

DRAFT 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®**

JANUARY 2008

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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; 2-9) and southwest Mississippi (Figure 10).

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 over 100,000,000 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.

Due to the importance of providing safety to the citizens of southeastern Louisiana, and the amount of borrow needed to supply levee projects for the HPS, multiple borrow IERs are being prepared.

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 over 100,000,000 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 the Administration granted a series of supplemental appropriations acts following Hurricanes Katrina and Rita to repair and upgrade the project systems damaged by the storms. The supplemental appropriations acts 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 levied 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 (CED) that will describe the work completed and remaining to be constructed. The purpose of the draft CED will be to document the work completed by the CEMVN on a system-wide scale. The draft CED 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 draft CED will contain updated information for any IER that had incomplete or unavailable data at the time it was posted for public review.

The draft CED 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 draft CED 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 CED 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. Public comments received during the public review period and the 10 December, 2007 public meeting for this IER are found in Appendix B.

1.6 Data Gaps and Uncertainties

Transportation routes for the delivery of borrow material have not been determined, as it currently 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 is completed.

CEMVN is studying the feasibility of backfilling Government Furnished borrow areas after excavation. Information 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 Pre-Approved Contractor 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.

CEMVN is pursuing three avenues of obtaining the estimated amount of borrow material needed for HPS construction. The three avenues that are being pursued by CEMVN to obtain borrow material are Government Furnished (Government acquires rights to property), Pre-Approved Contractor Furnished (landowner and construction contractor work in partnership to provide borrow material), and Supply Contract (corporation delivers borrow material to a designated location for use by construction contractor). Two of the avenues being pursued (Pre-Approved Contractor Furnished and Supply Contract) allow a private individual or corporation to propose a site where borrow material could come from. It is possible that some of the Contractor Furnished and Supply Contract sources of borrow material may come from outside of the state of Louisiana. IERs 18 and 22 will discuss Government Furnished borrow alternatives. This IER and IER 23 will discuss Pre-Approved Contractor Furnished borrow alternatives. An additional IER(s) would discuss a potential Supply Contract. Additional borrow IERs will be prepared as future potential borrow sites are identified.

The US Fish and Wildlife Service (USFWS) supports CEMVN’s prioritization selection of potential borrow areas in the following order: existing commercial pits, upland sources, previously disturbed/manipulated wetlands within a levee system, and low-quality wetlands outside a levee system (Appendix D). USFWS recommended that prior to utilizing borrow sites every effort should be made to reduce impacts by using sheetpile and/or floodwalls to increase levee heights wherever feasible. The USFWS also recommended the following protocol be adopted and utilized to identify borrow sources in descending order of priority:

1. “Permitted commercial sources, authorized borrow sources for which environmental clearance and mitigation have been completed, or non-functional levees after newly constructed adjacent levees are providing equal protection.

2. Areas under forced drainage that are protected from flooding by levees, and that are:
 - a) non-forested (e.g., pastures, fallow fields, abandoned orchards, former urban areas and non-wetlands);
 - b) wetland forests dominated by exotic tree species (i.e., Chinese tallow) or non-forested wetlands (e.g. wetland pastures), excluding marshes;
 - c) disturbed wetlands (e.g., hydrologically altered, artificially impounded).
3. Sites that are outside a forced drainage system and levees, and that are:
 - a) non-forested (e.g. pastures, fallow fields, abandoned orchards, former urban areas) and non-wetlands;
 - b) wetland forests dominated by exotic tree species (i.e., Chinese tallow) or non-forested wetlands (e.g. wetland pastures), excluding marshes;
 - c) disturbed wetlands (e.g., hydrologically altered, artificially impounded).”

The USFWS is currently assisting CEMVN in meeting this protocol.

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. Contractors would implement Best Management Practices (BMP), including standard USACE storm water prevention requirements at all borrow area locations. It is the intent of CEMVN to not discharge any waters off site from a borrow pit during mining operations. Should this become necessary a National Pollutant Discharge Elimination System (NPDES) permits would be obtained, if required. 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. However, the full depth of the borrow area should be excavated according to the

plans and specifications of the approved borrow pit depths to avoid impacting additional surface acreage of habitat to fish and wildlife resources elsewhere.

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 Borrow Material.

2.3 Proposed Action

The proposed action (preferred alternative) consists of excavating all suitable material from the proposed nine borrow areas (Figure 1). 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.

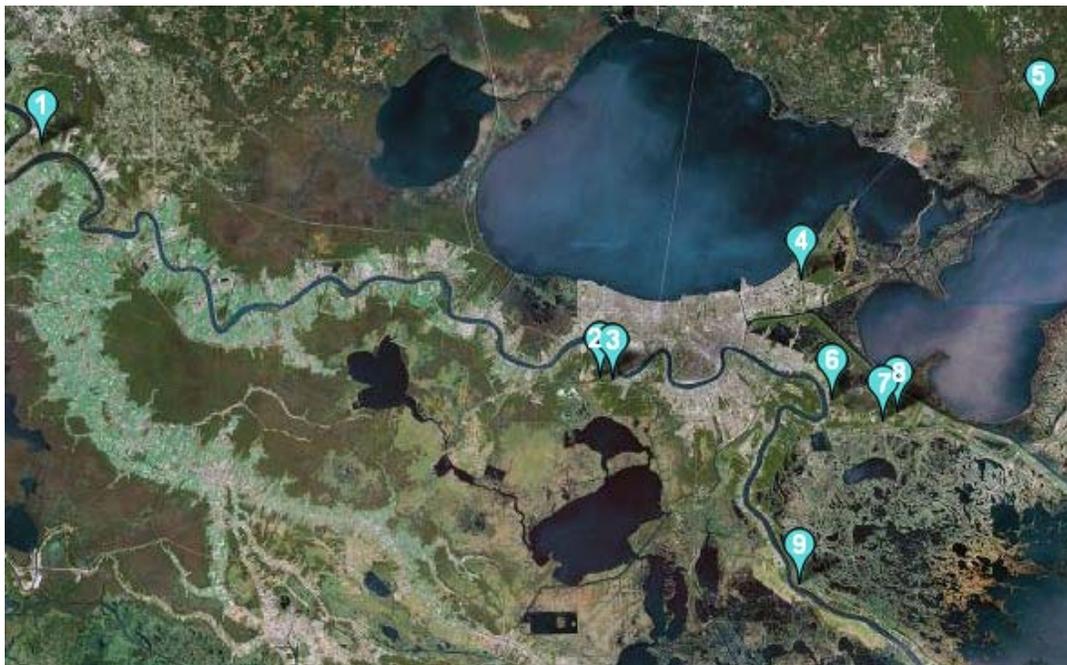


Figure 1: Proposed Borrow Areas

1: St. Gabriel Redevelopment / 2: River Birch Phase 1 / 3: River Birch Phase 2 / 4: Eastover / 5: Pearlinton Dirt / 6: Gatién-Navy – Camp Hope / 7: Sylvia-Guillot / 8: DK Aggregates / 9: Kimble #2

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 (T&E) 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 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 7). 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 8). 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 Kimble #2 area is located between Highway 39 and Highway 15 in Plaquemines Parish, Louisiana (Figure 9). The proposed borrow area is 10.4 acres, and would provide an estimated 120,000 cubic yards of suitable borrow material.
- The Pearlington Dirt Phase 1 area is located off of Highway 90 in Hancock County, Mississippi (Figure 10). The proposed borrow area is 98 acres, and would provide an estimated 1,000,000 cubic yards of suitable borrow material. This site could potentially use barge or rail to transport borrow to HPS construction sites.
- The Eastover area is located north of Dwyer Road in Orleans Parish, Louisiana (Figure 11). The proposed borrow area is 36.6 acres, and would provide an estimated 900,000 cubic yards of suitable borrow material.
- The Sylvia Guillot area is located at 3008 Bayou Road in St. Bernard Parish, Louisiana (Figure 12). The proposed borrow area is 10.7 acres, and would provide an estimated 270,000 cubic yards of suitable borrow material.
- The Gatién-Navy Camp Hope area is located on East St. Bernard Highway in St. Bernard Parish, Louisiana (Figure 13). 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 14). 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 15). The proposed borrow area is 122.6 acres, and would provide an estimated 800,000 cubic yards of suitable borrow material. This site could potentially use barge or rail to transport borrow to the HPS.

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.

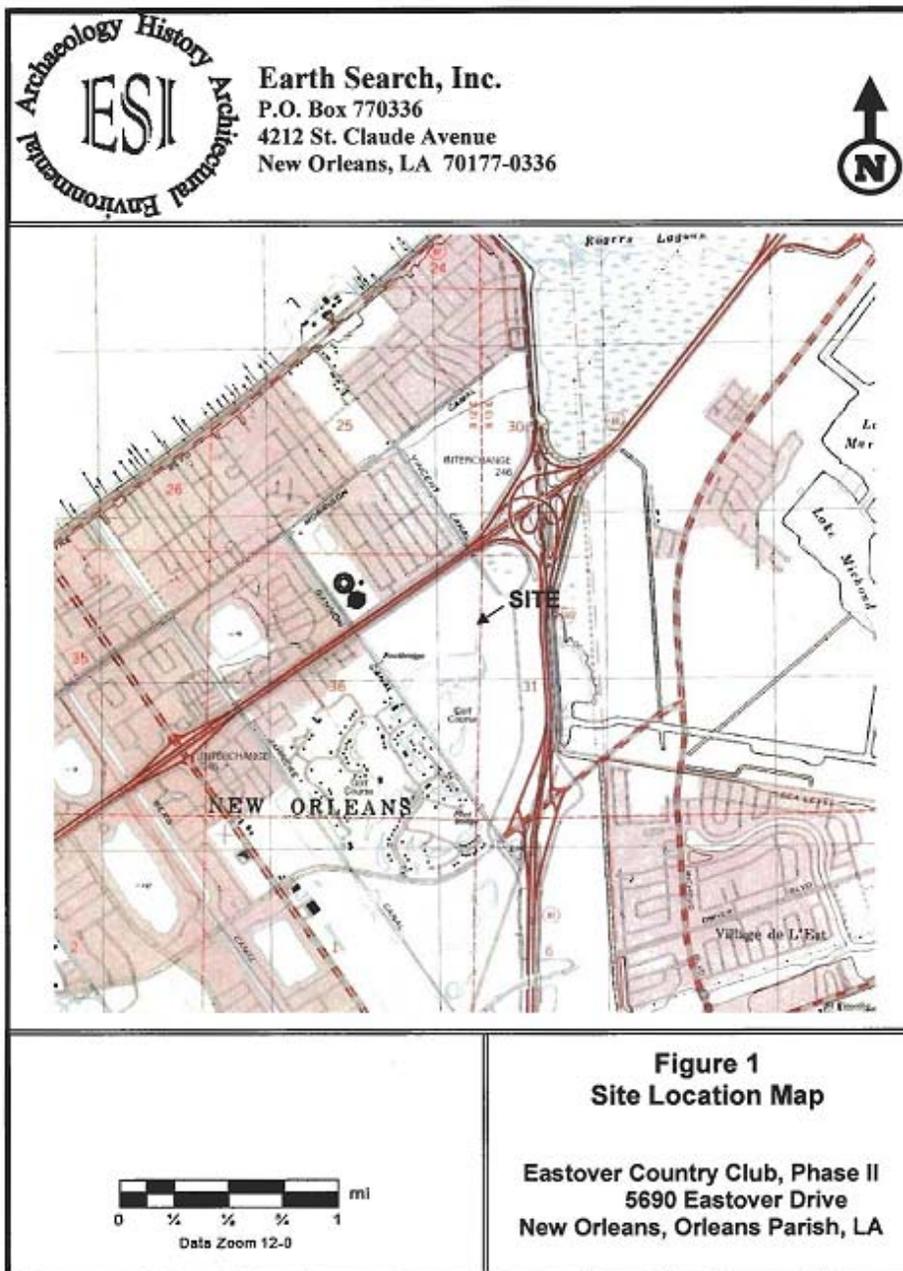


Figure 2: Eastover Proposed Borrow Area

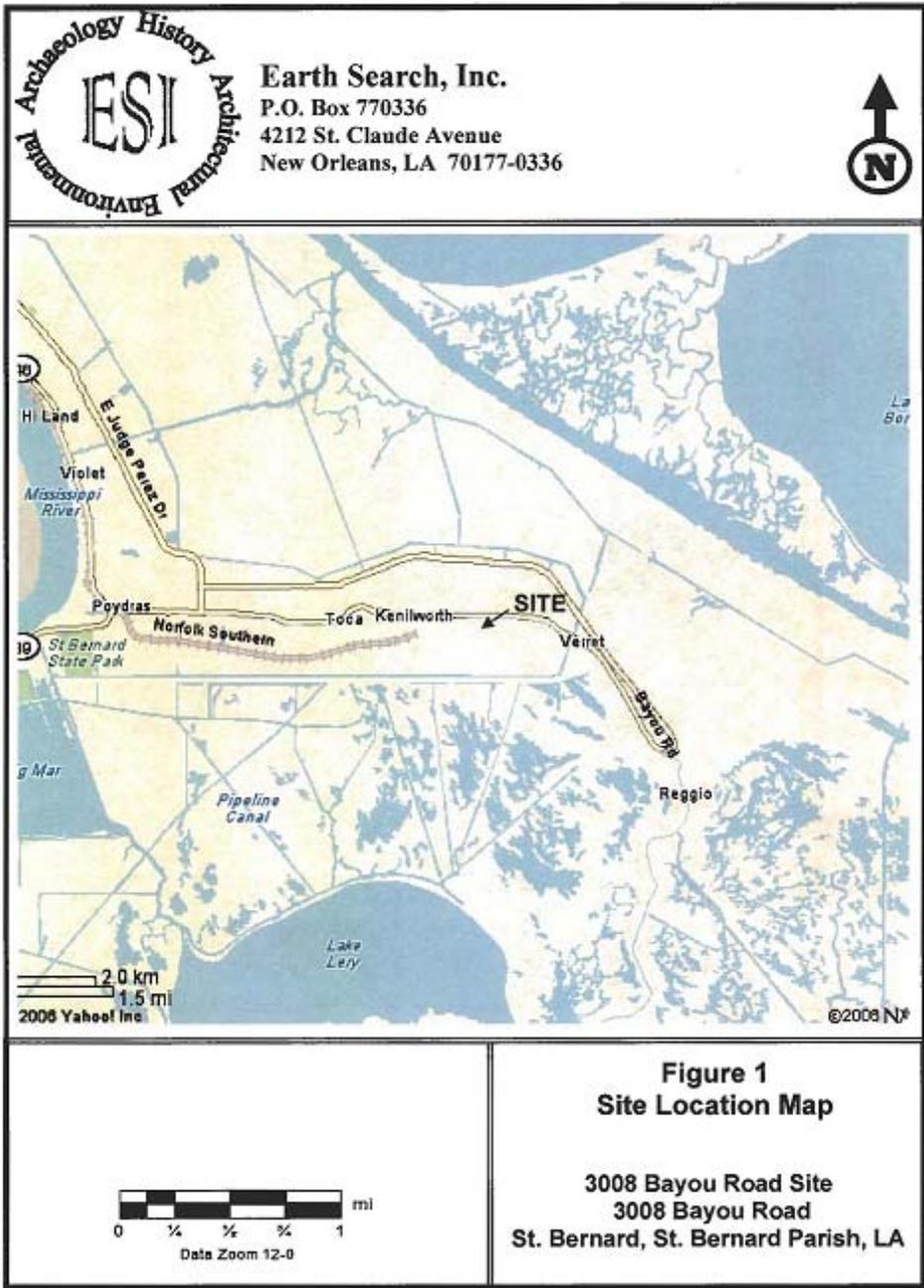
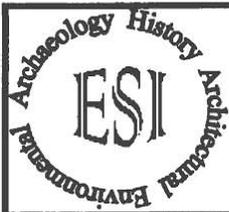
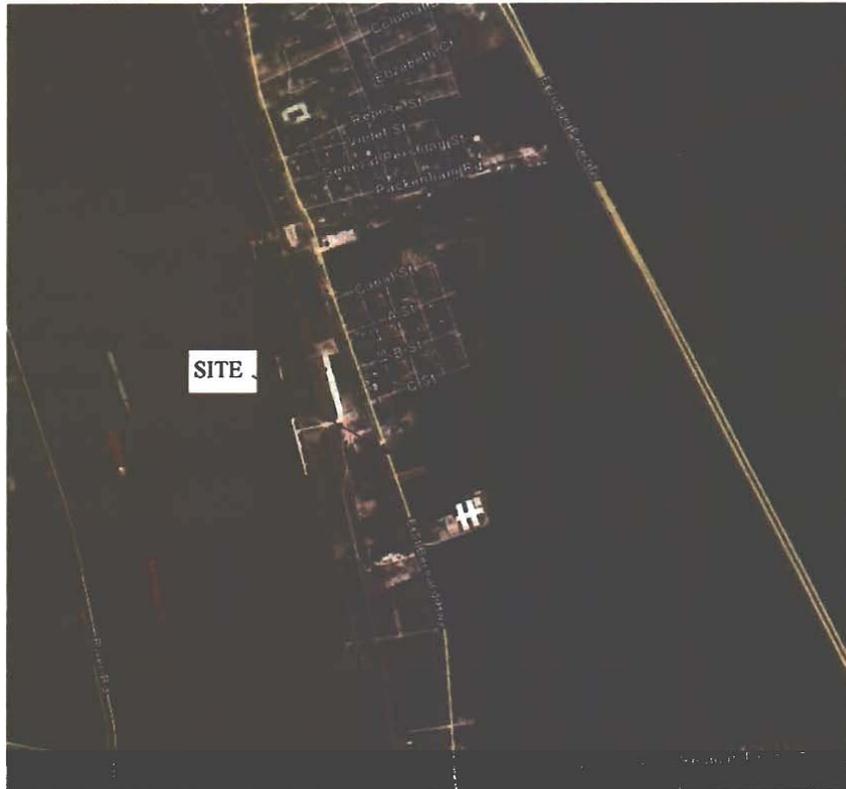


Figure 3: Sylvia Guillot Proposed Borrow Area



Earth Search, Inc.
P.O. Box 770336
4212 St. Claude Avenue
New Orleans, LA 70177-0336



Digital Globe
Aerial Photograph —2006

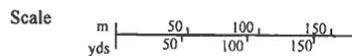


Figure 8
Aerial Photograph (2006)

Camp Hope Property
E. St. Bernard Hwy
Violet, St. Bernard Parish, LA

Figure 4: Gatién-Navy Camp Hope Proposed Borrow Area

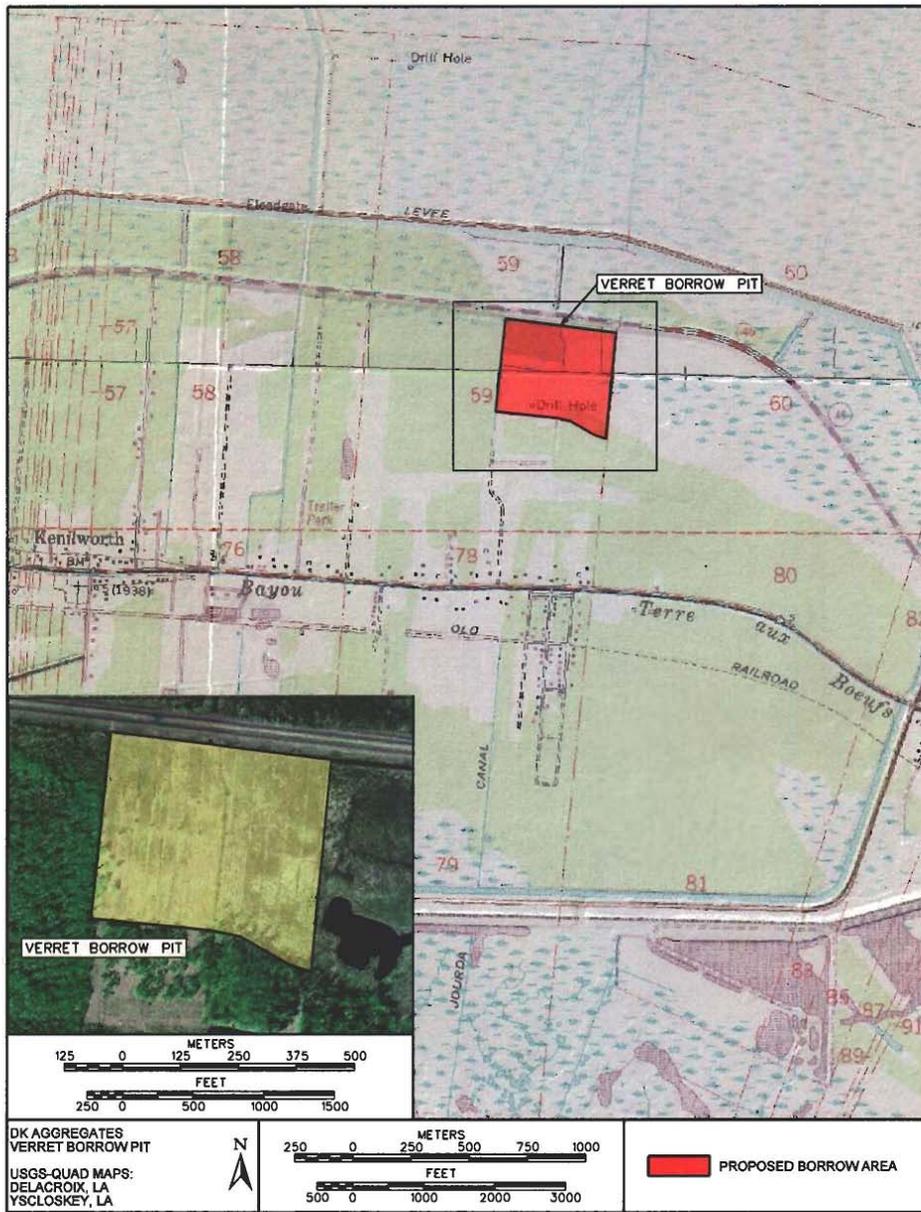


Figure 5: DK Aggregates Proposed Borrow Area



30° 13' 31"N, 91° 05' 45"W (NAD83/WGS84) *St. Gabriel Redevelopment*
 USGS Carville (LA) Quadrangle
 Projection is UTM Zone 15 NAD83 Datum

<http://www.topozone.com/print.asp?lat=30.22528&lon=-91.09583&s=48&size=1&u=6&la...> 5/25/2007

Figure 6: St. Gabriel Redevelopment Proposed Borrow Area

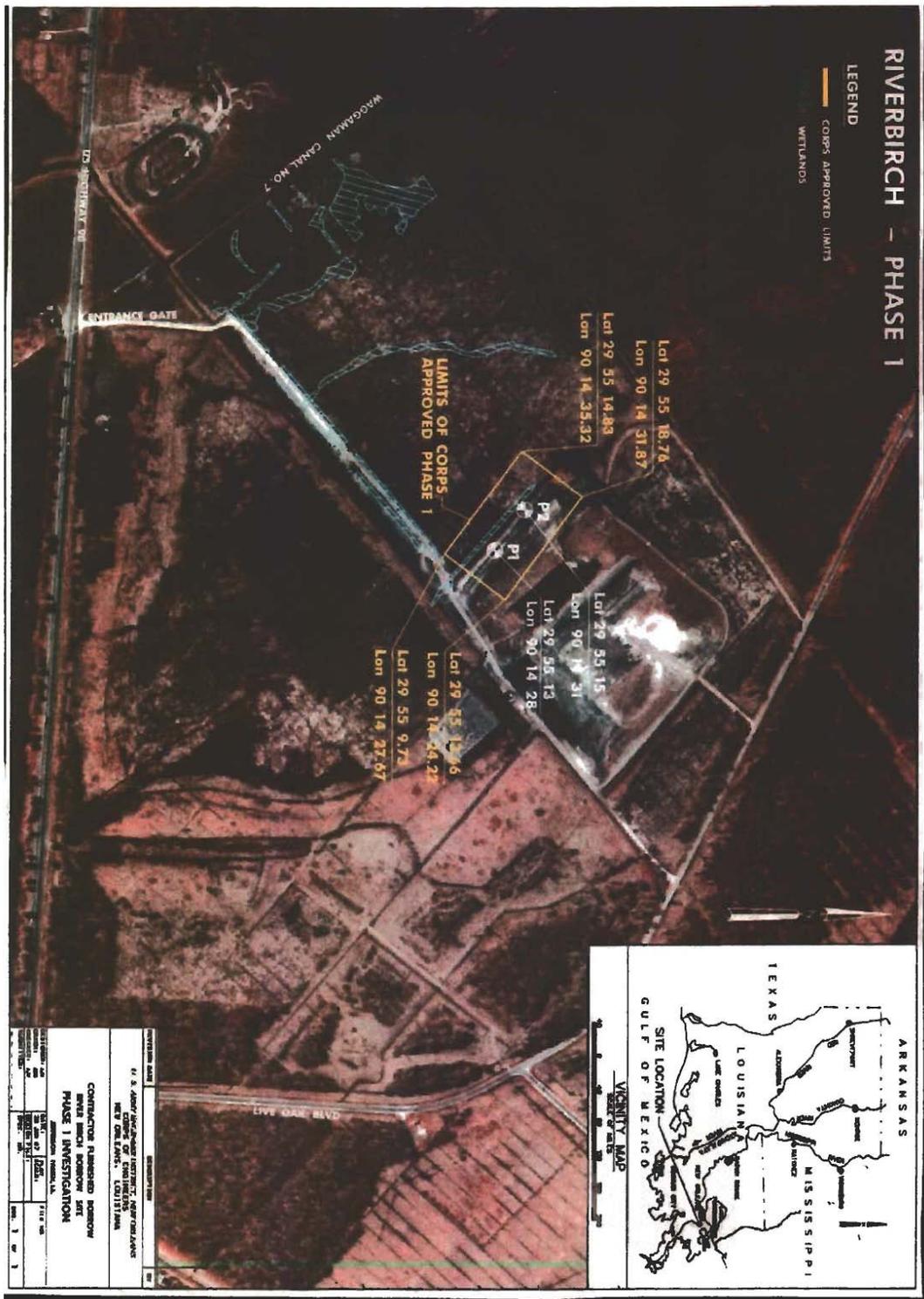


Figure 7: River Birch Phase 1 Proposed Borrow Area

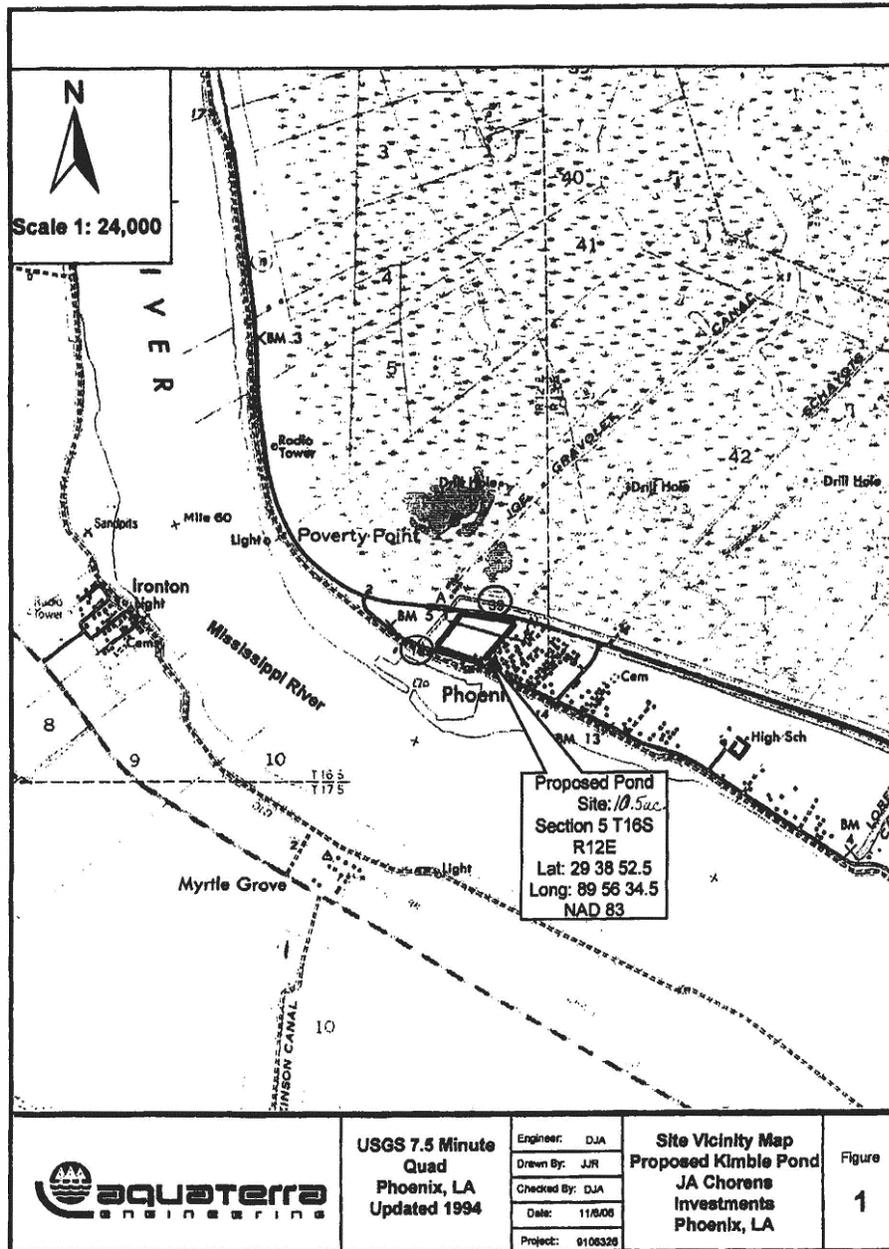


Figure 9: Kimble 2 Proposed Borrow Area

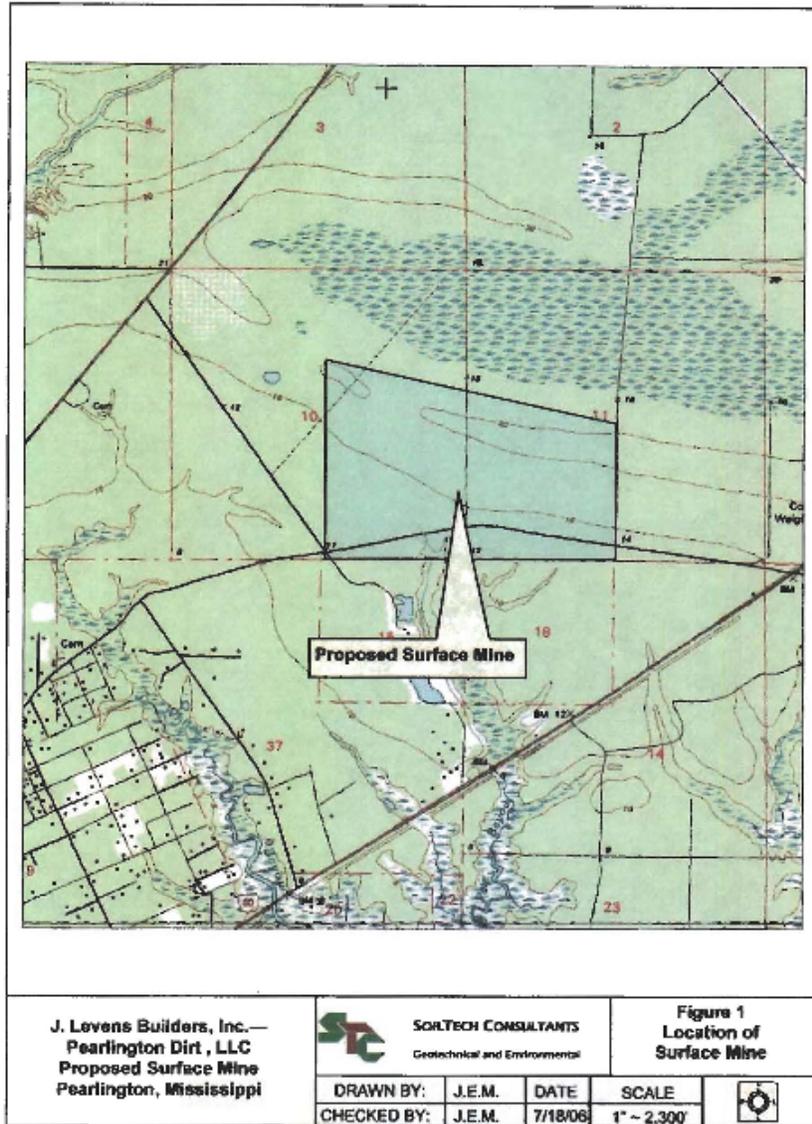


Figure 10: Pearlington Dirt Phase 1 Proposed Borrow Area

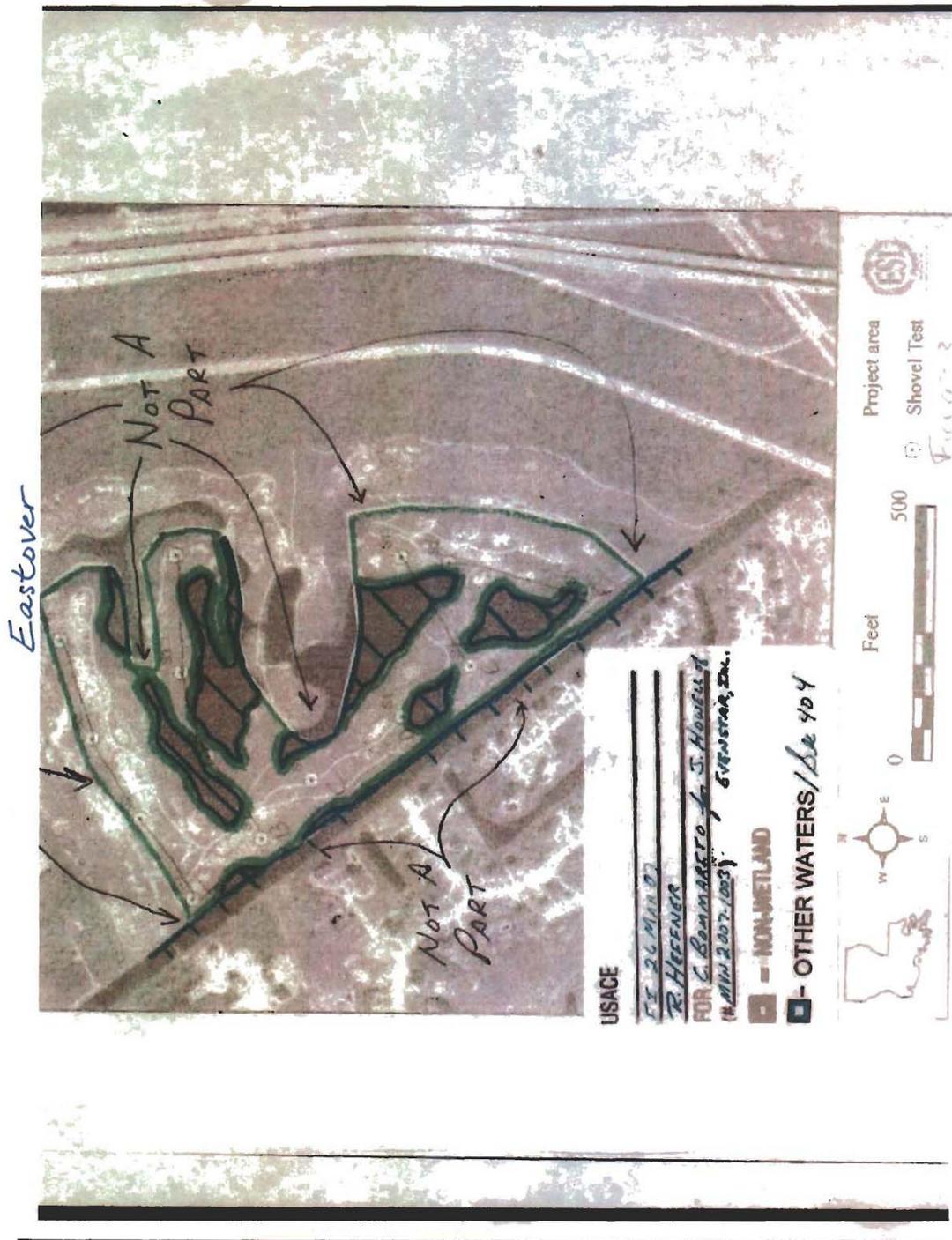


Figure 11: Eastover Proposed Borrow Area

3008 Bayou Rd.



Figure 12: Sylvia Guillot Proposed Borrow Area

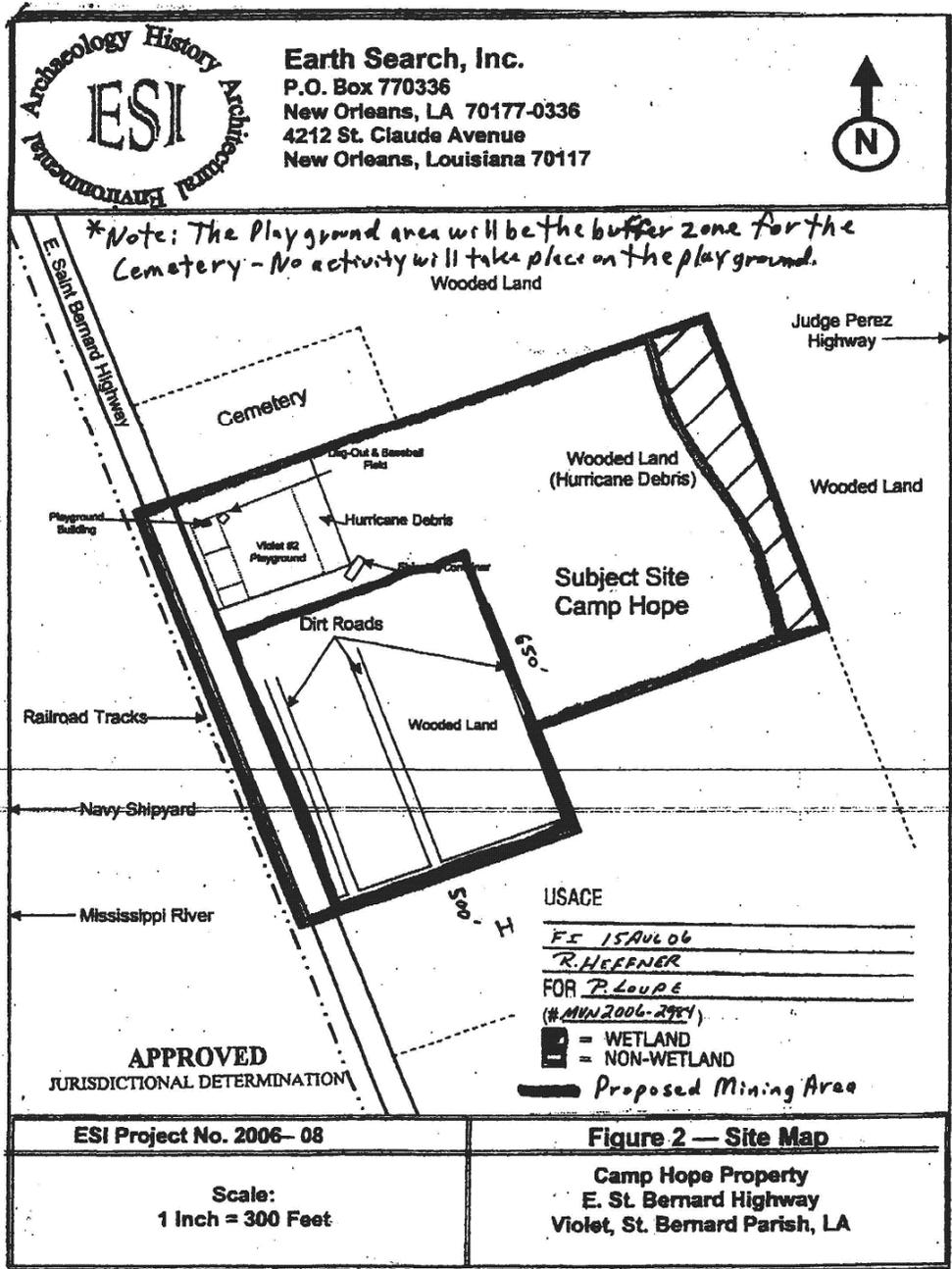


Figure 13: Gatién-Navy - Camp Hope Proposed Borrow Area

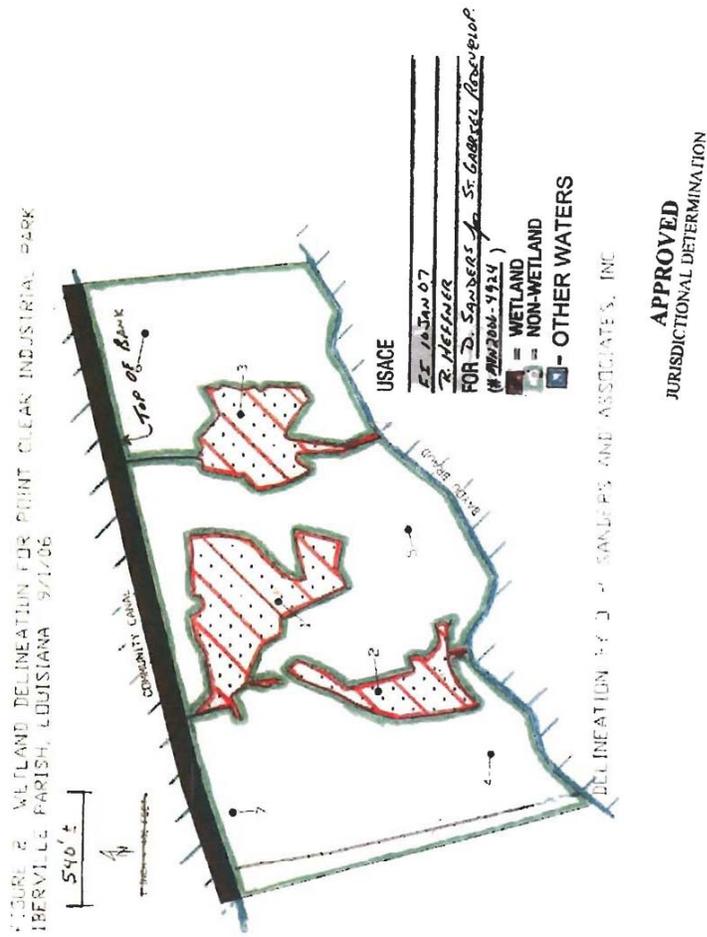


Figure 15: St. Gabriel Redevelopment Proposed Borrow Area

2.4 Alternatives to the Proposed Action

Other alternatives to the proposed action were considered, as described below

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. The material would be transported to HPS construction sites via barge or rail.

Government Furnished Borrow Material. Due to the large quantities of suitable clay material needed for the HPS projects Government Furnished borrow alternatives will be discussed in IER 18 and IER 22, and other future borrow IERs 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 unsuitable 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 Pearlinton, 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 Pearlinton 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 Gatien-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, amphibians, and mosquitoes 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

The term "suitable" as it relates to borrow material discussed in this document is defined as meeting the following current criteria after placement as levee fill:

- Soils classified as clays (CH or CL) are allowed as per the Unified Soils Classification System;
- Soils with organic contents greater than 9% are not allowed;
- Soils with plasticity indices (PI) less than 10 are not allowed;
- Soils classified as Silts (ML) are not allowed;
- Clays will not have more than 35% sand content.

The USACE Hurricane and Storm Damage Reduction System Design Guidelines, of which the soil standards previously discussed are a part, are reviewed and updated as necessary to ensure that the Corps is constructing the safest levees possible. Changes to the guidelines are reviewed and approved by USACE experts at the local, regional and headquarters level; additional reviews are completed by academia and private individuals who are recognized experts in their fields. Additionally, the guidelines being utilized by CEMVN have been reviewed by members of the Interagency Performance Evaluation Team (IPET). The design guidelines may be updated from time to time to respond to new engineering analysis of improved technology, innovative processes, or new data. An implementation plan for an external review should be finalized in February 2008.

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. Geotechnical testing and soil analysis is ongoing at some of the areas; the area acreages may change due to the results.

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 1 shows those significant resources found within the project area, and notes whether they would be impacted by any of the alternatives.

Table 1: 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, CEMVN is working diligently to avoid impacts to Clean Water Act Section 404 jurisdictional wetlands, associated with providing borrow material for authorized and 100-year hurricane protection construction. CEMVN selection prioritization of potential borrow areas (Section 2.1), as well as USFWS guidance (Appendix D), relating to impacts to jurisdictional wetlands are and will continue to be followed. CEMVN will coordinate with governmental agencies and the public if jurisdictional wetland may be impacted during future proposed borrow activities.

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 and public'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 was issued for an action not related to 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 was issued for an action not related to the Federal HPS.
- The Pearlinton Dirt Phase 1 proposed borrow area was determined to be non-wetland according to a letter dated 26 January, 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). A request was sent for the contractor to submit an excavation plan to CEMVN Regulatory Functions Branch to clarify the need for a Section 404 of the Clean Water Act permit. In a letter dated 21 June, 2007, the CEMVN Regulatory Branch stated they have reviewed the project and determined that a Section 404 permit would not be required.
- 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 Gatien-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.

- 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.

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 and 5.4 acres of non-wet bottomland hardwoods. 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 2). 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 2: 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	
		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 area currently provides suitable breeding habitat for various species of mosquitoes. While the proposed borrow areas have the potential to become mosquito breeding areas, the amount of surface acres of water is considered to be small compared to surrounding wetlands. However, local parish mosquito control programs, not CEMVN, are responsible for mosquito control.

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, while the proposed borrow areas may provide more habitat for mosquitoes to breed.

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 3).

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 3: 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 4). 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 4). 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 4: 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	10 October, 2006
River Birch Phase I	2002 correspondence	14 December, 2006
River Birch Phase II	2002 correspondence	14 December, 2006
Pearlington Dirt Phase 1	Landowner request letter	22 November, 2006*
Sylvia Guillot-Bayou Road	Reconnaissance Survey by Earth Search, Inc.	6 February, 2006
Gaiten-Camp Hope	Reconnaissance Survey by Earth Search, Inc	8 September, 2006
St. Gabriel Redevelopment	Reconnaissance Survey by Surveys Unlimited Research Associates.	17 April, 2007
Eastover	Reconnaissance Survey by Earth Search, Inc	15 March, 2007
DK Aggregates	Reconnaissance Survey by R. Christopher Goodwin & Associates	10 April, 2007
*Mississippi Department of Archives and History, MI SHPO		

Proposed Action

The cumulative impacts of the excavation of the Gatién-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

Some of the proposed borrow sites are located near highways, interstates, and residential areas, while others are located in rural areas. Currently, sound levels would be expected to be moderate. The primary producers of sound would be from traffic, people, and, wildlife. Local traffic may have short-term sound levels that are high..

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 an elevation of noise levels during construction. This noise would be associated with construction equipment such as bull dozers, excavators, haul trucks, and/ or chainsaws. Portable pumps would also be used if needed. Elevated noise levels may impact nearby residents. However, these impacts are expected to be constrained to construction hours.

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 short-term impacts to air quality that would result from the construction of borrow areas in Orleans, Jefferson, St. Bernard, and Plaquemines parishes, and Hancock County controlled by proper best management practices (BMP). Air quality impacts would be limited to those produced by heavy equipment, and suspended dust particles generated by bulldozing, dumping, and grading. Operation of construction equipment and support vehicles would 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

Louisiana Department of Environmental Quality (LDEQ) regulates both point and nonpoint source pollution. Many of the proposed borrow areas are uplands with associated drainage features.

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. The contractor would be required to secure all proper

local, State, and Federal permits required for potentially impacting water quality. The CEMVN requires that construction BMPs be implemented and followed during construction phase. 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. The River Birch Phase 1 and 2 sites received DEQ Water Quality Certifications on, May 7, 2004 and 28 June, 2007, respectfully.

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.

The following is a listing of each proposed borrow area by parish and the sites' proximity to roads and highways.

- St. Bernard Parish: The Sylvia Guillot area is located at 3008 Bayou Road on the south side of the road. The Gatien-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.
- 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.
- 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. 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 Pearlinton 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 Pearlinton 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

The proposed borrow areas may contain distinct qualities that make them visually significant. Some of the proposed borrow areas are located in residential areas; however, most of the proposed borrow areas are remote and all are inaccessible. Therefore, they generally lack visual significance as their private land use does not allow for 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. Where it is not feasible to

develop these proposed borrow areas using positive environmental features, measures such as landscaping could be utilized to screen off negative viewsheds into the borrow areas.

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 temporarily affect viewsheds associated with scenic byways.

3.3 Socioeconomic Resources

3.3.1 Land, Water, Minerals, Fisheries, and Agriculture

Existing Conditions

The existing conditions of the proposed actions include 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 Gatiens-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, which 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. 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 in order to continue raising flood protection to the authorized or 100-year level.

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. Some of the sites were previously used as pasture for agricultural purposes, and the owners of these businesses may not have all returned post-Katrina. 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, some are located near or adjacent to residential property. 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 levied 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 permanent adverse impacts to housing units or that would cause residential displacement. Although there will be added noise and traffic congestion in the area during excavation, none of these impacts would be permanent.

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 Pearlinton 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 levied 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. However, the site itself is vacant. The Gatién-Navy Camp Hope area is located on East St. Bernard Highway. This site, while vacant and undeveloped, is directly adjacent to a cemetery. Both sites are located in the vicinity of residential properties. 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 Pearlinton 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 possible due to the unique flood and hurricane protection systems that are dependent on 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.

If the borrow sites are not backfilled and are instead converted into large ponds, there may be an increased presence of mosquitoes in the area. While the proposed borrow areas have the potential to become mosquito breeding areas, the amount of surface acres of water is considered to be small compared to surrounding wetlands. Mosquito control would be taken care of by the parish as part of the parish-wide mosquito control program.

The landowner would be responsible for complying with any local fencing ordinances for Pre-Approved Contractor Furnished sites.

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. There is some public concern about the effect that digging borrow pits will have on surrounding neighborhoods. 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 additional 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.

Some landowners in the vicinities of the borrow sites, in St. Bernard Parish specifically, have expressed concern about the effects of digging borrow pits on their communities. These landowners feel that the removal of borrow material from their neighborhoods would have a detrimental impact on community cohesion.

Borrow material will only be acquired from willing sellers. Those who do not wish to have borrow material removed from their properties do not have to enroll in the program. As such, the detrimental impacts on community cohesion are considered minimal.

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. Over 100,000,000 cubic yards of borrow material is estimated to 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 over 100,000,000 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 100,000,000 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 provided verbal comments during the meetings, and written comments after each meeting in person, by mail, and via www.nolaenvironmental.gov (Appendix B).

The public comment period for this IER began on 2 November, 2007, and ended on 6 December, 2007. In addition to being discussed at various public meetings starting in July 2007, borrow related-issues were specifically addressed at public meeting on 10 December, 2007. Public comments received during the public review period and the 10 December, 2007 public meeting can be found in Appendix B. Additional borrow IERs will be discussed at future public meetings.

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, and correspondence between governmental agencies and CEMVN are found in Appendix D. 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 5).

Table 5: 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 (Appendix D). 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 was 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.

All non-jurisdictional BLH forest impacts were assessed by the USFWS and CEMVN under NEPA, Fish and Wildlife Coordination Act, and under Section 906 (b) WRDA 1986 requirements and mitigation for those impacts would be completed. Under the NEPA Alternative Arrangement process, mitigation planning and implementation for unavoidable impacts will be done under a separate investigation and discussed in future IERs currently being written. The 5.4 acres of BLH impacts at the proposed Kimble #2 borrow area would be included in one of these mitigation IERs.

Mitigation IERs will be prepared documenting and compiling the unavoidable impacts discussed in each IER. The mitigation IERs will implement compensatory mitigation as early as possible. All mitigation activities will be consistent with standards and policies established in the Clean Water Act Section 404 and the appropriate USACE policies and regulations governing this activity.

A draft CED will be prepared once the IERs are completed documenting and compiling these unavoidable impacts and those for all other proposed actions associated with the HPS which are being analyzed through other IERs. Mitigation planning is being carried out with a systems approach so that large mitigation efforts can be initiated rather than

several smaller efforts, increasing the relative economic and ecological benefits of the mitigation effort. The mitigation IER and draft CED will be made available for public review and comment.

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 5); 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 are located in wetland and non-jurisdictional wetland areas that would have no significant effect on cultural resources or threatened and endangered species. This office has assessed the environmental impacts of the proposed action and has determined that the proposed action would have unavoidable impacts to a total of 5.4 acres of non-wet bottomland hardwoods and 6.7 acres of jurisdictional wetlands from the River Birch sites. Mitigation for unavoidable impacts to non-jurisdictional BLH will be described under a separate IER. CEMVN determined that the proposed work would have no significant impact upon jurisdictional wetlands, BLH, upland resources, fisheries, wildlife, navigable waters, recreational resources, aesthetics, noise, air quality, prime and unique farmland, water quality, transportation, and socioeconomic resources.

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 Pollmann - 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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Appendix A: List of Acronyms and Definitions of Common Terms
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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
BMP: Best Management Practices
CED: Comprehensive Environmental Document
CEQ: Council on Environmental Quality
Clay Classifications
 CH: Fat clay
 CL: lean clay
 ML: Silt
CRM: Cultural Resource Management
CZM: Coastal Zone Management
EA: Environmental Assessment
EIS: Environmental Impact Statement
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
IPET: Interagency Performance Evaluation Team
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
QA/QC: Quality Assurance/Quality Control
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

Letter # 1: Donald Serpas Sr., 27 November 2007
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November 27, 2007

Donald Serpas Sr.
 5012 Bayou Rd.
 St. Bernard, La 70085

Mr. Bill Owen
 U.S. Army Corps of Engineers
 PM-RS
 P.O. Box 60267
 New Orleans, La 70160-0267

Dear Mr. Owen:

Thank you for accepting my comments regarding the U.S. Army Corps of Engineers Environmental Report #15. I have been fighting for almost 20 yrs. to get the D.R.D.O. closed and yielded in to stop erosion.

I see borrow pits as the most acute and traumatic cause of erosion to St. Bernard Parish. If you are against erosion you have to be against borrow pits.

We are fighting for levees to protect us and then we have to fight not to dig our good high land inside the levee system. Why dig out the land we are trying to protect?

If there is no other way please consider back-fill.

Sincerely,
 Donald Serpas Sr.

DS 1

DS 2

DS 1: An extraordinary quantity of borrow material is needed to construct the hurricane protection system to the levels required to provide protection for the people of the Greater New Orleans area. CEMVN's priority in the New Orleans area is public safety and it is working hard to balance out the impacts of providing protection against the impacts on the people and land in the area. CEMVN is considering several alternatives to earthen levees that would change the quantity of borrow material needed. Alternatives such as T-wall floodwalls and hollow core levees are being evaluated on a project by project basis under IERs that are specific to the levees projects. The Corps is charged with being a good steward of the land and the tax payers' dollars, as such we are analyzing what alternatives will have the least impacts to the land and the people while still meeting the best and wisest use of tax payers dollars. For example, in areas where both T-walls and earthen levees are equally effective protection measures, the earthen levee is selected based on cost criteria.

DS 2: The feasibility of backfilling borrow areas is currently being investigated by CEMVN.

Letter # 2: Catherine Serpas, 27 November 2007
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November 9, 2007
Catherine Serpas
2012 Pecan Hill
St. Bernard, LA 70085

Mr. Dick Owen
U.S. Army Corps of Engineers
P.M. - R.S.
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Owen:

Thank you for accepting my comments regarding the U.S. Army of Engineer Environmental Report #18. My comments are primarily on St. Bernard Parish. I am fully against borrow pits being dug in St. Bernard Parish. It seems to me that with the intelligence of the Corps you could come up with other ways for us to be protected than by digging up to 5000 to 6000 acres of St. Bernard for mud and the very thought that pits that were and would be dug would not be best-filled is not acceptable. Some of the sites are located very close to my home one within 200 ft - others in walking distance. I am against borrow pits in St. Bernard Parish.

Sincerely,
Catherine Serpas
Home Resident of Eastern St. Bernard

NOU-28-2007 09:41:19 FROM: CHARLETTE BIKE 5042713565 TO: 96228988 P. 2

CS 1 CS 2 CS 3

CS 1: IERS 1 through 17 will evaluate alternative designs of levee and floodwall projects, some of which could require less borrow material to accomplish. Additionally, the feasibility of backfilling borrow areas is currently being investigated by CEMVN.

CS 2: It is recognized that some of the proposed borrow sites are located near homes. The language in IER 19 will be revised to reflect that some of the proposed St. Bernard borrow areas are adjacent to residential properties. The Corps is committed to working with the owners of Contractor Furnished pits to ensure that they implement required safety and Occupational Safety and Health Administration (OSHA) regulations as well as follow required Best Management Practices for pit design, location, storm water runoff.

CS 3: CEMVN is investigating borrow areas both inside and outside the levee system throughout the New Orleans Metropolitan area and in other areas of the state and Mississippi. Visit http://www.mvn.usace.army.mil/hps/borrow_pits_home.htm for more information.

Letter # 3: Charles Leon, 4 December 2007
Page 1 of 1

From: charlesleon@cox.net [mailto:charlesleon@cox.net]
Sent: Tuesday, December 04, 2007 8:00 AM
To: MUN Environmental
Subject: NOLA Environmental Comment - General Comment

Good Morning:
The barrow pits are my concern. The massive amount of pits would further deplete the quality of life and future economic growth of the region. It would scar the region. Hopefully an alternative such as concrete T-Walls would be an alternative.

Thank you and we appreciate the work which the Corps of Engineers is doing.

Sincerely,
Charles Leon

CL1

CL 1: IERs #1 through #17 will evaluate alternative designs of levee and floodwall projects so that the best engineering solution can be achieved. CEMVN is considering the alternative of using T-walls in all levee and floodwall projects; however, the first priority is creating the most safe and effective hurricane protection system possible.



Louisiana Audubon Council
 1522 Lowerline St., New Orleans, LA 70118

December 4, 2007

Mr. Gib Owen, CEMVN-PM-RS
 USACE, Planning, Programs Mgt. Div.
 Environ. Planning and Compliance Branch
 P.O. Box 60267
 New Orleans, LA 70160-0267

Re: IER #19, Pre-Approved Contractor Furnished Borrow Material

Dear Mr. Owen,

We have reviewed the Individual Environmental Report (IER #19) and request that these comments be included in the public record for this IER. The application of NEPA requires the Corps to explain its rationale which leads to the selection or rejection of borrow sites. This course of action is missing in IER #18 and 19. The post-Katrina borrow standards for soils are more restrictive and therefore this IER should address the logic of the decision making process leading to the selection or rejection of entire or portions of borrow sites under consideration.

The omission of the Corps' new sediment (soil) criteria for borrow used in post-Katrina levees is a major NEPA deficiency in both IER #18 and #19. We, therefore, consider both IERs grossly inadequate. We insist that these two IERs be expanded to discuss, thoroughly, the implications of using borrow under the old and new sediment criteria.

The Federal Register (U.S. DOD, 2007; item number 4) mandates that, "Prior to any decision to proceed with proposed actions, CEMVN will complete an IER that documents the decision-making process followed by the USACE," This decision making process has not been documented in either IER #18 or 19.

The failures of many levees protecting the greater New Orleans area can be attributed to the use of substandard soils which did not meet the engineering criteria needed for a hurricane worthy levee system. Hence, the Corps' change (improvement) in its sediment criteria.

Have either of these documents (IER #18 and 19) been reviewed by a Corps' Geologist? I did not see a geologist named as a preparer of either document (sect. 9.2). If not, include one in the preparation of the revised IERs and cite by name.

Criteria for selection of soils for borrow (pre and post-Katrina)?

A USACE (2007a) memo outlines the changes in the selection of embankment material (borrow) for use in post-Katrina levee building and the new criteria which were provided by the CEMVN Geotech Branch. We assume this is an admission that the pre-Katrina standards were inadequate. We want to be sure that these new standards are going to be used for the selection of soils for the rebuilding of the New Orleans levee system.

These new standards must be included in the borrow documents (IER #18, 19), since the new standards have a bearing on the success of the new levee structure and the environmental consequences. If there have been any additional changes to the standards since the 8/28/07 memo, we request that they be included in the revised IER #18 and 19. We also request that documentation of soil analyses for each borrow site be included in the revised IERs. These analyses should be matched to the new criteria to

LAC 12/3/07

1

LAC 1 LAC 2 LAC 3 LAC 4 LAC 5 LAC 6 LAC 7

LAC 1: The intent of NEPA is to investigate the impacts of the Government's proposed action on the natural and human environment. There are a number of reasons that a potential borrow area would be removed from consideration, such as the presence of wetlands, potential unavoidable impacts to a known cultural resource or a threatened or endangered (T&E) species, or the presence of a hazardous, toxic, and/or radioactive waste (HTRW) material that could not be avoided. Additionally, CEMVN has established specific soil standards that all borrow material must meet in order to be used for constructing the Federal Hurricane Protection System (HPS). CEMVN Engineering staff evaluates the geotechnical information from each site and makes a determination as to the acceptability of the material. Soils either meet the standard or do not meet the standard which is the basis for accepting or rejecting a site based on geotechnical evaluations.

LAC 2: Soil criteria are:

- Soils classified as clays (CH or CL) are allowed as per the Unified Soils Classification System;
- Soils with organic contents greater than 9% are not allowed;
- Soils with plasticity indices (PI) less than 10 are not allowed;
- Soils classified as Silts (ML) are not allowed;
- Clays will not have more than 35% sand content.

IER #19 has been updated to include the soil standards listed above. References to soil standards discussed in this report are referring to the standards described above. A discussion of past soil standards is not considered relevant to the decision being made on the proposed Federal action, and as such is not being discussed in IER #19. Visit http://www.mvn.usace.army.mil/hps/soil_boring_factsheet.htm for more information.

LAC 3: CEMVN has identified a need for an amount of borrow material in excess of 100 million cubic yards to construct the proposed HPS. The intent of IER 19 is to provide an analysis of the sites that have been proposed to CEMVN by private individuals or companies that wish to voluntarily provide borrow material to the HPS project. Proposed borrow areas either meet or don't meet the criteria that have been established, as discussed in LAC 2. IER 19 clearly lays out the investigative process that was followed and the decision rationale for selecting potential borrow sites. Because of the extraordinary quantity of material needed sites that meet all of the Government criteria would be approved for use.

Letter # 3: Louisiana Audubon Council, 4 December 2007
Page 1 of 7

LAC 4: Soils of all existing levees that are part of the HPS have been evaluated or are under-going evaluation to determine if they conform to current CEMVN standards. Any levees found not to meet these standards are being rebuilt to meet the standards. Much of this rebuilding work has already occurred (i.e., under Task Force Guardian). The process is constantly being looked at and improved so that USACE provides the best and safest system possible.

LAC 5: The information submitted by any landowners or corporations for use on the HPS is reviewed and approved by a CEMVN Geotechnical Branch staff.

LAC 6: All CEMVN design standards are reevaluated on occasion and are updated when necessary in response to new data and technologies. Soil standards have been reevaluated and will be adhered to when selecting soils to be used for construction of the HPS.

LAC 7: CEMVN soil standards are listed in LAC 2 and have been included in IER #19. A discussion of the soil analysis performed for each site under investigation is not considered relevant to the decision being made for the proposed Federal action. The soils at the sites either meet CEMVN soil standards or they don't. If a potential borrow area does not meet all of the CEMVN standards as discussed in LAC 1 and LAC 2 then the site is declined for use as a Federal borrow source.

Letter # 3: Louisiana Audubon Council, 4 December 2007

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assure that the borrow passes the new soil tests. The documents used to detail the changes in soil standards be should be referenced in the revised IERs.

According to the USACE (2007a) memo, (see reference section) the following are the differences in embankment material prior and post Katrina used by the USACE.

"In all levee embankment specifications, allowable soil materials are more stringent than prior to Hurricane Katrina. In particular:

Bold is the present requirements; (Before is prior to Hurricane Katrina)

• **Soils after placement with organic contents greater than 9% are not allowed**
(Before - not tested - prior specs stated free from masses of peat and humus)

• **Soils with plasticity indices (PI) less than 10 are not allowed**
(Before - PI less than 5 was not allowed; ML material allowed)

• **Soils classified as Silts (ML) are not allowed**
(Before - ML material allowed)

• **Only soils classified as clays (CH or CL) are allowed"**

"Bottom line is we're more selective in materials utilized - there is an organic content limit that wasn't there before and we no longer accept silty materials ML, CH & CL's are still acceptable - more clayey materials are being utilized." (USACE, 2007a)

ML = silts and very fine sands

CL = lean clays (low to medium plasticity)

CH = fat clays (high plasticity) USACE (2007b)

I have been told that there is also a review of the maximum amount of sand that can be used in the borrow material for levee construction. The USDA classification allows clays to have as much as 45% sand content. What is the Corps' standard in regard to the inclusion of sand sized material in borrow?

Omission of data:

Based on the statements in IER #18, and #19, the documents exclude discussion of the additional 11.4 million cubic yards (mcyds) of borrow required for the levees. This is 76% of the 150 mcyds of borrow - a majority of that required (IER #18 only includes 18% of the required borrow while IER # 19 includes only 6% of the required borrow). When will the location of the additional borrow sites be discussed? Will there be another IER? (For additional Louisiana sites? For contractor sites outside Louisiana?) If so, when will the supplemental IERs be provided to the public and the "external engineering peer review"?

QA/QC process?

How will the Corps assure that the soils to be used in the levee system will meet the new Corps' standards? A quality assurance/quality control process must be in place - but this is not discussed or presented in either IER #18 or 19. How will the borrow pits be monitored to be sure that soils extracted meet the engineering requirements? Will inspectors check the quality of borrow delivered to the levee sites? The report discusses "suitable" soils but does not define what they are (see additional comments below).

External engineering peer review?

Federal Register 3/13/07, section 7, states that, "an external engineering peer review of the proposed levees and floodwalls work will be made as soon as practicable and no later than the publication of the draft CED" (Comprehensive Environmental Document).

LAC 12/3/07

2

LAC 8: CEMVN soil standards allow no more than 35% sand content in levees.

LAC 9: IERs #18 and #19 discuss specific potential borrow locations and quantities of borrow available at those sites that have been identified to date. CEMVN recognizes that the potential borrow areas will not provide all borrow currently estimated required for the proposed HPS. CEMVN is pursuing all avenues for locating borrow material and as such there are no limitation on location (in state or out of state) for potential borrow sites if they meet all criteria discussed in LAC 1, and are reasonably priced. Currently three avenues are being pursued by CEMVN to obtain borrow material: Government Furnished (GF) (Government acquires rights to property), Pre-Approved Contractor Furnished (CF) (landowner and construction contractor work in partnership to provide borrow), and Supply Contract (SC) (corporation delivers borrow material to a designated location for use by construction contractor). See LAC 28.

LAC 10: As additional potential borrow areas are located and investigated, CEMVN will complete additional borrow IERs. Future IERs addressing borrow needs include IER #22, entitled Government Furnished Borrow Material #2, and IER #23, entitled Pre-Approved Contractor Furnished Borrow Material #2. These IERs are expected to be ready for public review in March or April 2008. Other IERs will be prepared as additional potential borrow sites are identified. A borrow handout has been available at public meetings since July 2007 and is updated often to show all investigated sites, approved sites and declined sites. The handouts are available at www.nolaenvironmental.gov.

The USACE Hurricane and Storm Damage Reduction System Design Guidelines, of which the soil standards previously discussed are a part, are reviewed and updated as necessary to ensure that the Corps is constructing the safest levees possible. Changes to the guidelines are reviewed and approved by USACE experts at the local, regional and headquarters level; additional reviews are completed by academia and private individuals who are recognized experts in their fields. Additionally, the guidelines being utilized by CEMVN have been reviewed by members of the Interagency Performance Evaluation Team (IPEET). The design guidelines may be updated from time to time to respond to new engineering analysis of improved technology, innovative processes, or new data. An implementation plan for an external review should be finalized in February 2008.

LAC 11: Approval of a potential borrow site requires a determination that the soil located at the site meets CEMVN suitability criteria. The contractor excavating the soil will have a geologist on site to ensure that objectionable (unsuitable) material is cast aside as per USACE design specifications. Additionally, quality control of the material to be placed on a levee is performed. The levee contractor is required to test soil classification, moisture content, organic content, sand content, plasticity, and density at a minimum of every 1,500 cubic yards of placed material, or each 500 linear feet of placed material per 12-inch lift. Quality assurance of the entire project is provided by USACE Quality Assurance Representatives who would oversee the operation at the borrow site as well as the levee construction site.

LAC 12: See LAC 2.

LAC 13

Who will conduct the peer review? Will there be outside engineers, unaffiliated with the USACE, or will it be engineers from other Corps' Districts? A completely independent review of the projects is warranted to provide the Corps with credibility.

Agency coordination?

When will the public be able to see the agency comments and review them so that they can submit additional comments for the record. The NEPA process provides agency input on the draft EIS. There is also a final EIS with all the comments and an opportunity for public review and comment also. Will the IERs follow this process? It is also stated that

Figures:

There should be an index map showing all the borrow sites cited in this IER. A series of figures entitled "Borrow Team Acquisition Plan" were handed out at the Corps' 9/25/07 public meeting. These figures showed all the government and contractor borrow sites proposed in IER 18 and 19 on a parish by parish basis. Similar figures should be included for both borrow site IERs.

The following comments relate to each referenced section.

Sect. 1: Introduction:

"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." There should be an engineering definition of the term "suitable". The term "suitable" is used 23 times in IER #19 but there is no definition. What is suitable borrow? Wasn't unsuitable material used in the 17th Street Canal levee and the London Canal levee? What engineering characteristics make the borrow "suitable" for use in the hurricane protection levees? (see previous discussion under Criteria for selection of...)

Sect. 1.3. Prior Reports:

Many of the reports outlined in this section were completed before the Corps changed its sediment borrow criteria, post-Katrina. The pre-Katrina reports should be updated to reflect the new borrow standards for sediment to be used in rebuilding the hurricane levee systems. We know the failure of the 17th Street Canal and the London Canal levees were due to poor soil foundations which would not pass the post-Katrina sediment criteria (e.g. thick peat layers below the tip of sheet piling (17th St levee), massive sand layers (London Canal levee)). Neither of these levees would be acceptable with the new sediment criteria for levee embankments - given the high percent of peat and sand within critical depths of these levees. Borings taken by the Corps in each levee site showed questionable soil characteristics at the time (at the depths of the levee failures).

Therefore, each of the cited EAs, prepared before Katrina, should be amended to reflect the new sediment criteria and whether the borrow documented in the older EAs are still acceptable for post-Katrina use.

The list of EAs and prior reports includes:

(1) "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."

(2) "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."

As an example that there should be a review of existing EAs, the first (1) reports on the London Avenue Outfall Canal, which gave way to rising water because of poor foundation characteristics (sand

LAC, 12/3/07

LAC 14 15 16

LAC 17

LAC 18

LAC 13: The USACE Hurricane and Storm Damage Reduction System Design Guidelines, of which the soil standards previously discussed are a part, are reviewed and updated as necessary to ensure that the Corps is constructing the safest levees possible. Changes to the guidelines are reviewed and approved by USACE experts at the local, regional and headquarters level; additional reviews are completed by academia and private individuals who are recognized experts in their fields. Additionally, the guidelines being utilized by CEMVN have been reviewed by members of the Interagency Performance Evaluation Team (IPET). The design guidelines may be updated from time to time to respond to new engineering analysis of improved technology, innovative processes, or new data. An implementation plan for an external review should be finalized in February 2008.

LAC 14: USFWS, Louisiana Department of Wildlife and Fisheries (LaWLF), and NOAA National Marine Fisheries Service (NMFS) provided comments to CEMVN regarding the proposed work discussed in IER #19 during the 30-day public comment period. Governmental agency correspondence has been added, with copies of letters from the various agencies provided in IER #19 and in this Addendum.

LAC 15: CEMVN implemented Alternative Arrangements under the provisions of the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA. The normal NEPA procedures focus on substantive comments (see the CEQ regulations provisions on commenting at 40 CFR §1503). It would be inconsistent with the purpose of the emergency Alternative Arrangements to require additional time and process to address favorable or supportive comments, or comments that do not raise substantive issues with regard to the environmental analysis. Consequently, the Alternative Arrangements provide discretion in determining whether comments on an IER are substantive and merit a response in an IER Addendum.

LAC 16: IER #19 has been updated to include an index map that shows the location of all proposed borrow areas investigated under this IER (Figure 1 in IER #19). A copy of the updated IER is available at www.nolaenvironmental.gov or by contacting CEMVN.

LAC 17: See LAC 2.

LAC 18: The updated soil standards caused no new impacts that were not addressed in pre-Katrina documents, so a re-evaluation of past Federal decisions is not warranted. All borrow areas, as well as potential future borrow areas, are evaluated and only soils that meet the soils standards will be utilized.

blowout). The second (2) Orleans Avenue Outfall Canal was never completed and the water went around the I-610 to pump station segment which was 5 ft below the top of the flood wall and remains incomplete. Because of these engineering failures, the existence of prior reports does not mean that the problems have been solved or that they were properly studied. How can we be sure that the pre-Katrina borrow site IAs were rigorous enough to have considered the proper borrow criteria for the new levee system? Independent reports documented improper sediments being used in new levee construction after Katrina.

Sect. 1.4: Draft Comprehensive Environ. Doc. (DCED)

How will this document be structured when IER #18 and #19 together only cover the impacts of 24% of the borrow needed for levee construction? Will the document be amended to cover other borrow sites which must make up the remaining 76% of the borrow required? How will the cumulative environment impacts of all the borrow extraction be accomplished? When will the impacts of transportation of all the borrow be studied to determine the affects on communities?

Sect. 1.6: Data Gaps and Uncertainties:

A significant data gap is the omission of the new soil criteria as well as the information on the types (USDA classification) of soils which are acceptable ("suitable") based on the new criteria for soils to be used for levee building. Seventy-six percent of the contractor and government furnished borrow, estimated to be needed in the rebuilding process, is not included in either IER. This is a total of 114 mcyds of borrow not covered in either document.

How are these data gaps going to be closed? Will there be new IERs on the remaining borrow sites to complete the total needed?

"Large quantities of material . . . 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."

The Federal Register (4/13/07) does not mention an IER that is specific to transportation impacts. Which numbered IER will it be? When will it be available for public review?

As the borrow pits are used, many will fill with water. We have noticed that portable pumping stations are used to remove the ground and rain water from the excavation sites. Won't these pumps, which are a point source of pollution, need an NPDES permit?

Sect. 2.4: Alternatives to proposed actions:

"The Bohemia area is located on the north side of Highway 15 in Plaquemines Parish. The 146 acre area was declined because of unsuitable soil conditions." Explain why these soils are unsuitable for borrow. Provide an engineering definition of suitable soils.

Why aren't other alternatives considered? Where are the criteria for accepting or rejecting alternative sites?

Sect. 3. Affected Environment and Environmental Consequences:

"Some concern was noted regarding the possible presence of contaminants in the soil within the floodway because water from the Mississippi River flows over the site during spillway openings." (See comments below at Sect. 3.4).

Sect. 3.1 Environmental Setting: - Soils:

This should be a major portion of the IER since it is about the quality of borrow to be used in rebuilding the levee system. It should be expanded to include the consequences of not utilizing the correct type of soils for levees. The human environmental consequences of levee failure should be a significant concern. Why is the Corps prospecting for soils in different areas outside the state. Is it because of the new soil criteria? Explain.

The borrow quality also relates to wetlands use. Wetland soils generally are higher in organic matter which is to be avoided according to the new soil criteria. Therefore, a clear definition of "suitable" soils is needed to determine which wetland areas will be avoided as future borrow sites.

LAC 12/30/07

4

LAC 19

LAC 19: See LAC 11.

LAC 20 21

LAC 20: See LAC 9 and LAC 10. Cumulative impacts of borrow activities is an acknowledge data gap that will be addressed in future IERs as more information becomes available. Also, a Comprehensive Environmental Document (CED) will be written to discuss the cumulative impacts of all the HPS activities.

LAC 21: Transportation is an acknowledged data gap that will be addressed in future IERs as information becomes available. A task order was issued to David Miller & Associates on 5 December 2007 to complete a comprehensive transportation study for the proposed HPS projects. Information from this study will be incorporated into future IERs and the CED where appropriate.

LAC 22: See LAC 2 and LAC 10.

LAC 23: See LAC 21.

LAC 23 24

LAC 24: Borrow contractors will implement Best Management Practices (BMP), including standard USACE storm water prevention requirements at all borrow area locations. It is the intent of CEMVN to not discharge any waters off site from a borrow pit during mining operations. Should this become necessary a National Pollutant Discharge Elimination System (NPDES) permit would be obtained, if required.

("Sec. 2.4.4."): The proposed Bohemia borrow area is a Government Furnished site and is addressed in IER 18 and the IER 18 Addendum. Soils analyzed from the proposed Bohemia site do not meet CEMVN standards, and the site has been eliminated from further consideration. See LAC 2 for definition of suitable soil standards.

("Sec. 3.3."): The proposed Bonnet Carré borrow area is a Government Furnished site and is addressed in IER 18 and the IER 18 Addendum.

LAC 25: See LAC 2 and LAC 9.

LAC 26 – LAC 27: See LAC 2.

LAC 25 26 27 28 28a

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LAC 28: CEMVN is pursuing three avenues of obtaining the estimated 100 million cubic yards of borrow material needed for HPS construction. The three avenues that are being pursued by CEMVN to obtain borrow material are Government Furnished (Government acquires rights to property), Pre-Approved Contractor Furnished (landowner and construction contractor work in partnership to provide borrow material), and Supply Contract (corporation delivers borrow material to a designated location for use by construction contractor). Two of the avenues being pursued (Pre-Approved Contractor Furnished and Supply Contract) allow a private individual or corporation to propose a site where borrow material could come from. It is possible that some of the Contractor Furnished and Supply Contract sources of borrow material may come from outside of the state of Louisiana. Currently, CEMVN is not investigating any potential borrow sources outside of the state under the Government Furnished alternative. However, if it should become in the Government's best interest to look at a potential borrow area outside the state the Government could do so.

LAC 28a: Material from a wetlands site would only utilized if CEMVN determines that all reasonable and practicable non-wetland areas have been investigated. If that occurs and wetland areas are investigated then soils will undergo the same rigorous geotechnical investigation required for borrow material. See LAC 2.

LAC 29

Table 1. This table omits the shrink-swell potential of the soils provided in Table 1 of IER #18. Why were these data omitted in IER #19? The table should be expanded to provide more documentation on the types of soils and the consequences of using them in levee building - not less. At least be consistent.

"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."

Again, the document should explain the criteria used to accept or reject the borrow material. Include the criteria used to quantify what soils are "suitable" for use. IER #18 and IER #19 documents are silent on this.

- Other issues/info to be addressed in this section:
- What was the length of borings used? Greater than 20 ft?
 - Include a chart with the analyses for each soil type and a typical boring or composite from each borrow site.
 - Since this section is very important to the IER (it is about soils) expand to include a matrix of the results of geotech testing and soil analysis for each site accepted or rejected for borrow.
 - Include a section on how the results are used when applied to the new borrow criteria. (see previous discussion)
 - Methodology was discussed but no results (soils analysis) are presented
 - An explanation of what is "suitable soil" needs to be included here. (see earlier discussion)
 - How are the decisions made in selecting borrow inside and outside the levee systems?
 - Include Q&A/QC in this section. (see comments above).

Soil types to be used:

LAC 30

1). River Birch Phase 1 and 2: both sites are classified as having **Barbary Soils**. Barbary soils are described by USDA (1983) as poor for road fill because of the low strength, wetness and shrink-swell. They are also described as montmorillonitic and classified as MH -clastic silt; and OH - organic clay or silt. They have very high shrink-swell potential and are considered to have severe limitations for use as embankments, dikes and levees.

A section should be added to discuss how these soils can be used, based on the USDA descriptions that these soils contain buried logs, stumps and wood fragments. If this soil type is going to be utilized, discuss in the revised IER #19 how the soil will meet the new criteria for use in levees.

- Limitations for embankments, dikes and levees (USDA, 1983)
Barbary soils: "Severe; excess humus, hard to pack, ponding."

LAC 39

2). Eastover Site: This site is described as being composed of Harahan clay and Allennands muck. Harahan clay and Allennands muck also have very high shrink-swell potential. They contain soils defined by USDA as OH, MH and CH. Are OH and MH soils permitted under the new soils criteria? If not, how does the Corps avoid using these soils if the Eastover site is accepted. How does Allennands muck pass the new sediment criteria?

- Limitations for embankments, dikes and levees (USDA, 1983)
Allennands muck: "Severe; piping, ponding and excess humus."
Harahan: "Severe; excess humus, hard to pack, wetness"

Sect. 3.2.1: Jurisdictional wetlands:

"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." Does this statement mean that permits may be issued in the future? Seventy-six percent of the settlements needed for levee building have not been identified. While avoiding wetlands is a laudable goal, will wetlands, now avoided, be included in the future to make

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LAC 29: The shrink-swell potential of the soils as presented in IER 18 and omitted in IER 19 is not considered to be a valuable assessment of the soils. These tables present data from the US Department of Agriculture (USDA) National Resource Conservation Service (NRCS) Web Soil Surveys, and are a general description of the condition of the type of soil, not necessarily that of the soil present at a proposed borrow area. The USDA typically classifies only the surface layer (the first 80 inches) of the soil present at any given location and does not provide any information for the underlying soil. Additionally, information provided by the USDA, such as the shrink-swell potential, describes only the virgin condition of the soil, not the compacted condition of the soil. Expansion of the table to provide more documentation of the types of soil that may be used, as classified by the USDA, and the consequences of using these soils is not considered relevant to the IERs, and as such these tables have been removed from both IERs. The USDA classification of soils is not used to determine suitability of the material for use in levees. Soil suitability is determined as per the standards discussed in LAC 2.

LAC 30: See LAC 2.

LAC 31-37: Soil boring depths vary and are determined on a site-specific basis. The depth of the boring is typically 5 feet deeper than the planned excavation. The inclusion of the following information is not considered relevant to the environmental impact analysis process, and was not included in the IER: analysis of each soil type; typical boring from each borrow site; results matrix; and the application of borrow criteria.

LAC 38: CEMVN is investigating all reasonable and practicable sites via the three avenues discussed in LAC 28. Whether the area is inside or outside of a levee system has no bearing on a decision to utilize a potential borrow site.

LAC 29

LAC 30 **LAC 31** **33** **35** **37**
32 **34** **36** **38**

LAC 39

LAC 40
41

LAC 42

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LAC 39-41: See LAC 29. USDA classifications of soils were not used to determine soil suitability for potential borrow material. Comprehensive soil suitability is determined by CEMVN by analyzing borings taken on 500 feet spacings over the entire proposed site. Samples from these borings are then taken to an approved geotechnical laboratory where detailed soils tests are performed to assess the material as to its ability to meet the soil standards discussed in LAC 2. All potential borrow areas have the potential for the presence of some material that will be considered objectionable (unsuitable), such as buried logs, stumps, and wood fragments. See LAC 2.

LAC 42: CEMVN is working diligently to avoid impacts to jurisdictional wetlands associated with providing borrow material for HPS projects. CEMVN selection prioritization of potential borrow areas (Section 2.1 in IER #19), as well as USFWS guidance (letter dated 7 August, 2006 in Appendix D of IER #19), relating to impacts to jurisdictional wetlands are and will continue to be followed. It is possible that once CEMVN has determined that due diligence of reasonable and practicable alternatives for avoiding wetland sites has been completed, wetland sites could be investigated for use as potential borrow sources. At that time the CEMVN Regulatory Branch could reexamine the purpose and need (related solely to the proposed HPS projects) of any permit applications involving wetland areas. CEMVN will coordinate with governmental agencies and the public if jurisdictional wetlands may be impacted during future proposed borrow activities. CEMVN will mitigate impacts to jurisdictional wetlands, as required by law.

LAC 43: See LAC 42.

LAC 44: A discussion on the impacts of mosquitoes has been included in IER 19. While the proposed the borrow areas, if constructed, have the potential for becoming mosquito breeding areas, the amount of surface acres of water is considered to be small compared to surrounding wetlands. Mosquito control would be implemented by the parish and would conform to its existing plan for controlling mosquitoes.

LAC 45: If it is determined that water can not be contained on-site then any required NPDES permits would be obtained.

LAC 46: Additional borrow material will be needed by the local non-Federal sponsor to perform operation and maintenance of the HPS over the life of the project. CEMVN expects that additional borrow material needed for this purpose would be identified as the need becomes evident, and any required environmental compliance, analysis, and testing would be completed at that time.

LAC 47: See LAC 2.

LAC 48: IERs 18 and 19 were discussed at four public meetings in July 2007 (in Belle Chasse, Avondale, New Orleans East, and St. Charles Parish). Borrow handouts detailing the HPS need and the potential borrow sources have been made available at all public meetings since July 2007, and are available at www.nolaenvironmental.gov. Discussions concerning borrow have occurred at some of the public meetings in response to questions asked by the public. Borrow issues in St. Bernard Parish were discussed at length at a public meeting in St. Bernard on 24 October, 2007.

LAC 49: Non-governmental organizations (NGOs) as well as all interested stakeholders have had the opportunity to participate in the planning process and to provide input about proposed HPS work since the process started in March 2007. NGOs have had the opportunity to provide written comments through the mail, and through www.nolaenvironmental.gov, as well as at public meetings. In addition, a public meeting held on 1 November 2007 at the request of several NGOs was targeted to provide detailed information to these groups concerning the entire HPS.

LAC 43 **LAC 44 45** **LAC 46** **LAC 47 LAC 48** **LAC 49 50 51** **LAC 52 LAC 53 LAC 54**

up the shortfall in borrow? Will wetlands outside the levee system be used for contractor borrow in the future?

We hope that this wetland avoidance will be consistent throughout the borrow excavation process. Other borrow pits, excavated for the WB&V Hurricane Protection Project, are located in wetland areas.

Sect. 3.2.12: Water Quality:
 What will be the environmental consequences of borrow pits, which when filled with water, will be mosquito breeding areas. How will disease vectors at the new sites be controlled? This is an environmental health issue and must be discussed in the IER.
 "In some cases the borrow areas may need to be drained with the use of a sump pump." Won't an NPDES permit be required for this potentially polluting point source?

Sect. 4: Cumulative Impacts:
 "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."
 Does this mean that additional material in excess of 150 mcyds estimated will be needed for levee maintenance? If so, what will be the impacts and how much additional borrow will be needed in the future based on subsidence and compaction?

Sect. 5: Selection Rationale
 There is no discussion of the borrow criteria to be used in rejecting soils which would not meet the post-Katrina criteria.

Sect. 6.1: Public Involvement
 There were no formal discussions of the borrow sites at any of the public meetings I attended. The handout which was provided at the Sept 25, '07 and Nov. 29, '07 meetings did not include discussion of the new sediment criteria.

Sect. 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."
 Which environmental groups were involved in preparation of this IER? Name them. We are unaware of the involvement of any environmental groups in preparation of this IER. Were there meetings with public interest groups to discuss the preparation of IER #19?
 There are a series of recommendations listed as sourced from the USF&WS and Corps' responses. Include the draft coordination act document (dated Nov. 1, 2007) from the USF&WS as an addendum in the revised IERs. We would like to read the entire text.
 Was there any other input from federal or state agencies in regard to the selection or rejection process of borrow sites? Was there input from the USGS?

Summary:
 Based on the Corps' estimate, IER #18, and 19 address only 24% of borrow required to rebuild the levee system. Therefore, there is a net deficit of 114 mcyds (or 76 %) of the total volume of borrow required by the Corps. The Federal Register (U.S. DOD, 2007) does not mention additional IERs for the remainder of the borrow needed for the levee system. Will there be additional revisions of IER #18 and 19 which add additional borrow sites not included in the draft IERs? If so, when will they be prepared and will the public be able to comment?
 The Corps must lay out the criteria used in the selection or rejection of borrow sites. This information is basic to this IER. These new criteria are not addressed in IER #18 or 19, as required by NEPA. The Corps' rationale must be explained as part of the decision making process (U.S. DOD, 2007).
 Section 7 of the Federal Register (3/13/07) requires "an external engineering peer review of the proposed levees and floodwalls". Will this also include an analysis of the borrow material used for the
 LAC, 12/3/07

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LAC 50: The USFWS Coordination Act Report along with other agency correspondence and comment received in regards to the proposed Federal action discussed in IER 19 is included in Section 2 of this Addendum and as a part of Appendix D in IER #19. Copies of the updated IERs are available at www.nolaenvironmental.gov or by contacting CEMVN.

LAC 51: The USFWS, US Environmental Protection Agency (EPA), NMFS, US Geologic Survey (USGS), Louisiana Department of Natural Resources (LaDNR), and LaWLF were and will continue to be included in the planning process. Members of the interagency team are listed in Appendix C of IER 19. These agencies, as well as the public and NGOs, had the opportunity to comment during the public review period. Comments from governmental agencies are found in Section 2 of this Addendum. USGS did not submit a comment during the public comment period.

LAC 52: See LAC 10.

LAC 53: The soils at the proposed borrow areas discussed in IER #19, as well as all other proposed borrow areas, must meet current CEMVN soil standards as discussed in LAC 2 in order to be considered suitable for HPS construction. The selection rationale as discussed in IER 19 is that a site has to meet all of the CEMVN criteria discussed in LAC 1 and LAC 2 for it to be considered as a potential borrow site where material could be taken from for use on the HPS levees.

LAC 54: The USACE Hurricane and Storm Damage Reduction System Design Guidelines, of which the soil standards previously discussed are a part, are reviewed and updated as necessary to ensure that the Corps is constructing the safest levees possible. Changes to the guidelines are reviewed and approved by USACE experts at the local, regional and headquarters level; additional reviews are completed by academia and private individuals who are recognized experts in their fields. Additionally, the guidelines being utilized by CEMVN have been reviewed by members of the Interagency Performance Evaluation Team (IPET). The design guidelines may be updated from time to time to respond to new engineering analysis of improved technology, innovative processes, or new data. An implementation plan for an external review should be finalized in February 2008.

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levees? Will this peer review be accomplished with Corps personnel or outside engineers and geologists paid by the Corps?
We request a public meeting to discuss both IER #18 and 19 as required in section 6 of the Federal Register (3/13/07). Please inform us when the public meetings will be scheduled on the borrow IERs and whether revised IERs will be prepared.

Sincerely,

(sent by electronic mail)

Barry Kohl, Ph.D., Geologist
President, LAC

cc: Horst Grczmiel, CEO
Gulf Restoration Network (GRN)
Lake Pontchartrain Basin Found (LPBF)
National Audubon Society (NAS)
Sierra Club, Delta Chapter
EPA
USF&WS

References:

- USACE, 2007a. Memo outlining sediment criteria used pre-Katrina and post-Katrina for use in embankment material (hurricane protection levees). Gib Owen, USACE to Barry Kohl dated, August 28, 2007.
- USACE 2007b, Hurricane and Storm Damage Reduction System Design Guidelines. New Orleans District Engineering Division, Oct. 23, 2007.
- U.S. DOD, 2007. Department of the Army; Corps of Engineers: Adoption of Alternative Arrangements under the National Environmental Policy Act for New Orleans Hurricane and Storm Damage Reduction System. Federal Register, vol. 72, n. 48, p. 11337-11340.
- USDA, 1983. Soil Survey of Jefferson Parish, Louisiana. Soil Conservation Service, 95 pp., 43 maps.

LAC, 12/3/07

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LAC 55

LAC 55: The requested public meeting was held on 10 December, 2007.

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Louis Barrett
 2533 Bayou Rd.
 St. Bernard, La. 70085

December 6, 2007

Mr. Gib Owen
 U.S. Army Corps of Engineers
 PM-RS
 PO Box 60267
 New Orleans, LA 70160-0267

Re: Individual Environmental Report #19

Dear Mr. Owen:

Please accept my following comments and concerns regarding the U.S. Army Corps of Engineers Individual Environmental Report #19. As a St. Bernard Parish resident, my comments are primarily constrained to its effects on St. Bernard Parish.

While recognizing that hurricane protection for the region is vital and urgent, I am also seriously concerned of the impact on the community by several parts of IER#19 as currently stated.

General Comments

First and foremost, I believe the logic of cannibalizing the area within the levees by excavating large borrow pits within this protected area is seriously flawed. The three sites in St. Bernard listed in IER#19 are within the levee protection area. Excavating large borrow pits in the eastern St. Bernard Parish only accelerates the destruction of this coastal parish instead of preserving, restoring, and rebuilding it. The Corps of Engineers should be taking the position of being a premier guardian of the coastal parishes, instead of a participant in their destruction.

The public participation for this and other related projects is inadequate. Information about this IER and the Corps of Engineers related projects has not reached the majority of the people in the community. Notification of public meetings has also been inadequate. These notices should be much more than a small ad in newspapers. Information on these projects is difficult to find on the Corps of Engineers websites and especially so for anyone with less than proficient computer skills. Also, many concerned people in the community are preoccupied with rebuilding their lives and property after the devastation of Katrina and do not have the time to devote to searching for information on these projects. The Corps of Engineers and local government should reach out to the people in the community to inform them of the impact of these projects. The public comment period should be extended bearing these facts plus given the fact that the comment period is over the Thanksgiving holidays.

LB 1

LB 2

LB 3

LB 1: CEMVN's mission is to ensure the safety of the people of southern Louisiana and protect the infrastructure. In order to do this, large quantities of borrow material are needed. CEMVN is currently investigating borrow sources from all over the New Orleans Metropolitan area and from other states. Additionally, three avenues to obtain borrow material are being pursued: Government furnished (GF) (government acquires rights to property), Pre-Approved Contractor Furnished (CF) (landowner and construction contractor work in partnership to provide borrow material), and Supply Contract (SC) (corporation delivers borrow material to a designated location for use by construction contractor). See LAC 28. A companion effort is underway via the LaCPR (Louisiana Coastal Protection and Restoration) study to determine reasonable and effective ways to restore the wetlands of south Louisiana.

LB 2: The public has had the opportunity to give input about proposed HPS work throughout the planning process through the mail or www.nolaenvironmental.gov, as well as at public meetings. CEMVN has completed 37 public meetings to discuss the proposed HPS since starting the planning process in March 2007. CEMVN sends out public notices in local and national newspapers, news releases (routinely picked up by television and newspapers in stories and scrolls), and mail notifications to stakeholders for each public meeting. In addition, www.nolaenvironmental.gov was set up to provide information to the public regarding proposed HPS work. CEMVN has recently started sending out e-mail notifications of the meetings to approximately 300 stakeholders who requested to be notified by this method. Public meetings will continue throughout the planning process. Additionally, IER 19 was made available for a 30-day public comment period and a public meeting (on 10 December 2007) regarding borrow issues was held at the request of the public.

LB 3: This addendum provides the public with another 30-day period to provide comments on the proposed action.

● Page 2

IER #18 does not consider the cumulative effects of the total "borrow pit" impact on the area. It does not address the previous or future sites being considered through future IERs or local permitting procedures. The impact of this IER cannot be judged without addressing the cumulative effect of all existing and planned borrow pits. An example of a severe impact not considered in IER#19 would be the sites left by IER #18, which do not consider the backfilling option.

The practice and procedures by the Corps of Engineers of using the Government Furnished Borrow Material vs. the Pre-Approved Contractor Furnished Borrow Material procurement methods tend to promote and encourage landowners to sell their property for high returns through contractors. This practice has opened the door for "mud brokers" who search out landowners willing to sell their property. These different procedures have the effect of people being frightened into selling their land because they believe the Corps of Engineers will take it for little or nothing.

Also, many of these landowners are either former residents who did not return to live in St. Bernard or do not live in the area and thus do not have a vested interest in the community.

Specific Comments by Section

1.5 Public Concerns: The few public concerns listed in this section are not addressed in the rest of the report. The public concerns of not excavating in the coastal parishes and backfilling borrow pits is not strongly addressed elsewhere in this report. This leaves one with the impression that these concerns are not considered relevant.

1.6 Data Gaps and Uncertainties: This is a huge gap that has not been determined. Transportation routes will affect traffic congestion; the cost of the borrow material, damage to roadways, and the aesthetics in the community. Many of these borrow areas are on Bayou Rd., which is a state sub-standard highway and has been blocked by the La. Dept. of Transportation in two locations to confine the traffic to local traffic only and to remove the truck traffic. This highway is also listed as part of the San Bernardo Scenic Byway by the tourism commission.

2.1 Alternatives Development and Preliminary Screening Criteria: In IER#19 mention is made that borrow pits would be backfilled in parishes that have ordinances requiring backfilling. Why isn't this considered in IER#18?

It is stated that Part of the Environmental Design Considerations for Main Stem Levee Borrow Areas Along the Lower Mississippi River Report 4: Part V, will be referred to when designing the borrow areas. This report states that the maximum depths of 7 to 10 feet are recommended. However, the drawings of the sites indicate design depths of 20 feet. Why would these design considerations not be adhered to?

2.4 Alternatives to the Proposed Action: It is stated in the No-Action alternative, that the borrow areas listed could still be excavated by the landowner, but not used for federal levee projects. Considering the scarcity of borrow material for future projects and the fact that permits were issued by the Corps of Engineers for the purpose of

LB 4: See LAC 20. Cumulative impacts analysis is an on-going effort. Future IERs and the CED will provide additional information on the cumulative impacts as information is obtained.

LB 5: Because of the large quantity of borrow material needed, CEMVN is investigating obtaining borrow from all reasonable and practicable methods. See LAC 9. Any properties acquired by the USACE or its non-Federal sponsor for use as a government furnished borrow site would be done at fair market value based upon highest and best use of the property.

LB 6: Comment noted.

LB 7: CEMVN does not intend to use existing wetlands for borrow at this time, but will re-evaluate this practice if non-wetland sites become more difficult to obtain. CEMVN is currently considering the feasibility of backfilling borrow sites.

LB 8: A task order was issued to David Miller & Associates on 5 December 2007 to complete a comprehensive transportation study of the HPS study area. This is an acknowledged data gap in the current documents that will be addressed in future documents.

LB 9: The feasibility of backfilling borrow areas for Government Furnished sites is currently being investigated by CEMVN.

LB 10: CEMVN is using Report 4 for designing borrow pits and will incorporate environmental considerations where feasible. For example, 10 feet is the recommended depth for borrow pits, but this depth requires a trade-off that there will be more acres of land excavated for borrow if pits do not maximize available clay materials below the 10-foot depth. See <http://www.mvn.usace.army.mil/ED/edsp/index.htm> for more information.

LB 11: CEMVN is currently avoiding using wetland sites as borrow sources and is applying this standard to Government Furnished, Per-Approved Contractor Furnished, and Supply Contact sites consistently. However, a private landowner is able to apply for a permit at any time to use a wetland for a purpose not related to the proposed Federal project.

Letter # 4: Louis Barrett, 6 December 2007
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levee material, why wouldn't the permit be canceled, and thus reduce the borrow pit impact on the area?

Barge or rail transport of material is mentioned briefly. This option could greatly impact this IER.

3.1 Environmental Setting: The soil data, especially the information in Table 1, is not meaningful unless one is technically familiar with this area of expertise. What significance does the shrink-swell potential have? What is the significance between the different types of clay?

3.2 Significant Resources: Information referenced in this section is very inaccessible to most people. The information should be explained instead of referenced to a website digital library. Also, some of these areas are within historical sites and communities, how can the recreational resources and aesthetics not be impacted? Also, without on site investigation by trained wildlife professionals, how can assurances be made that threatened and endangered species are not impacted?

3.2.13 Transportation: It is stated that St. Bernard Parish is still undergoing clean-up from the devastation due to Hurricanes Katrina and Rita, and that debris hauling trucks are still working in the area. This is not true. This area of St. Bernard Parish essentially been cleaned with little or no debris hauling activity remaining. Also, a large majority of the residents in this area of St. Bernard Parish have returned and rebuilt. Numerous dump trucks in this area will be a large impact on the local sub-standard roadways.

3.2.14 Aesthetics: I feel that the proposed borrow pits in St. Bernard Parish will have significant visual impact, as they are all located adjacent to local highways or roadways and two are in close proximity to residential housing. An example of an abandoned borrow pit is the TFG site at Creedmoor on Hwy 46 where one can see the unsightly overgrown fenced borrow site.

Part V of the Environmental Design Considerations for Main Stem Levee Borrow Areas Along the Lower Mississippi River is again referenced in the Proposed Action paragraph. How can anyone feel confident that this will be adhered to when existing sites do not conform to this standard and the site designs in this IER are in conflict with these recommendations?

3.3.1 Land, Water, Minerals, Fisheries, and Agriculture: Under the Proposed Action section, it is stated that a relatively small amount of land is used for agricultural purposes. Farming operations are not instantaneous startup endeavors and many of these operations were destroyed by Katrina. Many of these people have not resumed the agricultural operations for various reasons at this time, but it is reasonable to assume that these operations will resume as people return and rebuild. The land use statements in this IER, as stated soon after the devastation of Katrina, probably do not accurately reflect the normal land use.

LB 12

LB 13

LB 14 15 16

LB 17

LB 18

LB 19

LB 12: See LAC 21. It is probable that borrow material from two proposed borrow areas (Pearlington and St. Gabriel) could be transported by barge using the Gulf Intracoastal Waterway (GIWW). The proposed action is not expected to have any impacts on the environment if the sites are approved. All of the other sites discussed in IER #19 would be transported by truck to the construction site.

LB 13: See LAC 29. The information presented in this table was determined to be not relevant to the IER and was removed from the document.

LB 14: Documents are referenced in an effort to keep each IER as concise as possible. Many of the referenced documents will be pertinent to several IERs being written, so it is reasonable to have these references kept in a common location. Hard copies of individual documents can be provided upon request.

LB 15: Excavation of any of the proposed borrow areas would not alter the characteristics of historic properties nor change their inclusion in the National Register of Historic Places, if applicable. While the addition of borrow areas would alter the existing viewscape at particular points along the byway, several borrows pits already exist along this byway and in the vicinity of the proposed borrow areas. In addition, some borrow pits lie in close proximity to pre-Katrina mobile home parks, and residential sub-divisions. For example, the proposed borrow areas in IER #18 (Government Furnished Borrow Material) located at 1418/1420 and 1572 Bayou Road are set at least 100 yards from the road and lie behind houses or vegetation. These existing features provide some screening from the road. Planting vegetation to screen the borrow pits could help reduce the visibility of them from the road.

LB 16: Onsite investigations were made by professionals (biologist, recreation planner, and archeologist) for each site. USFWS was consulted for each proposed borrow site, and concurred with CEMVN staff determination that no significant impacts would occur to any T&E species or areas designated as critical habitat for a T&E species.

LB 17: Concur. The language in IER #19 has been reflected to show this.

LB 18: Comment noted. See LB 15.

LB 19: The statement that "a relatively small amount of land is used for agricultural purposes" applies to both pre and post-Katrina conditions. As it stands, agricultural endeavors are a small part of the economy of the New Orleans MSA, relative to other industries.

● Page 4

3.3.3 Business, Industry, Employment, and Income: I question the statement that none of the sites have been identified as impacting businesses. These sites should be considered for future development and businesses in the parish, especially at this time so soon after Katrina. Many businesses haven't reopened. Also, agricultural activities should be considered as businesses.

3.3.4 Population and Housing: Under proposed action, it is stated that the Sylvia Guilliot site is vacant. It is true that the site itself is vacant, but there are numerous occupied houses in the vicinity and directly across the highway. It is also stated that the proposed action would not cause residential displacement. However, one certainly could speculate that the existing borrow sites of Sylvia Guilliot and Marquize (within close proximity) prompted the permit application of two additional sites adjacent to the Guilliot property. (CUP#s P20071567 and P20071568)

3.3.5 Property Values, Tax Revenues, Public Facilities, and Services: I question the housing values quoted for St. Bernard Parish. Sylvia Guilliot has had her storm damaged house up for sale for over \$400,000. Also, this area is across the highway from Sylvia Estates where an empty lot is over \$65,000. There are numerous houses in this vicinity that would be valued over \$200,000. Just check the real estate transfers for this area. The low figures quoted give a false impression to anyone not familiar with the area.

3.3.6 Community and Regional Growth: It is stated in the Proposed Action paragraph that local government and business owners have expressed concerns with so much potentially developable land being converted to borrow sites. As the government's highest authority of land use for levee construction, why isn't the backfilling and reconstruction of these areas being led by the Corps of Engineers instead of only paying homage that efforts are underway at the local level to backfill many of the sites? The Corps of Engineers should be a premier guardian and restorer of all the land instead of leaving destructed areas in the aftermath of a project.

3.3.7 Health and Safety: There is a health impact, and especially so for the sites in St. Bernard Parish that are close to residential areas. The pits would increase the area for mosquito breeding and thus a health concern. There is a major concern of the possibility of tropical diseases, and St. Bernard already has concerns and problems with mosquito control which would be exacerbated with more ponds close to residential areas.

The pits in these areas would also be an attractive nuisance to a neighborhood and dangerous to children.

3.3.8 Community Cohesion: The statement that the proposed sites are located in unpopulated areas is false. The Sylvia Guilliot and Gatten-Navy Camp Hope sites are located near residential housing.

It is also stated that public involvement with the community is part of this process. Have the residents of these neighborhoods been notified that a borrow pit is planned

LB 20

LB 20: The language in IER #19 has been adjusted to reflect that several of the proposed St. Bernard borrow areas were previously pasture. Only current land uses are considered relevant to the NEPA process and are compensable if acquired by the government.

LB 21

LB 21: CEMVN has estimated a need for approximately 30 million cubic yards of material in St. Bernard Parish to build the HPS projects and is pursuing three methods of obtaining the material: Government Furnished, Pre-Approved Contractor Furnished and Supply Contract. Additional borrow materials will be needed by the non-Federal sponsor to operate and maintain the levees over the life of the project (perpetuity). CEMVN does not have the authority to stop any private land owners from offering their properties as potential borrow sources through the Pre-Approved Contractor Furnished or Supply Contract processes. If a site is found to meet the CEMVN standards as described in LAC 1 and 2, it is probable that the site could be utilized for borrow material for the HPS levees. See LAC 9.

LB 22

LB 22: Real estate data comes from the 2000 US Census. The data in question was provided for the census tracts on which the potential borrow sites are located. The values quoted are median values that take outliers into account - on both the extremely high and on the extremely low end.

LB 23

LB 23: CEMVN is investigating the feasibility of backfilling Government Furnished sites used by the Federal government for HPS projects.

LB 24

LB 24: A discussion about mosquitoes has been added to IER #19. While the proposed borrow areas have the potential to become mosquito breeding areas, the amount of surface acres of water is considered to be small compared to surrounding wetlands. Mosquito control would be taken care of by the parish as part of the parish-wide mosquito control program.

LB 25 LB 26

LB 25: The landowner would be responsible for complying with any local fencing ordinances for Pre-Approved Contractor Furnished or Supply Contract sites. CEMVN is investigating the feasibility of fencing Government Furnished borrow sites used by the Federal government for HPS projects.

LB 26: The language in IER #19 has been adjusted to reflect that several of the proposed St. Bernard borrow areas are located near residential housing.

Letter # 4: Louis Barrett, 6 December 2007
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● Page 5

next to their houses? Each resident in close proximity of these sites should be personally notified of what is planned for their neighborhood.

How can digging and leaving large borrow pits (destroying part of the community) be considered a positive element of community cohesion?

4. Cumulative Impacts: It is stated that "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."

I question this assumption and request an explanation of how the impact of this IER and future IER's will not have an adverse impact on the environment.

6.6.1 Public Involvement: See general comments.

Thank you for the opportunity to comment on this IER#19. I look forward to your reply.

Respectfully,

Louis Barrett
2533 Bayou Rd.
St. Bernard, La. 70085

LB 27: CEMVN is currently looking at borrow options around the New Orleans Metropolitan area, as well as outside of the state of Louisiana. It is not feasible to contact each resident individually. Notification is available through CEMVN websites and notices published in local and national newspapers. Additionally, notifications about meetings and the availability of project documents such as this one are mailed and e-mailed to interested stakeholders.

LB 28: The proposed project is designed to benefit areas beyond those of the immediate proposed project sites, i.e. the entire parish. It is also intended to benefit the larger community of the New Orleans Metropolitan area and the nation at large. This is accomplished by lowering the risk of catastrophic flooding that typically results in much more adverse consequences with respect to community cohesion and other social effects.

LB 29: IER 19 discusses that with the unavoidable impacts described in the document when mitigated would result in no substantial impacts to the environment. CEMVN is not able to say at this time that the completion of the proposed 100-year HPS work will not have adverse or significant impacts on the environment in the New Orleans Metropolitan area.

LB 27 **LB 28**

LB 29



UNITED FOR A HEALTHY GULF

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December 6, 2007

Mr. Gib Owen
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Environmental Planning and Compliance Branch
CEMVN-PM-RS
PO Box 60267
New Orleans, LA 70160-0267

RE: INDIVIDUAL ENVIRONMENTAL REPORT #19

Dear Mr. Owen:

We are writing on behalf of the Gulf Restoration Network (GRN)¹, Lake Pontchartrain Basin Foundation (LPBF), Sierra Club—Delta Chapter (Sierra Club) Benrose Housing Initiatives, Advocates for Environmental Human Rights, Louisiana Environmental Action Network, William A. Fontenot, Unitarian Universalist Service Committee, M-W & Associates, Coalition to Restore Coastal Louisiana, Louisiana Bayoukeeper, Association of Family Fishermen, and Holy Cross Neighborhood Association. Please accept the following comments regarding the Army Corps of Engineers' *Individual Environmental Report, Pre-Approved Contractor Furnished Borrow Material, Jefferson, Orleans, St. Bernard, Iberville, and Plaquemines Parishes, Louisiana (IER #19)*.

While we recognize that the protection of our coastal resources is urgent, we are concerned about several aspects of IER #19 as it is currently written. These concerns are outlined below:

A. General Comments

Public Participation: So far, the public participation for the expedited NEPA process and specifically IER #18 and #19 has not been adequate for the following reasons:

¹ The Gulf Restoration Network is a diverse coalition of individual citizens and local, regional, and national organizations committed to uniting and empowering people to protect and restore the resources of the Gulf of Mexico.

GRN 1a: Adequate public notification has been completed by CEMVN. CEMVN has no control over the level of public response or participation.

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1. It is very difficult to find these projects online. They are not on the Corps' New Orleans District's website nor is there any indication on the website or a link from the homepage to direct viewers to find the reports at www.nolaenvironmental.gov. Further, these projects, along with the nolaenvironmental.gov website should be much more prominent. The Corps must rectify this immediately to stop making it exceedingly difficult for the public to access and review and comment on these important projects.
2. The public comment period for all IER's should be longer than 30 days. Specifically IER 18 and 19 comment periods occur over the Thanksgiving holiday. Given the fact that the public cannot be expected to devote adequate time to these proposals during a very busy time of year, the comment period is inadequate and should be extended to accommodate the disruption.
3. The Corps must outreach to impacted communities. Specifically, the Corps should actively visit all of the adjacent and neighboring communities, and distribute fliers and talk to them about the potential impacts to their neighborhoods. We request the Corps pursue this course of action immediately.
4. The public comment periods for both IER #18 and #19 end before the "Environmental Justice" meetings even take place. At the very least, people attending these meetings should have an opportunity to comment on IER #18 and #19, and as such we request the comment periods for both be extended to accommodate this.
5. We are concerned that the borrow pits are being proposed in a piece-meal manner and it is difficult to adequately assess their cumulative impact on the region without a single map that combines all of the borrow areas from each IER. We ask that the Corps furnish us with such a map.

Therefore, we request a public hearing on IER #18 and #19. The Federal Register announcement published on Tuesday, March 13, 2007 states that "Public meetings to discuss a specific IER will be held if requested by the stakeholders involved" (emphasis added). The public has not had adequate opportunities to express their concerns about these projects, and we feel that the public would be able to supply additional information that is not included in written comments.

Total Fill Necessary, Not Addressed: According to IER #18 and #19, 150,000,000 cubic yards of appropriate fill are necessary to make the Metro New Orleans levees meet a "100-year" protection. However, IER #18 and #19 only address approximately 35,000,000 cubic yards of fill. This amounts to only 23% of the necessary fill. It is extremely short-sighted and disingenuous to the public to state that a level of protection will be offered, without the resources to fulfill that promise. For this reason, we recommend that the Corps look at alternative options, like raising houses, to give the public adequate protection. Given this issue, we question the wisdom of taking some of the few areas of "high ground" in the coastal parishes and digging massive pits, thus causing even more loss of land in the coastal area and, in many cases, destroying critical storm surge protection.

GRN 1: The CEMVN homepage has been updated. A link at the top of the page directs viewers to www.nolaenvironmental.gov. The www.nolaenvironmental.gov website includes links to borrow handouts, public meeting calendar, and a variety of reports. Each public notice, e-mail distribution, mailing, and news release includes reference to the www.nolaenvironmental.gov website. During the comment period for IER 19 a link directly to the document was posted prominently on the www.nolaenvironmental.gov home page.

GRN 2: The NEPA Alternative Arrangements state that the public review period will be 30 days for each IER. Alternative Arrangements are an expedited process adopted to allow the Federal government to make the best decision possible in a time frame that meets the emergency conditions that it is operating in. A completion goal of June 2011 for HPS work has been set, and CEMVN is working diligently to meet that goal.

GRN 3: CEMVN is currently looking at borrow options around the New Orleans Metropolitan area, as well as outside of the state of Louisiana. It is not feasible to contact each resident individually. Notification is available through the CEMVN websites and notices in local and national newspapers. Notices are also sent out by mail and e-mail to interested stakeholders.

GRN 4: Environmental justice outreach efforts are being pursued by CEMVN for the entire New Orleans Metropolitan area. Environmental justice is an important part of the overall outreach effort being pursued by CEMVN, with more than 30 community group meetings planned over the next 12 months. This Addendum provides interested stakeholders another 30 day opportunity to voice their concerns on the proposed Federal action discussed in IER 19.

GRN 5: An index map has been added to IERs 18 and 19. Copies of the updated IERs are available at www.nolaenvironmental.gov or by contacting CEMVN. Cumulative impacts are an acknowledged data gap that will be addressed in future IERs as more information becomes available on the potential impacts of the HPS projects. In addition, the CED will discuss the cumulative impacts of the proposed Federal actions.

GRN 6: The requested public meeting was held on 10 December, 2007.

GRN 7: Public safety is CEMVN's highest priority and, as a part of that effort, IERs 1 through 17 are evaluating alternative designs so that the best engineering and safest solution can be achieved. These IERs will provide an analysis of alternatives such as: no action, non-structural, floodwall, and levee. CEMVN is working to identify additional sources for borrow, and additional potential borrow areas will be addressed in subsequent IERs. CEMVN is investigating sources throughout the New Orleans Metropolitan area as well as other parts of Louisiana and Mississippi. CEMVN must balance the feasibility of providing borrow material economically in an environmentally acceptable manner that meets the engineering standards established to provide the lowest risk of future disasters to the citizens

GRN 8

Important Information Not Included: There are several necessary items in IER #18 and #19 that are not addressed. For example, IER #18 states that "IER #19 will also discuss barging or utilizing railroad to transport clay material from a remote site(s) as an alternative," and yet IER #19 states that "barge or rail transport of material from areas outside of the New Orleans Metropolitan Area... have not been selected, and are not discussed." If this alternative is not discussed, how are the public and the Corps supposed to make an informed decision?

GRN 9

Alternatives Analysis Not Adequate: In both IER #18 and #19, the Corps has failed to adequately perform an alternatives analysis to demonstrate how sites were and were not selected, or why material barged or shipped in from outside sources is or is not adequate or appropriate. Additionally different levee material (ex. hollow-core levees) alternatives must be addressed, especially given the obvious lack of clay material.

GRN 10

New Standards for Borrow Not Addressed: Both IER #18 and #19 fail to include the new standards for borrow. These standards should be included to ensure proper selection of soils for the state's levee rebuilding efforts.

B. Specific Comments

GRN 11

1.5 Public Concerns: It is concerning that this section is so short and is never re-addressed throughout the rest of the report. It is stated that "the public...feels that the remaining land left in coastal parishes should not be excavated," and that "the public feel(s) that the borrow areas should be backfilled." These aspects are not directly addressed anywhere in the document and require further explanation by the Corps. We would like to echo the public concern regarding digging massive "borrow" pits, which would remove some of the scarce high-ground in coastal parishes, especially with no plans of backfilling these areas and re-establishing the original habitat type (i.e. replanting) as well as invasive species management.

GRN 12

1.6 Data Gaps and Uncertainties: It is extremely difficult to look at these projects cumulatively or holistically without outlining the transportation routes for the delivery of the proposed borrow. This is a major concern that impacts traffic congestion, cost of borrow used, air quality, and aesthetics. There is not enough information from which to adequately assess those selected borrow areas and make an informed decision. As such, we request the Corps provide this information.

GRN 13

2.3 Proposed Action: It is stated that River Birch Phase 1 & 2 are future landfills. We require more information regarding these landfills, including Corps of Engineers, Louisiana Department of Environmental Quality, and Coastal Use permits. Further, many landfills require clay in order to cover and cap daily additions of waste; has this use of clay been accounted for in the amount of clay that will be available for levee construction?

GRN 8: Only two sites discussed in IER 19 will utilize barging if approved (Pearlington and St. Gabriel) and the route from the sites would be via the GIWW. No impacts are expected to occur as a result of the use of this site. All other sites discussed in the IER would be transported via truck.

GRN 9: IERs 1 through 17 will evaluate alternative designs of levee and floodwall projects, including hollow-core levees. Selection of sites was determined based on criteria discussed in LAC 1. Proposed borrow areas discussed in the IER meet all these criteria. Proposed borrow areas shown as declined failed to meet one or more of the criteria. Barging would be necessary for two Contractor Furnished sites considered under IER #19. This transportation method may become more important as the CEMVN expands its study area through the use of a Supply Contract. A task order was issued to David Miller & Associates on 5 December 2007 to complete a comprehensive transportation study of the HPS study area. This is an acknowledged data gap in the current documents that will be addressed in future documents as information is obtained.

GRN 10: CEMVN soil standards have been included in IER 19 and are discussed in LAC 2. Only soils meeting current standards will be used for construction of the HPS projects.

GRN 11: CEMVN is currently considering the feasibility of backfilling Government Furnished borrow areas.

GRN 12: This is an acknowledged data gap in the current documents that will be addressed in future documents as information becomes available. We concur that there will be unavoidable impacts associated with the transport of borrow material to the HPS project sites, but these impacts will occur regardless of the sites selected. In an effort to address this issue, a task order was issued to David Miller & Associates on 5 December 2007 to complete a comprehensive transportation study of the HPS study area.

GRN 13: The proposed River Birch sites are part of an approved landfill and is not subject to USACE authority beyond the Clean Water Act permitting process that is administered through the CEMVN Regulatory Branch. Additional information can be obtained about the landfill operation by contacting Louisiana Department of Environmental Quality (LaDEQ) or the landfill owner directly.

<p>GRN 14: Two of the proposed sites would utilize barging via the GIWW to get borrow material to construction sites. It is not expected that there will be any impacts due to material being barged to the HPS project sites. The transportation study will complete an analysis on the use of barges to move borrow material to the HPS project sites. The information learned from that study will be provided in future documents as it becomes available.</p>
<p>GRN 15: The information presented in this table was determined to be not relevant to the IER and was removed from the document.</p>
<p>GRN 16: At this time, CEMVN is avoiding impacts to wetlands. It is possible that once reasonable and practicable alternatives to avoiding wetland impacts are exhausted that some wetlands may be utilized as HPS borrow sites. Those sites and any impacts associated with them will be discussed in future borrow IERs if it becomes necessary to investigate wetland areas as potential borrow sources. Governmental agencies and the public would be involved in this process.</p>
<p>GRN 17: BMPs would be followed by CEMVN contractors during the excavation of the proposed borrow areas to avoid any direct impacts to wetlands. Excavation site plans would factor in appropriate setbacks, retention dike construction, etc. to avoid causing secondary impacts such as altered hydrology on any wetlands located in the vicinity of a proposed borrow area.</p>
<p>GRN 18: The proposed Eastover borrow area was determined to not contain waters subject to CEMVN jurisdiction under the Clean Water Act.</p>
<p>GRN 19: Excavation of material from the sites will be completed relatively quickly. As a result, noise impacts are determined to be minimal and temporary in nature. Public notification has occurred as part of the public involvement phase of this project.</p>
<p>GRN 20: Excavation of material from the sites will be completed relatively quickly. As a result, air quality impacts are determined to be minimal and temporary in nature. Public notification has occurred as part of the public involvement phase of this project.</p>

<p>GRN 14</p> <p><u>2.4. Alternatives to the Proposed Action:</u> Once again, barge or rail transport of material outside of the New Orleans Metropolitan Area is all but ignored. This section states that this is "not discussed" in this document. If it is not discussed in the two IER's dealing with borrow, where will it be discussed?</p>	<p>GRN 15</p> <p><u>3.1 Environmental Setting:</u> The information in this section is not very accessible to the public because it contains technical terminology. Specifically, the headings in Table 1 must be explained and/or defined in layman's terms. For example, what does the "drained" heading refer to, and what is the difference between soil types?</p>	<p>GRN 16</p> <p><u>3.2.1 Jurisdictional Wetlands:</u> The IER states that "At this time, the CEMVN Regulatory Functions Branch is not issuing Clean Water Act 404 permits to landowners for the purpose of need of providing borrow materials to the HPS from areas deemed to be jurisdictional wetlands" (emphasis added). While we agree that wetlands should not be destroyed for this purpose, we are concerned that the Corps uses the phrase "at this time." Does this mean that wetlands might be destroyed in the future? If the Corps is committed to preserving our wetland resources, a stronger statement must be made.</p>	<p>GRN 17 GRN 18</p> <p>There are also at least two concerns in the discussion of impacts in this section. 1) There is no discussion regarding indirect and secondary impacts. Many of these sites are proposed adjacent to wetlands, so indirect and secondary impacts must also be addressed and avoided. 2) This IER states that "the Eastover proposed borrow area contains ponds that are classified as jurisdictional other waters, and can be excavated without a permit." We question this assertion. Our understanding is that damage to jurisdictional waters must be avoided, and if not avoided, at least minimized and mitigated for. Please explain how jurisdictional waters can be destroyed without a Section 404 permit.</p>	<p>GRN 19</p> <p><u>3.2.10 Noise Quality:</u> First, we question how effects on noise quality can be deemed "minimal" when it is stated that "there is not data available regarding the existing conditions." If there is no base-line, how can a judgment be made? Also, this determination contradicts itself, stating both that the effects would be "minimal" but also have short term "high" sound levels. Many of these areas have residents nearby. Have these residents been directly contacted to inform them of the noise pollution that is expected to occur?</p>	<p>GRN 20</p> <p><u>3.2.11 Air Quality:</u> Again it is stated that the impacts would be "minimal," but there is no evidence of how air emissions will not "significantly impact air quality in the region." Often, these projects are referred to as "short duration," but there is no statement of how long these projects would be polluting the air in the local regions. Again we also ask if the local residents have been directly contacted to inform them of the air pollution from heavy machinery that in some cases will be operating in close proximity to their homes and families. Some of these families might have health problems that could be exacerbated by the pollution and particulates that will be emitted from these projects. The Corps must address this public information issue.</p>
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GRN 21: Equipment used to remove and transport borrow material would have temporary impacts on air quality in the borrow pit area. There is no expectation that air quality outside of the borrow area would be impacted.

GRN 22: CEMVN has determined that Figures 1 and 2 are not related to any planned USACE project in the area. Figures 3 and 4 appear to have been taken of the DK Aggregates site discussed in IER 19 as a possible Pre-Approved Contractor Furnished site. CEMVN does not have any projects currently taking place at this location. If you believe there is an activity going on that is not being properly implemented we suggest that you talk to the local government officials who may have jurisdiction over the activities in question. All borrow sites utilized by USACE would employ appropriate BMPs and would have in place a QC/QA program in place to ensure that the BMPs are followed.

GRN 23: CEMVN's intent is to manage waters found on any authorized borrow areas. If it is determined that water can not be contained on-site, then any NPDES permits required would be obtained. Storm water permits would be obtained as per standard operating procedures.

GRN 24: The statement that "a relatively small amount of land is used for agricultural purposes" applies because agricultural endeavors are a small part of the economy of the New Orleans MSA, relative to other industries.

GRN 25: The borrow sites discussed in IER #19 have been nominated by the landowner for use as a borrow site. As such, the landowner has made the decision as to the best use of his or her property.

GRN 26: There would be potential temporary impacts during construction. These include noise and air quality impacts and traffic congestion in or near the borrow areas. There would be no lasting adverse impacts to housing units in the area.

GRN 27: The data used is from the 2000 US Census. Relevant data is not yet available to reflect post-Katrina conditions.

GRN 21

Additionally, this IER states that "the construction equipment and haul trucks should have the same emissions as local traffic in the areas." We request evidence of this assumption and argue that this heavy machinery will increase the air pollution in the area.

GRN 22

3.2.12 Water Quality: First, we question how effects on water quality can be deemed acceptable when it is stated that "there is not data available regarding the existing conditions." If there is no base-line, how can a judgment be made? We also question the effectiveness of implementing best management practices (BMPs). In fact, we have visited potential borrow sites that do not have adequate BMPs in place (see Figures 1-4). Given the fact that existing BMPs are not being implemented correctly on these projects, how can the Corps assure that they will be properly implemented and managed in new projects?

In addition, the IER indicates that some borrow areas may be drained by sump pump, however no further information or references are made in the document. The groups request information on this, especially as to where the water is to be pumped and if water quality problems such as turbidity are of concern. Also, if these areas are being pumped out, we request that they secure Louisiana Pollutant Discharge Elimination System (LPDES) permits prior to excavation.

GRN 23

3.3.1 Land, Water, Minerals, Fisheries, and Agriculture: Under "Proposed Action," it is stated that "a relatively small amount of land is used for agricultural purposes." We question this and request evidence. Many areas in the coastal parishes are used for crops, forage, and cattle grazing, including some of the proposed areas in IER #18 and #19.

GRN 24

3.3.3 Business, Industry, Employment, and Income: Similar to the above comment, farming and cattle grazing are not adequately addressed in this section, even though agriculture obviously fits into this category as well. In fact, IER #19 goes so far as to say that "none of the proposed project sites have been identified as impacting business, industries or related employment." We question this assertion and request evidence supporting it.

GRN 25

3.3.4 Population and Housing: We feel that the proposed borrow pits will have significant impacts on the population and housing. The IER states that "while adjacent areas include urban and suburban developments, the engineering design and environmental analysis indicate no adverse impacts to housing units." We question how the excavation of 20 foot deep pits with heavy machinery will not at least indirectly impact adjacent housing and neighborhoods.

GRN 26

3.3.5 Property Values, Tax Revenues, Public Facilities, and Services: What census information was used? Was it pre- or post-Katrina data?

GRN 27

GRN 28

3.3.7 Health and Safety: It is evident that there is no intention to back-fill all of the borrow pits, thus large deep ponds will be left behind. Mosquitoes are already problematic in the coastal parishes, and large expanses of open fresh water will only exacerbate this problem. Especially with the possibility of increased tropical diseases in the region, this is a major concern and must be included in the Corp's analysis of all borrow projects.

GRN 29

3.3.8 Community Cohesion: Many of these proposed projects are located adjacent to homeowner's property and neighborhoods. This section also states that "public involvement with the community is part of this process." The public participation process for this entire expedited NEPA process has not been adequate. Each residence adjacent or within half a mile of these projects should be personally notified in writing of the massive dirt removal that will occur nearby and public meetings should be held as well.

GRN 30

4. Cumulative Impacts: We question the assertion that "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." We request further evidence that these projects, cumulatively with IER #18, will result in no adverse impact to the environment.

GRN 31

5.6.1 Public Involvement: See general comments.

Z. Mitigation: In order to ensure that mitigation will take place, we request that all mitigation will take place prior to, or at least in tandem with any excavation projects. Also, there is no mention of mitigation for "non-wet" bottomland hardwood, even though USFWS has requested this mitigation.

Thank you for the opportunity to comment on IER #19. We expect that you will take all of the above comments seriously, as they would enhance the project. We look forward to a timely written response. Further, we would welcome the opportunity to meet with the agency to discuss our concerns.

Sincerely,
 Matt Rota
 Gulf Restoration Network
 Jill Mastrorotaro
 Lake Pontchartrain Basin Foundation
 Leslie March
 Sierra Club, Delta Chapter

GRN 28: See LB 24.

GRN 29: CEMVN disagrees with this statement and believes that actions taken to notify the citizens of the New Orleans Metropolitan area have been more than adequate. CEMVN will continue to explore reasonable methods to engage stakeholders in the NEPA process for the proposed HPS projects. CEMVN is open to forming partnerships with any community groups or NGOs that would increase the level of public awareness of the proposed HPS projects.

GRN 30: The cumulative impacts assessment for the HPS projects is an on-going dynamic process. As additional information is gathered, the cumulative impacts assessments will become more defined. This information will be discussed in future IERs and the CED. CEMVN is not able to say at this time that the completion of the proposed 100-year HPS work will not have adverse impacts on the environment.

GRN 31: For the proposed Pre-Approved Contractor Furnished borrow areas described in IER 19, the landowners are responsible for jurisdictional wetland mitigation, if required by CEMVN's Section 404 program. Any impacted non-wet bottomland hardwood forests will be mitigated for by the landowner under CEMVN guidance. USFWS recommendation #1 (Section 6.2 in IER #19) as stated in the IER discusses the need for approximately 5.4 acres of non-wet bottomland hardwoods to be mitigated for if the site is utilized as a borrow source. CEMVN clearly states that it will work with USFWS to address the mitigation recommendation. CEMVN has been in contact with the landowner, who has been made aware that if the site is utilized mitigation will be required for the impacts the bottomland hardwoods located on the site.

Eugene Ben A.I.A.
Benroe Housing Initiatives P.C

Monique Harden and Nathalie Walker
Advocates for Environmental Human Rights

Marylee M. Orr
Louisiana Environmental Action Network/Lower Mississippi Riverkeeper
William A. Fontenot

Bev Hoffman
Unitarian Universalist Service Committee

Darryl Malek-Wiley
M-W & Associates

Mark Ford
Coalition to Restore Coastal Louisiana

Tracy Kuhns
Louisiana Bayoukeeper

Michael Roberts
Association of Family Fishermen

Pam Dashiell
Holy Cross Neighborhood Association

Sandy Rosenthal
Levees.org

Attachments included

CC:

Horst Greczmiel, CEQ
Dinah Bear, CEQ
Michael Brown, US Army Corps of Engineers, New Orleans District
Barry Kohli, LA Audubon Council
Tulane Environmental Law Clinic
Mark Davis, Tulane University
Jeff Dautzat, Louisiana Department of Environmental Quality

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Figure 1. Cleared area for borrow extraction on Bayou Rd. and Jerose Dr. Note lack of BMPs and clearing all the way up to the water body.



Figure 2. Cleared area for borrow extraction on Bayou Rd. and Jerose Dr. Note lack of BMPs and clearing all the way up to the water body.

GRN Figures 1 and 2: The site identified in the pictures is not a part of the proposed Federal action described in IER #19.

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Figure 3. DK Aggregates Proposed Borrow Area. Appears to potentially be wetland. Also note lack of BMPs and clearing all the way up to the water body.

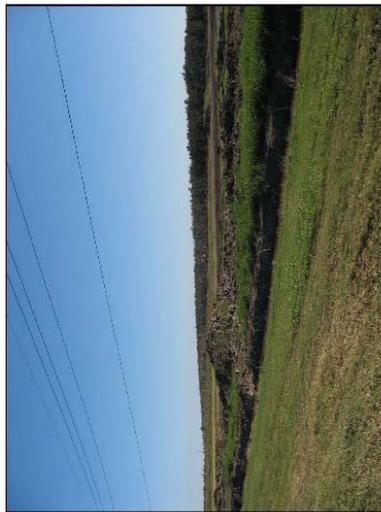


Figure 4. DK Aggregates Proposed Borrow Area. Appears to potentially be wetland. Also note lack of BMPs and clearing all the way up to the water body.

GRN Figures 3 and 4: The site identified in the pictures appears to be the same site identified in IER #19 as the proposed DK Aggregates Pre-Approved Contractor Furnished borrow area. Any activities that have occurred on this site are the results of the landowner and/or his or her agents, and are not associated with CEMVN's proposed action. The DK Aggregates site identified in IER 19 for possible use has been determined to not contain any waters subject to Corps Clean Water Act Section 404 jurisdiction.

Public Meeting Recap

IER 18 Public Meeting
Monday, December 10, 2007

Location	New Orleans District Assembly Room 7400 Leake Avenue New Orleans, LA 70119
Time	4:00 p.m.
Attendees	Approximately 100 and staff
Format	Presentation then Q & A
Handouts	<ul style="list-style-type: none">• Presentation• IER 18• IER 19• Borrow-related correspondence
Facilitator	Col. Murray Starkel Welcome by Col A. Lee, District Commander Presentation by Michael Brown, Environmental Manager Presentation by Richard Varusso, Geotech Manager

Introduction

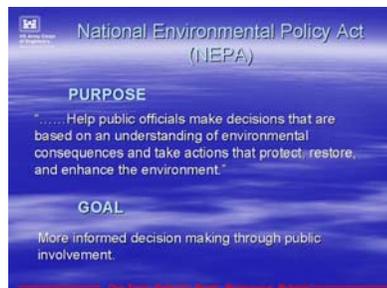
Col. Murray Starkel introduced Col. Alvin Lee

Welcome/Why are we here

Welcome by **Col. A. Lee:**

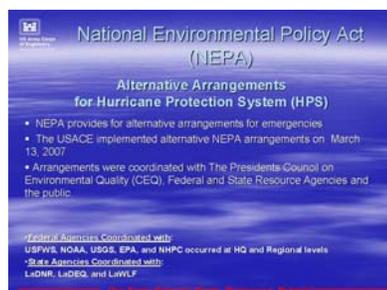
Good afternoon, thanks for coming to the meeting today. I'd like to introduce who we have here including Col. Jeffrey Bedey and Karen Durham-Aguilera.

The Corps needs borrow to complete the hurricane risk reduction system. We need over 100 million cubic yards of borrow, that's enough to fill the Superdome 20 times, to give you a comparison.



NEPA helps us make decisions. We need a better understanding of the impacts to the environment our projects may have and we need to understand all the impacts. We have to take into account all of these impacts and our goal is to make an informed decision [about the hurricane protection system] through public involvement.

We have the IER process that Col. Starkel mentioned. This meeting is about IER 18 and 19 and it is critical that we include public engagement opportunities. We have a public comment period. Comments we received asked for additional public meeting so you could provide additional comments.

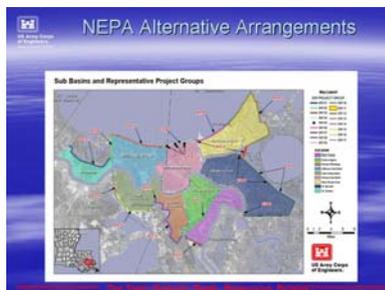


Under NEPA we get alternative arrangements so we're implementing these arrangements in coordination with the President's Council on Environmental Quality, which we refer to as CEQ. Public involvement is a critical component. As you can see, there are federal agencies involved in this process including NOAA, USGS, EPA, NHPC and all

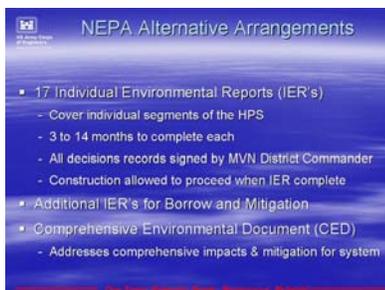
Public Meeting Recap

interactions have occurred at the office headquarters and regional offices.

Also coordinated with state agencies you see at bottom of slide. We'll review natural resources and work with DEQ. So you get an idea of what we've done under NEPA.



This map shows how we've divided the IERs. They're broken up by sub-basin and IERs 18 and 19, they encompass the entire area. That's what we're looking at during IER 18 and 19.



This slide talks about the alternative arrangements. It shows what segment they consist of and the time needed to complete them. To make a decision about the system these documents will be brought to me for approval. We will have an additional IER for borrow and also for mitigation. These IERs are about borrow, that's why you're here.

As you comment, I'd like you to keep in mind a couple things: It's important to understand that public safety is our number one

concern. New Orleans is critical in building the new system.

We have done an electronic request for sources sought. What that means is we've asked the public and contractors from all over the country to provide sources of borrow. We have three methods for obtaining borrow.

1. Government Furnished
2. Contractor furnished
3. Supply contract

We've gone out to seek additional sources to build the hurricane protection system. We've done a detailed analysis of polders or sub-basins. It showed different areas where we could get the borrow and we have a borrow team who is heading up this effort. They have done a detailed analysis and they're looking for locations where material can come from. In some cases, there is not enough borrow available. We went on Friday to seek additional resources. I wanted to give you that overview today.

Now the team will provide additional information about IER 18 and 19 for you. Public input this evening is critical.

Presentation

Col. Starkel introduced Michael Brown. Brown is the project manger and the functional lead of regularity and environmental on the borrow team



Presentation by: Michael Brown, Environmental Manager:

Thank you for participating in the meeting tonight. I'm here to discuss IERs 18 and 19. They are titled Government Furnished Borrow and

Public Meeting Recap



910 Bayou Road is an 11 acre site.



Florissant is an 11.6 acre site.



Dockville is 144 acres. Currently, 107 acres are proposed for borrow.



Triumph is in Plaquemines Parish. It would be an expansion of an existing pit.

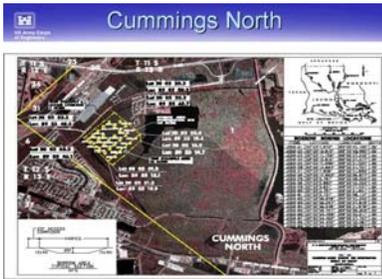


Belle Chasse is in Plaquemines Parish. This is on the naval base. They want a pond for recreation so now it's [inaudible].

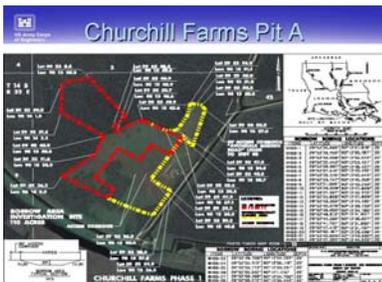


Maynard is in Orleans parish. The original investigation was of 102 acres but it was reduced to 44 acres because of wetlands.

Public Meeting Recap



Cummings North is also in Orleans Parish. 2,000 acres were investigated but only 182 acres are suitable for borrow because of wetlands and poor geotech.



Churchill Farms Pit A included an original 123 acres, but only 110 acres are suitable.



Bonnet Carre North was investigated for 1115 acres but only 680 acres are acceptable. The surrounding site has topography and wetlands we needed to avoid.



Westbank G site is in Jefferson Parish. We investigated 82 acres, but just recently got geotech's review back. This site will be declined. It won't go further.

Contractor Furnished Environmental Process

- Signed right of entry
- Obtained regulatory Wetland Determination
- Obtained Section 10-404 Permit Secondary Use/ Proof of Mitigation
- Secured Coastal Zone Permit/Letter of no objection

Contractor Furnished Environmental Process

- Received concurrence from U.S. Fish and Wildlife Service
- Coordinated Cultural Resources Report with State Historic Preservation Office & Tribes
- Provided Phase 1 Environmental Site Assessment to ASTM 1527-05

IER 19: Contractor Furnished Borrow

The contractor furnished borrow process is a little different. The contractor must provide a completed environmental packet with clearance [papers to the Corps]. We require a signed right of entry and jurisdictional wetland determination letter. The regularity branch of the Corps is not signing [inaudible] now, but for example a sub-division, such as retention pond would provide suitable [borrow]. That would be acceptable [to the Corps] if other sources [agree]. We would still need a coastal zone permit.

We need clearance from the US Fish and Wildlife Service also. The contractor would provide cultural resources and there would be

Public Meeting Recap

coordination with the State Tribes Department. A Phase 1 site assessment is required.

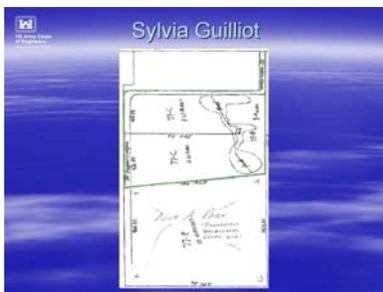
Contractor Furnished Borrow

	Sites	Estimated Quantity (Cubic yards)
Program Borrow Needs		over 100,000,000 million yards
IER 19 Contractor Furnished Sites Proposed for Borrow	9	8,390,000 (8%)

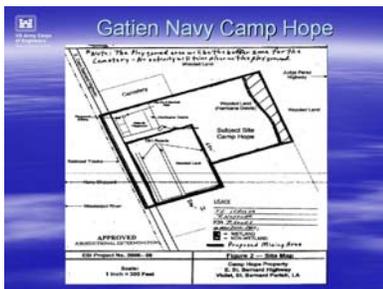
The hurricane protection system currently needs over 100 million cubic yards of borrow. IER 19 could cover 8 million cubic yards, or 6 percent of that total.

IER 19 Contractor Furnished Sites Proposed for Borrow (9)

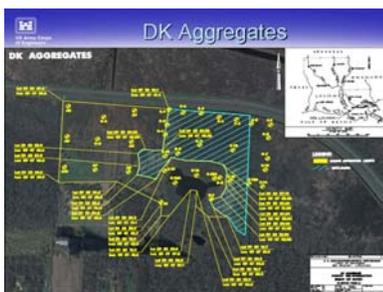
Name	Parish	Initial Site Investigated (acres)	Approx. Cubic Yards
Sylvia Guilliot	St. Bernard	10.7	270,000
Gatien Navy Hope	St. Bernard	7.5	200,000
DK Aggregates	St. Bernard	58.5	1,420,000
Kimble #2	Plaquemines	10.4	920,000
River Birch Phase 1	Jefferson	9.7	200,000
River Birch Phase 2	Jefferson	78.4	3,500,000
Prattington Dist Phase 1	Mississippi	98	1,000,000
Eastover	Orleans	36.9	900,000
St Gabriel Redevelopment	Iberville	122.6	800,000



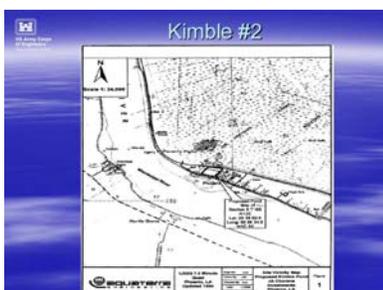
Sylvia Guilliot is 10.7 acres.



Gatien has 7.5 suitable acres.



DK aggregates has 58.5 suitable acres.

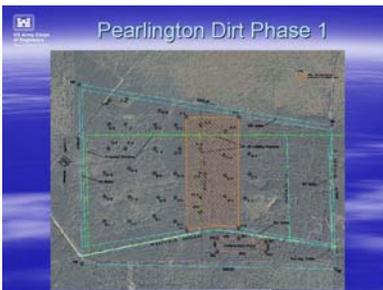


Kimble has 10.4 suitable acres.

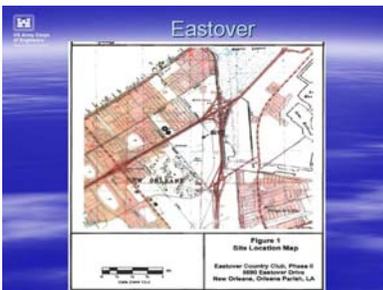
Public Meeting Recap



River Birch 1 and 2 regularity was permitted for a landfill. This site has suitable soil and we're using this in the system.



Pearlington Dirt Phase 1 is 98 acres. We'll need to revise it in IER 19 because transportation can occur only by barge or rail.



Eastover is in Orleans Parish. It's a 36.6 acres site.



St. Gabriel redevelopment could be transported by barge.

IER 18 and 19 Proposed Borrow Sites by Parish

Parish	Size (acres)	Approx. Cubic Yards
St. Bernard	239	3,804,000
Praquemines	21	360,000
Orleans	263	5,338,000
Jefferson	200	4,850,000
St. Charles	660	16,932,000
Iberville	122	800,000
Hancock County, MS	98	1,000,000
Total	1623	33,984,000

The borrow site by parish slide gives you an idea of how many acres and cubic yards are taken from each parish.

Public Meeting Recap

IER 22 Government Furnished #2 Sites Proposed for Borrow (6)

Name	Parish	HPS Use	Initial Site Investigated (acres)	Site After Avoidance	Approx. Cubic Yards
Brad Buras	Plaquemines	NOV	9	9	224,000
Chauvin	Plaquemines	NOV	28	28	872,000
Tabony	Plaquemines	NOV	171	171	3,735,000
Westbank F	Jefferson	WBV	155	152	3,962,000
Westbank I	Jefferson	WBV	79	33	806,000
Westbank N	Jefferson	WBV	145	69	1,949,000
Total			587	482	11,048,000

Future borrow sites will be identified in IER 22. There are six sites proposed, three in Plaquemines; Brad Buras, Chauvin and Tabony. The acreages are shown in the table.

There are three sites in Jefferson Parish: Westbank F, I, and N. These sites could provide 11 million cubic yards of borrow.

IER 23 Contractor Furnished #2 Sites Proposed for Borrow (5)

Name	Parish	HPS Use	Initial Site Investigated (acres)	Approx. Cubic Yards
Acosta	St. Bernard	LPV	29	1,000,000
1025 Florissant	St. Bernard	LPV	3	100,000
3C Riverside	St. Charles	WBV	258	6,000,000
Myrtle Grove	Plaquemines	NOV	271	6,750,000
Pearlington Dist Phase 2	Hancock County, MS	LPV	110	2,500,000
Total			671	16,350,000

IER 23 covers the next contractor furnished borrow sites. It will cover 5 sites; two in St. Bernard; Acosta and Florissant. In St. Charles we're calling that site Riverside. Another site in Plaquemines is Myrtle Grove. There is another site in Mississippi called Pearlington 2, we may use barge or rail to get that borrow out.



Thanks for the opportunity to present this information to you and thank you for coming to the meeting. You can view the IERs in full at www.nolaenvironmental.gov.

If we received a written comment in the mail from people in the audience, you'll get a written response shortly.

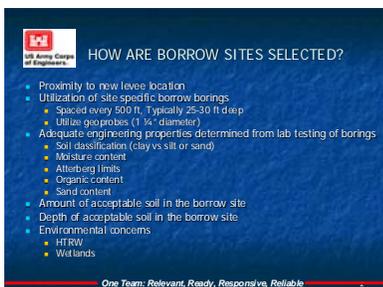
Following presentation by: Richard Varuso, Geotech Manager



We know you may have technical questions about borrow so we will take a few minutes to determine borrow criteria.

Proximity of borrow to levee location is important because the close sites allow us to be more cost effective. Every site is investigated with the same criteria. The technical requirements are reviewed so we use site specific borrow borings.

There's general information when it comes to technical people for approval. We site specific borings. The borings are about 1 ¼ in diameter and go about 20 feet deep. Then we take information from the borings to the lab and a technician tests the sample. The test will give us a classification and tell us the moisture content.



We look at Atterberg limits, which show elasticity. The amount of acceptable borrow is something we look at. Every borrow site is not the same. One may have 20 feet of material, others may have the top 10 feet unsuitable but it could still be used for levee construction. Environmental concerns are involved in approving or disapproving sites.

Public Meeting Recap



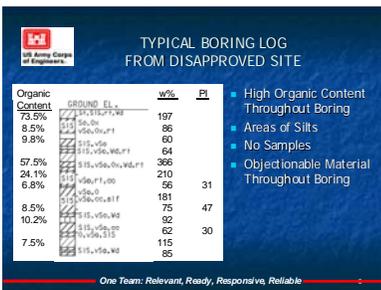
This is a typical layout; you see borings are spaced every 500 feet to get an idea of what's there. You can use different zones. We don't want to approve or disapprove a site just on one boring.



This is geoprobe, it shows that the site instrument we use is non-invasive, it's small and takes a 1 1/4 sample. This is all tested in the lab.



This borrow is from an approved site, it's indicative of sites that are approved or disapproved.



Basically, we look for organic content so in this example this material wouldn't be approved. We could remove the upper part of the pit to get to deeper area where soil is okay. This is typical of red borrow boring. It may be disapproved. The organic content is much higher, and there is too much silt. Some areas of no samples of [inaudible] that have wood if we see this in a large area the site could be disapproved.

Investigating borrow site is the first step. Investigation of soils used continues throughout construction. Just because borrow was approved as mud we still check to see that it meets our strict criteria on either the flood site or protected side of the levee. We still check on the soil once the borrow is placed. We check every 12 inches; we take post construction borings to make sure levee construction is appropriate.

Questions and Answers Facilitated by Col. Starkel:

As you can see, this is a complicated issue. [inaudible] We still need to locate and acquire [borrow]. As we continue to investigate borrow pits, we're going to continue to come back and get comments on environmental impacts as they relate to borrow.

Public Meeting Recap

Questions

1. **Jerome Klier, 3440 Mayor St. in Walker, La.:** My question is not about what you're doing here, it's about the Comite River diversion project in Baton Rouge. Over 7 million cubic yards of excavation is required. If we flatten slopes, we could acquire additional borrow. Federal dollars are involved in this process, so this is free dirt. The channel has access to the Mississippi River. Riffraff will come from Arkansas to supply dirt because it's bisected by railroad. I recommend the Corps looks at using channel excavated dirt as it is suitable for levees.

Col. Starkel: We looked at it, but the transportation cost eats your lunch. We're looking at it.

Jerome: This is good material that may be able to be used. Will numbers be included?

Starkel: We're looking at numbers.

2. **Villare Cross, Manson Gulf Construction:** When you list property as government furnished borrow is it actually already turned over to the government?

Col. Starkel: No, not yet.

Cross: Recently started [inaudible] is Lake Cataouche we have a considerable amount of borrow for levees that we aren't using in phase 1, is there any expectation of using that leftover borrow for other projects?

Tom Podany: At this point, that material could be used for other projects. We haven't specifically dedicated to the west bank; it's optionally usable in other projects.

A section of Lake Catouche from Hwy. 90 to our project is currently out for bid

Cross: Is there an expectation to use that borrow for that project?

Sohelia Holley: We are not sure if there is enough quantity of the material.

Tom: We're not locking in borrow to the project. We've identified where it might be used.

We have a spreadsheet of data that shows what borrow goes where, but an individual contractor might have a need. For that borrow we haven't entitled a material for that use. That material isn't set aside now.

3. **Barry Kohl, Louisiana Audubon Council:** I hope my comments will be included in the amendment I see that the federal regulation requires. Will written comments go to me?

Mike Brown: Yes, written comments will be sent back to you.

Kohl: The basis of my letter was regarding pre and post- Katrina borrow standards.

Throughout the borrow procedure I got a memo which outlined pre and post-Katrina soil standards. They've changed significantly, most likely because it [soil] was considered unsuitable. IER 18 and 19 omitted criteria for selection of borrow. We've asked that the criteria be included. Without it, we don't know how selection is being pursued. You said some borrow isn't included because of geotech issues. There should be rationale as to why it [the borrow] was rejected along with reference to borrow standards that are post Katrina.

Acceptance or rejection of each site is important for the wetlands. Integrity of soil is significant and should have been addressed in detail in the first IERs. It was a great omission. I'm a geologist, I pay attention to details and those should be in those documents. I will make additional comments later.

4. **Richard Robichala:** My family owns property in Jefferson Parish which is being looked at for government furnished borrow. Is there any discussion of fair price rather than commandeering?

Linda Lebeur: As part of the process, even if land is commandeered, it doesn't negate appraisal for the owner. That will be part of the process.

Public Meeting Recap

Robichala: There is a difference between actual dirt and price. The new price could be 10 times greater.

Lebeur: As a real estate action, the department of justice standards require that we take an interest in real property. We start at fair market then work with the owner who may make a counter offer. There's a give and take in these situations, to find out what constitutes just compensation in their minds.

Robichala: So if I show you the price I got the dirt for before I can get that price?

Lebeur: We can talk about that. Anything you want to present to use as a negotiation tool to get amicable settlement we'll look at.

Robichala: If you'd come out and give a price you'd have more [borrow] than you could use.

Col. Starkel: We invite you and others who have sites to bring information to us so we can put it into the market analysis. It may turn out that supply exceeds demand and the Corps would get a lower price.

Robichala: If you gave a fair price, you'd get your borrow.

5. **Unknown speaker: Is the article on borrow I read in the Times Picayune in which Rick Kendrick is quoted accurate?**

Col. Bedey: If you boil down everything, we're still at 41 percent of the total borrow we need [inaudible]. So we're pursuing multiple courses of action. We have to look at government furnished [borrow], then we have to look at contractor furnished. Next, we look at supply contract; this is about fulfilling the obligation of the USACE to provide 100-year protection. I'm restating what Rick Kendrick referred to in the article, which is that we're trying to listen to stakeholders. We're looking at the potential of doing "out of the box" things. Will we be able to do it? That is yet to be seen. We have a solicitation that says in simple terms, "give me a price for dirt that can be delivered that meets specifications." If you win the contract then we'll issue a task order that says "on this date deliver this much dirt to this site." We'll let the market drive cost but we're talking about doing a reverse bid auction. If you have dirt we'll give a pin number and you can bid up. Using that example, we will take input whether from St. Bernard or Mississippi to help us meet this obligation. Our mission is to reduce risk. Rick Kendrick said that we're going in that direction [of using a bid system]. That may not happen, but we'll give it a shot. We'll do that concurrent with what we're doing with the IER meetings. Within the next 60 days we could do an auction.

Unknown speaker: That's the best thing I've heard from the Corps in months.

Col. Bedey: Thanks, that's the team. We know we can't take all the dirt from St. Bernard because of lift requirements. It might be prudent to save the dirt. We may have to get to that dirt at some time. We have to realize that we're in an area where there is subsidence and we'll need future lifts.

6. **Blake Jones, Crescent Area Management:** I like ducks and people but I fear that if you pull dirt closest to the levee, it might be an area people want to go back to. You might be protecting dirt and not people. What I'm looking at is the focus on environment as opposed to looking at the practical side of things. [The Corps should] pay more for dirt from far away so people can build subdivisions and houses. The 'sliver by the river' is there. You're looking for clay but that's the high ground. You don't want to just build levees for ducks on a pond. Will you consider paying more for dirt from far away and not from here where people build houses?

Col. Starkel: We look at more than bugs and bunnies; we look at human impacts too. We'll take this into consideration for all sites.

Public Meeting Recap

7. **Pete Babinth:** I'm a limited partner with 3,000 acres better known as Cumming's Tract. Cumming is out of town and he asked us to ask questions. Cumming wrote a letter to Col. Lee explaining the possibility of assembling a considerable amount of clay in hopes that the Corps would look into that to offer an RFP [request for proposal] to someone who had the ability to assemble clay and have it delivered. Am I correct that the Corps is doing this?

Col. Bedey: Yes. The Corps had commandeered acreage of Chef Menteur during an emergency. The way I interpret the map, some land that we have parallel to Chef Menteur is continuous to property that was expropriated. [My understanding is that] maybe that property has been declined.

Babinth: My understanding is that maybe that property has been declined.

Brown: I would have to look at the map to tell you for sure.

Babinth: How could the same piece of property be used then declined?

8. **Matt Rota, Gulf Restoration Network:** I submitted written comments and I also have a few things to say. Number one is that IERs 18 and 19 are testing ground for what's going to be 25 or 30 IERs from now. Right now the public participation aspect is inadequate. Meetings have been a "come and ask questions" format. I work for an environmental organization and I didn't know about nolaenvironmental.gov. That's lacking. Number two, a lot of borrow pits are next to homes. IERs 18 and 19 make it look like no one lives there. I'm talking about St. Bernard because I drove by and took a look. Has someone gone out to the neighborhoods to let people in the neighborhoods know about a 20 ft hole that will be dug in their back yard? That's important to let them know about air quality and erosion. People there need to know about this. Another thing I have concerns about is water quality. I've seen no best management practices except for ditches in the waterway. I submitted pictures with my comments. I don't see how future IERs can be done correctly if we're avoiding wetland impact. I have questions about making sure there are buffer zones and also on secondary impact on wetlands. I want to make sure there are not secondary impacts. What about mitigation with contractor provided borrow? You say that if they have a 404 permit then that can be used for secondary action, has anyone gone out to check on mitigation? They shouldn't be using borrow without certifying mitigation. It feels like the public is being left in the dark. Even though there have been 20 some meetings, and some people have come, it's because you have not communicated properly to public that more don't come. There should be notice more than the Times Picayune and the web site.

Col. Starkel: We'll improve that to make sure the public knows. We try to have IERs with specific meeting topics, but they need to be more specific. At meetings we know borrow is going to be an issue, we'll have people available to answer all questions. In terms of door to door, we'll go through and make sure neighborhoods know about impacts and we will look at buffer zones. We don't have Chris Accaro here, but we'll follow up.

Rota: Are the people giving public comments today, is that going to be recorded? Is there an additional opportunity for people to comment?

Gib Owen: If we get certain comments, we may do an addendum, then decision makers will decide if the addendum will be approved. That would go out for 30 days.

Rota: Will the environmental justice concerns go on the record?

Owen: Yes, but not for this IER.

9. **Jill Nach, Lake Pontchartrain Basin Foundation (LPBF):** I want to reiterate public involvement. I'm familiar with public processes but this information is difficult to find. Having to go to separate Web sites is unnecessary. You'd think you'd go to the Corps Web site and this information should be on that Web site.

Public Meeting Recap

Please rectify this. One issue is [inaudible] there is public concern there could be more flooding. There is also reference to vague alternative analyses, such as that borrow could be shipped in by rail. What kind of basis was this decision made on? Where did the criteria come from that we're looking at on maps? Another issue is that supposedly there would be a mitigation IER, when will that be?

Owen: We are moving forward with two IERs on mitigation. The first one should be done in 3 months, sort of like borrow process. We'll keep adding tools.

Nach: There was a lack of follow up with Task Force Guardian mitigation. Who is involved in the follow up? If this impacts habitat, we want to see how. We're farther from the process but it seems that this stuff is coming from different angles.

Col. Starkel: We need to make the nolaenvironmental.gov link bigger and brighter.

We're breaking backs to get the Hurricane Protection System done by 2011. [inaudible]

Nach: This process allows for change. How soon can or will the IERs be approved?

Col. Starkel: That depends on comments we get. It depends on how we turn them around. We have contracts waiting for signing. We want to resolve [issued raised by] comments as quickly as possible.

Nach: When can we expect IERs 22 and 23?

Brown: The IER 22 meeting is in April, so public notice will go out in March, IER 23 should go out for public notice around March too.

10. **Kelly Hager, wetland consultant and lawyer:** There's a bunch of procedural issues if you go to the borrow page [on the Corps website] it talks about contractor furnished borrow but there are two choices. It tells you to apply for a wetland permit but doesn't say anything about categorical denial. Five of my clients have wetland permits but have been told in writing that they can't give mud. If you're going to have that criteria, have a hyperlink to that information. We're not making distinctions between inside and outside levee. We're not talking about permitted levee. Try to figure out how people with land are approved, and others disapproved. You have substance issues. In a news release in Aug 2006, you say you might use wetlands for borrow [inaudible]. You're about 90 million short, there's a procedural issue. We're filing a Freedom of Information Act (FOIA) because of you not returning phone calls. [inaudible] If you get to the 404 permit process and you haven't tainted it, which would be exhibit 1, at least in 404 you would go to balancing act. You're in a posture now that says 'we're not going to issue a permit.'. Then you're billing *Lucas vs. South Carolina*, you're ready for a takings problem. You're creating some issues. You're trying to economize but takings isn't the way.
11. **Barry Kohl, Louisiana Audubon Council:** To follow-up, the federal register says an IER addendum will be completed. It should be noticed. Can Gib [Owen] comment on a follow-up addendum? This guideline shows there should be an addendum.

Owen: We [inaudible] but there is some discretionary authority [inaudible], otherwise we'd always have to accept comments. If all the comments aren't telling what we'd re-address, we will put together an addendum.

Kohl: Starkel mentioned 26 percent [inaudible] which hasn't been addressed in either IER. Please explain the other 76 percent. How will the public be involved in next steps? This is a moving target.

Col. Starkel: This is an ongoing process and we will continue to hold IER public meetings. We'll have people at those meetings to discuss all issues.

Col Lee: I'll take on the quantity question. The bottom line is there are 60 million cubic yards of placed material, that's what we're working off of. As we go project by project to design

Public Meeting Recap

levees and floodwalls, there are also waste factors and those types of things. Until we have design and quantity requirements, we're talking about estimated quantity. Right now it's over 100 million cubic yards, which could go up or down. That'll change. We're doing rough estimates. As we get closer to award contracts, we can tell you how much borrow is actually needed.

- 12. Jeanne Lagarde, 1200 Bayou Rd, St. Bernard Parish:** I'm nervous because about 15 years ago they [dug] a borrow pit next to my house and they said there weren't any concerns. But ever since then, we've had safety concerns. I've had kids come in and out of the borrow pits. There [are] alligators since the borrow pit was dug. The pit has eroded. Now you're going to have one on 910 and 1025 Bayou Road? I'm going to be an island! We live in a historic district. We want to protect the levee instead of spending money to bring other dirt. I wish I was told before because there's going to be a big borrow pit around me. [inaudible] I can't tell you how many times kids go swimming and fishing or go into the pit riding 4-wheelers. I know we need higher levees. People aren't coming back; they sell and get out but what about others? I'm concerned. I want safety, but it looks like I'll have borrow pits all around, what about my property value?

Col. Bedey: As Col Lee mentioned, final decisions haven't been made. We have a partnership with the community as it relates to bus tours in St. Bernard. That addressed your concerns, relative to looking for out of the box solutions. We can't commit [to whether or not these sites will be used for borrow] because we don't know yet. We're talking about an unrestricted contract that says 'I don't care where it comes from' and gets delivered; we're looking to do what some are asking us to do. We know we only have 41 percent [of the borrow material needed]. We know we don't need to go to every location. We're going to let free market decide where to go. It matters what it costs, the dirt can come from India as long as it meets specifications and allows us to provide 100-yr protection. We can't decide all of this tonight, but we're heading there. We'll let free market tell us what's feasible.

Lagarde: But these addresses don't have contracts already?

Bedey: No, those are just approved sites.

- 13. Alberta Lewis:** I'm coming in at the back end of the meeting because I was busy dealing with the casino that may be built near my house. I'm at 721 Bayou Road. We own a plantation and want to know the policy when there's a national registered site. What's the good to build a 100-yr levee when we won't be there? The house we're in has been there since 1830 and there's a drainage issue. We couldn't raise the building to address historic [inaudible]. We were told just before Katrina that we have wetlands on the plantation. As a national registered site we wanted to create a preserve, but we're putting a lot of money into the plantation. We need to know about erosion.

Owen: We have professional archaeologists and if it's a historic site we work with state historic [officials] and tribes. If it's a verified site, we have a no work zone.

Lewis: It's not on the national register but it is part of the original property. We're what's left of the original plantation.

Owen: Our archaeologists are aware, they know about the area.

- 14. Catherine Serpas, 2012 Bayou Road, St. Bernard Parish.** It takes courage for people to speak. I tell you in every meeting that you, the Corps of Engineers, will not keep us safe in St. Bernard, the lower ninth ward or New Orleans east unless the Mississippi River Gulf Outlet (MRGO) is closed and filled in. We have a 76-mile borrow pit with MRGO as far as I'm concerned. We're being fooled to think we're being protected with levees. We need another means other than mud. You can come up with better ideas other than clay mud. I feel that St.

Public Meeting Recap

Bernard has been damaged enough and we don't need another slap in the face with digging up high ground. What will we protect with levees, borrow pits? People are going to leave. Digging pits in St. Bernard is unacceptable, if it has to be dug, it must be filled. St. Bernard is unique with a rich history that need to preserve. Bayou Road is a scenic highway. What'll happen if they drive it and see a bunch of borrow pits?

I plead with you to have compassion for St. Bernard and lower St. Bernard parish and to consider a lot of other options than just clay mud.

Col. Starkel: Thank you.

Lee: Thank you. I'm aware of the MRGO, were doing a de-authorization study of MRGO and it's out for state review. Our recommend plan is to close MRGO. Those state and agency review comments will be done by Dec 14. Col Bedey talked about alternatives, we appreciate feedback to help us understand your community history and leadership from the parish. We had a levee summit with levee boards and have discussed backfilling requirements. We've heard those requirements and from levee leadership we're expanding this to get borrow material.

Serpas: The rock [dyke] by Bayou Loutre? That won't protect St. Bernard from the storm water. Katrina wasn't the perfect storm. That needs to be considered. When they said to close it [and put the rock dyke in], that's not going to help St. Bernard, lower 9th or New Orleans East.

Col. Bedey: Wetland restoration is a key to 100-year protection. We want to protect wetlands, we're working with the state to divert Mississippi River water and protect wetlands.

- 15. Mark Davis, Director of the Institute on Water Resources Law and Policy at Tulane University:** A lot of this [information] would have been useful to hear earlier in the process. I was involved with getting alternatives for NEPA. This meeting wasn't scheduled. A meeting like this should be the way you open a comment period. It also lets people have 30 days so comments are more thought through and you aren't losing time. It's vital to explain that "borrow" is talking about mining. Generally speaking we're talking about something we won't get back. This is mining and should be understood that way. You're taking someone's land, this is a mining operation. These procedures can instigate legal issues. The best way is to ventilate the system up front. You don't want people coming in at the back end to get to substantive and cultural problems. Use this as test case. Let something constructive come out of it. This effort emigrated through redevelopment under the Road Home Program and the Louisiana Coastal Protection and Restoration Program (LACPR). People are coming back to the community and money is coming back in. That needs to be cross-referenced and those people don't know these maps. It may not make sense to use local sources. Right now cost will be higher than many will wish but we'll live with it. I urge you to go back and take note of what we've learned. Make each program like this at the beginning of the 30-day comment period.
- Starkel:** You have to consider future lifts too. We're considering balance of long term needs.
- Davis:** You've got Morganza and Donaldsonville too. You have to think about the future. [inaudible] about whether alternative levee design is being considered.
- Col. Starkel:** We are looking at alternative levee designs.
- 16. Paul Lagarde, 1200 Bayou Road, St. Bernard Parish:** I make my living off my land and have had a citrus farm for 23 years. [inaudible] I know about the Army. I have an idea, because there is a levee behind my house I have a lot of clay because they dug a big pit next to me. I can tell you that that levee has sunk. They built a high levee from Verret to [inaudible] Except River Levee. You can find [inaudible] without reseeding. We're going to dig inside the system [inaudible]. As little kids we learned about the Dutch levee system. We're taking land and doing [inaudible] With the levee behind my house they dug a canal next to the levee and

Public Meeting Recap

needed to drain the water? I went crawfishing last year on the northside and there must have been 7 feet of water. That whole levee has pushed across the canal. It amazed me, it's being pushed away. You can't keep soil from piling up. I was reading on the internet about floodwalls from [inaudible] to Florida, it slipped out if you put mud made of peat in the levees. I want to give you a copy of my plan. My idea is to build an I-wall to the Avenue Bridge, do a sheet piling [using cutter torch] and add a foot of concrete and veneer on it. I asked a guy from the Corps if they're going to burn it. You have a wall 12 ft by 3 ft. I watched them drive a sheet pile. When you put water on the inside of a canal and bump with a boat, you're going to [inaudible] iron can't hold a barge. This will flood again. I've been thinking about this, it is a levee with sheet pilings 32 feet high and that could be changed. You drive sheet pilings down preferably on an angle and get both sides in there then run with strong backs. If you put fill in a levee system it can't go anywhere, you have another 60 feet and you have to get down to clay [inaudible] or the same will happen as did with the Industrial Canal. The levee slipped and pilings went to the bottom of levee, about 12 feet it went down. It went another 4 feet and it stuck out. You can see where the whole levee slipped, this can't slip. I'll give you a copy of this [my plan]. We can solve this problem. Water can be diverted into the ground, it won't be pushed over. It's not going to collapse. It'll put pressure back into the earth. This will stand anything, a barge or anything else. [Lagarde showed big drawing]. There's only one way to keep water out of St. Bernard. This is the area we're trying to protect. We have levee going to Verret. Two to three days before a storm you have wind and it takes hours to get water. [inaudible] Water pushed against the shore lines. The Northern border is a ship channel and it runs along Lake Borgne to Breton Sound [inaudible]. It's about a half mile wide and you have a channel, I have that listed too. If you put two dredge boats in Lake Borgne we don't need to use river mud. Fill the channel and spiral the area with a channel. What is created is half mile of spiral area. You'll make a mile-wide barrier island. If you take it down past Hopedale or Breton Sound then the water will [inaudible] when that water hits and comes down it will pass through the New Orleans [inaudible] barrier and will take it out to Breton Sound. It won't let water from New Orleans get out. We're set up now to flood every time. [inaudible] (clapping)

Col. Starkel: Thank you.

Kohl: One handout shows that on the borrow site in Plaquemines 1, there's a stock pile and it's on a 404 cubic area which is being protected through perpetuity. Why is there borrow stockpile on there?

Owen: That was an error, we'll take it off.

17. **Louis Barrett, 2533 Bayou Road, St. Bernard:** In [other] IERs there are references to backfilling required. That's not mentioned in IER 19. Why would an IER make these references if local government requires backfilling?

Lebuer: The reason is that federal government rights here are supreme to any local organization. As long as we pay just compensation then they've been compensated accordingly. We're looking at backfilling pits.

Barrett: There seems to be a disconnect.

Starkel: If there's an engineering reason to fill a pit then we can.

Barrett: The concern would be to preserve the community, not a project.

Karen Durham-Aguilera: We need to look at litigation, this isn't all decided, including how we possibly backfill.

18. **Barbara Makoff (lives in St. Charles Parish but family owns property in Jefferson Parish):** In the 1930's they used borrow to build Hwy 90. My concern is borrowing mud from

Public Meeting Recap

Lake Borgne, if they protect us in Lake Borgne it would protect every one. My family has lost a lot, I would hate to see more loss. I'd prefer doing something here and there instead of using money from the 100-year plan and protect everyone.

Col. Starkel: We're looking at this stuff. We have to do close end defense first then work out to a further perimeter line of defense but that has to happen in a perimeter path.

Makoff: The rock jetty would allow more water to come in. It'll never be high enough.

Durham-Aguilera: Thanks for comments. The rock dyke is just for MRGO. Congress already de-authorized MRGO and it's our job to figure out how. We're recommending a rock dyke. This spring we're doing contracts for surge barriers, it could be 3 or 4 gates but it protects St. Bernard, New Orleans East and Orleans parish. Under LACPR we'll blend the solutions. The question is what is the quickest way to reduce risk? This is all a balancing act. No decisions have been made. We may end up going for sources elsewhere and in the future may use St. Bernard. Looking at historic sites and plantations, this all has to be rolled up in to what to do. [inaudible] We'll take all this into account.

Unknown speaker: I've seen land being cleared on the contractor side but you're telling us decisions aren't being made?

Col. Lee: Karen [Durham-Aguilera] is responding to [gathering] borrow material. This process is in multiple stages. We've been taking borrow for many years. There's a process we go through, it's systematic and takes public comments into account. This meeting has been valuable. We've engaged leadership and levee board officials, state and federal agencies. We have received lots of comments in this meeting tonight and they will generate results. We are considering your views and comments as we go forward. That's why we're here tonight, thanks for spending your time here.

Col. Starkel: We have another meeting tomorrow from 7 to 9 at St. Maria Goretti in New Orleans East. The purpose is environmental justice, but we'll talk about any and all projects. We have a lot of people doing a lot of things but we'll make sure that you get a response. Thank you.

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
David Muth	U.S. National Park Service
Clint Padgett	U.S. Geologic Survey
Jamie Phillippe	Louisiana Dept. of Environmental Quality
Manuel Ruiz	Louisiana Dept. of Wildlife and Fisheries
Angela Trahan	U.S. Fish and Wildlife Service
David Walther	U.S. Fish and Wildlife Service
Patrick Williams	NOAA National Marine Fisheries Service

Appendix D: Interagency Correspondence



United States Department of the Interior

FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.

Suite 400

Lafayette, Louisiana 70506

August 7, 2006

Colonel Richard P. Wagenaar
District Commander
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Wagenaar:

As you know, the U.S. Fish and Wildlife Service (Service) is assisting the U.S. Army Corps of Engineers (Corps) in assessing impacts of, and mitigation requirements for, borrow sites which are needed to complete authorized improvements, and to construct Federal and non-Federal hurricane/flood protection levees in southern Louisiana. Those improvements to hurricane and flood control projects are authorized by the Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico (Public Laws 109-148, PL 84-99 and PL 109 234 (4th supplemental)). This letter is provided in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Fish and Wildlife Coordination Act (FWCA, 48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), but it does not constitute the final report of the Secretary of the Interior as required by Section 2(b) of the Fish and Wildlife Coordination Act.

Through the efforts of Task Force Guardian, the Corps has restored Hurricane Katrina-damaged hurricane/flood protection projects to their authorized or previously permitted/constructed protection levels. Identification of borrow areas needed to complete those repairs utilized a protocol that prioritized selection of those sites in the following order: existing commercial pits, upland sources, previously disturbed/manipulated wetlands within a levee system, and low-quality wetlands outside a levee system. The Service supports the use of such protocols to avoid and minimize impacts to wetlands and bottomland hardwoods within project areas. Avoidance and minimization of those impacts helps to provide consistency with restoration strategies and compliments the authorized hurricane protection efforts. Such consistency is also required by Section 303(d)(1) of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).

Accordingly, the Service recommends that prior to utilizing borrow sites every effort should be made to reduce impacts by using sheetpile and/or floodwalls to increase levee heights wherever feasible. In addition, the Service recommends that the following protocol be adopted and utilized to identify borrow sources in descending order of priority:

1. Permitted commercial sources, authorized borrow sources for which environmental clearance and mitigation have been completed, or non-functional levees after newly constructed adjacent levees are providing equal protection.
2. Areas under forced drainage that are protected from flooding by levees, and that are:
 - a) non-forested (e.g., pastures, fallow fields, abandoned orchards, former urban areas) and non-wetlands;
 - b) wetland forests dominated by exotic tree species (i.e., Chinese tallow-trees) or non-forested wetlands(e.g., wet pastures), excluding marshes;
 - c) disturbed wetlands (e.g., hydrologically altered, artificially impounded).
3. Sites that are outside a forced drainage system and levees, and that are:
 - a) non-forested (e.g., pastures fallow fields, abandoned orchards, former urban areas) and non-wetlands;
 - b) wetland forests dominated by exotic tree species (i.e., Chinese tallow-trees) or non-forested wetlands(e.g., wet pastures), excluding marshes;
 - c) disturbed wetlands (e.g., hydrologically altered, artificially impounded).

Notwithstanding this protocol, the location, size and configuration of borrow sites within the landscape is also critically important. Coastal ridges, natural levee flanks and other geographic features that provide forested/wetland habitats and/or potential barriers to hurricane surges should not be utilized as borrow sources, especially where such uses would diminish the natural functions and values of those landscape features.

To assist in expediting the identification of borrow sites, the Service recommends that immediately after the initial identification of a new borrow site the Corps should initiate informal consultation with the Service regarding potential impacts to federally listed threatened or endangered species. To aid you in complying with those proactive consultation responsibilities, the Service has enclosed a list of threatened and endangered species and their critical habitats within the coastal parishes of the New Orleans District.

The Service offers the following additional recommendations for reducing borrow site impacts on fish and wildlife resources and, where feasible, enhancing those resources. However, these additional recommendations should not be implemented if they would result in the expansion of existing borrow pits or construction of new borrow pits in wetlands or bottomland hardwoods.

1. A minimum of 30 percent of the borrow pits' edge should slope no greater than 5 horizontal (H):1 vertical (V), starting from the water line down to a depth of approximately 5 feet.

2. Most of the woody vegetation removed during clearing and grubbing should be placed into the deepest parts of the borrow pits and the remaining debris should be placed in the water along the borrow pit shorelines, excluding those areas where the 5H:1V slope, per recommendation 1, have been constructed.
3. Following construction, perimeter levees (if constructed) around each borrow pit should be gapped at 25-foot intervals with an 8-foot-wide breach, the bottom elevation of which should be level with the adjacent natural ground elevation.

When avoidance and minimization of bottomland hardwood and wetland impacts is not practicable, all unavoidable net losses of those habitats should be fully offset via compensatory mitigation. Such compensatory mitigation should be sited within the watershed and/or hydrologic unit where the impact occurred, and should be completed concurrently with borrow operations, or as soon thereafter as possible.

The combined need for borrow necessary to complete authorized improvements to and construction of Federal and non-Federal hurricane/flood protection levees, and the potential construction of levees capable of withstanding a category 5 hurricane, will require substantial amounts of borrow. It is highly likely such amounts would exceed local availability. In the case of ongoing hurricane/flood protection projects (e.g., Morganza to the Gulf) the search for levee-building material has been conducted primarily on project-by-project basis. In the context of such project-by-project searches for borrow material, the least-expensive and easiest sources of borrow material are usually located within wetlands and/or bottomland hardwoods, adjacent to the proposed levee. Such on-site sources, however, often involve adverse impacts to wetlands, thus exacerbating the overall wetland loss problem in all coastal basins, especially those in the deltaic plain of southeast Louisiana. In short, while such on-site sources are relatively inexpensive, they will frequently be inconsistent with coastal restoration efforts and, to the extent that wetlands will be adversely impacted, use of those sites will be counterproductive with respect to minimizing wetland impacts and attaining the goal of increasing non-structural hurricane protection within a sustainable ecosystem.

Large-scale, off-site borrow sources could have the potential to reduce environmental impacts from levees and expedite project-by-project environmental review. Such potential "programmatic" borrow sources could include uplands along the Mississippi River, beneficial use of sediments dredged for navigation purposes (including the mining of disposal sites), the Mississippi River, and offshore deposits (e.g., Ship Shoal). As part of the planning process, we recommend that the Corps begin investigating the practicability of various large-scale, off-site borrow sources and actively involve all resource agencies with the Protection and Restoration Office's Borrow Team efforts.

Programmatic planning would be essential to identify borrow sites of acceptable quantity and quality, while avoiding and/or minimizing adverse environmental impacts. We therefore recommend that a plan be developed that integrates borrow resources, uses, and needs for various programs and activities. Guiding principles should be developed to identify borrow resources, borrow-site designs, and prioritize uses to avoid competing for resources, maximize benefits with those resources, and avoid adverse environmental impacts.

We appreciate the opportunity to provide this planning-aid letter and would be pleased to assist your agency in further identification of potential borrow sources. Should you or your staff have any questions regarding this letter, please contact David Walther (337/291-3122) of this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell C. Watson". The signature is fluid and cursive, with a large initial "R" and a long horizontal flourish extending to the right.

Russell C. Watson
Supervisor
Louisiana Field Office

Enclosure

cc: National Marine Fisheries Service, Baton Rouge, LA
EPA, Dallas, TX
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources, CMD, Baton Rouge, LA
LA Dept. of Natural Resources, CRD, Baton Rouge, LA

Threatened and Endangered Species in Coastal Louisiana – FWS Responsibility

MAMMALS

Bear, Louisiana*
(*Ursus americanus luteolus*)
Manatee, West Indian
(*Trichechus manatus*)

GENERAL DISTRIBUTION IN LOUISIANA

T Entire state
E Lake Pontchartrain & tributaries on North shore;
rare along Gulf coast

BIRDS

Eagle, bald
(*Haliaeetus leucocephalus*)
Pelican, brown
(*Pelecanus occidentalis*)
Plover, piping**
(*Charadrius melodus*)

Woodpecker, red-cockaded
(*Campephilus principalis*)

T Entire state
E Coast
T Coast

E Entire state except Delta

REPTILES

Tortoise, gopher
(*Gopherus polyphemus*)
Turtle, ringed map (=sawback)
(*Graptemys oculifera*)
Turtle, loggerhead sea
(*Caretta caretta*)

T Washington, St. Tammany, and Tangipahoa
Parishes
T Pearl and Bogue Chitto Rivers
T Potential Nesting on Chandeleuer Is.

FISH

Sturgeon, Gulf**
(*Acipenser oxyrinchus desotoi*)
Sturgeon, pallid
(*Scaphirhynchus albus*)

T Pearl River & Lake Pontchartrain tributaries
E Mississippi River & tributaries

INVERTEBRATES

Mussel, inflated heelsplitter
(*Potamilus inflatus*)

T Amite River

PLANTS

Louisiana quillwort
(*Isoetes louisianensis*)

E Washington and St. Tammany Parishes

*Indicates proposed critical habitat

**Indicates designated critical habitat

Enclosure



United States Department of the Interior

FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506
November 1, 2007

Colonel Alvin B. Lee
District Engineer
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Lee:

Please reference the Individual Environmental Report (IER) 19, entitled Contractor Furnished Borrow Material Jefferson, Orleans, St. Bernard, Iberville, and Plaquemines Parishes, Louisiana, and Hancock County, Mississippi. That IER addresses impacts resulting from the excavation of contractor-furnished borrow sites which will be used to increase hurricane protection within the Greater New Orleans area located in southeast Louisiana. Work associated with that IER is being conducted in response to Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4). That law authorized the Corps of Engineers (Corps) to upgrade two existing hurricane protection projects (i.e., Westbank and Vicinity of New Orleans and Lake Pontchartrain and Vicinity) in the Greater New Orleans area to provide protection against a 100-year hurricane event. This draft report contains an analysis of the impacts on fish and wildlife resources that would result from excavation of those borrow sites and provides recommendations to minimize and/or mitigate project impacts on those resources.

The proposed project was authorized by Supplemental 4 which directed the Corps to proceed with engineering, design, and modification (and construction where necessary) of the Lake Pontchartrain and Vicinity and the West Bank and Vicinity Hurricane Protection Projects so those projects would provide 100-year hurricane protection. Procedurally, project construction has been authorized in the absence of the report of the Secretary of the Interior that is required by Section 2(b) of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). In this case, the authorization process has prevented our agencies from following the normal procedures for fully complying with the FWCA. The FWCA requires that our Section 2(b) report be made an integral part of any report supporting further project authorization or administrative approval. Therefore, to fulfill the coordination and reporting requirements of the FWCA, the Service will be providing post-authorization 2(b) reports for individual IERs.

This draft report incorporates and supplements our Fish and Wildlife Coordination Act Reports that addressed impacts and mitigation features for the Westbank and Vicinity of New Orleans (dated November 10, 1986, August 22, 1994, November 15, 1996, and June 20, 2005) and the Lake Pontchartrain and Vicinity Hurricane (dated July 25, 1984, and January 17, 1992) Protection projects. It also supplements our August 7, 2006, Planning-aid Letter to the Corps providing recommendations for minimizing impacts to fish and wildlife resources from borrow site selection and use. This report,

however, does not constitute the report of the Secretary of the Interior as required by Section 2(b) of the FWCA. This report has been provided to the Louisiana Department of Wildlife and Fisheries and the National Marine Fisheries Service; their comments will be incorporated into our final report.

DESCRIPTION OF THE STUDY AREA

The study area is primarily located within the Mississippi River Deltaic Plain of the Lower Mississippi River Ecosystem. Portions or all of Jefferson, Orleans, St. Charles, St. Bernard and Plaquemines Parishes are included in the study area. Higher elevations occur on the natural levees of the Mississippi River and its distributaries. Developed lands are primarily associated with natural levees, but extensive wetlands have been leveed and drained to accommodate residential, commercial, and agricultural development. Federal, State, and local levees have been installed for flood protection purposes, often with negative effects on adjacent wetlands. Navigation channels such as the Gulf Intracoastal Waterway and the Mississippi River – Gulf Outlet are also prominent landscape features, as are extensive oil and gas industry access channels and pipeline canals. Extensive wetlands and associated shallow open waters dominate the landscape outside the flood control levees. Major waterbodies include Lake Pontchartrain located north of the project area, the Mississippi River which bisects the project area, and Lake Borgne which is located on the eastern edge of the project area.

A borrow pit was located outside of southeast Louisiana in Hancock County which is in the southwest corner of Mississippi. Commercial and residential development in that area has reduced wildlife habitat. Conversion of forested lands to loblolly pine plantations or farm land has also resulted in decreased wildlife habitat in the area.

FISH AND WILDLIFE HABITATS AND RESOURCES

Habitat types at and in the vicinity of the borrow sites include forested wetlands (i.e., bottomland hardwoods and/or swamps), non-wet bottomland hardwoods, upland forests, scrub-shrub, marsh, open water, and developed areas. Due to urban development and a forced-drainage system with the levee system, the hydrology of much of the forested habitat has been altered. The forced-drainage system has been in operation for many years, and subsidence is evident throughout the area.

Wetlands (forested, marsh, and scrub-shrub) within the study area provide plant detritus to adjacent coastal waters and thereby contribute to the production of commercially and recreationally important fishes and shellfishes. Wetlands in the project area also provide valuable water quality functions such as reduction of excessive dissolved nutrient levels, filtering of waterborne contaminants, and removal of suspended sediment. In addition, coastal wetlands buffer storm surges reducing their damaging effect to man-made infrastructure within the coastal area.

Factors that will strongly influence future fish and wildlife resource conditions include freshwater input and loss of coastal wetlands. Depending upon the deterioration rate of marshes, the frequency of occasional short-term saltwater events may increase. Under that scenario, tidal action in the project area may increase gradually as the buffering effect of marshes is lost, and use of that area by estuarine-dependent fishes and shellfish tolerant of saltwater conditions would likely increase. Regardless of

which of the above factors ultimately has the greatest influence, freshwater wetlands within and adjacent to the project area will probably experience losses due to development, subsidence, and erosion.

Forested wetlands in the area are divided into two major types; bottomland hardwood forests and cypress-tupelo swamps. Bottomland hardwood forests found in the project area occur primarily on the natural levees of the Mississippi River or former distributary channels and in the transition areas between swamps and upland hardwood forests. Cypress-tupelo swamps are located along the flanks of larger distributary ridges as a transition zone between bottomland hardwoods and lower-elevation marsh, scrub-shrub habitats, or open water. Cypress swamps that are within a levee system and under forced drainage are often dominated by bald cypress, but vegetative species more typical of bottomland hardwoods will dominate the under- and mid-story vegetation. Because of their altered hydrology, these areas can potentially convert to sites dominated by bottomland hardwood species and will often have ecological functions closer to those of a bottomland hardwood.

Non-wet bottomland hardwoods within the project area also provide habitat for wildlife resources. Between 1932 and 1984, the acreage of bottomland hardwoods in Louisiana declined by 45 percent (Rudis and Birdsey 1986). By 1970, Jefferson Parish was classified as entirely urban or nonforested in the U.S. Forest Service's forest inventory with most of this loss resulting from development within non-wet areas inside the hurricane protection levees. A large percentage of the original bottomland hardwoods within the Mississippi River floodplain acreage in the Deltaic Plain are located within a levee system, especially those at higher elevations. However, losses of that habitat type are not regulated or mitigated with the exception of impacts resulting from Corps projects as required by Section 906(b) of the Water Resources Development Act of 1986.

Upland forests in the area are primarily comprised of pine forests. An ongoing trend within those forested areas is their conversion to loblolly pine plantations; such plantations provide lower quality wildlife habitat as compared to naturally regenerated pine forests.

Scrub-shrub habitat is often found along the flanks of distributary ridges and in marshes altered by spoil deposition or drainage projects. Typically it is bordered by marsh at lower elevations and by developed areas, cypress-tupelo swamp, or bottomland hardwoods at higher elevations.

Open-water habitat within the project area consists of ponds, lakes, bays, canals, and bayous. Natural marsh ponds and lakes are typically shallow, ranging in depth from 6 inches to over 2 feet. Typically, the smaller ponds are shallow and the larger lakes or bays are deeper. In fresh and low-salinity areas, ponds and lakes may support varying amounts of submerged and/or floating-leaved aquatic vegetation.

Dead-end canals and small bayous are typically shallow and their bottoms may be filled in to varying degrees with semi-fluid organic material. Drainage canals enclosed within the hurricane protection projects or within developed areas are stagnant except when pumps are operating to remove rain water. Runoff from developed areas has likely reduced the habitat value of that aquatic habitat by introducing various urban pollutants, such as oil, grease, and excessive nutrients. Clearing and development has eliminated much of the riparian habitat that would normally provide shade and structure for many

aquatic species.

Some of the waterbodies in the project area meet criteria for primary and secondary contact recreation and partially meet criteria for fish and wildlife propagation; while others do not meet the latter criteria. Causes for not fully meeting fish and wildlife propagation criteria include excessive nutrients, organic enrichment, low dissolved oxygen levels, flow and habitat alteration, pathogens and noxious aquatic plants. Sources of those problems include hydromodification, habitat modification, recreational activities, and unspecified upstream inputs. Municipal point sources, urban runoff, storm sewers, and onsite wastewater treatment systems are also known contributors to poor water quality in the area.

Developed habitats in the study area include residential and commercial areas, as well as roads and existing levees. Those habitats do not support significant wildlife use. Most of the development is located on higher elevations of the project area; however, vast acreages of swamp and marsh have been placed under forced drainage systems and developed. A smaller acreage of wetlands has been filled for development. Agricultural lands occur throughout the area; agriculture includes sugarcane farming, cattle production, and haying.

Endangered and Threatened Species

To aid the Corps in complying with their proactive consultation responsibilities under the Endangered Species Act (ESA), the Service provided a list of threatened and endangered species and their critical habitats within the coastal parishes of the New Orleans District (see Attachment). The Corps has conducted ESA consultation on each borrow site. No known threatened or endangered species or their critical habitat were located at any borrow site. If a proposed borrow site is changed significantly or relocated, or excavation is not implemented within 1 year, we recommend that the Corps require contractors 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.

National Wildlife Refuges, Wildlife Management Areas and Parks

Located within the area are the Bayou Segnette and the St. Bernard State Parks, which are operated by the Louisiana Department of Culture, Recreation and Tourism, Office of State Parks. The Barataria Unit of Jean Lafitte National Historical Park and Preserve is located on the west bank of the Mississippi River and managed by the National Park Service. The Service's Bayou Sauvage National Wildlife Refuge is located in the east of New Orleans. The Pearl River Wildlife Management Area is located on the western edge of Hancock County and is managed by the Louisiana Department of Wildlife and Fisheries.

Future Fish and Wildlife Resources

The combination of subsidence and sea level rise results in higher water levels, stressing most non-fresh marsh plants and forested wetlands leading to plant death and conversion to open water. Other major causes of wetland losses within the study area include altered hydrology, storms, saltwater intrusion (caused by marine processes invading fresher wetlands), shoreline erosion, herbivory, and

development activities including the direct and indirect impacts of dredge and fill (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority 1998). The continued conversion of wetlands and forested habitats to open water or developed land represents the most serious fish and wildlife-related problem in the study area. Habitat losses could be expected to cause declines in the area's carrying capacity for migratory waterfowl, wading birds, other migratory birds, alligators, furbearers, and game mammals.

ALTERNATIVES UNDER CONSIDERATION

The proposed borrow sites have been located in areas that minimize impacts to wetlands and impacts to non-wet bottomland hardwoods have also been avoided to the extent practicable. Use of adjacent borrow, the typical construction method, has been limited because of soil conditions (i.e., insufficient clay content), thus impacts resulting from expansion of borrow sites into wetlands has been avoided in some areas. The Service provided an August 7, 2006, Planning-aid Letter to the Corps proposing a protocol to identify borrow sites thereby minimizing impacts to fish and wildlife resources. The Corps has used that protocol as a guideline in identifying potential government-furnished borrow sites.

PROJECT IMPACTS

Excavation of borrow sites will result in the conversion of terrestrial habitat into open-water areas. Because pasture, open water, cleared land and pine plantation habitats have a reduced value to fish and wildlife resources and are not a declining or limited habitat type, impacts associated with conversion of those habitats to open-water were quantified only by acreage (Table 1). Wetland impacts were determined by the Corps regulatory program. That program was also responsible for overseeing mitigation determination and implementation. Approximately 5.4 acres of non-wet bottomland hardwoods were impacted at the Kimble 2 borrow site, impacts and mitigation needs have not been assessed.

Table 1: Impacts from Contractor-furnished Borrow Sites

Site	Parish/ County	Acres	Habitat
River Birch Phase 1	Jefferson	41	pasture, 0.6 acres wetlands
River Birch Phase 2	Jefferson	109	pasture, 6 acres wetlands
Pearlington Dirt Phase 1	Hancock County	45	loblolly plantation
Eastover	Orleans	65	open water, golf course
Kimble 2	Plaquemines	10.5	agriculture, 5.4 acres non-wet bottomland hardwoods
Gatien -Navy Camp Hope	St. Bernard	7.5	pasture
DK Aggregates	Orleans		pasture, open water
St. Gabriel Redevelopment	Iberville		cleared land, approximately 27 acres wetland
Sylvia Guillot	St. Bernard	10.7	cleared land, open water

FISH AND WILDLIFE CONSERVATION MEASURES

The President's Council on Environmental Quality defined the term "mitigation" in the National Environmental Policy Act regulations to include:

(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

The Service supports and adopts this definition of mitigation and considers its specific elements to represent the desirable sequence of steps in the mitigation planning process. Based on current and expected future without-project conditions, the planning goal of the Service is to develop a balanced project, i.e., one that is responsive to demonstrated hurricane protection needs while addressing the equal need for fish and wildlife resource conservation.

The Service's Mitigation Policy (Federal Register, Volume 46, No. 15, January 23, 1981) identifies four resource categories that are used to ensure that the level of mitigation recommended by Service biologists will be consistent with the fish and wildlife resource values involved. Considering the high value of forested wetlands and marsh for fish and wildlife and the relative scarcity of that habitat type, those wetlands are usually designated as Resource Category 2 habitats, the mitigation goal for which is no net loss of in-kind habitat value. The degraded (i.e., non-wet) bottomland hardwood forest and any wet pastures that may be impacted, however, are placed in Resource Category 3 due to their reduced value to wildlife, fisheries and lost/degraded wetland functions. The mitigation goal for Resource Category 3 habitats is no net loss of habitat value.

To minimize wetland and bottomland hardwood impacts, the Service recommends that prior to utilizing borrow sites, every effort should be made to reduce impacts by using sheetpile and/or floodwalls to increase levee heights wherever feasible. In addition, the Service recommends that the previous mentioned protocol to identify and prioritize borrow sources provided in our August 7, 2006. Planning-aid letter (attached) should continue to be utilized to guide contractors in locating future borrow-sites.

SERVICE POSITION AND RECOMMENDATIONS

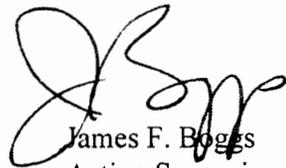
The Service does not object to the use of the proposed borrow sites provided the following fish and wildlife conservation recommendations are implemented concurrently with project implementation:

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.
2. The Corps provide to the Service verification that wetland impacts and impacts to non-wet

bottomland hardwoods, present and future, have been mitigated.

3. The Corps provide to the Service maps, descriptions of habitats and impacts for all future contractor-furnished borrow sites.
4. The protocol to identify and prioritize borrow sources provided in our August 7, 2006, Planning-aid letter (attached) should be utilized as a guide for contractors locating future borrow-sites.
5. Any proposed change in borrow site features, locations or plans shall be coordinated in advance with the Service, NMFS, LDWF, and LDNR.
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.
7. If a proposed borrow site is changed significantly or excavation is not implemented within one year, we recommend that the Corps 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.

Sincerely,



James F. Boggs
Acting Supervisor
Louisiana Field Office

Attachment

cc: EPA, Dallas, TX
NMFS, Baton Rouge, LA
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources (CMD/CRD), Baton Rouge, LA

LITERATURE CITED

Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority. 1998. *Coast 2050: Towards a Sustainable Coastal Louisiana*. Louisiana Department of Natural Resources. Baton Rouge, LA. 161 p.

Rudis, V. A., and Birdsey, R. A. 1986 *Forest Resources and Current Conditions in the Lower Mississippi Valley*. Resour. Bull. SO-116. New Orleans, La: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 7 p.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

November 9, 2007 F/SER46/RH:jk
225/389-0508

Mr. Gib Owen
Environmental Planning and Compliance Branch
Planning, Programs, and Management Division
New Orleans District, U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Owen:

NOAA's National Marine Fisheries Service (NMFS) has received the draft **Individual Environmental Report (IER) #19** provided by letter from Ms. Elizabeth Wiggins dated November 2, 2007. The draft IER evaluates and quantifies the impacts associated with the use of nine contractor-furnished borrow sites to restore levees to the 100-year level of hurricane protection.

NMFS has reviewed the draft IER and agrees that none of the borrow sites are located in areas classified as essential fish habitat or supportive of marine fishery resources. As such, we have no comments to provide on the draft IER.

We appreciate the opportunity to review and comment on the draft IER.

Sincerely,

for Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

c:
FWS, Lafayette
EPA, Dallas
LA DNR, Consistency
F/SER46, Ruebsamen
Files





KATHLEEN BABINEAUX BLANCO
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES

BRYANT O. HAMMETT, JR.
SECRETARY

November 30, 2007

Mr. Gib Owen
Planning, Programs, and Project Management Division
Environmental Planning and Compliance Branch
United States Army Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

RE: *Application: IER #19*
Applicant: U.S. Army Corps of Engineers, New Orleans District
Public Notice Date: November 2, 2007

Dear Mr. Serio:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF), Office of Wildlife, has reviewed the above referenced Public Notice. Based upon this review the following has been determined:

LDWF has no objection to the activity, provided that implementation of the Proposed Action (3.2.1 Jurisdictional Wetlands) has no direct or indirect impact to jurisdictional wetlands at the proposed borrow areas.

The Louisiana Department of Wildlife and Fisheries appreciates the opportunity to review and provide recommendations to you regarding the proposed activity. Please do not hesitate to contact Kyle Balkum (225-765-2819) of our Habitat Section should you need further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Venise Ortego".

Venise Ortego, Permits Coordinator

kb/cd

c: Kyle Balkum, Biologist Program Manager
Chris Davis, Biologist
EPA, Marine & Wetlands Section
USFWS Ecological Services



United States Department of the Interior

FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.

Suite 400

Lafayette, Louisiana 70506

December 5, 2007

Colonel Alvin B. Lee
 District Engineer
 U.S. Army Corps of Engineers
 Post Office Box 60267
 New Orleans, Louisiana 70160-0267

Dear Colonel Lee:

The U.S. Fish and Wildlife Service (Service) has reviewed the, draft Individual Environmental Report 19 for the Pre-Approved Contractor Borrow Material, Jefferson, Orleans, St. Bernard, Iberville, and Plaquemines Parishes, Louisiana and Hancock County, Mississippi. Those documents, transmitted via a November 2, 2007, letter from Ms. Elizabeth Wiggins, Chief of your Environmental Planning and Compliance Branch, describe the proposed work (i.e., excavation of borrow sites) needed to provide earthen material to improve levees to 100-year flood protection design grade. That IER also describes impacts to fish and wildlife resources. The Service provided a draft Coordination Act Report dated November 1, 2007, which included the Services recommendations on that IER. The following comments are provided in accordance with provisions of the National Environmental Policy Act of 1969 (83 Stat. 852, as amended; 42 U.S.C. 4321- 4347).

The Service is pleased to note the inclusion of our recommendations from our November report in the IER and reiterate our recommendations that the approximately 5.4 acres of non-wet bottomland hardwoods impacted by the Kimble 2 borrow site be mitigated and verification of this mitigation be provided to the Service. The Service would like to assist in the assessment of impacts and mitigation development. That mitigation will be addressed in a separate IER.

The Service also recommends that the IER indicate that information provided in the Service's August 7, 2006 Planning-aid Letter regarding siting of borrow sites and potential environmental features be incorporated into the document (i.e., Section 2.1, Alternatives Development and Preliminary Screening Criteria).

We appreciate the opportunity to review the IER for the borrow areas and are pleased with your

OPTIONAL FORM 90 (7-90)

FAX TRANSMITTAL

of pages ▶ 2

To Mike Brown	From David W
Dept./Agency	Phone #
Fax #	Fax #

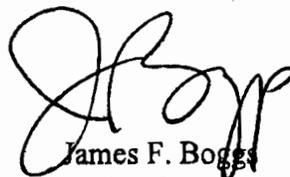
NSN 7540-01-317-7388

5099-101

GENERAL SERVICES ADMINISTRATION

proactive measures that your staff has taken to avoid impacting wetlands within the project area. If your staff has any questions or comments on this letter, please have them contact David Walther (318/291-3122) of this office.

Sincerely,



James F. Boggs
Acting Supervisor
Louisiana Field Office

cc: EPA, Dallas, TX
National Marine Fisheries Service, Baton Rouge, LA
U.S. Army Corps of Engineers, CEMVN-PM-RP, New Orleans, LA
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources, CMD, Baton Rouge, LA



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue, South
St. Petersburg, Florida 33701

December 6, 2007 F/SER46/RH:jk
225/389-0508

Mr. James F. Boggs, Acting Field Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service
646 Cajundome Blvd., Suite 400
Lafayette, Louisiana 70506

Dear Mr. Boggs:

NOAA's National Marine Fisheries Service (NMFS) has received the draft Fish and Wildlife Coordination Act Report (Report) on the Individual Environmental Reports (IER) transmitted by your letter dated November 26, 2007. The Report discusses the U.S. Fish and Wildlife Service's (FWS) findings and recommendations associated with plans to use numerous IERs to allow expedited implementation of hurricane protection measures authorized under Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4). The Report provides relatively generic recommendations as the designs of the various IERs have not been finalized at this time.

NMFS has reviewed the Report and concurs with the vast majority of the FWS recommended fish and wildlife conservation measures included in the document. Fish and wildlife conservation recommendation #2 pertaining to enclosure of wetlands deals with two separate issues. One is the acquisition of easements to preclude development of enclosed wetlands and the other is the maintenance of hydrologic connections with unenclosed wetlands to minimize adverse hydrologic impacts. However, as the recommendation is written, the FWS recommends easements be obtained **OR** (emphasis added) hydrologic connections be maintained. NMFS recommends this recommendation be rewritten to replace the term "or" with "and."

In addition, NMFS finds that there is no recommendation pertaining to the requirement to quantify and fund mitigation needs in each IER necessary to offset project impacts to wetlands, essential fish habitat, and forested areas. While some staff of the New Orleans District have indicated that sufficient construction monies would be set aside to fund compensatory mitigation, no binding agreement to do so has been established. As such, NMFS recommends the FWS add a recommendation similar to the following:

Impacts should be measured both in acres and Average Annual Habitat Units (AAHUs) to determine mitigation needs for each IER. Funds necessary to fully offset adverse impacts should be determined, and each IER should indicate that those mitigation monies would be set aside from those necessary for levee construction. Mitigation funds should be pooled, by habitat type, with those from other IERs within the same hydrologic basin, to enable the construction of compensatory mitigation projects sufficient to fully offset project impacts.



The above recommendation to assess impacts using both acre and AAHU metrics is made in recognition of various agency policies and guidelines as well as various public laws. Consistent with the spirit of the authorization of alternative National Environmental Policy procedures by the President's Council on Environmental Quality and recent authorization of the Water Resources Development Act that requires striving for consistency across programs, flexibility should be allowed to consider both acre and AAHU metrics. If nothing else, this allows a quality control check of the habitat based model that generates AAHUs.

The Report includes only one recommendation pertaining to oversight over the adequacy and success of the mitigation plan. That recommendation suggests that reports documenting the status of mitigation implementation and maintenance be released every three years. NMFS is concerned that such a recommendation is not consistent with requirements of the Water Resources Development Act (WRDA) of 2007 which requires that projects to reduce flood damage comply with the mitigation standards and policies established pursuant to the regulatory program administered by the Corps of Engineers. Additionally, language in WRDA details required components of a mitigation plan, including criteria to define ecological success, description of the mitigative actions to be taken, a contingency plan, and a monitoring effort. NMFS recommends the Report be revised to include a conservation recommendation stating that activities authorized in each IER should comply with the policies and standards used for the Clean Water Act Section 404 program and as described in WRDA.

Finally, NMFS recommends the section on Essential Fish Habitat (EFH) be revised to indicate that ~~portions of the project areas in the vicinity of the potential levee construction also have been~~ identified as EFH for gulf stone crab. However, EFH has not been designated for bluefish, cobia, or mangrove snapper. Categories of EFH that have been identified in the project areas of the IERs include estuarine emergent wetlands; mud, sand, shell, and rock substrates; submerged aquatic vegetation; and, estuarine water column. Updated information has been provided in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico, prepared by the Gulf of Mexico Fishery Management Council. NMFS recommends this section of the Report be revised to reflect the above information.

We appreciate the opportunity to review and comment on this Report.

Sincerely,



For Miles M. Croom
Assistant Regional Director
Habitat Conservation Division

c:
LA DNR, CMD, Consistency
LDWF, Ruiz
USACE, Planning- Owen ✓
F/SER46, Ruebsamen
Files