncte Incised, Tchefuncte Stamped, Lake Borgne Incised, Orleans Punctated, Tammany Punctated, Alexander Incised, and Alexander Pinched (Toth 1988:23).

Tchefuncte culture sites in the Atchafalaya Basin are commonly composed of shell middens and often contain intact organic remains. The faunal assemblage from Morton Shell Mound (16IB3), a Tchefuncte culture site in Iberia Parish, indicates that deer, alligator, raccoon, goose, and catfish were utilized as the primary sources of protein. Botanical remains included hickory nuts, acorns, plums, grapes, persimmons, squash, and gourd. The latter two may be indicative of plant domestication (Neuman 1984:119). Tchefuncte settlements tend to be located along slow, secondary streams that drain bottomlands, in littoral settings, or near floodplain lakes (Neuman 1984; Goodwin et al. 1990:25).

In Louisiana, four regional phases, including the Pontchartrain phase (500-250 B.C.), the Beau Mire phase (250 B.C.- A.D. 1), the Lafayette phase (500 B.C.-A.D. 1), and the Grand Lake phase (500 B.C.-A.D. 1), represent Tchefuncte sites (Goodwin et al. 1990).

Marksville Period (A.D. 1-400)

The Marksville culture of the Lower Mississippi Valley is believed to have participated in an extensive interregional exchange network commonly labeled the Hopewell Interaction Sphere (Caldwell and Hall 1964). The primary focus of this interregional exchange network was among various societies inhabiting the Ohio and Illinois River valleys (Hudson 1976:72; Hunter et al. 1995:23; Stoltman 1978:721). These groups acquired and traded various exotic raw materials which included copper, marine shells, mica, obsidian, and sharks' teeth. Different theories have been offered in an attempt to explain this interaction. Most emphasize either an economic or a

combination of economic and socio-religious factors; but the exact nature of the interaction sphere remains problematical. Most often, finished products made from exotic materials were recovered from burials placed in conical earthen mounds. In addition to these burial mounds, Hopewellian societies constructed large earthworks which were circular, octagonal, square, and zoomorphic (Hunter et al. 1995:23; Kelley 1989:20; Neuman 1984:140-142; Toth 1988:211-212).

Toth (1988:211-212) has argued that Marksville culture developed out of the preceding Tchula period Tchefuncte culture as a result of intermittent contacts with the societies occupying the Ohio and Illinois valleys. He emphasizes the evidence for interaction is limited solely to certain aspects of Marksville ceramic traditions and mortuary practices, but his interpretation of the nature of interregional interaction is speculative (Hunter et al. 1995:23). Subsistence and economic data from Marksville period sites are relatively non-existent. Information gathered for sites in the midwest (Asch et al. 1979) indicate intensive collection of wild plant foods and faunal resources complemented by horticultural practices revolving around native and tropical cultigens. Maize is believed to be lacking or of only minor importance at this time.

Located south of Morgan City in the vicinity of the project area are the Bone Point (16SMY39) and Oak Chenier (16SMY49) sites. These sites yielded Marksville-like artifacts, principally ceramic sherds. The Bone Point site is located on a natural levee on the right descending bank of Bayou Shaffer at the former junction of Bayou Shaffer and Bayou Penchant. Gibson (1982:410-412) reported that the cultural material was not *in situ*, and that the shell midden was a recent development. The Oak Chenier site is a *Rangia*/earth midden located on the right descending side of Bayou Chene on the south shore of Avoca Island Lake. This site was recorded by Gibson (1978b:127-132), and its assemblage is reported to contain Marksville ceramics. It should be noted, however, that the site form indicates a cultural affiliation for each of these sites as Troyville/Coles Creek with no reference to a Marksville component (LA State Site Files). Initially identified as Troyville in age, these sites have been reassigned to the late Marksville period on the basis of revised ceramic analysis (Weinstein and Kelley 1992:35).

Baytown Period (A.D. 400-700)

Most aspects of the Baytown period are poorly understood, which has led some archeologists to characterize this period as an era of cultural decline following the Hopewellian florescence (Griffin 1967:187; Phillips 1970:901). However, there are indications that this period may in fact be a time of population growth and increased social integration (Braun 1977; Styles 1981). As with most post-Archaic cultures in the Lower Mississippi Valley, more is known about the ceramics produced by these groups than other aspects of their lifeways (Kidder 1993:13-18). Even though available evidence is relatively scarce, it does suggest that Baytown period habitation sites are either small hamlets or large communities with mounds (Kidder 1993:18). Kidder (1993:18) notes that grave goods, although rare at Baytown period sites, were often elaborate and seem to support his contention of little differentiation of status at these sites. Moreover, Kidder (1993:18) indicates Baytown period subsistence is probably a continuation of earlier Marksville hunter-collector patterns. During this period, changes in the stone tool tradition reflected a transition from the atlatl to the bow and arrow. Dart points were replaced by small arrow points.

The Whitehall site (16LV19) on the Amite River exists as the sole representative of the Whitehall phase (A.D. 400-700) in southeast and south-central Louisiana. However, strong Baytown components have been identified at the Gibson Mounds (16TR5) (Weinstein et al. 1978:Tables 29-30, Fig. 63; Weinstein and Kelley 1992:36). Reported ceramics from this site include Coles Creek Incised, *var. Stoner*; Evansville Punctated, *var. Amite*; French Fork lugs; Larto Red, *vars. Larto* and *Silver Creek*; Mazique Incised, *var. Bruly*; and Woodville Zoned Red, *var. Woodville* (Weinstein and Kelley 1992:36).

Coles Creek Period (A.D. 700-1200)

The Coles Creek period was at one time considered to be part of a broadly defined Troyville period (Neuman 1984). However, Troyville and contemporaneous cultures are now treated as regional variants within the Baytown period. Many Coles Creek mound sites, which typically consist of a group of mounds around a plaza, appear to be built over earlier Baytown period platform mounds (Kidder 1993:22).

The cultural developments of the Coles Creek period are impressive and appear to establish the foundation on which later Plaquemine and Mississippi cultures were built. The development of substantial platform mounds, in the form of truncated pyramids, shows an ability to organize the labor needed for large earth-moving projects. Larger sites have several mounds clustered around a plaza. Mortuary or temple structures stood on the mound summits.

The current consensus of opinion among archeologists is that the Coles Creek period represents the rise of chiefdom-level societies in the Lower Mississippi Valley. However, the emergence of social rank and of regional political centers seems to occur only at the end of the period (Kidder 1992:29-30; Steponaitis 1986:386; Woodiel 1993:121; Nassaney and Cobb 1991:302-306). Belmont (1985:276-278) at one time framed a model for Coles Creek settlement that hypothesized secondary mound sites arranged around a principal center. Currently, this model seems to owe more to incomplete recording of Coles Creek sites than it does to actual settlement pattern.

Similarities to the Weeden Island culture of northwest Florida can be seen in the Lower Mississippi Valley cultural florescence occurring during this time period. Community patterns such as the construction of small mounds around plazas indicates the stratification of social systems during this period. Incised, stamped, and punctated pottery types with decorative restrictions around the rim of the vessel are distinctive of both culture periods (Weinstein and Kelley 1992:37).

Within the general study area, there are three temporally sequential phases for the period: Bayou Cutler (A.D. 700-800), Bayou Ramos (A.D. 850-1000), and St. Gabriel (A.D. 1000-1200). Ceramic types and varieties are temporally diagnostic. The Bayou Cutler phase is recognized by Coles Creek Incised, *vars. Coles Creek* and *Athanasio*; Mazique Incised, *var. Mazique*; Pontchartrain Creek Stamped, *var. Pontchartrain*; and French Fork Incised. Bayou Ramos ceramics include Avoyelles Punctated, *var. Avoyelles*; Beldeau Incised, *var. Beldeau*; Coles Creek Incised, *var. Mott*; Mazique Incised, *var. Kings Point*; and Pontchartrain Check Stamped, *var. Tiger Island.* St. Gabriel phase ceramics include Harrison Bayou Incised, *var. Harrison Bayou*; Coles Creek Incised, *var. Hardy*; Mazique Incised, *var. Manchac*; and Evansville Punctated, *var. Wilkinson* (Weinstein and Kelley 1992:37).

Mississippi Period (A.D. 1200-1700)

The Mississippi period was the final prehistoric period in eastern North America. There are two interpretations of the relationships between Coles Creek, Plaquemine, and Mississippian groups in the Lower Mississippi Valley. Phillips (1970) believed the Plaquemine culture developed from the Coles Creek, with interaction between Plaquemine and Mississippian cultures resulting in changes in the resident population. In time, Mississippian groups entered the area and displaced the resident groups. Brain (1978), however, maintains that the resident Coles Creek population became Plaquemine as the result of contact with Mississippian groups. Mississippian influence continued to increase, in time displacing the characteristics of the resident groups.

There has been considerable debate over the nature of the Plaquemine to Mississippian transition. Most notably, there is some doubt about the diffusion of Mississippian traits to Plaquemine populations. Kidder (1993) indicates that the notion of Mississippian diffusion fails to explain many of the cultural traits of the Plaquemine culture. However, there was clearly a diffusion of certain traits, such as the use of shell tempering in ceramics, and new patterns in domestic architecture (Kidder 1993:27). Political consolidation and the emergence of a religious elite are also contributed to Mississippian influences. Mound sites became less scattered but larger, while non-mound sites were smaller but more numerous.

Plaquemine culture provides the first definite evidence for a ranked society in the late prehistoric period (Kidder 1992:29-30). In many parts of the Southeast, there appears to have been a hierarchy of sites. Special purpose camps and farmsteads were scattered throughout the region. The latter were sites where nuclear, and extended families lived in small huts and cultivated maize, beans, and squash. The diet was based primarily on the consumption of cultivated plants, but it also included the use of game and wild plants. Many of the scattered farmsteads appear to have been oriented toward mound centers. Excavations have shown that these centers were occupied for long periods, and that the mounds supported structures and were surrounded by palisades. The groups appear to have had chiefdom-level political systems. There was differential access to goods, and some sites evidence specialization in the production of certain classes of material goods.

The Louisiana coastal zone experienced cultural change and variation similar to the rest of the Lower Mississippi Valley. As mentioned above, the Plaquemine period (ca. A.D. 1200) appears throughout the region. Large mound sites such as Gibson (16TR5), and the Berwick Mounds (16SMY184) are likely representatives of major Plaquemine centers (Weinstein and Kelley 1992:38). Smaller sites represented by isolated mounds probably indicate the presence of minor villages. Plaquemine components are exemplified in numerous shell middens possibly serving as seasonal collecting locales for the inhabitants of the larger mound sites (Altschul 1978; Gibson 1978b; McIntire 1958; Weinstein et al. 1978; Weinstein and Gagliano 1985; Weinstein and Kelley 1992).

The Medora site (16WBR1) in West Baton Rouge Parish is the type site of the Plaquemine culture. The Medora phase (A.D. 1200-1500), established by Gagliano (1967) based on Qumiby's (1951) excavations of the Medora site is one of the early Plaquemine period phases in the region (Weinstein and Kelley 1992:39). The second two phases represented in the area are the Barataria phase (A.D. 1200-1500) and the Burk Hill phase (A.D. 1200-1600); all three phases are identified on the basis of ceramic type and variety.

Also during this time period, evidence of the so-called "Southern Cult" is represented primarily by cult designs which occur on pottery in the Barataria phase (Holley and DeMarcay 1977:16; Weinstein 1987; Weinstein and Kelley 1992:39). This, in addition to the distribution of shell-tempered pottery ,suggests an eastern Gulf coast origin occurring around Mobile Bay (Gagliano et al. 1975:27; Weinstein et al. 1978:8).

By approximately 1500 A.D., the material culture of the aboriginal groups in the Louisiana coastal zone appeared similar to that encountered by the early French explorers. The Delta Natchezan phase (A.D. 1500-1700) was created by Phillips (1970) to include all of south Louisiana with ceramics similar to the protohistoric and historic Natchez. Bayou Goula (16IV11), the type site for this phase, is the assumed location of the historic Bayougoula (Weinstein and Kelley 1992:39). A small amount of shell-tempered pottery including Addis Plain *vars. Greenville* and/or *St. Catherine* may be associated with the Delta Natchezan phase. However, the principal ceramic markers include Fatherland Incised, *vars. Fatherland* and *Bayou Goula* (Quimby 1957:121-128; Brain 1969; Brown 1985; Phillips 1970; Steponaitis 1974; Weinstein and Kelley 1992:39).

CHAPTER 4
HISTORIC BACKGROUND

The Colonial Period to 1803

The area of St. Mary Parish was little explored or settled during the early decades of the French colonial administration of Louisiana. The region was part of the Attakapas district, named for a powerful Indian tribe in southwestern Louisiana. The early historic occupation of the Attakapas District was by the Atakapas (or Attakapas) at its western extremity and the Chitimacha tribe to the east.

At the beginning of the historic period the Atakapas comprised several bands. Their territory ranged from the Vermilion River in the east, stretching westward past the Mermentau River to the Calcasieu and lower Sabine Rivers. "Atakapas" ("man eaters") was a name given them by Mobilian or Choctaw speakers because of purported cannibalistic practices, but they referred to themselves as many tribes did, as "the People" (*Ishak*). Two eastern bands of the Atakapas, the *Hikike Ishak* or "Sunrise People," lived at the western edge of modern St. Mary Parish at various times. They occupied locations on upper Bayou Teche, lower Vermilion River, near Plaquemine Brule, near lake Arthur on the Mermentau River, on western Grand Lake, on Lower Bayou Nezpique, on Bayou Queue de Tortue, and on Lacassine Island. The total Atakapas population may have totaled about 2,000 to 2,500 in the second half of the seventeenth century (Swanton 1952:198-199; Kniffen et al. 1987:46; Goins and Caldwell 1995:21).

The Atakapas were initially isolated from French settlement in southeastern Louisiana because of the obstacle the Atchafalaya Basin provided to migration and trade. In the 1720s, Bienville estimated the Atakapas at about 200 warriors. In the late 1730s, the Atakapas made entreaties to the French to trade pelts, bear oil, and horses for European goods and the French were happy to comply (Usner 1992:1100-101). Increased contact with the French negatively affected the Atakapas with disease, and substantial European settlement in their territory began in the mid-eighteenth century. After 1760, European settlement within the Atakapas district accelerated, and the Atakapas began to withdraw westward. The Atakapas sold land between Bayou Teche and the Vermilion River to French settlers. In 1779, the eastern Atakapas bands at the Vermilion River and the Mermentau River had a total of about 180 warriors, and furnished warriors to Galvez' expedition against the British. By 1805, only about 80 warriors remained in the single surviving Atakapas town on the Vermilion River, and of these, about 30 were Houma and Tunica that had joined the Atakapas. A handful of eastern Atakapas may have resided on the Mermentau River into the 1830s, but otherwise, they were absent from their former eastern range by this date (Swanton 1952:198-199; Kniffen et al. 1987:75; Goins and Caldwell 1995:21).

The Chitimacha tribe in the early historic period was centered in two groups, one along Grand Lake and its environs, including lower Bayou Teche, and one on the upper reaches of Bayou Lafourche. The Chitimacha may have derived their appellation from their own name for Grand River (*Sheti*). They were a powerful tribe in the region, numbering approximately 3,000 or 4,000 individuals in 1650. John R. Swanton (1952) identified several Chitimacha village sites within modern St. Mary Parish. These included: *Ama'tpan na'mu*, a village located three miles east of Charenton on Bayou Teche, and then later on the east side of Grand Lake opposite Charenton; *Hi'pinimsh na'mu*, at Fausse Pointe; *Ne'kun tsi'snis*, opposite Ile aux Oiseau in Lake False Pointe; *Ne Pinu'nsh*, two miles west of Charenton on Bayou Teche; *Oku'nkiskin*, somewhere on Bayou Teche; *Shatshnish*, at Jeanerette; *Sho'ktangi ha' ne hetci'nsh*, on the south side of Graine à Volée Inlet, Grand Lake; *Tca'ti kuti'ngi na'mu*, at the junction of Bayou Teche with Atchafalaya Bayou (probably north of Berwick); *Tcat kasi'tunshki*, at Charenton; and *Waitinimsh,* at Irish Bend (Swanton 1952:202-203; Kniffen et al. 1987:53; Castile et al. 1990:21-22).

At the beginning of the eighteenth century, the French found Chitimacha villages on Bayou Lafourche and Bayou Teche; the latter settlements were possibly recently established. The Chitimacha allied themselves with Iberville and the French, and had an estimated 700 to 800 warriors in 1699. Relations between the French and the Chitimacha soon deteriorated. War erupted between the Chitimacha and the Taensa, former allies, in 1706. A Chitimacha war party returning from an unsuccessful raid on the Taensa killed a party of Frenchmen (including Father de St.-Cosmé, missionary to the Natchez). A war ensued, lasting more than a decade, and was disastrous to the Chitimacha. In 1707, the French and their Indian allies destroyed one of the Chitimacha villages, and the Chitimacha began a retreat to more inaccessible regions of the Atchafalaya Basin. Many Chitimacha were enslaved by the French before a peace between them was concluded in 1718. Some of the Chitimacha moved to the Mississippi River, but some remained in the southwest part of the Atchafalaya Basin. In 1784, there were two Chitimacha villages reported on the Teche. By the later-nineteenth century, only a small band of Chitimacha remained at Charenton, with a handful of Chitimacha descendants remaining in the Atchafalaya Basin. The Federally-recognized Chitimacha tribe are unique in Louisiana in that their reservation today at Charenton is where they had a settlement in 1700 (Swanton 1952:202-203; Kniffen et al. 1987:308-309; Castile et al. 1990:21-22; Goins and Caldwell 1995:21).

It is possible that European settlers had established themselves in the vicinity of Morgan City in the early Spanish colonial period. Acadians and others ascending Bayou Teche to the Poste des Attakapas may have stopped in the area of Berwick Bay and Bayou Boeuf in the second half of the 1760s. Descendants of Irishman Christopher O'Brien claimed that he was resident on Tiger Island for a short time before 1770, and after 1801, O'Brien received a Spanish grant of a 640-acre tract that eventually became the site of Morgan City. However, the earliest documented European settler in the Morgan City area was Thomas Berwick, who moved to Tiger Island from Opelousas after 1784. On July 3, 1797, Berwick's wife, Eleanor Wallace Berwick, and his son, Joseph, received a Spanish land grant for a 70-arpent front tract on Tiger Island, fronting on "the river Teche" [Lower Atchafalaya River and Berwick Bay] (Peltier and Lehmann 1960:11).

The early European settlers found the portion of modern St. Mary Parish along Bayou Teche to be the most desirable land for settlement. Along the Teche, cultivable land extended one to three miles on either bank. Along Bayou Salé, Bayou Cypremort, Bayou Boeuf, Bayou Shaffer, and the shores of Berwick Bay, the land suitable for cultivation was less extensive and seldom exceeded an area one-half mile from the waterway (de Grummond 1949:18). In 1762, there were about 400 persons residing in the Attakapas district. Some of these settlers were Creoles who had come from Fort Toulouse and Mobile. Louisiana was transferred to Spain under the terms of the Treaty of Paris in 1763, and the Spanish encouraged settlement in the Attakapas district. In 1765, Acadian settlers began to arrive in Louisiana in large numbers. Some were settled along the Mississippi River by the colonial administration, but many of them located in Attakapas. The Acadian settlers received Spanish land grants in a area stretching from La Manque, near modern Breaux Bridge, to Fausse Pointe (present-day Loreauville).

The settlement of the St. Mary Parish region was predominantly Acadian only at the upper and lower extremities of Bayou Teche within the modern Parish boundaries. Between the vicinities of Baldwin and Morgan City, many settlers were Creoles from elsewhere in the colony, and after 1804, Americans of British or other European background (Goins and Caldwell 1995:97). The Franklin and Morgan City regions thus developed a diversified population of Acadian, Creole, British-American, and African-American heritage (Kuttruff et al. 1993:36; Harris 1881:217).

The Antebellum Period: 1804-1861

In 1805, the Legislative Council of the Territory of Orleans renamed the Attakapas District the County of Attacapas (*sic*), comprising the modern parishes of Vermilion, Iberia, Lafayette, St. Martin, and St. Mary. The first territorial legislature redivided Louisiana into nineteen parishes in 1807. The former Attakapas district became the parish of St. Martin, with a total population of 7,369 persons in 1810. In 1811, St. Mary Parish was created out of St. Martin Parish. Franklin was established as the seat of St. Mary Parish in 1820. In the following decades, the boundaries of St. Mary Parish were defined and altered and did not become permanent in their contemporary locations until the Reconstruction period. Notably, Iberia Parish was created from portions of St. Mary and St. Martin parishes in 1868 (Broussard 1977:12; Goins and Caldwell 1995:41-44).

More European-American settlers arrived in the Bayou Teche, Atchafalaya River, and Berwick Bay area during the early American period and began to grow sugarcane. Thomas Ashe, traveling in Attakapas in 1806, noted that stock raising was important in the district, but also that sugar cane was "very abundant and profitable" (quoted de Grummond 1949:21). Cathcart noted in 1819 that sugar cane was being grown on the natural levees on the south side of Tiger Island, and other planters in the Berwick Bay area had turned to sugar growing by this date (Peltier and Lehmann 1960:9-13; Goodwin et al. 1985:36, 40). The excellent alluvial soil along Bayou Teche and Bayou Sale also led to the re-consolidation of tracts along these waterways and their use for commercial agriculture. Many of those consolidating larger tracts were American planters, encouraged by the sugar tariffs of 1816. Cotton prices were also low in the 1820s, further encouraging sugar growing. By 1824, there were over 1500 acres planted in sugar cane in St. Mary Parish. The tariff was revised in 1828, and within a year, the number of sugar plantations nearly doubled in the parishes of St. Mary, St. Martin, and Lafayette (which included portions of present-day Iberia and Vermilion parishes). By 1835, sugar had clearly become the dominant commercial crop in the area, but the soil and climate were suitable for many other crops. Travelers in the early antebellum era noted that Berwick Bay residents also grew corn, oranges, pears, plums and other fruits, sweet potatoes, beans, garlic, and cabbages. In the later antebellum period, planters and farmers grew rice, corn, Irish potatoes, sweet potatoes, pears, plums, quinces, and other garden vegetables and fruits, reportedly even pineapple, in small quantities (de Grummond 1949:21; Broussard and Broussard 1955:11; Peltier and Lehmann 1960:77; Goodwin et al. 1985:41).

The availability of water transportation in the Parish was important to its agricultural development. Bayou Teche and the lower Atchafalaya River remained the main transportation route within St. Mary Parish throughout the antebellum period. Regular steamboat service between New Orleans and New Iberia began in 1819. By 1825, ships were carrying St. Mary Parish sugar directly to markets in the northern states and regular steamship service soon developed out of Franklin (de Grummond 1949:22; Pearson and Saltus 1991:27-35).

The area of Franklin was laid out in lots by Hugh Latiolais in 1808. At first called Carlin Settlement, the Post Office was named Franklin in 1817. In 1819, Franklin was described as a village of 15 or 20 houses, and the neighboring area had 15 or 20 plantations. Many of the early settlers of Franklin were of British or Anglo-American descent (Kuttruff et al. 1993:36), in contrast to the heavily Creole and French population of the countryside. Named the St. Mary Parish seat in 1820, Franklin was not incorporated until 1830 (Broussard 1977:12). By 1838, a visitor to Franklin described the town as a "beautiful village" with a population of about 800 persons. The community had a church, court house, public school, female seminary, two hotels, two banks, two printing offices, a post office, an ice house, and even had some macadamized streets. By 1850, the population had reached almost 900 persons and continued to grow during the remainder of the antebellum period. As the parish seat, Franklin was a communications center, and four newspapers, all weeklies, were published there during the antebellum period. These were the *Franklin Republican*, from 1832 to 1841; the *Attakapas Register*, from 1857 to

1861; the *St. Mary Union Bell*, in 1860; and the *Planter's Banner*, which began publication in 1836 and lasted until 1872 (de Grummond 1949:22-23, 53-54; Broussard and Broussard 1955:12; Broussard 1977:13; Pearson and Saltus 1991:27-35).

The port of Franklin was also increasingly busy during the antebellum years; sugar, molasses, timber, corn, and moss were exported, and manufactured goods imported for distribution up the Teche and along the shores of Berwick Bay. Franklin had a U.S. custom house for some time in this period. In 1847, 71 domestic and nine foreign vessels with an aggregate tonnage of 8,158 tons landed in Franklin. The following year, 88 domestic vessels and 32 foreign ships landed at Franklin with an aggregate tonnage of 15,319 tons. Exports for 1848 included 16,589 hogsheads of sugar, 2742 hogsheads and 19,644 barrels of molasses, and 55,900 feet of live oak lumber. By 1850, four steam packets made regularly scheduled trips from New Orleans to Franklin, and in 1852, 24 foreign vessels and 98 domestic vessels landed at Franklin with an aggregate tonnage of 19,912 tons. However, navigation on the Atchafalaya and Teche was complicated by occasional low-water levels, which required vessels to unload portions of their cargo, and by seasonal floods that brought strong currents. Because of these complications, the actual packet times between Franklin and New Orleans were irregular. Traffic on the lower Atchafalaya and Bayou Teche was heaviest in January, when the sugar harvest was in, water levels were high, and the district court was in session. Local pilots were usually necessary to navigate the tricky Atchafalaya and Teche channels, and Atchafalaya Bay and River pilots were regulated after 1850. The government appointed not over six pilots at a time, who were U.S. citizens and residents of Louisiana for at least two years, and who had to post sureties totaling $1,000. Each pilot was subject to a $500 fine or up to six months in jail for refusing to board and pilot a ship in need of his services (de Grummond 1949:22-23, 53-54; Broussard and Broussard 1955:9-10; Broussard 1977:13; Pearson and Saltus 1991:27-35).

Patterson, or Pattersonville, as it was called into the twentieth century, grew up at the site of Dutch Settlement. Dutch Settlement, also called Dutch Prairie and Dutch Town, was established by Hans Knight (apparently a Pennsylvanian of Germanic extraction) in the early years of the nineteenth century. In 1819, Dutch Settlement had a single tavern as its only business. In 1832, Captain John Patterson, from Indiana, arrived in the area by boat and purchased a tract of land to the north of the present town. Patterson built a home in Dutch Settlement and opened a store. Patterson was responsible for moving the United States Post Office from the Charpentier Plantation (later Luckland Plantation) to Dutch Settlement, and afterwards, the citizenry changed the name of Dutch Settlement to Pattersonville. By 1838, the growing prosperity of the region was evident even in Pattersonville, which had several stores and a post office. In 1847, the first school in St. Mary Parish opened at Pattersonville; in the following year, a cypress sawmill, supplied by pre-industrial float logging methods, had come into operation. By the early 1850s, Pattersonville had swelled to a population of 600 persons, second in St. Mary Parish only to Franklin (Broussard and Broussard 1955:7; Patterson High School 1965:7-10).

Centerville, located about 12 miles up Bayou Teche from Pattersonville, also had a post office and stores by 1838, and the population had grown to 200 persons by 1853. The town had several stores, a general mercantile cooperage, a cypress sawmill, an icehouse, and several hotels (de Grummond 1949:22-23, 53-54; Broussard and Broussard 1955:7).

The latecomer of major towns in St. Mary Parish was Brashear, later called Morgan City. Brashear was also sometimes called the town of St. Mary prior to its incorporation. Tracts were subdivided and sold on Berwick Island by 1812. Around this time, Dr. Walter Brashear was resident on a plantation established by Thomas Berwick, which Brashear acquired between 1809 and 1817. Brashear was a major landowner in the area, eventually owning tracts at Cote Blanche, Petite Anse, and Orange Island as well as on both sides of Berwick Bay and on Bayou Boeuf (Peltier and Lehmann 1960:9-13; Goodwin et al. 1985:36, 40; Pearson and Saltus 1991:28). Brashear bought a parcel of land on Berwick Bay in 1832 and another in 1835. Brashear's

holdings were subdivided by his descendants after his death in 1842, and the descendants evidently began to sell parcels of the two plantations before 1849. Berwick Bay became an entrepôt for shipping from the Gulf of Mexico to the port of Franklin. Sugar, molasses, and large numbers of cattle were shipped from the area (Tourist Division 1938:234; Peltier and Lehmann 1960:14-16; Goodwin et al. 1985:52-53,58; Kuttruff et al. 1993:36; Goins and Caldwell 1995:68).

The greatest stimulus to the area was the construction of the New Orleans, Opelousas, and Great Western railway line from Algiers to Berwick Bay, which began in 1852. The owners of Tiger Island sugar plantation, Robert B. and Thomas T. Brashear, granted a right of way across the plantation to the railroad and also sold them a lot for a depot. The Brashears further subdivided their tract in an 1853 plan, and population growth was rapid enough by 1855 (before the railroad reached the area) that the town of Brashear had a United States Post Office. According to an 1855 advertisement in the New Orleans *Picayune*, the Brashears intended to donate 50 to 100 town lots to "homesteading mechanics, shopkeepers, artisans, etc." (quoted in Goodwin et al. 1985:58). On August 20, 1856, the Brashears conveyed to the N.O.O. & G.W.R.R. rights to construct and maintain wharves, sheds and other buildings on the margin of Berwick Bay for a distance of 130 feet above and 200 feet below the centerline of the railroad line. Another contract, dated February 14, 1857, allowed construction of a coal yard wharf and cattle landing on the bay front and a track extending down Front Street (Tourist Division 1938:234; Peltier and Lehmann 1960:14-16; Goodwin et al. 1985:52-53,58; Kuttruff et al. 1993:36; Goins and Caldwell 1995:68).

The railroad was completed as far as Bayou Boeuf on February 24, 1856, and through to Brashear by April 1857. On November 13, 1856, the N.O.O. & G.W.R.R. made an agreement with Cornelius Vanderbilt for steamer service between Brashear and Galveston, Texas. The first sidewheel steamboat between Brashear and Galveston entered service in April 1857, and the second in May of that year. Daily trains ran from Algiers, and Brashear became a hub for east-west traffic and shipping on the Teche. The town grew rapidly around the rail terminus, and by 1859, 40 homes had been constructed at Brashear. Brashear was formally incorporated on March 8, 1860. Its population was about 300 persons at this time (Tourist Division 1938:234; Peltier and Lehmann 1960:14-16; Goodwin et al. 1985:58; Kuttruff et al. 1993:36; Goins and Caldwell 1995:68).

The rise of commercial sugar agriculture in St. Mary Parish was accompanied by a increasing proportion of enslaved African-Americans in the population. By 1830, slaves made up more than half the parish population, and by 1840, over 70% of the parish's total population of nearly 9,000 persons was enslaved. Between 1850 and 1860, the white population of St. Mary Parish increased by 100 persons, while the slave population increased by 3,200 persons. On the eve of the Civil War, about 77% of the Parish's total population of 16,816 persons were slaves. Relatively speaking, slaveholdings were large in St. Mary Parish. In 1860, the average number of slaves per slaveholding was over 20 slaves, and fewer than 10% of slaves were held in units of 9 slaves or fewer. However, about 42% of slaveholders in St. Mary Parish owned fewer than 10 slaves in 1860. This means that while many slaveowners had only a few slaves, most slaves were held by owners with 10 or more slaves. Fewer than 6% of slaveholders, about 90 persons total, owned 50 slaves or more; but about 73% of slaves in the Parish were held by these 90 slaveowners. In addition, a smaller percentage of the white population owned slaves in 1860 than had done so ten years before (de Grummond 1949:26-27; Hilliard 1984:29-38; Kuttruff et al. 1993:37).

Farms were also relatively large in St. Mary Parish. In 1853, there were 175 farms producing sugar in St. James Parish, 67 with steam mills and 115 with horse-powered mills; they had an average of 37 working hands per farm. The average sugar production of these farms and plantations in 1853 was 226 hogsheads of sugar (Broussard 1977:26). Over 10% of all farms in St. Mary Parish in 1860 were 500 acres and larger; the average farm size was over 800 acres and average farm value at over $10,000. These statistics indicate that a significant number of plantations were very large indeed. Alluvial lands in St. Mary Parish were valued at from $10,000 to

$20,000 per square mile, among the highest in the sugar region, surpassed only by lands in Ascension and Iberville parishes (Hilliard 1984:41-44). In 1860, the largest plantations between Pattersonville and Berwick Bay were owned by Estate D.D. Richardson & Bro. (Waveland Plantation), Antoine Como, John M. Bateman, V.H. Rentrop, and W.M and J.K. Smith, interspersed with several smaller establishments (Champomier 1860).

The heavy investments made by St. Mary Parish planters in slave labor and sugar-processing equipment contributed to St. Mary Parish being the leading sugar-producing parish in the state in 1850-1852, 1854-1855, and 1857-1860. In the 1853-1854 season, a major hurricane damaged the crop in St. Mary Parish, which still had the second highest crop production in the state for the year. The highest pre-war production total for St. Mary Parish was the 1858 season, when 44,634 hogsheads were produced. Even this large total was surpassed in the statewide banner crop year of 1861-1862, when St. Mary Parish plantations produced 48,779 hogsheads of sugar (Champomier 1862; de Grummond 1949:43; Broussard and Broussard 1955:11).

The Civil War: 1861-1865

St. Mary Parish saw its share of military activity during the Civil War, with Bayou Teche playing a uniquely significant role in the western theater of war. A Northern soldier commented that the Teche played a role relative to the Mississippi Valley similar to that of the Shenandoah Valley in Virginia: "the Teche country was a sort of a back alley, parallel to the main street wherein the heavy fighting must go on; and one side or the other was always running up and down the Teche with the other in full chase" (quoted in Roland 1957).

In spring 1861, the Parish of St. Mary was more concerned with local defense than providing troops for out-of-state Confederate service. A battalion of militia was quickly raised and equipped in St. Mary Parish after secession, but initially only three companies of troops were sent to the regular Confederate Army (Winters 1962:74), with free transportation courtesy of the N.O.O. & G.W.R.R. The railroad provided nearly $18,000 worth of free transportation of troops and matériel for the Confederate military during the first year of the war (Peltier and Lehman 1960:17). The St. Mary Parish militia was called into active duty in June 1861 and deployed at the mouth of the Red River. The St. Mary's Cannoneers, made up of planters, distinguished itself the following year. This unit was the only one to remain steadfastly at its post during the mutiny of Confederate troops at Fort Jackson, below New Orleans, in April 1862 (Winters 1962:100, 150, 314).

A substantial minority of the free residents of St. Mary Parish were not secessionists, and probably a larger number were indifferent to the Confederacy. The majority of the Parish population were slaves, a fact sometimes overlooked by local historians when considering the popularity of the Confederate "Cause." An unknown number of African-Americans from St. Mary Parish, at least many hundreds, were recruited into the Union Army in the last three years of the war, contributing to the over 24,000 African-Americans from Louisiana who served in the United States armed forces during the Civil War (Winters 1962:100, 150, 314).

Ironically, the first wartime sugar crop (that of 1861-1862) was also the largest Louisiana harvest to date, but the Federal naval blockade made getting the sugar to market extremely difficult. Northern markets and sources of plantation supplies were effectively sealed off; railroad rolling stock was in very short supply, making distribution within the Confederacy difficult also. Some planters had foreseen that war would be a disaster for the sugar and cotton industries, but even more came to rue the consequences of secession, even before military actions traumatized the region, as the prices of necessities soared and plantation products languished in warehouses (Roland 1957:42-44).

Brashear City, at the junction of Bayou Teche, the Atchafalaya River, and the only railway line in southern Louisiana, was a particularly strategic point in the region that was bound to be soon involved in military action. The Confederates built three forts and several smaller works in the vicinity of Brashear City in 1861. Other defensive measures taken by the Confederates included removing all navigational aids in the Atchafalaya channel and filling it with an abatis of live oak trees, except for an eighty-foot passage. Barges were prepared with additional trees to fill the gap when required. However, with the fall of New Orleans on April 25, 1862, the Confederates abandoned the fortifications in and around Brashear (and other Gulf Coast points). The works around Brashear were dismantled and the heavy artillery dumped into the bodies of water the cannon had been intended to guard (Peltier and Lehmann 1960:19; Goodwin et al. 1985:61).

On May 1, 1862, the N.O.O. & G.W.R.R. was taken over by Union troops. A few days later, a company of Confederate Rangers captured the train at Bayou Boeuf, and then proceeded to Avondale aboard the captured train. After destroying track there, the Rangers returned to Brashear, destroying the Des Allemands, Lafourche, and Boeuf bridges behind them before abandoning the train. The Union Army took complete control of the N.O.O. & G.W.R.R. line in November 1862, and after repairs, the line was operated by Federal authorities exclusively for military use (Peltier and Lehmann 1960:17).

The war came to St. Mary Parish in earnest in the autumn of 1862. Almost 1400 Confederate troops under General Alfred Mouton passed through Brashear City on October 28 or 29, pursued by General Godfrey Weitzel's Union troops, and retreating toward Fort Bisland on Bayou Teche. The Federal gunboats *Kinsman*, *Estrella*, *Calhoun*, and *Diana* reached Brashear City on October 30, too late to impede Mouton, and Weitzel arrived at the town on November 2 (Winters 1962:162; Peltier and Lehmann 1960:20-21; Pearson and Saltus 1991:36; Goins and Caldwell 1995:38). An inconclusive running naval battle between the Confederate gunboat *J.A Cotton*, captained by Atchafalaya Basin planter E.W. Fuller, and the *Kinsman*, *Estrella*, *Calhoun*, and *Diana* occurred from November 1 to November 4 on Berwick Bay, the lower Atchafalaya, and Bayou Teche. These actions concluded with the Federal gunboats withdrawing to Brashear City and the *Cotton* moving up the Teche (Winters 1962:162-163).

Some sugar planters sought to move their slaves out of the path of the invading Federal troops in the autumn of 1862, fearful the slaves would leave the plantations once infected by "Yankee fever." A few planters moved their slaves as far afield as Texas, while others shifted the slaves to out-of -the-way plantations closer by (Roland 1957:55-56, 95). The Emancipation Proclamation was announced on January 1, 1863, with ironic effect in the Teche country. The Federals hoped to encourage sugar and cotton production in the region, and the sale of these products to northern brokers. St. Mary Parish was one of the Louisiana parishes expressly exempted from the Emancipation Proclamation (Brown 1867:121). However, General Banks recognized *de facto* emancipation in January 1864 and proclaimed inoperative all laws recognizing and regulating slavery in Louisiana. The Louisiana Constitutional Convention declared all slaves in the state free in September of that year. However, slaves in Confederate-occupied portions of Louisiana were in practical terms not emancipated until June 1865. In the meantime, the slaves were thus supposed to remain on their plantations, producing the valuable commodities the Federals were so anxious to obtain. However, the presence of Federal troops on Bayou Teche played havoc with the sugar plantations of the area. The initial reaction on the part of many slaves to the arrival of Union troops in their district was a great excitement and exuberance. A Union soldier described the revelry on a Bayou Teche plantation when the "Lincoln soldiers" arrived. The slaves lit a great bonfire, and hundreds danced to the raucous strains of fiddles, until suddenly the fiddles ceased and the dance turned into a thanksgiving prayer meeting (Roland 1957:100).

While some slaves simply rejoiced when the Federal troops approached, others took more material advantage of the situation. Large numbers of slaves left their plantations to follow the Union troops. The slaves were sometimes encouraged by the soldiers to take what they wanted of

their master's foodstuffs, clothing, furniture, or livestock; other stragglers interfered with the slaves on the plantations, disrupting all work. Disorderly fraternization of soldiers with slaves horrified moralistic officers, enlisted men, planters, and undoubtedly, slaves as well. Many slaves refused to perform plantation labor, and large numbers deserted their plantations and flocked to the Federal forces either on the march or at Brashear City, becoming a substantial logistical problem. The Federals tried to discourage the "contrabands" from coming to Brashear and encouraged slaves to stay on their plantations. The Federals had only a limited effect in this regard, and the planters in the region were mostly paralyzed for lack of reliable labor. Compulsion to work failed, and planters were forced to try wage arrangements with their slaves. The plight of the planters was compounded by the poor discipline of the Federal troops, and much plundering of farms and plantations went on in the vicinity. Many "loyal" planters complained loudly to the Union command, and in some cases, Federal troops were stationed on "loyal" plantations to protect them from depredations of crops and livestock (Roland 1957; Winters 1962:162-163).

Brashear City remained an important Federal base in 1863. Reconnaissance expeditions were regularly sent up the Teche and Atchafalaya from Brashear. As a result of one of these expeditions, the Union gunboat *Diana* was captured by the Confederates in an ambush on Bayou Teche in early 1863. Also in winter 1863, Union General Nathaniel P. Banks made plans to move towards the strategic Confederate strongpoint at Port Hudson from the west, rather than ascending the Mississippi. Forces from New Orleans and Baton Rouge, numbering 4,500 men, were assembled at Brashear City in March 1863, and began advancing north on April 11. Their objectives were to clear the Teche of Confederates, take Fort Burton at Butte La Rose on the Atchafalaya River, and cut Port Hudson off from supply from the west (Winters 1962:214, 221-233; Goins and Caldwell 1995:39).

Confederate troops had been encamped for several weeks on the plantation of William T. Palfrey of St. Mary Parish, located between Patterson and Centerville. Fearing imminent disaster, Palfrey managed to sell the copper pans, worms, tanks and pipes from his sugar house to a St. Martin Parish planter on April 10, with the proviso that the buyer move the equipment at his own "peril & risk." The Confederates moved into entrenchments on the Bethel Plantation, below Palfrey's, and the Federals arrived on the afternoon of April 12. A battle ensued, remembered as the battle of Bisland, and continued on the 13th. The action was largely an artillery duel and resulted in 40 Federal dead and 184 wounded, with an unknown number of Confederate casualties. The *Diana* was damaged in this action supporting the Confederates and moved up the Teche to Franklin for repairs, while the Confederate infantry and artillery also withdrew from their positions when it was learned that the Federals had flanked them up the bayou, closer to Franklin. The Confederate and Union forces met again on April 14 upstream at Nerson's Woods (Irish Bend) near Franklin. In a rugged holding action and with superior leadership, the Confederates inflicted losses of 49 killed and 274 wounded upon the Federals; Confederate losses were at least 21 dead and an unknown number of wounded. The fatigued Confederates escaped from the larger Union force, abandoning Franklin and retreating north. Also on April 14, Union naval forces defeated the Confederates on Grand Lake in St. Martin Parish (Roland 1957:59-60; Winters 1962:214, 221-233; Goins and Caldwell 1995:39).

The actions at Bisland and Irish Bend were relatively small by Civil War standards, but certainly memorable enough for the participants. Fighting in dense fields of sugar cane, some of it unharvested from the preceding year, indelibly marked the memories of participants in these battles. The stalks formed an "impenetrable *chevaux de frise*" as the combatants struggled "amid horrible labyrinths of tangled sugar cane" (quoted in Roland 1957:60).

Skirmishing continually after the action at Irish Bend, the Union Army pushed the exhausted Confederate forces out of St. Mary Parish, past Jeanerette to New Iberia, and on to Vermilionville. Many of Taylor's troops were disgruntled conscripts and deserted during the

retreat. Opelousas was captured by Banks' forces on April 20. Banks' troops rested and then advanced on Alexandria, which was occupied by David Farragut's U.S. naval force on May 7 (Winters 1962:214, 221-233; Goins and Caldwell 1995:39).

Banks sought to secure his supply lines from Brashear City to Opelousas. Additional expeditions were sent into the Atchafalaya Basin, and for a time Franklin was occupied by Federal troops. The town and the surrounding countryside suffered further from foraging expeditions and outright pillaging. A New York soldier observed between Bisland and Franklin:

> The men soon learned the pernicious habit of slily leaving their places in the ranks, when opposite a planter's house, to "appropriate" a chicken, or "confiscate" a pig, or "gobble" a few turnips and radishes. Oftentimes a soldier can be found with such an enormous development of the organ of destructiveness, that the most severe punishment cannot deter him from indulging in the breaking of mirrors, and pianos, and the most costly furniture. Men of such reckless dispositions are frequently guilty of the most horrible desecrations... [quoted in Winters 1962:236]

Behind Banks' army in its advance were widespread destruction of fences, houses ransacked, crops trampled, and the carcasses of butchered cattle. Some inhabitants flew British or French flags over their homes, hoping to escape molestation. Instead, the soldiers held the flying of a foreign flag in particular contempt and showed these inhabitants "very little mercy" (quoted in Winters 1962:236). Pillaging and looting became bad enough for guards to be stationed at every house with two or more chimneys along the army's route, to prevent theft; the more modest homes of the lesser inhabitants did not receive such protection. By April 15, 1863, some 300 soldiers had been arrested for theft, and approximately 500 stragglers were at large behind Banks' army, plundering the countryside. Some inhabitants fled their homes and hid in the woods. The depredations of straggling soldiers were perhaps most serious, but slaves no longer concerned with plantation discipline and vagabond civilians appropriated livestock and other items for their own use. Matters were bad enough from wanton looting, but Banks' army also tried to supply itself from the countryside as much as possible. Some "loyal" planters managed to sell their plantation products to the Federals, but cotton, sugar, molasses, rum, corn, sweet potatoes, horses, mules, cattle, and livestock harness were seized by foraging parties operating from Franklin and other posts. "Requisitions" of private property went beyond the immediate needs of the forces in the area, and in some cases government rations were discarded by soldiers well-fed from local produce. Thousands of bales of cotton, tens of thousands of head of livestock, and vast amounts of other commodities were sent to Brashear City from the surrounding countryside (Roland 1957:68; Winters 1962:237).

In a report on May 11, 1863, Banks enthusiastically described shipping traffic at Brashear City:

> ...Almost hourly vessels are to be seen coming down the bay freighted with mountain loads of the precious materials of the regions just regained by our arms—cotton, hogsheads of sugar, and countless herds of mules and cattle.
>
> The treasures already discharged upon the landing of Brashear City up to this date would amount to many hundreds of thousands of dollars; while this is but an installment of what remains behind, and which can only be counted by millions of dollars... the planters in the newly-overrun regions had not the amount the amount of "patriotism" which the rebel leaders either supposed or pretended they had... [they] did not quite see the necessity of consigning to flames all the wealth they possessed in the world, merely for the sake of proving their devotion to the cause of Jeff Davis & Co....

> Wherever our armies have penetrated they have found cotton and sugar carefully concealed in all sorts of remote corners; and as they seize these costly products a receipt is given to the owners, upon a fair valuation, in case they should hereafter be able to prove themselves of loyal antecedents, the *onus probandi* being entirely on the planter [quoted in Peltier and Lehmann 1960:23]

Civil law and order was threatened by the 1863 spring operations, and Federal provost troops were required to suppress "insurrections" of slaves who had left their plantations below Franklin and formed into disruptive bands. The retraction of Federal forces from the Teche towards Port Hudson in May 1863 actually contributed to a decline in slave disorders in some areas, as slave owners clamped down on plantation discipline. But through the same month, St. Mary Parish also suffered from widespread disturbances by jayhawkers and runaway slaves. A white jayhawker was believed to be fomenting slave rebellion in St. Mary Parish, and the frightened white citizenry formed a vigilance committee. Assisted by 35 Confederate soldiers, the nascent insurrection was quashed without compunction; the white "ringleader" and some 50 slaves were hanged (Roland 1957:98-100; Winters 1962:237-238, 307).

Among the many dramatic changes for the African-Americans of St. Mary Parish resulting from occupation of the area by Federal troops was the raising of "Colored Regiments" for United States service. Banks, though initially reluctant to use "colored" troops, had five regiments of African-American soldiers by May 1863, and was planning at least two more. By September 1863, Banks was more enthusiastic about the "colored" regiments. He began to conscript able-bodied African-American men into the Corps D'Afrique, eventually creating 20 regiments. There were many problems with these early regiments, but their discipline and training improved markedly over time. They were frequently used for garrison duty (as at Brashear City) and engineering labor, but some units eventually established good combat records (Winters 1962:238, 312-314).

With Port Hudson lost to the Confederates, General Richard Taylor decided in June 1863 to strike back at the Federals with what forces he had. Confederate troops under Alfred Mouton moved back down the Teche, while Colonel J.P. Major took a cavalry force toward Thibodaux. The Union base at Brashear was a tempting target, manned by a large number of convalescents and poorly disciplined troops. Major's cavalry surprised a Federal force at Thibodaux on June 20. The Union troops retreated in disorder to Lafourche crossing. The Confederates, after a drunken binge at Thibodaux, advanced through a heavy rainstorm and attacked on June 21. They were repulsed and retreated toward Thibodaux (Winters 1962:284-286).

Additional Union troops arrived at Brashear City the day after the battle of Lafourche Crossing. Union forces at Brashear then numbered some 700 men, of whom about 300 were convalescents. On the night of June 22, two hundred and fifty of Mouton's men rowed down the Teche and the Atchafalaya in a "mosquito fleet" of skiffs, bateaux, and pirogues, landing in the backswamp at the rear of Brashear City. Two artillery batteries and three battalions of calvary and mounted infantry were simultaneously positioned in the ruins of Berwick and in the woods south of the town. On June 23, the surprised Union garrison was awakened by artillery fire from the Confederate troops across the Bay. Unnoticed by the distracted Federals, the Louisiana and Texas troops formed into line of battle. The Confederates then struck, sweeping through the Union camp. Some of the Federal troops managed to rally at the rail depot, but by 10:00 AM the Union garrison of Brashear City had surrendered to the Confederates (Peltier and Lehmann 1960:24-25; Winters 1962:287-288).

Confederate losses were very light in the capture of Brashear, while 46 Federals were killed and 40 wounded. Some 1,300 military prisoners and 2,000 contrabands, and a huge amount of other materiel and ordnance were captured (Peltier and Lehmann 1960:26; Winters 1962:288-289). A Confederate troop continued up Bayou Boeuf, and one day after the Brashear

battle (June 24) a Federal contingent of 435 officers and men at Boeuf Crossing surrendered to the Confederates without firing a shot. The re-combined Confederate troops under Mouton then failed to take Donaldsonville on June 27-28. After prevailing against the Federals at Cox's Plantation on July 13, this Confederate force withdrew to Brashear City. However, learning that Union gunboats were enroute to Brashear City, Mouton abandoned the town and pulled back to Franklin. Federal troops transferred from Donaldsonville reoccupied Brashear City in force on July 25 (Peltier and Lehmann 1960:25; Winters 1962:289; Pearson and Saltus 1991:39; Goins and Caldwell 1995:39).

Banks was preoccupied with the Texas campaign during the rest of the summer of 1863, but after General Franklin's Sabine Pass debacle, Banks' attention returned to the Teche. In September 1863, the Federals were routed at Sterling's plantation near Morganza. Banks then decided on an overland move against Texas. To secure the Teche, another Union expedition under General Franklin moved up the bayou from Brashear City in October 1863. Confederate cavalry scored a minor victory at a Bayou Teche sugar plantation during this movement, capturing a Federal foraging expedition without a shot while the Union troops were eating dinner. Beyond Opelousas, the main Federal force was stopped by low water levels. Franklin's dawdling caused the overland approach to Texas to be abandoned. The Federals began a slow withdrawal down the Teche, and were attacked by the Confederates at Grand Coteau on November 3. The Federals made out badly in the contest, with losses of 716 killed, wounded, and captured. The Union troops continued down the Bayou and reached New Iberia on November 17. Proceeding down the Teche, the Union force rounded up thousands of the remaining plantation horses and mules in the area and drove them to Brashear City (Roland 1957:67; Peltier and Lehmann 1960:25; Winters 1962:289; Pearson and Saltus 1991:39; Goins and Caldwell 1995:39). These movements concluded major operations in the area for the year.

With all of the problems facing Bayou Teche planters in 1863 and 1864, some tried to plant cotton in addition to smaller amounts of sugarcane. Seed cane was in extremely short supply in 1864. The disruption of the plantation regimen by both armies meant that the rattoons and seed cane could not be properly cultivated, with disastrous results. Cotton-growing on the Teche largely failed because of the unsuitability of the area to cotton culture, shortages of equipment and bagging, and in 1864, poor weather and insect pests (Roland 1957:78-79).

Banks' Red River Campaign began in late winter 1864. In March, a large force was assembled at Brashear City. On March 13, Union troops began to move from Brashear up the Teche and westward from Vicksburg, converging on Alexandria, which was taken on March 16 (Goins and Caldwell 1995:40). The Federal troops subsequently retreated down the Red River and Bayou Teche was largely spared further military activity for the rest of the War.

In the Spring of 1864, the Confederate Louisiana government sought to solve the problem of low recruitment and jayhawking with a single measure. Men of St. Landry, Calcasieu, Vermilion, Lafayette, St. Martin, and St. Mary Parishes liable for military service were ordered "to come forward and join the Louisiana Infantry regiments on duty in the state on or before the 1st day of June 1864; otherwise they [would] be considered and treated as jayhawkers and shot down on sight" (quoted in Winters 1962:383). The impression of desperation conveyed by this order suggests the low ebb of Confederate fortunes in the region. Nevertheless, new recruits of the Fourth Louisiana Regiment were trained at Franklin, and in spring 1864 they raided the Union garrison at Brashear City. After this attack, the Federals were afraid to forage far from their Brashear City base, to the relief of the Teche planters (Winters 1962:383). Expeditions of gunboats and troop transports into the Atchafalaya Basin continued until the early summer of 1865 (Maygarden et al. 1997:43-47). For the remainder of the war, jayhawkers were a greater problem for the residents of St. Mary Parish than was Federal military activity. The last Confederate forces in Louisiana surrendered on May 26, 1865, ending the Civil War in Louisiana.

The Late-Nineteenth Century

St. Mary Parish, as a commercial sugar-growing region, was heavily affected by the Civil War. Physical destruction had been suffered along the Atchafalaya River and Bayou Teche, at Brashear City, and in other areas of military activity. More importantly, the loss of huge amounts of capital invested in slaves (about 50% of total wealth in the Parish in 1860), the collapse of land values, the destruction of cultivation and processing equipment, and the disruption of agricultural labor systems spelled economic disaster for the Parish as a whole, and particularly for the planter class. A painful period of adjustment was required, and political Reconstruction added a context of social tension and civil unrest to efforts to re-develop the economy.

The political intricacies of the post-Civil War and Reconstruction era in Louisiana are too Byzantine to describe in any but the scantiest detail. Political and social unrest were already at a high pitch in early 1867 when the first of the Military Reconstruction Acts designated Louisiana part of the Fifth U.S. Military District. This Act disenfranchised most of the electorate that had been Confederate sympathizers, antagonizing the white population. Symptomatic of the social and political tension in St. Mary Parish was the formation, in response to the Reconstruction Acts, of the Knights of the White Camellia, a "White Man's Club" or "Caucasian Club." This group first assembled in Franklin on May 22, 1867, one day before the Knights of the White Camellia formally organized in New Orleans. Chairman Alcibiades de Blanc described the Knights of the White Camellia as a "strictly peaceful, law-abiding and loyal order; as much so as Freemasons or Oddfellows" (quoted in Goodwin et al. 1985:65). However, the real intent of the organization was to insure, by violence if necessary, that Freedmen voted Democratic or did not vote at all. The Knights of the White Camellia, like the Ku Klux Klan at the same time, identified "carpetbaggers" as interlopers and trouble-makers who had incited the Freedmen and were responsible for the political and social tension in the area. By autumn 1868, there were 800 knights of the White Camellia in St. Mary Parish, a very large percentage of the adult white males of the Parish. St. Mary Parish Sheriff H.H. Pope (a native of New York) and a judge named Chase were assassinated in October 1868 at O'Neill's Hotel in Franklin, in the presence of Pope's family. The perpetrators were suspected to be members of the Knights of the White Camellia, but no legal action was ever brought in the case. In all, the Knights of the White Camellia were implicated in the assassination of 23 African-American office-holders across the state (Broussard and Broussard 1955:17; Broussard 1977:70-72; Goodwin et al. 1985:66).

The contested results of the statewide election of November 4, 1872, further agitated the already tense political and social scene. Franklin native Murphy J. Foster and James Costello were declared winners of the Congressional race in St. Mary Parish by the Warmoth-appointed Returning Board, despite trailing the Republican and Independent candidates in votes actually cast. A competing Returning Board declared the Radical Republican candidates the winners. Foster became a leader of the forces opposing Republican William P. Kellogg, who was recognized by Grant and the U.S. government as the winner of the gubernatorial election rather than the Anti-Radical gubernatorial candidate, Democrat John McEnery. On December 28, 1872, Foster led a mass meeting in Franklin to rally support for McEnery. The situation remained unsettled, and on March 6, 1873, Foster and other leaders of the anti-Kellogg forces were arrested by Federal troops in New Orleans, but promptly released. Civil insurrection seemed possible during the remainder of the year and into 1874. In September 1874, a shipment of arms to the White League, a radical white supremacist organization in New Orleans, were seized by Kellogg's forces, precipitating the pitched Battle of Liberty Place on September 14. Grant immediately dispatched Federal troops to back up Kellogg, and the McEnery faction was forced to concede defeat in the 1872 elections (Broussard and Broussard 1955:17-18; Taylor 1976:101-112).

The 1876 elections brought further strife. The returns indicated a victory for the Democratic candidate Francis T. Nicholls in the Governor's race. However, the Republicans claimed the

election was rife with fraud and intimidation, repudiated the results, and declared Republican candidate Stephen B. Packard as Governor. Events outside Louisiana settled the matter. Because of the disputed electoral votes in the national presidential election, the Compromise of 1877 was reached in which Louisiana's electoral votes were counted for Rutherford B. Hayes. The Democrats appealed the Republican's actions to President Hayes, and Federal troops were subsequently withdrawn from Louisiana. The result was the eventual collapse of the Packard administration and the seating of Democrat Nicholls as Governor. In 1879, Democrat Louis A. Wiltz was elected governor, further pacifying the anti-Republicans (Broussard and Broussard 1955:18-19, 21; Taylor 1976:113).

The Reconstruction attempt to empower African-Americans as the supporters of Republican rule had failed. In practice, the voting rights of African-Americans were neutralized from 1876 to 1896 by fraud and intimidation, and after 1898, by new voting qualifications. The end of Reconstruction brought with it the re-imposition of the dominance of landed white Democrats in Louisiana political life, exemplified in St. Mary Parish by the election of Murphy J. Foster to the Senate in 1879. Foster served in the Senate until 1892, afterward was governor of Louisiana for two terms, and then again returned to the Senate (Broussard and Broussard 1955:18-19, 21).

Among the effects of war and Reconstruction was change in the demographic structure of the parish population. Total population declined between 1860 and 1880, principally because of the detachment of Iberia Parish from St. Mary Parish in 1868. In 1880, the St. Mary Parish population total was 16,470, about 98% of the 1860 total. However, the white population had increased from about 3900 persons in 1860 to about 5400 in 1880, a 72% increase in a much smaller area over a period of only twenty years. In the same two decades, the African-American population decreased from about 13,000 persons in 1860 to about 11,000 in 1880, or to 67% of the Parish total. The African-American population of St. Mary Parish thus experienced an absolute population decline of about 8.5% during the war and Reconstruction years. Much or all of this decline can be attributed to the creation of Iberia Parish, since in the state as a whole, the years 1860 to 1880 saw a strong increase in African-Americans as a percentage of total population. After 1880, St. Mary Parish reflected particularly strong overall population growth. By 1900, total parish population had reached 34,145 persons (Goins and Caldwell 1995:52), more than double the 1880 total.

In 1880, Franklin's population was about 1500 persons, and the town had six churches (three white and three black), a shipyard, an ice factory, and a sawmill. Ten years later, Franklin had three schools, a white school, a "colored" school, and a Catholic school; plus three hotels, two livery stables, and one newspaper. In 1880, St. Mary Parish overall had a total of 21 "colored" and 11 white public schools (Harris 1881:119, 218; Kuttruff 1993:36).

Brashear City was in a sorry state at the conclusion of the Civil War. Moveable property of the residents and livestock had been confiscated or plundered, and real property and capital investments in buildings and machinery damaged and destroyed. The agricultural economy of the hinterland, upon which the commerce of Brashear City depended, was in disarray. However, the railroad was eventually the savior of Brashear's fortunes. By 1869, the N.O.O. & G.W.R.R. went broke with the effort to repair its track and bridges and extend the line westward. Shipping magnate Charles Morgan purchased the line, which became Morgan's Louisiana and Texas Rail Road. In July 1869, Morgan obtained permission to construct 650 feet of wharves, a double track or turntable for the railroad, storage sheds, cattle pens, and other improvements at Brashear City at the railroad's expense. The revival of commerce led to Brashear being made a U.S. port of entry in 1873. In 1871-1874, Morgan undertook dredging of the Atchafalaya and Berwick Bay so that his larger steamships could dock at Brashear (Peltier and Lehman 1960:29, 65; Pearson and Saltus 1991:40).

Despite a fire in 1870 that destroyed much of the commercial section of Brashear City (Broussard and Broussard 1955:19) and another major flood in 1874, the town continued to grow. In the latter year a U.S. Army Corps of Engineers survey of the Atchafalaya included a description of traffic in Berwick Bay:

> The products of the Atchafalaya Country are cotton, sugar, molasses, moss, lumber, staves, and shingles... The lumber and staves are rafted down to Brashear and the Teche, seven small steamers being engaged in this trade... United States contractors for live-oak have a depot at the one hundred and thirty-fourth mile, on Berwick's Bay, where they collect large supplies of this valuable material from points as far above as Bayou Chene, and ship by schooner... [quoted in Pearson et al. 1991:40].

In recognition of the railroad's impact upon the community, the City Council changed the name of Brashear to Morgan City in 1876. Morgan City was already twice as large as Franklin by this date, with about 3000 residents and 800 houses. By the late-1870s, Morgan City had two newspapers; two fire companies; Presbyterian, Catholic, Episcopal, Methodist, Baptist and Jewish congregations; five schools; two white and two African-American fraternal lodges; one moss factory; one sash, door, and blind factory; four steam sawmills; one ice house; three drug stores; 50 wholesale or retail stores; 15 coffee shops; five billiard rooms; three bakeries; and a public park with menagerie. Morgan City had become a major regional transportation center, with 17 vessels in regularly-scheduled operation between Morgan City and Texas, New York, Havana, and Mexican and Central American ports, as well as regular traffic by Teche and Atchafalaya packets. The yellow fever epidemic of 1878 caused over 100 deaths in Morgan City (about 3% of total population), but only temporarily checked its increasing population. Lesser outbreaks of yellow fever in 1898 and 1899 resulted in far fewer deaths. Opposite Morgan City, Berwick also grew strongly in this period. In 1880, Berwick had about 700 residents and two shipyards (Harris 1881:119, 218; Broussard and Broussard 1955:24-25; Peltier and Lehmann 1960:31-32, 36-37; Kuttruff 1993:36; Goins and Caldwell 1995:68).

Morgan's Louisiana and Texas Rail Road was sold prior to his death in 1878 to the Louisiana and Texas Railroad and Steamship Co. The track between Berwick and Patterson was completed by 1879, and a steel swing-span bridge across the Atchafalaya at Morgan City was completed in 1881. One-third of a mile in length and in water reaching 80 feet in depth, the swing-span was an engineering marvel for its day. It allowed through trains from New Orleans to Houston, and also did not prevent deeper-draft ships from docking north of the bridge. However, competition with the railway eventually undercut steamer traffic to Morgan City. By 1885, 90% of the commerce between the Teche and New Orleans was carried by the railroad (Broussard and Broussard 1955:19; Vertical Files, Morgan City Archive; Peltier and Lehmann 1960: 67-68; Pearson and Saltus 1991:41).

Unfortunately, the Atchafalaya channel from Berwick Bay to the Gulf was allowed to silt up, and by 1888, the U.S. Army Corps of Engineers noted a serious decline in shipping traffic at Morgan City. However, in 1887 the Atchafalaya and Plaquemine Improvement Association had been formed with the help of lumbermen E.A. Pharr and F.B. Williams. The Association had two goals: establishing a channel 30 feet deep from the mouth of the Atchafalaya River to the Gulf of Mexico, and opening a route to the Mississippi River through Bayou Plaquemine with locks. Further action on this plan was delayed, but the channel was eventually dredged to 15', and the Plaquemine Lock was begun in 1895 and completed in 1907 (Vertical Files, Morgan City Archive; Peltier and Lehmann 1960: 67-68; Pearson and Saltus 1991:41).

Sugar-growing remained one of the principal economic factors in St. Mary Parish after the Civil War, and after a period of difficult readjustment to postwar conditions, the plantations began

to increase production. In the early 1880s, the largest plantations between Pattersonville and Berwick Bay were held by: Bourdier and Bellissein (Waveland, the largest in the parish), Jon Rochelle (Boucanier), J.P. Delmas (Hope), Williams and Selburn (Idlewild), V. Como (St. Leonard and Crescent), Bowman Bros. (Glencoe), Steele & Clarke (Lagonda), Mrs. V.H. Rentrop (Fairfield and Wilton), Walter Torian (Pine Grove), G.G. Zenor (Riverside and Cloverdale), John N. Pharr (Glenwild), Capt. J.A. Freeman (Eureka), Mrs. Henry Bradley (Oakland) and several other farms that were smaller or inactive (Bouchereau 1883).

The problem of developing a wage labor system to replace slavery was one among many difficulties facing the sugar plantations. African-American women largely withdrew from full-time field labor after emancipation, and shortages of sugarcane labor were periodically acute for the rest of the century. Despite various experiments with share tenancy, immigrant workers, and other measures over the last three decades of the nineteenth century, male African-American wage-laborers eventually became the predominant workers on the sugar plantations. Sugarcane plantation workers usually received housing and also a food ration to supplement their wages, which were frequently paid in credit at the plantation store. Because of the centralized nature of the sugar estates, the workers oftentimes resided in the old antebellum quarters. The number of residents per house, however, was typically about half of the antebellum complement. Once the post-Reconstruction economic, social, and political regime stabilized, the living standards of cane plantation workers were not otherwise dramatically better than they were before emancipation (Braud et al. 1997).

There were a variety of reasons why plantation workers did not share in the general rise in living standards for agricultural labor that occurred in the North, Mid-West, and West of the United States. The provision of non-wage compensation to plantation workers, and use of seasonal labor, may have limited upward pressure on wages. In addition, technological advances in cane husbandry also dramatically reduced full-time labor requirements during the late-nineteenth century, a process that continued into the twentieth century. Between 1860 and the mid-1890s, mechanization nearly halved the labor requirements of cane growing, and the costs of labor for cane-growers declined by over one-third (Slichen Van Bath 1960:18). Overall, the cost of producing sugar cane decreased by about 50% between 1855 and 1890. This dramatic reduction in the cost of producing cane was not totally due to new technologies. However, it matched the decrease in the cost of producing corn, one of the crops heavily mechanized by the 1890s, and was significantly greater than the median decrease in the cost of production for all major U.S. crops. By the end of the 1890s, mechanization and other advances saved cane-growers some $5.25 million per year over what it would have cost to produce the U.S. sugar crop by antebellum methods (Quaintance 1904:11, 14, 25-26).

The planters of St. Mary Parish and elsewhere were dead set against labor organization on their plantations, while sometimes effectively combining themselves to prevent wages from rising. In St. Mary Parish, a strike by the Knights of Labor in 1887 occurred while other parishes were in great turmoil. Violence erupted, and the St. Mary Parish strike resulted in the death of four African-American workers at the hands of Sheriff's deputies (Wade 1995:181). The sugar strike of 1887 seems to have been the last large-scale labor organizing activity in St. Mary Parish until the twentieth century (Ferleger 1982:32).

The plantation labor market operated with relative freedom from the effects of planter combinations or labor organization for much of the late-nineteenth century. While chronic shortages of seasonal cane labor did occur, African-Americans also had relatively limited opportunities to pursue other employment in the late-nineteenth century. Plantation wage rates, including non-wage compensation, compared favorably with other employments available to large numbers of African-Americans. At the end of the nineteenth century, use of immigrant labor on the cane plantations also increased, although African-Americans remained the predominant ethnic group among cane workers in St. Mary Parish. In 1890, there were 207 Italian immigrants resident in

St. Mary Parish, and by 1900, there were 1039 Italians in the Parish (Wade 1995:181-182). These immigrant workers were exploited in semi-indenture arrangements, and most left the plantations at the earliest opportunity. Immigrant labor probably also depressed wages for plantation workers. However, despite the many factors identified, the stasis in cane plantation laborer's wages and living standards has yet to be fully explained (Braud et al. 1997).

While some sugarcane plantations remained large productive units, others were subdivided under the economic pressures of the Reconstruction era. The lack of capital to rebuild or modernize sugar house equipment was solved by the introduction of the central factory system, in which large refineries processed cane from several surrounding plantations and farms. Whereas nearly every antebellum planter sought to build his own sugar house, the central factory system allowed smaller and under-capitalized planters to produce remunerative crops without the expense of building a sugar house. By the early 1880s, the central factory system was an established fact in St. Mary Parish, although 115 sugar houses were still in operation in the Parish. The logic of economies of scale in sugar growing and processing was relentless. When narrow-gauge railroads came into prevalent use on cane plantations in the 1890s, individual sugar houses could process thousands of acres of cane; the size of plantations grew rapidly while the number of sugar houses declined precipitously (Braud et al. 1997). At the end of the century, Waveland Plantation, the largest sugar plantation in the Parish, consisted of 1600 acres, with about 500 acres in cane (Broussard and Broussard 1955:27).

On the other hand, the rise of central factories meant that smaller farmers could concentrate on growing cane and selling their crop to a central processor. These small farmers were mostly white. Relatively few African-Americans were among the small farmers growing cane for sale to the large central factory concerns late in the nineteenth century. However, there were 248 sugarcane farms owned and operated by African-American farmers in St. Mary Parish in 1900, representing more than one-quarter of black-owned sugar farms in the state (Scott 1994:80-81).

Other crops beside sugarcane were grown in commercial quantities in St. Mary Parish after the Civil War. On alluvial tracts, oranges, plums, muscadine grapes, blackberries, and dewberries were grown in addition to sugar cane and corn. The Land Reclamation Company of Louisiana reclaimed tracts of sea marsh in St. Mary Parish for rice raising. Sweet potatoes, Irish potatoes, pumpkins, peas, hay, cabbages, tobacco, beans, castor oil beans, ramie, indigo, and sea island cotton were also raised on reclaimed marsh tracts (Harris 1881:217-218). Other minor products of the St. Mary Parish area shipped from Morgan City included honey, beeswax, wool, and onions. Wild products shipped from Morgan City included moss (approximately 300 tons in 1876, a year of short production), otter and coon skins, alligator hides (over 4100 in 1876), live wild birds, pelican oil, lake shell, and oysters. Jacques Lehmann, a French immigrant, began buying oysters from local oystermen in 1879 and the business expanded rapidly. Lehmann soon had to bring in oyster shuckers from Galveston, Biloxi, and Baltimore to handle demand and was shipping oysters as far as California. Saltwater and freshwater fish were also shipped from Morgan City by rail from the 1870s, sometimes by companies that also sold oysters and furs. Among these early fish exporters were Louis Smyly, John Dalton Co., Ltd. (established 1882), Edgar Bass Fish Depot, and the Berwick Bay Fish and Oyster Co. (before 1887), all located on Front Street. Crucial to the success of the oyster and fish trades was the availability of cheap manufactured ice. An ice plant opened in Morgan City by 1875, and not only supplied ice for seafood shipping but also served the lucrative Texas wholesale ice market (Vertical Files, Morgan City Archive; Peltier and Lehmann 1960:32, 77-79).

St. Mary Parish, like many parts of southern Louisiana, was a potentially rich source of timber resources. Cypress, oak, ash, elm, sweetgum, black walnut, hickory, and magnolia were all present in St. Mary Parish in marketable qualities (Harris 1881:218), and almost one third of the Parish was covered with marketable timber. The pre-industrial float logging methods of the "swamper" and logger made little dent in the vast reserves of virgin cypress timber in wetland

locales, until the invention of the overhead railway cable skidder in 1889 and the pullboat in 1892 made it possible to harvest timber in almost any environment. But even before these technological developments, timber was a major product of the region, and the Berwick Lumber Co. was in operation soon after the Civil War. The pullboat and skidder were developed in a period of surging national demand for lumber and a lumber boom resulted in Louisiana (Mancil 1972:76-77). Whereas alluvial lands in St. Mary Parish cost from $6 to $30 per acre in the early 1880s, public lands, where much of the virgin cypress timber in particular was located, could be purchased from the government at $.25 to $1.25 per acre (Harris 1881:118). Huge tracts of public land were purchased by timber companies, who often simply ceased to pay property taxes on the properties once the marketable timber was removed. New sawmills were established on Berwick Bay and the Atchafalaya River to process the immense rafts of timber floated down the Atchafalaya, and some grew into huge operations. Among the first of these industrial sawmills was built by the Brownell-Moore Lumber Co., established in 1886 below Berwick. This mill became the Berwick Lumber Co. in 1889. The Brownell-Drews Lumber Co. constructed a huge new sawmill on Morgan City's Front Street in 1899 (Vertical Files, Morgan City Archive; Southern Pacific Rail Road 1910:27; Peltier and Lehmann 1960:81-82).

Pattersonville also evolved from a small town serving an agricultural hinterland to an industrial sawmill center during the 1890s. In 1891, Alabaman Frank B. Williams arrived in Pattersonville and founded the Red Cypress Company, destined to become the largest in the world (Broussard and Broussard 1955:28). Within a few years, Pattersonville was a boom town, with a population of about 1800 persons, over 50 retail stores and workshops, four churches, a building and loan association, two millinery establishments, four hotels, six boarding houses, three practicing physicians, and two dentists (Patterson High School 1965:10-11,17).

The Twentieth Century

The twentieth-century population of St. Mary Parish has ridden a roller-coaster. Between 1900 and 1910, the populations of the towns of St. Mary Parish and the Parish as a whole grew strongly. In 1900, Morgan City had 2,332 residents and Berwick 713 residents, and Patterson had a population of almost 2,000 persons. Patterson was incorporated in 1906, Berwick in 1907, and Baldwin in 1913. All of the larger St. Mary Parish towns grew rapidly during the cypress lumber boom. By 1910, Morgan City's population had more than doubled to 5,477 persons, while Berwick's population had tripled to 2,183 residents. However, between 1910 and 1920, St. Mary Parish lost almost 22% of its total population, declining from 39,368 persons to a total of 30,754. In 1920, St. Mary Parish had fewer residents than at the turn of the century. Throughout the sugar-producing parishes population decline was comparable, as large numbers of African-Americans migrated to urban centers and other areas in Louisiana and beyond its borders, but the exodus from St. Mary Parish was particularly heavy. Even Morgan City ceased to grow in this period; its official census count of population in 1920 was 5,429 persons, a decline of 38 persons since the 1910 census. A portion of this decline was caused by a relatively severe incidence of yellow fever in Morgan City in this period. The total Parish population declined further by 1930 and recovered slowly during the Depression, only reaching 31,458 persons in 1940. Morgan City and Berwick, however, began to grow again, a trend that continued into the post-World War II era. At the height of the modern oil boom, in 1980, total Parish population had doubled since 1940, reaching 64,253 persons. During the following decade, with the oil bust, the population of St. Mary Parish plunged 10% to a 1990 total of 58,068 persons. Morgan City declined even more acutely. From a 1970 high of 16,586, the Morgan City population declined over 12% by 1990, sinking to a total population of 14,531 persons (Broussard and Broussard 1955:26-29; Peltier and Lehmann 1960; Yakubik et al. 1994:69; Goins and Caldwell 1995:54; *Louisiana Almanac* 1997).

Railroad transportation remained important in St. Mary Parish in the early twentieth century. The Southern Pacific system acquired the Louisiana and Texas Rail Road and by 1908 had built a new swing-span bridge at Morgan City at a cost of $1 million. By 1915, the S.P.R.R. had

built two spur lines from the trunk line between Morgan City and New Iberia, one roughly paralleling Bayou Sale to East Cote Blanche Bay and another from Baldwin to Vermilion Bay. Although the importance of Morgan City as a railway terminus and connecting point declined, particularly in the second half of the twentieth century, yet another swing-span bridge replacing the 1908 bridge was constructed. This third railway bridge across the Atchafalaya was completed in 1970 (Vertical Files, Morgan City Archives; Goins and Caldwell 1995:69).

The early twentieth century also saw dramatic change in water transportation in the Atchafalaya Bay area. In 1906, the Atchafalaya Bay Ship Channel Company was organized, and with private and public funds the Atchafalaya ship channel was dredged to 14 feet by 1909. At this date, Berwick Bay had a maximum channel depth of 90 feet, and the Berwick and Morgan City harbors at the docks had a depth of 40 to 70 feet. Marine traffic increased so dramatically that the Federal Government assumed authority from the Company and began dredging the channel to a width of 200' and a depth of 20'. The 1915 hurricane nearly eliminated the shipping channel. The profitability of off-shore shrimp harvesting led to increased traffic in the 1930s, and the channel was fully re-dredged to a 10-foot depth in 1939-1940. By 1960, the channel was maintained at a depth of 16 feet. At this time, more than 21 million tons of cargo passed through Morgan City annually, representing $6 million worth of exported and $2 million of imported goods and commodities (Peltier and Lehman 1960:68-70).

An important alteration to the waterways in the St. Mary Parish region was the construction of the Intracoastal Waterway. Construction of the western Gulf portions of the modern Waterway route had begun soon after 1905. However, regular Federal funding of Intracoastal Waterway construction did not begin until the passage of the U.S. River and Harbor Acts of 1925. The section of the ICWW through St. Mary Parish had been constructed between 1933 and 1935. The strategic value of the ICWW was recognized at the outbreak of World War II, and in early 1942, Congress authorized an extension of the Waterway from the Louisiana Gulf Coast to Florida. Beginning at this time, existing sections of the ICWW were enlarged and new portions constructed to a depth of 12' and a width of 125' (Vertical Files, Morgan City Archive; The *Times-Picayune* 1976).

The twentieth century has also witnessed major improvements in road transportation in St. Mary Parish. The Old Spanish Trail, now U.S. Highway 90, was developed through St. Mary Parish in the early decades of the twentieth century. The Old Spanish Trail was to be a major improved automobile highway running from California to Florida along historic routes. In the Morgan City vicinity, the Old Spanish Trail ran along the southern side of Bayou Boeuf on Avoca Island and crossed Bayou Boeuf by ferry. From Berwick, the route headed northwest toward Bayou Teche. Parts of the Old Spanish Trail were coursed with gravel in the early 1920s. During Louisiana Highway Commission road improvements begun during the Huey Long administration and continued under Governor O.K. Allen, Old Spanish Trail was designated U.S. Highway 90 and paved. The Berwick Bay Highway Bridge (now the Hwy. 182 Bridge) was constructed 1931-1933. The current U.S. Hwy 90 bridge was constructed ca. 1973. As part of the construction of the Atchafalaya Basin protection levees, Hwy. 70 was constructed on the outside of the east protection levee in 1936-1937 (Vertical Files, Morgan City Archive).

The early-twentieth century economy of St. Mary Parish was significantly diversified. There were four banks in Mogan City by 1908, and several facilities developed serving the important agricultural and transportation industries of the region by 1910. These included machine shops producing tanks, structural iron and steel, castings, and other metal products. The marine industries included three shipbuilding and repair yards at Berwick Bay. Sugar-processing and cane-harvesting machinery was manufactured in Morgan City and Berwick, while sugar and molasses were produced at several sugar factories in the Parish. Other agricultural products were also processed or manufactured. Berwick Bay had long been an important livestock transshipment point, and between September 1907 and June 1908, 100,000 head of cattle passed through

the Morgan City transit stockyards (Vertical Files, Morgan City Archive; Southern Pacific Rail Road 1910).

Natural resources, namely seafood and timber, were most important to the St. Mary Parish economy in the early decades of the twentieth century. This was particularly true of timber; St. Mary Parish, drawing upon the vast cypress stands of the Atchafalaya Basin, reached its peak as a lumbering center in the early twentieth century. The industrial sawmills of St. Mary Parish grew to gigantic size. Patterson was already a boom town when the Red Cypress Company, Ltd., constructed a new industrial sawmill in 1908, eventually employing approximately 350 workers. The sawmill and planing mill specialized in railroad ties and tanks, but also turned out telephone poles, barrels and barrel staves, building lumber, and dressed lumber, with an average daily lumber output of 75,000 board feet (27.4 million feet per year), plus 75,000 shingles per day. Eight monorail cars on four miles of track moved the lumber on the 250-acre mill site. In 1910, the plant put in electric generating equipment and began selling power to the town of Patterson, until losing its franchise in 1911. The Red Cypress Co. mill closed in 1927 because of depletion of virgin cypress stands, with about 4 million feet of lumber remaining in its yards. During its more than three decades of operation, the Red Cypress Co. mill earned Frank B. Williams profits of more than $30 million and the title "the Cypress King of the World." Two other major mills were located in Patterson, the Riggs Cypress Co., owned by N.B. Trellue, and the Coons Silo Cypress Co. The town of Baldwin itself was a sleepy hamlet serving as a commercial center for the rich sugar plantations of the area until the early twentieth century, when the large C.W. Coleman & Sons sawmill and Barnett Bros. sawmills were constructed, and Baldwin too became a lumber boom town (Broussard and Broussard 1955:28; Patterson High School 1965:31-32).

By 1909, the Brownell-Drews sawmill in Morgan City was at its largest and produced 50,000 board feet of lumber and 80,000 shingles per day (18 million board feet and 29 million shingles per year). At this same date, the Menefee Cypress Co. (formerly Berwick Lumber Co., later Norgress-Menefee Lumber Co.), had an annual production of 17 million feet of cypress lumber and 90 million shingles, while the Cotten Bros. Cypress Co. sawmill had an annual production of 15 million board feet of cypress lumber. The George Vinson Shingle and Manufacturing Co., established in 1905, was by 1909 producing 140,000 shingles per day (51 million shingles per year). Another very large concern in the Morgan City area was the Wadell-Williams Co. (after 1922, the Norman-Breaux Co.), located on Bayou Boeuf. Other lumber companies in Morgan City or Berwick in the early-twentieth century were the Baldwin Lumber Co., Hanson Lumber Co., F.B. Williams Cypress Lumber Co., Ramos Lumber Co., Riggs Cypress Lumber Co., Kyle Lumber Co., Chapman-Storm Lumber Co., Wadell-Jones Lumber Co., Rhoda Lumber Veneer Co., and the Texas Co. Shook (stave) Mill (Southern Pacific Rail Road 1910:27; Vertical Files, Morgan City Archive; Peltier and Lehmann 1960:81-82; Mancil 1972).

Total Louisiana production of cypress lumber reached one *billion* board feet in 1915; however, stands of virgin cypress were quickly depleted under intense logging pressure. By 1925, the cypress lumber business went into a precipitous decline, although milling of other hardwoods continued on a large scale for some time. Patterson was almost a ghost town soon after the Red Cypress Co. mill closed in 1927, and the population declined by almost one-fifth during the 1930s. Other mill towns, like Baldwin, similarly declined when the cypress was gone. However, after World War II, the Central Louisiana Electric Co. built a generating plant in Baldwin, which was soon expanded. The electric plant and construction of the nearby United Carbon Co. carbon black plant at Ivanhoe ameliorated economic conditions in the Baldwin area (Broussard and Broussard 1955:28). The Norman-Breaux mill in Morgan City was the last large industrial sawmill in operation in St. Mary Parish. It became a planing mill and survived until 1957. Because of their more diversified economies, Morgan City and Berwick suffered less than some smaller towns, but were still hit hard by the cypress bust (Southern Pacific Rail Road 1910:27; Vertical Files, Morgan City Archive; Broussard and Broussard 1955: Peltier and Lehmann 1960:81-82; Mancil 1972).

Fishing was one industry that remained important in the St. Mary Parish region after the cypress was depleted. The number of Berwick Bay fish and oyster dealers grew in the early twentieth century, particularly after about 1907, when gasoline-powered internal combustion boat motors were introduced. Among the seafood dealers at Berwick Bay during this period were pioneer firms like the John Dalton Co., Bass Fish Depot, the Berwick Bay Fish and Oyster Co., and Louisiana Oyster and Fish Co. The Louisiana Oyster and Fish Co., incorporated in 1904 by W.J. Lowrance, revolutionized the oyster industry. They developed the method of planting oysters in deep water and harvesting them by dredge rather than by hand tongs. The Company rapidly grew into one of the largest in the oyster business. By the early twentieth century, Dalton, Bass, the Louisiana Oyster and Fish Co., and other dealers were shipping oysters and fish to New Orleans, Denver, St. Louis, Kansas City, Omaha, and other markets in the Indian Territory (Oklahoma), Texas, Montana, Idaho, and California. The largest of all the oyster shippers was the firm of Dunbar, Lopez, and Dukate, whose huge cannery complex was located at the confluence of Berwick Bay and Bayou Boeuf. Other seafood firms at Berwick Bay begun in the twentieth century included that of Manuel Cogenheim, who took over the Berwick Bay Fish and Oyster Co., and his successor, T.H. Bergeron; the Ozio, Casso, and Emery firms; St. Mary Seafood, Riverside Seafoods, Drackett Fisheries, and Monarch Packing Co.; and independent operators like Victor Guarisco, Jack Pharr, Ernest "Honey" Casso, H.W. Logan, Sidney Prestenbach, D. Egle and Sons, A.J. Breaux, and Alfred Mead. The oyster industry in Morgan City declined by World War II, and by 1960, most oyster packing at Morgan City was of oysters harvested from beds out of proximity to St. Mary Parish. In the 1920s, crabmeat packing began in the Morgan City area, and by the 1930s, shipments from Morgan City topped one-half million pounds annually. (Southern Pacific Rail Road 1910:7; Vertical Files, Morgan City Archive; Peltier and Lehmann 1960:79-81).

From the mid-1930s, deep-sea shrimp fishing also rose to importance, following the migration of white and brown shrimp into the waters off south Louisiana, improving the economy of St. Mary Parish. East-coast and Texas fishermen followed the shrimp population, and Morgan City became a major packing and shipping point, touted as "the Shrimp Capital of the World" until brown shrimp began to be caught in larger numbers in Texas waters. In 1960, as many as 175 seagoing shrimp trawlers still made Morgan City their home port. Patterson also developed an important shrimp packing industry. The St. John Shrimp Co. was founded in Patterson by Mr. Felice Golino in 1937 with a fleet of nine boats. The Patterson Shrimp Co. was established by Capt. John Carinhas the following year, with its own fleet of ten trawlers. In 1940, D.A. Versaggi and his brother opened the Versaggi Shrimp Co. in Patterson. In 1945-46, John Carinhas built a new plant, and his brother Jack Gomez Carinhas took over the former Patterson Shrimp Co. facility as the Independent Shrimp Co. In 1945, Felice Golino left the St. John Shrimp Co. and with Capt. John Bellesti opened the Sea Shrimp Co., which produced breaded shrimp. Later, shrimp plants in Patterson included the Cardinale Bros., outside the eastern limits of the town, and the plant of Fulton Felderman, Jr. Patterson also shipped smaller quantities of crabmeat, oysters, and freshwater fish. John Carinhas, veteran of the shrimp business, opened the Patterson Shipyard, the largest employer in Patterson as of 1965 (Peltier and Lehmann 1960:79-81; Patterson High School 1965:36-38, 64).

The freshwater fish industry of St. Mary Parish also grew in the twentieth century, based on urban markets for rail-shipped catfish, buffalofish, and gaspergou. The Morgan City fish docks were supplied by independent fisherman of the Atchafalaya Basin, and this industry enjoyed a heyday through the 1940s. Fresh-water fish still remained important after the war; in 1959, the Morgan City area shipped over 2 million pounds of fresh-water fish, 90% of total Louisiana freshwater fish production (Peltier and Lehmann 1960:79-81). By the 1980s, the St. Mary Parish area had become less important in the Louisiana fishing industries. In the second half of the decade, St. Mary Parish marine fisheries produced only 4% of the Louisiana total, and freshwater fisheries, a mere 3% of total Louisiana production (Goins and Caldwell 1995:83).

Until the post-World War II period, all shrimp shipped from Morgan City and Patterson were shipped "fresh," iced down in trucks or rail cars. Ice production at Morgan City expanded with the growth of the fish and oyster shipping industries. The John Dalton Co. owned the largest ice plant in the area in 1909, producing 30 tons of ice a day, while the old Berwick Ice and Fuel Co., Ltd., plant produced 10 tons a day (Vertical Files, Morgan City Archives). Not until 1946 did Patterson resident Ben Favret build an industrial size seafood freezer in Morgan City, and the Patterson plants followed (Patterson High School 1965:36-38, 64).

The Louisiana fur industry is also based on natural resources and has experienced a rise and fall over the course of the twentieth century. This occurred largely because of tastes in fashion, but also because of habitat change in the region and other environmental factors. The Bass Fish Depot of Morgan City was among the dealers who purchased furs trapped by Atchafalaya Basin trappers from the early twentieth century, and by 1909 was shipping mink, coon, otter, muskrat, and 'possum furs to the New Orleans and St. Louis fur markets. Fur receipts at Morgan City were valued at over $100,000 in 1909, and in 1917, $150,000 worth of furs were shipped from Morgan City. This climbed to half a million dollars in sales by the end of 1919. Fur prices rose with demand; muskrat pelt prices rose from 10¢ apiece to 80¢; 'possum skins brought $1.00, 'coons $4.50, minks $5.50, and otters from $10 to $15 in 1919. Many Atchafalaya Basin residents added significantly to their annual incomes with the proceeds of trapping during this period of fur coat popularity. The market for furs stood at $15 million in 1946, but had dwindled to less than $1 million annually by the late-1950s (Vertical Files, Morgan City Archive; Southern Pacific Rail Road 1910:13; Peltier and Lehmann 1960:84-85; cf. Comeaux 1972, Maygarden et al. 1997).

Petroleum has been the single most important factor affecting St. Mary Parish's economic fortunes in the second half of the twentieth century. Interest in the potential extraction of natural gas and oil in St. Mary Parish dated back to the turn of the century. As early as 1901, three oil production companies were organized in St. Mary Parish: the Franklin Oil Co., the Attakapas Oil Co., and the Chitimacha Oil Co. Chitimacha drilled unsuccessfully at Charenton Beach in 1902, but exploratory ventures continued. Meanwhile, Morgan City became a center not only for early extraction efforts, but also for distribution of petroleum. The Higgins Oil and Fuel Co. was established on Berwick Bay before 1908 and had a fleet of ocean-going oilers and tug boats handling petroleum barges in the region. Higgins had also established a pipeline for distribution within Morgan City by this date. By 1910, other oil distributors had located on Berwick Bay, but extraction efforts in the region remained a focus of oil companies. Two exploratory wells were drilled on Avoca Island in 1918-1919 without success. The Land and Exploration Co. of Houma drilled another dry hole at Charenton in 1926 and conducted extensive seismic testing on Avoca Island in 1928. However, no successful fields were developed in the area until the Jeanerette field in 1935. The Horseshoe Bayou and Bateman Lake fields were developed by Texaco in 1937, and Sun Oil first successfully drilled in the Belle Isle field in 1940-1941. The Deer Island Field was discovered in 1942, the Bayou Carlin Field in 1945, and the Duck Lake Field (eventually the most productive) in 1948. In 1954, the 190 onshore wells of Shell Oil's Franklin Division were alone producing over a million barrels of oil per month and 3.75 billion cubic feet of natural gas (Vertical Files, Morgan City Archive; Southern Pacific Rail Road 1910; Broussard and Broussard 1955:30; Peltier and Lehmann 1960:71-75).

Among the most important developments in the twentieth-century economic history of St. Mary Parish was the rise of offshore petroleum production. The first producing offshore well had been drilled about 1937, and extensive experimentation by Magnolia Petroleum Co. (later Mobil) in 1944-1946 showed the practicality of deep-water offshore production. However, the first large-scale offshore drilling success, the Ship Shoal Field, Block 32, was drilled by Kerr-McGee in 1947. The Kerr-McGee success led to an eventual burgeoning of the south Louisiana offshore petroleum extraction industry. The next major field off St. Mary Parish was the Eugene Island Block 32 Field, discovered in 1949. By 1951, St. Mary Parish had 12 on-shore and offshore fields with 300 oil wells, 31 gas wells, and an annual production topping 11 million barrels of oil. In

1954 came the first offshore field discovered since 1949, the Eugene Island Block 18 Field. In 1959, St. Mary Parish had 1159 oil wells and 231 gas wells. It ranked fourth among Louisiana parishes in crude oil production (almost 19 million barrels), fourth in casinghead gas (almost 27 million mcf), sixth in natural gas, and tenth in condensate (Peltier and Lehmann 1960:71-76).

By the end of the 1950s, Shell, Humble, Mobil, Gulf, Phillips, Sun, Kerr-McGee, Sinclair, Continental, Pure, Superior, California, Atlantic, United Gas, Union Producing, and many other petroleum companies had been or were currently active in St. Mary Parish. The strong petroleum extraction sector in St. Mary Parish produced carbon black plants, fabricators, and other oilfield support industries in the Parish. United Carbon, Cabot Carbon, and Columbia Carbon were producing in the Parish by the mid-1950s. At least 21 Morgan City supply firms, eight tool rental companies, six oil sale firms, five mud companies, five repair companies, four truck lines, and four shipyards were dependent on the petroleum business in 1960 (Broussard and Broussard 1955:30; Peltier and Lehmann 1960:71-76; Broussard 1977:98-100). The dominance of the petroleum industry in the Parish economy has caused St. Mary Parish and Morgan City to experience economic swings over the decades, particularly the petroleum boom years of the 1970s and the bust of the mid-1980s.

Despite the importance of lumbering and then the petroleum industry, agriculture has remained important in St. Mary Parish in the twentieth century. Cotton, sugarcane, rice, corn, potatoes, soybeans, cowpeas, velvet beans, lespedeza and clover, figs, oranges, peaches, and pears have all been commercially grown in the Parish during the twentieth century (Tourist Division 1938:179). Late-nineteenth-century trends in the sugar industry continued in the twentieth century. The growth of central factories and the plantation railroads provided new opportunities for small, independent cane farmers and for cane-growing tenants. By 1916, the average sugar factory was grinding over 25,000 tons of cane in a season, representing the output of about 1,700 acres under normal yields. It was difficult for a single firm to efficiently organize this much acreage. By 1916, the majority of tonnage ground at Louisiana cane factories was purchased by the mills, and 85% of Louisiana sugar factories purchased at least some of the cane they ground. Typically, the larger the factory, the greater reliance on outside sources of cane, and the trend was for the factories to purchase more cane as time went on and rely less on the production of their own plantations. Only nine of the over 150 mills in Louisiana in 1916 purchased all of their cane, and the largest of these purchased cane from as many as 700 farmers in a 20-mile radius (Schmitz 1979:276-277). In 1933, 22,757 acres were in sugar production in St. Mary Parish; by the end of the 1940s, improved varieties of cane and new techniques increased the total cane acreage in the parish to between 26,000 and 35,000 acres, and doubled production to an average of 2 tons of sugar per acre of cane. Sugar remains a major agricultural product of St. Mary Parish in recent decades. In the second half of the 1980s, St. Mary Parish was in the top three sugar-producing parishes of the state, annually producing about 13% of total Louisiana sugar production (Goins and Caldwell 1995:74-92).

In economic aspects other than the petroleum industry and agriculture, St. Mary trails behind larger and more diversified parishes. However, Morgan City makes St. Mary Parish a regional center of the transportation, communications, utilities, and construction industries (Goins and Caldwell 1995:74-92). Conversely, the contraction of the Louisiana petroleum business in the 1980s produced relatively high unemployment rates in St. Mary Parish, and was a disaster for Morgan City. The revival of the offshore petroleum industry in the mid-1990s begins another chapter of the St. Mary Parish story. Major economic and environmental challenges continue to confront St. Mary Parish at the end of the twentieth century, as they have in the past. St. Mary has benefited from a series of growth industries — sugar cane in the antebellum period; railroad expansion and shipping after the Civil War; and timber, fishing, and petroleum in the twentieth century — yet still seeks a diversified, stable economy that can withstand the buffets of business cycles and depletion of natural resources.

Among the most intriguing personages associated with St. Mary Parish in the twentieth century were Harry P. Williams, heir of Red Cypress Co. founder F.B. Williams, and his partner James "Jimmie" Wedell, aviator and airplane designer. The aviation partnership of Williams and Wedell reflected brightly on the small town of Patterson in the 1930s. As a young man, Harry P. Williams worked in his father's cypress business, but his financial interests were later diversified in plantations, banking, a motor company, and petroleum extraction. Williams' involvement with aviation began in 1927, when, as (one-term) mayor of Patterson, he met flyer Jimmie Wedell during an air tour sponsored by the New Orleans *Item*. Before a courtesy flight with Wedell was over, Williams had arranged to purchase a Ryan aircraft from sales agent Wedell, on the condition that Wedell teach him to fly. Within a month, a landing field had been cleared on one of Williams' sugar plantations, which was later taken over by the state of Louisiana as the Patterson Airport. Early in 1929, the Wedell-Williams Air Service was formed, originally to provide charter trips, sight-seeing flights, flying instruction, and so forth for the south Louisiana market. The business rapidly expanded, establishing regularly scheduled flights between New Orleans and St. Louis, Shreveport, and Dallas-Fort Worth, and winning the contract for airmail service between New Orleans and Houston. Wedell and Williams began to manufacture racing planes at their Patterson field as a sporting venture, and innovative Wedell-Williams planes won numerous national and international speed trophies. At one time Wedell-Williams held more speed records than any other airplane manufacturer, and Wedell himself held numerous trophies as a pilot.

Jimmie Wedell was killed in a plane crash with a flying student in 1934, ironically when the U.S. government had accepted a Wedell-Williams design as a military pursuit craft. The famous P-51 Mustang, widely regarded as the best fighter aircraft of World War II, was also based on a racer designed at Patterson by Wedell for a London-Australia race. Williams continued the corporation after Wedell's death, but was himself killed in a plane crash in 1936. Williams was a highly respected figure in Patterson, and among other philanthropic efforts he and his wife annually selected 20 or more outstanding students from Patterson to receive college scholarships. Despite his prominence, Williams resisted further calls to enter politics, with the exception of his temporary appointment by Governor Huey Long to reorganize Angola Penitentiary. After Williams' death his widow (actress and silent film star Marguerite Clark) sold the Wedell-Williams Air Service to Eastern Airlines (Patterson High School 1965:44-55).

CHAPTER 5
PREVIOUS INVESTIGATIONS

Introduction

This review examines previous archeological investigations completed in or near the present project area. Most of the known archeological sites in the lower Atchafalaya Basin have been recorded during Phase I surveys. Overall, very little excavation data exists for most of these sites, although some NRHP evaluations and rarely archeological mitigation have been completed in the region. The information from these excavations, in conjunction with additional archaeological data from the rest of the study area, provides the best guide to the types of cultural resources which may be encountered in the current project area.

Jackson (n.d.)

The proposed locations of two oxidation ponds and new sewer lines in the vicinity of Stephensville and Belle River, Louisiana, were the subject of an archeological survey. The oxidation pond location for Stephensville was located in an inundated cypress swamp, but pedestrian survey was conducted at the proposed location for the Belle River oxidation pond. The sewer lines were all to be placed within an existing road right-of-way. No previously recorded sites were noted in the area; and no new sites were recorded as a result of the survey.

Gagliano et al. (1975)

This survey, which included 315.1 miles along the Intracoastal Waterway and associated spurs, was conducted by Coastal Environments, Inc., in 1975. The waterways, adjacent spoil, and their immediate vicinity were surveyed (Gagliano et al. 1975:1). The intent of the survey was to assess high-probability areas based on landforms and sediment dispersal. Geographic regions within the project area were discussed. The Amelia-Morgan City area was identified as being archeologically important. Gagliano et al. (1975:59) noted that numerous sites are located in the vicinity of Bayou Boeuf, but that very little is known of the archeology of the region.

Investigations included archeological testing to define the presence and extent of prehistoric and historic archeological sites in the study area. Fieldwork was conducted by boat and consisted primarily of surface collection and examination of previously identified archeological sites. Previously unknown sites were identified by the presence of artifacts or shells associated with prehistoric middens (Gagliano et al. 1975:7-8). This survey resulted in the identification of 158 sites within their study area. Of these, 78 were exposed on the banks of the waterways or within their spoil areas. A total of 150 prehistoric and 42 historic components were discovered during the study.

Gagliano (1976)

A cultural resources survey was conducted for four proposed construction sites for drainage and flood control in the Wyandotte and Siracusaville subdivisions. No previously recorded sites were identified in the project area. No archeological remains or standing structures were recorded during the field survey.

Neuman and Servello (1976)

Between October 1974 and March 1976, Robert W. Neuman and A. Frank Servello conducted the first major systematic survey within the Atchafalaya Basin. This project was funded by

the U.S. Army Corps of Engineers and included Avoyelles, Pointe Coupee, St. Landry, Lafayette, St. Martin, Iberville, Assumption, and St. Mary parishes.

Neuman and Servello (1976) performed archival research followed by an extensive field survey. Sites previously recorded by McIntire and Kniffen were not visited, but were recorded on the site map. Neuman and Servello stated that, "All recorded sites for which there was locational and other data, have been incorporated into the report" (Neuman and Servello 1976:8).

Of the 133 sites recorded in the Atchafalaya Basin and ancillary survey areas, 77 sites were newly discovered and 56 were previously recorded. Twenty-three of the previously recorded sites were revisited. Neuman and Servello classified all 133 sites into one of the following categories: shell midden, earthen midden, multiple mounds with associated middens, and isolated mounds (Neuman and Servello 1976:11-13).

Neuman and Servello's survey enhanced archeologists' understanding of the prehistory of the basin. A large number of previously unknown sites were recorded. Also, the survey provided a better basis for discussions of settlement patterns, site distribution patterns, and the chronological sequence within the basin. Some of the patterns noted as a result of their survey included: the location of tumuli versus shell middens, the earliest age and majority age of sites within the basin, the presence of Archaic and Tchefuncte sites on basin's periphery, site location on extant and relict bayou levees and lake shores, and finally, that no sites were located along the Atchafalaya River itself (Neuman and Servello 1976:72-73).

This and subsequent surveys that followed in the 1970s marked the beginning of a more scientific/systematic approach to understanding the archeological record within coastal Louisiana. This shift in archeological procedure can probably be related to the passing of the National Historic Preservation Act of 1974.

Rivet (1976)

This letter report detailed a cultural resources survey of the Lake Palourde by-pass roads, St. Mary Parish. Prior to field survey, the Louisiana Site Files were checked for previously recorded sites in the project area. While numerous sites were recorded along Bayou Boeuf to the south and west of the project area, no sites had been recorded in the immediate vicinity of the project area. During the surface survey, no archeological sites were encountered. Numerous shell deposits consisting of *Rangia*, *Crassostrea*, and *Thais* were observed, however, these were apparently natural deposits or the result of fill episodes.

Gibson (1978a)

From March through December of 1977, Jon L. Gibson conducted a survey southeast of Morgan City in St. Mary, Assumption, and Terrebonne parishes between U.S. Highway 90 and the Gulf of Mexico. Gibson posed a series of theoretical questions which dictated the approaches or goals for the systematic survey of the banks of Bayou Chene from its confluence with Bayou Black through Avoca Island Cutoff to the entrance of the Lower Atchafalaya River; Bayou Shaffer from its source at Bayou Boeuf to the Lower Atchafalaya River; Lower Atchafalaya River from its exit of Berwick Bay to the Atchafalaya Bay; and finally, an overland corridor bounded on the west by the Lower Atchafalaya River; on the east by the line corresponding to the eastern section line of conjoined sections 4, 9, and 16 in T18 S, R12 E; on the north by Avoca Island Cutoff, and on the south by the Atchafalaya Bay (Gibson 1978a:1). His stated goals for the systematic survey were to locate cultural resources in order to mitigate adverse project impacts and to analyze and explain the variability in prehistoric sites within the project area.

Gibson reported two sites in Assumption Parish, 29 in St. Mary Parish, and 12 in Terrebonne Parish. Of the 29 sites recorded in St. Mary Parish, 12 were evaluated as eligible for nomination to the National Register of Historic Places (Gibson 1978a:276-277, 283). Sites recorded within the general vicinity of the current project area include Shaffer Oak Ridge (16SMY50), Rip Rap (16SMY51), Bayou Shaffer Water Locks (16SMY52), 16SMY53, Lafitte Skiff (16SMY54), and Brick (16SMY130) along Bayou Shaffer; and Little Wax Bayou Cut-off (16SMY131) on the Atchafalaya River. The Shaffer Oak Ridge site (16SMY50) was the focus of a later report discussed below.

In conjunction with his systematic survey of the project area in the lower basin, Gibson also provided in-depth, theory-based discussions of the culture history of the Lower Atchafalaya Basin. The main focus was on chronological sequencing of prehistoric and historic populations (Gibson 1978a:30-65) and on the natural environment, geomorphic development, landforms, waterways, elevation and flooding potential, and relief and slope, since these could have influenced site location and use (Gibson 1978a:66-117). Finally, Gibson discussed the cores and the reconstruction of sedimentary environments for each site and performed a Chi-Square statistical analysis for site dispersal within different environmental zones (Gibson 1978a:183-260). The results of the tests suggested that aboriginal populations were choosing natural levees instead of swamps and marshes, and that there was a higher frequency of sites in the swamp-marsh ecotone rather than within the interior of either zone (Gibson 1978a:230-231).

Gibson (1978b)

The Shaffer Oak Ridge site (16SMY50) was recorded at the junction of Bayous Boeuf and Shaffer during the extensive survey discussed above. Shovel testing and examination of the ground surface indicated that the site consisted of *in situ* and redeposited shell and midden strata. Intact shell and earthen midden extended to a depth of 32 cmbs (below ground surface). Horizontally, the site extended 150 m west along the Bayou Boeuf waterfront and 350 m south along the Bayou Shaffer Waterfront. The extant width of the site was approximately 8 to 10 m; however, the presence of tree stumps in Bayou Boeuf indicated that bankline erosion had been fairly severe, destroying the northernmost 50 m of the site (Gibson 1978b:2).

Artifacts, consisting mostly of undecorated aboriginal sherds, were found in higher densities within shovel tests than on the ground surface. The only decorated ceramic type recovered was Pontchartrain Check Stamped. Faunal remains from fish, mammals, and shellfish, mostly *Rangia cuneata*, were also found at the site. Based on the presence of intact deposits, the Shaffer Oak Ridge site was considered eligible for nomination to the National Register of Historic Places (Gibson 1978b:2).

The property is leased by T & T Disposal Pits, Inc. Planned construction by the company included excavating two disposal pits 600 ft x 100 ft in the vicinity of the archeological site. Additional examination of the site was undertaken to determine the possible adverse impacts by the disposal pits. It was recommended that the easternmost boundary of the project be moved 80 m to the west, thereby completely avoiding the archeological site. Other planned construction, such as the stabilization of the bankline would be beneficial by protecting the site (Gibson 1978b:3).

Weinstein et al. (1978)

Coastal Environments, Inc., was contracted to perform a baseline environmental study of the proposed relocation of U.S. Hwy 90 (LA 3052 and interchanges) between Ellsworth and Morgan City, Louisiana (Weinstein et al. 1978:1). The project area crossed three parishes: Assumption, St. Mary, and Terrebonne. A total of 29 sites were recorded in the three parishes. The most sites (19) were recorded in St. Mary Parish.

There were eight sites which lay along Bayou Ramos between Lake Palourde and Bayou Boeuf in St. Mary Parish. Test excavations were performed at Bayou Ramos I (16SMY133) to evaluate its National Register eligibility. Bayou Ramos I included both prehistoric and historic components. Prehistoric artifacts recovered from the *Rangia* shell midden were ceramics and a few faunal remains. Ceramic types identified at the site are: Baytown Plain, Coles Creek Incised *vars. Coles Creek* and *Mott*, and Mazique Incised *vars. Bruly* and *Kings Point*. Shell samples yielded radiocarbon dates ranging from 735 A.D. to 980 A.D. (Weinstein et al. 1978:90 and 99).

The historic component at Bayou Ramos I includes the Bayou Ramos House constructed in the mid to late nineteenth century. At the time of the survey, the site was inhabited. Artifacts collected from the historic component included various ceramics, metal, glass, brick, and domestic animal bone. While the historic evidence indicates that the house was constructed in the mid-nineteenth century, and the area was occupied prior to this, the artifact assemblage represents mostly late nineteenth and early twentieth century activities (Weinstein et al. 1978:117). All of the other sites recorded along Bayou Ramos were small *Rangia* shell middens (Weinstein et al. 1978:120-130).

Giardino and Davis (1981)

In 1981, the Tulane Department of Anthropology conducted a survey of the 47.1 acre area of proposed construction for the U.S. Coast Guard's Marine Safety Office and Housing facilities (Giardino and Davis 1981:4). The objectives of the survey were to locate any archeological sites in the project area, to establish the locations of such sites in terms of the proposed construction, and to evaluate the significance of the sites and the need for mitigation (Giardino and Davis 1981:10). The only site located during the survey was the previously recorded Bergeron site (16SMY185). In the report, this site was incorrectly listed as 16SMY5.

The site is located approximately 340 m north of the Berwick Lock Facilities. It consists of *Rangia* shell midden. At the time of the 1981 survey, much of the site had already been lost due to erosion. Two localities were established at the site. Artifacts recovered from the site were aboriginal sherds and faunal material. The ceramic evidence indicated that the site was occupied during the Coles Creek/Plaquemine period (Giardino and Davis 1981:73). Only one locality exhibited apparently intact midden. This area was covered by 10-12 ft of spoil. Based on the general paucity of artifacts, the lack of diagnostic artifacts, the limited intact midden, and the amount of overburden at the site, 16SMY185 was considered a non-significant cultural resource which required no mitigation (Giardino and Davis 1981:2).

Gibson (1982)

This large-scale survey covered 295 kilometers in portions of Avoyelles, Pointe Coupee, St. Landry, St. Martin, Iberville, Assumption, and St. Mary parishes. The survey was necessitated because of proposed construction and maintenance of the East and West Atchafalaya Basin Protection Levees which demarcate the Atchafalaya Basin Floodway. The areas surveyed were long linear corridors from Moreauville to a southern terminus near the junction of the Avoca Island Cutoff and the Lower Atchafalaya River below Morgan City (Gibson 1982:31). The survey was conducted in five segments along the east and west protection levees as well as segments of levees west of the Berwick area, west and southwest of Morgan City (Gibson 1982:31-36).

Gibson's approach to this study was designed to provide data to address issues concerning "...certain broad settlement-related hypotheses dealing with lowland adaptation and relative site location" (Gibson 1982:325). An ethnographic survey of the area provided an excellent overview of the historic populations in and around the basin. The methodology for archeological survey was based on geographic parameters (settings) within the survey corridors. These corridors were 60 meters in width, centered on existing levee crests (Gibson 1982:336). Four different field tech-

niques were utilized. Pedestrian coverage of one to three longitudinal transects following the corridors was undertaken. These transects were spaced 10 to 40 m intervals (Gibson 1982:337). In situations where the terrain precluded longitudinal transects, the corridor was covered by one to three irregular search paths beginning at points of disembarkation, which were systematically spaced at 200 meters (Gibson 1982:337-338). A third technique was applied for the southern extremities: the East Atchafalaya Basin Protection Levee south of Bayou Sorrel, the West Atchafalaya Basin Protection Levee south of Lake Fausse Point, and the levees west of Berwick. In these areas, probing was utilized in delimiting the extent of *Rangia* deposits. Finally, shovel tests were excavated in areas where geological information suggested near-surface sites were likely to be present. The shovel tests measured 50 x 50 cm. They were confined to geologically older but geomorphologically less active landforms found mostly north of U.S. Highway 190 (Gibson 1982:340).

Gibson's survey recorded two sites in Pointe Coupee Parish, one site in Iberville Parish, six sites in St. Martin Parish, fourteen sites in St. Mary Parish, two sites in Iberia Parish, five sites in St. Landry Parish, and two sites in Avoyelles Parish. Many of the sites located during the earlier survey (Gibson 1978a) were revisited during this survey. These included Shaffer Oak Ridge (16SMY50), Rip Rap (16SMY51), Bayou Shaffer Water Locks (16SMY52), 16SMY53, and Brick (16SMY130).

Floyd (1982)

A cultural resources survey of the Lake Palourde/Grassy Lake region was conducted by John E. Chance and Associates, Inc., under contract with Celeron Oil and Gas Company, Lafayette, Louisiana (Floyd 1982:2). A proposed pipeline route passed through an area where known archeological sites were located. One site (16SM23) in particular would be impacted by the pipeline. Both pedestrian and boat surveys were performed. Pedestrian surveys were conducted at all bayou banks and lake shore areas where proposed pipelines would cross. Subsurface testing was deemed unnecessary (Floyd 1982:21).

Four previously recorded sites (16SM23, 16SM24, 16SM25, and 16SM26) were relocated, and one new site (16AS43) was recorded. The sites were primarily *Rangia* shell midden with some *Unio* shells present. Artifacts recovered from the sites included Mississippi Plain, Baytown Plain, and Coles Creek Incised sherds, and faunal materials (Floyd 1982:24, 32, and 43). The pipeline was rerouted to avoid all archeological sites in the area (Floyd 1982:4).

Goodwin and Selby (1984)

In 1984, R. Christopher Goodwin and Associates, Inc., conducted investigations at the site of the Morgan City floodwall boat. The boat was located on the left descending bank of Berwick Bay at the floodwall on Front Street between Greenwood and Freret Streets. Prior to fieldwork, extensive archival and historic research, and oral interviews were done to establish the historical context of the boat (Goodwin and Selby 1984:8). The report also includes an extensive history of Morgan City (originally Brashear City) and its importance as a navigation center. No site number was ever assigned to the Morgan City floodwall boat (LA State Site Files).

Combining the historical context and the archeological evidence recovered at the site of the boat, two alternate hypotheses for its function were developed. The watercraft was a barge which may have been used as a ferry (Goodwin and Selby 1984:69). Flat-bottom barge ferries were an important mode of transportation across the Atchafalaya River. Alternatively, the vessel may have been used as an ice barge. Large amounts of sawdust were observed during excavations of the barge, and sawdust was used as an insulator for ice. In support of the latter hypothesis is the fact that the barge was wrecked in the location of a former wharf for an icehouse (Goodwin and Selby 1984:77).

deFrance (1985)

A cultural resources evaluation was made of an area to be impacted by the planned construction of a bulkhead on Bayou Boeuf, St. Mary Parish. The purpose of the survey was to determine if the proposed project would adversely impact the Greenwood Cemetery, site 16SMY19, a prehistoric site and historic cemetery (deFrance 1985:iv).

The site consists of a large prehistoric mounded shell midden with an intrusive historic cemetery (deFrance 1985:4). At the time of the survey, the prehistoric component of the site was fairly undisturbed, and the historic cemetery overgrown. A surface collection was made along the bayou bankline, where the prehistoric midden was being eroded. The types of aboriginal ceramics recovered suggest that the site was occupied during the late Marksville and early Coles Creek periods (de France 1985:4).

Intact *Rangia* shell midden was encountered at a depth of 36 cmbs in one shovel test. The vertical extent of the shell midden was not established (deFrance 1985:6-7). The proposed bulkhead would impact part of the intact midden; however, since erosion is the major destructive force at the site, the bulkhead would ultimately protect the remaining portions of the site. The historic cemetery would not be impacted by the proposed bulkhead. It was recommended that no further archeological investigations were necessary for the planned construction area (deFrance 1985:7).

Goodwin et al. (1985)

R. Christopher Goodwin and Associates, Inc., conducted a cultural resources survey in the vicinity of Morgan City. The survey was necessitated due to proposed expansion to the hurricane protection levees in the region (Goodwin et al. 1985:9). Fieldwork consisted of systematic shovel testing, mapping, and test excavations at the Goat Island site (16SMY1). No new prehistoric or historic sites were recorded during the survey. Excavations at the Goat Island site revealed that the *Rangia* shell midden at the site is discontinuous. Very few artifacts were recovered during the excavations (Goodwin et al. 1985:101). Based on the paucity of artifacts, the discontinuous nature of the midden, and the general disturbance of the site, 16SMY1 was considered ineligible for nomination to the National Register of Historic Places (Goodwin et al. 1985:112).

Deshotels (1987)

Rehabilitation of the existing bridge over Ramos Bayou, US 90, east of Morgan City, required examination of the Bayou Ramos I site (16SMY133), as well as the Ramos House, an historic habitation located on the north bank of Bayou Ramos.(Deshotels 1987:2). The Bayou Ramos I site, recorded by Weinstein et al. (1987), exhibited both prehistoric and historic components. The site is located on the south bank of Bayou Ramos, approximately 350 ft above the existing bridge. Bayou Ramos I was recommended as eligible for nomination to the National Register of Historic Places (Deshotels 1987:9). The Ramos House may have been constructed in the mid 1800s. At the time of the survey, the Ramos House was a well-kept residence.

Proposed construction work was limited to the existing roadway and right-of-way. Neither the Bayou Ramos I site nor the Ramos House would be adversely impacted by the planned construction. No further archeological investigations were deemed necessary prior to commencing construction.

Kelley (1988)

Coastal Environments, Inc., surveyed two proposed borrow areas and excavated a portion of Avoca Plantation (16SMY130) in St. Mary Parish, Louisiana. The survey was necessitated for

planned improvements to the East Atchafalaya Basin protection levee (Kelley 1988:11). Fieldwork included systematic survey and test excavations at 16SMY130 to evaluate its National Register eligibility.

During the survey of one borrow area, five historic scatters were recorded. These were interpreted as the remains of workers' quarters on Avoca Plantation; and therefore were not assigned individual site numbers (Kelley 1988:81). Artifacts recovered from the locales included brick and other construction materials; historic ceramics consisting primarily of decorated whitewares; and glass. No intact archeological deposits were encountered at these locales. The workers' quarters were most likely constructed in the early-twentieth century (ca. 1910-1920) (Kelley 1988:91).

Additional excavations at 16SMY130 revealed intact prehistoric and historic deposits. There is some evidence for earlier occupations; however, the focus of the prehistoric occupations appears to have been during the Mississippi period (Kelley 1988:65). Historic deposits at the site date to the late-nineteenth and early-twentieth centuries. Based on intact archeological deposits for both the prehistoric and historic components, Avoca Plantation was recommended as eligible for nomination to the National Register of Historic Places.

Pearson and Saltus (1989)

Remote sensing survey and exploratory diving operations were undertaken by Coastal Environments, Inc., at two project areas (American Pass and Blue Point Chute) in the Atchafalaya Basin. These were the sites of two proposed weirs, five and 14 miles upstream from Morgan City. The purpose of the survey was to locate and to evaluate the historic significance of submerged watercraft in these areas. The survey was conducted using a proton precession magnetometer. The use of this instrument limited the survey to fairly large historic boats with sufficient metal hardware to be detected by the magnetometer. Smaller craft with little or no iron work were not expected to be detected using this instrument (Pearson and Saltus 1989:5).

Until the latter half of this century, the project areas lay in the shallow waters of Grand Lake. Based on this and other information gleaned from the navigational histories of the two project areas, there was a low probability of locating shipwrecks in either area. However, given the intense use of south Louisiana waterways for commercial and private transportation and fishing, it was considered possible that small vessels may have been lost or abandoned in the vicinity of the project areas (Pearson and Saltus 1989:21).

Three magnetic anomalies recorded in the vicinity of the American Pass project area (five miles above Morgan City) were the subject of further investigations (Pearson and Saltus 1989:32, 35, and 38). At each magnetic anomaly, the river bottom was searched by hand and probed. The sources of the anomalies could not be located (Pearson and Saltus 1989:39-42).

This was the first reported use of remote sensing equipment for detecting submerged watercraft in the lower Atchafalaya Basin. While no wrecks were located during the survey, it provided invaluable data concerning the importance of remote sensing techniques in the region. This survey and the resulting interpretations form the basis for later investigations discussed below.

Pearson and Saltus (1991)

Remote-sensing surveys and diving operations were undertaken by Coastal Environments, Inc., in Sts. Martin and Mary parishes along the Atchafalaya River Main Channel and Bayou Shaffer (Pearson and Saltus 1991:11). The areas surveyed were the proposed locations of channel

training projects. Survey was also conducted in the possible location of the wreck of the *U.S.S. Kinsman* (Pearson and Saltus 1991:73).

Survey was conducted using a proton precession magnetometer and a side-scan sonar to locate magnetic anomalies and submerged objects, and a fathometer to "map" the river bottom. Fieldwork was divided into the initial magnetometer survey of the entire projects areas, intensive side-scan sonar of possible shipwrecks, and actual investigation (diving operations and probing) of selected locales (Pearson and Saltus 1991:51).

Most of the anomalies investigated were modern debris from oil production and commercial fishing (Pearson and Saltus 1991:112-113). The project areas in Bayou Shaffer were the only locations to yield shipwrecks. At sites 16SMY55 and 16SMY61, important submerged watercraft were recorded. The watercraft located at 16SMY55 was a small cypress skiff of the type which has had a long and important history in the region. At 16SMY61, the remains of a large wooden barge were found. This was a coal barge, important to the sugar industry in the area. Another vessel found at 16SMY61 was a submerged sailing sloop or schooner. Numerous other vessels or sections of vessels were also recorded in the Bayou Shaffer areas (Pearson and Saltus 1991:113).

This survey, combined with the survey conducted in 1989 (Pearson and Saltus 1989), adds to the growing body of knowledge concerning the important navigational history of the Lower Atchafalaya Basin.

Weinstein and Kelley (1992)

This report provides possibly the best reviews and discussions of Terrebonne Marsh archeological sites to date. Research for the report included field investigations and reviews of collections from 21 previously recorded sites within the area. The study area was bounded by Bayou du Large on the east, Bayou Shaffer and the Lower Atchafalaya River on the west, the proposed relocation of U.S. Hwy 90 on the north, and the Gulf of Mexico on the south. Fieldwork was undertaken for the U.S. Army Corps of Engineers to assess the impact of barrier construction related to the long term maintenance on the Atchafalaya Floodway.

Construction alternatives required assessment of previously recorded sites or survey in Assumption, St. Mary, and Terrebonne parishes. Information was gathered on 91 sites in the Atchafalaya Basin and Terrebonne Marsh. Seventy of these sites were visited during the field investigations. Of these sites, 13 were determined eligible for nomination to the NRHP, 30 were considered potentially eligible pending further investigations, 20 were regarded as non-significant cultural resources, four sites could not be relocated, and three were outside the sampling area.

Using data collected from the sites, Weinstein and Kelley developed a model of the reconstructed paleogeography for the area from 1,000 BC to AD 1940 (1992:331-361). The model shows changes in the physical landscape and concomitant human settlement patterns. They chose to divide the model into eight intervals: Poverty Point and Tchula, Marksville, Baytown, Coles Creek, Mississippi, Colonial, Antebellum and Civil War, and Postbellum and Modern (Weinstein and Kelley 1992:Plates 3-10). The south-central portion of the Terrebonne Marsh shows fairly continuous occupation from Poverty Point times through Mississippian (Weinstein and Kelley 1992:Plates 3-8). The colonial and later periods see few, if any, occupations (Weinstein and Kelley 1992:Plates 9-10).

Given the highly dynamic nature of the Terrebonne marsh in terms of both geology and human settlement, Weinstein and Kelley (1992:383) suggest that further research in the area should include an interdisciplinary approach that would involve archeologists and geomorphologists. Through such a study, we will gain invaluable information concerning the past lifeways of humans in the coastal zone.

Summary

Based on the investigations described above, cultural resources potentially located in the project area should be affiliated with occupations dating to or after the late Archaic period. Prehistoric site types include shell middens; earth middens; isolated mounds and associated middens; and multiple mound groups with associated middens. The most common prehistoric site type noted in the lower Atchafalya Basin is the *Rangia* midden. These middens are located almost exclusively on the natural levees of streams courses in the lower Atchafalaya Basin, but some of the middens have been noted along the banklines of several large lakes. Earth middens are rare and are found in the same ecological situations as shell middens. Isolated and multiple mounds are usually located on the broader portions of natural levees.

Historic occupations potentially located in the project area should date after the mid-eighteenth century. Plantation complexes and/or individual farmsteads should be the two site types encountered in the project area. These sites would also be concentrated along the natural levees flanking the stream courses in the lower Atchafalya Basin.

The likelihood of encountering cultural resources in the project area is low to moderate, since it is situated at the junction of the natural levee backslope and backswamp. That portion of the project area with the highest probability for containing cultural resources is the eastern one-third to one-quarter. This area would provide enough topographic relief for seasonal prehistoric exploitation of the backswamp environment. Also, the potential for buried prehistoric cultural resources in this portion of the project area is moderate to high, since the backslope is usually draped with fine sediments during seasonal overbank flooding. Historic cultural resources may be present in the eastern portion of the project area, but would be restricted to barns, sheds, etc., associated with agricultural production.

CHAPTER 6
FIELD INVESTIGATIONS

Methodology

Investigations began with pedestrian survey of the borrow area. Survey consisted of transects with 30 m (98 ft) lane spacing with shovel tests excavated at 30 m (98 ft) staggered intervals along each transect. Additional shovel tests were excavated along the proposed access road easement. Shovel tests measured approximately 30 cm (12 in) in diameter and were excavated to sterile subsoil or a maximum depth of 50 cm (20 in). Excavated soil was screened through 1/4" (0.64 cm) wire mesh whenever possible. In cases where screening was not possible, soils were carefully trowel-sorted and examined for cultural material.

Upon completion of pedestrian survey of the borrow area, two backhoe trenches were excavated. These trenches were placed in the northern portion of the borrow area, which had the highest probability of yielding buried cultural deposits, since the borrow area is located at the approximate junction of the natural levee and the backswamp.

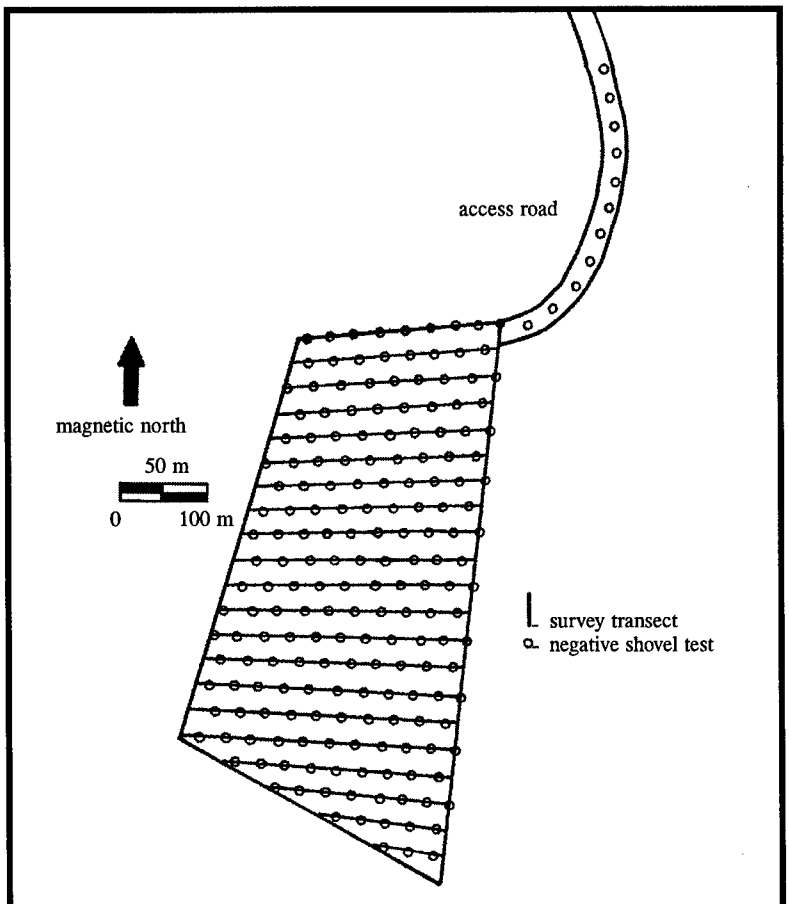


Figure 2. Map of the borrow area and access road.

Survey of the Borrow Area

A total of 21 transects were surveyed within the 40-acre borrow area. Transects were oriented east/west and followed a bearing of N280° (Figure 2), and they were numbered sequentially from north to south. The borrow area was formerly a cultivated field, and the planting rows were still evident in the northern 3/4 of the parcel. By contrast, the southern 1/4 of the borrow area appeared to have been fallow for a longer period of time. The understory was extremely dense, and the field rows were barely evident. Shovel tests were excavated between rows whenever possible. A total of 187 shovel tests were excavated, all were negative for cultural material.

Minimal variation was noted within soil profiles of the shovel tests (Figure 3). The most frequently encountered profile was a 10YR 4/2 (dark grayish brown) wet silty loam matrix to 50 cm below ground surface (bgs). The water table was encountered in majority of the shovel tests containing this matrix between approximately 25 cm to 30 cm bgs. A second common stratigraphic profile exhibited a 10YR 4/2 (dark gray-

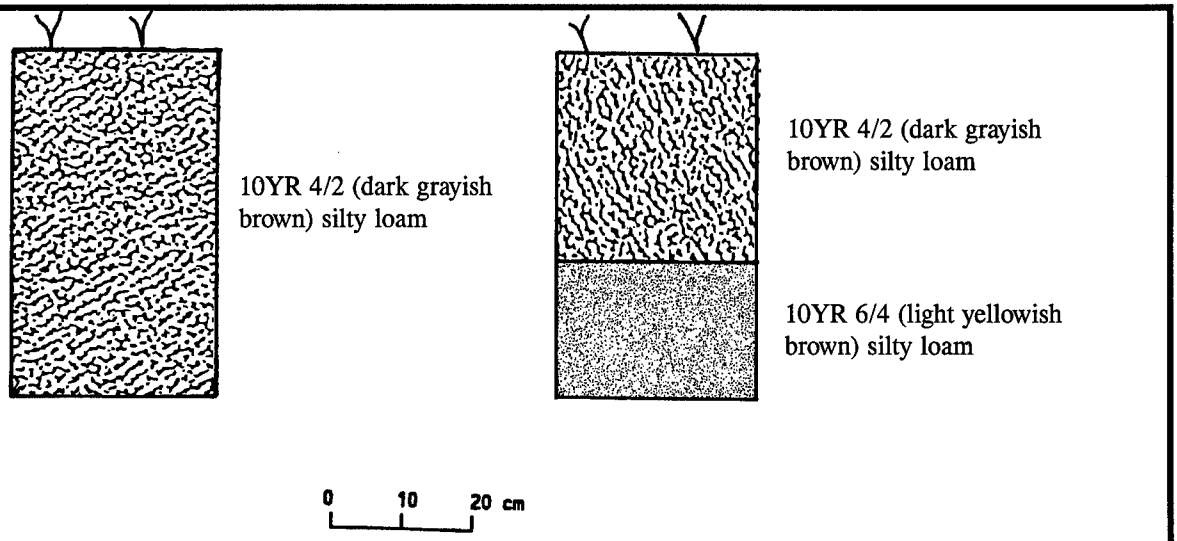


Figure 3. Representive shovel test profiles, borrow area.

ish brown) silty loam matrix between 0 to 30 cm bgs. This was followed by a 10YR 6/4 (light yellowish brown) silty loam to 50 cm bgs.

A trash dump was encountered along Transect 18, approximately 60 m east of the western boundary of the parcel. Modern roofing tin, barrels, a bed frame, a wash tub, and other modern debris was noted.

Survey of the Access Road

A total of 11 shovel tests were excavated along the proposed access road easement (Figure 2). Shovel test were excavated every 30 m along the cut survey line for the road. Two stratigraphic profiles were encountered among these tests (Figure 4). As was the case in the borrow

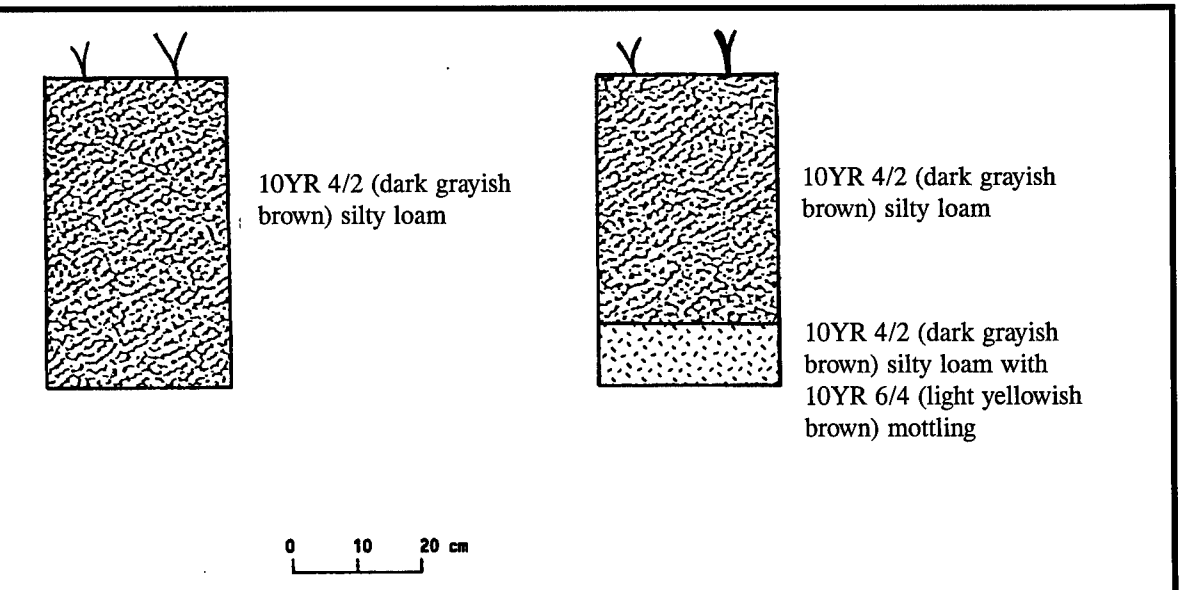


Figure 4. Representative shovel test profiles, access road.

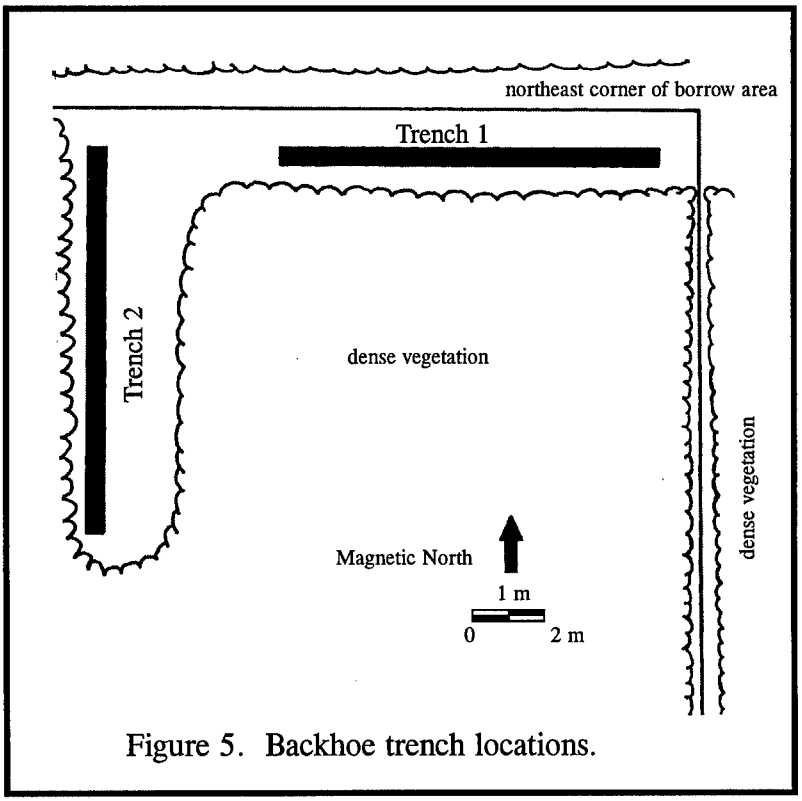


Figure 5. Backhoe trench locations.

area, a 10YR 4/2 (dark grayish brown) silt loam matrix was the most common soil profile seen in shovel tests. In addition, a mixed soil profile was observed near a large drainage ditch which ran approximately north/south across the borrow area. Between 0 to 40 cm bgs, a 10YR 4/2 (dark grayish brown) silt loam was encountered. Beneath this was a 10YR 4/2 (dark grayish brown) silt loam with 10YR 6/4 (light yellowish brown) mottling to 50 cm bgs. All shovel tests were negative for cultural material.

Backhoe Trench Excavation

Two trenches were mechanically excavated after the pedestrian survey was completed. These trenches were located in the northeast corner of the borrow area (Figure 5), and each measured 10 m in length and 2 m in depth. Trench 1 was oriented east/west, and Trench 2 was oriented north/south. Four distinct strata were revealed in the trench profiles (Figures 6 and 7). No cultural material was recovered from either trench.

Stratum 1. Stratum 1 extended to approximately 60 cm below ground surface in both trenches. It consists of a 10YR 2/1 (black) silt loam, which is clearly the result of field cultivation.

Stratum 2. This stratum occurs between 60 to 130 cm below ground surface. It consists of a 10YR 5/2 (grayish brown) silt loam with 10YR 3/2 (very dark grayish brown) silt loam mottling which contained a small amount of Ferromagnesium (FeMn) concretions. The presence of FeMn concretions in soil horizons was once thought to indicate the relative age of the landform. However, recent research indicates that the presence and size of these concretions has very little to do with age. Most geomorphologists would agree that the formation of FeMn concretions is more closely related to the position of the water table

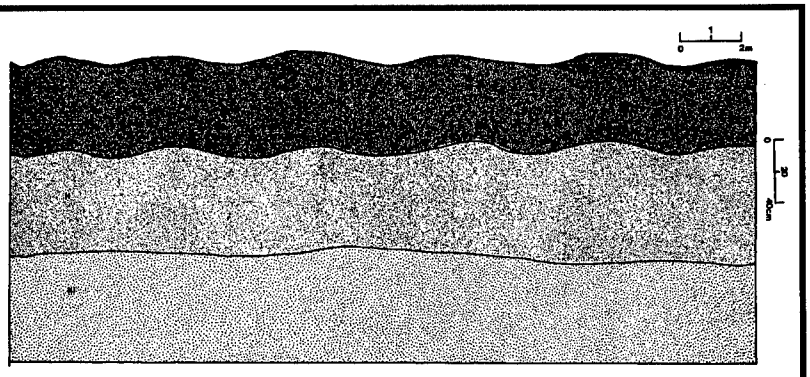
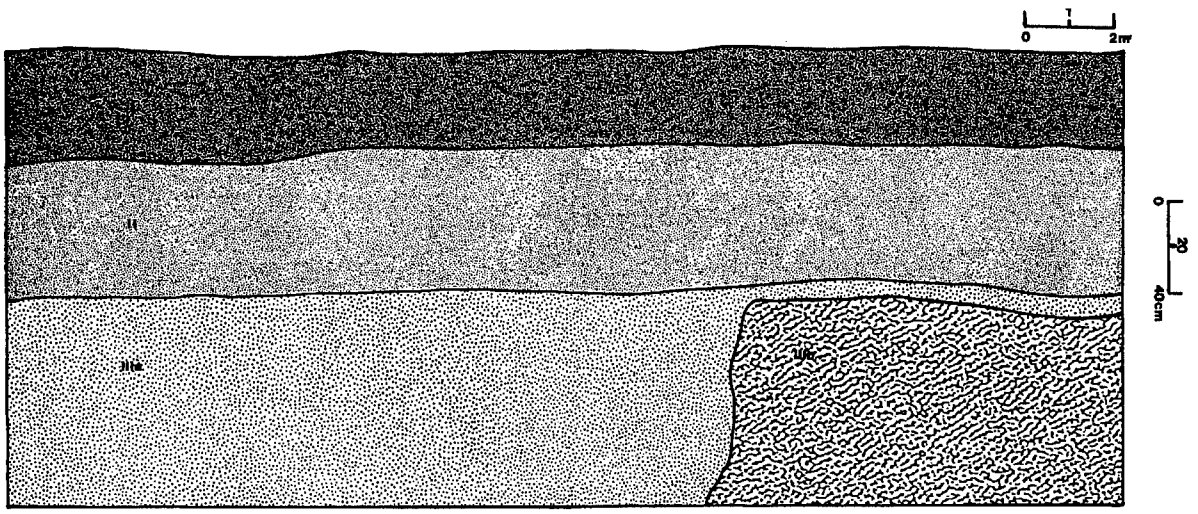


Figure 6. North profile of Trench 1.



10YR 2/1 (black) silt loam plow zone

10YR 5/2 (grayish brown) silt loam with 10YR 3/2 (very dark grayish brown) silt loam mottling; small amount of FeMn concretions

10YR 5/1 (gray) silt loam with 10YR 4/4 (dark yellowish brown) and 7.5YR 4/6 (strong brown) mottling; dense concentration of FeMn concretions

5GY 4/1 (dark greenish gray) clay; dense concentration of FeMn concretions

Figure 7. West profile of Trench 2.

in the profile and where the soil horizon is situated upon the landscape. FeMn concretions should be more prevalent in soil profiles located near or at the junction of the back slope of the natural levee and the backswamp. The water table would be relatively high and fluctuate periodically due to seasonal influxes of rain and flood water. Minerals migrating downward are "trapped" by the relatively high water table and begin to coalesce around organic material. The concretions "grow" seasonally as the mineral transmigration and trapping events occur (Roger T. Saucier, personal communication 1998).

Stratum 3a. This stratum consisted of a 10YR 5/1 (gray) silt loam, with 10YR 4/4 (dark yellowish brown) and 7.5YR (strong brown) silt loam mottling. A much higher concentration of FeMn concretions was encountered in this stratum, which resulted in the strong brown coloring of the soil.

Stratum 3b. Encountered only in Trench 2, this unit consists of a 5GY 4/1 (dark greenish gray) silt loam. Dense quantities of FeMn concretions were also noted in this stratum.

Summary

A total of 187 shovel tests and two backhoe trenches were excavated within the borrow area, and an additional 11 shovel tests were excavated along the proposed access road into the borrow area. All excavations were negative for cultural material. No prehistoric or historic sites were encountered.

CHAPTER 7
RECOMMENDATIONS

Intensive pedestrian survey was undertaken of the West Atchafalaya Basin Protection Levee (WABPL) at a proposed borrow area for Item W-123 in Patterson, St.Mary Parish, Louisiana. Approximately 40 acres within the tract of land to be used as a borrow area were examined with systematic shovel testing and mechanical excavation. A total of 198 shovel tests were excavated within the borrow area and along the proposed access road easement. Additionally, two backhoe trenches to a depth of 2 m were excavated in the northeastern portion of the borrow area. All excavations were negative for cultural material, and no prehistoric or historic sites were observed during survey. No further work is necessary.

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APPENDIX I
SCOPE OF SERVICES

CEMVN-PD-RN January 14, 1998

SCOPE OF SERVICES
Cultural Resources Survey of a
Borrow Area for the West Atchafalaya Basin Protection Levee Item W-123, St. Mary Parish, Louisiana

1. Introduction. The cultural resources survey to be performed under this delivery order is in support of the use of a tract of land as a borrow area for the enlargement of the West Atchafalaya Basin Protection Levee (WABPL) at Item W-123. The survey area consists of a borrow site located on the distal flank of the Bayou Teche natural levee along the right descending bank of the Lower Atchafalaya River. Although no archeological sites are presently recorded in the proposed borrow area, the locale has a moderate probability for prehistoric and historic cultural resources.

2. Study Area. The study area consists of a single *ca.* 40 ac tract of land located mostly in Township 16S, Range 11E, Section 48. A small portion of the parcel extends into Section 47. The area is located directly south of the town of Patterson, Louisiana, near the distal margin of the Bayou Teche natural levee. The study area includes the proposed access road easement, as indicated in the attachement (Attachments 1 and 2).

3. General Nature of the Work. The study will consist of historical and geographical research of the study area, intensive cultural resources survey of the borrow area, and data analysis and report preparation.

4. Study Requirements. The study will be conducted utilizing current professional standards and guidelines including, but not limited to:

- the National Park Service's National Register Bulletin 15 entitled, "How to Apply the National Register Criteria for Evaluation;"
- the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation as published in the Federal Register on September 29, 1983;
- Louisiana's Comprehensive Archeological Plan dated October 1, 1983;
- The Advisory Council on Historic Preservation's regulation 36 CFR Part 800 entitled, "Protection of Historic Properties."

The study will be conducted in three phases: Historical Research, Intensive Survey of the Borrow Area, and Data Analysis and Report Preparation.

A. Phase 1: Historical Research. The study will begin with research of available literature and records necessary to establish the historic setting, predict the nature of the resource base in the project area, and refine the survey methodology. This background research will include a literature review, review of the geomorphology, research of historic maps and records, and a review of previously known archeological sites in the vicinity of the project area. The background research will be sufficient to establish explicit historic contexts for the project area that will ultimately provide the basis for determination of cultural resource eligibility through application of National Register Criteria (36 CFR 60.4).

B. Phase 2: Intensive Survey of the Borrow Area. Upon completion of Phase 1, the Contractor shall initiate the fieldwork. The terrestrial survey will be adapted to the site conditions. The survey will include the following procedures:

(1) intensive pedestrian survey with shovel testing of the relatively undisturbed portions of the study area. The survey will utilize transect lane spacing of 30 meters and a shovel testing interval of 30 meters in an offset pattern. Shovel tests will be approximately 30x30 cm in the horizontal plane and will be excavated to sterile subsoil, but at least 50 cm deep. The excavated soil will be screened through 0.64 cm (0.25 in) wire mesh when feasible. Soils that are too wet or clayey for efficient screening will be thoroughly trowel searched for cultural materials. This systematic procedure will be supplemented with judgmental shovel testing where the background research indicates a high probability for historic sites; and

(2) auger sampling in areas that appear, based on the geomorphology, historical research, and the results of the surface inspection and intensive survey of undisturbed portions of the proposed borrow site, to have a high probability for buried cultural deposits. These 1.5 to 2 m deep auger tests will be placed in a grid pattern in areas with a high potential for archeological sites.

All sites located in the survey corridors will be mapped, photographed, and tested using shovel and auger tests, and limited controlled surface collection to determine depth of deposit, site boundaries, stratigraphy, condition, and cultural association. At a minimum, site maps will show site boundaries, locations of features and artifact scatters, locations of all subsurface testing units, and prominent natural and cultural

features in the site area. All shovel/auger tests and excavation units will be immediately backfilled upon completion of archeological recordation. The data collected will be sufficient to support an explicit preliminary National Register evaluation of each site.

For all sites discovered during the survey, the contractor will file state site forms with the Louisiana State Archaeologist and cite the resulting state-assigned site numbers in all draft and final reports. In addition, the contractor will submit site update forms to the State Archeologist for all previously recorded sites that are relocated and examined. These forms will correct previously filed information where appropriate and summarize the results of the present investigation. All sites located within the project area will be recorded to scale on the appropriate 7.5 minute quadrangle and aerial mosaic project maps. The quadrangle maps will be utilized to illustrate the site forms. One copy of the aerial mosaic project maps, marked with the locations of all sites and historic structures in the project easement, and two unbound copies of each site and site update form will be submitted to the Contracting Officer's Representative (COR) with the draft report.

Any standing structures located in the survey area will be identified by function, dated, and described in standard terminology of formal or vernacular architecture, as appropriate. Each structure predating 1945 or of potential National Register eligibility will be recorded on Louisiana state standing structure forms accompanied by a minimum of three black and white photographs showing front, back and side views of the structure. The contractor will determine whether archeological deposits are present. If present, the structure and features will be treated as a site and documented accordingly. The contractor shall assess the significance, i.e. the National Register eligibility, of all standing structures. Two copies of all standing structure forms will be submitted with the draft report.

C. Phase 3: Data Analyses and Report Preparation. All data will be analyzed using currently acceptable scientific methodology. The Contractor shall catalog all artifacts, samples, specimens, photographs, drawings, etc., utilizing the format currently employed by the Louisiana State Archeologist. The catalog system will include site and provenience designations.

All cultural resources located by the survey will be evaluated against the National Register criteria contained in Title 36 CFR Part 60.4 to assess their potential eligibility for inclusion in the National Register. The Contractor will classify each site as eligible for inclusion in the National Register, potentially eligible, or not eligible. The Contractor shall fully support his recommendations regarding site significance.

For those sites considered worthy of additional testing, the Contractor will recommend a specific testing plan. The Contractor shall also recommend appropriate mitigation measures for all sites classified as eligible.

The analyses will be fully documented. Methodologies and assumptions employed will be explained and justified. Inferential statements and conclusions will be supported by statistics where possible. Additional requirements for the draft report are contained in Section 5 of this Scope of Services.

5. Reports. Six copies of the draft report integrating all phases of this investigation will be submitted to the COR for review and comment within 8 weeks after delivery order award. Along with the draft reports, the Contractor shall submit:

(1) One copy of the 7.5 minute quadrangles marked with the locations of all sites and standing structures in the project easement;

(2) two unbound copies of each site, site update, and standing structure form;

(3) three copies of the National Register Registration Forms for each site recommended as eligible for inclusion in the National Register. This documentation will contain all of the data required by National Register Bulletin 16: Guidelines for Completing National Register of Historic Places Forms.

The written report shall follow the format set forth in MIL-STD-847A with the following exceptions: (1) separate, soft, durable, wrap-around covers will be used instead of self covers; (2) page size shall be 8-1/2 x 11 inches with 1-inch margins; (3) the reference format of *American Antiquity* will be used. Spelling shall be in accordance with the U.S. Government Printing Office Style Manual dated March 1984.

The COR will provide all review comments to the Contractor within 6 weeks after receipt of the draft reports (14 weeks after work item award). Upon receipt of the review comments on the draft report, the Contractor shall incorporate or resolve all comments and submit one preliminary copy of the final report to the COR within 4 weeks (18 weeks after work item award). Upon approval of the preliminary final report by the COR (within 1 week after submittal), the Contractor will submit 40 copies and one reproducible master copy of the final report to the COR within 20 weeks after work item award. The Contractor will also provide computer disk(s) of the text of the final report in Microsoft Word or other approved format.

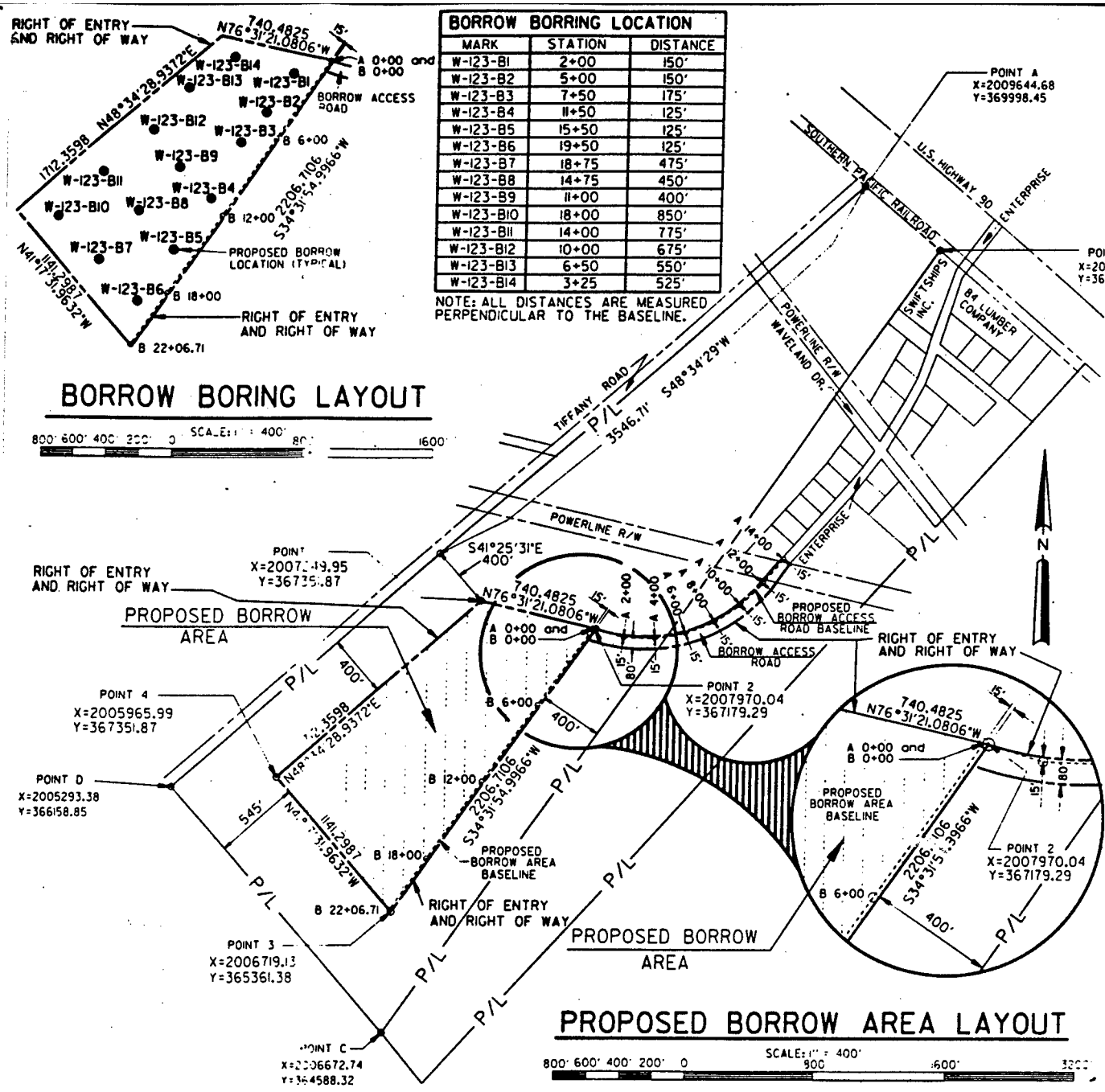
Included as an appendix to the Final Report will be a complete and accurate listing of cultural material and associated documentation recovered and/or generated. In order to preclude

vandalism, the final report shall not contain specific locations of archeological sites. Site specific information, including one set of project maps accurately delineating site locations, site forms, black and white photographs and maps, shall be included in an appendix separate from the main report.

6. Right-of-entry. The New Orleans District has obtained right-of-entry for cultural resource investigations in the study area.

7. Attachments.

1. Map of study area
2. Location map



WEST ATACHAFALAYA BASIN PROTECTION LEVEE
ITEM W - 123
LEVEE ENLARGEMENT
STA. 6504+00(LMS) TO STA. 6554+00(LMS)
ST.MARY PARISH, LA.

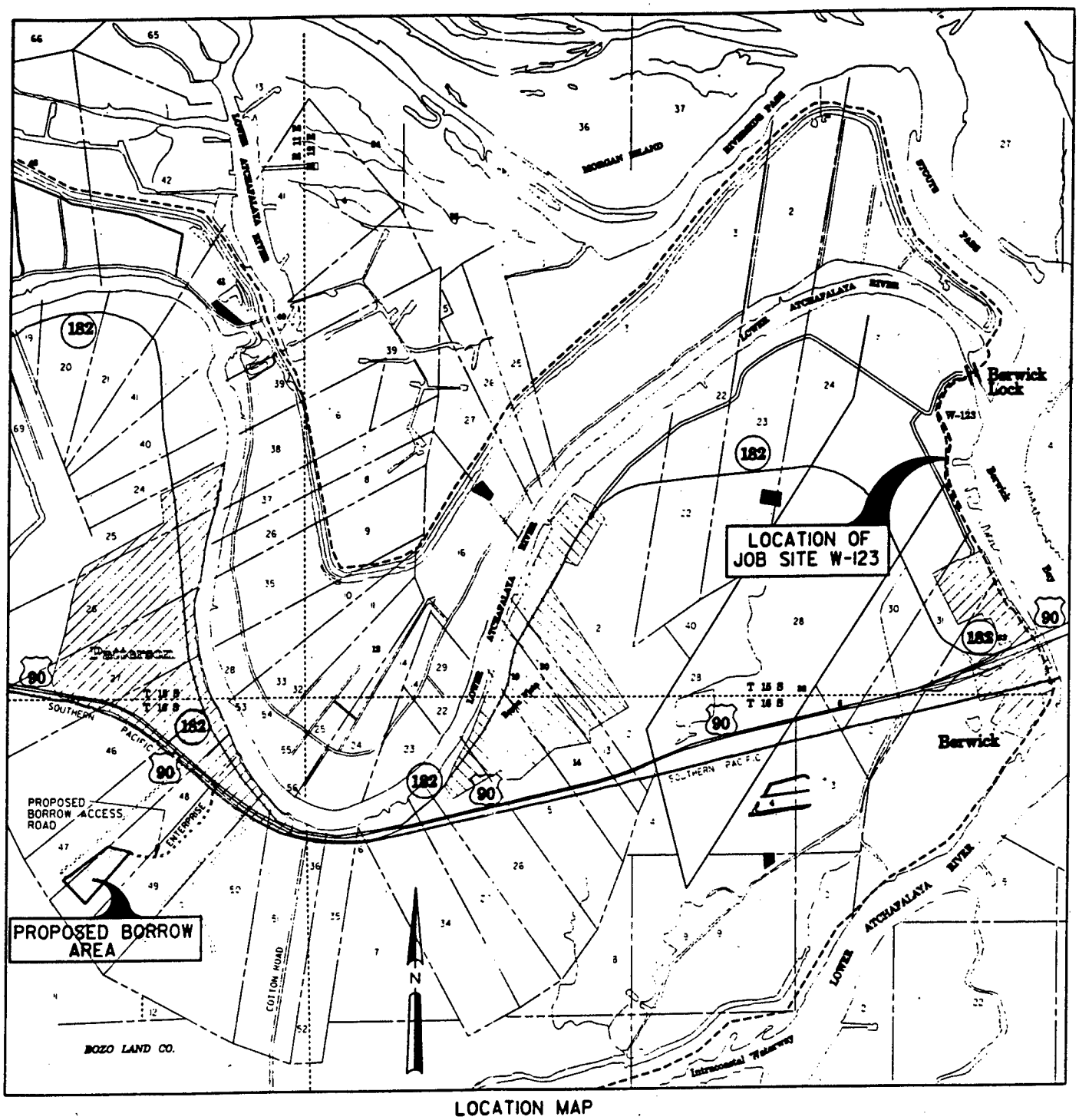
RIGHT OF ENTRY FOR SURVEYS AND BORROW BORINGS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

DESIGNED BY: M.PINTO	PLOT SCALE:	PLOT DATE: DEC. 7, 1995	CADD FILE: 4466IRE1.DGN
DRAWN BY: M.PINTO			FILE NO. H-8-44661
CHECKED BY: M.PINTO	DATE: DEC. 8, 1995		

3 | 2 | 1 | DWG. 1 of 2

Attachment 1



LOCATION MAP

SCALE:

1 MILE ½ 0 1 MILE 2 MILE 3 MILE 4 MILE

SCALE IN FEET

3000 0 3000 6000 9000 12000 15000 18000 21000

5	4	3

Attachment 2