

INDIVIDUAL ENVIRONMENTAL REPORT
PRE-APPROVED CONTRACTOR FURNISHED BORROW MATERIAL
JEFFERSON, ORLEANS, ST. BERNARD, IBERVILLE, AND PLAQUEMINES
PARISHES, LOUISIANA,
AND HANCOCK COUNTY, MISSISSIPPI

IER #19



**US Army Corps
of Engineers®**

OCTOBER 2007

1. Introduction	3
1.1 Purpose and Need for the Proposed Action	3
1.2 Authority for the Proposed Action.....	4
1.3 Prior Reports	4
1.4 Integration with other Interim Environmental Reports.....	9
1.5 Public Concerns	9
1.6 Data Gaps and Uncertainties.....	10
2. Alternatives	10
2.1 Alternatives Development and Preliminary Screening Criteria.....	10
2.2 Description of the Alternatives	11
2.3 Proposed Action.....	11
2.4 Alternatives to the Proposed Action	27
2.5 Alternatives Sites Eliminated from Further Consideration.....	27
3. Affected Environment and Environmental Consequences.....	27
3.1 Environmental Setting	27
3.2 Significant Resources.....	29
3.2.1 Jurisdictional Wetlands/Bottomland Hardwood Forest	30
3.2.2 Non-Wetland Resources/Upland Resources	33
3.2.3 Navigable Waters.....	34
3.2.4 Prime and Unique Farmland	35
3.2.5 Fisheries	36
3.2.6 Wildlife	37
3.2.7 Threatened and Endangered Species	38
3.2.8 Cultural Resources	38
3.2.9 Recreational Resources.....	41
3.2.10 Noise Quality	41
3.2.11 Air Quality	42
3.2.12 Water Quality.....	43
3.2.13 Transportation.....	44
3.2.14 Aesthetics.....	46
3.3 Socioeconomic Resources	47
3.3.1 Land, Water, Minerals, Fisheries, and Agriculture.....	47
3.3.2 Flood Control and Hurricane Protection.....	48
3.3.3 Business, Industry, Employment, and Income.....	49
3.3.4 Population and Housing.....	49
3.3.5 Property Values, Tax Revenues, Public Facilities, and Services.....	50
3.3.6 Community and Regional Growth.....	52
3.3.7 Health and Safety.....	52
3.3.8 Community Cohesion	53
3.4 Hazardous, Toxic, and Radioactive Waste	54
4. Cumulative Impacts.....	55
5. Selection Rationale.....	56
6. Coordination and Consultation.....	56
6.1 Public Involvement	56
6.2 Agency Coordination.....	57
7. Mitigation.....	58
8. Compliance with Environmental Laws and Regulations	59
9. Conclusions	59
9.1 Interim Decision.....	59
9.2 Prepared By.....	59
9.3 Literature Cited.....	59
Tables.....	60
Figures.....	60

1. Introduction

The U.S. Army Corps of Engineers (USACE) Mississippi Valley Division, New Orleans District (CEMVN), has prepared this Individual Environmental Report #19 (IER #19) to evaluate the potential impacts associated with the proposed excavation of nine pre-approved Contractor Furnished borrow areas. The proposed action areas are located in southeastern Louisiana (Figures 1-8) and southwest Mississippi (Figure 9).

IER #19 has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality's Regulations (40 CFR §1500-1508), as reflected in the USACE Engineering Regulation, ER 200-2-2. The execution of an IER, in lieu of a traditional Environmental Assessment (EA) or Environmental Impact Statement (EIS), is provided for in ER 200-2-2, Environmental Quality (33 CFR §230) Procedures for Implementing the NEPA and pursuant to the Council on Environmental Quality (CEQ) NEPA Implementation Regulations (40 CFR §1506.11). The Alternative Arrangements can be found at www.nolaenvironmental.gov, and are herein incorporated by reference.

CEMVN implemented Alternative Arrangements on 13 March, 2007 under the provisions of the Council on Environmental Quality Regulations for Implementing the NEPA (40 CFR §1506.11). This process was implemented in order to expeditiously complete environmental analysis for any changes to the authorized system and the 100-year level of the Hurricane Protection System (HPS) (also known as the Hurricane and Storm Damage Reduction System) authorized and funded by Congress and the Administration. The proposed actions are located in southeastern Louisiana and are part of the Federal effort to rebuild and complete construction of the Hurricane and Storm Damage Reduction System in the New Orleans Metropolitan area as a result of Hurricanes Katrina and Rita.

A total of nine potential pre-approved Contractor Furnished borrow areas investigated by the CEMVN Borrow Project Delivery Team (PDT) are discussed in this IER. The goal of the CEMVN Borrow PDT is to acquire suitable borrow material needed for HPS improvements. CEMVN engineers currently estimate that 150,000,000 cubic yards of suitable material is required to improve Federal and non-Federal levee and floodwall projects. Borrow areas investigated in this IER would provide approximately 8,390,000 cubic yards of suitable material for levee and floodwall projects.

1.1 Purpose and Need for the Proposed Action

The purpose of the proposed action is to identify borrow areas that contain suitable material that can be excavated to supply Federal HPS levee and floodwall projects. The proposed action resulted from the need to provide a total of approximately 150,000,000 cubic yards of suitable clay for HPS projects that include the completion and improvement of hurricane protection levees in southeastern Louisiana. Raising levee elevations and the completion of levees requires the excavation of material from borrow areas necessary for project construction to ensure 100-year level of flood protection for local communities.

The term "100-year level of protection," as it is used throughout this document, refers to a level of protection which reduces the risk of hurricane surge and wave driven flooding that the New Orleans Metropolitan area has a 1% chance of experiencing each year.

1.2 Authority for the Proposed Action

The authority for the proposed action was provided as part of a number of hurricane protection projects spanning southeastern Louisiana, including the Lake Pontchartrain and Vicinity (LPV) Hurricane Protection Project and the West Bank and Vicinity (WBV) Hurricane Protection Project. Congress and Administration granted a series of supplemental appropriations acts following Hurricanes Katrina and Rita to repair and upgrade the project systems damaged by the storms that gave additional authority to the USACE to construct HPS projects.

The LPV project was authorized under the Flood Control Act of 1965 (P.L. 89-298, Title II, Sec. 204) which amended, authorized a “project for hurricane protection on Lake Pontchartrain, Louisiana ... substantially in accordance with the recommendations of the Chief of Engineers in House Document 231, Eighty-ninth Congress.” The original statutory authorization for the LPV Project was amended by the Water Resources Development Acts (WRDA) of 1974 (P.L. 93-251, Title I, Sec. 92); 1986 (P.L. 99-662, Title VIII, Sec. 805); 1990 (P.L. 101-640, Sec. 116); 1992 (P.L. 102-580, Sec. 102); 1996 (P.L. 104-303, Sec. 325); 1999 (P.L. 106-53, Sec. 324); and 2000 (P.L. 106-541, Sec. 432).

The WBV project was authorized under the WRDA, as cited above. The Westwego to Harvey Canal Hurricane Protection Project was authorized by the WRDA of 1986. The WRDA of 1996 modified the project and added the Lake Cataouatche Project and the East of Harvey Canal Project. The WRDA 1999 combined the three projects into one project under the current name.

The Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act of 2006 (3rd Supplemental - P.L. 109-148, Chapter 3, Construction, and Flood Control and Coastal Emergencies) authorized accelerated completion of the project and restoration of project features to design elevations at 100% Federal cost. The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery of 2006 (4th Supplemental - P.L. 109-234, Title II, Chapter 3, Construction, and Flood Control and Coastal Emergencies) authorizes construction of a 100-year level of protection; the replacement or reinforcement of floodwalls; the construction of permanent closures at the outfall canals; the improvement of the Inner Harbor Navigation Canal (IHNC); and the construction of levee armoring at critical locations. Additional Supplemental Appropriations include the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 H.R. 2206 (pg. 41-44) Title IV, Chapter 3, Flood Control and Coastal Emergencies, (5th Supplemental), General Provisions, SEC. 4302.

1.3 Prior Reports

A number of studies and reports on water resources development in the proposed project area have been prepared by the USACE, other Federal, State, and Local agencies, research institutes, and individuals, and are herein incorporated by reference. Pertinent studies, reports and projects are discussed below:

Lake Pontchartrain and Vicinity Hurricane Protection Project

- In July 2006, CEMVN signed a Finding of No Significant Impact (FONSI) on an EA #433 entitled, “USACE Response to Hurricanes Katrina & Rita in Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of Hurricanes Katrina and Rita.

- On 30 October, 1998, CEMVN signed a FONSI on EA # 279 entitled “Lake Pontchartrain Lakefront, Breakwaters, Pump Stations 2 and 3.” The report evaluated the impacts associated with providing fronting protection for outfall canals and pump stations. It was determined that the action would not significantly impact resources in the immediate area.
- On 2 October, 1998, CEMVN signed a FONSI on EA # 282 entitled “LPV, Jefferson Parish Lakefront Levee, Landside Runoff Control: Alternate Borrow.” The report investigated the impacts of obtaining borrow material from an urban area in Jefferson Parish. No significant impacts to resources in the immediate area were expected.
- On 2 July, 1992, CEMVN signed a FONSI on EA # 169 entitled “LPV, Hurricane Protection Project, East Jefferson Parish Levee System, Jefferson Parish, Louisiana, Gap Closure.” The report addressed the construction of a floodwall in Jefferson Parish to close a “gap” in the levee system. The area was previously leveed and under forced drainage, and it was determined that the action would not significantly impact the already disturbed area.
- On 22 February, 1991, CEMVN signed a FONSI on EA # 164 entitled “LPV Hurricane Protection – Alternate Borrow Area for the St. Charles Parish Reach.” The report addressed the impacts associated with the use of borrow material from the Mississippi River on the left descending bank in front of the Bonnet Carré Spillway Forebay for LPV construction.
- On 30 August, 1990, CEMVN signed a FONSI on EA # 163 entitled “LPV Hurricane Protection – Alternate Borrow Area for Jefferson Parish Lakefront Levee, Reach III.” The report addressed the impacts associated with the use of a borrow area in Jefferson Parish for LPV construction.
- On 2 July 1991, CEMVN signed a FONSI on EA # 133 entitled “LPV Hurricane Protection – Alternate Borrow at Highway 433, Slidell, Louisiana.” The report addressed the impacts associated with the excavation of a borrow area in Slidell, Louisiana for LPV construction.
- On 12 September, 1990, CEMVN signed a FONSI on EA # 105 entitled “LPV Hurricane Protection – South Point to Gulf Intracoastal Waterway, A. V. Keeler and Company Alternative Borrow Site.” The report addressed the impacts associated with the excavation of a borrow area in Slidell, Louisiana for LPV construction.
- On 12 March, 1990, CEMVN signed a FONSI on EA # 102 entitled “LPV Hurricane Protection – 17th Street Canal Hurricane Protection.” The report addressed the use alternative methods of providing flood protection for the 17th Street Outfall Canal in association with LPV activity. Impacts to resources were found to be minimal.
- On 4 August, 1989, CEMVN signed a FONSI on EA # 89 entitled “LPV Hurricane Protection, High Level Plan - Alternate Borrow Site 1C-2B.” The report addressed the impacts associated with the excavation of a borrow area along Chef Menteur Highway, Orleans Parish for LPV construction. The material was used in the construction of a levee west of the Inner Harbor Navigation Canal.

- On 27 October, 1988, CEMVN signed a FONSI on EA # 79 entitled “LPV Hurricane Protection – London Avenue Outfall Canal.” The report investigated the impacts of strengthening existing hurricane protection at the London Avenue Outfall Canal.
- On 21 July, 1988, CEMVN signed a FONSI on EA # 76 entitled “LPV Hurricane Protection – Orleans Avenue Outfall Canal.” The report investigated the impacts of strengthening existing hurricane protection at the Orleans Avenue Outfall Canal.
- On 26 February, 1986, CEMVN signed a FONSI on EA # 52 entitled “LPV Hurricane Protection – Geohegan Canal.” The report addressed the impacts associated with the excavation of borrow material from an extension of the Geohegan Canal for LPV construction.
- Supplemental Information Report (SIR) #25 entitled “LPV Hurricane Protection – Chalmette Area Plan, Alternate Borrow Area 1C-2A” was signed by CEMVN on 12 June, 1987. The report addressed the used of an alternate contractor furnished borrow area for LPV construction.
- SIR #27 entitled “LPV Hurricane Protection – Alternate Borrow Site for Chalmette Area Plan” was signed by CEMVN on 12 June, 1987. The report addressed the used of an alternate contractor furnished borrow area for LPV construction.
- SIR #28 entitled “LPV Hurricane Protection – Alternate Borrow Site, Mayfield Pit” was signed by CEMVN on 12 June, 1987. The report addressed the used of an alternate contractor furnished borrow area for LPV construction.
- SIR #29 entitled “LPV Hurricane Protection – South Point to GIWW Levee Enlargement” was signed by CEMVN on 12 June, 1987. The report discussed the impacts associated with the enlargement of the GIWW.
- SIR #30 entitled “LPV Hurricane Protection Project, Jefferson Lakefront Levee” was signed by CEMVN on 7 October, 1987. The report investigated impacts associated with changes in Jefferson Parish LPV levee design.
- SIR #17 entitled “LPV Hurricane Protection – New Orleans East Alternative Borrow, North of Chef Menteur Highway” was signed by CEMVN on 30 April, 1986. The report addressed the used of an alternate contractor furnished borrow area for LPV construction.
- SIR #22 entitled “LPV Hurricane Protection – Use of 17th Street Pumping Station Material for LPHP Levee” was signed by CEMVN on 5 August, 1986. The report investigated the impacts of moving suitable borrow material from a levee at the 17th Street Canal in the construction of a stretch of levee from the Inner Harbor Navigation Canal to the London Avenue Canal.
- SIR #10 entitled “LPV Hurricane Protection, Bonnet Carré Spillway Borrow” was signed by CEMVN on 3 September, 1985. The report evaluated the impacts associated with using the Bonnet Carré Spillway as a borrow source for LPV construction, and found “no significant adverse effect on the human environment.”

- In December 1984, a SIR to complement the Supplement to Final EIS on the LPV Hurricane Protection project was filed with the Environmental Protection Agency.
- The Final EIS for the LPV Hurricane Protection Project, dated August 1974. A Statement of Findings was signed by CEMVN on 2 December, 1974. Final Supplement I to the EIS, dated July 1984, was followed by a Record of Decision (ROD), signed by CEMVN on 7 February, 1985. Final Supplement II to the EIS, dated August 1994, was followed by a ROD signed by CEMVN on 3 November, 1994.
- A report entitled “Flood Control, Mississippi River and Tributaries,” published as House Document No. 90, 70th Congress, 1st Session, submitted 18 December, 1927 resulted in authorization of a project by the Flood Control Act of 1928. The project provided comprehensive flood control for the lower Mississippi Valley below Cairo, Illinois. The Flood Control Act of 1944 authorized the USACE to construct, operate, and maintain water resources development projects. The Flood Control Acts have had an important impact on water and land resources in the proposed project area.

West Bank and Vicinity Hurricane Protection Project

- In July 2006, CEMVN signed a FONSI on an EA # 433 entitled, “USACE Response to Hurricanes Katrina & Rita in Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of Hurricanes Katrina and Rita.
- On 23 August, 2005, CEMVN signed a FONSI on EA # 422 entitled “Mississippi River Levees – West Bank Gaps, Concrete Slope Pavement Borrow Area Designation, St. Charles and Jefferson Parishes, Louisiana.” The report investigated the impacts of obtaining borrow material from various areas in Louisiana.
- On 22 February, 2005, CEMVN signed a FONSI on EA # 306A entitled “West Bank Hurricane Protection Project – East of the Harvey Canal, Floodwall Realignment and Change in Method of Sector Gate.” The report discussed the impacts related to the relocation of a proposed floodwall moved because of the aforementioned sector gate, as authorized by the LPV Project.
- On 5 May, 2003, CEMVN signed a FONSI on EA # 337 entitled “Algiers Canal Alternative Borrow Site.”
- On 19 June, 2003, CEMVN signed a FONSI on EA # 373 entitled “Lake Cataouatche Levee Enlargement.” The report discussed the impacts related to improvements to a levee from Bayou Segnette State Park to Lake Cataouatche.
- On 16 May, 2002, CEMVN signed a FONSI on EA # 306 entitled “West Bank Hurricane Protection Project - Harvey Canal Sector Gate Site Relocation and Construction Method Change.” The report discussed the impacts related to the relocation of a proposed sector gate within the Harvey Canal, as authorized by the LPV Project.
- On 30 August, 2000, CEMVN signed a FONSI on EA # 320 entitled “West Bank Hurricane Protection Features.” The report evaluated the impacts associated with

borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Project.

- On 18 August, 1998, CEMVN signed a FONSI on EA # 258 entitled “Mississippi River Levee Maintenance - Plaquemines West Bank Second Lift, Fort Jackson Borrow Site.”
- The Final EIS for the WBV, East of Harvey Canal, Hurricane Protection Project was completed in August 1994. A ROD was signed by CEMVN in September 1998.
- The Final EIS for the WBV, Lake Cataouatche, Hurricane Protection Project was completed. A ROD was signed by CEMVN in September 1998.
- In December 1996, the USACE completed a post-authorization change study entitled, “Westwego to Harvey Canal, Louisiana Hurricane Protection Project Lake Cataouatche Area, EIS.” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish between Bayou Segnette and the St. Charles Parish line. A Standard Project Hurricane (SPH) level of protection was recommended along the alignment followed by the existing non-Federal levee. The project was authorized by Section 101 (b) of the WRDA of 1996, Public Law 104-303, subject to the completion of a final report of the Chief of Engineers, which was signed on 23 December, 1996.
- On 12 January, 1994, CEMVN signed a FONSI on an EA # 198 entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, LA, Hurricane Protection Project, Westwego to Harvey Canal, Jefferson Parish, Louisiana, Proposed Alternate Borrow Sources and Construction Options.” The report evaluated the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Levee.
- In August 1994, CEMVN completed a feasibility report entitled “WBV (East of the Harvey Canal).” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of metropolitan New Orleans from the Harvey Canal eastwards to the Mississippi River. The final report recommended that the existing West Bank Hurricane Project, Jefferson Parish, Louisiana, authorized by the WRDA of 1986 (P.L. 99-662), approved November 17, 1986, be modified to provide additional hurricane protection east of the Harvey Canal. The report also recommended that the level of protection for the area east of the Algiers Canal deviate from the National Economic Development Plan’s level of protection and provide protection for the SPH. The Division Engineer’s Notice was issued on 1 September, 1994. The Chief of Engineer’s report was issued on 1 May, 1995. Preconstruction, engineering, and design was initiated in late 1994 and is continuing. The WRDA of 1996 authorized the project.
- On 20 March, 1992, CEMVN signed a FONSI on EA # 165 entitled “Westwego to Harvey Canal Disposal Site.”
- In February 1992, the USACE completed a reconnaissance study entitled “West Bank Hurricane Protection, Lake Cataouatche, Louisiana.” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish, between Bayou

Segnette and the St. Charles Parish line. The study found a 100-year level of protection to be economically justified based on constructing a combination levee/sheetpile wall along the alignment followed by the existing non-Federal levee. Due to potential impacts to the Westwego to Harvey Canal project, the study is proceeding as a post-authorization change.

- On 3 June, 1991, CEMVN signed a FONSI on EA # 136 entitled “West Bank Additional Borrow Site between Hwy 45 and Estelle PS.”
- On 15 March, 1990, CEMVN signed a FONSI on EA # 121 entitled “West Bank Westwego to Harvey Changes to EIS.” The report addressed the impacts associated with the use of borrow material from Fort Jackson for LPV construction. The material was used for constructing the second life for the Plaquemines West Bank levee upgrade, as part of LPV construction.
- In December 1986, the USACE completed a Feasibility Report and EIS entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, La.” The report investigated the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish between the Harvey Canal and Westwego, and down to the vicinity of Crown Point, Louisiana. The report recommended implementing a plan that would provide SPH level of protection to an area on the west bank between Westwego and the Harvey Canal north of Crown Point. The project was authorized by the WRDA of 1986 (P.L. 99-662). Construction of the project was initiated in early 1991.

1.4 Integration with other Interim Environmental Reports

In addition to this IER, CEMVN is preparing a Draft Comprehensive Environmental Document (DCED) that will describe the work completed and remaining to be constructed. The purpose of the DCED will be to document the work completed by the CEMVN on a system-wide scale. The DCED will describe the integration of individual IERs into a systematic planning effort. Overall cumulative impacts, a finalized mitigation plan, and future operations and maintenance requirements will also be included. Additionally, the DCED will contain updated information for any IER that had incomplete or unavailable data at the time it was posted for public review.

The DCED will be available for a 60-day public review period. The document will be posted on www.nolaenvironmental.gov, or can be requested by contacting CEMVN. A notice of availability will be mailed/ e-mailed to interested parties advising them of the availability of the DCED for review. Additionally, a notice will be placed in national and local newspapers. Upon completion of the 60-day review period all comments will be compiled and appropriately addressed. Upon resolution of any comments received, a Final Comprehensive Environmental Document (FCDC) will be prepared, signed by the District Commander, and made available to any stakeholders requesting a copy.

1.5 Public Concerns

According to the results of focus groups held by Unified New Orleans Plan (UNOP) the public places very high priority on storm protection. The public wants a 100-year or higher level of protection from storm events. The public also feels that the remaining land left in coastal parishes should not be excavated. Some members of the public feel that the borrow areas should be backfilled. The public is concerned about impacting wetlands. The public is concerned about truck haulers causing traffic congestion.

1.6 Data Gaps and Uncertainties

Transportation routes for the delivery of borrow material have not been determined, as it is uncertain to which HPS construction sites each proposed borrow area would provide material. Large quantities of material would be delivered to HPS construction sites, as well as to other ongoing flood protection projects in the area. This could have localized short-term impacts to transportation corridors that can not be quantified at this time. CEMVN is completing a transportation study to determine any impacts associated with the transporting of material to construction sites. This analysis will be discussed in future IERs once it becomes available.

Some construction schedules are changing or not known at this time.

2. Alternatives

2.1 Alternatives Development and Preliminary Screening Criteria

NEPA requires that in analyzing alternatives to a proposed action a Federal agency consider an alternative of “No Action.” Likewise, Section 73 of the WRDA of 1974 (PL 93-251) requires Federal agencies to give consideration to non-structural measures to reduce or prevent flood damage. Since this IER deals with Government Furnished borrow material there are no nonstructural alternatives. Non-structural alternatives will be evaluated in the IERs dealing directly with the construction of the HPS.

The HPS includes the completion and raising of storm protection levees in southeastern Louisiana. Raising levee elevations and completion of levees requires the excavation of material from borrow pits for use in project construction. As part of the construction, numerous utilities, including electrical services, gas lines, telephone poles and lines, storm drainpipes, subdrain lines, and storm drain catch basins, would be avoided or relocated. The access routes and land would be cleared using bulldozers and excavators. Woody debris would be stockpiled on-site and placed in the pit once excavation is completed or in some cases the material may be removed to an approved landfill. Silt fencing would be installed around the perimeter of the borrow area to control runoff. In most cases excavation of the borrow areas would commence from the back of the areas to the access road to provide adequate space for staging haul trucks and stockpiled material. To make optimum use of available material, excavation should begin at one end of the borrow area and be made continuous across the width of the areas to the allowed borrow depths to provide surface drainage to the low side of the borrow pit as excavation proceeds. During this process the overburden (topsoil that lays on top of suitable borrow material) would be stockpiled. The excavation activities shall be long enough to provide the required quantity of material, and shall be accomplished in such manner that all available material within the required width to full depth will be utilized when possible. Upon abandonment, site restoration will include placing the stockpiled overburden back into the pit and grading the slopes to the specified cross-section figure shown in the drawings. If additional overburden is available at the areas it would be used to create gradual side slopes, islands, and smooth out corners within the borrow area to enhance wildlife and fishery habitat. The Environmental Design Considerations for Main Stem Levee Borrow Areas Along the Lower Mississippi River Report 4: Part V, incorporated by reference, and CEMVN operating procedures will be basic guidelines referred to when designing the borrow areas. Some parishes have ordinances that require the back-filling of any borrow pits inside the jurisdictional limits of the parish. Sites in these areas would be backfilled in accordance with the local ordinances. Material for the backfill operation will likely be dredged from the Mississippi River.

2.2 Description of the Alternatives

Four alternatives were considered. These included the No-Action, the Proposed Action, Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area, and government Furnished.

2.3 Proposed Action

The proposed action (preferred alternative) consists of excavating all suitable material from the proposed nine borrow areas. In order to serve the borrow needs of CEMVN, personnel from CEMVN Engineering, Real Estate, Office of Counsel, Relocations, and Environmental branches established a Borrow Project Delivery Team. This team worked closely with other CEMVN elements (Hurricane Protection Office, Protection and Restoration Office, and Regulatory Functions Branch) to accomplish its mission. The team's goal is to locate and procure high quality clay borrow sources suitable for levee and floodwall construction in such a way as to be least damaging to both the natural and human environments within the proposed project areas.

The team investigated and completed environmental coordination on the proposed borrow areas, and is currently investigating others. Pre-approved Contractor Furnished borrow sites were initially evaluated by reviewing the contractor-provided information packet required for the use of proposed borrow areas. The contractor packet was considered approved if it consisted of the following: 1) a signed right of entry; 2) maps that showed the property boundaries and areas being proposed for use as a pre-approved contractor furnished borrow site; 3) an approved Jurisdictional Wetland Determination from the CEMVN Regulatory Functions Branch indicating no wetland impacts, or a Section 404 (of the Clean Water Act- see Appendix A) permit and proof of compensatory mitigation; 4) a Coastal Use permit or letter of no objection from the Louisiana Department of Natural Resources, Coastal Management Division (LDNR) or local parish coastal management; 5) a concurrence letter from the U.S. Department of the Interior, Fish and Wildlife Service (USFWS) indicating no threatened or endangered species or their critical habitat would be affected; 6) a cultural resources report with concurrence from the State Historic Preservation Office (LaSHPO), and Federally and State-recognized Native American tribes; 7) a Phase 1 Environmental Site Assessment (ESA); 8) geotechnical boring logs and soil analysis identifying the suitability of potential borrow material.

The proposed action consists of removing all suitable material from the following nine borrow areas. Excavation would have no effect on cultural resources, or threatened and endangered (T&E) species or their critical habitat. All HTRW issues would be avoided.

- The River Birch Phase 1 area is located on Highway 90, approximately 0.7 miles west of Live Oak Boulevard in Jefferson Parish, Louisiana (Figure 6). The proposed borrow area is 9.7 acres, and would provide an estimated 200,000 cubic yards of suitable borrow material. The landowner plans on constructing a landfill at the site. The landfill would be the primary use of the site; borrow material excavation would be secondary to this action.
- The River Birch Phase 2 area is located on Highway 90, approximately 0.7 miles west of Live Oak Boulevard in Jefferson Parish, Louisiana (Figure 7). The proposed borrow area is 79.4 acres, and would provide an estimated 3,500,000 cubic yards of suitable borrow material. The landowner plans on constructing a landfill at the site. The landfill would be the primary use of the site; borrow material excavation would be secondary to this action.

- The Pearlington Dirt Phase 1 area is located off of Highway 90 in Hancock County, Mississippi (Figure 9). The proposed borrow area is 98 acres, and would provide an estimated 1,000,000 cubic yards of suitable borrow material.
- The Eastover area is located north of Dwyer Road in Orleans Parish, Louisiana (Figure 10). The proposed borrow area is 36.6 acres, and would provide an estimated 900,000 cubic yards of suitable borrow material.
- The Kimble #2 area is located between Highway 39 and Highway 15 in Plaquemines Parish, Louisiana (Figure 8). The proposed borrow area is 10.4 acres, and would provide an estimated 120,000 cubic yards of suitable borrow material.
- The Sylvia Guillot area is located at 3008 Bayou Road in St. Bernard Parish, Louisiana (Figure 11). The proposed borrow area is 10.7 acres, and would provide an estimated 270,000 cubic yards of suitable borrow material.
- The Gatien-Navy Camp Hope area is located on East St. Bernard Highway in St. Bernard Parish, Louisiana (Figure 12). The proposed borrow area is 7.5 acres, and would provide an estimated 200,000 cubic yards of suitable borrow material.
- The DK Aggregates area is located on Highway 46 in St. Bernard Parish, Louisiana (Figure 13). The proposed borrow area is 58.5 acres, and would provide an estimated 1,400,000 cubic yards of suitable borrow material.
- The St. Gabriel Redevelopment area is located near Carville in Iberville Parish, Louisiana (Figure 14). The proposed borrow area is 122.6 acres, and would provide an estimated 800,000 cubic yards of suitable borrow material.

Some of the proposed borrow areas have a designated stockpile area delineated. If additional material is needed for levee construction the stockpile areas may be utilized as a borrow source rather than impacting new areas.

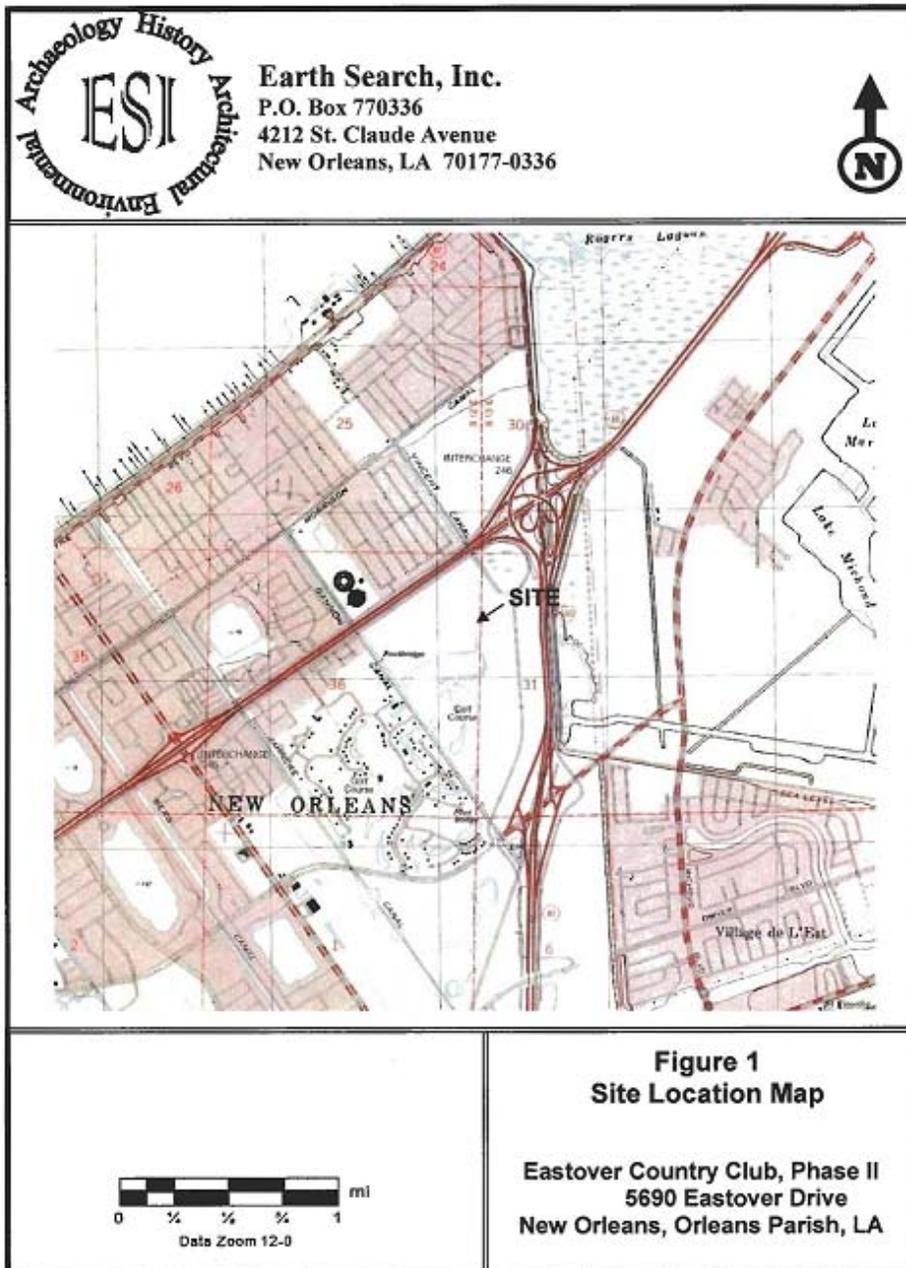


Figure 1: Eastover Proposed Borrow Area

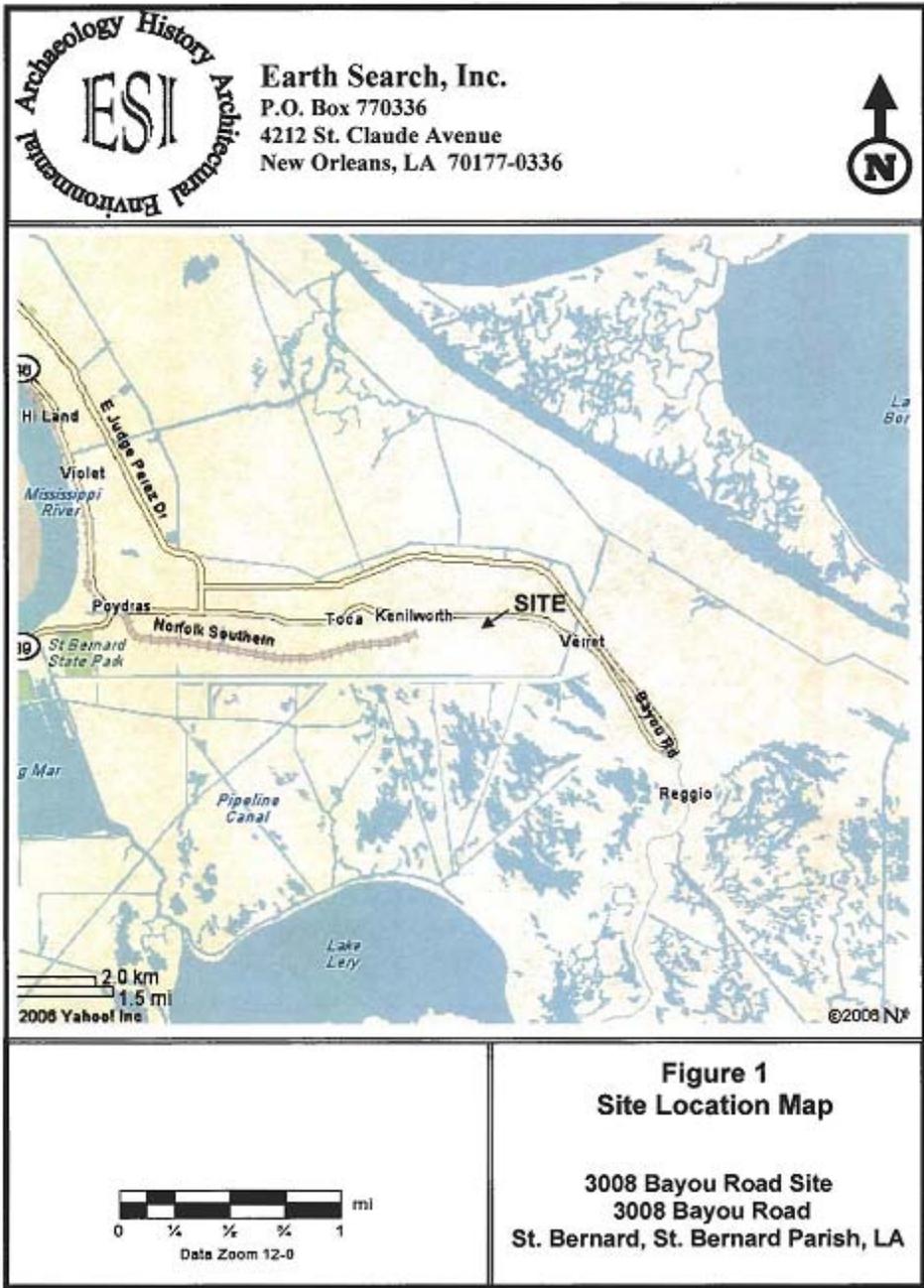


Figure 2: Sylvia Guillot Proposed Borrow Area

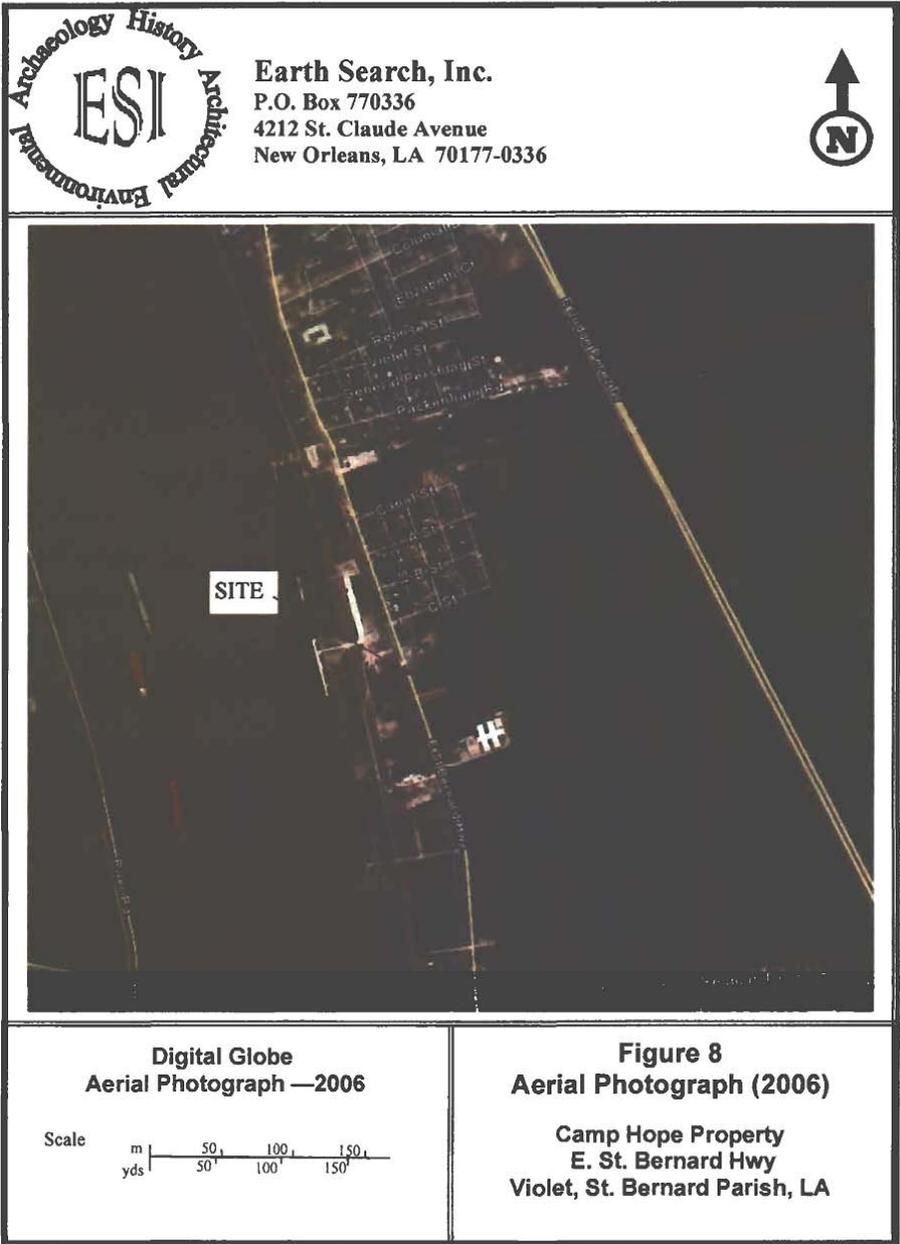


Figure 3: Gatién-Navy Camp Hope Proposed Borrow Area

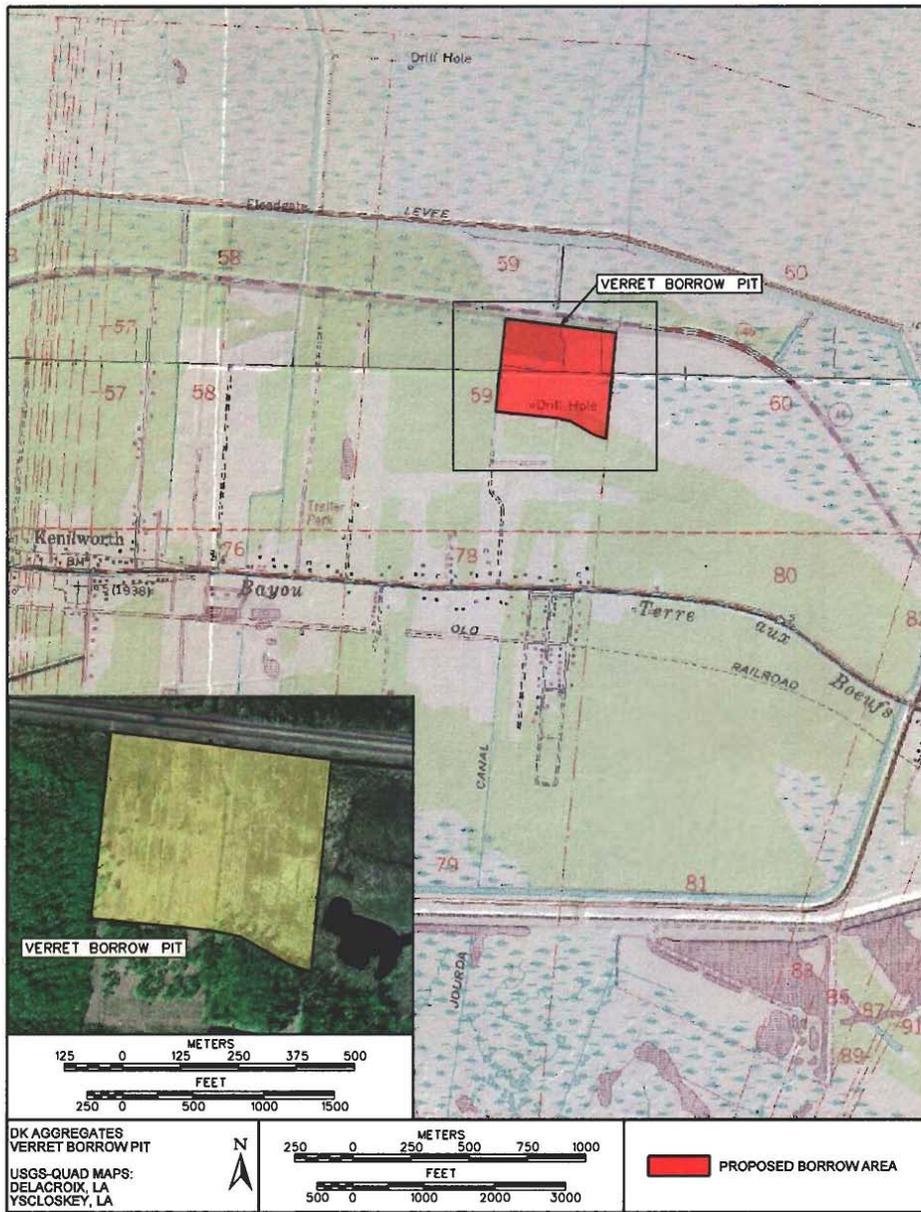


Figure 4: DK Aggregates Proposed Borrow Area

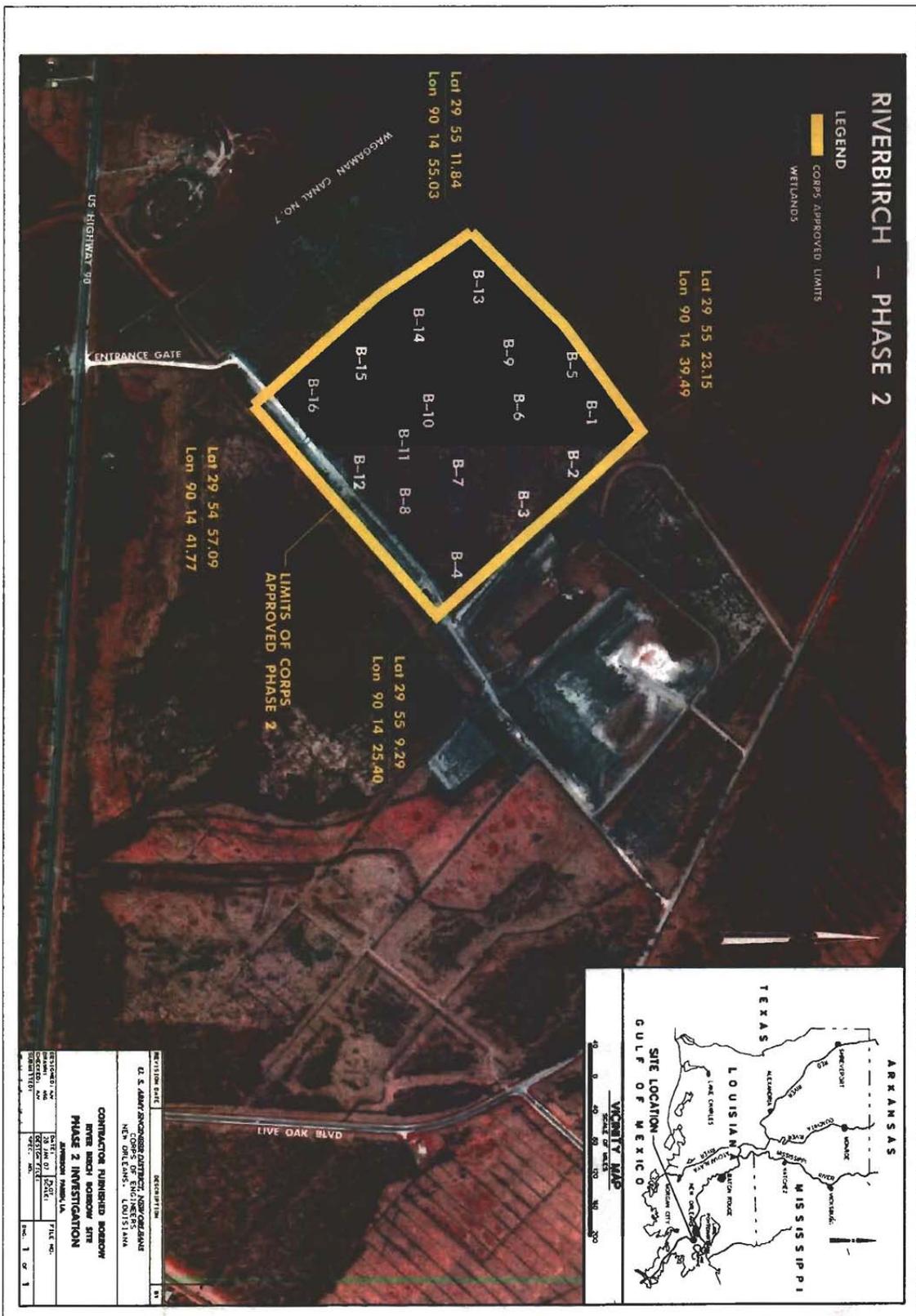


Figure 7: River Birch Phase 2

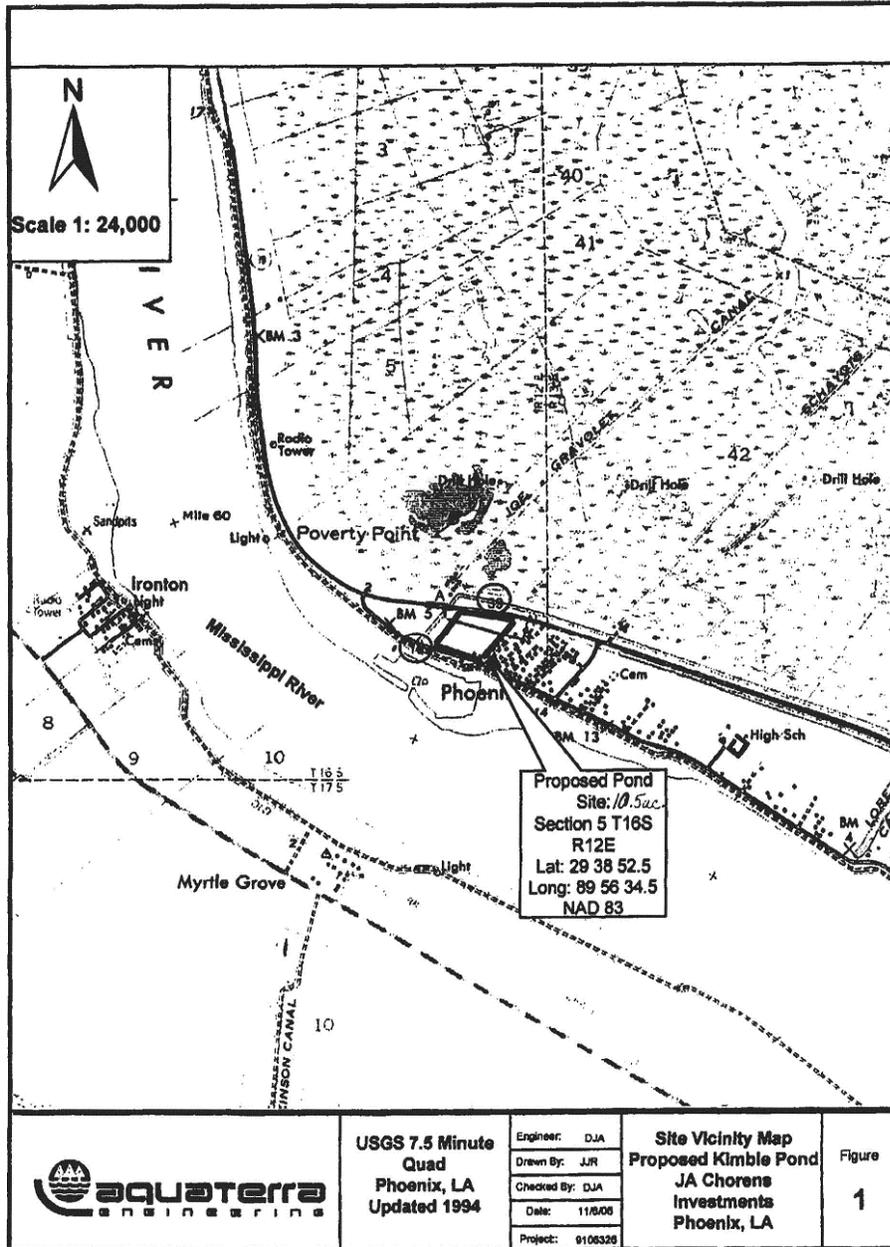


Figure 8: Kimble 2

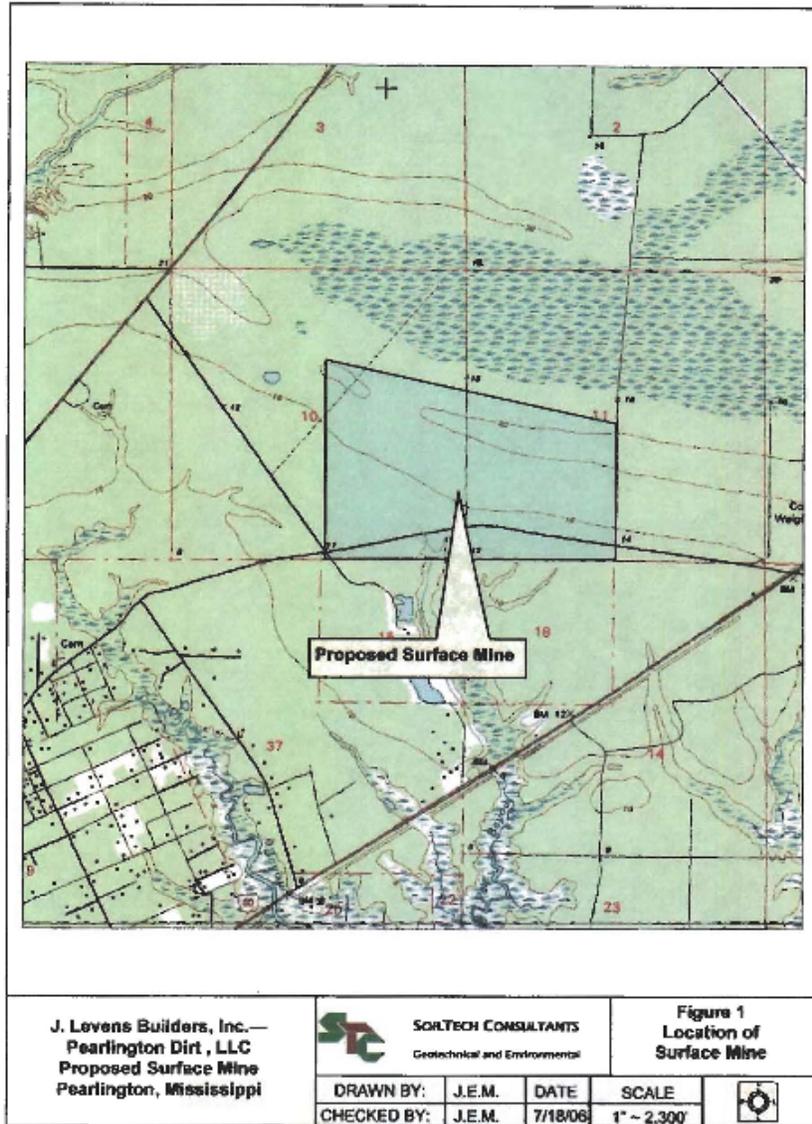


Figure 9: Pearlington Dirt Phase 1

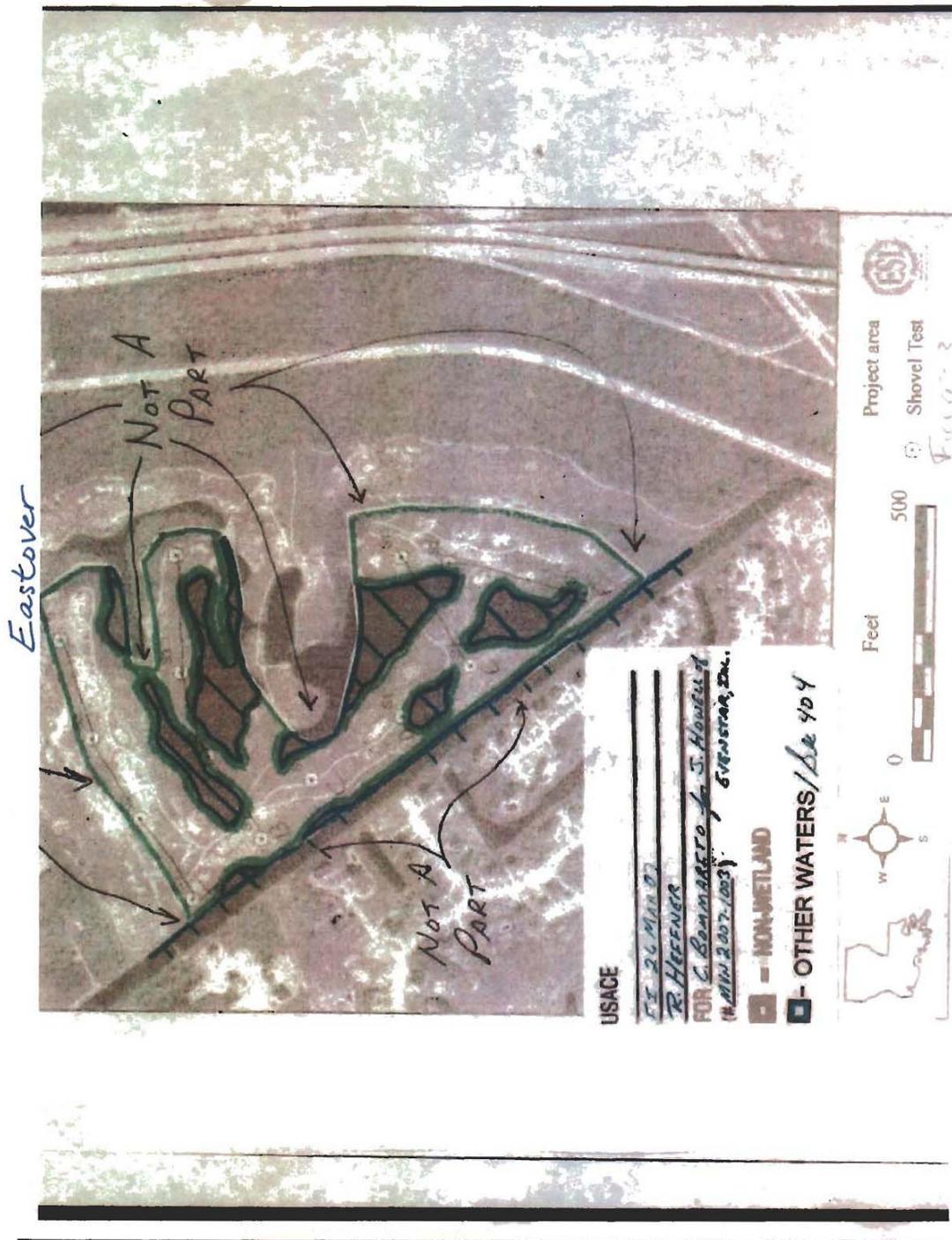


Figure 10: Eastover

3008 Bayou Rd.

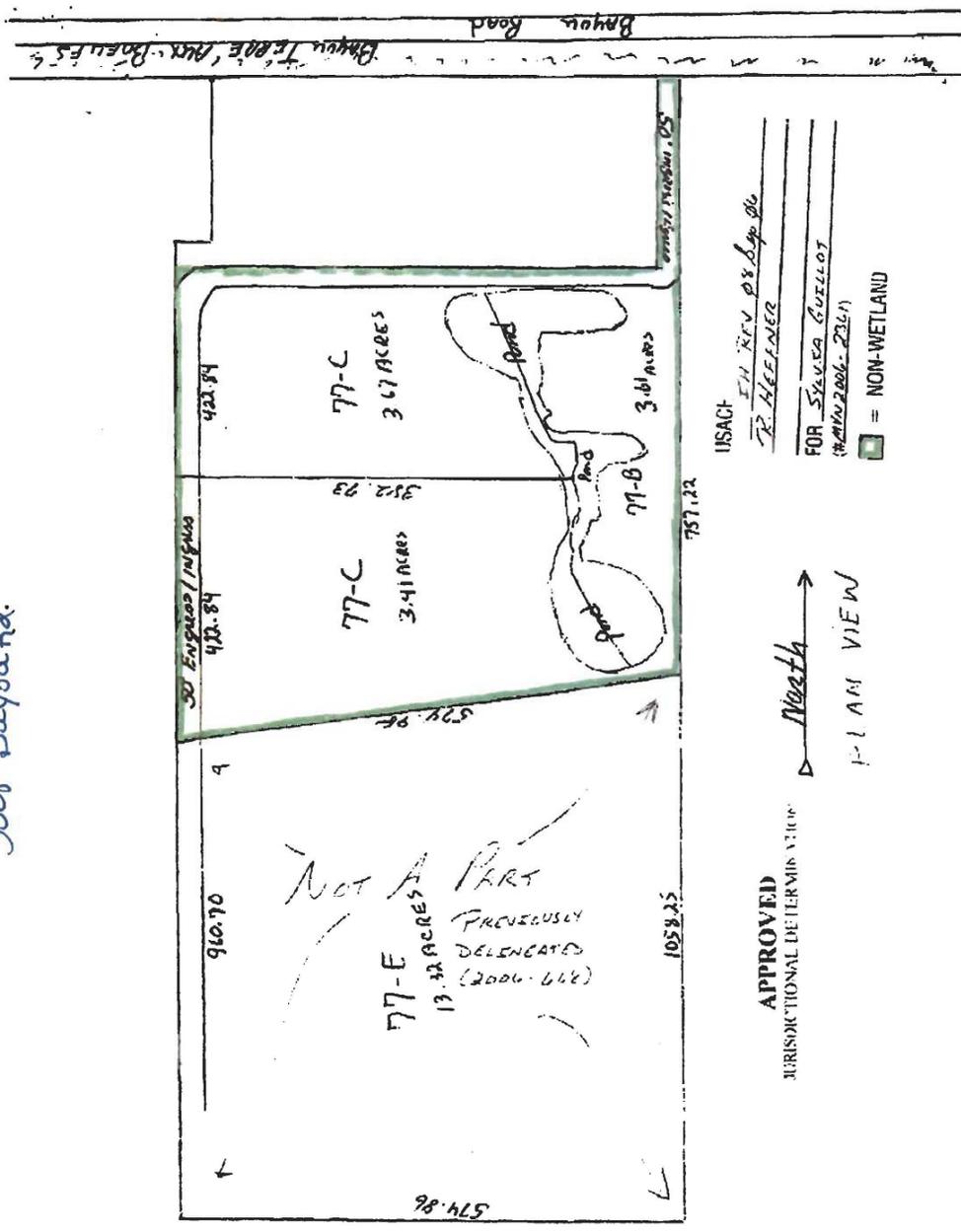


Figure 11: Sylvia Guillot

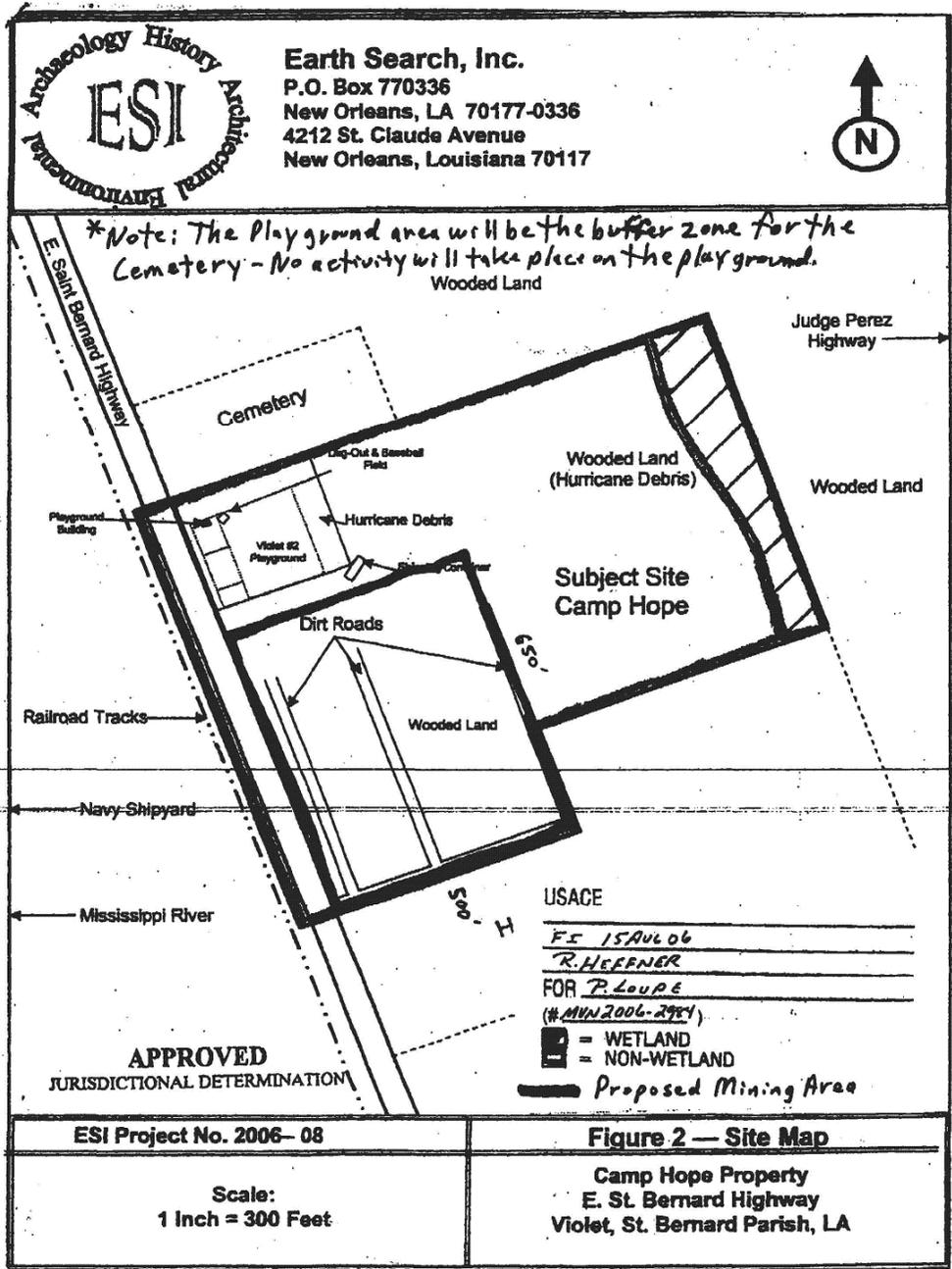


Figure 12: Gatién-Navy - Camp Hope

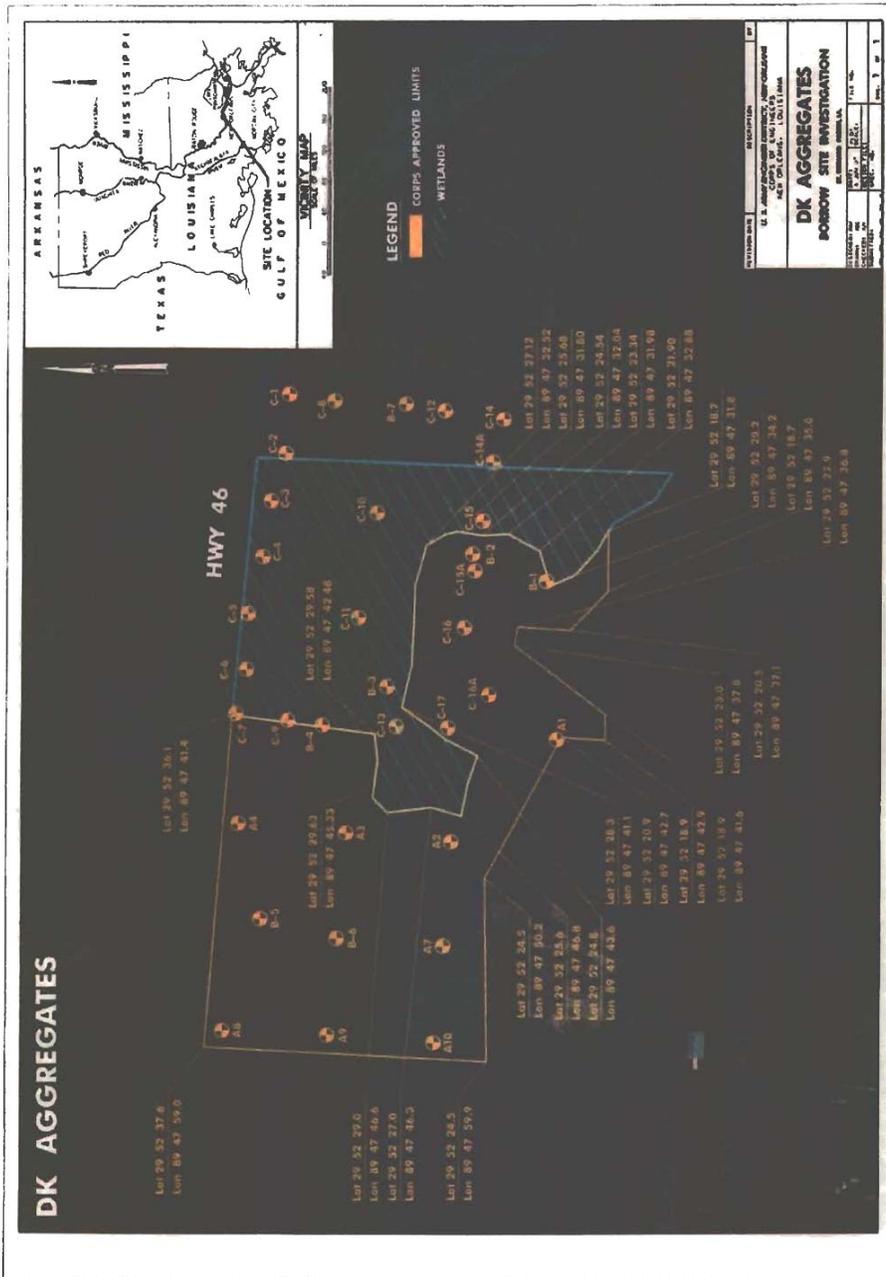


Figure 13: DK Aggregates

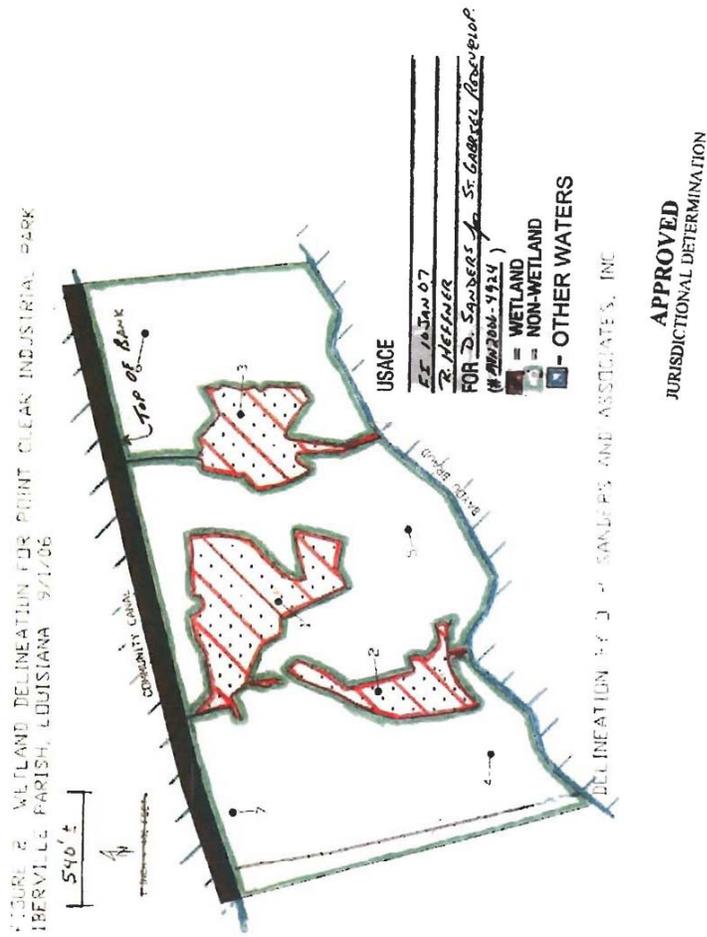


Figure 14: St. Gabriel Redevelopment

2.4 Alternatives to the Proposed Action

Another alternative to the proposed action was considered. This was the No-Action alternative.

No-Action. Under the no-action alternative, the proposed pre-approved Contractor Furnished borrow sites would not be used by contractors awarded a CEMVN HPS contract. The borrow areas listed in the proposed action may still be excavated by the landowner's, but not used for federal levee projects. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action. The proposed action consists on excavating the proposed borrow areas throughout the New Orleans Metropolitan area that are discussed in this document. The material would be transported to HPS levee and floodwall construction sites via truck.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area. Under this alternative, borrow areas outside of the New Orleans Metropolitan area would be excavated. These proposed borrow areas have not been selected, and are not discussed in this document. The material would be transported to HPS construction sites via barge or rail.

Government Furnished Borrow Material. Due to the large quantities of clay material needed for the HPS projects Government Furnished borrow alternatives is an alternative that will be discussed in IER 18 and IER 22, both titled Government Furnished Borrow Material. These documents will be released independent of IER 19 and as such no further discussion of Government Furnished Borrow Material will be done in IER 19.

2.5 Alternatives Sites Eliminated from Further Consideration

The following investigated areas were deemed unsuitable by CEMVN for HPS activities:

- Guidry site: The proposed site is located north of Highway 440 in Tangipahoa Parish, Louisiana. The area consists of approximately 100 acres of mostly open pasture, with forested areas along natural drainage conveyances. The area will not be further considered because of anticipated cultural resource survey cost issues.
- English Turn site: The proposed site at 3177 English Turn is located in Plaquemines Parish, Louisiana. The area will not be further considered because right of entry for environmental and cultural investigations was not granted.
- Kimble 1 site: The proposed site is located between Highway 39 and Highway 15 in Plaquemines Parish, Louisiana. The site was located in the Mississippi River Batture and was not considered due to poor soil conditions.

3. Affected Environment and Environmental Consequences

3.1 Environmental Setting

The proposed borrow areas described in this report are located in Jefferson, Orleans, Iberville, St. Bernard, and Plaquemines parishes, Louisiana, and Hancock County, Mississippi. In Louisiana, the area is bounded to the north by Lake Pontchartrain and to the west by town of St. Gabriel and to the east by Pearlington, Mississippi. The area is

bordered to the south by an extensive marsh system that provides a barrier between the cities within these parishes and the Gulf of Mexico. Louisiana's coastal plain remains the largest expanse of coastal wetlands in the contiguous United States.

The River Birch Phase 1 and 2 sites are an expansion of an existing landfill that is surrounded by a containment levee in Waggaman, Louisiana. The Pearlington Dirt Phase 1 area is located in rural area of Hancock County, Mississippi. The Eastover site is more urban due to its location near New Orleans. The Kimble #2, DK Aggregates, and St. Gabriel Redevelopment sites are located in rural areas of southeastern Louisiana. The Sylvia Guillot and Gatién-Navy Camp Hope sites are located in urban areas of in St. Bernard Parish.

Fauna and Flora

The Louisiana Coastal Plain area contains an extraordinary diversity of estuarine habitats that range from narrow natural levee and beach ridges to expanses of bottomland hardwood (BLH) forest, forested swamps and fresh, brackish, saline marshes, and pasture lands. The wetlands support various functions and values, including commercial fisheries harvesting of furbearers, recreational fishing and hunting, ecotourism, critical wildlife habitat (including threatened and endangered species), water quality improvement, navigation and waterborne commerce, flood control, and buffering protection from storms.

Terrestrial animals that may inhabit some of the proposed borrow areas include nutria, muskrat, raccoon, mink, and otter, which are harvested for their furs. White-tailed deer, feral hogs, rabbits, various small mammals, and a variety of birds, reptiles, and amphibians also occur in the study area. Forests, wetlands, bottomland hardwood forests, and pastures may be found in some of the proposed borrow areas. Agricultural crops grown in the vicinity of some of the proposed borrow areas include citrus fruits and truck crops.

Soils

Soil data for the nine areas were compiled using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2007). The mapped soil units are shown in Table 1.

Geotechnical borings were collected at each area to determine the suitability of the material for levee construction use. The borings were spaced to adequately define the material in the pit, but in no case spaced greater than 500 feet on center. Borings along the proposed borrow area boundary were located no further than one-half of the boring spacing in the area or 250 feet, whichever was less.

The soils were classified, logged, and recorded within seven days of obtaining the samples in the field. The Unified Soil Classification System was used in classifying the soils. A water content determination was made and recorded on all samples classified as fat clay (CH), lean clay (CL), and silt (ML) at one foot intervals (recommended) or two foot intervals (required). For (CH), (CL), and (ML) soils, Atterberg Limits and Organic Content Testing (American Society of Testing and Materials [ASTM] D 2974, Method C), was required every five feet (minimum). Samples with moisture contents at 70% or higher or having a Liquid Limit of 70 or higher were tested for organic content, as well as for a sample two feet above and two feet below that sample (2.5 feet also acceptable). Grain size distribution determinations including both sieve (#200 sieve required) and

hydrometer testing was required for samples that classify as CL with a plasticity index (PI) greater than 10 for 2 or more consecutive feet, but not more than one test every 5 feet of sampling.

The resulting classification, plasticity, water content, and organic content determinations and borrow area boring logs with GPS readings at the boring locations were analyzed for potential borrow use by CEMVN to determine the suitability of the soil (Table 1). Geotechnical testing and soil analysis is ongoing at some of the areas; the area acreages may change due to the results.

Table 1: Soil Survey Map Units

Site Name	Parish/County	Soil map unit(s)	Slope	Drained
River Birch Phase 1	Jefferson	Barbary clay	Less than 1%	Very poorly
River Birch Phase 2	Jefferson	Barbary clay	Less than 1%	Very poorly
		Allemands muck	Less than 0.5%	Poorly
Pearlington Dirt Phase 1	Hancock County	Beauregard silt loam	0-5%	Moderately well drained
		Guyton silt loam	Less than 0.5%	Poorly
		Trebloc association	0-2%	Poorly
Eastover	Orleans	Harahan clay	Less than 1%	Very High
		Allemands muck	Less than 0.5%	Poorly
Kimble 2	Plaquemines	Cancienne silty clay loam	0 to 3%	Somewhat poorly
		Harahan clay	0-1%	Poorly
Gatien –Navy Camp Hope	St. Bernard	Cancienne silty clay loam	0 to 3%	Somewhat poorly
DK Aggregates	Orleans	Barbary clay	Less than 1%	Very Poorly
		Schriever clay	Less than 1%	Poorly
St. Gabriel Redevelopment	Iberville	Schriever clay	Less than 1%	Poorly
		Gramercy silty clay loam	0 to 3%	Poorly
Sylvia Guillot	St. Bernard	Cancienne silt loam	0 to 3%	Somewhat poorly
		Schriever silty clay loam	Less than 1%	Poorly

3.2 Significant Resources

This section contains a list of the significant resources located in the vicinity of the proposed action, and describes in detail those resources that would be impacted, directly or indirectly, by the alternatives. Direct impacts are those that are caused by the action taken and occur at the same time and place (40 CFR §1508.8(a)). Indirect impacts are those that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR §1508.8(b)). Cumulative impacts are discussed in Section 4.

The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of National, State, or Regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Further detail on the significance of each of these resources can be found by contacting CEMVN, or on www.nolaenvironmental.gov, which offers information on the ecological and human value of these resources, as well as the laws and regulations governing each resource. Search for “Significant Resources Background Material” in the website’s digital library for additional information. Table 2 shows those significant resources found within the project area, and notes whether they would be impacted by any of the alternatives.

Table 2: Significant Resources in Project Study Area

Significant Resource	Impacted	Not Impacted
Jurisdictional Wetlands/Bottomland Hardwood Forest	X*	
Non-Wetland Resources/Upland Resources	X	
Navigable Waters	X	
Prime and Unique Farmland	X	
Fisheries	X	
Wildlife	X	
Threatened and Endangered Species		X
Cultural Resources		X
Recreational Resources		X
Noise	X	
Air Quality	X	
Water Quality		X
Aesthetics		X
Socioeconomics	X	
Transportation	X	

*impacts not directly related to Federal HPS work

3.2.1 Jurisdictional Wetlands/Bottomland Hardwood Forest

Existing Conditions

At this time, the CEMVN Regulatory Functions Branch is not issuing Clean Water Act Section 404 permits to landowners for the purpose or need of providing borrow materials to the HPS from areas deemed to be jurisdictional wetlands. Nor will material be acquired from commercial operations that would impact regulated wetlands when the purpose and need for those impacts are directly related to the construction of the HPS.

The jurisdictional wetland habitat types in the proposed borrow areas may include pasture wetland, cypress swamps, and bottomland hardwood forest (BLH). The jurisdictional wetlands contain hydrophytic vegetation, hydric soils, and hydrology indicators. Pasture wetlands are comprised of soft rushes, flat sedges, smartweed, alligator weed, and other wetland grasses. Cypress swamp areas are dominated by bald cypress and tupelo gum. Jurisdictional bottomland hardwood forest include hackberry, Chinese tallow tree, pecan, American elm, live oak, water oak, green ash, bald cypress, black willow, box elder, and red maple. BLH are comprised of dominant species such as hackberry, Chinese tallow tree, pecan, American elm, live oak, water oak, green ash, bald cypress, black willow, box elder, and red maple. Some understory species include dewberry, lizard’s tail, and poison ivy. A variety of birds utilize these hardwoods for nesting, breeding, brooding,

and as perches. Hard mast (nuts) and soft mast (samaras, berries) provide a valuable nutritional food source for birds, mammals, and other wildlife species.

During initial investigations a jurisdictional wetland determination from the CEMVN Regulatory Functions Branch was completed for each site. For sites with jurisdictional wetlands it was determined that the sites would be avoided unless the landowner acquired a Section 404 permit from the CEMVN Regulatory Functions Branch. Furthermore, for a permit to be issued there had to be a demonstrated purpose and need for the wetland impacts that were completely unrelated to the taking of borrow material for the purpose of supplying the material to a HPS contractor or directly to a HPS project. If a permit was issued for a site with jurisdictional wetlands and as a condition of that permit the removal of material from the site was a permitted activity and it was determined by CEMVN that the use of the material for HPS levee construction was solely a byproduct of the permitted activity, then the action of using the material for HPS construction was considered to be in the Federal Government's best interest. Mitigation for any wetland impacts associated with the action permitted by CEMVN Regulatory Functions Branch would be required to be implemented by the Section 404 applicant prior to any materials being transported to a Federal HPS work site or utilized by any contractor working under a Federal HPS contract.

- The CEMVN jurisdictional wetland determination at River Birch Phase 1 indicated 0.30 acres of jurisdictional wetlands and 0.10 acres of jurisdictional other waters are located on the site. A Section 404 (NOD-22) permit was issued (MVN-2004-2721, 28 June, 2004) for the purpose of constructing a landfill. Impacts to wetlands are related solely to landfill construction, not Federal HPS activities; the availability of levee material from this site is considered to be a secondary use of the site. The permit indicates wetland impacts would be mitigated for by the landowner prior to any materials being acquired by a HPS contractor. A Section 404 permit will not be issued for the purpose of providing material for the Federal HPS.
- The River Birch Phase 2 site proposed was determined to have 6.4 acres of BLH subject to Clean Water Act jurisdiction. A Section 404 permit was issued (MVN-2004-2721, 9 August, 2007) for the construction of a landfill. Impacts to wetlands are related to landfill construction, not Federal HPS activities since borrow construction is a secondary use of the site. The permit indicates wetland impacts would be mitigated for by the landowner prior to the acquisition of any material for use on the HPS by a contractor. A Section 404 permit will not be issued for the purpose of providing material for the Federal HPS.
- The Pearlington Dirt Phase 1 proposed borrow area was determined to be non-wetland according to a letter dated 26 January 26, 2007 from the USACE Vicksburg District, which covers Hancock County, Mississippi.
- The Eastover proposed borrow area was determined to have some Section 404 jurisdictional other waters, which were ponds from an abandoned golf course (MVN-2007-1003).
- The Kimble #2 proposed borrow area was determined to be non-wetland (MVN-2006-3881-SK).
- The Sylvia Guilliot site was determined to be non-wetland (MVN-2006-2361-2-SU).

- The Gatién-Navy Camp Hope proposed borrow area was determined to be non-wetland (MVN-2006-2984).
- The DK Aggregates site initially proposed was 85.5 acres in size and was determined to have 27 acres of jurisdictional wetlands, and some Section 404 jurisdictional other waters (MVN-2007-441-SU) present. The proposed area described in this document to be excavated is 58.5 acres in size and is located in non-wetland areas. The contractor was made aware that no impacts to the wetlands can occur as results of his or her actions related to the taking of borrow material for HPS work. Should DK Aggregates desire to expand its operation into the regulated wetlands area it will need a Section 404 permit and be able to demonstrate that the taking of any material from the site for HPS work would be totally unrelated to the purpose of the need to impact regulated wetlands. Should a Section 404 permit be obtained, all wetland impacts would be required to be mitigated for prior to the Federal Government's acquisition of any levee material. A Section 404 permit will not be issued for the purpose of providing material for the Federal HPS.
- Part of the St. Gabriel Redevelopment site is jurisdictional wetland (MVN-2006-4924). The proposed area described in this document to be excavated is 122.6 acres in size and is located in non-wetland areas. The landowner was made aware that no impacts to the wetlands can occur as results of his actions related to the taking of borrow material for the HPS work. Should the landowner desire to expand his or her operation into the jurisdictional wetlands area, they will need a Section 404 permit and be able to demonstrate that the taking of any material from the site for HPS work would be totally unrelated to the purpose of the need to impact jurisdictional wetlands. Should a Section 404 permit be obtained, all wetland impacts would be required to be mitigated for prior to the Federal Government's acquisition of any levee material. A Section 404 permit will not be issued for the purpose of providing material for the Federal HPS.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to non-permitted jurisdictional wetlands through CEMVN actions would occur at the proposed borrow areas. These resources may be impacted by non-Federal actions if the landowner has an approved Section 404 permit. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action impacts to jurisdictional wetlands and BLH at the River Birch Phase 1 and River Birch Phase 2 would occur. Impacts have been mitigated by the landowner as required in the Section 404 permit. The sites are permitted by the State of Louisiana to be used as a landfill for construction, demolition, and yard debris, according to the Section 404 permits. Suitable material from the sites would be used on Federal HPS projects. Any jurisdictional wetland areas outside of the permitted area would be avoided.

At the River Birch Phase 2 site mature trees would be cut down with the use of chainsaws or pushed down with bulldozers and excavators. Saw logs could be sold to the mill and younger trees could be processed into pulp wood for paper products. Woody debris leftover would be cleaned up and all berms would be leveled to

eliminate hydrologic impacts. Once excavated the area would no longer be viable for silviculture practices and some wildlife habitat would be removed. The area would be converted to ponds and small lakes if water is retained, or by vegetation and woody plants if water is not retained. It is expected that either type of area would attract a variety of wildlife including birds, reptiles, amphibians, and small mammals. The River Birch Phase 2 area would be used as a commercial landfill, and be filled with construction, demolition, and yard waste according to the Section 404 permit.

The Eastover proposed borrow area contains ponds that are classified as jurisdictional other waters, and can be excavated without a Section 404 permit. The DK Aggregates and St. Gabriel Redevelopment proposed borrow areas contained jurisdictional wetland areas that would be avoided.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative direct and indirect impacts to jurisdictional wetlands at any proposed borrow areas would be the same as described in the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact jurisdictional wetlands.

3.2.2 Non-Wetland Resources/Upland Resources

Existing Conditions

Species identified in the non-wet pasture areas include Johnson grass, yellow bristle grass, annual sumpweed, arrow-leaf sida, vasey grass, Brazilian vervain, and eastern false-willow. The scrub/ shrub areas are comprised of Chinese tallow tree, eastern false-willow, wax myrtle, giant ragweed, dew berry, elderberry, red mulberry, pepper vine, and dog-fennel.

The areas listed below show representative vegetation found in the pasture and scrub/ shrub areas.

- The Pearlington Dirt Phase 1 area is 97.9 acres of a loblolly pine.
- The Eastover area is 36.6 acres of overgrown turf grasses and some existing ponds from an abandoned golf course on the site.
- The Sylvia Guillot area is 10.7 acres of maintained pasture land.
- The Kimble #2 area consists of some pasture land. The area is under forced drainage with no evidence of hydrology.
- The Gatien-Navy Camp Hope area consists of some pasture and forested windrows.
- The DK Aggregates area is 58.5 acres of overgrown pasture land consisting of bull thistle, yellow bristle grass, annual sumpweed, arrow-leaf sida, eastern false-willow, and Johnson grass.

- The St. Gabriel Redevelopment area is 122.6 acres of overgrown pasture land and scrub/shrub comprised of giant ragweed, Johnson grass, Brazilian vervain, dog fennel, and dewberry.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to non-wetland resources/ upland resources through CEMVN actions would occur at the proposed borrow areas. These resources may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action non-wetland resources/upland resources would be cleared and excavated. The areas would be converted to ponds and small lakes. The pasture areas would no longer provide grasses for herbivores such as deer, rabbits, and cattle. The thick scrub/shrub areas that provided cover for wildlife would be removed. Some scrub/shrub areas may redevelop around the borrow pit perimeters in time. Borrow pits that remain dry would be expected to be colonized by vegetation and woody plants, which could offset some habitat loss.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to non-wetland/upland resources at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact non-wetland/ upland areas.

3.2.3 Navigable Waters

Existing Conditions

The Mississippi River, Gulf Intracoastal Waterway, Inner Harbor Navigation Canal, and other navigable waterways are in the vicinity of HPS projects. The waterways and associated locks may be utilized for shipping borrow material.

Discussion of Impacts

No Action

Without implementation of the proposed action, direct or indirect impact to navigable waters may occur. Borrow material from the sites, which would not be used on Federal HPS projects, may be transported via barge, causing an increase in waterway traffic. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action direct or indirect impact to navigable waters would not occur through CEMVN actions. The borrow material from the proposed borrow areas would be hauled via dump truck to HPS project areas.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative some impacts to navigable waters could occur. Borrow material from the proposed areas would be transported via barge to HPS construction sites, causing an increase in waterway traffic. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact navigable waters.

3.2.4 Prime and Unique Farmland

Existing Conditions

Five proposed borrow areas contain prime and unique soils according to the NRCS (Table 5). None of the five areas identified by NRCS are currently under cultivation. The DK Aggregates site in St. Bernard has been used in the past for grazing livestock.

Table 3: Prime and Unique Farmland Soils Present

Site Name	Parish	Soil map unit(s)	Prime Farmland	Acres of Prime and Unique Farmland
River Birch Phase 1	Jefferson	Barbary clay	No	N/A
River Birch Phase 2	Jefferson	Barbary clay	No	N/A
		Allemands muck	No	
Pearlington Dirt Phase 1	Hancock County	Beauregard silt loam	No	N/A
		Guyton	No	
Eastover	Orleans	Harahan clay	Exempt	N/A
		Allemands muck		
Kimble #2	Plaquemines	Cancienne silty clay loam	Yes	10.1
		Harahan clay	No	N/A
Sylvia Guillot	St. Bernard	Cancienne silt loam	Yes	20.2
		Schriever silty clay loam	Yes	
Gatien-Navy Camp Hope	St. Bernard	Cancienne silty clay loam	Yes	7.5
DK Aggregates	St. Bernard	Barbary clay	No	N/A
		Schriever silty clay loam	Yes	14.0
St. Gabriel Redevelopment	Iberville	Schriever clay	Yes	122.6
		Gramercy silty clay loam	Yes	

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to prime and unique farmland through CEMVN actions would occur at the proposed borrow areas. Prime and unique farmland may be impacted by non-Federal actions if the

landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action prime and unique farmlands would be cleared and excavated. Removing soils from these proposed borrow areas would result in a permanent loss of prime and unique farmlands, and the areas would no longer be available for farming. The proposed borrow areas would most likely fill with water and be converted to ponds or small lakes. Borrow areas that do not retain water would probably not be able to produce food and fiber crops. The land would no longer provide grasses for herbivores such as deer, rabbits, or cattle.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to prime and unique farmlands at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact prime and unique farmlands.

3.2.5 Fisheries

Existing Conditions

The proposed borrow area at Eastover contains ponds that were once golf course water traps. They do not support a viable fisheries system. There are no known fisheries resources at the other eight sites proposed.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to fisheries through CEMVN actions would occur at the proposed borrow areas. Fisheries at the Eastover area may be impacted by non-Federal actions if the landowner chooses to use the site as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action jurisdictional wetlands, BLH, and/ or upland areas would be cleared and excavated. Dry land sites may be converted to ponds and small lakes. The areas could provide fishery habitats if stocked by landowners, which would not be inconsistent with other land uses near the project area. Fish that may thrive in ponds include mosquitofish, killifish, shortnose and spotted gar, redbfin shad, bass, bluegill, and catfish. If overburden is sufficient, sloped and fringe shallows could be created to provide shallows for both near edge and submergent vegetative growth. Overburden material would be used, to the maximum extent practicable, to create fringe wetlands and fishery habitats.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to fisheries at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact fisheries.

3.2.6 Wildlife

Existing Conditions

The study area contains a great variety of mammals, birds, reptiles, and amphibians. Species inhabiting the area include nutria, muskrat, mink, otter, raccoon, white-tailed deer, skunks, rabbits, squirrels, armadillos, and a variety of smaller mammals. Wood ducks and some migratory waterfowl may be present during winter.

Non-game wading birds, shore birds, and sea birds including egrets, ibis, herons, sandpipers, willets, black-necked stilts, gulls, terns, skimmers, grebes, loons, cormorants, and white and brown pelicans are found in the project vicinity. Various raptors such as barred owls, red-shouldered hawks, northern harriers (marsh hawks), American kestrel, and red-tailed hawks may be present. Passerine birds in the areas include sparrows, vireos, warblers, mockingbirds, grackles, red-winged blackbirds, wrens, blue jays, cardinals, and crows. Many of these birds are present primarily during periods of spring and fall migrations. The areas may also provide habitat for the American alligator, salamanders, toads, frogs, turtles, and several species of poisonous and nonpoisonous snakes.

The bald eagle is a raptor that is found in various areas throughout the United States and Canada as well as throughout the study area. Bald eagles are federally recognized under the Bald Eagle Protection Act of 1940. The bald eagle feeds on fish, rabbits, waterfowl, seabirds, and carrion (Ehrlich et al. 1988). The main basis of the bald eagle diet is fish, but they will feed on other items such as birds and carrion depending upon availability of the various foods. Eagles require roosting and nesting habitat, which in Louisiana consists of large trees in fairly open stands (Anthony et al. 1982). Bald eagles nest in Louisiana from October through mid-May. Eagles typically nest in bald cypress trees near fresh to intermediate marshes or open water in the southeastern parishes.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to wildlife through CEMVN actions would occur at the proposed borrow areas. Wildlife may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action wildlife would be displaced when the areas are cleared and excavated. The areas may be converted to ponds and small lakes. At that time, some aquatic vegetation may colonize the shallow littoral edge of the pits, and wildlife (otters, alligators, raccoons, wading birds, and ducks) adapted to an aquatic environment would be expected to expand their range into the new waterbodies. A variety of plant types may develop adjacent to the water that could provide important wildlife habitat utilized for nesting, feeding, and cover. Any pits that remain dry would be expected to be colonized by vegetation and woody plants, which could offset some habitat loss. The dense vegetation could attract a variety of wildlife including birds, reptiles, amphibians, and small mammals.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to wildlife at any proposed borrow areas would be the same as the preferred alternative. However, the loading

and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact wildlife.

3.2.7 Threatened and Endangered Species

Existing Conditions

There are no known threatened and endangered (T&E) species, or critical habitats, in the vicinity of any of the proposed borrow areas.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to T&E species through CEMVN actions would occur at the proposed borrow areas. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

The proposed action is not likely to adversely affect these T&E species or their critical habitats. The USFWS concurred with the CEMVN that excavation of any proposed borrow areas would not be likely to adversely affect T&E species or their critical habitat (Table 6).

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

The impacts to T&E species under this alternative are not known. CEMVN would work with USFWS to avoid impacts to T&E species at any proposed borrow areas. CEMVN would work with USFWS and NOAA National Marine Fisheries Service (NMFS) to avoid impacts to T&E species associated with the loading and unloading of material to navigable waters, if used.

Table 4: USFWS T&E Concurrence

Proposed Borrow Area	USFWS Concurrence
River Birch Phase 1	28 June, 2004
River Birch Phase 2	7 February, 2007
Pearlington Dirt Phase 1	15 September, 2006
Eastover	20 March, 2007
Kimble #2	20 August, 2007
Sylvia Guillot	29 January, 2007
Gatien-Navy Camp Hope	20 August, 2007
DK Aggregates	21 December, 2006
St. Gabriel Redevelopment	8 March, 2007

3.2.8 Cultural Resources

Existing Conditions

Cultural resources have been considered for each borrow area (Table 7). The level of investigation varied depending on the probability of cultural resources being located within the project area. Investigations included background research, reconnaissance surveys (Bommarito 2007; Gray 2006a, 2006b; Gray and Lintoot 2006), and in some cases extensive subsurface testing (Handly 2007; Shuman 2006). In addition, one property, the Kimble Pond, was previously surveyed. One archaeological site, 16PL104,

is located in southeastern Louisiana. Archaeological testing at this site revealed that the structures associated with this site were either burned or destroyed by the construction of the back levee embankment (Goodwin et al 1986: 303). Given the lack of integrity, this site was determined not eligible for the National Register of Historic Places. Therefore excavation of the proposed project area will have no affect to historic properties.

Contractors coordinated Section 106 of the National Historic Preservation Act, as amended, consultation with the Louisiana State Historic Preservation Officer at the Louisiana Division of Archaeology or the Mississippi State Historic Preservation Officer at the Mississippi Division of Archives and History, as appropriate. Upon completion of consultation a CEMVN archaeologist reviewed the consultation documentation. The Louisiana Division of Archaeology has no record of historic or prehistoric archaeological sites eligible for listing or listed on the National Register of Historic Places within Louisiana the project areas. Similarly, the Mississippi Division of Archives and History has no record of historic or prehistoric archaeological sites eligible for listing or listed on the National Register of Historic Places within the Pearlinton Dirt Phase 1 project area. LA SHPO and Mississippi SHPO provided comment on the projects and no objections were presented for any of the proposed excavation plans (Table 7). In sum, no known National Register of Historic Places listed or eligible properties will be impacted by the proposed projects.

Archaeological surveys in the vicinity of the proposed borrow areas have identified both prehistoric and historic sites in the vicinity of the proposed action. Given the recent geologic development of the Mississippi delta and the age of deposits within the project areas (Saucier 1994), archaeological sites are not expected to date prior to the Poverty Point phase (1700 – 500 B.C.). Prehistoric sites, such as shell middens, hunting and gathering camps, habitation sites, villages, and mound sites, tend to be located on active and abandoned distributary channel levee complexes, major beach ridges and on older stable portions of the delta, and in association with freshwater marshes. Similarly, historic period sites, such as forts, plantations, and industrial features tend to be located on levees and waterways. Urban development and levee construction that occurred prior to the passage of the National Historic Preservation Act impacted some of these plantation sites, such as 16PL104, the St. Sophie Plantation site.

The dynamic nature of flooding and sedimentation from the Mississippi River has likely buried many archaeological sites, and subsidence has inundated others. The proposed borrow areas tend to be located in drained backswamps. While prehistoric and historic resources extraction included backswamps, there is little evidence of occupation within this habitat. Consequently, the likelihood for the presence of undiscovered cultural sites within the proposed project areas remains low.

Discussion of Impacts

No Action

Without implementation of the proposed action any undiscovered or unreported cultural resources or traditional cultural properties would remain intact and in their current state of preservation. The burial or subsidence of historic land surfaces would continue in the current pattern. There is no reason to believe that this alternative would have any positive or negative impact to cultural resources. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Table 5: Summary of Cultural Resource Investigations and Section 106 consultation for the pre-approved Contractor Furnished Borrow sites

Proposed Borrow Area	Cultural Resource Investigations	Date concurrence received from LA SHPO
Kimble Pond	1986 survey	October 10, 2006
River Birch Phase I	2002 correspondence	December 14, 2006
River Birch Phase II	2002 correspondence	December 14, 2006
Pearlington Dirt Phase 1	Landowner request letter	November 22, 2006*
Sylvia Guillot-Bayou Road	Reconnaissance Survey by Earth Search, Inc.	February 6, 2006
Gaiten-Camp Hope	Reconnaissance Survey by Earth Search, Inc	September 8, 2006
St. Gabriel Redevelopment	Reconnaissance Survey by Surveys Unlimited Research Associates.	April 17, 2007
Eastover	Reconnaissance Survey by Earth Search, Inc	March 15, 2007
DK Aggregates	Reconnaissance Survey by R. Christopher Goodwin & Associates	April 10, 2007
*Mississippi Department of Archives and History, MI SHPO		

Proposed Action

The cumulative impacts of the excavation of the Gaiten-Navy Ships property on the neighboring Merrick cemetery were also considered. In order to minimize cumulative impacts from erosion, a buffer zone between the cemetery and the excavation will remain in place. This plan was developed with coordination from the Louisiana State Historic Preservation Officer (LASHPO).

With implementation of the proposed action, any undiscovered cultural resources may be damaged during borrow and construction operations. However, it is unlikely that any cultural sites will be inadvertently damaged because the borrow areas tend to be located in areas not associated with cultural sites. Therefore, no direct or indirect impacts to cultural resources are expected, and there is no reason to believe that the Proposed Action will have any positive or negative impact to cultural resources or traditional cultural properties

Any undiscovered cultural resources may be damaged during borrow and construction operations. However, it is unlikely that any cultural sites would be inadvertently damaged because the borrow areas tend to be located in areas not associated with cultural sites. Furthermore, the CEMVN will instruct all construction contractors to halt excavations should cultural resources be encountered during the excavation of any borrow pit. Therefore, no direct or indirect impacts to cultural resources are expected, and there is no reason to believe that the proposed action would have any positive or negative impact to cultural resources or traditional cultural properties.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative any undiscovered cultural resources may be damaged during borrow, stockpiling, and construction operations. It is unlikely that any cultural sites will be inadvertently damaged during borrow excavation because the borrow areas tend to be located in areas not associated with cultural sites. Stockpiling, loading or unloading materials from barges and railcars is unlikely to cause damage to archaeological sites when it occurs in pre-developed industrial areas. If undeveloped areas with a high probability for the presence of archaeological sites, such as natural levees, are used for stockpiling and loading areas then the potential to damage archaeological sites is greatly increased. Stockpiling material compresses soils and heavy equipment churns the soil. Both of these activities destroy the context of archaeological materials. Destruction of archaeological sites from these activities can be minimized when the locations for stockpiling, loading, and unloading are identified in advance, and cultural resource surveys are completed prior to their use. Therefore no direct or indirect impacts to cultural resources are expected, and there is no reason to believe that this alternative would have a positive or negative impact to cultural resources or traditional cultural properties.

3.2.9 Recreational Resources

Existing Conditions

The region in which the proposed actions are to take place is rich with recreation resources. The specific sites may have some recreational potential, but contain no existing recreational infrastructure or specific features, and are not open to public access.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to recreational resources through CEMVN actions would occur at the proposed borrow areas. These resources may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

The proposed action would not directly or indirectly impact recreation resources in the region. In some cases, depending on how the end site is left, the habitat may be suitable to support some recreational activities (e.g., wildlife viewing and fishing). These benefits are expected to be minimal, and sites would remain private, restricting their recreational value to the public.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to recreational resources at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact recreation.

3.2.10 Noise Quality

Existing Conditions

There is no data available regarding the existing conditions in the proposed borrow areas.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to noise quality through CEMVN actions would occur at the proposed borrow areas. Noise quality may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action there would be minimal temporary impacts to noise within the project areas. The proposed borrow areas would produce elevated noise levels initially due to clearing and grubbing of the areas. Bull dozers, excavators, haul trucks, and chainsaws would be used to clear the land. Once the area is cleared excavators, diesel pumps, and haul trucks would be used during the borrow excavation. The sounds produced from this equipment are powered by diesel engines that produce about the same noise as diesel engines in commercial trucks. Construction activities could have short term sound levels that are high. Some of these areas are in semi-residential areas, although most are in primarily rural areas.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to noise quality at any proposed borrow areas would be the same as the preferred alternative. Additional noise levels are expected for barge and railroad transportation, but should blend in with usual barge and train sound levels in the area. The loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact noise quality.

3.2.11 Air Quality

Existing Conditions

As of June 15, 2005, the 1-hour ozone standard for the Metropolitan New Orleans area (Orleans, Jefferson, St. Bernard, Plaquemines, and St. Charles parishes) was revoked and replaced by an 8-hour standard. The New Orleans area is currently not subject to any conformity requirements of the Clean Air Act, or in other words, these parishes are now in attainment of the 8-hour ozone standard and all other criteria pollutant National Ambient Air Quality Standards (NAAQS). The parishes listed above are currently in attainment of all NAAQS. This classification is the result of area-wide air quality modeling studies. Iberville Parish, which is where the St. Gabriel Redevelopment proposed borrow area is located, is not in NAAQS attainment due to the presence of elevated ozone pollutants. Hancock County, Mississippi, which is where the Pearlinton Dirt Phase 1 proposed borrow area is located, is in NAAQS attainment.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to air quality through CEMVN actions would occur at the proposed borrow areas. Air quality may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action, there would be minimal temporary impacts to air quality in Orleans, Jefferson, St. Bernard, and Plaquemines parishes, and Hancock County. Dust particles would be generated by activities that disturb and suspend soils such as equipment operating on disturbed soils, bulldozing, compacting, truck dumping, and grading operations. Operation of construction equipment and support vehicles would also generate volatile organic compounds (VOCs), particulate matter (PM) 10, PM 2.5, nitrogen oxides (NO_x), carbon monoxide (CO), ozone (O₃) and sulfur oxides (SO_x) emissions from diesel engine combustion. The construction equipment and haul trucks should have catalytic converters and mufflers to reduce exhaust emissions. The construction equipment should have the same emissions as local traffic in the areas.

Dust suppression methods would be implemented to minimize dust emissions. Air emissions from the proposed action would be temporary and should not significantly impair air quality in the region. Due to the short duration of the construction projects, any increases or impacts on ambient air quality are expected to be short-term and minor and are not expected to cause or contribute to a violation of Federal or State ambient air quality standards.

Equipment used during excavation of the St. Gabriel Redevelopment area is not expected to exceed 100 tons per year of VOCs and nitrogen oxides. The air quality of Iberville Parish is not expected to be significantly impacted by this action.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to air quality at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact air quality.

3.2.12 Water Quality

Existing Conditions

There is no data available regarding the existing conditions in the proposed borrow areas.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to water quality through CEMVN actions would occur at the proposed borrow areas. Water quality may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

Despite the use of best management practices, with implementation of the proposed action there would be some disturbances to water quality in the immediate vicinity of the proposed borrow areas. Silt fencing and hay bales would be installed around the perimeter of the proposed borrow areas to control runoff. To make optimal use of available material, excavation would begin at one end of the borrow area and be made continuous across the width of the areas to the required borrow depths, to provide surface drainage to the low side of the borrow pit as excavation proceeds. Excavation for semi-compacted fill would not be permitted in water nor shall excavated material be scraped, dragged, or otherwise moved through water. In some

cases the borrow areas may need to be drained with the use of a sump pump. Upon abandonment, site restoration would include placing the stockpiled overburden back into the pit and grading the slopes to the specified cross-section figures. Abrupt changes in grade shall be avoided, and the bottom of the borrow pit shall be left relatively smooth and sloped from one end to the other. Any excavation below the depths and slopes specified shall be backfilled to the specified permissible excavation line in accordance with construction plans and specifications. Abrupt changes in borrow area alignment shall be avoided. Disturbance of water quality would be temporary, confined, and short lived.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to water quality at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact water quality.

3.2.13 Transportation

Existing Conditions

Additional information on the potential impacts associated with transporting borrow material is being developed by CEMVN and will be discussed in future IERs.

- St. Bernard Parish: The Sylvia Guillot area is located at 3008 Bayou Road on the south side of the road. The Gatién-Navy Camp Hope area is located on East St. Bernard Highway on the east side of the Highway. The DK Aggregates area is located on the south side of Highway 46. The St. Bernard Parish area is still undergoing clean-up from the devastation due to Hurricanes Katrina and Rita. Debris hauling trucks are still working in the area.
- Plaquemines Parish: The Kimble #2 area is located in Phoenix, Louisiana between Highway 39 and Highway 15. The site is located on the east side of the Mississippi River.
- Orleans Parish: The Eastover area is located just south of I-10 and west of Paris Road. The New Orleans East area is still undergoing clean-up from the devastation due to Hurricanes Katrina and Rita. Debris hauling trucks are still working in the area.
- Jefferson Parish: The River Birch Phase 1 and River Birch Phase 2 areas have four access points from a shell entrance road that leads to Highway 90. Three other roads on the north lead into the site from Live Oak Boulevard.
- Iberville Parish: The St. Gabriel Redevelopment site is located near Carville, Louisiana east of Highway 75.
- Hancock County: The Pearlington Dirt Phase 1 site fronts Whites Road, which leads into Highway 90 to the east and Highway 604 to the west.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to transportation routes through CEMVN actions would occur at the proposed borrow areas. Transportation resources may be impacted by non-Federal actions if the landowner

chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action construction equipment such as bulldozers and excavators would need to be delivered and haul trucks would be entering and exiting the areas on a daily basis during the period of construction. The truck hauling would temporarily impede vehicle traffic and result in a minimal reduction of the level of service (LOS, a metric describing traffic volume relative to capacity) on some local road segments. Flagmen, signage, cones, barricades, and detours would be used where required to facilitate the movement of heavy equipment and local traffic on affected road segments. As previously mentioned, the proposed design of all areas would require methods to avoid exposure of adjacent traffic routes and other urban developments. Appropriate measures to ensure safety and facilitate the movement of traffic would be implemented at all approved borrow areas. The current traffic volume at these areas is unknown.

- St. Bernard Parish: The Sylvia Guillot, DK Aggregates, and Gatien-Navy Camp Hope areas are located on road segments that do not presently receive heavy traffic loads. If the proposed areas are used, material would more than likely be used for HPS construction sites closest to the proposed borrow areas, minimizing the disruption of transportation through developed areas. The process used in transporting the borrow material would be similar to methods used in removing debris following Hurricanes Katrina and Rita. Ongoing clean-up of the parish utilizes haul trucks to move construction and demolition debris. Therefore, transportation is currently somewhat altered by the clean-up work. While efforts to restore existing developments in the parish are ongoing, the reduced population has also led to reduced residential congestion at the present time.
- Plaquemines Parish: The Kimble #2 site is in a rural area, and material excavated would likely be used on HPS construction sites within the area. The site is only 10.4 acres in size, so truck hauling from the area would be short lived.
- Orleans Parish: The Eastover site is located near the Almonaster-Michoud industrial district west of Paris Road. The area is commercial in nature with substantial commercial trucking. Truck traffic should blend in with the local traffic in the area.
- Jefferson Parish: The River Birch Phase 1 and River Birch Phase 2 areas are located in a rural area close to Highway 90, a heavily used commercial road on in Jefferson Parish. The areas are an expansion of an existing landfill. Following Hurricanes Katrina and Rita much of the traffic in the area included debris disposal in surrounding landfills. The area is commercial in nature with some large landfills in the area. Currently, an unnamed road is being used to supply material for the Lake Cataouatche levee. Truck haulers should blend in with the local commercial traffic in the area.
- Iberville Parish: The St. Gabriel Redevelopment area is located in a rural area. Industrial refineries are located near the area. Truck haulers should blend in with the local commercial traffic in the area. The area is near the Mississippi River, and material could be barged via the River to HPS construction sites.

- Hancock County: The Pearlington Dirt Phase 1 area is located in a rural area. The logging industry is a major contributor of jobs in the area. Truck haulers should blend in with the local commercial timber haulers in the area.

Appropriate measures to ensure safety and facilitate the movement of traffic would be implemented at all potential borrow areas. The current traffic volume at these areas is unknown.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to waterborne and rail transportation would occur. Vessel traffic in the Mississippi River, Intracoastal Waterway, and associated locks may increase if material is shipped via barge. Traffic congestion may increase at railroad crossings if material is shipped via rail. The Pearlington Dirt Phase 1 and St. Gabriel Redevelopment areas may utilize one of these methods of transportation due to their distance from HPS projects. The loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact transportation.

3.2.14 Aesthetics

Existing Conditions

Most of the proposed borrow areas are of little visual significance, as their private land use does not allow for general public access.

Discussion of Impacts

No Action

With implementation of this alternative no direct or indirect impacts to recreational resources through CEMVN actions would occur at the proposed borrow areas. These resources may be impacted by non-Federal actions if the landowner chooses to use the land as a borrow source. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

The project involves the development of borrow pits. Previously, traditional borrow areas were excavated in a rectangular shape with no aesthetic concerns as outlined in Figure 16-1, Appendix 16, Mississippi River Mainline Levees Enlargement and Seepage Control. These borrow areas should be utilized as positive environmental features. Therefore, they should be designed and constructed with gradual side slopes, irregular shapes, and have some islands, and where practical vegetation should be allowed to serve as its backdrop. Specific design guidelines for these borrow areas are found in Part V of Environmental Design Considerations for Main Stem Levee Borrow Areas Along the Lower Mississippi River, Lower Mississippi River Environmental Program, Report 4, April 1986.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to aesthetics at any proposed borrow areas would be the same as the preferred alternative. However, the loading and unloading of material from these areas, and associated roads leading to these areas, are undetermined and could potentially impact additional landscapes and impair natural sightlines.

3.3 Socioeconomic Resources

3.3.1 Land, Water, Minerals, Fisheries, and Agriculture

Existing Conditions

The existing conditions of the proposed actions include both land, water, natural resources, and pasture land that may be influenced by the proposed action, and also adjacent areas needing additional protection under the emergency recovery program. Under this proposal, approximately 430 acres of land would be excavated from the proposed borrow areas.

The proposed borrow areas in Jefferson Parish sites include 89.1 acres from two areas: River Birch Phase 1 and River Birch Phase 2. The sites are located along U.S. Highway 90, approximately 0.7 miles west of Live Oak Boulevard, in Kennedy Heights, Louisiana. River Birch Phase 1 consists of 0.3 acres of wetlands and 0.1 acres of jurisdictional other waters. River Birch Phase 2 consists of 6.4 acres of BLH. Section 404 permits were issued for both sites for the construction of a landfill and any levee material to be acquired by a HPS contractor for the HPS is a byproduct of River Birch's permitted landfill activity.

The Pearlinton Dirt Phase 1 proposed borrow area is located in Hancock County, Mississippi. This site consists of 98 acres. It is located along Whites Road, off of U.S. Highway 90, near Pearlinton, Mississippi.

The Eastover proposed borrow area is located in Orleans Parish, north of Lake Forest Boulevard. The area consists of 36.6 acres. It includes some jurisdictional other waters, but no jurisdictional or non-jurisdictional wetlands. The Eastover site is bordered by residential development on the west side, and the interstate on the east side.

The Kimble #2 site is located in Nero, Louisiana, within Plaquemines Parish. The site is located between Highways 39 and 15, and consists of a 10.4 acre area, and is designated as having Prime Farmland soils.

Proposed borrow areas totaling 76.7 acres in St. Bernard Parish include the 10.7 acre Sylvia Guilliot area located at 3008 Bayou Road in Kenilworth, Louisiana.; the Gatién-Navy Camp Hope site comprising 7.5 acres of pasture and forestry located on East St. Bernard Highway in Violet, Louisiana; and the DK Aggregates site comprising 58.5 acres of overgrown pasture located on Highway 46 between Kenilworth and Verret, Louisiana. All three sites contain Prime Farmland soils. The DK Aggregates site contains jurisdictional wetlands and other waters, that would be avoided during excavation.

One proposed borrow area is in Iberville Parish. It is located on Bayou Road, near Maryland Street, in St. Gabriel Louisiana. The site consists of 122.6 acres. The site contains 27 acres of wetlands, that would be avoided during excavation. The area consists otherwise of overgrown pasture and shrubs.

Discussion of Impacts

No Action

For the purpose of this IER, the No Action alternative is defined such that if the proposed borrow sites listed in the IER are not selected for use, HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.. The incremental impacts to significant resources of acquiring the borrow material from a different unspecified alternate site are assumed to be zero.

If none of the proposed borrow sites are used the land would then be available for other purposes since most are within the Metropolitan New Orleans area, and all are within the hurricane protection system. HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action, non-wetland areas would be converted for use as borrow areas to be used for levee and floodwall construction. Wetland impacts are expected to occur but do not arise from the proposed Federal HPS actions. It is expected that wetland impacts will occur at the River Birch site regardless of the proposed HPS work because of River Birch's Section 404 permit which allows the wetlands to be impacted for the purpose of constructing a landfill. The cumulative impacts and added level of protection provided would be dependent upon a variety of factors, including the latest technical information available for construction and the level of protection needed based on public concerns and related cost considerations. While small sections of Plaquemines and St. Bernard parishes would be converted from pasture for flood protection purposes, these parishes are part of the New Orleans MSA (Metropolitan Statistical Area), and a relatively small amount of land is used for agricultural purposes. No areas have been identified as threatening mineral rights or timber production.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

With implementation of this alternative the impacts to land, water, minerals, fisheries and agriculture would likely be the same as those resulting from the proposed action. However, these sites would have to be determined before definite impacts can be identified.

3.3.2 Flood Control and Hurricane Protection

Existing Conditions

The proposed sites fall within existing flood and hurricane protection areas of Jefferson, Orleans, St. Bernard, Plaquemines and Iberville parishes, in addition to one site in Hancock County, Mississippi. All parishes in the vicinity have been highly sensitive to flood and hurricane damage, requiring an extensive network of structures, pumping systems, and evacuation routes. The rate of erosion in some areas appears to have declined since the 1960's, but the loss of barrier islands, erosion, and subsidence of wetlands have continued in many areas in close proximity of the project sites. Hurricanes Katrina and Rita, which occurred in August and September of 2005, respectively, created heavy damage that required an immediate effort to restore existing conditions and re-establish protected areas of the community whenever possible.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified.

Proposed Action

With implementation of the proposed action suitable material would be excavated from the proposed borrow areas. This is the procedure used to create most of the storm surge reduction infrastructure for the Metropolitan New Orleans area.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

No incremental impacts with respect to the preferred action are expected under this alternative.

3.3.3 Business, Industry, Employment, and Income

Existing Conditions

The proposed sites with the exception of DK Aggregates are not currently used for business and industrial purposes generating employment. The DK Aggregates site has been used in the past for grazing livestock. However, non-wetland areas in close proximity to urban areas provide value and potential income. The project sites total almost 300 acres within close proximity to urban developments of the New Orleans MSA.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified. The future conditions with this alternative would require alternative methods for improving flood and hurricane protection using borrow material from other locations. The collection of alternative material may be an added cost to the project that would be reflected in the project construction cost. However, no incremental impacts on business and industry relative to the proposed alternative are anticipated.

Proposed Action

None of the proposed project sites have been identified as impacting businesses, industries or related employment. Landowners of the proposed sites would receive income measured in a per yard payment from HPS contractors. However, the proposed projects would support business and industry by advancing the HPS, providing protection from storm surges during storm events.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

No incremental impacts on business and industry, employment and income with respect to the preferred action are expected under this alternative

3.3.4 Population and Housing

Existing Conditions

While the proposed borrow areas are themselves unpopulated, they are all within project areas established for additional hurricane and flood protection, which influences the metropolitan population and housing.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified. No action at the proposed project sites would require material from

alternative sites. Material taken from alternative sites will have no incremental effect on population settlement patterns.

Proposed Action

While most of the proposed project sites are located within leveed areas of the New Orleans MSA, the preferred alternative would not require the relocation of existing housing units or the displacement of population. While adjacent areas include urban and suburban developments, the engineering design and environmental analysis indicate no adverse impacts to housing units or that would cause residential displacement.

The Jefferson Parish areas, River Birch Phase 1 and River Birch Phase 2, are on sites that were used as a landfill. It is in the vicinity of several residential developments, but far enough away that no adverse impact to residential property would occur.

The Pearlington Dirt Phase 1 area in Hancock County, Mississippi is in a rural area that was previously undeveloped. There is one residential development in the vicinity, but no adverse impact to this property would occur.

The Eastover area is located on Dwyer Road in Orleans Parish. The site used to be a golf course, and is presently vacant. The site is in the close vicinity of residential development, but no impact to this property would occur.

The Kimble #2 area is located in Plaquemines Parish between Highway 39 and Highway 15. It is located in a leveed area, but the site is undeveloped.

Three proposed borrow areas are located in St. Bernard Parish. The first is the Sylvia Guilliot site at 3008 Bayou Road in Kenilworth. One structure is directly adjacent to the site. However, the site itself is vacant. The Gatien-Navy Camp Hope area is located on East St. Bernard Highway. This site, while vacant and undeveloped, is directly adjacent to a cemetery. As such, a buffer zone will be left between the cemetery and the area where excavation is to occur. Finally, the DK Aggregates area on Highway 46 is located on undeveloped land.

Lastly, the St. Gabriel Redevelopment site in Iberville Parish sits on undeveloped land. There are some residential structures in the area, but no adverse impact to these properties would occur.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

No incremental impacts on population and housing with respect to the proposed action are expected.

3.3.5 Property Values, Tax Revenues, Public Facilities, and Services

Existing Conditions

Mostly located within the Metropolitan New Orleans area and largely within non-wetland areas, the proposed borrow areas have more property value than large tracts of adjacent wetlands in close proximity to public facilities and services. The areas indirectly, if not directly, contribute to the local tax base. The close proximity of the proposed borrow areas to additional urban developments adds value to the adjacent area, commercial and residential property values, public facilities and services, utilities, public transit, safe highways, streets and bridges, police and fire protection facilities and services, schools

and educational services, hospitals and health care services, and the many other public facilities and services of Federal, State, and Local government.

Of the six parishes in Louisiana discussed in this report, the specified median value of homes ranged from \$76,700 in Iberville Parish to as high as \$110,100 in Plaquemines Parish. The “future conditions” paragraph below indicates the latest and most detailed census information specifying the value of residential property in related census tracts, although all of the sites proposed are currently on vacant property.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified. The no action alternative would require finding of alternative borrow sites in different areas. No incremental effects on property values relative to the proposed action are anticipated.

Proposed Action

Planning for the preferred alternative has attempted to balance the cost and the need for recovery as soon as possible with consideration of property values, public facilities and services, and the concerns of the local tax base. The proposed borrow areas are located within existing or authorized hurricane protection systems, adding value for various purposes ranging from industrial, commercial, residential, institutional, and public purposes in the New Orleans MSA, including valuable flood control and hurricane protection purposes. None of the proposed borrow areas are currently used for commercial or residential purposes.

The Jefferson Parish areas (River Birch Phase 1 and River Birch Phase 2) cover approximately 89 acres along two sites within the WBV hurricane protection system established to maintain property values in the area. The sites proposed are on census tract 275.02 with specified owner-occupied housing units of median value \$57,300.

The Eastover area in Orleans Parish measures approximately 37 acres, and is located on a golf course. The site is in the vicinity of residential, commercial, and industrial structures, but is itself vacant. The site is proposed on census tract 17.32, with specified owner-occupied housing units with median value of \$96,000.

The Kimble #2 area in Plaquemines Parish consists of approximately 10 acres. The entire east bank of Plaquemines Parish is located in census tract 501, with a total of more than 900 units but only 369 home-owner units specified with a median value of \$132,400. Many of these housing units were destroyed by Hurricane Katrina.

The three proposed borrow areas in St. Bernard Parish (Sylvia Guillot, Gatién-Navy Camp Hope, and DK Aggregates) total approximately 77 acres, and are within the LPV hurricane protection system. All three sites are undeveloped, while there are differing levels of residential development in the vicinity. Two sites are located on census tract 301.04, with specified owner-occupied housing units of median value \$68,800; while the third is located on tract 301.03, where the median value of specified owner-occupied housing units is \$66,700.

The St. Gabriel Redevelopment area is in Iberville Parish, and consists of approximately 123 acres of land. This land is undeveloped, but there is some

development in the vicinity. The site is located on census tract 9525.01, with specified owner-occupied housing unit median value of \$81,600.

The Pearlington Dirt Phase 1 area in Hancock County, Mississippi consists of 98 acres. This site is undeveloped, and there are no structures in the vicinity. It is located within census tract 304, which has a median value for specified owner-occupied housing units of \$60,400.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

Without knowing the exact locations of these remote sites it is impossible to know the effects of taking borrow material on property values in the area. However, it is assumed that sites would be vacant and far enough from development that property values, tax revenues, and public facilities and services would go undisturbed.

3.3.6 Community and Regional Growth

Existing Conditions

Generally desirable community and regional growth is considered growth that provides a net increase in benefits to local or regional economy, social conditions, and the human environment, including water resource development. Similarly to other references to social and economic conditions, community and regional growth has been heavily dependent on the unique flood and hurricane protection systems created by borrow areas. The proposed project sites are planned to improve flood and hurricane protection.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified. The no action alternative would require finding of alternative borrow sites in different areas. No incremental impacts on community and regional growth are anticipated.

Proposed Action

The preferred alternative is intended to support community and regional growth by advancing the HPS, providing protection from storm surges during storm events. Local government officials and business owners have expressed concerns with so much potentially developable land being converted to borrow sites. Efforts are underway at the local level to require backfilling of many of these sites, so that areas are available for development in the future. Ordinances already exist in Plaquemines and Jefferson parishes requiring backfill of borrow sites.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

No incremental impacts on community and regional growth with respect to the proposed action are expected.

3.3.7 Health and Safety

Existing Conditions

The immediate project sites do not include health and safety facilities providing related services.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified. The no action alternative would require finding of alternative borrow sites in different areas. The no action scenario would require alternative borrow locations, which would raise construction costs. However, no incremental impacts on health and safety are anticipated.

Proposed Action

While the proposed borrow areas could be used for improvements in the larger community, including facilities for health and safety, none of the sites would be immediately adjacent to such facilities. Implementation of the sites would be subject to Federal, State, and Local safety and health regulations.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

As long as the remote borrow sites are not adjacent to facilities related to health and safety, no incremental impacts on health and safety with respect to the proposed action are expected.

3.3.8 Community Cohesion

Existing Conditions

The proposed borrow areas are located on unpopulated tracts of land. However, the proposed project is designed to benefit areas beyond the immediate project sites, and also benefit community cohesion of the larger community of the Metropolitan New Orleans area, and the nation at large.

Conditions brought about by water resource development can impact community cohesion in different ways. The basic objectives of water resource development have essentially been to provide addition protection through flood control and hurricane protection, improved navigation, environmental restoration, and recreation through civil works as needed by the local, region, and nation. Public involvement with the community is part of this process.

Discussion of Impacts

No Action

With implementation of this alternative HPS projects would be built to authorized or 100-year levels using Government Furnished borrow material, or other sources as yet to be identified. The no action alternative would require finding of alternative borrow sites in different areas. The no action scenario would require alternative borrow locations, raising construction costs. No incremental impacts relative to the proposed action are expected.

Proposed Action

The proposed projects would support community cohesion by advancing the system providing protection from storm surges during storm events.

Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area

No incremental impacts on community cohesion with respect to the proposed action are expected.

3.4 Hazardous, Toxic, and Radioactive Waste

The USACE is obligated under Engineer Regulation 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of the proposed action. ER 1165-2-132 identifies CEMVN HTRW policy to avoid the use of project funds for HTRW removal and remediation activities. Costs for necessary special handling or remediation of wastes (e.g., Resource Conservation and Recovery Act [RCRA] regulated), pollutants and other contaminants, which are not regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), will be treated as project costs if the requirement is the result of a validly promulgated Federal, State or Local regulation.

An ASTM E 1527-05 Phase I Environmental Site Assessment (ESA) was completed for each proposed borrow area. The Phase I ESA documented the Recognized Environmental Conditions (REC) for the proposed project areas. If a REC cannot be avoided, due to the necessity of construction requirements, the CEMVN may further investigate the REC to confirm presence or absence of contaminants, actions to avoid possible contaminants. Federal, State, or Local coordination may be required. Because CEMVN plans to avoid RECs the probability of encountering HTRW in the project area is low.

A copy of the Phase I ESA referenced below will be maintained on file at CEMVN and are incorporated herein by reference. Copies of these reports are available by requesting them from CEMVN, or accessing them at www.nolaenvironmental.gov.

HTRW Land Use Histories and Phase I HTRW ESAs have been completed for the following sites:

- The Phase I ESA for River Birch Phase 1 was completed on 10 August, 2006. No RECs were identified. The site was revisited on 13 September, 2007. CEMVN determined no significant changes in the area since the Phase I ESA was completed.
- The Phase I ESA for River Birch Phase 2 was completed on 10 August, 2006. No RECs were identified. The site was revisited on 13 September, 2007. CEMVN determined no significant changes in the area since the Phase I ESA was completed.
- The Phase I ESA for Pearlington Dirt Phase 1 was completed on 15 September, 2006. No RECs were identified. The site will be revisited before construction to determine if there have been significant changes in the area since the Phase I ESA was completed.
- The Phase I ESA for Eastover was completed on 19 February, 2007. No RECs were identified.
- The Phase I ESA for Kimble #2 was completed on 1 June, 2007. No RECs were identified.

- The Phase I ESA for Sylvia-Guillot was completed on 29 January, 2007. No RECs were identified.
- The Phase I ESA for Gatien-Navy Camp Hope was completed on 14 August, 2006. No RECs were identified. The site will be revisited before construction to determine if there have been significant changes in the area since the Phase I ESA was completed.
- The Phase I ESA for DK Aggregates was completed on 5 March, 2007. No RECs were identified.
- The Phase I ESA for St. Gabriel Redevelopment was completed on 25 May, 2007. No RECs were identified.

4. Cumulative Impacts

NEPA requires a Federal agency to consider not only the direct and indirect impacts of a proposed action, but also the cumulative impacts of the action. Cumulative impact is defined as the “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 §CFR 1508.7).” Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Borrow material has been obtained in the past by CEMVN for HPS and other projects in southeastern Louisiana. CEMVN has been working at an accelerated schedule to rehabilitate the HPS system after Hurricanes Katrina and Rita, and has a goal of building the system to 100-year level of protection by June 2011. An estimated 150,000,000 cubic yards of borrow material will be needed to complete the 100-year level of protection. Borrow material will also be needed to perform levee lifts and maintenance for at least 50 years after construction is completed. CEMVN is in the process of implementing construction projects to raise the hurricane protection levees associated with the federal LPV, WBV, and New Orleans to Venice (NOV) Hurricane Protection projects to authorized elevations. This includes modifications to flood protection projects not covered by this IER. Levee improvements throughout the LPV and WBV projects would require substantial amounts of borrow material, and some of the borrow pits needed have been identified in this document to provide adequate material in proximity to proposed flood protection projects. In addition to modifying and raising existing structures, three new outfall canal closure structures are proposed at the 17th Street, Orleans Avenue, and London Avenue Outfall Canals in the Orleans East Bank Basin, and a new closure structure is proposed for within the IHNC area. All of these flood protection projects are currently in the planning and design stages and impacts from these component projects will be addressed in separate IERs.

Other CEMVN projects such as Morganza to the Gulf, Donaldsonville to the Gulf, Larose to Golden Meadows, Grand Isle non-Federal levees, Plaquemines West Bank non-Federal levees, and other ongoing civil works investigations will require suitable borrow material. State and Local levee and floodwall construction efforts will require borrow material as well. The Mississippi River and Tributaries Projects will utilize borrow material for levee repairs, replacements, lifts, and berms. Government Furnished borrow areas are also being investigated and utilized to supply large quantities of material for levee and floodwall projects.

The construction of the proposed borrow areas would have short-term cumulative affects on transportation. It is anticipated that 150,000,000 cubic yards of material would be needed to raise levee elevations regionally to meet the needs of the HPS. It is unknown the total number of truck trips required or haul routes for the movement of this quantity of material, but cumulative short-term impacts to transportation are expected to occur. Additional information related to transportation impacts is being collected and will be discussed in future IERs.

The extent of land directly and indirectly affected by previous development activities, in combination with the excavation and use of the proposed borrow material for HPS construction, would contribute cumulatively to land alteration and loss in southeastern Louisiana/southwestern Mississippi (Proposed Action), or other areas (Barge or Rail Transport of Material from Areas Outside of the New Orleans Metropolitan Area Alternative). After borrow area excavation the land may be converted to ponds and small lakes, making it unsuitable for farming, forestry, or urban development in the reasonably foreseeable future. Habitat would be changed to favor aquatic and semi-aquatic species over the terrestrial ones that now occupy the areas. Borrow areas that do not retain water would be colonized by vegetation and woody plants, which would favor terrestrial species. This would attract the same species that are currently found in the areas.

Based on historical human activities and land use trends in southeastern Louisiana/southwestern Mississippi it is reasonable to anticipate that future activities would further contribute to cumulative degradation of land resources. It is anticipated that through the efforts taken to avoid and minimize affects on the project area and the mandatory implementation of a mitigation plan that functionally compensates unavoidable remaining impacts the proposed borrow areas would not result in substantial direct, secondary or cumulative adverse impact on the environment. The mitigation plan is discussed in Section 7.

5. Selection Rationale

The proposed action consists of excavating pre-approved Contractor Furnished borrow areas in the New Orleans Metropolitan area that would have no impact on cultural resources and T&E species, and no significant impact on jurisdictional wetlands, BLH, upland resources, fisheries, wildlife, navigable waters, recreational resources, aesthetics, noise, air quality, prime and unique farmland, water quality, transportation, and socioeconomics. There is an identified need for over 150,000,000 cubic yards of borrow material, and the proposed action meets approximately 6% of this demand. Because of this need, CEMVN will need to investigate acquiring all potentially viable areas for the next few years. Government Furnished borrow is an option that will be explored in IER 19. Other borrow options will be discussed in future IERs.

6. Coordination and Consultation

6.1 Public Involvement

Extensive public involvement has been sought in preparing this IER. The projects analyzed in this IER were publicly disclosed and described in the Federal Register on 13 March, 2007 and on the website www.nolaenvironmental.gov. Scoping for this project was initiated on 12 March, 2007 through placing advertisements and public notices in USA Today and The New Orleans Times-Picayune. Nine public scoping meetings were held throughout the New Orleans Metropolitan area to explain scope and process of the Alternative Arrangements for implementing NEPA between 27 March and 12 April 2007, after which a 30-day scoping period was open for public comment submission. Additionally, CEMVN is hosting monthly public meetings to keep the stakeholders

advised of project status. The public is able to provide verbal comments during the meetings and written comments after each meeting in person, by mail, and via www.nolaenvironmental.gov.

6.2 Agency Coordination

Preparation of this IER has been coordinated with appropriate Congressional, Federal, State, and Local interests, as well as environmental groups and other interested parties. An interagency environmental team was established for this project in which Federal and State agency staff played an integral part in the project planning and alternative analysis phases of the project (members of this team are listed in Appendix C). This interagency environmental team was integrated with the CEMVN PDT to assist in the planning of this project and to complete a mitigation determination of the potential direct and indirect impacts of the proposed action. Monthly meetings with resource agencies were also held concerning this and other CEMVN IER projects. The following agencies, as well as other interested parties, are receiving copies of this draft IER:

- U.S. Department of the Interior, Fish and Wildlife Service
- U.S. Department of the Interior, National Park Service
- U.S. Environmental Protection Agency, Region VI
- U.S. Department of Commerce, National Marine Fisheries Service
- U.S. Natural Resources Conservation Service
- Louisiana Advisory Council on Historic Preservation
- Governor's Executive Assistant for Coastal Activities
- Louisiana Department of Wildlife and Fisheries
- Louisiana Department of Natural Resources, Coastal Management Division
- Louisiana Department of Natural Resources, Coastal Restoration Division
- Louisiana Department of Environmental Quality
- Louisiana State Historic Preservation Officer

LDNR reviewed the proposed action for consistency with the Louisiana Coastal Resource Program (LCRP). All proposed borrow activities discussed in this document were found by LDNR to be consistent with the LCRP (Table 6).

Table 6: LDNR Coastal Zone Consistency Determination Concurrence

Proposed Borrow Area	LDNR LCRP Consistency Permit Number
River Birch Phase 1	P20030454
River Birch Phase 2	P20061802
Pearlington Dirt Phase 1	DMR-070125
Eastover	N/A
Kimble #2	P20061684
Sylvia Guillot	N/A
Gatien-Navy Camp Hope	N/A
DK Aggregates	P20061819
St. Gabriel Redevelopment	N/A

CEMVN received a draft Coordination Act Report from the USFWS on 1 November, 2007. This document will be available for public review. Recommendations of the USFWS, in accordance with the Fish and Wildlife Coordination Act, include:

Recommendation 1: “Approximately 5.4 acres of non-wet bottomland hardwoods that have been impacted needs to be assessed for mitigation. Subsequent to that assessment, adequate mitigation should be implemented.”

CEMVN Response 1: CEMVN will work with USFWS to address this mitigation issue.

Recommendation 2: “[CEMVN] to provide [USFWS] verification that wetland impacts and impacts to non-wet bottomland hardwoods, present and future, have been mitigated.”

CEMVN Response 2: CEMVN will provide verification of mitigation.

Recommendation 3: “[CEMVN] to provide to the [USFWS] maps, descriptions of habitats and impacts for all future contractor-furnished borrow sites.”

CEMVN Response 3: CEMVN will provide maps, etc. to USFWS.

Recommendation 4: “The protocol to identify and prioritize borrow sources provided in our August 7, 2006, Planning-aid letter... should be utilized as a guide for contractors locating future borrow-sites.”

CEMVN Response 4: Concur.

Recommendation 5: “Any proposed change in borrow site features, locations or plans shall be coordinated in advance with [USFWS], NMFS, LDWF, and LDNR.”

CEMVN Response 5: CEMVN will coordinate with these agencies.

Recommendation 6: “Forest clearing associated with borrow site preparation should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.”

CEMVN Response 6: Concur.

Recommendation 7: “If a proposed borrow site is changed significantly or excavation is not implemented within one year, we recommend that [CEMVN] notify the contractor to reinitiate coordination with this office to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.”

CEMVN Response 7: Concur.

7. Mitigation

The River Birch Phase 2 area was identified as having 6.4 acres of BLH present that will be mitigated for by the landowner as required in its Section 404 permit. The River Birch Phase 1 area was identified as having 0.3 acres of jurisdictional wetlands that will be mitigated for by the landowner as required in its Section 404 permit. All mitigation will occur prior to the acquisition of any levee material by a HPS contractor.

Relative to the creation ponds and small lakes, if overburden is sufficient, sloped and fringe shallows may be created to provide shallows for both near edge and submergent

vegetative growth. Overburden material would be used, to the maximum extent practicable, to create fringe wetlands and fishery habitats.

8. Compliance with Environmental Laws and Regulations

Construction of the proposed action would not commence until the proposed action achieves environmental compliance with all applicable laws and regulations, as described below.

Environmental compliance for the proposed action will be achieved upon coordination of this IER with appropriate agencies, organizations, and individuals for their review and comments; USFWS and National Marine Fisheries Service confirmation that the proposed action would not adversely affect any T&E species or completion of Endangered Species Act Section 7 consultation (Table 6); Louisiana Department of Natural Resources concurrence with the determination that the proposed action is consistent, to the maximum extent practicable, with the LCRP; coordination with the LASHPO; receipt and acceptance or resolution of all Fish and Wildlife Coordination Act recommendations; and receipt and acceptance or resolution of all Louisiana Department of Environmental Quality comments on the air quality impact analysis documented in the IER.

9. Conclusions

9.1 Interim Decision

The proposed action consists of excavating nine borrow areas that would have no significant effect on cultural resources or threatened and endangered species. CEMVN determined that the proposed work would have no impact upon cultural resources and T&E species, and no significant impact on jurisdictional wetlands, BLH, upland resources, fisheries, wildlife, navigable waters, recreational resources, aesthetics, noise, air quality, prime and unique farmland, water quality, transportation, and socioeconomics.

9.2 Prepared By

IER # 19 was prepared by Michael Brown, Biologist, NEPA Compliance, with relevant sections prepared by: Danielle Tommaso - Environmental Resources Specialist; Dr. Chris Brown - HTRW; Dr. Valerie McCormack - Cultural Resources; Hope Pollman - Recreational Resources; Richard Radford - Aesthetics; Laura Singer - Socioeconomics; Gib Owen - Environmental Team Leader; and Soheila Holley – Senior Project Manager. The address of the preparers is: U.S. Army Corps of Engineers, New Orleans District; Planning, Programs, and Project Management Division, CEMVN-PM; P.O. Box 60267; New Orleans, Louisiana 70160-0267.

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Tables

Table 1: Soil Survey Map Units..... 29
 Table 2: Significant Resources in Project Study Area..... 30
 Table 3: Prime and Unique Farmland Soils Present 35
 Table 4: USFWS T&E Concurrence..... 38
 Table 5: Summary of Cultural Resource Investigations and Section 106 consultation for the pre-approved Contractor Furnished Borrow sites 40
 Table 6: LDNR Coastal Zone Consistency Determination Concurrence 57

Figures

Figure 2: Sylvia Guillot Proposed Borrow Area..... 14
 Figure 3: Gatién-Navy Camp Hope Proposed Borrow Area 15
 Figure 4: DK Aggregates Proposed Borrow Area 16
 Figure 5: St. Gabriel Redevelopment Proposed Borrow Area..... 17
 Figure 6: River Birch Phase 1 18
 Figure 7: River Birch Phase 2 19
 Figure 8: Kimble 2 20

Figure 9: Pearlington Dirt Phase 1	21
Figure 10: Eastover	22
Figure 11: Sylvia Guillot	23
Figure 12: Gatien-Navy - Camp Hope.....	24
Figure 13: DK Aggregates	25
Figure 14: St. Gabriel Redevelopment.....	26

Appendices

Appendix A: List of Acronyms and Definitions of Common Terms

Appendix B: Public Comment and Responses Summary

Appendix C: Members of Interagency Environmental Team

Appendix A: List of Acronyms and Definitions of Common Terms

AAHUs: Average Annualized Habitat Units
ASTM: American Society of Testing and Materials
BLH: Bottomland Hardwood
CEQ: Council on Environmental Quality
Clay Classifications
 CH: Fat clay
 CL: lean clay
 ML: Silt
CRM: Cultural Resource Management
CZM: Coastal Zone Management
DCED: Draft Comprehensive Environmental Document
EA: Environmental Assessment
EIS: Environmental Impact Statement
FCDC: Final Comprehensive Environmental Document
FONSI: Finding of No Significant Impact
HPS: Hurricane Protection System (aka, Hurricane and Storm Damage Reduction System)
HTRW: Hazardous, Toxic, and Radioactive Waste
IER: Individual Environmental Report
IHNC: Inner Harbor Navigation Canal
LDWF: Louisiana Department of Wildlife and Fisheries
LOS: Level of service
LPV: Lake Pontchartrain and Vicinity Hurricane Protection Project
MSA: Metropolitan Statistical Area
NAAQS: National Ambient Air Quality Standards
NEPA: National Environmental Policy Act
NMFS: NOAA National Marine Fisheries Service
NOV: New Orleans to Venice Hurricane Protection Project
PDT: Project Delivery Team
PI: Plasticity index
ROD: Record of Decision
Section 404 (of the Clean Water Act): The Section 404 program for the evaluation of permits for the discharge of dredged or fill material was originally enacted as part of the Federal Water Pollution Amendments of 1972. The Secretary of Army acting through the Chief of Engineers may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites.
SIR: Supplemental Information Report
SPH: Standard Project Hurricane
T&E: Threatened or Endangered Species
UNOP: Unified New Orleans Plan
USACE: U.S. Army Corps of Engineers
 CEMVN: Mississippi Valley Division, New Orleans District
USDA: U.S. Department of Agriculture

NRCS: Natural Resources Conservation Service
USFWS: U.S. Fish and Wildlife Service
WBV: West Bank and Vicinity Hurricane Protection Project
WRDA: Water Resources Development Acts
WVA: Wetlands Valuation Assessment

Appendix B: Public Comment and Responses Summary

Intentionally left blank, pending any comments received during 30-day public comment period.

Appendix C: Members of Interagency Environmental Team

Kyle Balkum	Louisiana Dept. of Wildlife and Fisheries
Agaha Brass	Louisiana Department of Natural Resources
Catherine Breaux	U.S. Fish and Wildlife Service
David Castellanos	U.S. Fish and Wildlife Service
Frank Cole	Louisiana Department of Natural Resources
John Ettinger	U.S. Environmental Protection Agency
Jeffrey Harris	Louisiana Department of Natural Resources
Richard Hartman	NOAA National Marine Fisheries Service
Jeffrey Hill	NOAA National Marine Fisheries Service
Christina Hunnicutt	U.S. Geologic Survey
Barbara Keeler	U.S. Environmental Protection Agency
Kirk Kilgen	Louisiana Department of Natural Resources
Tim Killeen	Louisiana Department of Natural Resources
Brian Lezina	Louisiana Dept. of Wildlife and Fisheries
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Clint Padgett	U.S. Geologic Survey
Jamie Phillippe	Louisiana Dept. of Environmental Quality
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