APPENDIX I
PUBLIC INVOLVEMENT

On June 9, 2009, the Commission issued a notice in the **Federal Register** (74 FR 27290) requesting comments on its agenda, priorities, and strategic plan, with written comments due on June 26, 2009. The Commission stated that, if the analysis of any issues raised in the comments would benefit from a public hearing, it would hold a hearing. The Commission received several written comments. In addition, some commenters requested an oral hearing. Accordingly, the Commission will conduct a public hearing on August 25, 2009, to hear oral comments from these requesters or other interested parties concerning its current strategic plan, and agenda and priorities for fiscal year 2011.

Persons who desire to make oral presentations at the hearing on August 25, 2009, should send an e-mail, call, or write Todd A. Stevenson, Office of the Secretary, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, Maryland 20814, e-mail *cpsc-os@cpsc.gov,* telephone (301) 504–7923, facsimile (301) 504–0127 not later than 5 p.m. EST on August 18, 2009. Presentations should be limited to approximately ten minutes.

Persons desiring to make presentations must submit the text of their presentations to the Office of the Secretary not later than 5 p.m. EST on August 18, 2009. The Commission reserves the right to impose further time limitations on all presentations and further restrictions to avoid duplication of presentations. The hearing will begin at 10 a.m. on August 25, 2009, and will conclude the same day.

Dated: August 4, 2009.

Todd A. Stevenson,

Secretary, Consumer Product Safety Commission.

[FR Doc. E9–19114 Filed 8–10–09; 8:45 am]

BILLING CODE 6355–01–P

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Amended Notice of Intent To Prepare an Environmental Impact Statement for the Proposed Regional Watershed Supply Project, Second Notice of Extension of Scoping Period

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice; extension of comment period.

SUMMARY: The public scoping comment period for the Intent to Prepare an Environmental Impact Statement for the Regional Watershed Supply Project by Million Conservation Resource Group, published in the **Federal Register** on Friday, March 20, 2009 (74 FR 11920), required comments be submitted May 19, 2009 following publication in the **Federal Register**. The comment period was later extended to July 27, 2009, to accommodate requests from entities that desired more time and from areas that desired additional public meetings. The comment period has now been extended to September 28, 2009. Due to number of cooperating agency requests received, the Corps is extending the comment period to allow for additional time to respond to these requests. During this time period, the Corps will communicate with certain entities regarding the possibility of consolidating participation through designation of a single point of contact to represent multiple entities.

FOR FURTHER INFORMATION CONTACT: Questions and comments regarding the proposed action and EIS should be addressed to Ms. Rena Brand, Project Manager, U.S. Army Corps of Engineers, Denver Regulatory Office, 9307 S. Wadsworth Blvd., Littleton, CO 80128–6901; (303) 979–4120; *mcrg.eis@usace.army.mil.*

SUPPLEMENTARY INFORMATION: None.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. E9–19232 Filed 8–10–09; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Plaquemines Parish, LA, Federal Hurricane Protection Levee

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DOD.

ACTION: Notice of intent.

SUMMARY: The U.S. Army Corps of Engineers, Vicksburg District, in cooperation with the New Orleans District and the Louisiana Coastal Protection and Restoration Authority (the non-Federal sponsor), are undertaking studies to develop and evaluate possible alternatives to improve the storm damage reduction capability of the Federal levee system, Plaquemines Parish, LA.

DATES: Initiate Supplemental Environmental Impact Statement (SEIS) August 17, 2009.

ADDRESSES: Correspondence may be sent to Mr. Larry Marcy at the U.S. Army Corps of Engineers, Vicksburg District, CEMVK–PP–PQ, 4155 Clay Street, Vicksburg, MS 39183–3435.

FOR FURTHER INFORMATION CONTACT: Mr. Larry Marcy at the U.S. Army Corps of Engineers, Vicksburg District, telephone (601) 631–5965, fax number (601) 631–5115, or e-mail at *larry.e.marcy@usace.army.mil*.

SUPPLEMENTARY INFORMATION:

Proposed Action. It is the intent of the Vicksburg District to prepare an SEIS for the New Orleans to Venice (NOV) Federal Hurricane Protection levee. The NOV Federal Hurricane Protection project straddles the Mississippi River in Plaquemines Parish, Louisiana, between approximate River Miles 59 and 10. On the west bank, it includes 37 miles of back levee divided into four reaches (Reaches A, B–1, B–2, and St. Jude to City Price) and 34 miles of enlarged west bank Mississippi River levees. On the east bank, the project includes 16 miles of enlarged back levees (Reach C). This project is a Federal system designed to provide protection from hurricane tidal overflow in the lower Mississippi River delta region.

The purpose of the SEIS is to identify and evaluate structural and nonstructural storm damage reduction alternatives to address hurricane-related flooding problems in Plaquemines Parish. Additional work is needed to restore the Federal levees and floodwalls to the authorized level of protection where the levee and floodwalls are below grade due to subsidence and/or post-Katrina design changes.

Alternatives. Alternatives to address flooding problems will be identified and evaluated in cooperation with state and Federal agencies, local government, and the public.

Scoping. Scoping is the process for determining the range of the alternatives and significant issues to be addressed in the SEIS. A part of this analysis will include a letter sent to all parties believed to have an interest in the analysis, requesting their input on alternatives and issues to be evaluated. The letter will also notify interested parties of public scoping meetings that are being held in the local area. A meeting notice will be sent to the local news media. All interested parties are invited to comment at this time, and anyone interested in the study should request to be included on the mailing list.

Two public scoping meetings will be held on Saturday, September 12, 2009: one meeting will be held at the Woodland Plantation, 21997 Highway 23, West Point a La Hache, Louisiana, from 9 to 11:30 a.m. (open house from 9 until 9:30 a.m., scoping meeting to begin promptly at 9:30 a.m.); the second meeting will be held at Boothville Elementary School, #1 Oiler Drive, Boothville, Louisiana, from 3 to 5:30 p.m. (open house from 3 until 3:30 p.m., scoping meeting to begin promptly at 3:30).

Significant Issues. The tentative list of resources and issues to be evaluated in the SEIS includes aquatic resources, essential fish habitat, fisheries and wildlife resources, wetlands, water quality, air quality, threatened or endangered species, recreation resources, and cultural resources. Socioeconomic items to be evaluated in the SEIS include residential housing and business activity, tax revenues, population, community and regional growth, transportation, and community cohesion.

Environmental Consultation and Review. The U.S. Fish and Wildlife Service (FWS) will be asked to assist in the documentation of existing conditions, impact analysis of alternatives, and overall study review through the Fish and Wildlife Coordination Act (FWCA) consultation procedures. The FWS would provide an FWCA report to be incorporated into the SEIS. The FWS and National Marine Fisheries Service will be asked to be cooperating agencies. The draft SEIS or a Notice of Availability will be distributed to all interested agencies, organizations, individuals, congressionals, and Indian tribes.

Estimated Date of Availability. The draft SEIS is expected to be available in November 2010.

Daniel A. Johnson,

Acting Chief, Planning, Programs, and Project Management Division.

[FR Doc. E9–19230 Filed 8–10–09; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF EDUCATION

Arbitration Panel Decision Under the Randolph-Sheppard Act

AGENCY: Department of Education.

ACTION: Notice of arbitration panel decision under the Randolph-Sheppard Act.

SUMMARY: The Department of Education (Department) gives notice that on March 1, 2009, an arbitration panel rendered a decision in the matter of *Bernard R. Werwie, Sr.* v. *Pennsylvania Office of Vocational Rehabilitation, Case No. R–S/07–9.* This panel was convened by the Department under 20 U.S.C. 107d–1(a), after the Department received a complaint filed by the petitioner, Bernard R. Werwie, Sr.

FOR FURTHER INFORMATION CONTACT: You may obtain a copy of the full text of the arbitration panel decision from Suzette E. Haynes, U.S. Department of Education, 400 Maryland Avenue, SW., Room 5022, Potomac Center Plaza, Washington, DC 20202–2800. Telephone: (202) 245–7374. If you use a telecommunications device for the deaf (TDD), you may call the Federal Relay Service (FRS), toll-free, at 1–800–877–8339.

Individuals with disabilities may obtain this document in an accessible format (e.g., braille, large print, audiotape, or computer diskette) on request to the contact person listed under **FOR FURTHER INFORMATION CONTACT**.

SUPPLEMENTARY INFORMATION: Under section 6(c) of the Randolph-Sheppard Act (the Act), 20 U.S.C. 107d–2(c), the Secretary publishes in the **Federal Register** a synopsis of each arbitration panel decision affecting the administration of vending facilities on Federal and other property.

Background

Mr. Bernard R. Werwie, Sr., (Complainant) alleged violations by the Pennsylvania Office of Vocational Rehabilitation, the State licensing agency (SLA) of the Randolph-Sheppard Act (Act) and the implementing regulations in 34 CFR part 395. Specifically, Complainant alleged that the SLA improperly administered the Randolph-Sheppard Vending Facility Program in violation of the Act, implementing regulations under the Act, and State rules and regulations, when the SLA denied Complainant's bid to manage Facility #804 at the U.S. Post Office in Pittsburgh, Pennsylvania.

On or about June 2006, Facility #804 became available due to the death of the previous vending facility manager. At that time, the SLA placed the facility out for bid on a regional satellite basis rather than on a Statewide or permanent basis. According to section 2430.91 of the SLA's rules and regulations governing the Randolph-Sheppard vending program, a satellite facility is one operated by a vendor at the same time the vendor is operating another assigned facility. The SLA is authorized to establish a satellite facility only on a temporary basis when the SLA can demonstrate that it does not have a qualified blind vendor to place on a permanent basis.

The SLA alleged that, because there was a crisis situation at Facility #804, its decision to place the facility out for bid on a regional satellite basis rather than on a Statewide or permanent basis was within its discretion under its State rules and regulations. Further, the SLA contended that its decision was sanctioned by the Elected Committee of Blind Vendors (ECBV), which pursuant to the Act and 34 CFR part 395, is an elected body fully representative of all blind vendors in a State.

A State fair hearing on this matter was held on March 19, 2007. On April 18, 2007, the hearing officer issued a decision denying Complainant's grievance. It was this decision that Complainant sought review of by a Federal arbitration panel.

According to the arbitration panel, the issues to be resolved were: (i) Whether the Pennsylvania Office of Vocational Rehabilitation's decision to bid Facility #804 on a regional basis violated the Randolph-Sheppard Act, the implementing regulations, and State program rules and regulations; and (ii) if there was a violation, what is the remedy.

Arbitration Panel Decision

After hearing testimony and reviewing all of the evidence, the panel majority ruled that the Pennsylvania Office of Vocational Rehabilitation's decision was a reasonable, good faith attempt to remedy a bad situation, and was done in the best interest of all licensed blind vendors in the State of Pennsylvania. The panel denied Complainant's request to be placed without delay to Facility #804. Additionally, the panel denied his request for monetary relief.

One panel member dissented. Specifically, this panel member believed that the SLA unlawfully designated Facility #804 as a satellite facility and that the Complainant should have been compensated for loss of revenue had he been the successful bidder as well as for attorney's fees incurred in his seeking Federal arbitration.

The views and opinions expressed by the panel do not necessarily represent the views and opinions of the Department.

Electronic Access to This Document

You may view this document, as well as all other Department of Education documents published in the **Federal Register**, in text or Adobe Portable Document Format (PDF) on the Internet at the following site: *http://www.ed.gov/news/fedregister*.

To use PDF you must have Adobe Acrobat Reader, which is available free at this site. If you have questions about

SCOPING REPORT

New Orleans to Venice Federal Levee System

Plaquemines Parish, Louisiana

Public Scoping Meeting
Comments and Concerns

INTRODUCTION

The National Environmental Policy Act (NEPA) of 1969 established a nationwide policy to include a detailed statement of the environmental impacts of the proposed action for all major Federal actions that could significantly affect the human or natural environment.

The NEPA also provides for an early and open public process for determining the scope of issues, resources, impacts, and alternatives to be considered. A Notice of Intent (NOI) to prepare a Draft Supplemental Environmental Impact Statement (SEIS) for the New Orleans to Venice Federal Levee System restorations, armoring, and accelerated completion construction, including impacts to the local community and supporting infrastructure, was published in the *Federal Register* (Volume 74, No. 153) on August 11, 2009. The NOI also announced the start of the scoping process. Two scoping meetings were held on September 12, 2009. The first meeting was located at the Woodland Plantation in Pointe á La Hache, Louisiana at 9 am, and the second meeting was held at 3 pm at the Boothville-Venice Elementary School in Boothville, Louisiana. Another scoping meeting was held November 3, 2009 at St. Patrick's Catholic Church in Port Sulphur, Louisiana at 6 pm. A final scoping meeting was held at Plaquemines Parish District 1 Office in Davant, Louisiana on December 8, 2009 at 6 pm. An overview of the NEPA process, NOV project area, and project schedule was presented at each meeting. Eighteen categories of public comments expressed during the scoping meeting are presented and summarized in this Scoping Report.

Study Purpose

The U.S. Army Corps of Engineers (USACE), Vicksburg District (CEMVK) is preparing a Supplemental Environmental Impact Statement (SEIS) to evaluate the potential impacts associated with the proposed construction to the New Orleans to Venice (NOV) Federal Levee System in Plaquemines Parish, Louisiana. The project includes restoring, armoring and accelerating completion of the existing NOV Federal levees on the east bank from Phoenix to Bohemia and on the west bank from St. Jude to Venice to provide the authorized design grade for storm risk reduction. The elevations of the existing floodwalls and levees are below the authorized NOV design elevation. The NOV Federal levee project would restore the elevation of the levees on the east bank from Phoenix to Bohemia and the levees on the west bank from St. Jude to Venice to meet the authorized 2 percent design grade. A total of two miles of the Mississippi River Levee (MRL) between river mile (RM) 46.5 to RM 44 have an average deficiency of 0.4 feet. The two miles of the MRL that are deficient need to be raised to meet MRL authorized grade prior to the NOV Federal levee project; however, the schedule for execution of this MRL work is subject to congressional appropriation. The project to address deficiencies in the MRL levee would be constructed and funded through the Mississippi River and Tributaries (MR&T) program prior to construction of the NOV Federal levee project and a separate NEPA analysis will document the impacts to the environment

The project was initially authorized in the Flood Control Act of 1962. In 1974, a final Environmental Impact Statement (EIS) was prepared by U.S. Army Corps of Engineers, New Orleans District, detailing environmental impacts related to enlarging the lower 36 miles of the existing levee. Prior to the landfall of Hurricane Katrina in August of 2005, the NOV levee project was approximately 85 percent complete with an estimated completion date of September 2018. After 2005, the NOV project was funded at $769 million in the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006 (3rd Supplemental), Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (4th Supplemental), Supplemental Appropriations Act, 2008 (6th Supplemental), and Supplemental Appropriations Act, 2009 (7th Supplemental) passed by Congress. The funding provided for repair work, restoration of the project to the authorized grade, acceleration of the project, and armoring of critical project elements.

Study Alternatives

Alternatives considered included restoring, armoring, and accelerating completion of Federal levees to meet the 50-year (2%) level of risk reduction, which is the tentatively selected plan (TSP), and the restoring, armoring, and accelerating completion of levees to meet the authorized pre-Katrina (GDM) level of risk reduction. A No-Action alternative was also considered. This supplemental EIS evaluates the effects that each alterative has on the project area's significant resources. The estimated fully funded cost of the Proposed Action (TSP), including mitigation, is anticipated to fall between $857 and $1,268 million.

Scoping Meeting and Request for Public Comment

At each scoping meeting, CEMVN presented a brief description of the scoping process, CEMVN study process, and CEMVN compliance procedures for implementing the NEPA process, with particular emphasis on the SEIS. Facilitators recorded participants' comments. Scoping meeting participants presented their concerns regarding the proposed study. Every individual comment was recorded until no new comments were expressed. Transcripts are provided as an attachment. Table 1 describes the approximate number of attendees and number of participants commenting at each scoping meeting.

Table 1. Scoping Meeting Locations and Attendance

Meeting	Number of Attendees (Approximate)	Number of Participants Commenting
12/12/2009 – Woodland Plantation	50	11
12/12/2009- Boothville-Venice Elementary	12	4
11/3/2009	27	16
12/8/2009	30	10

REVIEW OF SCOPING COMMENTS

The scoping process enables CEMVN to gather information concerning sensitive resources from regulatory and responsible regulatory agencies and determine the public's major concerns. This information will be considered both in the CEMVN study process and in preparation of the draft SEIS. Each scoping comment was reviewed for content and categorized by SEIS subject matter heading. A total of 18 general categories of comments were recorded from scoping meeting participants (Table 2).

Table 2. Scoping Meeting Comments

#	Comments	Number of Comments
1	Delay in NOV project schedule due to environmental impacts	10
2	Environmental or wetland impacts	3
3	Non-federal levee system	1
4	Coastal Restoration	1
5	Length of public review period	1
6	Levee authorization	2
7	Time and dates of scoping meetings	2
8	Level of hurricane protection in Plaquemines Parish	7
9	Acquisition of land to build levees	1
10	Expand on protected side vs. flood side of levees	3
11	Mitigation and mitigation costs	6
12	Impact of NOV project on hydrology and flooding	3
13	Location and method of extracting borrow material	4
14	Project funding (NFL vs. NOV)	2
15	LACPR buy-outs	1
16	Responsibility of road damage as result of the NOV project	1
17	Type of equipment used to build levees	1
18	Local people getting jobs with levee contractors	1

SUMMARY OF SCOPING COMMENTS

The concerns expressed at the public scoping meetings are summarized below. The most numerous concerns expressed by meeting participants regard the delay in the NOV project schedule due to environmental concerns, the level of hurricane risk reduction in Plaquemines Parish and, mitigation and mitigation costs.

The major concern of the public was the delay in the NOV project due to environmental concerns from February 2010 until 2012. Comments were made expressing the low-quality of the wetlands near the levees and that hurricane risk reduction is more important than 1,000 acres of impacted wetlands. The public is concerned that the project will not be built in time before another hurricane comes through the area. In addition, the public is concerned about the level of hurricane risk reduction that Plaquemines Parish is receiving. USACE made it clear that Plaquemines Parish is not receiving the same 100-year level of risk reduction that the greater New Orleans area is receiving. This project is just updating the NOV levees to the authorized grade using current design standards.

Mitigation and the cost of mitigation was also a large concern expressed by the public. USACE said that most of the cost of mitigation occurs in the real estate acquisition and construction costs. Councilman Jay Friedman mentioned at different meetings about the possibility of the mitigation costs being waived so that more of the project money could be used on risk reduction instead of mitigation.

Some participants expressed concerns about the acquisition of land to build the levees in Plaquemines Parish is higher than in other parishes. Many people would like to see the levee footprint expand out into the marsh, rather than into their backyards. The location and method of excavating borrow material was another concern expressed by the public. It had not been determined at the time of the meeting whether the NOV borrow pits would be government or contractor furnished.

CONCLUSIONS

The scoping comments described herein will be addressed in the significant issues, range of alternatives, and consultation and coordination sections of the SEIS. Many of the scoping comments and concerns are presently being considered in determining project alternatives. However, some comments are outside the scope of this project and CEMVN will consider them in consultation and coordination, where appropriate. The Draft SEIS will be distributed for public comment and interagency review for a minimum of 45 days, which is anticipated to begin on March 14, 2011. USACE’s responses to public comments on the Draft SEIS will be included in the Final SEIS, which is anticipated to be available to the public for review no later than May 30, 2011.

(without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36. Comments, motions to intervene, notices of intent, and competing applications may be filed electronically via the Internet. *See* 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Web site *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov;* call toll-free at (866) 208–3676; or for TTY, contact (202) 502–8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, mail an original and seven copies to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426.

More information about this project, including a copy of the application, can be viewed or printed on the "eLibrary" link of the Commission's Web site at *http://www.ferc.gov/docs-filing/elibrary.asp.* Enter the docket number (P–13839–000) in the docket number field to access the document. For assistance, contact FERC Online Support.

Dated: March 18, 2011.

Kimberly D. Bose,

Secretary.

[FR Doc. 2011–7043 Filed 3–24–11; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2829–004]

City of Loveland, CO; Notice of Intent To File License Application, Filing of Pre-Application Document, and Approving Use of the Traditional Licensing Process

a. *Type of Filing:* Notice of Intent To File License Application and Request To Use the Traditional Licensing Process.

b. *Project No.:* 2829–004.

c. *Dated Filed:* February 11, 2011.

d. *Submitted by:* City of Loveland, Colorado (Loveland)

e. *Name of Project:* Loveland Hydroelectric Project.

f. *Location:* The existing 900-kilowatt project is located in Larimer County, Colorado on the Big Thompson River. The project occupies lands of the U.S. Forest Service.

g. *Filed Pursuant to:* 18 CFR 5.3 of the Commission's regulations.

h. *Potential Applicant Contact:* Larry Howard, Loveland Water & Power, 200 E. Wilson Avenue, Loveland, CO 80537; (970) 962–3703.

i. *FERC Contact:* Jim Fargo at (202) 502–6095; or e-mail at *james.fargo@ferc.gov.*

j. Loveland filed its request to use the Traditional Licensing Process on February 11, 2011. Loveland notified the public of its request on February 7, 2011. In a letter dated March 17, 2011, the Director of the Office of Energy Projects approved Loveland's request to use the Traditional Licensing Process.

k. *With this notice, we are initiating informal consultation with:* (a) The U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act and the joint agency regulations thereunder at 50 CFR, Part 402; and (b) the Colorado State Historic Preservation Officer, as required by Section 106, National Historical Preservation Act, and the implementing regulations of the Advisory Council on Historic Preservation at 36 CFR 800.2.

l. With this notice, we are designating Loveland as the Commission's non-Federal representative for carrying out informal consultation, pursuant to section 7 of the Endangered Species Act, section 305 of the Magnuson-Stevens Fishery Conservation and Management Act, and section 106 of the National Historic Preservation Act.

m. Loveland filed a Pre-Application Document (PAD; (including a proposed process plan and schedule) with the Commission, pursuant to 18 CFR 5.6 of the Commission's regulations.

n. A copy of the PAD is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site (*http://www.ferc.gov*), using the "eLibrary" link. Enter the docket number, excluding the last three digits in the docket number field to access the document (P–2829). For assistance, contact FERC Online Support at *FERCONlineSupport@ferc.gov* or toll free at 1–866–208–3676, of for TTY, (202) 502–8659. A copy is also available for inspection and reproduction at the address in paragraph h.

o. The licensee states its unequivocal intent to submit an application for a new license for Project No. 2829. Pursuant to 18 CFR 16.8, 16.9, and 16.10 each application for a new license and any competing license applications must be filed with the Commission at least 24 months prior to the expiration of the existing license. All applications for license for this project must be filed by March 8, 2014.

p. Register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via e-mail of new filing and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

Dated: March 18, 2011.

Kimberly D. Bose,

Secretary.

[FR Doc. 2011–7041 Filed 3–24–11; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–8996–1]

Environmental Impacts Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–1399 or *http://www.epa.gov/compliance/nepa/*

Weekly receipt of Environmental Impact Statements

Filed 03/14/2011 Through 03/18/2011

Pursuant to 40 CFR 1506.9.

Notice: In accordance with Section 309(a) of the Clean Air Act, EPA is required to make its comments on EISs issued by other Federal agencies public. Historically, EPA met this mandate by publishing weekly notices of availability of EPA comments, which includes a brief summary of EPA's comment letters, in the **Federal Register**. Since February 2008, EPA has included its comment letters on EISs on its Web site at: *http://www.epa.gov/compliance/nepa/eisdata.html.* Including the entire EIS comment letters on the Web site satisfies the Section 309(a) requirement to make EPA's comments on EISs available to the public. Accordingly, on March 31, 2010, EPA discontinued the publication of the notice of availability of EPA comments in the **Federal Register**.

EIS No. 20110084, Draft EIS, USFS, OR, Galena Project, To Implement Several Resource Management Activities, Blue Mountain Ranger District Malheur National Forest, Town of John Day, Grant County, OR, Comment Period Ends: 05/09/2011, Contact: Robert Robertson 541–575–3061.

EIS No. 20110085, Draft EIS, FHWA, CA, State Route 180 Westside

Expressway Route Adoption Study, To Improve Mobility East and West through the Center of Fresno County and the San Joaquin Valley, Fresno County, CA, Comment Period Ends: 05/09/2011, Contact: G. William "Trais" Norris, III 559–243–8175.

EIS No. 20110086, Draft EIS, USACE, LA, New Orleans To Venice (NOV), Federal Hurricane Protection Levee. Restoring, Armoring and Accelerating the Completion of the Existing NOV, Plaquemines Parish, LA, Comment Period Ends: 05/09/2011, Contact: Christopher Koeppel 601–631–5410.

EIS No. 20110087, Draft EIS, DOE, CA, Topaz Solar Farm Project, Issuing a Loan Guarantee to Royal Bank of Scotland for Construction and Startup, San Luis Obispo County, CA, Comment Period Ends: 05/09/2011, Contact: Angela Colamaria 202–287–5387.

EIS No. 20110088, Final EIS, NRC, GA, Vogtle Electric Generating Plant Units 3 and 4, Construction and Operation, Application for Combined Licenses (COLs), NUREG–1947, Waynesbora, GA, Review Period Ends: 04/25/2011, Contact: Mallaecia Sutton 301–415–0673.

Dated: March 22, 2011.

Robert W. Hargrove,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2011–7115 Filed 3–24–11; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9286–3]

Science Advisory Board Staff Office; Notification of a Public Teleconference of the Clean Air Scientific Advisory Committee (CASAC)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announces a public teleconference of the Clean Air Scientific Advisory Committee (CASAC) to conduct a quality review and approve draft reports from the CASAC Oxides of Nitrogen (NO_X) and Sulfur Oxides (SO_X) Secondary Review Panel (NO_X-SO_X Panel) and the CASAC Air Monitoring and Methods Subcommittee (AMMS).

DATES: The public teleconference will be held on May 12, 2011 from 9 a.m. to 11 a.m. (Eastern Time).

ADDRESSES: The public teleconference will be conducted by telephone only.

FOR FURTHER INFORMATION CONTACT: Any member of the public who wants further information concerning the teleconference may contact Dr. Holly Stallworth, Designated Federal Officer (DFO), EPA Science Advisory Board (1400R), U.S. Environmental Protection Agency, 1300 Pennsylvania Avenue, NW., Washington, DC 20460; via telephone/voice mail (202) 564–2073; fax (202) 565–2098; or e-mail at *stallworth.holly@epa.gov.* General information concerning the CASAC can be found on the EPA Web site at *http://www.epa.gov/casac.*

SUPPLEMENTARY INFORMATION:

Background: The CASAC was established pursuant to the Clean Air Act (CAA) Amendments of 1977, codified at 42 U.S.C. 7409D(d)(2), to provide advice, information, and recommendations to the Administrator on the scientific and technical aspects of issues related to the criteria for air quality standards, research related to air quality, sources of air pollution, and the strategies to attain and maintain air quality standards and to prevent significant deterioration of air quality. The CASAC is a Federal Advisory Committee chartered under the Federal Advisory Committee Act (FACA), 5 U.S.C., App. 2. Section 109(d)(1) of the CAA requires that the Agency periodically review and revise, as appropriate, the air quality criteria and the NAAQS for the six "criteria" air pollutants, including Oxides of Nitrogen and Oxides of Sulfur.

As noticed in 76 FR 4109–4110, the NO_X-SO_X Panel held a public meeting on February 15–16, 2011 to review EPA's *Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur* (February 2011). On May 12, 2011, CASAC will review the draft report of the NO_X-SO_X Panel that provides advice on issues identified in the policy assessment.

As noticed in 76 FR 4346, the AMMS met on February 16, 2011 to review and provide advice on the scientific adequacy and appropriateness of EPA's draft documents on monitoring and methods for Oxides of Nitrogen (NO_X) and Sulfur (SOx_X). As noticed in 76 FR 12732–12733, the AMMS also held a public teleconference on March 29, 2011 to review and finalize its draft report.

The draft reports of the NO_X-SO_X Panel and the AMMS will be posted at the CASAC Web site. To access these draft reports, go to the CASAC Web site at *http://www.epa.gov/casac* and click on the calendar link for May 12, 2011 on the blue navigation bar.

Technical Contact and URL for EPA's *Policy Assessment for the Review of the Secondary National Ambient air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur* (February 2011): Any technical questions concerning the above-referenced policy assessment can be directed to Dr. Richard Scheffe at *scheffe.rich@epa.gov* or 919–541–4650. The document is posted at *http://yosemite.epa.gov/sab/sabproduct.nsf/bf498bd32a1c7fdf85257242006dd6cb/7f4c00f9da9bb75e852577ed005f026c!OpenDocument&Date=2011-02-15.*

Technical Contact and URL for EPA's Monitoring Documents for NO_X and SO_X: Any technical questions concerning EPA's draft monitoring documents for NO_X and SO_x and proposed methods for assessing levels of nitrogen and sulfur deposition should contact Dr. Richard Scheffe at *scheffe.rich@epa.gov* or 919–541–4650. Review documents on NO_X and SO_X monitoring can be assessed at *http://yosemite.epa.gov/sab/sabproduct.nsf/bf498bd32a1c7fdf85257242006dd6cb/eea38cc34cc1f86f8525781d005866e6!OpenDocument&Date=2011-02-16.*

Availability of Meeting Materials: A meeting agenda and other materials for the meeting will be placed on the CASAC Web site on the Web page reserved for the May 12, 2011 teleconference, accessible through the calendar link on the blue navigation sidebar at *http://www.epa.gov/casac.*

Procedures for Providing Public Input: Public comment for consideration by EPA's federal advisory committees and panels has a different purpose from public comment provided to EPA program offices. Therefore, the process for submitting comments to a federal advisory committee is different from the process used to submit comments to an EPA program office. Federal advisory committees and panels, including scientific advisory committees, provide independent advice to EPA. Members of the public can submit comments for a federal advisory committee to consider as it develops advice for EPA. Input from the public to CASAC will have the most impact if it consists of comments that provide specific scientific or technical information or analysis for CASAC to consider or if it relates to the clarity or accuracy of the technical information included. Members of the public wishing to provide comment should contact the Designated Federal Officer directly.

Oral Statements: To be placed on the public speaker list for the teleconference, interested parties should notify Dr. Holly Stallworth, DFO, by e-mail no later than May 5, 2011.

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

14 March, 2011

Regional Planning and
Environment Division South
New Orleans Environmental Branch

NOTICE OF AVAILABILITY

The U.S. Army Corps of Engineers, Mississippi Valley Division, Regional Planning and Environmental Division South, Vicksburg District has prepared a draft supplemental environmental impact statement (SEIS) for the New Orleans to Venice (NOV) Federal Levee, Plaquemines Parish, Louisiana.

The existing NOV Federal storm risk reduction levees were severely damaged in 2005 by Hurricanes Katrina and Rita. The project area lies in the delta of the Mississippi River in Plaquemines Parish, Louisiana commencing on the east bank in Phoenix, which is approximately 38 miles south of downtown New Orleans, and terminating in Bohemia, Louisiana. On the west bank, the project area begins in St. Jude and terminates in Venice, Louisiana. Because the grade elevation varies within the project area and hurricanes that have struck the project area since 2005 have degraded certain reaches, the current level of risk reduction is of low reliability. The goal of this project is to provide the authorized design-grade level of storm risk reduction for Plaquemines Parish.

The draft SEIS recommends the least environmentally damaging alternative to accomplish the needed risk reduction system requirements. The tentatively selected plan would call for the restoration, armoring, and accelerated completion of the existing NOV Federal levees on the east bank from Phoenix to Bohemia, and on the west bank from St. Jude to Venice to provide the authorized design-grade for storm risk reduction. The elevations of the existing floodwalls and levees within some sections of the back levee and portions of the Mississippi River Levee are below the authorized design elevation. Some portions of the same sections also lack subsurface stability to support design-grade level flood risk reduction capability. The project would restore, armor, and accelerate completion of all NOV Federal flood risk reduction structures to meet the authorized design-grade and stabilize those sections of levees where subsoil deficiencies or internal levee deficiencies undermine their strength. The levees would be restored to an authorized 2% design elevation (approximately 50-year level of risk reduction) using recommended design criteria.

Attached for your review and comment is the draft SEIS. The draft SEIS and its appendices can also be viewed at www.nolaenvironmental.gov. The public comment period for the draft SEIS ends on May 8, 2011.

Three public meetings will be held for discussion on the draft SEIS on:

- April 5th, 2011 at Buras Auditorium, 35619 Highway 11, Buras, Louisiana 70041 beginning at 6:00 p.m.

- April 6th, 2011 at the Belle Chasse Middle School, 13476 Highway 23, Belle Chasse, Louisiana 70037 at 6:00 p.m.
- April 7th, 2011 at the Rev. Percy M. Griffin Community Center, 15535 Highway 15, Davant, Louisiana 70046 beginning at 6:00 p.m.

Please send all inquiries or comments to Mr. Christopher Koeppel by mail, fax, or email.

Mr. Koeppel can be contacted at:

Mr. Christopher Koeppel, Environmental Team Leader
U.S. Army Corps of Engineers (PD-E), Vicksburg District
Regional Planning and Environment Division South
4155 East Clay Street
Vicksburg, MS 39183
Telephone: (601) 631-5410
Fax: (601) 631-5115
Email: Christopher.D.Koeppel@usace.army.mil

Joan M. Exnicios

Joan M. Exnicios
Chief, New Orleans Environmental Branch

NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

For Immediate Release:
March 31, 2011

Contact: Rene Poche
504-862-1767
Rene.G.Poche@usace.army.mil

Corps releases proposed plan for Plaquemines Parish risk reduction

NEW ORLEANS, LA – The U.S. Army Corps of Engineers has released a draft Supplemental Environmental Impact Statement (EIS) for 45-day public review, which addresses impacts anticipated from modifying/raising back levees from Phoenix to Bohemia on the eastbank and back levees and Mississippi River levees from St. Jude to Venice on the westbank of Plaquemines Parish. These levees are a part of the New Orleans to Venice, Louisiana (NOV) Federal levee project.

"The plan described in the environmental document proposes raising the current New Orleans to Venice hurricane risk reduction project by as much as 5 feet in some areas," said Julie LeBlanc, senior project manager. "Our project team will be holding public meetings to collect feedback from community members on the proposed plan."

The Supplemental Environmental Impact Statement for the existing New Orleans to Venice Hurricane Risk Reduction Project is currently available for public review through May 8, 2011.

At three public meetings the Corps will discuss the proposed plan described in the SEIS and also the Environmental Impact Statement proposing improvements to incorporate the non-Federal back levees which run from Oakville to St. Jude on the westbank of Plaquemines Parish into the NOV Federal project. Meeting details are:

Meeting 1
When: Tuesday, April 5, 2011
Open house 6:00 to 6:30 p.m.
Presentation and discussion 6:30 p.m.

Where: Buras Auditorium, 35619 Hwy 11, Buras, LA 70041

Meeting 2
When: **Wednesday, April 6, 2011**
Open house 6:00 to 6:30 p.m.
Presentation and discussion 6:30 p.m.

Where: Belle Chasse Middle School Gym, 13476 Hwy 23, Belle Chasse, LA 70037

Meeting 3
When: **Thursday, April 7, 2011**
Open house 6:00 to 6:30 p.m.
Presentation and discussion 6:30 p.m.

Where: Rev. Percy M. Griffin Community Center, 15535 Hwy 15, Davant, LA 70046

-more-

The draft SEIS and its appendices can be viewed at www.nolaenvironmental.gov. Hard copies are available upon request. The public comment period for the draft SEIS ends on May 8, 2011. The public comment period for the draft EIS (covering incorporation of the non-Federal levees into NOV) ends on April 18, 2011.

Inquiries on the proposed plan and comments may be submitted to:

U.S. Army Corps of Engineers (PD-E)
c/o Christopher Koeppel
4155 Clay St.
Vicksburg, MS 39180
Phone: (601) 631-5410
Fax: (601) 631-5115
E-mail: Christopher.D.Koeppel@usace.army.mil

For more information on the Corps' projects visit www.mvn.usace.army.mil or www.nolaenvironmental.gov.

###

US Army Corps of Engineers
New Orleans District

Public Meeting Summary

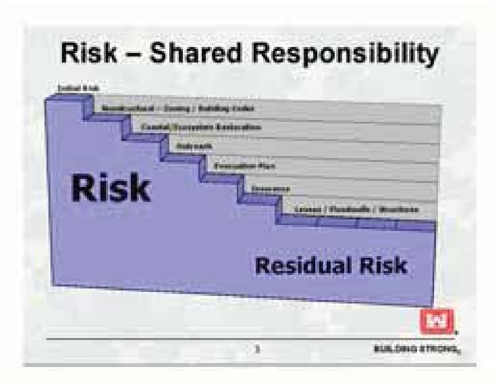
Plaquemines Parish Non-Federal Levee EIS & New Orleans To Venice SEIS
April 7, 2011

Location	Rev. Percy M. Griffin Community Center 15535 Hwy 15, Davant, LA 70046
Time	Open House 6:00 p.m. Presentation 6:30 p.m., followed by a discussion
Attendees	Approx. 19
Format	Open House Presentation
Handouts	• Presentation • Approval Process Brochure • 2009 Status map
Facilitator	Rene Poche

Rene Poche: My name is Rene Poche and I'm with the public affairs and I will be facilitating tonight's meeting. Before we get started I want to turn it over to Councilmember Griffin to say a few words.

Councilman Percy Griffin: I would like to open the meeting with a prayer if everyone could stand up. Father God we come here tonight to help [Inaudible]. Thank you for another day and another opportunity to have [Inaudible]. We thank each and everyone who gathers here this evening and we thank those who make presentations and show the protection and interest of our lives and our family. We hope that everything done here tonight is pleasing in your eyesight and we ask for these blessings and all blessings in Jesus' name, Amen. I surely want to welcome you here tonight at the Rev. Percy Griffin Community Center. We want to thank the Corps for taking the time to come down and discuss the interest of what the people desire and feelings are. As we talk about restructuring the levee from Phoenix to Bohemia, there is some talk about how and when it's going to be done and there is interest because Katrina showed us what can happen when we don't the property levee in our area. What the Corps' intention is to raise that levee from Phoenix to Bohemia and hopefully this will give us the proper protection that we need to withstand some hurricane that may not be another Katrina. I just want to welcome you all here and make sure that you absorb the information that is given to you.

Rene Poche: I ask that you hold all questions and comments until the end of the presentation as we will have discussion a session then. Everything that you will see on the screen tonight is also on these boards over here and we have handouts.

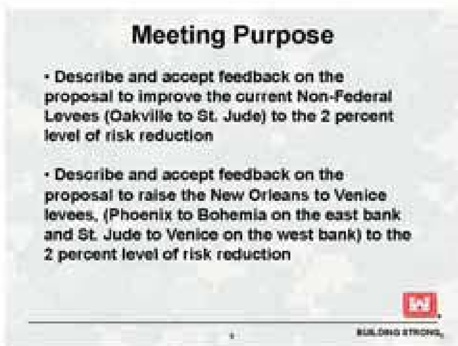


Risk is a shared responsibility. We use to call the system a Hurricane Protection System but over time we learned that reducing risk is really what's important so now we call it the Hurricane Storm Damage Risk Reduction System. Even after we construct a levee, floodwall or build a pump station, there is still going to be some amount of risk there. What this diagrams shows is that we start off with risk and then there are ways and opportunities to reduce that risk. We do that through building codes, insurance and lower down the line you see earthen levees and floodwalls. All these things work in tandem to reduce the risk, but the key thing to remember is that we do live in Southeast Louisiana and there will always be some risk here. For that reason you need to have an evacuation plan for you and your family and you need to listen to local officials and heed any evacuation warnings they may put out.

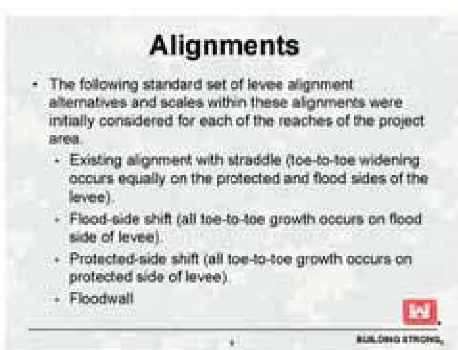
At this time I'm going to turn it over to Chris Koeppel to discuss compliance.

Chris Koeppel: I'm the environmental manager for this project and I'm going to talk a little about NEPA, the National Environmental Policy Act and why we are here tonight.

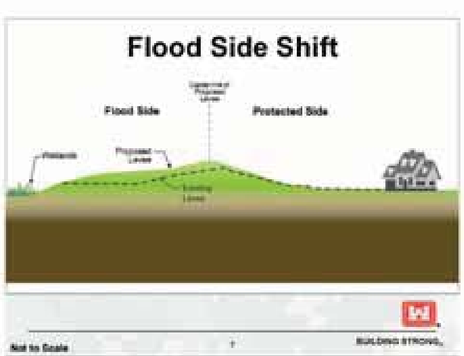
NEPA stands for The National Environmental Policy Act and is used for all major federal actions or any action that uses federal funds and this is one of them. It is a planning tool that helps us pick different alternatives based on how those alternatives work, their efficiency and what kind of impacts they have to the human environment. By human environment I don't just mean endangered species, but we also mean habitats for species like habitats and our recreational facilities. We talk to people to find out what they think is important as we need communication to get a better idea of what our impacts will have on citizens. The goal is to have a better informed decision making process so we can choose the alternatives that work best for all the different things we are trying to balance in this project. In the end it results in environmental documents that we have on-line. This is a 45-day comment period so we are inviting comments from the public and those comments will be considered when we are writing the final document; so you really are stakeholders in the process.



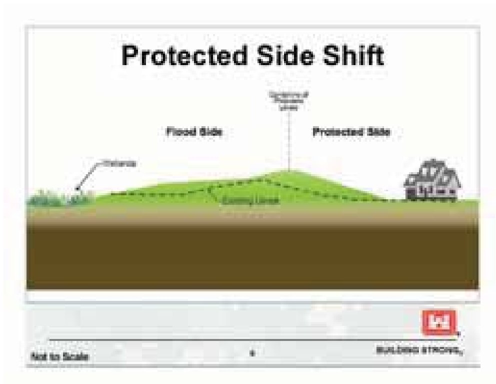
So, why are we here tonight? We will describe what we are doing and accept feedback on what we are doing and the impacts to what you consider to be important. There are two different projects that are related; one is the non-federal levees and we are asking your input to raising those levees to the 2% level of risk reduction. What exactly that means we will discuss a little later. The second one is the current federal levees from Phoenix to Bohemia and St. Jude to Venice on the West Bank to the 2% level of risk reduction as well. We are taking the non-federal levees and incorporating them into the improved federal system. The end result of both of these projects will be one federal system of improved levees to the 2% level.



This slide describes the different alignments that are possible in the system. To make it bigger you have to make it wider. One way of doing that is a straddle, which you keep the same crown and you widen equally on both sides. You raise it up higher and then you widen on both sides. There is also a flood-side shift, which is shifting the crown and the levee to the flood side and then there is the opposite for the protected-side shift.



This is a flood-side shift and you can see how the crown has shifted from the original existing levee towards the wetlands and the levee is widened towards that direction and that would be away from the protected side. In this case the decision may have been made because there were canals on the protected side or we don't want to relocate houses.

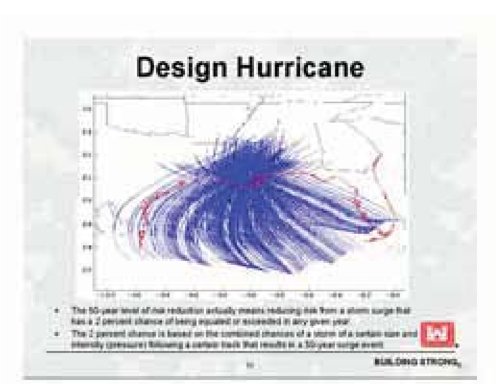


This is the opposite and you can see it has been shifted closer towards the personal property on the protected side and the crown has been increased to that direction as well. In this scenario, the wetlands are unaffected.

I'm going to pass this over to Project Manager Charles McKinnie who will talk about the non-federal levees.

Charles McKinnie: Good evening, I'm the project manager for the non-federal levees system that we will be discussing tonight.

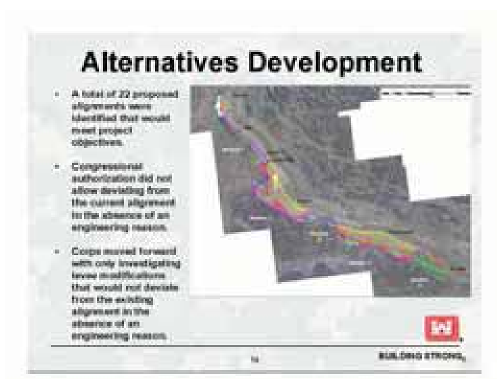
Before we do this, I have an overview of the entire project area. Up here, you have the Lake Pontchartrain and Vicinity Project and then in this area right here is the West Bank and Vicinity Project, and then in the yellow, we have the non-federal levee system that will be incorporated into the New Orleans to Venice federal system in this reach right now. The New Orleans to Venice federal system is going to raise these levees on the East Bank, where we are at today, and then you have these levees along the Mississippi River, the Mississippi River Levee, St. Jude to Venice and then the back levees from St. Jude to Venice. This is the project we are here to discuss tonight the West Bank and Vicinity non-federal and the New Orleans to Venice federal levees.



This slide depicts the design hurricanes to develop the levee heights for this levee system. There was a suite of 150 storms that were used as hydrologic models using wind speed and velocity. With all these storms a frequency analysis was performed and what came out of this for this project, we are using authorized level of protection of a 50-year storm or a 2% chance that can be equal or exceeded in any given year. That is what this project is designed for. Each of these tracks were taken into account and the designs were developed from this.

This project areas breaks up the project into non-federal West Bank areas and the East and West Bank federal levee system. The green highlights the federal levees. Where we are today is here the Venice to Bohemia project, which is considered NOV 01. These are the non-federal levees that were basically built by local entities and these levees authorized by Congress after Katrina, are to be incorporated into the federal levee system.

On the Non-Federal Levees Authority and Funding, it was authorized by Supplemental Appropriations to incorporate into the federal levee system; $671 million was allocated for this proposed action. This includes mitigation, which is when you do a project and you do damage to the environments, you have to mitigate for that and this includes the funding for that.



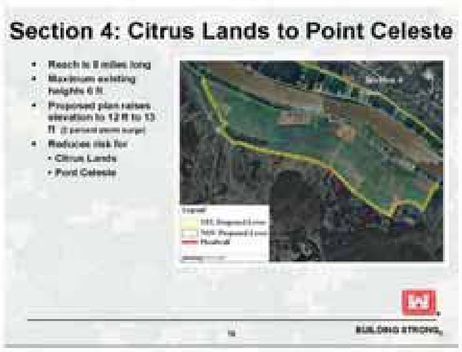
This is the entire reach of the non-federal levee system from Oakville to La Reussite and it's broken up into five individual sections here. There were a total of 22 proposed alignments and each one was identified to meet the project objectives. Congress authorization didn't allow for any deviation from the existing alignment except for an engineering reason and there are currently three location basically that we have that. The Corps moved forward with only investigations these modifications that would deviate for these engineering reasons.

This is what we call the Tentatively Selected Plan, the levee area is in yellow. The area in blue is the original levee alignments; these are the three areas that we deviated from the alignment. This area here has barrow pit and caused stability problems for the levee system to that alignment was changed. The area here the levee followed an irregular path and for stability reasons it was set back. This is pretty much the tentative plan and it does pretty much following the existing alignment. Right here, there is not a levee currently and here is where you tie into the federal system, Section 5, and that will actually be a new levee that will be raised to the 2% risk reduction elevation.

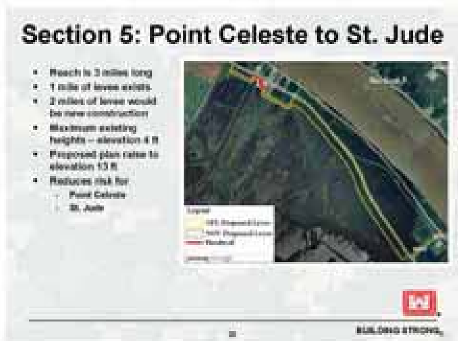
Looking at Section 1 that is Oakville to La Reussite and this reach ties into the West Bank and Vicinity project. It is approximately 8 miles long and the existing height is 9 feet, that's the maximum height as there are a lot of lower elevations in there. The proposed plan for the 2% storm surge is to raise that from 7.5 feet to 9 feet; 7.5 feet being here and increasing to 9 feet here. The reason for that is the storm surge is higher down here than it would be up here so as the storm comes in the storm surge gets less as it comes in so that is why you have 7.5 to 9.5. It's different than your typical river levee where you slope of the upstream/downstream, it's usually higher. Hurricane surge is typically higher downstream and it gets lower as you go upstream. We also have in this reach a locally preferred plan to raise it to the 1% storm surge, which is elevation 10.5 to 12.5. The locally preferred plan takes into the account the authorized action and the difference between that 1% chance, or the 100-year, and the difference in that will be paid by the local sponsor to achieve that level of protection. These levees reduce risk for Oakville, Jesuit Bend, Ollie, Naomi and La Reussite.

In Section 2, this is from La Reussite to Myrtle Grove. This is it he footprint of the levee and the reach is about 11 miles long. The existing levee height is about 8 feet. The Wilkerson Pump Station, which is right down here, will be replaced and moved to a location just upstream here and basically that is just replace in-kind. The p ump station there is very old and needs to be replaced. We could only replace what was there. The proposed plan is to raise the elevation of the levee from 9 feet to 11 feet for the 2%; 9 feet being here and the 11 feet being here at Myrtle Grove. The major land owner in this area is ConocoPhillips, which is the refinery right here and employs about 700 people. This levee system will reduce risk for Alliance, Ironton and Myrtle Grove.

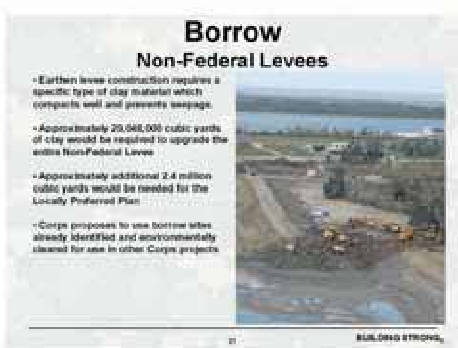
This is Section 3 and includes Myrtle Grove Marina and basically it starts right here and comes around past the shooting range by Highway 23. The reach is about 3 miles long and the existing levee height is about 6 feet. The plan is to raise this from 11.5 to 12 feet with a protected-side shift earthen levee enlargement along the existing alignment. Basically you will be moving landward here because you have marsh right here. It's possible to tie that into the MRL depending on the cost of construction somewhere in this reach right here. This basically reduces risk for Myrtle Grove area.



Section 4 is the Citrus Lands to Pointe Celeste. This reach is about 8 miles long with an existing levee height of 6 feet. The proposed elevation plans range from 12 to 13 feet for the 2% design storm; 12 feet being here and 13 feet being here. This plan reduces risk for Citrus Lands and Pointe Celeste. One thing I didn't mention, the red spot is a pumping station and we will provide fronting protection for that station, which protects the surge from taking out the pump station while there is a hurricane event.



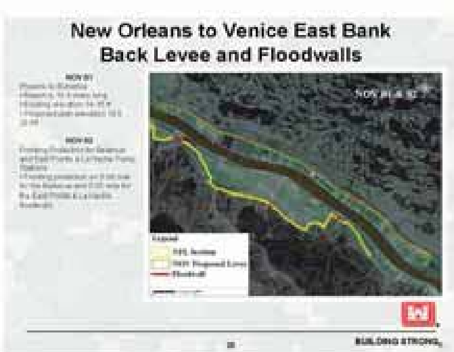
This is Section 5 from Pointe Celeste to St. Jude. This reach is about 3 miles long and 1 mile of levee exists right in here. The maximum elevation of that levee is 4 feet and the proposed plan is to raise that to elevation 13. The will tie into the federal levee system that currently exist right here. This reduces to Pointe Celeste and St. Jude. This is a floodwall and there is limited right-of-way in this reach right here and there will be a floodwall that will protect this and eliminate from having to take some homes and other businesses there.



Borrow for this non-federal levee system is going to require a specific type of clay material that packs well and prevents seepage. Approximately 29 million cubic yards of clay will be required to upgrade the entire federal levee system. For the LPP, if the parish agrees to go to the 1% in Section 1, that is an addition 2.4 million cubic yards that will be needed. The Corps proposes to use borrow sites that have already been identified and environmentally cleared for us in the Corps projects. These can be government-furnished sites that have been used for other projects and also contractor-furnished sites that are basically local individuals who own land and these sites have been cleared for environmental and geotech stability reason to make sure the soil has been cleared. So that is where the borrow will be coming from. I'm going to turn this over now to LeeAnn Riggs, she is the project manager for the New Orleans to Venice Federal Levee System.

LeeAnn Riggs: I work on the federal portion. Basically I'm going to do an overview of all of the reaches, the green highlights on the East and West Banks.

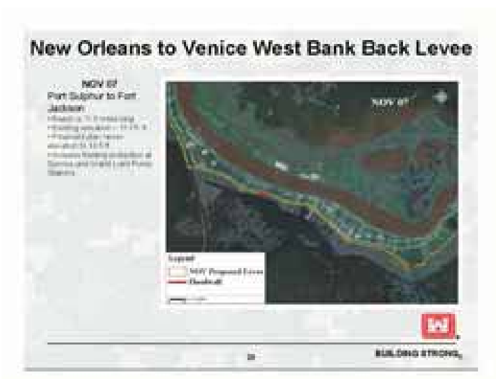
The authority that we received funding through, originally it was authorized in 1962 but wasn't completed by time Katrina hit. After Katrina, we got an extra $769 million to complete the project.



The first reach is NOV 01 and NOV 02, which is all back levees on the East Bank. NOV 01 goes to Bohemia to Phoenix and it's almost 16 miles long. It is currently between 14 and 15 feet high and the proposed plan would move it up from 19.5 to 20.5 feet. NOV 02 is fronting protection for two pump stations here in Pointe a La Hache and Bellevue and it would give fronting protection along those and raise that up.

NOV 05 moves us over the West Bank back levees. This first reach is from St. Jude to City Price. It is about 3.2 miles long and it currently 7 to 11 feet high and our proposed plan would raise it up to 13 feet. Where the red is would be fronting protection for Diamond Pump Station.

NOV 06 is the next reach down on the West Bank and is from City Price to Empire. It is 12.2 miles and has some T-wall in there, the red marks, which is fronting protection for Hayes and Gainard Woods Pump Stations. Just like we are going to do on the East Bank for NOV 02, this is fronting protection for the pump stations on this side of the river. Right now it's almost to grade and the proposed elevation would bring it up to 13 feet.



The next section is Port Sulphur to Fort Jackson; it is NOV 07 and is 11. 8 miles long and currently it ranges from 11 to 15 feet high and the proposed plan would move it up to at least 13 feet. We would not degrade the 15 foot down. It also has some fronting protection that will be for Sunrise Pump Station and Grand Liard.

The next reach down the river is from Fort Jackson down to Venice. This is 8.9 miles long and the proposed plan would be to be in some stability berms as it is almost to grade. There will also be fronting protection for Duvic Pump Station.

US Army Corps of Engineers
New Orleans District

Public Meeting Summary

NOV 09 is the next reach and it is actually the first MRL reach so we are moving over to the MRL's on the West Bank. This reach goes from St. Jude to City Price and it is 2.5 miles and between 14.5 to 17.5 feet in elevation. The proposed plan would raise that to 18.5 feet.

We then go down to City Price to Empire where the lock and floodgate is located. It is 12.2 miles long and is currently 14.5 to 17.5 feet high and it would be raised to 18 feet.

NOV 11 is from Buras to Fort Jackson. It is 5.2 miles long and is currently 11 to 15 feet high and it would be raised to 17.5 feet.

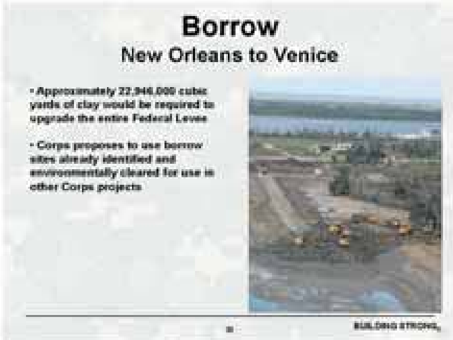
The last reach on the MRL is from Fort Jackson to Venice. It is 8.2 miles long and it is 17 feet elevation and we would add some stability and widen or raise the stability berms as necessary.

NOV 13 is the floodgate that is on the back levee on the West Bank. It is currently at 14.6 and the different plans that we looked at would raise it to 19 feet and it would either be located within the current floodgate, outside of it or next to it.

The lock is on the MRL side in the same area and it is at 14.6 feet. The proposed plan would raise it to 20.5 feet and they are looking at putting it out in the Mississippi River or within the side as it is now.

NOV 15 is from Childress and Venice. There are some floodwalls in those area that would replaced.

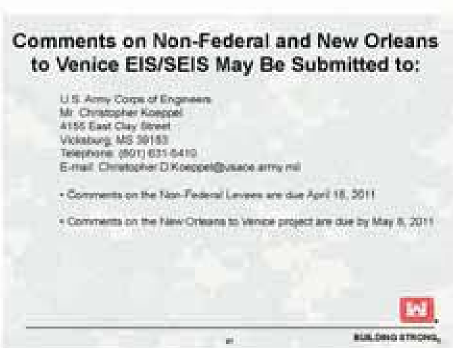
The last one is NOV 16 and it is in the Buras area. It is 6.6 miles long and would be raised from 17 to 18 feet. That is every reach in the federal side.



The borrow in our projects would be similar to the other side. Same type of material – clay. It would take about 23 million cubic yards to complete the whole federal side of the project. Same thing, it's already been cleared environmentally by our borrow folks.

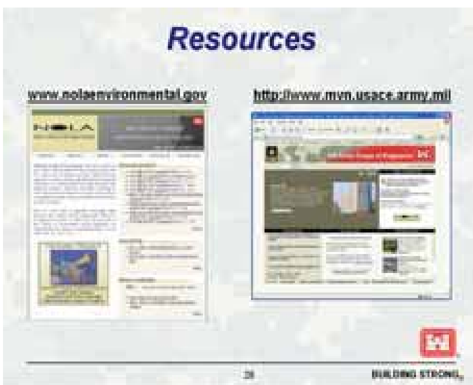
Rene Poche: We do have some documents out for public review. We have IER 27 a Supplemental, which is remediation to the outfall canals. We have the 13a Supplemental for the Hero Canal, which is through April 14th. The New Orleans to Venice Environmental Impact Statement I for review through April 18th and the NOV Supplemental is for review until May 8th. There is a variety of ways you can get input to us. There is a phone number there or you can email or go to nolaenvironmental.gov and post any comments you may have.

We do have some upcoming public meetings in May. These will be in Jefferson and St. Charles Parishes.



Here is more contact information on the non-federal New Orleans to Venice on the EIS and SEIS. There is contact information for Chris as well. And again those dates are April 18th and May 8th.

If you are into social media, we do have a presence out there on Twitter, Facebook and Flickr. You can like us on Facebook and everything that happens at these meetings, all types of information, gets posted out there. We do have a lot of photos on Flickr of the risk reduction system as you can see what is happening in the metro New Orleans area you can see that on Flickr; we have thousands of pictures on the various projects. We also have a Twitter account but we use that more for emergency situations to get information to people quickly.



We have several resources; we have nolaenvironmental.gov. It is a good site to find information on all the projects going on and again you can leave your comments there. We also a public site and that is www.mvn.usace.army.mil. We do have a link there for the risk reduction work as well as the tradition civil works mission that we have going on in New Orleans.

We are now going to move into the comment discussion area. We have a mic here so when you come up please say your name because we are getting this for the record and it will become part of the official documents.

Don Beshel: First of all, we started talking about non-federal levels being put into the federal system; that takes an act of Congress correct?

Rene Poche: Yes.

Don Beshel: You all have been doing cost studies for these projects?

Paul Eagles: These non-federal levee projects were funded by Congress after Katrina. I don't personally know of any studies that were ongoing studies going on at the time for that.

Don Beshel: I'm just confused because the money that was put in for non-federal levees was just a stop gap to fix the levees and repair the levees. I haven't heard of any money being put aside to actually build federal levees in a non-federal levee system in Plaquemines.

Paul Eagles: Congress, when they made the supplemental appropriations, specified that they were to be incorporated into the federal system.

Don Beshel: In Supplement 3 they didn't do that but in Supplement 4 they did in some areas like Citrus Lands.

Paul Eagles: It was basically on the West Bank from Oakville to St. Jude.

Don Beshel: So we are not talking about Braithwaite to White Ditch?

Paul Eagles: No.

Don Beshel: I just wanted to get that clear …

Rene Poche: It's West Bank only….

Don Beshel: Ok, because 18 miles of levee up here are being left out and that is going to be our flood plain. The Mississippi River Levee is good in Belle Chasse because that is where the water is going to end up. We would like you all to at least look at doing Braithwaite to White Ditch Levee. We have been pushing that for years but have not gotten any ground. We went to Congress and Congress sent me to the Corps and when I go to the Corps you say its' Congress so go back to Congress. It's a wagon wheel and we just go round and round. The other thing is that this is all fine and dandy, but from what I remember the cost of the levee just on this side of the river is going to be a billion dollars and with contingencies $1.2 and you had mentioned $769 million but the last I saw we only had $400 million some odd dollars left in the kitty for the three levees we are talking about.

Paul Eagles: We don't know the final cost of the projects as we are working on the designs right now. We suspect that it won't be enough for all of the system and we are prioritizing to get the most we can with the funding we have…

Don Beshel: I want to know where you are going to spend the money that you have right now? Are you going to choose a part or do one side over the other?

Paul Eagles: We are going to try and do work on both sides of the river…

Don Beshel: Are you just going to raise it one foot everywhere…

Paul Eagles: I talked to a councilman earlier and we are going to start out on the East Bank focusing on the fronting protection on the pump stations first and try to do that. On the West Bank try to work on fronting protection there and some of the levees and try to get as far as we can.

Don Beshel: You can raise a mile of levee 20 feet but what are you going to do that every two or three years? I'm just trying to figure out why we are here? If we don't have the money to do it, when are we going to get it and how is it being worked on and who is working on it? Are you guys going to have a job past the budget next week?

Rene Poche: You ask a lot of good questions but I don't know if we can answer all those here tonight. The best thing I can offer you right now is that we will take those questions, go back and get all the answers and get back with you. We are not going to solve it in this meeting tonight.

Don Beshel: I thought you would have something to give to me tonight, something concrete.

Rene Poche: We can't give absolutes as we are still in the early stages. We can talk more after and then we can get back with you with more information.

Joel Fredrick: Are y'all going to do anything to the river levee to bring it up to the same height of the back levee in this area here?

Paul Eagles: We were not authorized by the Supplemental Appropriations to work on the river side levee on the East Bank. It was the back levee only for this project. At this point the Mississippi River Levee is not part of the project.

Joel Fredrick: How high is the river levee?

Paul Eagles: I don't personally know what it is.

Joel Fredrick: If you are going to raise the back 2 to 4 feet higher than it is, it's going to be a lot higher than the river levee and you are not solving the problem. When you get a storm surge it's just going to come around and come over the river levee. My other question is up in Phoenix where the back levee ties into the river levee there are two highways. There is Highway 39 and Highway 15 that cross the levee. Are you going to raise those highways also?

Rene Poche: Yes, they will be raised.

Joel Fredrick: But you are not going to do anything with the river levee?

Rene Poche: Not authorized.

Joel Fredrick: That's not solving the problem.

Byron Encalade: I am the councilman for this district and I want to talk about mitigation. I understand you have funds in this project to mitigate the damages in the marsh land. Are you going to mitigate the damages from the existing levee all the way to the canal or are you just going to take part of it and leave a problem that was created years ago. We want to see the Corps be more responsive to our community to the point of undoing some the wrong.

You can't undo it all but we can undo some of it. We need to mitigate from the levee to the canal and give people back access to the canal property. It was a Corps project that put the back levee there in the beginning that took away their land. Now they declare marshland and not put into mitigation all the way to the canal and that would do to this community a big disservice.

Chris Koeppel: In terms of mitigation, we can only mitigate for the direct impact we have to those marshes and that mitigation would be creation of new marsh wherever we can find it. It might a mitigation bank, it might be somewhere nearby. We take a tiered approach to creating marsh; we try and choose local first and then move out to find areas that we can buy to create marsh.

Byron Encalade: I understand what you are saying, but what I want to know are you going to mitigate all of the marsh between the levee and the canal?

Chris Koeppel: If it's impacted.

Byron Encalade: It's impacting because it impacts the community. So if you are not going to put mitigation funds in to address the economics of the community I think this is a way we can service that; by mitigating that marshland from the levee to the canal.

Chris Koeppel: So you are talking more than environmental impacts?

Byron Encalade: Economic impact too because if I can't have access to my bayou property that crosses my land that the Corps originally took from me that I had access to, I would think it would be a good jester to mitigate all that marshland between those levees and give me back my bayou property. Am I right?

Chris Koeppel: We can only mitigate impacts from this project for this project. Part of what we looked at for impact is economic impacts to things like connectivity, access to recreational areas and access to anything. What we are talking about here is the economic impacts and it's an important part of this process and we would be happy to talk to you afterwards and get some further information.

Byron Encalade: It is an impact. I would like to go on the levee and fish on my own property and when you put this project you say you are mitigating for marshland but you are not considering the economic impact to the community. Too many times we've had this in the past and we need to address this. We need to also put in mitigation. Too many times we don't know who we are dealing with, whether we are dealing with the state or the Corps. I'm not here to bash you but I'm going to talk the facts. What I'm saying is that we need to make sure the mitigation is right to make sure the economic impact in this community, because of the project, is included. If you have to give something by mitigating more marshland to make sure economic stability of the community is taken care of and have access to their bayou property, I think you should do it.

Chris Koeppel: These are impacts that we definitely consider during the NEPA process. That's information that we need so we can make informed decisions.

Don Beshel: On mitigation cost for the federal levee especially the one back here, is that 100% funded or do we have to pay 3-% on the reseed back here?

Paul Eagles: All the mitigation will be [Inaudible]

Don Beshel: Is the levee funded 100% too?

Paul Eagles: [Inaudible – not near mic]

Rene Poche: It's 100% funding for both. Any other questions?

Louis Adams: I represent a community that is on this back levee system here from Phoenix. I'm about three miles below Phoenix. The road that goes over the levee to get into our camp area, there are 19 camps in there, is that road going to be elevated an additional five feet?

Charles McKennie: Any existing access that is there now will be raise in conjunction with the levee. If you have access now it will be maintained and still be there.

Louis Adams: Will it be straight across or diagonal?

Charles McKennie: I can't answer that exactly and I apologize. Most likely if it's straight across now it will be straight across then but we have to fit it in with the highway next to it so the roadway dynamics may cause it to be skewed.

Louis Adams: I attended a meeting last year about this and they explained it that the ramp will be changed to a diagonal ramp, both entrance and exit, so it wouldn't be a straight access over the levee it would be diagonal. I don't know if that was changed.

Paul Eagles: Was that for a different project?

Louis Adams: No, it was the raising of this levee.

Rene Poche: This is the most correct response he just gave you because there are a lot of factors to consider on whether it will be straight over or angled.

Louis Adams: When will that be addressed?

Charles McKennie: We will know more in a few months. We are in the infancy stage of the design so that is why I can't tell you exactly what we are doing right now.

Byron Encalade: I did go to a meeting with Corps and the project managers were all there for all the levees and stuff and they made a firm commitment to me that every road that's over these levees would be maintained. They didn't on the last project they did because the last road over my property the road was left out and several others. They made a firm commitment, and I'm going to be watching it, to make those roads go back over the levees and you need to be conscious of that because you will have a lot of communities raising noise if those roads are not put back. That was a commitment that they made to me years ago that they were going to be put back.

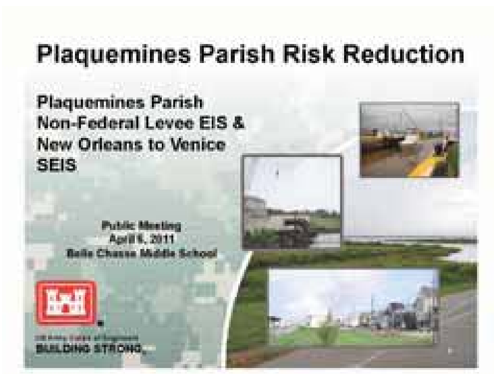
Rene Poche: Thank you. We do have the slides posted if you want to look at them and we also have all this as handouts so you can take that as well. Thank you.

US Army Corps of Engineers
New Orleans District

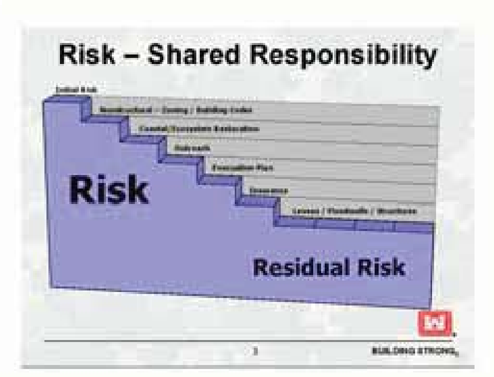
Public Meeting Summary

Plaquemines Parish Non-Federal Levee EIS & New Orleans To Venice SEIS
April 6, 2011

Location	Belle Chasse Middle School
Time	Open House 6:00 p.m. Presentation 6:30 p.m., followed by a discussion
Attendees	Approx. 54
Format	Open House Presentation
Handouts	• Plaquemines Parish Risk Reduction Fact Sheet • Corps Approval Process Brochure
Facilitator	Rachel Rodi



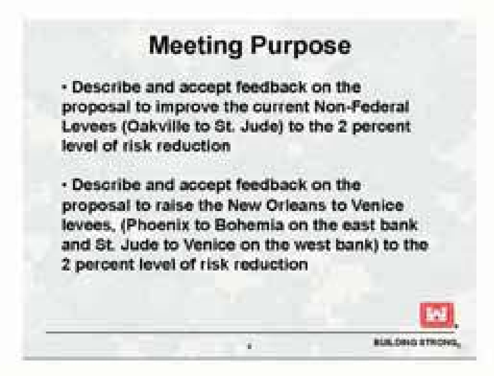
Rachel Rodi: My name is Rachel Rodi and I am in public affairs for the Corps. Thanks to all for coming; I see a lot of familiar faces. We are here tonight to talk about the parish non-federal levees and the New Orleans to Venice projects.



Who has been to a Corps public meeting before? If you have been I know you've seen this slide showing the risk is a shared responsibility. Before in the Corps we called this system the Hurricane Protection and we realized that we are not protecting, but reducing risks so we now call it the Hurricane Risk Reduction System and there are many ways we, together, can reduce risks. We can buy that down by zoning, building codes, outreach, having an evacuation plan, insurance and then there are levees, floodwalls and structures. The point is we live in Southeast Louisiana so we all have risks.

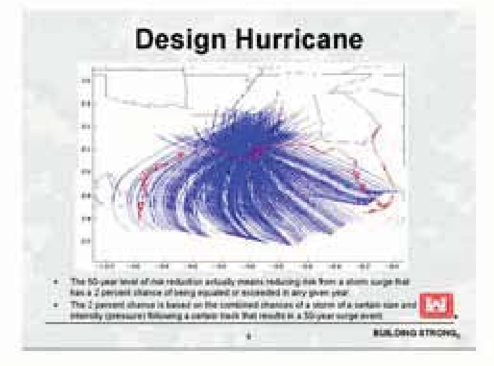
Part of the reason why we are here is NEPA, the National Environmental Policy Act, is used for all major federal actions. It analyzes the impact to humans and the natural environment and investigates reasonable alternatives. Public involvement is the key to everything as we need your input.

Public Meeting Summary



Two reasons we are here. We want your feedback on the non-federal levees from Oakville to St. Jude; that's for the 2% level of risk reduction. The second project is the feedback on the New Orleans to Venice levees, which is Phoenix to Bohemia on the East Bank and St. Jude to Venice on the West Bank. We are not going to talk about the Eastern Tie-In or the floodgate. If you do have comments, you can give them us afterwards o email us. With that, I'm going to turn it over to Julie LeBlanc who is a senior project manager.

Julie LeBlanc: This map shows the multiple projects in the area. The purple here is the Lake Pontchartrain and Vicinity and that we are currently working on that will provide a 1% or 100-year level of risk reduction for the East Bank Orleans Parish, New Orleans East, to St. Bernard Parish. There is the West Bank and Vicinity Project, which is this orange project in this vicinity; this does provide risk reduction to the Belle Chasse area from Oakville upward into Algiers into St. Charles Parish. That also is a 1% or 100-year risk reduction project. Both of those are scheduled to be completed in June of this year. One of the projects we are going to talk about today is the New Orleans to Venice non-federal levee incorporation into the New Orleans/Venice project; it's the yellow levee here that are approximately 34 miles from Oakville to St. Jude. We also have the New Orleans to Venice project, which is in green, that is from St. Jude to Venice and that is back levees as well as Mississippi River levees on the West Bank. And lastly, we have Phoenix to Bohemia on the East Bank is also part of the New Orleans to Venice project. Both of these projects will be built to approximately 2% level of protection or protect and provide risk reduction from a 50-year storm. Another thing that is noted here is that there are three distinct but connected projects that provide risk reduction to Plaquemines Parish residents. The first is the West Bank and Vicinity project and then the New Orleans to Venice and non-federal levees projects and then the Mississippi River and Tributaries provides risk reduction from river rain flooding and that starts on the north side of this map and on the West Bank it travels all the way down to Venice and on the East Bank starts at the top and travels all the way down to Bohemia. So those are the three projects that provide risk reduction to Plaquemines Parish. There is also some East Bank non-federal levees below Braithwaite that we are no authorized to do any work on.

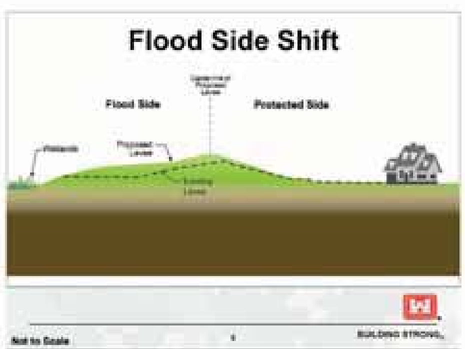


This Design Hurricane map shows you a grouping of synthetic hurricanes; we had 152 storms that we ran to determine what levee elevation the levees need to be built to in order to provide a certain level of risk reduction. These projects we are talking about tonight will provide a

Public Meeting Summary

50-year level of risk reduction, which means reducing risk from a storm surge that has a 2% chance of being equaled or exceed in a given year.

Some of the alignments we are going to talk about in more detail. The following standard set of levee alignment alternatives and scales within these alignments were initially considered for each of the reaches of the project area. Basically, there are four alternatives we looked at. We have a straddle, which is basically taking an existing levee and then raising it up so the crown of the levee stays in the same location, it just goes straight up to whatever elevation it need to be built to. The second one is a flood-side shift, which is when we shift it to the flood-side or away from the protected areas. The protected-side shift does just the opposite and moves it the other way. Another option is a floodwall or T-wall that we can use to provide risk reduction.



This is a slide of what it looks like. This would be the wetlands side or the unprotected side. This dash line is the existing levee so you can see this is where the existing crown of the levee is and it continues on to the side where the houses and businesses are located. A flood-side shift would actually take the crown of the levee and move it up and over toward the flood-side.

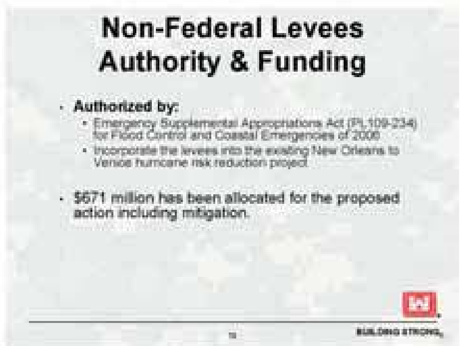
A protected-side shift would do just the opposite. This is an existing levee with the crown in this location tapering off this way and the protected-side shift would shift that levee crown toward the protected-side. In locations where we have houses very close to the levee, this is not an alternative we want to go with so we are not impacting houses and businesses.

We have two presentations and I'm going to talk about the non-federal levees and then Paul Eagles, our senior project manager, will talk about the New Orleans to Venice project.

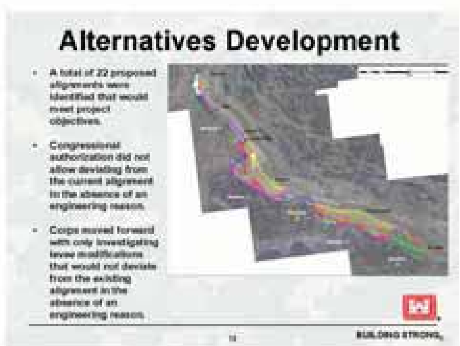
Public Meeting Summary

So the next couple of slides talks about the New Orleans to Venice non-federal levee project.

This map is looking just at the Plaquemines Parish area. The non-federal levees are from Oakville down to St. Jude and then there is a couple miles stretch here where there isn't an existing levee where we would design and construct a levee to the 2% level of risk reduction. It's a lot easier on this map so I'll point it out again, the New Orleans to Venice Project consists of back levees from Phoenix to Bohemia on the East Bank and then back levees and Mississippi River Levees on the West Bank from St. Jude to Venice.



The non-federal authority and funding was authorized by two Supplemental Appropriations in the aftermath of Katrina. The first was the Public Law 109-234 in 2006. We did get the money in two pieces, but the total we received was $671 million that has been allocated. I know there have been some questions about this and I will answer any questions in detail, but just to let you know, this money has been allocated and we have that money in hand to do this work.



This again is showing you the entire stretch from Oakville to St. Jude and there are alternatives we looked at shown on this map. We considered a total of 22 proposed alignments that would meet the project objectives. The Congressional authorization said we had to incorporate certain non-federal levees into the system. If there wasn't an engineering reason to deviate from that alignment that is the alignment we stayed on.

This is our tentatively selected plan or the proposed action that we are talking about in the Environmental Impact Statement and we are asking for your comments on this tonight either in person or in writing. Highway 23 is the pink line running along the river. Again we are starting up here at Oakville and running to St. Jude. The blue, which is only a couple of locations, is where the existing alignment can be seen on the map. If you see the yellow, basically the alignment that we are selecting is the same as the existing levee alignment. So in these three locations, we deviated from the alignment there because of engineering reasons. There are some really deep oil field canals that have some stability issues so we shifted the levee alignment in a little. In this location, there is a pump station and in order for us to protect that pump station, we need to shift the alignment in so that we are not trying to protect a point. We will shift that alignment and then also replace that pump station with the same size pump station. In this area, there are some borrow sites that caused some levee stability issues so we shifted the alignment in that location as well.

Section 1 is Oakville to La Reussite. The proposed levee is shown in yellow and we are tying into the West Bank and Vicinity at Oakville, and that's in blue. Anywhere there is a red line, that's showing a floodwall that we are proposing. Anywhere that's yellow is basically a levee. So a levee for most of it and we have a floodwall here and in this location and at the bottom by La Reussite. The reach is approximately 8-miles long and the maximum elevation is currently 9 feet, in many locations it's lower than that. W are proposing to raise the elevation to 7.5 to 9-feet elevation; I believe the 7.5 feet are in the upper reach and as then as you go down it's 9 feet to provide the 50-year level of risk reduction. We are looking at a locally preferred plan for this entire stretch that would raise the elevation to approximately 10.5 to 12.5 feet and that would provide design elevations along this back levee reach to the 100-year elevation. It would reduce risk for Oakville, Jesuit Bend, Ollie, Naomi and La Reussite.

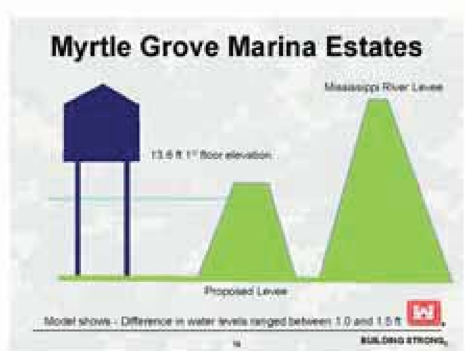
Section 2 is from La Reussite to Myrtle Grove. I know we have a lot of people from the Myrtle Grove area here. The bottom of this here is between Section 2 and 3, so we do have more information on this on the next slide. This reach is 11 miles and the maximum existing height is 8 feet. We will also be replacing the Wilkerson Canal Pump Station and include a wall in front of that to provide backflow protection. The proposed raises elevations from 9 to 10-feet elevation. ConocoPhillips is the major landowner and employs approximately 700 people at their site in section two and it reduces risk for Alliance, Ironton and Myrtle Grove.

Since we are talking about the Myrtle Grove Marina between Section 2 and 3, we added in some additional information for some modeling that we've done that talk about the effects on the Myrtle Grove Marina Estates residents. These structures are outside the levee protection and currently have a 4-foot levee behind them and the levee will be raised to 11.5 feet behind that. This map shows that in grey are various storms we looked at. The four storms that we tracked, which are arbitrarily named, the four are Storm 11, 14, 84 and 153.And you can see here's the track for 153 and 11 and 14 are here and 84 is in this location. What we tried to do is look at multiple storms that gives us various surge levels so that we could see what the storm surge would be without a levee in place versus with a levee in place and what the differences are. You can see these storms varied from 6.6 to 11.5-foot storm surge. We also compared Hurricane Gustav, which produced a 7-foot surge in that area, and you can see how the storm compared from a wind speed and pressure stand point.

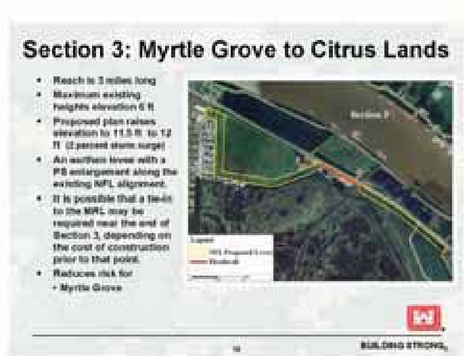
Male Speaker: Is that based on actual storm data?

Julie LeBlanc: It's synthetic storms so no, it's not actual storm data, but we do take the data and then run and actual storm and calibrate the model to that and see if the synthetic storms are actually showing the same elevations from an actual storm with a similar path and similar characteristics.

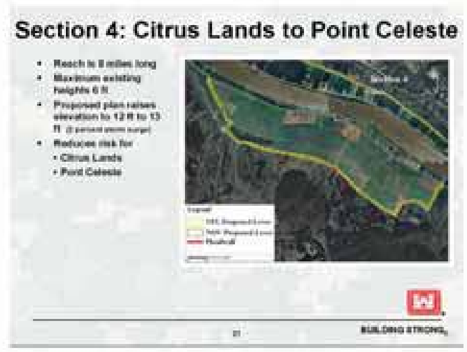
This is not to scale but it gives you an idea of what the impact would be for us raising the existing non-federal levees behind the area. This is showing you what the houses look like. We did some slab elevations on the first floor living area, which is above the ground level. The lowest one was around 13.6 feet elevation. The existing levee again is around 4 feet. This is just showing you that with the existing levee, the storm surge would be somewhere in this location depending on the storm, it could be up or down from that location.



This next slide show what it would have been and then with the increased levees to 11.5 feet, we are showing the difference between these two in the model results for the four storms that we ran. The difference in water level ranged between 1 to 1.5 feet. So whatever the elevation is now with the elevation of the existing levee where it overtops the levee, when you put it in place, you increase the surge between 1 to 1.5 feet. Of the storms that were run, three of the four actually showed that it didn't overtop the proposed levee. Right now it goes over the existing levee here so it would just go up a little bit higher on the higher levee.

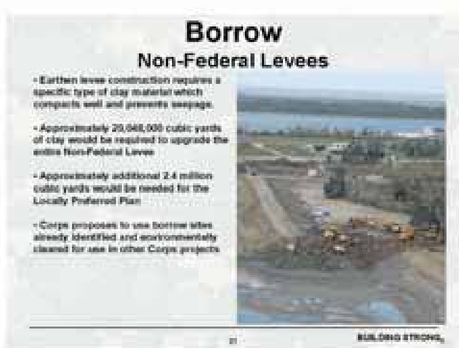


This is Section 3, which is the bottom part of Myrtle Grove. This reach is 3 miles long with a maximum existing elevation of 6 feet. The proposed plan will raise the elevation to 11.5 – 12 feet. It's an earthen levee with a pump station enlargement along the existing non-federal alignment. Depending on budget, if there is not enough money to complete the entire project, we would tie into the existing Mississippi River Levee in this location. There is proposed levee along this reach and then proposed floodwall and it reduces risk to the Myrtle Grove area.



Section 4 is Citrus Lands to Point Celeste. This reach is approximately 8-miles long with maximum existing height of 6 feet. We are proposing to raise the elevation from 12 to 13 feet. This will reduce risk for Citrus Lands and Point Celeste. It's mostly levee except for one location here where we have a floodwall. There is an existing levee alignment that comes along here like a square and we are actually avoiding the borrow pits in that location for stability reasons.

Section 5 is Point Celeste to St. Jude. The project that Paul will talk about in a minute deals with existing New Orleans to Venice levees actually are right here so we are tying into those existing levees that start at St. Jude with this last stretch. It's approximately 3-miles long; one mile of the levee exist, the other we will build from the ground up. Maximum existing elevation is around 4 feet and the proposed plan is to raise the elevation to 13 feet. Again, we have some areas where we are looking at levee along most of this stretch with one reach of floodwall.



Borrow requirements for the non-federal levees are earthen levee construction. This requires a specific type of clay material that compacts well and prevents seepage. We need approximately 29 million cubic yards to upgrade the entire non-federal levee reach. We need an additional 2.4 million more cubic yards for the locally preferred plan, again which is in the top 8 miles of the non-federal levee from Oakville to La Reussite. The Corps proposed to use borrow sites that have already been identified and environmentally cleared for use in Corps projects. We are either going to use government furnished, which are sites that we designate to the contractor, or we tell the contractor that they have to find their won borrow but they would go to designated sties that have already been cleared from an environmental standpoint as well as insuring that they are adequate for levee construction and meet certain geotechnical requirements. Paul is going to talk about New Orleans to Venice project, which is south of this project.

Paul Eagles: I'm going to talk about the levees in green you saw on the map awhile ago.

The levees are here on the East Bank and on the West Bank.

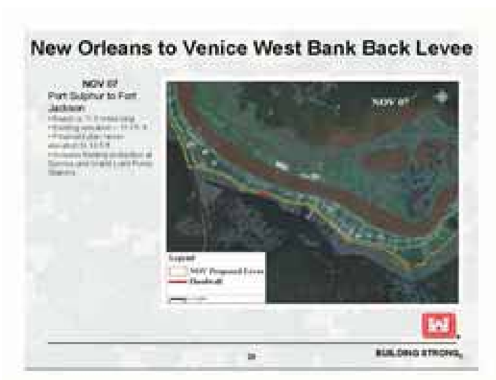
This project is authorized by the Flood Control Act of 1962 and it was about 85% complete before Hurricane Katrina hit. Following Katrina you had the Supplemental funding and this project was funded for $769 million for repairs as well as completing the project.

I will go through the different reaches of the project and describe where they are; very similar to what Julie just talked about. NOV-01 is on the East Bank from Phoenix to Bohemia, which is about 16- miles long. The existing levee height is 14 to 15 feet and the proposed elevation is 19.5 to 20.5. NOV-02 is in the same area and basically what this entails is fronting protection for two pump stations where the red is right here. It's for the Bellevue and East Pointe á La Hache pumps stations. The fronting protection would be for both of those pump stations.

Public Meeting Summary

NOV-5 is on the West Bank from St. Jude to City Price and is about 3.2 miles long. Existing elevation is about 7 to 11 feet with a design height of 13-feet elevation. It does include fronting protection for Diamond Pump Station.

NOV-6 is City Price to Empire. This is a pretty long reach, about 12.2-miles long and it will have several short sections of T-wall and I-wall on the back levee. The existing elevation is near the design grade; however, the proposed plan would be about 13-feet elevation and the design sections would be increased to take care of the design requirements for the levees. This includes the fronting protection for the Gainard Woods and Hayes Pump Stations as well.



NOV-7 goes from Port Sulphur to Fort Jackson and it's almost 12-miles long. It has an existing elevation of 11.5 feet to 15 feet and the proposed plan is to raise this to a consistent elevation of 13.5 feet. Grand Liard and Sunrise is also included in this reach fronting protection for those pump stations.

The last one on the back levee is NOV-8 and is from Fort Jackson to Venice. This reach is almost 9 miles and is near the design grade so there is not a lot of work to be done. There is the Duvic Pump Station in here that will have fronting protection provided b y the project.

On the Mississippi River Levee side you start out with NOV-9 from St. Jude to City Price and it's about 2.5 miles with existing elevation from 14.5 to 17.5 feet and the proposed design elevation is 18.5 feet along the river.

NOV-10 is City Price to Empire and this reach is over 12-miles long. Existing height is 14.5 to 17.5 feet and it's also 18 feet proposed elevation along the river.

Buras to Fort Jackson is a little over 5- mile reach with elevation from 11 to 15 feet to 17-feet design.

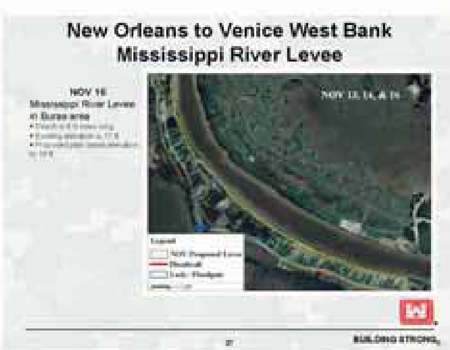
NOV-12 is from Fort Jackson to Venice. This reach is about 8.2 miles with an existing elevation of 17 feet. This would restore the levee to increase the stability and widen and raise the levee as necessary. This is pretty close to design grade.

Public Meeting Summary

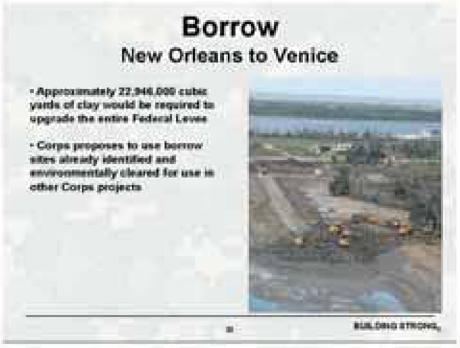
NOV-13 is the Empire Floodgate. This will raise the floodgate from about 14.5 to an elevation of 19 feet and replacing the floodgate that is there now.

NOV-14 is the Empire Lock. There is an existing gate that and we would raise that from 14.6 to 21.5 and they were looking at some options on how to replace the sector gate in front of the lock or possibly within the lock itself.

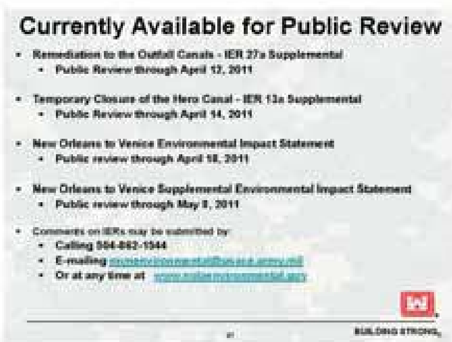
NOV-15 is some floodwall replacement at Childress to Venice. The Childress Floodwall will be replaced with a levee and the Venice Floodwall will be replaced with a concrete T-wall.



NOV-16 is the last one and it’s between 10 and 11. It’s a 6.6-mile long reach and will go from about 17 feet to and elevation of 18 feet.

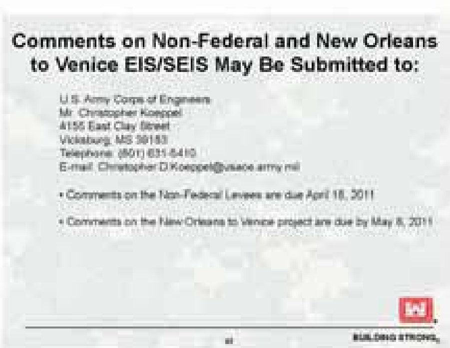


As Julie said, we need almost 23 million cubic yards of clay for this project. The materials will come from borrow areas that have been cleared through the other projects; either government furnished or contractor furnished borrow.



Rachel Rodi: A couple of things first. If you have a comment there are cards over here. We have a list at the sign-in table, but these are all the Individual Environmental Reports we have for review right now. We have IER 27, 13a, this project we are talking about tonight. You can call us at 862-1544 or you can email us or go on-line to nolaenvironmental.gov.

We do have some upcoming public meetings. Tomorrow night we will be across the river talking about these projects. Then we will be in Jefferson and St. Charles Parishes in May.



Comments tonight will go directly to Chris. You can email or call him; he's in Vicksburg, one of our regional offices. Comments are due no later than April 18th on the non-federal levees and then on May 8th for the New Orleans to Venice project.

If you are into social media, we do have a presence out there on Twitter, Facebook and Flickr. You can find a lot of good project pictures on Twitter as well as Facebook.

We have several resources; we have nolaenvironmental where to you can get tonight's presentation as well as the meeting transcript, which we are recording to make sure we get all your comments on the record.

Norwood Kelly: On the berm on the levees from Oakville to St. Jude, who makes the decision to go higher on that?

Julie LeBlanc: Section 1, the Corps is authorized to build to the 50-year or the 2% level of risk reduction, so anything over that would have to be through the Office of Coastal Protection and Restoration or Plaquemines Parish government. They have asked us to look at the difference between building a 2% or a 100-year-level for these eight miles of back levee and we owe them an answer on what that incremental cost would be and that would be a local decision on if they want to bare that cost at 100%.

Norwood Kelly: And you would build it?

Julie LeBlanc: Yes.

Norwood Kelly: When would construction start?

Julie LeBlanc: All the projects start in 2012 and to complete we are looking at through 2014 or early 2015, depending on the levee reach.

Norwood Kelly: Where are you going to start?

Julie LeBlanc: As we complete the design efforts, we would start construction. One thing to note, when we are talking about the non-federal levees, we said if there's not enough money to fully incorporate them we would tie into the Mississippi River Levee, we are currently working on developing a better cost estimate for the work we need for the non-federal levees as well as NOV to determine what features we can build because there is not enough money to complete the non-federal levee incorporation into New Orleans to Venice as well the New Orleans to Venice levees.

Male Speaker: Where would you start?

Julie LeBlanc: On the New Orleans to Venice we would start on the north end and move south on the non-federal levees. On New Orleans to Venice, the priority is likely to build the back levees on the West Bank as well as fronting protection on the East Bank. As we have better cost estimates, we will know what work we can actually complete within the funds that we have.

Male Speaker: I'm a little confused. You said the money was appropriated….

Julie LeBlanc: Correct, the money is appropriated but the estimate to complete the project is higher than the money we have in hand.

Male Speaker: Because of the cost of the borrow?

Julie LeBlanc: I wouldn't say because of the cost of the borrow. The design criteria has changed saying that we have to build wider levees. The levee section has to be larger. The footprint was shown on the maps and what we are doing under the Environmental Impact Statement and the Supplemental Environmental Impact Statement is showing you the maximum footprint and we do expect it to be smaller than that footprint so it varies depending on the levee reach as to what the width of the levee will be. In those locations where we have restricted right-of-way with houses or structures close by, those are the areas where we are looking at putting a floodwall in to reduce that footprint.

Gary Ragas: Will any property be taken from the landowners adjacent to the Mississippi River Levee if the levee needs to be raised or widened?

Paul Eagles: We would work as best we could with the design to avoid doing that; impacting structures and property along the levee. There will be some cases where we have the river close to the levees on the other side and structures close to the levee on the protected-side where the impacts will not be avoid them and so our goal is to avoid them, but when we can't avoid them, we will have to impact those structures and relocate.

Gary Ragas: More specifically between Highway 11 and the Mississippi River Levee through Buras area…

Paul Eagles: Those are some of the areas where I know in a few places we are going to be able to get levees in there, but there are some places where we may not be able to squeeze it in and we would have to look at buying out the properties and relocating.

Gary Ragas: From Oakville to La Reussite could you tell me on the back levee what the final elevation you hope to be at?

Paul Eagles: It goes from 7.5 to 9 feet for the 2% elevation with overbuild for settlement.

Gary Ragas: It currently at 7.5 to 9 feet?

Paul Eagles: No, the maximum height is 9 feet now, but a lot if it is much lower than t that.

Gary Ragas: And what are you going to raise it to?

Paul Eagles: 7.5 to 9 feet is the design grade. We will start at 7.5 on the upper half and 9 feet on the lower end. The locally preferred plan is to the 100-year level and that would be higher, which would make it 10.5 feet to 12.5 feet.

Gary Ragas: The money you have appropriated now would just raise it to 7.5 to 9 feet?

Paul Eagles: Yes.

Male Speaker: But 20 feet further south?

Paul Eagles: As hurricanes goes, your surge increases as you go further down so your levees are higher as you go toward Venice.

Chris Koeppel: We just want to be clear that what is presented today is what is presented in the environmental documents for both the federal and non-federal levees. Under NEPA we present a number of alternatives that represents the totality of what could be done. Under NEPA we explore alternatives that we know we may not be able to afford or alternatives that are no feasible, but the idea is to get public feedback on these. What you are looking at on these slides, the tentatively selected plan, is a wide footprint giving wiggle room to the actual construction showing the complete idea of the project. This is different than what may be funded. What we want to do is make sure the impacts to this project are completely described to the public and the resource agencies so that when we start construction and in the event we do have funding for the entire thing, we don't have to stop and to a another analysis and re-coordinate with the environmental agencies. The plan is pretty much the totality of what could happen in the sense of the impacts to the environment.

Benny Roussell: Over the years in these meeting we have gone from looking at Congressional language to be sent to Congress who authorized this particular levee from Oakville to St. Jude to go to 100-year-level. Has that language been sent to Congress?

Tom Holden: We have had a members request on language drafting services. The Corps of Engineers, for any member of Congress in Senate or House, will at their request draft language. We neither endorse nor don't endorse it; we just say if you've asked us for language we will draft it so that if you get it into law the way it's structured, we can implement it if it's funded. We had a members request and it's been provided to that member. I can't speak to what they have done to enter it, but it has been done. It's for Oakville to La Reussite then across and then back up, which includes the Mississippi River Levee that is to incorporate it into the West Bank Project. Right now it has not been authorized nor funded so we have responded to that member.

Benny Roussell: So that would leave the Myrtle Grove area out? Moving on to my next question, in your calculations for cost, you used some figure for borrow and reading the documents you have on nola, the preferred option is government supply?

Julie LeBlanc: Typically when the Corps builds projects, our preference is to go with government furnished. In the aftermath of Katrina we've been given permission to go beyond that and use other sources to provide borrow. We are covering government-furnished borrow sites, I believe there are a few, as well as all the contractor-furnished sites that have been cleared through the IERs for the West Bank & Vicinity and the Lake Pontchartrain & Vicinity Projects, so we have all of those areas potentially for use on this project. Whether it's going to be government or contractor furnished, as we get the designed completed we will make the determination on what's available. If government-furnished is available, it is our first preference.

Benny Roussell: Is it more expensive or less?

Julie LeBlanc: Typically, government furnished is less expensive; however, it has to be available when you are ready to use it. That's why we pursued contractor furnished sites and when we award a contract with a contractor furnished borrow site, we do not designate where that borrow will come from. The contractor talks to landowners and ask to buy materials from you, it's been environmentally cleared and meets the criteria and then that is worked out between that contractor and landowner. Potentially a contractor could propose a site that is not environmentally cleared, but they would have to go through the environmental clearance on their own and they would have to determine that it is geotechnically suitable.

Benny Roussell: The calculations on the material for the job, on the preferred option, do you have that cost estimate yet?

Julie LeBlanc: No, we are working on that estimate now. We had to complete 30 to 35% design for both efforts; the authorized project as well as going to the 100-year, and we are currently working through that right now.

Benny Roussell: So that cost will be passed on to the parish or the state if Congress doesn't pass the original legislation at hand?

Julie LeBlanc: Correct.

Benny Roussell: It's my opinion that if you were to go to contractors supply, it would be much more expensive and I would hope that the Corps, in light of the government shutting down possibly tomorrow night, and the cost of the project not being able to be completed that you would look at government supply material, whether you do it by appropriation, I believe that if you are calculating at $7 cubic yard for 29 million cubic yards of dirt, you are looking at $200 million. If you appropriate or expropriate the property for $50 million, which is way more than what has been asked for the property when you just go out to purchase it, you would save $150 million towards the project to be able to build a gate at Myrtle Grove and possibly finish the project somewhere cutting back to the river. I made this testimony two years ago in Oakville and I'm here to reiterate that government supplied material, in light of what the local government has taken a position that the holes do not have to be backfilled, should be the way to go. When the efforts started on these levees, the effort was to get contractor-supply because the parish ordinance was on the books to make them backfill and the effort was that we didn't want holes throughout the parish because we would be building levees around holes. This government has now taken a position that in this reach, the holes do not have to backfilled. In a letter addressed to the colonel, this local government has dropped its case to the Supreme Court on the fight to backfill holes so with that being said, as a tax payer I would appreciate you saving $150 million in expropriated property, build a Myrtle Grove gate and build a project as we see it.

Rachel Rodi: This card has no name but I will read the question. I understand that protecting Highway 23 is paramount, so why would you have the lowest levels in the middle of the West Bank side of Highway 23? If Highway 23 floods at Jesuit Bend, what good is protecting the highway below it?

Male Speaker: All it's going to be is a big ditch if that river overflows. You can have a hurricane come up the river and it floods, where will all that water go?

Male Speaker: We had that issue before during Gustav. The bottom and top didn't flood, Myrtle Grove flooded and we shut down the highway for how long?

Rachel Rodi: If you had a little more specific information on what reach you are talking about; can you say exactly what reach it is?

Paul Eagles: Obviously, if any of the levees overtop you will have water between the two levees, the back levee and the Mississippi River levee. That's true in any area where you have potential for overtopping so that is an issue that will always be there.

Male Speaker: The question is that in Belle Chasse you will have 100-year protection and below St. Jude you will have 100-year protection, but in-between you're not, so it comes from the marsh levee and it floods what good is your 100-year protection?

Paul Eagles: You are saying if the locally preferred plan is built? These are 50-year authorized.

Male Speaker: Correct, the lowest levee in the whole parish are 50-year levees on the West Bank.

Paul Eagles: All of these will be 50-year levees.

Male Speaker: Those below us in the green are higher levees.

Paul Eagles: The levees are built based on hurricane surge. The hurricane surge is different in different locations so that is how they are designed.

Woman Speaker: But they are being called federal levees versus non-federal levees.

Paul Eagles: Right, the project Julie talked about would be to incorporate the non-federal levees into the federal project and give them all the same level of risk reduction.

Woman Speaker: Which is all 50-year level? From the floodgate down…even though we were a 100-year before?

Paul Eagles: Once we build them they become a federal level and they will all be from New Orleans to Venice from top to bottom and they are all 50-year levees.

Male Speaker: Who is responsible for maintaining our non-federal levees right now?

Julie LeBlanc: It's a local responsibility. Whoever owns the levee, whether it's the parish or the local landowner, it's their responsibility.

Ralph Herman: Julie, you have $671 million funded?

Julie LeBlanc: That's for the non-federal levees…

Ralph Herman: Are you about to exceed that budget by a certain percentage?

Julie LeBlanc: We are working on revising the cost estimate but right now the cost estimate is higher than $671 million to incorporate all 34 miles. On Section 3…

Ralph Herman: I understand that, I'm just wondering if you have some authorization to exceed the budget of $671 million.

Julie LeBlanc: No.

Ralph Herman: The reason I'm curious is because I went to Coastal Restoration meeting about building a diversion and they just said this is what we are allotted and we can exceed that budget 150%. So I'm curious about this.

Julie LeBlanc: Was it a CWPPRA meeting?

Ralph Herman: No. It was a meeting about a diversion.

Julie LeBlanc: They may already have the funding in hand that exceeds that amount, but we've been appropriated $671 million and we can't go over that amount without getting additional funding from Congress.

Ralph Herman: The other question I had was, in West Pointe a La Hache, we have a diversion and a canal adjacent to it, how are you going to protect that with the new levee?

Paul Eagles: That's in the non-federal area of Section 5. That's a T-wall. They don't fall over easy as we put a lot of piling under them.

Ralph Herman: So you are going to build a T-wall around that?

Paul Eagles: Yes.

Tom Holden: You asked a very good question about Myrtle Grove, but the difference is when we have a project that we have what we call a chief's report on and we are doing the next report that defines and recommend that we build it, there is an authority where if we are in a range above that cost, we call it the Section 902 limited law, if we are below we don't need a reauthorization as part of the recommendation. I think that's what you heard at that Myrtle Grove discussion. I know that because the planners that I have that work for us were very keen on how we work with the state to keep it within the authority of the original authorization so we don't have to go back to Congress and say not only do we recommend Myrtle Grove, but here is a post authorization change because Myrtle Grove is contingently authorized to be constructed today. All we have to do is get a report in and if we stay within those parameters on the signatures of the chief of engineers, Congress now has an actionable project that they can give us money and tell us to build it.

Ralph Herman: I was just curious because with the Diversion they have $375 million and Julie only has $671 million to build a whole levee and it's [Inaudible] to me.

Tom Holden: Well if you think about the origins of how we got to LCA, Louisiana Coastal Area, which is in your footprint, but it's totally separate. The Coastal 250, which had its roots in the CWPPRA program of which a few others in here worked in the program, that went into the Coastal 250 and ultimately was into the 10-year actionable 15 critical projects that needed to be done to arrest coastal degradation. Myrtle Grove, at that figure, is that piece. If we stay within the parameters of the authorization in the chief's report, don't extend that 902 limit, and then the chief can sign and immediately recommend construction. If he doesn't then he has to request reauthorization before we can go to construction. That's the difference. It's unrelated to what we are discussing in here but it's an excellent question because I understand how it can be confusing.

Ralph Herman: My thought was levee or diversion, which would you rather have.

Bobbie Stockwell: I'm concerned about the Harvey Canal Pumping Station and I would like to know what kind of risk we are going to have that water being pumped down Hero Canal or something like that, what kind of flood risk are we going to have in the back over here?

Tom Podany: We've analyzed the West Closure Complex and the Harvey Canal Floodgate as well as the drainage that's required to take rainfall that does fall during a hurricane and make sure that inside the Harvey Canal area that it's evacuated. We've also looked outside on the impact to people that are outside that system and we've determined that the impact is very small, less than a tenth of a foot, but we've addressed that. In the design of the 50-year storm, we've addressed the impact of the rest of the hurricane system on areas like Oakville to La Reussite; we've looked at the impact of the Harvey Canal, the West Bank & Vicinity Project and how that may impact the 50-year project and elevated the levee slightly to account for that. It's less than a foot impact.

Male Speaker: How did you determine that?

Tom Podany: We did, like Julie showed earlier, the hydrologic modeling with the 152 storms and looking at some critical storm paths to the West Bank. From that, we looked at storms like that and did an analysis and showed that the impact was less than a foot. That's the way we designed the entire system. We've looked at this as an entire system to ensure that if we are putting a levee in an area where we didn't have a levee, that the levee next to it that we are designing is taken into account and may have to be raised slightly, but it's very minimal increase.

Male Speaker: That data changes on a daily basis based on land marsh in the marshes.

Tom Podany: Over 50-years we factored in over time the impact of land loss on this. Over time, yes, the impact on the system over time to land loss would be something that happens with or without that levee in being raised or not being raised. If we lose the marsh, we are going to have more vulnerability to storms in all of our hurricane systems and we've factored that into our designs. Paul, how did you look at this for Plaquemines Parish, for the future?

Paul Eagles: In the design process for the hard structures like fronting protection and floodwalls, they are being built to a 50-year elevation so that land loss, subsidence and sea level rise is taken into account. For the levees, they are designed to be good for a 10-year period before anything additional is required for the design elevations. That is consistent with other parts of the system in the New Orleans area.

Rachel Rodi: If you want to get with me afterwards, we do have a slide that shows exactly the impacts and what will happen.

Claire LeBlanc: This gentleman over here talked about appropriations and having to go back to Congress if the appropriations were not large enough to incorporate the floodgate at Myrtle Grove. The other man spoke about the cost of dirt and supply. When will there be a forum where we can talk about the floodgate as an alternative to the back levee.

Rachel Rodi: Do you have a specific question about it that we can address?

Claire LeBlanc: When can we talk about that openly?

Paul Eagles: Now. We've met with the folks at Myrtle Grove several times and we are looking at the floodgate option and different aspects of the cost and the impacts to see if there is a viable alternative to a levee around Myrtle Grove. So that's still a possibility. We haven't made a final determination on that, but we are evaluating that as we speak.

Male Speaker: If we don't get one, may I ask what do you consider as it leads to the public utilities that will be involved [Inaudible] through the levee? Does that become an environmental issue if that no longer can happen?

Paul Eagles: That would be factored into the design of the levee to make sure that the drainage is taken care of as part of the design.

Male Speaker: As far as the street drainage?

Paul Eagles: Yes, as well as the sewer lift stations and the underground utilities.

Claire LeBlanc: If we wanted to put more input into that, how do we go about it?

Paul Eagles: Either talk about it tonight or send in information and that contact information is on the back of the cards.

Male Speaker: Can we have the old one in Myrtle Grove?

Mike Mudge: We appreciate y'all giving us the time to express our concerns as far as all of our levees are concerned and for coming back and looking at the subdivision and neighborhood. A couple of points I would like to make, is that earlier Benny made the point about backfilling these borrow pits; it's a very good point. If we don't go to the government sector to get the fill for these back levees and mainline Mississippi levees, the Corps is going to find themselves spending millions of dollars building levees to protect borrow pits. I don't know how much longer they are going to tolerate that, but we need to look at another source for the levees and there again, the government can provide it a lot cheaper and could provide it faster. On another note, David brought up the point about water coming across the Mississippi River Levee and getting blocked between the mainline Mississippi River Levee and the back levee and no one really had an explanation about how you were going to get this water out of there. Every year we do this for hurricanes and every year we sit out there 30 or 40 days with a flooded highway. Our proposal, in this little packet with that floodgate, will allow the Corps to open up the floodgate and let Highway 23 drain through the Wilkinson Canal and go out. Our little proposal for a floodgate to save our community from the intentional flooding in the name of flood protection will also resolve the issues of Highway 23 flooding. For some of y'all who don't know us, Myrtle Grove is just south of us and is a community where 300 homes sites are located and where we have about 71 homes presently built. We built under the guidelines and regulatory acts of the parish when we built. The base flood elevation was a little different. On Julie's slide she shows the scenarios with the two different levees; the present 11-foot levee and the impact that it will have on the homes at Myrtle Grove. Like we talked earlier this morning, it's a good depiction of the Mississippi River Levee and it's a great depiction of what they are going to build. What they have a problem with is a depiction of the house. It shows a single story house stuck up 13 feet above ground; that's not the case at Myrtle Grove and that's not what we built. We built by all the guidelines and provisions that the parish put on us when we built. We all have bottom stories; we have kitchens and recreation rooms, we have everything on the bottom so our point that we are trying to make to the Corps, is that Myrtle grove is what it is. It's nothing that popped up overnight, it's a community that was developed years ago and we are just trying to make it a good, safe community for us. When we get into the infrastructure, that is a concern that everyone in this parish should have because the people in this parish, whether you realize it or not, probably have $5 million worth of infrastructure that you own. You own the streets; you own the sub-surface sewerage, the drainage, and the lift-stations that are out there. Every time that community floods, you are going to have repetitive damages. It's not going to be a one-time damage where you clean; every time the community goes underwater it's going to be a cost to everyone of us in this parish. The floodgate, as we propose it, is simple and if you have one of our pamphlets you can look at it. It makes all the sense in the world and the dollars and sense are very close. Like I said earlier, if the Wilkinson Canal was not a canal and was a four-lane highway that went into a subdivision, that levee would come straight across the across and there wouldn't be any thought of going around that subdivision. That is our biggest concern for the people of Myrtle Grove. We appreciate the time that you give us comment. This is our community preferred option viewing time and I would like to present this as our community preferred option.

Male Speaker: I would just like to follow that and the study about the cost of the possible floodgate. Just as a suggestion, in Terrebonne Parish they have several of those. I was there this weekend and they are putting in three of them to protect Cocodrie, just one fishing community, compared to Myrtle Grove that doesn't have any. Cocodrie is getting three of them right now being built and there are several others in the parish that are already built. So as far as getting the cost, you can get the present cost or you can get the ones that have been completed a few years.

Rachel Rodi: Anything else on Myrtle Grove?

Male Speaker: The slide right there, what is that elevation based on, that 13.6 elevation? Because they shut my house and my house was 11.6. I was one of only five houses that was shut? Is that supposed to be a high end or the low end?

Paul Eagles: This is based on the survey you are talking about. I don't know why there is a discrepancy, but that was what we were told is the elevation. This would be I believe NAVD-88, right?

Rachel Rodi: We are talking sea level not actual height. The last question from Mr. Landry is a question about the WBV impact on the non-federal levees.

Male Speaker: A year ago, many of you might have been in Oakville when we came in and we had a slide and a big chart and it's here tonight, the chart, and for those of you with questions we will go to that chart….

Male Speaker: Question on the detail. How do you come up with that? Do you run, as Julie said, hundreds of storms or something like that. Do you pick the worse?

Male Speaker: No, we use the model to look at it. We did look at the range of the worst storm. We did the average, we did the low and we did the worse when we did this.

Male Speaker: Do you take a low storm and a major storm and you average them together to get the impact?

Tom Holden: When we did the suite of storms, it produces what we call the stages, with the still water and wave run-up and all that. That was the 150 storms. We did this one, because it is going to be more prevalent in a western storm of those suites, we pulled out of that what those suites would look like and then we took the high end knowing that's what the high end could be, this would be the average of those storms applied the model. Nancy Powell, who is our chief of hydraulics, ran this and we did brief this in Oakville in September 2009. There were a lot of questions on this because it was asked if ….

Donald Landry: My question is that some of the models showed some negative numbers and I'm wondering your methodology in choosing what your impact is going to be. I'm no hydrologist, but if I blow wind into a corner and it starts stacking up water in that corner, I know the worse case is going to be a 45 degree wind into that corner as it will stack water. It will also run water along that high levee and come into that corner. So if you are going to take averages and take a 2% storm because that's all reach one is going to have, if you take winds that are coming perpendicular and then average that out, you are going to have less than an impact claim that the actual impact. What I'm addressing is your methodology and making sure that you accounted for worse impact. I'm not saying worse storm, but impact.

Tom Holden: What you are using is what we call the induced stage and yes, we did. We did incorporate that in…

Donald Landry: And averaged that …

Tom Holden: No, it's added to so that what we design for you gets that overbilled to account for that. In other words, we don't ignore that then do a 50-year storm, we do a 50-year storm and then we account for that induced flooding and that's what is rolled into that. I apologize for not having Nancy here because she is far more technically qualified to explain, but we can follow-up with this if you would like that.

Donald Landry: The last indication we had was that they took an average and that's not an impact

Tom Holden: What we will do is get your name and we will make an arrangement to get that question answered.

Donald Landry: I'll give you an example. I attend a meeting in St. Bernard meeting and they are building a 24-foot wall going across the highway there so the Braithwaite folks were very concerned because they had a 10-foot levee tied into that 20-something foot levee and the models that they ran said they would only have a few inches of impact. I'm not genius on this, but why are you building a 24 or 27 foot wall if you are saying the negative impact is only a few inches?

Tom Holden: I think what we are saying the staged impacts are a small amount. Now the wall we are building is obviously for a very large event, but the impact to that adjacent community outside it, the added amount is not that substantial. Now, what you are really saying is that we are going to be getting wet and that is going to add to it.

Donald Landry: I understand you can't include building a levee for 50-year and you can't include the 1% storm, but you include the worse case of the 50-year storm.

Tom Holden: I think you've asked a very fair question and I think the thing we need to do is make our hydraulics chief, who did the modeling that is depicted here, available so she can answer your question on how that staged frequencies from the West Closure, because there are some increased stages on Plaquemines back levee on the west side, and we accounted for that so when we did this design that you would get 50% accounting for that in the design so it would have been built into what we raised. Now realize, there is still a 100-year storm out there, which is our standard that we design to, and obviously you are going to have some higher risk because of the overtopping of that event, but what we call the inducement from the West Bank and Vicinity has been accounted for. I apologize, I don't have the technical breath, I'm a civil engineer, but I'm a structural engineer, I'm not a hydraulics engineer. I know Paul, likewise, we don't have the right person here but we will make her available. We can at least let you look at this and we can generally explain this to you because the depiction is there but you are asking more of how did you develop that and how did you weight that in and how did it account to come up with those elevations.

Male Speaker: Can you read the number on the minimum and what you actually chose where it ties in; the non-federal and West Bank Vicinity.

Tom Holden: I think what we could do is if you would like we can get around this with you and whoever is interested and we will walk you through it. It does show you what the 2% and the 1% would be and what a Gustav, which we used as a frame of reference because people in real time have a reference in that because it's only been a few years. We will stay and walk you through this and if we don't answer your questions, we will make Nancy available and set up an opportunity so you and anyone else who is here can listen to her explain how we accounted for the West Bank impacts that Tom described on the back levee and how those are factored into the design, which is what Paul was saying, and what we added to the build so it was accounted for so you can get a true 50-year design.

Female Speaker: I live in Myrtle Grove Marina Estate and I have two questions. If the scenario goes to where the Corps builds a levee around our subdivision with a 12-foot levee and we have any type of flooding, if it's a 12-foot levee and say we get a storm surge of 8 to 10 feet, we have 150 mph winds, we get two to 2 to 4 foot storm surge that puts at least a foot of water in our homes, how are we impacted as far as our flood protection when we signed the packet and in that packet was some information that was provided to us from the National Flood Insurance Program. This information stated that in order for us to build, we had to build at 8-feet above mean sea level, which puts our first floor living space at approximately 12 feet. Under that scenario we will have anywhere from 1 to 4 feet of contaminated water in our homes. My question is from a flooding perspective where does that leave us based on the guidelines that we had to build under, which we have 70+ homes that are already built to those specifications. My second question is, even if we only have 4 to 5 feet of water in our subdivision with a 12-foot levee, we are still going to be impacted in our living space because all our electrical utilities will be underwater. Taking that in consideration, as the water stays within our community that water is eventually going to get into the house through the bottom level of our homes, which mean we are going to get mold in the living space of our house. Where does that leave us from the guidelines that we were mandated to build?

Joe Sloan, FEMA: The covenant that you are speaking about is that you had to build to at least the whatever the base flood elevation was on the flood map in effect at the time of construction…

Female Speaker: Correct, it was 8-feet above sea level, which ranges between 3 to 4 feet.

Joe Sloan: As far as elevation of the structure itself?

Female Speaker: The mean sea level ranges between 3 to 4 feet depending on what end of the subdivision you are in. If you are in the back of the subdivision….

Joe Sloan: If you are going to the base flood elevation you are going to whatever is above that then. Where are you talking about the water getting up into now? Well into that structure?

Female Speaker: It could yes.

Male Speaker: If it overlaps yes because the bottom floor is lower than the top of the levee.

Joe Sloan: Ok, but your question is it a levee keeping the water out question or is how your flood insurance going to respond gets into the house?

Female Speaker: Before we could build, we were given a set of guidelines from the National Flood Insurance Program that we had to build our house to meet a certain specification.

Joe Sloan: That you got from the parish, from the flood prevention ordinance.

Female Speaker: That was mandated through NFIP. We have all built to those guidelines and that means our homes are at approximately 12-foot elevation. If that levee is 12 feet, we get 8 to 10 feet of water two things are going to happen. If it's higher than the levee we are going to get, with wave action, we are going to get that actual water based on the height of the waves coming into our homes. The second part, even if we are lucky and we don't get that much water, whether it's 6, 8 or 4 feet, because of how the homes are constructed, there are no homes that don't have some kind of enclosure of the bottom level.

Joe Sloan: Can I address that problem right now? If you enclosed that area above the base flood elevation and it's not used for parking, storage or building access only, then you have illegal construction.

Female Speaker: It was all approved by the parish.

Joe Sloan: Then they are violating their own flood prevention ordinance if they did. The enclosed area can only be used for three things and that's building access, storage and parking, and no living facilities…

Female Speaker: There is no living. Some people might have a stove or refrigerator or counters down there.

Joe Sloan: That's living.

Female Speaker: In my case, I have a garage. So what's going to happen if we get 4 feet of water, anything in that space will be flooded, but we have studs and structure in there that encloses it and that is going to get flooded and all that water will seep up into the house and you are still going to get mold.

Joe Sloan: Enclosure is supposed to be built with flood vents.

Male Speaker: It is.

Female Speaker: But if you have 12 feet of water out there, it can't get out. If you have a levee that is 12-feet high and you get 10 feet of water, you can have all the vents you want, as long as that levee is there and that water is not receding that water is just going to stay there.

Joe Sloan: The way you are talking about is that the levee is going to hold the water in and not let it get out. That is not really a flood insurance question.

Female Speaker: The point is that we are still impacted and that water is going to rise up through the sheetrock or whatever form of enclosure you have and it's going to get into the living space. We built based on the guidelines of the NFIP.

Joe Sloan: Now you are telling me is that if we build this levee it would have changed the guidelines and it's going to increase your exposure as opposed to decreasing it?

Female Speaker: Correct, because the water has no place to go to get out.

Rachel Rodi: Can I let you follow-up afterwards?

Male Speaker: I'm going to try and simplify this. The Myrtle Grove Marina is completed surrounded…

Rachel Rodi: Let's follow-up with him afterwards. Does anyone have any questions for the Corps relating to the projects and then you can follow-up with FEMA afterwards.

Male Speaker: On the test portion of the river levee that was built at the end of Main Street, is that type of levee going to be built anywhere in Plaquemines Parish?

Julie LeBlanc: Are you talking about the section of levee that wasn't growing grass and it was on a very steep slope? We originally built that demonstration section to see if we could use stabilize soil to build a steeper slope and not have to cut the grass, but we are not moving forward with that option. We will be putting a grass levee in that location. The 700 feet will stay in place for the current time, but we will not be building additional levees out of the stabilized soil along that reach.

Male Speaker: Between Empire and Buras, if you raise the levee are you going to use the same methods that you have always used of coming up and going out?

Julie LeBlanc: Correct, except in those locations where we are building a floodwall.

Male Speaker: [Inaudible] and then bounced about one project to another and that's just the nature of this meeting, but to try and simplify our concerns so everyone can understand this, we all built in a 4-foot bathtub, we all understand that. There is a levee around our community that is 4-feet high. We all built our homes knowing there was a 4-foot bathtub so we built the bottom slabs in some cases, 5-feet high over the rim of the bathtub. Now under this proposal, we are now looking to raise the rim of the bathtub to 11.6. We did not build for that, we were not prepared for that and no one even told us that would become an option and that is what we are dealing with. We are now about to get an 11.6-foot bathtub and no matter what your models says or what your computers may say might be generated, it stands to reason without a doubt, we will have the possibility of getting 11.6 feet of water with the right storm and right conditions. That's our concern. The computers can say, and on that graph is shows 2% and there again, that graph doesn't depict the way we built. It does not depict our subdivision at all and that's our biggest concern. We just want people to understand that we filed all our permits and all of our homes were inspected by the parish and it had to go before the parish council to get voted on before we could even build, we had to get flood elevation certificates before we could even pour our slabs. Now it's like everyone has forgotten about this. It's like let's put an 11-foot levee around that community when one simple floodgate for basically the same money will spare that entire community and the 300 homes sites. That's the only point we are trying to make.

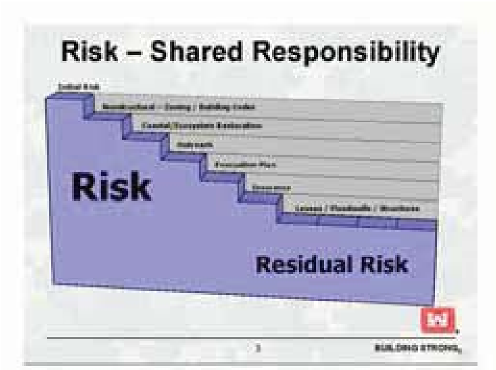
Rachel Rodi: Thank you. Again, nolaenvironmental.gov is where you can go to see this presentation and you can also make comments there as well. Chris Koeppel's information is also there. Thanks for coming. The project managers will stick around for more specific questions.

Public Meeting Summary

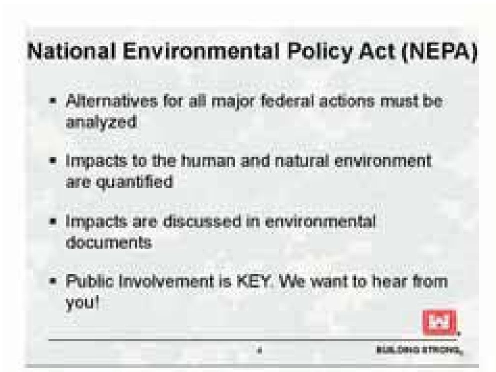
Plaquemines Parish Non-Federal Levee EIS & New Orleans To Venice SEIS
April 5, 2011

Location	Buras Auditorium
Time	Open House 6:00 p.m. Presentation 6:30 p.m., followed by a discussion
Attendees	Approx. 25
Format	Open House Presentation
Handouts	• Corps Approval Process Brochure • Written speaker request/comment cards • Plaquemines Parish Fact Sheet
Facilitator	Rene Poche

Rene Poche: My name is Rene Poche and I'm with the public affairs office. I will be facilitating tonight's meeting.

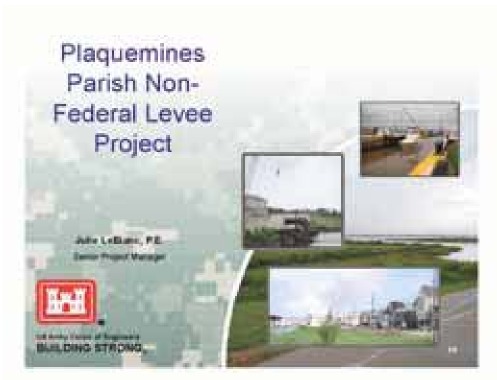


Risk is a shared responsibility and that goes all the way from the federal level all the way down to us here sitting in this auditorium. We need to decide how much risk we can tolerate personally. There are ways we can reduce risk and you see here it is kind of stair-stepped down from the initial risk through non-structural and building codes, evacuation plans, insurance and finally the levees, floodwalls and other structures that we are building. The bottom line through all of this though is that you need to listen to your elected officials and when they tell you it's time to evacuate, you need to evacuate.



The National Environmental Policy Act, or NEPA, is used for all major federal actions. It analyzes the impact to humans and the natural environment and investigates reasonable alternatives. Public involvement is the key to everything as we need your input. It helps us make a more informed decision and it's all documented in the environmental documents.

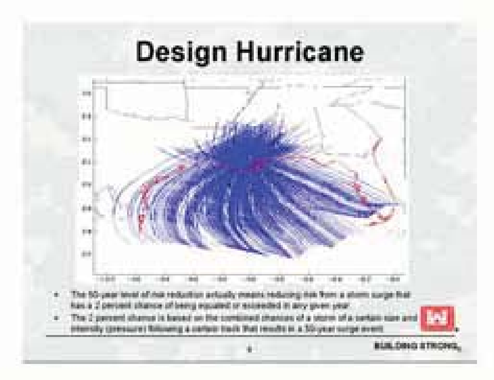
So, why are we here tonight? We are going to talk to you and get feedback on the proposal to improve the current non-federal levees, Oakville to St. Jude, and get your feedback on the proposal to raise the New Orleans to Venice levees; Phoenix to Bohemia on the East Bank and St. Jude to Venice on the West Bank.



I'm going to turn this over to Julie LeBlanc, she is the senior project manager for this project.

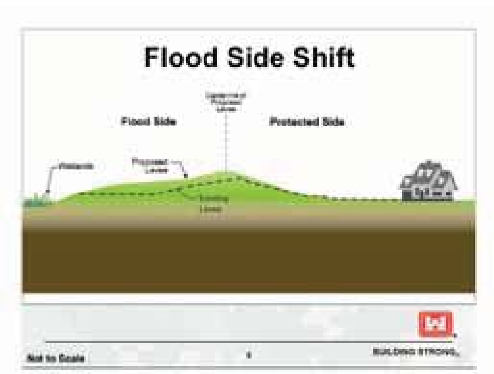
Julie LeBlanc: This map shows the multiple projects in the area. The purple here is the Lake Pontchartrain and Vicinity and that provides protection to St. Bernard Parish, New Orleans East, Metairie; that project will be built to the 1% or the 100-year level of risk reduction. The orange is the West Bank and Vicinity Project and this will also be built to the 100-year level of risk reduction and it ends here near Oakville. Relative to Plaquemines Parish, we have three separate projects that provide risk reduction to the parish area. Again the West Bank and Vicinity provides risk reduction to the Belle Chasse area ending at Oakville and then the New Orleans to Venice project, and as Rene mentioned, from St. Jude to Venice. We have a back levee and Mississippi River levee and that is an existing levee we are going to complete as part of this project and we will discuss this as part of the supplemental environmental impact statement. Then on the East Bank, from Phoenix to Bohemia, we have authority to raise the back levee. As part of the New Orleans to Venice project, this yellow project line that is 34-miles of existing non-federal levee, that once we complete the project will be incorporated into the federal New Orleans to Venice project. So the West Bank and Vicinity is one project that will provide a 100-year level of risk reduction to Belle Chasse and then the New Orleans to Venice and the non-federal levee incorporation into New Orleans to Venice will provide protection to both the West and East Banks. The other project that provides risk reduction to the parish is the Mississippi River Levees; the purpose is different there as it for riverine flooding. It's on this map; it's the light blue line that runs from the top of the map and on the West Bank, it runs all the way to Venice and on the East Bank, it runs to Bohemia.

Public Meeting Summary

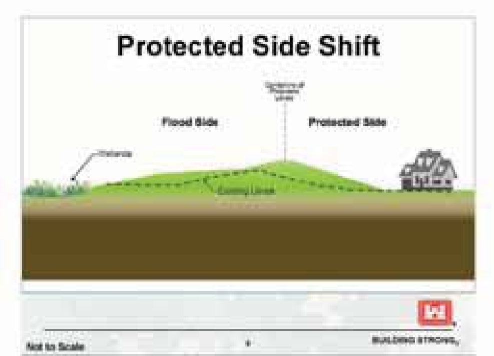


This Design Hurricane map shows you the 152 storms that the Corps has used as models to determine the various levee elevations that need to be built in order to provide a certain level of risk reduction. For the New Orleans to Venice and the non-federal levee incorporation into the New Orleans to Venice Project, we are looking at a 50-year level of risk reduction; basically what that means is reducing risk from a storm surge that has a 2% chance of being equal to or exceeded in any given year. The 2% chance is based upon the combined chances of a storm of a certain size and intensity following a certain track resulting in a 50-year storm surge event.

The following standard set of levee alignments alternatives and scales within these alignments were initially considered for each of the reaches of the project area. Various alignments or types of structures were then chosen depending on the exact situation in each levee reach. We do have some maps what each of these look like, but here is a description. We have four different alternatives that we looked at. The first is an existing levee alignment with a straddle, meaning we would just raise it straight up over the existing levee. So where the top of the levee is right now would remain the same and we would just move it up to a higher level. A flood-side shift would mean the levee would actually shift somewhat to the flood-side or where the wetlands would be. We have a protected-side shift, which would move more inland toward the protected side and then the last alternative would be a floodwall or T-wall.

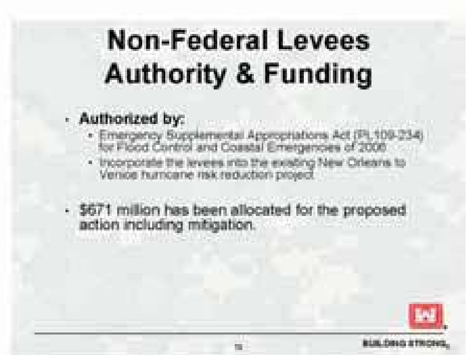


This is a slide of a general flood-side shift. It's conceptual here so it's not drawn to scale. The existing levee would be what's out there now and it's shown here as a dash line. So the top of the levee is here and it would tapper down and you would have houses and structures and businesses on the protected side. So if we are doing a flood-side shift, we are starting at the toe here and then build the center line of the proposed levee further outward toward the flood-side. This shows a berm here before it comes down. The new part of the levee would be the difference between the dash line and the top of the green portion.

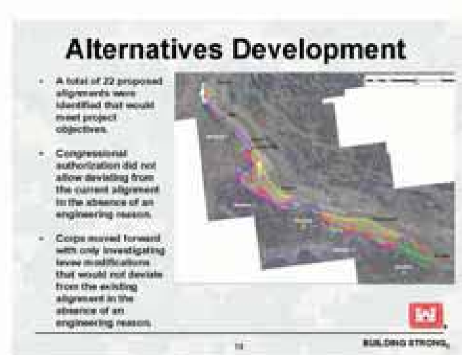


This is a protected-side shift. You see the existing levee with the top of the levee here. You would actually put the levee center line to the protected side and in most locations, if we have structures on this side, our tendency would be to do a flood-side shift, but then we also need to look at mitigation requirements. What are we going to do to the wetlands side to make that determination?

We have two portions that we are dividing this up into; I'm going over the proposed action for the non-federal levee incorporation into the New Orleans to Venice. This is basically from Oakville to St. Jude. Paul Eagles, who is our senior PM, will go over the existing New Orleans to Venice project. Again, this just shows you the 32-miles of existing non-federal levee and then we are looking at adding two miles from the ground up where there isn't an existing levee to tie into the existing New Orleans to Venice Project at St. Jude. Paul is going to go over the East Bank Federal Levee from Phoenix to Bohemia and then the West Bank from St. Jude to Venice in more detail.



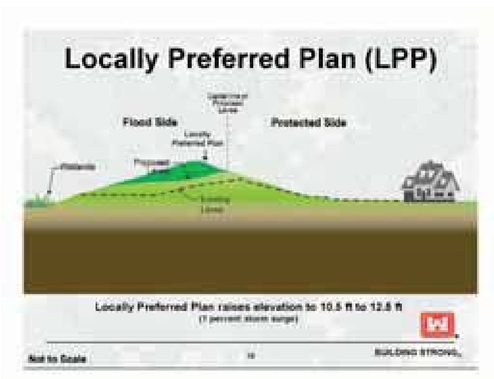
So the authority and funding that we have for the non-federal levees was authorized by the Emergency Supplementals; there were multiple supplementals. We received funds in the 4th and 6th Supplemental for a total $671 million to incorporate these non-federal levees into the project.



There were five sections where we looked at alternatives and there were multiple alternatives that we looked at ranging from providing a levee at Highway 23 to the existing alignment, to some alignment between what is out there now in existing levees and 22 proposed alignments that would meet the project objectives. Since the authorization told us to incorporate certain non-federal levees into the system, we are not deviating from that existing alignment unless there is an engineering reason. We do have a map that shows you what our tentatively selected plan and proposed action is and you can see a few places where we did deviate from the existing non-federal alignment.

This is our tentatively selected plan. Highway 23 is the purple line that continues down. The yellow line is our recommended alignment or tentatively selected plan and at the blue line, which you can see right here, is where we did deviate from the basic alignment. This basically shows what we are proposing to do in our Environmental Impact Statement; we are looking at incorporating the non-federal levees along this yellow line. We avoided this area here because there are some oil well canals that are very deep and provided some stability issues. There is a pump station right here that we will replace and move that alignment back for engineering reasons. There is one other location where we deviated from the existing alignment.

Section 1 is Oakville to La Reussite. The yellow shows areas where we are proposing a levee. The red is where we are proposing a floodwall. There is a floodwall here where it ties into the West Bank and Vicinity Project. There is a floodwall here and a piece of floodwall in this location. The blue is West Bank and Vicinity and that is currently being built right at Oakville. The reach is about 8-miles long and the maximum elevation is currently 9 feet and we are proposing to raise the elevation to 7.5 to 9-feet elevation. There is also a locally preferred plan that the parish has asked us to undertake, which looks at raising this 8 miles instead of the authorized plan, which is a 50-year elevation, raising it to a 100-year elevation or the 1% elevation. That design that we are doing to decide the incremental cost is being paid for by Plaquemines Parish and we will have results on that in the near future on what that incremental cost would be. The federal government will pay to build the project to the authorized grade and then to go above that, we would need Plaquemines Parish actually paying 100% to go to the higher elevation. The locally preferred plan raises the elevation to 10.5 feet in the upper reach and 12.5 feet in the lower reach. The Environmental Impact Statement that we put out covers both options so no matter what we move forward on, it is covered under the Environmental Impact Statement. This area of levee reduces risk to Oakville, Jesuit Bend, Ollie, Naomi and La Reussite.

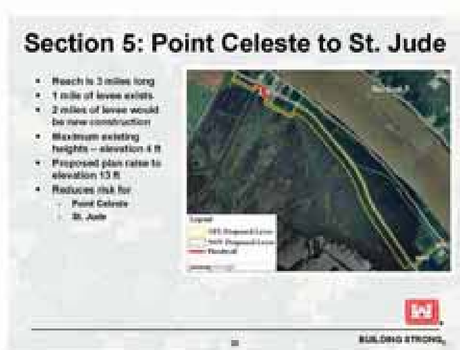


This shows you conceptually what the locally preferred plan looks like. Here you are looking at the existing levee and the authorized levee is to this light green and that is to the 2% or 50-year. The 1% would be a higher elevation and this darker green area could not be paid for by the federal government because we are only authorized to build to the 50- year level so it would have to be paid for by a non-federal entity.

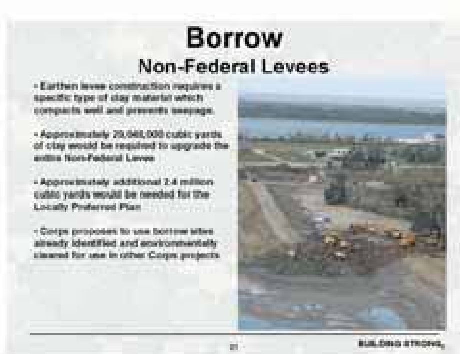
Section 2 is from La Reussite to Myrtle Grove. This reach is 11 miles and this is the levee footprint, the maximum extent we would be constructing in this reach. Maximum existing elevations are around 8-feet. We will also be replacing the Wilkerson Canal Pump Station. The proposed raises elevations from 9 to 11-feet elevation. ConocoPhillips is the major landowner and employs approximately 700 people at their site in section two and it reduces risk for Alliance, Ironton and Myrtle Grove.

Section 3 is Myrtle Grove to Citrus Lands. This reach is 3 miles long with a maximum existing elevation of 6 feet. The proposed plan will raise the levee elevation to 11 – 12 feet. It's an earthen levee with a pump station enlargement along the existing non-federal alignment. It's possible that in this location we may be have to have a tie-in into the Mississippi River Levees, depending on budget, if we are building from the top at Oakville and coming down southward, we may have to tie into this vicinity. The red here is floodwall, where the yellow is earthen levee.

Section 4 is Citrus Lands to Point Celeste. This reach is approximately 8-miles long with maximum existing height of 6 feet. We are proposing to raise the elevation from 12 to 13 feet. This will reduce risk for Citrus Lands and Point Celeste. The alignment is here and there is a floodwall in this location. There is an existing levee that actually goes in a corner here so there is some stability issues so our alignment follows along here and for engineering reasons, we are deviating from the existing levee alignment.



Section 5 is Point Celeste to St. Jude. There is no existing levee here. The reach here is 3-miles long; two miles will be new levee construction. The existing heights are around 4 feet and the plan is to raise them to 13-feet elevation. This will reduce risk for Point Celeste and St. Jude and again we've got an area here where we have floodwall to avoid impacts to structures. This again is showing the levee footprint. Right here is where we are tying into the existing federal levee that Paul is going to talk about and what improvements we will do there. There is an existing levee that goes across this way to the Mississippi River Levee and then continues on the Mississippi and the back levee.



Borrow requirements for the non-federal levees are earthen levee construction. This requires a specific type of clay material that compacts well and prevents seepage. We need approximately 29 million cubic yards to update the entire non-federal levee. If this is the chosen path forward, we would need an additional 2.4 million cubic yards for the locally preferred plan, again that is in the top 8 miles of the non-federal levee. The Corps proposed to use borrow sites that have already been identified and environmentally cleared for use in Corps projects.

Paul Eagles: I'm going to talk about the levees in green here you see on the East and West Banks.

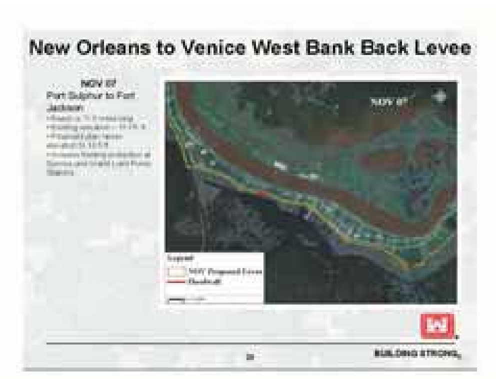
The New Orleans to Venice Levees and they are broken into different reaches.

This project is authorized by the Flood Control Act of 1962 and it was about 85% complete before Hurricane Katrina hit. This project is to complete it and build it to today's standards. It was funded for $769 million.

This is on the East Bank; the yellow you see here is the levee. This is Phoenix to Bohemia, which is about 15.8 miles. The existing levee height is 15 feet and the proposed elevation is 19.5 to 20.5. A separate contract is indicated here in red for pump stations and that will be fronting protection for Bellevue and East Pointe á La Hache pumps stations. The fronting protection would be a short floodwall.

This is NOV-5 from St. Jude to City Price and is about 3.2 miles long. The red mark is a floodwall location and that will go from about 7 –to-11 feet existing to a design height of 13-feet elevation. It does include fronting protection for Diamond Pump Station.

NOV-6 is about 12.2 miles long and it will have several short sections of T-wall and I-wall on the back levee. The existing elevation is near the design grade so this is more of beefing up the levee sections and improving the fronting protection at Gainard Woods and Hayes Pump Stations.



NOV-7 goes from Port Sulphur to Fort Jackson and it's almost 12-miles long. It has an existing elevation of 11.5 feet to 15 feet and the proposed plan is to raise this to a consistent elevation of 13.5 feet. You have pump stations here also with Sunrise and Grand Liard right there.

NOV-8 our next one going from Fort Jackson to Venice. This reach is about 8 miles and is near the design grade so there is not a lot of work to be done. It is mostly restoring some of the berms and adding fronting protection to the Duvic Pump Station in this reach.

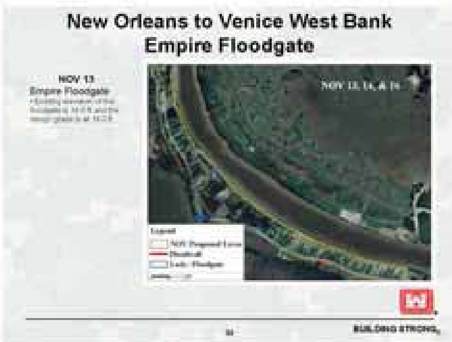
On the river side you start out with NOV-9 from St. Jude to River Price and it’s about 2.5 miles with existing elevation from 14.5 to 17.5 feet and the design elevation is 18.5 feet along the river.

NOV-10 is City Price to Empire and this reach is over 12 miles long. Existing height is 14.5 to 17.5 feet and it’s also 18 feet proposed elevation along the river.

NOV-11 is Buras to Fort Jackson and it’s about a 5.5 mile reach with elevation from 11 to 15 feet. The target elevation here is 17 feet along the river.

NOV-12 is from Fort Jackson to Venice, which is the last one on the reach. It’s 8.2 miles with an existing elevation of 17 feet. This would restore the levee to increase the stability and or widen or raise the stability berm as necessary.

Public Meeting Summary



NOV-13 is the Empire Floodgate. This will be replacing the floodgate that is there now at about 14.5 to an elevation of 19 feet. We will be raising that floodgate to a higher elevation.

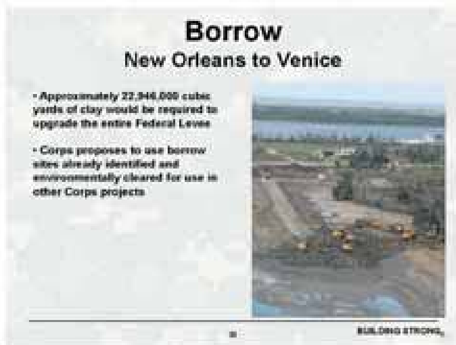
On the other side of the lock, the proposed plan is to construct a new sector gate at elevation of 21.5 on the other side of the lock to protect from hurricane surges coming from the river side.

NOV-15 is some floodwall replacement at Childress to Venice. You can see some red marks there as they are broken out separately. They are at 17 feet now and the proposed plan would replace these floodwalls; the one at Childress would be with a levee and the one at Venice would be with a new T-wall down here.

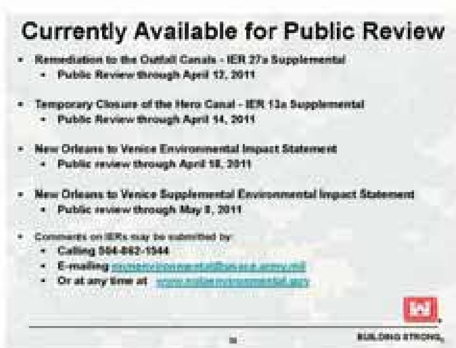
NOV-16 is the last one and it’s between some of the other ones on the river in the Buras area. It’s a 6.6 mile reach and the existing levee is at elevation 17 to be raised to 18 feet.

US Army Corps
of Engineers
New Orleans District

Public Meeting Summary

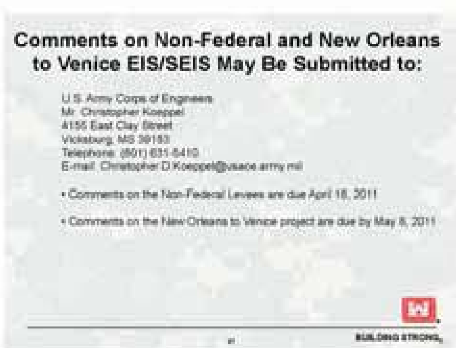


We will be using borrow materials for these levees totally about 22.9 million cubic yards of clay is required. We propose to use clay sources that have identified and approved for other projects in the area so these are already been evaluated and investigated beforehand.



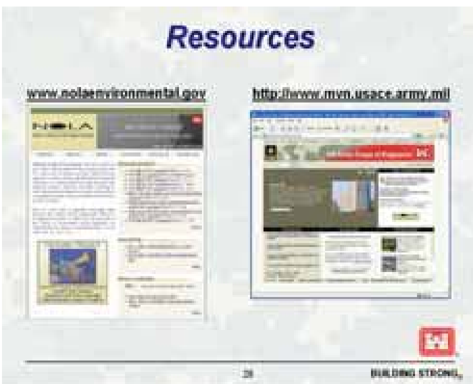
Rene Poche: Before we move on, everything you saw on the screen is over here so you can get a closer look at the various levee reaches. We do have some documents out for public review. We have IER 27 a Supplemental, which is remediation to the outfall canals. We have the 13a Supplemental for the Hero Canal. The New Orleans to Venice Environmental Impact Statement and the Supplemental are out. There is a variety of ways you can get information to us. There is a phone number there or you can email or go to nolaenvironmental.gov and post any comments you may have.

We do have some upcoming public meetings. We will be doing this again tomorrow night in Belle Chasse and then we will be on the East Bank Thursday night. We also have various meetings in metro New Orleans for other parts of the system.



All your comments can be submitted to this address here. There is also a phone number and email address. You have until the 18th of April for the non-federal levees and the 8th of May for the New Orleans to Venice projects.

If you are into social media, we do have a presence out there on Twitter, Facebook and Flickr. You can like us on Facebook and everything that happens at these meetings, all types of information, gets posted out there. We do have a lot of photos on Flickr of the risk reduction system as you can see what is happening in the Plaquemines Parish area there. Twitter is use more for emergency situations.



We have several resources; we have nolaenvironmental and then we have the Corps website and those links are at the bottom of the maps in the back.

We are now going to move into the comment discussion area. We are recording this so we can get it as part of the record. I ask that if you have any comments or questions, please come up to the mic and state your name and your comment. We will then have the appropriate expert on that matter respond to your questions.

Barry Calligan: [Inaudible] sources of borrow material?

Julie LeBlanc: Typically, when the Corps builds a project we have government furnished borrow pits that we can use. What we are covering in the Environmental Impact Statement is government furnished pits, that means pits owned by the government, and we would say to a contractor that they can access those pits or a contractor furnished pits, and we are covering both in the EIS. We can’t say exactly where it’s coming from, but more than likely most of these projects will be contractor furnished borrow, which means when we award a construction contract, they have to go out and find their borrow from a pit that has been environmentally approved. It must also be approved as suitable material for levee construction.

Barry Calligan: I understand that, but does it come from the local or federal government?

Julie LeBlanc: The borrow pit most likely will be contractor furnished, which would be individual landowners who sell their borrow to construction contractors and more than likely local because they don’t have to haul it as far so it will not cost as much.

Barry Calligan: In regards to the levee alone, from Myrtle Grove to Citrus Lands. What are the decisions [Inaudible] for on the site [inaudible]?

Julie LeBlanc: This is actually the entire non-federal levee alignment. We looked at 22 different alignments before we selected the proposed alignment that is shown here, which is the yellow line.

Barry Calligan: The proposal site that you selected, was that not the least favorable one?

Julie LeBlanc: The one we selected was the most favorable.

Barry Calligan: For what reason?

Julie LeBlanc: We were directed to incorporate the existing non-federal levees so that alignment was pretty much set unless there was an engineering reason to deviate from it.

Barry Calligan: It was a private levee it would be [Inaudible] tall.

Julie LeBlanc: That doesn't matter.

Barry Calligan: Isn't it more cost effective to do it [Inaudible]

Julie LeBlanc: Potentially, but the language we got from Congress said to incorporate the existing non-federal levees into the New Orleans to Venice system. Unless there was an engineering reason, which there were three or four locations where there were, we didn't deviate from that alignment.

Dwell Walker: Isn't it true that you take dirt from south Plaquemines and turn it north? Also, the alignment problem; isn't it true when they aligned these levees a long time ago, hurricane design was never put into it? For instance, when Japan had the tsunami, they spent a lot of money on 32-foot high concrete but they followed the alignments of the ground like y'all did and because of the cut situation it didn't work. Out at sea is the hurricane designed and I'm wondering why the Corps hasn't extended out there and back and on this side of Grand Isle put a beach in front of us so we wouldn't have to worry about these levees. Levees are designed to run the river downhill and somewhere up that river you have to put a spillway for hurricanes, probably around Myrtle Grove somewhere. The water will always go to the left so these hurricanes coming, you will save the city more by doing that more than you will any of these things. These levees will just catch water and re-pump water.

Rene Poche: I will just reiterate some of things Julie said. As far as the borrow goes, if it is contractor furnished we don't know where the borrow is going to come from so to say it's coming from one particular area versus another is speculation. We have to wait and see until the contracts are awarded. I can tell you that history has shown that the contractor likes to take the borrow that is closest to the project. I don't know all the factors that are going to play into that but we will see once the contacts get awarded. On the question of the levee alignments, I will defer back to what Julie was saying. We have to go with what Congress instructed and authorized us to do and that is to follow the existing alignments.

Dwell Walker: [Inaudible] the decision gives the people the false sense of security during a hurricane. We are in a global warming, we are coming off an ice age, Buras is the most active place in the world right now for hurricanes and I know if you've been noticing the fronts coming around. These fronts are one [Inaudible] …it's only because global warming hasn't hit yet; five degrees in the Gulf and then in the winter time every one of these fronts will go off [Inaudible]. For instance, Hurricane

Danny [Inaudible] automatically come across Buras and don't go anywhere [Inaudible] it's always go to be the left side, Port Sulphur and right side of Grand Isle, [Inaudible]…as long as it's solid like the eastern seaboard. Ever since Hurricane Andrew hit Dade County much bigger storms have occurred; there will be worse than what it did then.

Rene Poche: Thank you, we have all your comments on record. I can tell you this is a Risk Reduction System; there is nothing that is 100% safe out there and that's why it's important you listen to your elected officials and have an evacuation plan and when they tell you to leave, leave.

Roberta Gratz: What I don't understand is that you say the alignments are what Congress has authorized you to do. Who advises Congress on what is the right alignment? I assume they rely on your expertise?

Paul Eagles: In the case of the ones in green there, those are existing levees in a federal project already so those alignments were already established. The ones in red, those were non-federal levees that were already established by the local governments and those levees we were told to incorporate those into the green system there so that is what we based our decisions on.

Roberta Gratz: The existing levees were designed and built at a time of different circumstances. If it were your judgment, as the Corps, to say these are not appropriate at this time and alternative is best. Wouldn't you be the ones to advise Congress that it's not the appropriate thing; you are just adding on to something that already exists for that reason, not because it's the best alternative.

Paul Eagles: We have made a few changes based on engineering reasons so that's part of the process.

Rene Poche: Are there any more questions. Ok, well we will conclude tonight's meeting and thanks for coming. The project managers will be available after to answer any questions you may have. Thank you.

Nicole Forsyth

From: Koeppel, Christopher MVK [Christopher.D.Koeppel@usace.army.mil]
Sent: Tuesday, May 10, 2011 1:27 PM
To: Nicole Forsyth
Cc: Mallard, Matthew S MVK; Sumerall, Daniel C MVK
Subject: Fw: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Message sent via my BlackBerry Wireless Device

----- Original Message -----
From: Leroux, Patricia S MVN
To: Koeppel, Christopher MVK
Sent: Tue May 10 13:12:57 2011
Subject: FW: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Chris -

Please see the comment below from the MVN Environmental email.

Patricia Leroux
New Orleans
504-862-1544

-----Original Message-----
From: jtripp@edf.org [mailto:jtripp@edf.org]
Sent: Monday, May 09, 2011 6:37 PM
To: MVN Environmental
Subject: NOLA Environmental Comment - St. Charles

This comment (part 1 of 2) is from James T.B. Tripp, Senior Counsel to the Environmental Defense Fund.

1. The TSP Construction Activities Do Not Constitute Routine Maintenance

The SEIS states that "[i]mpacts resulting from the construction of proposed NOV levee sections would require coordination and 404(b)(1) analysis from CEMVK and Section 401 authorization from LDEQ, once the TSP is ultimately selected." (New Orleans to Venice SEIS, at EIS-157.) We would like to see a more direct statement acknowledging the permitting requirements to which this project is subject under section 404 of the Clean Water Act. It is apparent that the construction activities associated the project will not qualify for the maintenance exception to the permitting program. The narrowness of the maintenance exception is reflected in the Corps' guidelines, which states that "maintenance does not include any modification that changes the character, scope, or size of the original fill design." (33 C.F.R. §
323.4(a)(2) (emphasis added).)

Accordingly, the TSP calls for new levee construction and expansion, the Plaquemines Parish project will be subject to the full permitting requirements of section 404.

2. The SEIS Understates the Project's Environmental Impacts

Section 6.14 of the SEIS states that the TSP would result in permanent impacts to approximately 146.6 acres of WUS, 366.5 acres of jurisdictional wetlands, and 11 acres of other waters. These figures significantly understate the impact that the project will have on Louisiana's wetlands.
While this assessment may accurately reflect the direct effects that will be felt within the project's construction footprint, it fails to capture the cumulative effects that the project will have on the deltaic ecosystem.

The Mississippi River and its associated wetlands and floodplains constitute an interconnected ecosystem. In evaluating the impacts that proposed construction activities will have on the river, the ecosystem does not lend itself well to facile demarcation. Flood control efforts in one area have repercussions in other areas. By raising levees and altering the river's relationship with its natural floodplain, the TSP will impact the ecosystem beyond the boundaries of Plaquemines Parish. The SEIS fails to recognize this: it analyzes only those environmental consequences directly related to the project's construction footprint in Plaquemines Parish. Accordingly, the SEIS understates the environmental effects, as well as the mitigation required to offset those effects. USACE must fix this deficiency before moving forward with the proposed action.

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Nicole Forsyth

From: Koeppel, Christopher MVK [Christopher.D.Koeppel@usace.army.mil]
Sent: Tuesday, May 10, 2011 1:28 PM
To: Nicole Forsyth; Mallard, Matthew S MVK; Sumerall, Daniel C MVK
Subject: Fw: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Message sent via my BlackBerry Wireless Device

----- Original Message -----
From: Leroux, Patricia S MVN
To: Koeppel, Christopher MVK
Sent: Tue May 10 13:13:11 2011
Subject: FW: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

2 of 2

-----Original Message-----
From: jtripp@edf.org [mailto:jtripp@edf.org]
Sent: Monday, May 09, 2011 6:45 PM
To: MVN Environmental
Subject: NOLA Environmental Comment - St. Charles

This is comment 3 of 3 from James T.B. Tripp, Senior Counsel to the Environmental Defense Fund.

CONT'D:

The Corps' construction plans for Plaquemines Parish will exacerbate the trend outlined above. Without adequate freshwater, sediment, and nutrients, the coastal ecosystem will continue to deteriorate. It may be difficult to determine the amount of freshwater, sediment, and nutrient deprivation that the Plaquemines Parish project will account for. It may also be difficult to determine the fractional share of damage that the TSP- induced "ingredient" deprivation will have on the coastal ecosystem. However, it will certainly have some effect, and the Corps is remiss to have elided the issue in its SEIS.

The Corps' myopic focus on levees has prevented the agency from appreciating the role that wetlands play in protecting human civilization from the elements. Wetland erosion increases the risks associated with tropical storms, as Hurricane Katrina tragically demonstrated in 2005. In supplementing its analysis of the Plaquemines Parish's project environmental impacts, the Corps' should give due weight not only to the wildlife, recreational, and aesthetic value of wetlands, but to their human safety value as well.

The current mitigation plans calls for measures "to fully offset the impacts to habitats located in Plaquemines Parish related to the construction of the NOV levee system." (Appendix F at 1-1.) For reasons outlined above, this is insufficient. The project will affect habitats beyond the boundaries of Plaquemines Parish, and the Corps should supplement its SEIS in order to reflect those effects and comply with section 404.

State of Louisiana

JAY DARDENNE
LIEUTENANT GOVERNOR

OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT

CHARLES R. DAVIS
DEPUTY SECRETARY

PAM BREAUX
ASSISTANT SECRETARY

28 April 2011

Joan Exnicios
Chief, NO Environmental Branch
New Orleans District
Corps of Engineers
PO Box 60267
New Orleans, La 70160-0267

Re: Draft Report
La Division of Archaeology Report No. 22-3761
Management Summary; Phase I Cultural Resources Survey of New Orleans to Venice Federal Levees, Plaquemines Parish, Louisiana

Dear Ms Exnicios:

We acknowledge receipt of your letter received in our office on 4 April 2011 and two copies of the above referenced report. We have completed our review of this report and offer the following comments.

This is a very nice and comprehensive management summary that addresses most of our concerns. One general comment concerns the description and eligibility evaluation of the various sites. The eligibility determinations are, and rightly so, based upon the integrity of the artifact bearing deposits, and whether the older materials in particular occur primarily in the undisturbed sediments. However, the data to support these interpretations is often missing from the individual site descriptions, and unless the reader constructs their own data tables from the appendices, it is not possible to independently evaluate these interpretations. We hope that in the Phase I report, data on the proportion of older materials in deeper deposits and how sediment integrity was assessed will be presented with the site descriptions.

In Figure 3.2, 16PL131 is mis-plotted. In Table 5.1, please note that the use of the term "potentially eligible" is not preferred, rather sites are recommended eligible, not eligible or undetermined. With concurrence from the federal agency, some of the eligibility recommendations in this table may change (see below).

Based upon the report and subsequent discussions with Dr. Bretton Somers, GSRC Corporation, concerning certain sites, we concur that sites 16PL206, 16PL208, 16PL210, 16PL212, 16PL214, 16Pl215, 16Pl216, 16PL219, 16PL220, 16PL238, and 16PL245 are undetermined with respect to their eligibility for nomination to the National Register of Historic Places. We further concur that sites, or the portions of these sites within the project ROW, 16PL207, 16PL209, 16PL211, 16PL213, 16PL218, 16PL221, 16PL222, 16PL223, 16PL224, 16PL225, 16PL226, 16PL227, 16PL228, 16PL229, 16PL232, 16PL233, 16PL234, 16PL235, 16PL236, 16PL237, 16PL239, 16PL240, 16PL241, 16Pl242, 16PL243, 16PL244, 16PL246, 16PL247 and 16PL248 are not eligible for nomination to the National Register. We also concur that site 16PL231 Loci 1, 2, and 3 are eligible for nomination to the National Register. We do not agree that site 16PL230 is undetermined, rather, given the absence of any archaeological deposits around the two concrete features and the paucity of cultural data that could be obtained from these two features, our office believes that 16PL230 should be recommended not eligible for the National Register. Site 16PL217 is recommended eligible in the report based primarily upon its probable association with a historic plantation at this location; however, to date, no eligible archaeological deposits have been identified within the portion of the site within the ROW, thus its determination should be 'undetermined' until further investigation can determine the nature of the archaeological deposits and their association with the plantation.

We look forward to receiving a draft Phase I report with these comments on the Management Summary addressed as appropriate. If you have any questions, please contact Chip McGimsey in the Division of Archaeology by email at cmcgimsey@crt.state.la.us or by phone at 225-219-4600.

Sincerely,

Pam Breaux

Pam Breaux
State Historic Preservation Officer

PB:crm

COMMENTS ON SEIS NEW ORLEANS TO VENICE FEDERAL HURRICANE PROTECTION LEVEE

1. P. EIS-23, Section 3.1, last sentence: *Council of Environmental Quality*. Change *of* to on.

2. P. EIS-48, Section 4.41, 3rd sentence: *environmental consequence have not yet be assessed*. Change *consequence* to consequences and *be* to been.

3. P. EIS -77, Table 5-6: Change *drummondi* to drummondii.

4. P. EIS-85, Section 5.98: *However, it was severely damaged in Hurricane Katrina and is currently closed to the public.* The fort was reopened to the public in December 2010.

5. P. EIS-91, Section 5.105, last sentence: *vague description of consisting*. Delete *of*.

6. P. EIS-92, Section 5.109: *down the Mississippi river from Canada*. Change *river* to River.

7. P. EIS-92, Section 5.110, 2nd sentence: *Sieur de Bienville II*. Delete *II*.

8. P. EIS-139, Section 5.285, 1st sentence: Change *perfluorpcarbons* to perfluorocarbons.

9. P. EIS-142, Section 5.297, 4th sentence: *each of the affected parishes/counties*. Delete */counties*.

10. P. EIS-155, Section 6.3, 2nd sentence: *environmental consequence have not yet be assessed*. Change consequence to consequences and be to been.

11. P. EIS-158, Table 6-1: Total for wetland should be 366.51.

12. P. EIS-166, Table 6-6: Recommend including column totals in the blank cells in the Total row. The final total is confusing as it's located beneath the column for Acres of Open Water.

13. P. EIS-167, Table 6-7: Recommend including column totals in the blank cells in the Total row. The final total is confusing as it's located beneath the column for Acres of Open Water.

14. P. EIS-171, Section 6.58, 6th sentence: *nesting and migration stop over's*. *Over's* shouldn't be possessive.

15. P. EIS-172, Section 6.65, 4th sentence: *could impede the migration of species or tangle and entraps fishes and sea turtles*. Change *entraps* to entrap.

16. P. EIS-174, Section 6.76, 3rd sentence: *a portion of these three sites*. Only two sites (16PL231 Locus 1 and 16PL145) are mentioned.

17. P. EIS-175, Section 6.81, 1st sentence: *During field investigation, four sites were discovered within the ROW for the proposed TSP work*. Include the trinomial numbers for the four sites.
18. P. EIS-180, Section 6.102, 2nd sentence: *have not yet be assessed*. Change *be* to been.

19. P. EIS-184, Sections 6.120 and 6.121: These two sections have been carried over from page EIS-183. Delete.

20. P. EIS-185, Section 6.124, 2nd sentence: *the noise model projected*. Which model was used?

21. P. EIS-188, Table 6-14: Total for CO2 should be 140,056; total for CO2e should be 433,026; total for Total CO2 should be 573,072.

22. P. EIS-189, Table 6-15: Total for CO2 should be 163,471; total for NOV01 should be 62,922; total for NOV02 should be 20,668; total for NOV07 should be 49,147; total for NOV10 should be 71,870.

23. P. EIS-200. Section 6.192, 3rd sentence: *eligible for listing on or listed on the NRHP properties*. Delete *listing on* and delete *properties*.

24. P. EIS-206, Section 6.216, 1st bullet: *The of the excavation of the Gatien-Navy Ships property on the neighboring Merrick Cemetery would be considered*. This is an incomplete sentence.

25. P. EIS-207, 3rd bullet, 2nd sentence: *are considered by researchers to be eligible for listing on the NRHP*. Delete *by researchers*. Did SHPO concur?

26. P. EIS-208, Section 6.217, *no known sites eligible for listing on or listed on the NRHP*. Delete listing on.

27. P. EIS-208, Section 6.219, 1st sentence: *one of the above reference IERs*. Change *reference* to referenced.

28. P. EIS-211, Section 6.231, 2nd sentence: Change *LCPR* to LACPR.

29. P. EIS-212, Section 6.233: Recommend including DOTD's Submerged Road Program.

30. P. EIS-221, Table 6.18, Alternative 2: Total for AAHUs column should be 223.34 and total Mitigation Acres should be 698.25. Alternative 3: Total for AAHUs column should be 790.47.

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

May 3, 2011 F/SER46/PW:jk
225/389-0508

Colonel Jeffrey Eckstein
District Commander
U.S. Army Corps of Engineers, Vicksburg District
ATTN: CEMVK-PD-E (Mr. Christopher Koeppel)
4155 Clay Street
Vicksburg, Mississippi 39183

Dear Colonel Eckstein :

NOAA's National Marine Fisheries Service (NMFS) has reviewed the Draft Supplemental Environmental Impact Statement (SEIS) titled "New Orleans to Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana." This project is locally referred to as the Plaquemines New Orleans to Venice project and is located along both the west (St. Jude to Venice) and east (Phoenix to Bohemia) banks of the Mississippi River. The project includes the Mississippi River levee as well as the back levees along tidal wetlands. NMFS is a cooperating agency on the SEIS for this project.

The Vicksburg District evaluated various levee alignments and construction methods, along with structural and non-structural alternatives, to improve hurricane storm surge protection in this portion of Plaquemines Parish. The Tentatively Selected Plan (i.e., Alternative Two) consists of establishing the two percent level of risk reduction (i.e., 50-yr level storm surge event) by raising and expanding the footprint of levees in most reaches. The project consists of 14 levee reaches. Proposed borrow for levee construction would originate either from government-furnished borrow that already has received environmental clearance or from contractor-furnished borrow that remains subject to environmental clearance regulations. Construction of the project would result in the loss of the 75.3 acres of intermediate marsh, 30 acres of brackish marsh, and 106 acres of saline marsh; all of which have been designated as essential fish habitat (EFH) supportive of a number of federally managed marine fishery species. Additionally, the project would result in the loss of forested wetlands and fresh marsh not designated as EFH. The proposed action does not identify a mitigation project. However, it has been preliminarily determined that 138.4 acres of intermediate marsh, 76.6 acres of brackish marsh, and 282 acres of saline marsh would be necessary to be created to fully offset the anticipated amount of impacts to tidally-influenced marsh.

NMFS finds that there are environmental concerns and requests additional information is included in the Final Environmental Impact Statement. The attached comments identify areas where additional information is necessary to demonstrate compliance with applicable laws and regulations pertaining to mitigation and an EFH assessment.

Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act requires that NMFS provide EFH conservation recommendations for any federal action that may result in adverse impacts to EFH. Therefore, NMFS recommends the following to ensure the conservation of EFH and associated marine fishery resources:

EFH Conservation Recommendation

> Adequate mitigation should be developed through coordination with NMFS and other interested natural resource agencies. The mitigation should be planned, fully funded, and implemented in a timely manner such that functional losses are offset. Mitigation details should be made available for public and agency review and comment prior to issuing a Final Supplemental Environmental Impact Statement or signing a Record of Decision (ROD).

Consistent with Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act and NMFS' implementing regulation at 50 CFR 600.920(k), the Vicksburg District is required to provide a written response to our EFH conservation recommendation within 30 days of receipt. If the Vicksburg Districts will not be able to complete a ROD or other final action within 30 days of receiving our EFH conservation recommendation, the Vicksburg District should provide NMFS with an interim response within 30 days. In that case, a detailed response should be provided in a manner to ensure that it is received by NMFS at least 10 days prior to the signing of a ROD for this project.

NMFS appreciates the opportunity to review the SEIS. If you have questions regarding the above or attached comments, please contact Patrick Williams at 225-389-0508, (ext 208) for assistance.

Sincerely,

Richard Hartman

for Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

Enclosure

c:
COE, New Orleans District, Exnicios
FWS, Lafayette, Walther
EPA, Dallas, Keeler
LDWF, Balkum
LA DNR, Consistency, Ducote
F/SER46, Swafford
F/SER4, Dale
NOAA PPI, Reid
Files

ATTACHMENT

NOAA's National Marine Fisheries Service (NMFS) Comments on the Draft Supplemental Environmental Impact Statement (SEIS) titled "New Orleans to Venice Federal Hurricane Protection Levee (NOV), Plaquemines Parish, Louisiana"

General Comments

NMFS does not object to hurricane protection to reduce risk to life or property nor do we object to the proposed levee alignment. However, we find the SEIS lacks information necessary to demonstrate that adequate mitigation would be accomplished in compliance with Corps of Engineers (COE) and Environmental Protection Agency (EPA) 2008 mitigation regulations and stipulations of the Water Resources Development Act of 2007 related to mitigation requirements for water resource projects. The mitigation plan in Appendix F proposes conceptual mitigation and does not propose specific projects that would be implemented to offset adverse wetland impacts. The proposed plan does not have sufficient information to demonstrate compliance with the 12 "items" required in the 2008 mitigation regulations. This information is necessary for project planning purposes, including alternatives analysis, and equally important for public disclosure of the type and location of the mitigation and its dependent borrow needs. Considering the document lacks all the required components of a mitigation plan, it is NMFS' determination that the essential fish habitat (EFH) Assessment intended to be represented in the SEIS lacks sufficient details to demonstrate that the project's adverse impacts to EFH would be fully compensated.

Of the 12 components of mitigation plans required by the 2008 mitigation regulations, NMFS finds that financial assurances to demonstrate that mitigation can be constructed to be one of the more crucial issues needing to be addressed. As it relates to the mitigation regulations and guidance in the Council of Environmental Quality's Memorandum on Appropriate Use of Mitigation and Monitoring dated January 14, 2011, insufficient information is provided in the SEIS to demonstrate that adequate financial resources are available to ensure mitigation would be performed. The SEIS and appendices includes no discussion of: 1) estimated funds needed for the projected mitigation; 2) verification that the funds for the NOV mitigation are set aside and not at risk from debiting to satisfy needs for the Greater New Orleans Hurricane Surge Damage Risk Reduction System (GNOHSDRRS) mitigation, and 3) a commitment to seek funding if there is a shortfall. NMFS is aware that the mitigation cost per acre by habitat type assumed in the project cost estimates does not include the cost for design or administrative oversight. Also, we believe the assumed costs included for monitoring, and operations and maintenance of mitigation are insufficient to ensure compliance with the requisite success criteria.

The Final SEIS should clarify the extent that funds would be available from both the Federal and local sponsor to ensure that mitigation for the NOV is completed (i.e., designed, constructed, maintained, and monitored). Lacking that clarification, the Final SEIS should disclose the potential lack of mitigation funding and discuss the implications for compliance with the Clean Water Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297). The Final SEIS should include a commitment to seek funds if it is

reasonably foreseeable that funding for implementation of mitigation may be unavailable at any time during the life of the project.
The cost for mitigation is based on the mitigation potential (i.e., Average Annual Habitat Unit/mitigation acre) averaged from other civil works projects. The COE should understand that the mitigation potential changes with project specific design; therefore the cost to construct and maintain a mitigation project may increase and result in a funding shortfall. This is another reason NMFS is concerned about the issue of financial assurances and why we recommend a Final SEIS not be completed until all details of a mitigation plan have been developed and included in the Final SEIS.

Appendix F of the SEIS is a conceptual mitigation plan by title and content. It incorporates by reference projects and provisions identified in the Draft Fish and Wildlife Coordination Act (FWCA) Report. The Cumulative Impacts section of the SEIS also discusses mitigation. Appendix F and the Draft FWCA Report are a reasonable starting point. However, none of these three provide sufficient details or specificity on a mitigation project to conclude that, if implemented, the adverse wetland impacts would be adequately offset. Noticeably absent from the mitigation plan are site selection criteria, site protection instruments, and a mitigation work plan. Further, locating property that the government may acquire fee title ownership may be a substantial limiting factor, as well as feasible borrow sources. A fully developed mitigation plan should be prepared through coordination with the resource agencies and that plan should be included in the Final SEIS.

As mentioned above, the mitigation potential (Average Annual Habitat Unit per mitigation acre) will need to be re-calculated based on the final mitigation project and its design. Wetland Value Assessment (WVA) assumptions have been developed for GNOHSDRRS mitigation at the 35% design level. Those assumptions should be the starting point for WVAs conducted for any selected mitigation. Once the initial WVA for the mitigation has been completed, the mitigation potential can be recalculated and the corresponding funds can be refined and budgeted.

The performance standards and monitoring described in Appendix F and the referenced Draft FWCA Report are fairly thorough. However the latest performance standards and monitoring requirements that were developed for the GNOHSDRRS should be used for the NOV. That information is contained in the Final FWCA Report and the Final SEIS should be revised accordingly. If improvements are made to those criteria hereafter through programmatic coordination, NMFS will so advise staff of the Vicksburg District.

NMFS is viewing the submittal of the SEIS as the intent of the COE to initiate an EFH consultation as required by provisions of the Magnuson-Stevens Act. Our response is submitted in accordance with section 600.920(i)(4) of the EFH rules and regulations and includes focus on whether sections of the draft SEIS adequately constitute the required EFH assessment.

Based on our review of the SEIS, we have determined that although the document contains the four items required of an EFH assessment listed in section 600.920(e)(3) of the Magnuson-Stevens Act, the details in those items are insufficient. NMFS does not wish to preempt the

COE's responsibility, as Federal action agency, to prepare an EFH assessment. An EFH assessment includes an analysis of effects, including mitigation, to determine the net and cumulative impact to EFH. The mitigation project is unknown and therefore net benefits to EFH are undeterminable at this time. However, we acknowledge that if tidal marsh is created as mitigation in a timely manner sufficient in amount, location, type, and function, then overall project effects on EFH could be adequately offset.

Specific Comments

The Abstract, Summary, and Need for and Objectives of Actions sections appear internally inconsistent on when the NOV project would be constructed and to what extent funding limitations affect project construction, including mitigation. Section 1.6 stipulates that the first NOV contracts are proposed to be awarded in April 2012 with construction completion proposed for 2015 despite no reference to constructing mitigation. Further, Section 3.15 indicates that the proposed action is divided into 14 individual projects designed to be bid independently, again with no reference to mitigation. In contrast, the Abstract and Summary indicated that deficiencies in the Mississippi River levee portions of the NOV project would be funded and constructed by the Mississippi River and Tributaries (MR&T) program prior to the construction of the other portions of the NOV project. The Final SEIS should clarify the construction sequence, including mitigation, as it relates both to the MR&T program and potential funding limitations. The clarification should include: 1) whether the non-Mississippi River portions would be constructed after the MR&T upgrades are complete and how that effects the proposed 2012 and 2015 construction and completion dates for the NOV project; and, 2) the construction order of the NOV reaches and concurrent mitigation based on funding limitations.

Section 1. Summary
Section 404 Findings

Page EIS-6, 1.10. This section indicates that "full compensatory mitigation" would be provided for the unavoidable adverse impacts on wetlands. Due to incompleteness of the mitigation plan and associated discussion in the SEIS, NMFS does not concur at this time with the determination that "full" compensation would be provided. The FEIS should include all the required components of a mitigation plan or this section of the document should be revised to clarify that full compensation of project-induced adverse impacts on wetlands is contingent upon development of adequate mitigation that has yet to occur.

Section 3. Need for and Objective of Actions

Page EIS-29. The legends for the map figures in this section and in other sections were cut off. This should be checked throughout the document and appendices and corrected in the Final SEIS.

Section 4. Alternatives
Comparative Impacts of Alternatives

Page EIS-43, Table 4-1. For Alternative Two, the acres of impact are 211.25. For Alternative Three, 671.7 acres would be impacted resulting in 376.9 Average Annual Habitat Units (AAHUs) of impact. We recommend the SEIS be revised accordingly. NMFS staff is available to discuss these and other potential data discrepancies with the COE or their contractor.
Section 5. Affected Environment

Page EIS-68, 5.50 We suggest this paragraph referencing EFH be moved to the EFH section and inserted before 5.58.

Section 6. Environmental Consequences

Page EIS-162, Table 6-3. A negative sign should be inserted for the brackish marsh impacts for Alternative Three.

Page EIS-166, Table 6-6. Based on Table 6-2, the acres of intermediate marsh should be 75.26, unless a portion are located on the protected side of the levee (i.e., non-tidal) . The acres of saline marsh should be revised as 21.89, 25.04, 22.14, and 36.92 for levee sections two, six, seven, and eight, respectively. The total of saline marsh impacts should be 105.99 acres. The COE and their contractor may discuss these items with NMFS as needed. If the SEIS is verified as being in error, the corrections should be made in the Final SEIS.

Page EIS-166, 6.37. The total acres should be revised to 211.25. This section stipulates that "the marsh creation" would compensate for these (EFH) impacts. A mitigation project has not been identified. Lacking a complete mitigation plan, NMFS does not concur with this determination.

Page EIS-167, 6.41. The total AAHUs of impact that would result from Alternative Three are 671.7. This potential discrepancy should be verified and a correction should be made in the Final SEIS, if needed. NMFS staff are available to discuss as necessary.

Summary of Cumulative Impacts Analysis
Water Quality, Fisheries, and EFH

Page EIS-213, 6.236. It is not likely that operation of the Bonnet Carré Spillway would contribute to cumulative effects to water quality or fisheries in the NOV study area. We recommend deleting the reference to Bonnet Carré. The last sentence of this paragraphs states, "NMFS mitigation planning would be implemented to minimize cumulative impacts on marine and aquatic species." It is unclear what planning this is referencing. Mitigation is the responsibility of the COE as Federal action agency. NMFS will continue to coordinate with the COE to provide recommendations for the development of adequate mitigation.

Mitigation
Aquatics

Page EIS-215, 6.247. Reference is made therein to the total acres and AAHUs of impact requiring compensation. This section should be expanded to improve public disclosure of the scale of mitigation necessary to offset these impacts. Assuming the mitigation potential of 0.27 AAHUs per mitigation acre, almost 500 acres of marsh creation would be necessary. This mitigation potential is an average and may vary case-specifically, which could result in more acres of marsh creation being necessary to provide adequate mitigation sufficient to offset the temporal loss of marsh function that would result from any delay in mitigation construction. To improve transparency, the Final SEIS should be revised to identify the mitigation potential, that it is an estimate subject to case-specific revisions, and that approximately 500 acres of marsh creation mitigation is needed for the proposed action.

Appendix F. Conceptual Wetland and Bottomland Hardwood Restoration Plan for the Mitigation of Impact.

NMFS acknowledges this is a conceptual plan. However, a final mitigation plan should be developed prior to a Final SEIS to conclude that the mitigation is adequate. The aforementioned recommendations (e.g., site selection criteria, site protection instrument, mitigation work plan, financial assurances, and updating performance standards and monitoring requirements per the latest from the GNOHSDRRS) should be fully resolved and reported in detail in the Final SEIS. It should be noted that these components of a mitigation plan are required by COE and EPA guidelines promulgated in 2008, and that Section 2036 of the 2007 Water Resources Development Act requires that mitigation for water resource projects "complies with the mitigation standards and policies established pursuant to the regulatory program administered by the Secretary".

With regard to the mitigation work plan, Section 3.3.1 Site Design will require revisiting. More refinement on the containment plan, initial and settled target fill elevations, containment gapping, and planting plans warrant more development through coordination with NMFS and other interested agencies. Containment plans should be pursued that allow construction of the within one year rather than over multiple years. This may include multiple cells with primary and secondary (i.e., training) dikes to facilitate staggered pumping to allow partial dewatering prior to acceptance. Target settled elevations must be selected through coordination with NMFS and be based on adjacent healthy natural marsh. NMFS encourages adopting a design goal such that the settled target elevation is demonstrated (i.e., with settlement curves) to be within the tidal range as soon as possible and lasts as long possible over the period of analysis. Dikes should be degraded and/or gapped after the material is consolidated, but no later than three years after placement. The minimum acceptable gapping consists of one 25-ft wide gap every 1,000 feet down to the 0.0 feet NAVD 88. This is a generic gapping plan that should be coordinated with NMFS for mitigation project-specific adaptation. Similarly, the planting plan should be developed with interested stakeholders on a case-specific basis.

Coastal Louisiana Campaign
716 Adams St.
New Orleans, Louisiana 70118

www.nwf.org

May 5, 2011

U.S. Army Corps of Engineers (PD-E)
Mississippi Valley Division
Regional Planning and Environmental Division South
c/o Christopher Koeppel
4155 Clay Street
Vicksburg, MS 39180

Dear Mr. Koeppel:

Thank you for the opportunity to offer comments upon the Draft Supplemental Environmental Impact Statement (DSEIS) New Orleans to Venice, LA, Federal Hurricane Protection Levee.

The following comments have been prepared to address concerns pertaining to the DEIS for the proposed modifications to the federal levee system from St. Jude to Venice (west bank) and Phoenix to Bohemia (east bank).

[illegible]

The abstract states the project funded at $769 million to provide for the repair work, restoration to a 2% authorized grade, project acceleration and armoring of critical elements. However, the estimate of the fully funded cost of the project is $857 – 1,286 million.

[illegible]ndicated that due to fund availability it is possible that some levee sections may not proceed beyond the design phase, but the prioritization of the levee sections (or floodgates) is not suggested within the document. Prioritization of the levee sections would allow a better understanding of the environmental impacts that may result from the project construction. As of May 1, 2011 the modified Charleston method of mitigation was adopted by the Corps which could result in a 1:2 mitigation ratio, thus increasing the cost of the project significantly. Is this project subject to the increased mitigation requirements or is it held to previous standards?

[illegible]

A 50-year level of risk reduction allows for a consideration that the levees will be overtopped at least twice in a 100-year period. In addition, the report does not address the timeline where the effects of subsidence and sea level rise reduce the project protection level. The Corps must emphasize these factors with the general public to reduce the possibility of a false sense of security.

[illegible]

Section NOV-1 is in the approximate area of the proposed freshwater/sediment diversion at White Ditch. The purpose of the White Ditch diversion is to deliver freshwater, nutrients and sediment to maintain the current marsh area that is habitat for native fish and wildlife.

The White Ditch Diversion is intended to mimic natural processes that have been cut off by the Mississippi River levee system. In April of 2007, the Association of State Flood Plain Managers issued recommendation stating that the Corps should strive to protect existing natural functions, and during repair or reconstruction of levee systems the Corps should restore them to the maximum extent possible to account for past adverse impacts. It is our recommendation that the Corps' project teams coordinate their efforts to determine if there are opportunities for project cost sharing for these and other necessities.

However, if the design or proposed alignment of the NewOrleans to Venice, LA Federal Hurricane Protection Levee requires increases to the cost of authorized projects such as White Ditch, such increases in cost should be assigned to the levee project and not the diversion project. How will the costs be assigned and how will they impact cost-benefit ratios? Were these costs considered in the choice of potential alignments?

[redacted]

In Section 4.6, non-structural alternatives were evaluated and eliminated from consideration. There are numerous hurricane risk reduction projects under consideration for coastal Louisiana, and many of these will require non-structural alternatives. The Corps, and the New Orleans District in particular, needs to stop looking at non-structural as a stand-alone alternative (as it has for each instance in this project), and consider the benefits of non-structural risk reduction in conjunction with structural methods. The seeming inertia with which this Corps District continues to eliminate non-structural alternatives is damaging and counter to its own objectives. The Corps has within its own organization a National Non-Structural Floodproofing Committee that should be invited to review and comment on this draft EIS. Given that the project will increase the level of risk reduction to a 50-year level, there is a strong potential of a false sense of security with respect to the levees during a hurricane event and despite the State and Parish's best mandatory evacuation efforts, there may be those that decide to remain. For these and other reasons stated above, the integration of non-structural and structural methods is required.

If you are your colleagues have any questions pertaining to these comments and recommendations, please do not hesitate to call upon me or upon Christopher Pulaski (pulaskic@nwf.org, 985.360-6257).

Sincerely,

David P. Muth
Louisiana State Director
National Wildlife Federation
muthd@nwf.org
(504.872-5993)

BOBBY JINDAL
GOVERNOR

State of Louisiana

DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY

JIMMY L. ANTHONY
ASSISTANT SECRETARY

May 4, 2011

Mr. Christopher Koeppel, Environmental Team Leader
U.S. Army Corps of Engineers (PDE) – Vicksburg District
Regional Planning and Environment Division South
4155 East Clay Street
Vicksburg, MS 39183

RE: *Application Number: New Orleans to Venice Federal Levee - Draft Supplemental EIS*
Applicant: U.S. Army Corps of Engineers – Vicksburg District
Notice Date: April 8, 2011

Dear Mr. Koeppel:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the Draft Supplemental Environmental Impact Statement (EIS) for the New Orleans to Venice Federal Hurricane Protection Levee in Plaquemines Parish. Based upon this review, the following has been determined:

General Comments
LDWF believes that improvements to the hurricane protection levees are justified in order to provide additional protection to existing residences and infrastructure. However, to avoid and/or minimize adverse impacts to wetlands, additional measures, like those listed below, should be evaluated and/or implemented:

- The Army Corps of Engineers (USACE) shall evaluate the use of "T"-walls, or other similar flood protection structures that would minimize impacts to fish and wildlife resources.
- Construction rights-of-way (ROW) shall be limited to the minimum width practicable, especially in wetlands.
- One 24 inch culvert shall be installed every 250 feet when constructing temporary or permanent access roads in wetland areas. Additional culverts should be installed at drainage features. Culverts should be maintained to ensure that existing flow of surface water is uncompromised.
- The applicant shall implement adequate erosion/sediment control measures to insure that no sediments or other construction related debris are allowed to enter waters of the state or adjacent wetlands. Accepted measures include the proper use of vegetated buffers, silt fences or other Environmental Protection Agency construction site stormwater runoff control best management practices.
- Upon completion of construction activities or if at any time construction activities cease for more than 14 days, all disturbed soils shall be revegetated by sod, seed, or another acceptable method, as necessary, to restore cover and prevent erosion.

Compensatory Mitigation
The USACE shall provide adequate and appropriate mitigation for any impacts to wetland functions, and the mitigation shall be implemented concurrently with the levee construction. The mitigation plan shall be approved by the resource and regulatory agencies, including LDWF.

Borrow Pits
No borrow pits shall be constructed in wetland areas or immediately adjacent to forested wetland areas. LDWF believes that excavating pits in such close proximity to forested wetlands will affect wetland hydrology. LDWF recommends a 100-foot no work buffer zone between any proposed borrow pit and forested wetlands.

The applicant shall produce a slope of at least 4:1 (H:V) on the edge of the borrow pits once mining has ceased. Pit side slopes that are 4:1, or more gently sloping, improve wildlife access and revegetation capability, and are safer for users.

Oyster Leasing Areas
Based on the information provided, LDWF cannot confirm whether, or not, levee construction will adversely affect private oyster leases located adjacent to the proposed construction ROW. Construction activities may impact oyster leases at two separate locations – Buras boat harbor (Lat. 29.35490727 N, Long. 89.539128967 W), and Adams Bay at Empire (Lat. 29.381154041 N, Long. 89.605887311 W). Therefore, LDWF recommends that USACE conduct an oyster lease assessment and notify oyster lease holders within 1,500 feet of the proposed construction ROW. Contact LDWF biologist Chris Davis at 225-765-2642 for sampling protocols for oyster leasing areas. LDWF will work with USACE to eliminate or reduce impacts to oyster reef habitat should assessments determine they are present.

Bird Nesting Colonies
Our Natural Heritage Program database indicates the presence of bird nesting colonies within one mile of this proposed project. **Please be aware that entry into or disturbance of active breeding colonies is prohibited by LDWF.** In addition, LDWF prohibits work within a certain radius of an active nesting colony.

If work for the proposed project will commence during the nesting season (dates specified below), a field visit to the worksite must be conducted to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. LDWF shall be provided a copy of the survey report.

To minimize disturbance to colonial nesting birds, the following restrictions should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e. September 1 through February 15).
- For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e. September 16 through April 1).

The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Chris Davis at 225-765-2642 should you need further assistance.

Sincerely,

Kyle F. Balkum
Biologist Program Manager

cd/cm/rb

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAY 0 5 2011

Christopher Koeppel
Environmental Team Leader
U.S. Army Corps of Engineers,
Vicksburg District
4155 East Clay Street
Vicksburg, MS 39183

Dear Mr. Koeppel:

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft Supplemental Environmental Impact Statement (DSEIS) prepared by the Vicksburg District, U.S. Army Corps of Engineers (USACE) for the New Orleans To Venice (NOV), Louisiana, Federal Hurricane Protection Levee Project, Plaquemines Parish, Louisiana. The USACE proposes restoring, armoring, and accelerating completion of the existing Federal levees to provide the authorized design grade for storm risk reduction on the east bank from Phoenix to Bohemia and on the west bank from St. Jude to Venice.

EPA rates the DEIS as "**EC-2**" i.e., EPA has "Environmental Concerns and Requests Additional Information in the Final EIS (FEIS)". Detailed comments are enclosed with this letter which more clearly identify our concerns and the informational needs requested for incorporation into the Final Supplemental EIS (FSEIS).

EPA appreciates the opportunity to review the DSEIS. Please send our office two copies of the FSEIS when it is sent to the Office of Federal Activities, EPA (Mail Code 2252A), Ariel Rios Federal Building, 1200 Pennsylvania Ave, N.W., Washington, D.C. 20004. Our classification will be published on the EPA website, www.epa.gov, according to our responsibility under Section 309 of the CAA to inform the public of our views on the proposed Federal action. If you have any questions or concerns, please contact Michael Jansky of my staff at jansky.michael@epa.gov or 214-665-7451 for assistance.

Sincerely,

Michael Jansky
for Rhonda Smith
Chief, Office of Planning
and Coordination

Enclosure

DETAILED COMMENTS
ON THE
U.S. ARMY CORPS OF ENGINEERS
VICKSBURG DISTRICT
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
FOR THE
NEW ORLEANS TO VENICE, LOUISIANA
FEDERAL HURRICANE RISK REDUCTION
PROJECT

Background

The U.S. Army Corps of Engineers (USACE), Vicksburg District, proposes restoring, armoring , and accelerating the completion of the existing New Orleans to Venice (NOV) hurricane risk reduction levee project located along the Mississippi River corridor in Plaquemines Parish, Louisiana on the east bank from Phoenix to Bohemia and on the west bank from St. Jude to Venice. The USACE has prepared a DSEIS to satisfy the Federal requirements established by the National Environmental Policy Act (NEPA). The following comments are offered for your agency's consideration in completing the Final SEIS (FSEIS):

General Comments

EPA fully supports the efforts of the Corps to provide storm damage risk reduction measures for the residents and businesses of south Louisiana. While EPA has no conceptual concerns regarding this segment of the post-Katrina storm surge protection upgrades, we do have some concerns regarding the adequacy of the documentation, and in some cases, the adequacy of the environmental analyses presented in the DSEIS the New Orleans to Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana.

With regard to the first concern, the DSEIS for the New Orleans to Venice (NOV) Federal levee work often presents data with very little or no interpretation. It is the interpretation which should allow the public to weigh the costs, benefits, and impacts of the proposed project. This weighing of impacts and the evaluation of alternatives is a fundamental principle of the National Environmental Policy Act (NEPA).

The DSEIS does not provide clear documentation as to whether sufficient funding is available to complete the project, which could have serious ramifications for funding and implementing the mitigation and monitoring features. There is a similar lack of specificity regarding the local availability of construction borrow material. If the work is not planned to proceed immediately, it would seem that additional time would be available for developing the necessary specificity to provide a clear understanding of the borrow material issues and for developing a thorough wetland mitigation plan.

The concern about the environmental analyses is exemplified by the lack of a specific wetland mitigation plan. With respect to compensatory mitigation for wetland impacts, the DSEIS should include enough specificity to support a determination of compliance with the

Clean Water Act Section 404(b)(1) Guidelines, Section 2036 of the Water Resources Development Act of 2007, and with the 2008 joint Environmental Protection Agency (EPA)/Department of the Army final rule on compensatory mitigation for losses of aquatic resources. The DSEIS (Appendix G) contains a draft "conceptual" plan, which incorporates the recommendations from the January 19, 2011, U.S. Fish and Wildlife Service's *Fish and Wildlife Coordination Act Report* and the results of the December 2010 Wetland Value Assessment. This is an excellent starting point. However, no specific wetland mitigation projects are identified to compensate for any unavoidable adverse impacts to wetlands from the project construction and from the removal of construction borrow material. The FSEIS should ensure that adequate mitigation has been planned and that it will be funded and implemented in a timely manner such that all lost wetland functions are offset concurrent with project implementation. These details should be made available in the FSEIS for public and agency review prior to issuing the Corps' Record of Decision and prior to the initiation of construction.

Specific Comments

1) Abstract, page EIS-2, and Section 3.1, page EIS-23: These sections discuss related work to complete deficiencies in two miles of levees from River Mile 46.5 to River Mile 44, which need to be raised prior to the commencement of work on this project. It is noted, however, that the schedule for the initial work is subject to congressional appropriation and will be analyzed in a separate National Environmental Policy Act (NEPA) document. This document should explain why a separate NEPA analyses will be necessary and why this NEPA analysis is proceeding in light of the unknown schedule for the initial work.

Also, this NEPA analysis should explain why the NOV federal project and the NOV non-federal project, both funded by post-Katrina emergency supplemental appropriations bills, are being analyzed in separate NEPA documents. There are many data gaps in the DSEIS for the non-federal levee project and questions about the availability of funding. Accordingly, it would not seem that any of these related projects are scheduled to proceed in the immediate future. Therefore, the public could be well-served by using the intervening time to present a comprehensive analysis in a consolidated NEPA document.

This document should also provide an explanation as to why the environmental analyses for the work described therein were not conducted in the same fashion as the rest of the post-Katrina work funded under the same emergency supplemental appropriations bills. The NEPA analyses for the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (GNOHSDRRS) Project have been prepared according to alternative NEPA procedures, under guidance from the White House Counsel on Environmental Quality (CEQ), in an effort to fast track that work. The standard EIS approach was used for this project, implying that it not being fast tracked. Therefore, it would seem possible to take the time to tie together the environmental analyses for all the work proposed for the mainline Mississippi River Levees from New Orleans to Venice and to present a thorough analysis for public review.

The funding identified for this project is the same funding source as that for the rest of the major post-Katrina levee upgrade work, i.e. the work being conducted by the New Orleans District of the Corps for the GNOHSDRRS Project and for the NOV non-federal levee sections.

In fact, the two NOV projects will tie into the GNOHDRRS work and will comprise a portion of the overall risk reduction system. The recently released DEIS for the NOV non-federal levee portion provides contradictory information as to whether the required federal funding is available. This leads to questions as to the current availability of funding for the federal portion of that work, described in this DSEIS. This should be clarified in the FSEIS.

2) Section 1.10, page EIS-6, and Section 1.12, page EIS-7: This DSEIS should include a detailed wetlands mitigation plan. The DSEIS includes only a draft "conceptual" plan. No explanation was provided as to the necessity for postponing the development of a detailed mitigation plan. No information is provided as to when the plan will be prepared and presented for public review. The environmental acceptability of the proposed project will largely rest upon the decisions with regard to the location of borrow material and the detailed wetland mitigation plan with specific commitments for implementation and adequate funding assurances. These issues should be clarified in the FSEIS.

3) Tables 1-1, pages EIS-9 to EIS-11: Due to the fact that the borrow areas have not yet been identified, it is unclear as to how a determination could be made that the borrow areas are "partially compliant" with any of the listed statutes. This concern should be clarified in the FSEIS.

A detailed wetland mitigation plan has not yet been developed. Therefore, it is unclear as to how Alternatives 2 and 3 could be evaluated to be "partially compliant" with Section 404 of the Clean Water Act. Mention is made as to where marsh mitigation sites might "ideally" be located and that some bottomland hardwood wetland mitigation sites "would likely" occur within the same watershed as the impacted area, "to the extent practicable." These vague intentions do not meet the test of adequate public disclosure or adequate planning documentation. Nor do they support a finding of full or partial compliance with the Clean Water Act Section 404 and the related guidance, rules, and Executive Orders.

Also, if there are no requirements for USACE projects authorized by Congress to be in compliance with the River and Harbors Act and if no navigable waters will be obstructed by the project, as stated in the document, the entries under the heading for that Act should more appropriately read "not applicable."

4) Section 3: This Federal project, as well as the related non-Federal NOV project, is being designed to tie into the GNOHSDRRS project, which is being built to provide risk reduction for a one percent storm surge. This project is being built to the two percent level of risk reduction. An explanation should be provided in the FSEIS as to whether there are any engineering vulnerabilities associated with a transition between one percent and two percent flood protection at the tie-in points.

5) Section 3.13, page EIS-27; Section 4.21, page EIS-39; and Section 4.22, page EIS-39: The DSEIS mentions new sector gates as features included in segments NOV 13 and NOV 14 yet no details are provided. Considering the high price tag for such features, the FSEIS should clarify whether the current project funding is sufficient to support the selected alternatives for these reaches. Also, projections for the amount of dredged material that might be generated

during installation of the sector gates should be provided. A disposal plan for the dredged material should be included in the FSEIS, highlighting any potential for beneficially using that material to restore or create coastal wetland habitat.

6) Section 4.6, page EIS-36: This presentation provides no explanation of whether a risk reduction alternative was evaluated which would comprise a mix of relocations, raising in place, and flood proofing. The document should also clarify the level of analysis that any of these nonstructural options alone or in combination were given. It would seem that they fell out of the screening because the Corps determined that the cost of these measures exceeded the amount allocated to the project and/or are measures not within the authority of the Vicksburg District of the Corps. If this determination was decisive at the outset, a clear presentation should be provided of the Corps position regarding how this meets the CEQ guidance on alternatives development and analysis. According to CEQ (http://ceq.hss.doe.gov/nepa/regs/40/40p2.htm), alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies.

7) Section 4.25, page EIS-40: The information presented does not allow the public to evaluate and compare the costs and benefits of Alternatives 2 and 3. The documentation of the risks and reliability of Alternative 3 is insubstantial. The only information that is given is that Alternative 3 would reduce the risk of hurricane surge and wave-driven flooding in any given year "to various levels above or below the 2% elevation." This should be clarified.

8) Table 4-1, page EIS-42: This table indicates that significant impacts will be expected from the Tentatively Selected Plan on wetland resources, including permanent, direct, and long-term impacts on approximately 367 acres of jurisdictional wetlands. The comparative impacts of alternatives with regard to wetland resources simply cannot be properly evaluated in the absence of a proposed wetland mitigation plan. This should be rectified in the FSEIS.

9) Section 4.41, page EIS-48; Tables 4-3 through 4-5, pages EIS-50 to EIS-51; Section 6.3, page EIS-155; and Section 6.202, page EIS-202: The environmental and cost/benefit evaluations of the potential sites from which the borrow material may be acquired do not clarify whether the sites already evaluated for the GNOHSDRRS project are likely to be available for use in this project. Considering the high demands for the GNOHSDRRS project, the NOV non-Federal levee project, and this project, a discussion is warranted as to the projected borrow material demands vs. projected borrow material availability. This FSEIS should be clear as to the availability of local or other borrow material required for this piece of the south Louisiana levee upgrades.

The availability of the Government-approved borrow sites will also have ramifications for the borrow material transportation estimates of over 150 million miles of road traveled to deliver an estimated 1.5 million truck loads of borrow material (see Sections 6.57 - 6.71). Based on this tremendous demand, it would also seem that the borrow material purchase price might be expected to escalate significantly for this portion of the south Louisiana storm surge risk reduction projects, which would have later construction start dates. This should be clarified in the FSEIS.

10) Section 6.111, page EIS-182: Since the borrow material areas are unidentified, the impacts associated with staging and transporting the projected 1.5 million loads of borrow material (over 150 million miles of roads) are not presented in any sort of site-specific context. The impacts on local roads could be tremendous but it is hard to get that impression from the DSEIS. This should be clarified in the FSEIS.

11) Section 6.154, page EIS-193: The FSEIS should include an analysis of the projected impacts to publically funded facilities, such as coastal wetland restoration projects in the immediate vicinity of the project. Examples include, at a minimum, the West Point a la Hache Siphon Diversion, Outfall Management, and Marsh Creation Project and the Naomi Siphon Diversion and Outfall Management Project. Maps should be provided showing all of the related projects in relationship to the proposed NOV non-federal project and to the NOV federal project.

12) Section 6.176, page EIS-196: The FSEIS should summarize the wetland mitigation plan, in addition to referring the reader to Appendix F. Wetlands impacts and wetlands mitigation should be a key element of the EIS. It is unclear as to why the wetlands mitigation plan is still only at the draft conceptual phase in the DSEIS and an explanation should be provided. Also, a specific commitment should be included in the body of the DSEIS that the Corps will adhere to the mitigation priority areas established in the Draft Fish and Wildlife Coordination Report (Appendix G). Please address in the FSEIS.

13) Section 6.183, page EIS-198: This section explains that the effort to identify bottomland hardwood mitigation sites for the as yet unspecified government-furnished borrow sites is occurring concurrently with the project planning process in an effort to construct mitigation projects expeditiously. However, the document should explain why the mitigation work could not be completed prior to publishing this NEPA document and there is no commitment to complete the mitigation work concurrently with the project implementation. Funding assurances for the jurisdictional and non-jurisdictional wetland mitigation work should be provided in the FSEIS. Since this NEPA documentation is not being prepared under the fast-tracked procedures approved by CEQ for the GNOHSDRRS project, it would seem that there would be sufficient time to allow public review of the mitigation plans.

14) Section 6.203, page EIS-202, and Section 6.178, pages EIS-196 to EIS-197: These two sections appear to present significantly inconsistent policies regarding the selection of borrow sites that would incur impacts to jurisdictional wetlands. Section 6.178 says that government-sponsored borrow sites which would entail impacts to jurisdictional wetlands will be avoided. Section 6.203 implies that the standards for contractor-furnished borrow sites would be different, allowing for the use of sites that would involve wetland impacts subject to regulation under the Clean Water Act Section 404. This should be clarified in the FSEIS.

15) Section 6.231, page EIS-211: In addition to providing a list of coastal restoration projects within the area of influence of this project, the cumulative impacts section of the FSEIS should provide information as to whether there will be any impacts to those projects from this proposed action and how such impacts might be avoided or mitigated. In other words, not only is the geographic proximity of other projects of interest but any relationships between the projects should be explored with regard to engineering design, project maintenance and

operation, environmental and social impacts, etc. In addition, a web link could be provided for information on each of those deemed to have environmental consequences with regard to the proposed action in this DSEIS.

16) Section 6.235, page EIS-212: The qualified wording that it is "anticipated" that all Federal actions, "like the NOV levee project," would be required to provide compensatory mitigation to ensure that no net loss of wetlands would occur does not rise to the level of assurance necessary regarding the requirements for avoiding, minimizing, and mitigating unavoidable wetland impacts.

17) Appendix F: The wetlands mitigation plan should be more than conceptual at this point in the supplementary NEPA process. The mitigation plan should provide assurances that all feasible efforts have been employed to avoid and minimize impacts to wetlands. The plan should provide assurances that the project will not proceed to the construction stage in the absence of adequate funding for the mitigation features. Assurances should also be provided that mitigation features will be completed concurrent with the rest of the project. The body of the FSEIS should summarize the wetland mitigation plan, in addition to referring the reader to Appendix F. A specific commitment should be included in the body of the FSEIS that the Corps will adhere to the mitigation priority areas established in the *Draft Fish and Wildlife Coordination Act Report.*

Air Quality

Any demolition, construction, rehabilitation, repair, dredging, or filling activities have the potential to emit air pollutants and EPA Region 6 recommends best management practices be implemented to minimize the impact of any air pollutants. Furthermore, construction and waste disposal activities should be conducted in accordance with applicable local, state and Federal statutes and regulations. Please address in the FSEIS.

Greenhouse Gas Emissions and Climate Change

By statutes, Executive Orders, and agency policies, the Federal government is committed to the goals of energy conservation, reducing energy use, and eliminating or reducing greenhouse gas (GHG) emissions. Although the proposed project's annual GHG emissions are projected to be less than 25,000 metric tons per year, EPA recommends the FSEIS include a discussion of GHG emissions and climate change. Please see CEQ's "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions" for guidance.

Executive Order (EO) 13045-Protection of Children from Environmental Health Risks and Safety Risks

EPA recommends the FSEIS consider the April 1997 Executive Order (EO) 13045 - Protection of Children from Environmental Health Risks and Safety Risks when evaluating project impacts. This EO requires that all Federal agencies "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children, and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

Environmental Justice

Benefits of the Project

The most important and crucial benefit of this project is that it will help safeguard human safety and property as mentioned above. The levee restoration and repair also will encourage and enhance new economic opportunities for Plaquemines Parish through tourism, growth of industry, improved transportation systems, job growth, and increased agricultural opportunities. These positive impacts will benefit all the Plaquemines Parish residents.

Plaquemines Parish is not considered particularly low income (at 18%, below the poverty level), however, 22 of the 39 census tracts in the project area do fall below the State's 19.6% poverty rate, as of 2000 (Census Bureau estimate). These figures have probably worsened due to Hurricane Katrina and the British Petroleum oil spill. Regarding minority status, 20 census tracts had minority percentages greater than those of the minority population Plaquemines Parish in 2000. The entire Parish had a 32% minority population. Louisiana's minority percentage in 2000 was 38.9%, and 16 census tracts had higher minority percentages. Eleven census tracts had higher than both the State's minority percentage and the State's percentage of residents below the poverty level. Under the Executive Order on Environmental Justice, it is necessary to determine if there are "disproportionately high and adverse impacts" affecting these low-income and minority communities as a result this project.

Negative Impacts

Some of the negative impacts of the project will be temporary and short-lived (such as increased traffic and traffic delays, increased noise and dust as each section is being repaired). These negative impacts will be experienced by all the residents equally, but for a short duration. There are potentially negative aspects of the project, however, that could impact low-income and minority residents disproportionately regarding fishing and oyster gathering in the inlets, marshes and bays along the Mississippi. The DSEIS provides great detail regarding the probable destruction or damage of many wetlands areas. This can affect the fishing in these areas. While some fishermen engaging in this occupation are not low-income, many are, including many Cajuns, Vietnamese, and Indian (particularly the Houma) fishermen and they are more vulnerable and less resilient than their more prosperous counterparts are. They fish, gather oysters, and trap animals as part of their traditional way of life and as an essential part of their livelihood. The DSEIS explains that mitigation for the destroyed wetlands will be carried out by creating new wetlands in other places. It does not explain about compensation for the potential losses that may be experienced by low-income and minority fishermen.

Tribal Concerns

Currently in Plaquemines Parish 2.5% of the population is Indian. Most of the Indians who live in the Parish are of Houma Tribe ancestry, and they are dispersed along the marshes, bays and inlets, and make their living primarily by fishing, trapping and hunting in the traditional manner. Many different Tribal groups lived there temporarily in the early days of Spanish and French exploration/colonization. The DSEIS clearly details the correct protocols followed with regard to archeological/anthropological findings. There are three traditional sites near the project area (Buras Mounds, Adams's Bay Site, Pointe a la Hache) but none in the project area and these will not be affected by any of the activities. No ruins related to Tribal groups are expected to be found under the existing levees that will be excavated. In the event that any relics, etc. are found, the appropriate authorities and Tribes will be notified. The following Tribes are being consulted: Jena Band of Choctaws, Mississippi Band of Choctaws, Chitimacha Tribe of Louisiana, Coushatta Tribe of Louisiana, Tunica-Biloxi Indians of Louisiana, Caddo Tribe in Texas, United Houma Nation, Alabama Coushatta, Caddo Adala Tribe and several Tribes in Oklahoma. The Alabama Coushatta have replied that they have no concerns about the project. Because this project will not affect any traditional fishing rights that the Tribes may have, Tribes also will not be disproportionately and adversely affected by this project. Only the Alabama Coushatta Tribal Government has responded that they have no concerns about this project.

Negative Impacts

The negative impacts that will potentially be experienced by Native Americans are described above under Negative Impacts. They relate to possible impacts on the traditional fishing grounds of the Indians, who are mostly of Houma Tribal ancestry. The Indians may also be negatively impacted because of the medicinal plants they harvest in the marshes and wetlands. Coastal erosion is devastating to the United Houma Tribe in Terrebonne Parish, but this problem also is affecting the Indian population in Plaquemines Parish. How these problems will be addressed is not clear in the DSEIS, but this concern should be addressed in the FSEIS.

Conclusion

The project detailed in this DSEIS, raises no environmental justice or Tribal concerns except for the fact that wetlands areas and fishing grounds may be negatively impacted. The FSEIS should explain how the mitigation plans for destroyed wetlands will also benefit the low-income, minority fishermen. Otherwise, their culture and way of life may be irreparably harmed. The other negative impacts will affect ALL residents, but they will be minor, temporary and short-term in nature. The DSEIS makes it clear that the positive benefits of this levee restoration/replacement/repair project will be enjoyed equally by ALL residents, as well. Therefore, there appear to be no disproportionately high or adverse impacts that will be caused by this project except for impacts on fishing.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
1001 Indian School Road NW, Suite 348
Albuquerque, New Mexico 87104

TAKE PRIDE IN AMERICA

ER 11/297
File 9043.1

April 26, 2011

Christopher Koeppel
Environmental Team Leader
U.S. Army Corps of Engineers (PD-E)
Vicksburg District, Regional Planning and
Environment Division South
4155 East Clay Street
Vicksburg, Mississippi 39183

Subject: Draft Supplemental Environmental Impact Statement (DSEIS) for New Orleans to Venice (NOV), Louisiana, Federal Hurricane Protection Levee, Restoring, Armoring and Accelerating the Completion of the Existing NOV, Plaquemines Parish, LA

Dear Mr. Koeppel:

According to the DSEIS, the U.S. Army Corps of Engineers' preferred alternative would involve restoring, armoring, and accelerating completion of approximately 90 miles of the existing Federal hurricane protection levee system to provide a 50-year level of protection. The proposed project would be located on the east bank of the Mississippi River from Phoenix to Bohemia and on the west bank from St. Jude to Venice in Plaquemines Parish, Louisiana. The U.S. Department of the Interior has reviewed the subject DSEIS and offers the following comments in accordance with provisions of the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), and the Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.).

General Comments

The DSEIS adequately describes fish and wildlife resources in the project area and the potential project impacts on those resources. The U.S. Fish and Wildlife Service does not object to providing improved hurricane protection to Plaquemines Parish given that the Corps has incorporated our fish and wildlife conservation recommendations into future project planning and implementation. In addition, the Corps has committed to coordinate with the FWS and other State and Federal natural resource agencies regarding further detailed planning of project features (e.g., detailed mitigation planning, Design Documentation Report, Engineering

Documentation Report, Plans and Specifications, or other similar documents), including providing us and other agencies with an opportunity to review and submit recommendations on all work addressed in those plans and reports. The FWS also looks forward to continued coordination with the Corps and other natural resource agencies in the detailed planning and development of a specific compensatory mitigation project(s).

Specific Comments

Threatened and Endangered Species, Section 5.87, Page 82 – The brown pelican (*Pelecanus occidentalis*) was officially removed from the Federal List of Endangered and Threatened Species on December 17, 2009; however, they remain federally protected under the MBTA. This paragraph should be revised to distinguish between Federal and State protections. In addition, the last sentence of this paragraph should be revised to more accurately state that brown pelicans are likely to use open water in the project vicinity for foraging.

Threatened and Endangered Species, Section 5.89, Page 82 – The peregrine falcon (*Falco peregrinus*) was officially removed from the Federal List of Endangered and Threatened Species on August 25, 1999; however, they remain federally protected under the MBTA. This paragraph should be revised to distinguish between Federal and State protections.

Threatened and Endangered Species, Section 5.90, Page 83 – The first sentence should be revised to state that the bald eagle (*Haliaeetus leucocephalus*) was officially removed from the Federal List of Endangered and Threatened Species on August 8, 2007.

Wildlife, Section 6.188, Page 199 – This paragraph should also include the following buffer zone restriction to minimize disturbance to colonial nesting wading birds.

> For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 feet of a rookery should be restricted to the non-nesting period (i.e., September 1 through February 15, exact dates may vary within this window depending on species present). If the proposed work activities cannot be restricted to non-nesting periods or "no work zone" buffers cannot be implemented, a nesting bird abatement plan should be developed in coordination with Ms. Brigette Firmin (337/291-3108) of the FWS's Louisiana Ecological Services Office.

T&E Species, Section 6.190, Page 199 – This paragraph should be revised to explain the changes in the species' status (as mentioned in the first specific comment above) since the FWS provided ESA section 7 concurrence regarding government-furnished borrow sites.

Wildlife, Section 6.249, Page 216 – The last sentence of this paragraph should be revised to indicate that if construction activities would occur during the breeding/nesting season, nesting bird surveys would be conducted and appropriate "no work zone" buffers would be implemented to minimize disturbance to colonial nesting wading birds (refer to the previous bullet discussing the specific buffer zone distance).

Appendix F, Draft Mitigation Plan, Table 1-1, Page 1-11 – The mitigation acres for freshwater marsh do not equal or exceed the impacted acres of that habitat type. Therefore, a discussion of how those mitigation acres were derived should be included in this section of the draft mitigation plan.

Appendix F, Draft Mitigation Plan, Section 3.3.1.5, Wetland vegetation planting, Page 3-3 – This section discusses conceptual vegetative plantings for dredged material disposal sites for the marsh restoration portion of the mitigation project. Because of the extended growing season in Louisiana, it is unnecessary to use fertilizer or mulch of any kind to encourage marsh plant growth. In addition, because marshes are regularly inundated for a portion of each day depending on tidal cycles, any attempts to fertilize or mulch a marsh restoration site would be affected by the local tidal events. Past experience regarding marsh restoration in Louisiana has shown that many sites begin naturally re-vegetating prior to or in conjunction with implementation of vegetative planting. Therefore, the FWS does not oppose planting but does not believe that fertilizing and mulching are needed to ensure mitigation success.

We appreciate the Corps' continued cooperation in conservation of threatened and endangered species, migratory birds, and wetlands. We also remain committed to continuing our coordination with the Corps regarding the detailed planning of compensatory mitigation for the proposed action. If you have any questions regarding these comments, please contact Ms. Brigette Firmin (337/291-3108) of the FWS's Louisiana Ecological Services Office.

Sincerely,

Stephen R. Spencer

Stephen R. Spencer
Regional Environmental Officer

Choctaw Nation of Oklahoma

P.O. Box 1210 • Durant, OK 74702-1210 • (580) 924-8280

Gregory E. Pyle
Chief

Gary Batton
Assistant Chief

April 7, 2011

Joan M. Exnicios
Department of the Army
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Joan M. Exnicios:

We have reviewed the following proposed project (s) as to its effect regarding religious and/or cultural significance to historic properties that may be affected by an undertaking of the projects area of potential effect.

RE: New Orleans to Venice (NOV) Federal Levee, Plaquemines Parish, Louisiana

Comments: The Choctaw Nation of Oklahoma has reviewed project (s) and ask that we be contacted if Native American sites or human remains are encountered. Contact information 1-800-522-6170 ext. 2216.

Sincerely,

Ian Thompson PhD RPA
Tribal Archeologist/Assistant Director/NAGPRA Specialist
Choctaw Nation of Oklahoma

By: ____________________
Caren A. Johnson
Administrative Assistant

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

PUBLIC NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

WE WOULD RECOMMEND THAT THE PARISH FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW OF THE PROJECT.

David Metcalf
FPA/ Permit Officer
102 Ave G, Suite C
Belle Chasse, LA 70037
PPG.PPZ.SUPER@CMAACCESS.COM
(504) 297-5342

REVIEWER: DATE: March 24, 2011

Mayra G. Diaz
Floodplain Management and Insurance Branch
Mitigation Division
(940) 898-5541

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

14 March, 2011

Regional Planning and
Environment Division South
New Orleans Environmental Branch

NOTICE OF AVAILABILITY

The U.S. Army Corps of Engineers, Mississippi Valley Division, Regional Planning and Environmental Division South, Vicksburg District has prepared a draft supplemental environmental impact statement (SEIS) for the New Orleans to Venice (NOV) Federal Levee, Plaquemines Parish, Louisiana.

The existing NOV Federal storm risk reduction levees were severely damaged in 2005 by Hurricanes Katrina and Rita. The project area lies in the delta of the Mississippi River in Plaquemines Parish, Louisiana commencing on the east bank in Phoenix, which is approximately 38 miles south of downtown New Orleans, and terminating in Bohemia, Louisiana. On the west bank, the project area begins in St. Jude and terminates in Venice, Louisiana. Because the grade elevation varies within the project area and hurricanes that have struck the project area since 2005 have degraded certain reaches, the current level of risk reduction is of low reliability. The goal of this project is to provide the authorized design-grade level of storm risk reduction for Plaquemines Parish.

The draft SEIS recommends the least environmentally damaging alternative to accomplish the needed risk reduction system requirements. The tentatively selected plan would call for the restoration, armoring, and accelerated completion of the existing NOV Federal levees on the east bank from Phoenix to Bohemia, and on the west bank from St. Jude to Venice to provide the authorized design-grade for storm risk reduction. The elevations of the existing floodwalls and levees within some sections of the back levee and portions of the Mississippi River Levee are below the authorized design elevation. Some portions of the same sections also lack subsurface stability to support design-grade level flood risk reduction capability. The project would restore, armor, and accelerate completion of all NOV Federal flood risk reduction structures to meet the authorized design-grade and stabilize those sections of levees where subsoil deficiencies or internal levee deficiencies undermine their strength. The levees would be restored to an authorized 2% design elevation (approximately 50-year level of risk reduction) using recommended design criteria.

Attached for your review and comment is the draft SEIS. The draft SEIS and its appendices can also be viewed at www.nolaenvironmental.gov. The public comment period for the draft SEIS ends on May 8, 2011.

Three public meetings will be held for discussion on the draft SEIS on:

- April 5th, 2011 at Buras Auditorium, 35619 Highway 11, Buras, Louisiana 70041 beginning at 6:00 p.m.

April 3 2011

U.S. Army Corps of Engineers (PD-E)
C/o Mr. Christopher Koeppel
4155 Clay Street
Vicksburg Ms. 39180

Dear Sir,

Writting in concern: Hosting of Public Meetings in Plaquemines Parish from April 5 2011 thr April 7, 2011

I will not beable to attend those meetings but belonging to the largest family of Plaquemines Parish who live and own land in the Area

And haven read the times-Picayune on Sunday April 2. 2011 to see the Notice. "Reducing Risk in Plaquemines Parish. " Back levees and Mississippi River levees from St Jude to Venice on the Westbank of our Parish.

Proposed action draft (SEIS) the rasing of said levees upto authorized grade of 5 foot.

Could you please send to myself for our familys personal files. Hard Copies of the drafted environment documents and Appendixes for just the Above Proposed plans: "Existing Federal levees.

If we should need to pay for any copies Please Contact: Russell E (Rusty) Barrois Jr. at (504) 301-8179 after 1:30 pm. daily.

Again Thank You for your help in getting Hard copies for my family.

Kevin R. Barrois
193 W. Cazeza Drive
Buras. La. 70041

Send Copies to:

Kevin R. Barrois
C/o Russell E (Rusty) Barrois Jr.
193 West Cozette Drive
Buras, La. 70041

We will have several questions after were able to look over these plans.
We still have many unanswered question from when back levees were done in the 70's,
Question on Payments etc...

Thank You.
Kevin R Barrois.

Nicole Forsyth

From: Koeppel, Christopher MVK [Christopher.D.Koeppel@usace.army.mil]
Sent: Wednesday, April 06, 2011 2:03 PM
To: Mallard, Matthew S MVK; Nicole Forsyth
Subject: Fw: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Message sent via my BlackBerry Wireless Device

----- Original Message -----
From: Stiles, Sandra E MVN
To: Koeppel, Christopher MVK; Exnicios, Joan M MVN
Sent: Wed Apr 06 13:33:01 2011
Subject: Fw: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Chris,
Please see below. I've asked Trish to respond to the email with your contact information.

I recommend the contact information be corrected so that you are ensured to receive all the comments for this EIS. Also wondering if the appendices are included for public review or not? If not, is there a mechanism in place to provide them if ask for?

Thanks

Sandy

Message sent via my BlackBerry Wireless Device

----- Original Message -----
From: Leroux, Patricia S MVN
To: Behrens, Elizabeth MVN
Cc: Stiles, Sandra E MVN
Sent: Wed Apr 06 09:27:20 2011
Subject: FW: NOLA Environmental Comment - St. Charles (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Libby -

From the MVN Environmental email system.

Trish

-----Original Message-----
From: mvnenvironmental@usace.army.mil [mailto:mvnenvironmental@usace.army.mil]
Sent: Wednesday, April 06, 2011 7:46 AM
To: MVN Environmental
Subject: NOLA Environmental Comment - St. Charles

To whom it may concern,

I am attempting to review the NOV SEIS that is posted on your nolaenvironmental.gov web site. It is literally impossible to complete a review of this document given that there are no appendix's included with the report. For example, how can a person review the Corps mitigation plan, which is said to be in Appendix F if the appendix is not provided. Additionally, there are enormous gaps in the data presented, such as the location of the borrow sites and the methods of transportation. How can one reasonably review and comment on a project if there is insufficient data on the impacts to base a decision on?

The most glaring discrepancy in the report is the sentence that says to provide comments on this report "Send your comments to the District Engineer by 08 May 2011." Who is the District Engineer and what is his contact information?

Given the significance of the lack of information provided at this time. I formally request that the SEIS be withdrawn from public review and additional information regarding the impacts be incorporated into the document to meet the requirement of a NEPA and the Paperwork Reduction Act. I request that the updated SEIS be reposted for a minimum of 45 days for public review. I further request that proper contact information be provided for the designated person receiving the comments, and that all appendix's be provided as part of the public review period.

Classification: UNCLASSIFIED
Caveats: NONE

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
FEMA, Region IV, Mitigation Division – Mayra G. Diaz, Floodplain Management and Insurance Branch	1	Letter March 24, 2011 - We would recommend that the Parish Floodplain Administrator be contacted for review of the project: David Metcalf, FPA/Permit Officer, 102 Ave. G, Suite C, Belle Chasse, LA 70037	A copy of the SEIS was sent to Mr. Metcalf for review.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Anonymous – MVN Environmental email	2	Email - I am attempting to review the NOV SEIS that is posted on your nolaenvironmental.gov web site. It is literally impossible to complete a review of this document given that there are no appendix's included with the report. For example, how can a person review the Corps mitigation plan, which is said to be in Appendix F if the appendix is not provided. Additionally, there are enormous gaps in the data presented, such as the location of the borrow sites and the methods of transportation. How can one reasonably review and comment on a project if there is insufficient data on the impacts to base a decision on? The most glaring discrepancy in the report is the sentence that says to provide comments on this report "Send your comments to the District Engineer by 08 May 2011." Who is the District Engineer and what is his contact information? Given the significance of the lack of information provided at this time. I formally request that the SEIS be withdrawn from public review and additional information regarding the impacts be incorporated into the document to meet the requirement of a NEPA and the Paperwork Reduction Act. I request that the updated SEIS be reposted for a minimum of 45 days for public review. I further request that proper contact information be provided for the designated person receiving the comments, and that all appendix's be provided as part of the public review period.	Appendices were provided on the nolaenvironmental.gov website, along with the SEIS. Although the SEIS does not identify a specific borrow area that will be used for project construction, numerous Government Furnished and Contractor Furnished borrow areas have previously been evaluated for construction of the area's Hurricane and Storm Damage Risk Reduction System (HSDRRS). These previous NEPA documents meet the legal requirements of NEPA and other environmental and cultural resource laws and regulations, including public comment. Should a different borrow area be used, it will be evaluated for environmental impacts prior to earth-disturbing activity. Chapter 7 of the Draft SEIS stated the name and address of the contact person for the SEIS. Further, the nolaenvironmental.gov site, which was where the SEIS was made available for public review, has a dedicated button marked "Send a comment" to the District Engineer. If one reviewed the SEIS on the nolaenvironemtnal.gov site, then one had and continues to have access to "Send a comment". The Draft SEIS in its entirety was made available to the public for 45 days. The Draft SEIS meets NEPA legal requirements and need not be re-circulated for a 45 day public review period.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Choctaw Nation of Oklahoma – Ian Thompson, Tribal Archaeologist	3	Letter April 7, 2011 - The Choctaw Nation of Oklahoma has reviewed the project and ask that we be contacted if Native American sites or human remains are encountered. Contact information 1-800-522-6170 ext. 2216.	Choctaw Nation of Oklahoma will be contacted if Native American sites or human remains are encountered during construction.
Plaquemines Parish citizen - Kevin Barrois	4	Letter April 3, 2011 – Writing in concern: Hosting of Public Meetings in Plaquemines Parish from April 5, 2011 through April 7, 2011. I will not be able to attend these meetings but belonging to the largest family of Plaquemines Parish who live and own land in the area and have read the Times Picayune on Sunday April 2, 2011 to see the notice "Reducing Risk in Plaquemines Parish". Back Levees and Mississippi River levees from St. Jude to Venice on the west bank of our Parish. Proposed Action draft (SEIS) the raising of said levees up to authorized grade of 5 feet. Could you please send to myself for our family's personal files, hard copies of the drafted environmental documents and appendices for just the above proposed plans, existing federal levees. If we should need to pay for any copies please contact: Russell E (Rusty) Barrois Jr. at (504) 301-8179 after 1:30 pm daily. Again Thank You for your help in getting hard copies for my family. Send copies to: Kevin R. Barrois, c/o Russell E. (Rusty) Barrois Jr., 193 West Cazezu Drive, Buras, LA 70041. We will have several questions after we're able to look over these plans. We still have many unanswered questions from when back levees were done in the '70's. Question on payments etc., Thank You, Kevin Barrois.	A hard copy of the NOV SEIS was sent to Mr. Kevin Barrois.
Department of Interior – Stephen Spencer	5	Threatened and Endangered Species, Section 5.87, Page 82 - The brown pelican (Pelecanus occidentalis) was officially removed from the Federal List of Endangered and Threatened Species on December 17, 2009; however, they remain federally protected under the MBTA. This paragraph should be revised to distinguish between Federal and State protections. In addition, the last sentence of this paragraph should be revised to more accurately state that brown pelicans are likely to use open water in the project vicinity for foraging.	Paragraph revised as suggested.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Department of Interior – Stephen Spencer	6	Threatened and Endangered Species, Section 5.89, Page 82 - The peregrine falcon (*Falco peregrinus*) was officially removed from the Federal List of Endangered and Threatened Species on August 25, 1999; however, they remain federally protected under the MBTA. This paragraph should be revised to distinguish between Federal and State protections.	Paragraph revised as suggested.
Department of Interior – Stephen Spencer	7	Threatened and Endangered Species, Section 5.90, Page 83 - The first sentence should be revised to state that the bald eagle (*Haliaeetus leucocephalus*) was officially removed from the Federal List of Endangered and Threatened Species on August 8, 2007.	Sentence revised as suggested.
Department of Interior – Stephen Spencer	8	Wildlife, Section 6.188, Page 199 -This paragraph should also include the following buffer zone restriction to minimize disturbance to colonial nesting wading birds. For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 feet of a rookery should be restricted to the non-nesting period (i.e., September 1 through February 15, exact dates may vary within this window depending on species present). If the proposed work activities cannot be restricted to non-nesting periods or "no work zone" buffers cannot be implemented, a nesting bird abatement plan should be developed in coordination with Ms. Brigette Firmin (337/291-3108) of the FWS's Louisiana Ecological Services Office.	Paragraph revised as suggested. Also added text to Wildlife Section 6.59.
Department of Interior – Stephen Spencer	9	T & E Species, Section 6.190, Page 199 - This paragraph should be revised to explain the changes in the species' status (as mentioned in the first specific comment above) since the FWS provided ESA section 7 concurrence regarding government-furnished borrow sites.	Paragraph revised as suggested.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Department of Interior – Stephen Spencer	10	Wildlife, Section 6.249, Page 216 - The last sentence of this paragraph should be revised to indicate that if construction activities would occur during the breeding/nesting season, nesting bird surveys would be conducted and appropriate "no work zone" buffers would be implemented to minimize disturbance to colonial nesting wading birds (refer to the previous bullet discussing the specific buffer zone distance).	The following text was added to this paragraph (Section 6.256 in Final SEIS): "For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 ft of a rookery should be restricted to the non-nesting period (i.e., 01 September through 15 February; exact dates may vary within this window depending on species present). For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 1,312 ft (2,296 ft for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., 16 September through 1 April). If the proposed work activities cannot be restricted to non-nesting periods or "no work zone" buffers cannot be implemented, a nesting bird abatement plan would be developed in coordination with the USFWS and LDWF if nesting colonies are found within the noted distances."

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Department of Interior – Stephen Spencer	11	Appendix F, Draft Mitigation Plan, Table 1-1, Page 1-11 The mitigation acres for freshwater marsh do not equal or exceed the impacted acres of that habitat type. Therefore, a discussion of how those mitigation acres were derived should be included in this section of the draft mitigation plan.	The following sentence was added as an asterisk to Table 1-1 in the Mitigation Plan and to Table 6-18 in the SEIS: "Freshwater marsh habitat includes wet pasture which has a poor quality habitat value, thus the mitigation acres for freshwater marsh are less than the impacted acres."
Department of Interior – Stephen Spencer	12	Appendix F, Draft Mitigation Plan, Section 3.3.1.5, Wetland vegetation planting, Page 3-3 - This section discusses conceptual vegetative plantings for dredged material disposal sites for the marsh restoration portion of the mitigation project. Because of the extended growing season in Louisiana, it is unnecessary to use fertilizer or mulch of any kind to encourage marsh plant growth. In addition, because marshes are regularly inundated for a portion of each day depending on tidal cycles, any attempts to fertilize or mulch a marsh restoration site would be affected by the local tidal events. Past experience regarding marsh restoration in Louisiana has shown that many sites begin naturally re-vegetating prior to or in conjunction with implementation of vegetative planting. Therefore, the FWS does not oppose planting but does not believe that fertilizing and mulching are needed to ensure mitigation success.	The text regarding using fertilizer or mulch was removed and replaced with the following text: Fertilizer or mulch would not be used to encourage marsh plant growth because of the extended growing season in Louisiana. In addition because marshes are regularly inundated a portion of each day depending on tidal cycles, any attempts to fertilize or mulch a marsh restoration site would be affected by tidal events. Past experience regarding marsh restoration in Louisiana has shown that many sites begin naturally re-vegetating prior to or in conjunction with implementation of vegetative planting.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Office of Coastal Protection and Restoration (OCPR) – William Feazel	13	P. EIS-23, Section 3.1, last sentence: *Council of Environmental Quality*. Change *of* to on.	Revised as suggested.
OCPR – William Feazel	14	P. EIS-48, Section 4.41, 3rd sentence: *environmental consequence have not yet be assessed*. Change *consequence* to consequences and *be* to been.	Revised as suggested.
OCPR – William Feazel	15	P. EIS -77, Table 5-6: Change *drummondi* to drummondii.	Revised as suggested.
OCPR – William Feazel	16	P. EIS-85, Section 5.98: *However, it was severely damaged in Hurricane Katrina and is currently closed to the public.* The fort was reopened to the public in December 2010.	Revised to state that Fort Jackson has been reopened to the public.
OCPR – William Feazel	17	P. EIS-91, Section 5.105, last sentence: *vague description of consisting*. Delete *of*.	Revised as suggested.
OCPR – William Feazel	18	P. EIS-92, Section 5.109: *down the Mississippi river from Canada*. Change *river* to River	Revised as suggested.
OCPR – William Feazel	19	P. EIS-92, Section 5.110, 2nd sentence: *Sieur de Bienville II*. Delete *II*.	Revised as suggested.
OCPR – William Feazel	20	P. EIS-139, Section 5.285, 1st sentence: Change *perfluorpcarbons* to perfluorocarbons.	Revised as suggested.
OCPR – William Feazel	21	P. EIS-142, Section 5.297, 4th sentence: *each of the affected parishes/counties*. Delete */counties*.	Revised as suggested.
OCPR – William Feazel	22	P. EIS-155, Section 6.3, 2nd sentence: *environmental consequence have not yet be assessed*. Change consequence to consequences and be to been.	Revised as suggested.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
OCPR – William Feazel	23	P. EIS-158, Table 6-1: Total for wetland should be 366.51.	Revised as suggested.
OCPR – William Feazel	24	P. EIS-166, Table 6-6: Recommend including column totals in the blank cells in the Total row. The final total is confusing as it's located beneath the column for Acres of Open Water.	Revised Table 6-6 to clarify totals.
OCPR – William Feazel	25	P. EIS-167, Table 6-7: Recommend including column totals in the blank cells in the Total row. The final total is confusing as it's located beneath the column for Acres of Open Water.	Revised Table 6-7 to clarify totals.
OCPR – William Feazel	26	P. EIS-171, Section 6.58, 6th sentence: *nesting and migration stop over's*. *Over's* shouldn't be possessive.	Revised "stop over's" to "stopovers"
OCPR – William Feazel	27	P. EIS-172, Section 6.65, 4th sentence: *could impede the migration of species or tangle and entraps fishes and sea turtles*. Change *entraps* to entrap.	Revised as suggested.
OCPR – William Feazel	28	P. EIS-174, Section 6.76, 3rd sentence: *a portion of these three sites*. Only two sites (16PL231 Locus 1 and 16PL145) are mentioned.	Removed "three" so sentence says "…a portion of these sites…"
OCPR – William Feazel	29	P. EIS-175, Section 6.81, 1st sentence: *During field investigation, four sites were discovered within the ROW for the proposed TSP work*. Include the trinomial numbers for the four sites.	Added the trinomial numbers for the four sites in the text (16PL233, 16PL231 Locus 3, 16PL234, and 16PL235).
OCPR – William Feazel	30	P. EIS-180, Section 6.102, 2nd sentence: *have not yet be assessed*. Change *be* to been.	Revised as suggested.
OCPR – William Feazel	31	P. EIS-184, Sections 6.120 and 6.121: These two sections have been carried over from page EIS-183. Delete.	Revised as suggested.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
OCPR – William Feazel	32	P. EIS-185, Section 6.124, 2nd sentence: *the noise model projected*. Which model was used?	The California Department of Transportation 1998 equation and model that was described in Section 5.274. "California Department of Transportation (1998) noise model" was added to text.
OCPR – William Feazel	33	P. EIS-188, Table 6-14: Total for CO_2 should be 140,056; total for CO_2e should be 433,026; total for Total CO_2 should be 573,072.	Air quality impacts were recalculated for the Final SEIS. Air quality emissions as a result of borrow transport was broken out into a separate table.
OCPR – William Feazel	34	P. EIS-189, Table 6-15: Total for CO_2 should be 163,471; total for NOV01 should be 62,922; total for NOV02 should be 20,668; total for NOV07 should be 49,147; total for NOV10 should be 71,870.	Air quality impacts were recalculated for the Final SEIS. Air quality emissions as a result of borrow transport were broken out into a separate table.
OCPR – William Feazel	35	P. EIS-200. Section 6.192, 3rd sentence: *eligible for listing on or listed on the NRHP properties*. Delete *listing on* and delete *properties*.	Revised as suggested.
OCPR – William Feazel	36	P. EIS-206, Section 6.216, 1st bullet: *The of the excavation of the Gatien-Navy Ships property on the neighboring Merrick Cemetery would be considered*. This is an incomplete sentence.	Added "cumulative impacts" to text to make a complete sentence.
OCPR – William Feazel	37	P. EIS-207, 3rd bullet, 2nd sentence: *are considered by researchers to be eligible for listing on the NRHP*. Delete *by researchers*. Did SHPO concur?	Deleted "by researchers". According to IER 32, SHPO concurred with the findings.
OCPR – William Feazel	38	P. EIS-208, Section 6.217, *no known sites eligible for listing on or listed on the NRHP*. Delete listing on.	Revised as suggested.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
OCPR – William Feazel	39	P. EIS-208, Section 6.219, 1st sentence: *one of the above reference IERs*. Change *reference* to referenced.	Revised as suggested.
OCPR – William Feazel	40	P. EIS-211, Section 6.231, 2nd sentence: Change *LCPR* to LACPR.	Revised as suggested.
OCPR – William Feazel	41	P. EIS-212, Section 6.233: Recommend including DOTD's Submerged Road Program.	Added text describing the South Louisiana Submerged Roads Program
OCPR – William Feazel	42	P. EIS-221, Table 6.18, Alternative 2: Total for AAHUs column should be 223.34 and total Mitigation Acres should be 698.25. Alternative 3: Total for AAHUs column should be 790.47.	Corrected Table 6-18.
Louisiana Department of Wildlife and Fisheries (LDWF) – Kyle Balkum	43	LDWF believes that improvements to the hurricane protection levees are justified in order to provide additional protection to existing residences and infrastructure. However, to avoid and/or minimize adverse impacts to wetlands, additional measures, like those listed below, should be evaluated and/or implemented: •The Army Corps of Engineers (USACE) shall evaluate the use of "T"-walls, or other similar flood protection structures that would minimize impacts to fish and wildlife resources.	USACE investigated the exclusive use of concrete floodwalls as an alternative to earthen levees. However, concrete floodwalls proved to be cost prohibitive except where residential and industrial developments precluded the use of earthen levee systems. While T-walls could minimize impacts to fish and wildlife resources, they could also have negative impacts as well. Construction activities associated with T-walls would temporarily degrade foraging habitat for ducks and wading birds and could permanently affect the movement of common wildlife within the project area.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	44	LDWF believes that improvements to the hurricane protection levees are justified in order to provide additional protection to existing residences and infrastructure. However, to avoid and/or minimize adverse impacts to wetlands, additional measures, like those listed below, should be evaluated and/or implemented: •Construction rights-of-way (ROW) shall be limited to the minimum width practicable, especially in wetlands.	Construction ROWs would be limited to the minimum width necessary whenever practicable.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	45	LDWF believes that improvements to the hurricane protection levees are justified in order to provide additional protection to existing residences and infrastructure. However, to avoid and/or minimize adverse impacts to wetlands, additional measures, like those listed below, should be evaluated and/or implemented: •One 24 inch culvert shall be installed every 250 feet when constructing temporary or permanent access roads in wetland areas. Additional culverts should be installed at drainage features. Culverts should be maintained to ensure that existing flow of surface water is uncompromised.	Temporary or permanent access roads would avoid wetland areas, since this was one of the main criteria is selecting access route locations. If, during construction, it is determined that access roads would be situated outside the areas of analysis, then supplemental environmental documentation would be necessary and these measures would be considered. It will be specified in the Storm Water Pollution Prevention Plan (SWPPP) for each construction contract that one 24- inch culvert shall be installed every 250 feet when constructing temporary or permanent access roads in wetland areas. Additional culverts shall be installed at drainage features. Culverts shall be maintained to ensure that existing flow of surface water is uncompromised. Text was also added to Section 6.48 of the SEIS.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	46	LDWF believes that improvements to the hurricane protection levees are justified in order to provide additional protection to existing residences and infrastructure. However, to avoid and/or minimize adverse impacts to wetlands, additional measures, like those listed below, should be evaluated and/or implemented: •The applicant shall implement adequate erosion/sediment control measures to insure that no sediments or other construction related debris are allowed to enter waters of the state or adjacent wetlands. Accepted measures include the proper use of vegetated buffers, silt fences or other Environmental Protection Agency construction site stormwater runoff control best management practices.	These measures and BMPs would be implemented and are included in Section 6.48 the Mitigation section of the SEIS.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	47	LDWF believes that improvements to the hurricane protection levees are justified in order to provide additional protection to existing residences and infrastructure. However, to avoid and/or minimize adverse impacts to wetlands, additional measures, like those listed below, should be evaluated and/or implemented: •Upon completion of construction activities or if at any time construction activities cease for more than 14 days, all disturbed soils shall be revegetated by sod, seed, or another acceptable method, as necessary, to restore cover and prevent erosion.	The stabilization practices to be implemented shall include fertilizing, seeding, and mulching or any other temporary measure to restrict erosion from the construction site as specified in the SWPPP. On the daily CQC Report, the Contractor shall record the dates when the major grading activities occur, (e.g., clearing and grubbing, excavation, embankment, and grading); when construction activities temporarily or permanently cease on a portion of the site; and when stabilization practices are initiated. Where construction activity will resume on a portion of the site within 21 days from when activities ceased (e.g., the total time period that construction activity is temporarily ceased is less than 21 days), then stabilization practices do not have to be initiated on that portion of the site by the fourteenth day after construction activity temporarily ceased. Stabilization practices shall be initiated on that portion of the site by the fourteenth day in the case where construction activities will not resume within 21 days after construction activities have ceased. This is detailed in the Water Quality section (Section 6.48) and Mitigation section (Water Quality – Section 6.255) of the SEIS.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	48	**Compensatory Mitigation**: The USACE shall provide adequate and appropriate mitigation for any impacts to wetland functions, and the mitigation shall be implemented concurrently with the levee construction. The mitigation plan shall be approved by the resource and regulatory agencies, including LDWF.	A mitigation plan is provided in the SEIS. Mitigation will be implemented concurrently with levee construction. USACE will continue to coordinate its mitigation efforts with the resource and regulatory agencies throughout the process.
LDWF – Kyle Balkum	49	**Borrow Pits**: No borrow pits shall be constructed in wetland areas or immediately adjacent to forested wetland areas. LDWF believes that excavating pits in such close proximity to forested wetlands will affect wetland hydrology. LDWF recommends a 100-foot no work buffer zone between any proposed borrow pit and forested wetlands. The applicant shall produce a slope of at least 4:1 (H:V) on the edge of the borrow pits once mining has ceased. Pit side slopes that are 4:1, or more gently sloping, improve wildlife access and revegetation capability, and are safer for users.	The borrow pits that would be utilized for this project were approved through the NEPA process for the HSDRRS projects and followed these guidelines. Any borrow pits that would be selected by a contractor would have to go through a similar process.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	50	**Oyster Leasing Areas**: Based on the information provided, LDWF cannot confirm whether, or not, levee construction will adversely affect private oyster leases located adjacent to the proposed construction ROW. Construction activities may impact oyster leases at two separate locations — Buras boat harbor (Lat. 29.35490727 N, Long. 89.539128967 W), and Adams Bay at Empire (Lat. 29.381154041 N, Long. 89.605887311 W). Therefore, LDWF recommends that USACE conduct an oyster lease assessment and notify oyster lease holders within 1,500 feet of the proposed construction ROW. Contact LDWF biologist Chris Davis at 225-765-2642 for sampling protocols for oyster leasing areas. LDWF will work with USACE to eliminate or reduce impacts to oyster reef habitat should assessments determine they are present.	After consultation with Chris Davis of LDWF, it has been determined that no levee construction activities are expected to extend into waters where current oyster leases are located. The Buras Boat Harbor and Adams Bay locations listed above will be in close proximity to levee work, and LDWF has recommended that current oyster lease holders be contacted prior to the onset of construction activities. The Vicksburg District Corps of Engineers (CEMVK) will notify these leaseholders and ensure that proper Best Management Practices are utilized in proximity to these sites to limit increases in turbidity and sediment runoff.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
LDWF – Kyle Balkum	51	**Bird Nesting Colonies** Our Natural Heritage Program database indicates the presence of bird nesting colonies within one mile of this proposed project. Please be aware that entry into or disturbance of active breeding colonies is prohibited by LDWF. In addition, LDWF prohibits work within a certain radius of an active nesting colony. If work for the proposed project will commence during the nesting season (dates specified below), a field visit to the worksite must be conducted to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. LDWF shall be provided a copy of the survey report. To minimize disturbance to colonial nesting birds, the following restrictions should be observed: •For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e. September 1 through February 15). •For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e. September 16 through April 1).	Prior to the onset of construction activities, site visits will be conducted in cooperation with LDWF to determine the potential impacts to bird nesting colonies within the project area. If impacts to nesting colonies are anticipated during the listed nesting seasons, the USACE and its contractors will, to the maximum extent practicable, attempt to restrict construction activities to non-nesting periods. Due to the urgent nature of this project, unavoidable impacts to bird nesting colonies during breeding season might be necessary. In the event that this situation arises, the USACE will contact LDWF, as directed, to determine a course of action that will minimize negative impacts to bird nesting colonies. Text was added to Wildlife Section and Mitigation Section per LDWF and previous USFWS comments.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
State of Louisiana, Department of Culture, Recreation, and Tourism, Office of Cultural Development – Pam Breaux, State Historic Preservation Officer	52	Management Summary: This is a very nice and comprehensive management summary that addresses most of our concerns. One general comment concerns the description and eligibility evaluation of the various sites. The eligibility determinations are, and rightly so, based upon the integrity of the artifact bearing deposits, and whether older materials in particular occur primarily in the undisturbed sediments. However, the data to support these interpretations is often missing from the individual site descriptions, and unless the reader constructs their own data tables from the appendices, it is not possible to independently evaluate these interpretations. We hope that in the Phase I report, data on the proportion of older materials in deeper deposits and how sediment integrity was assessed will be presented with the site descriptions.	These data will be included in the full Phase I report.
State of Louisiana, Department of Culture, Recreation, and Tourism, Office of Cultural Development – Pam Breaux, State Historic Preservation Officer	53	Management Summary: In Figure 3.2, 16PL131 is mis-plotted. In Table 5.1, please note that the use of the term "potentially eligible" is not preferred; rather sites are recommended eligible, not eligible, or undetermined. With concurrence from the federal agency, some of the eligibility recommendations in this table may change (see below).	Site 16PL131 will be revised on Figure 3.2. Removed "potentially" from descriptions in Table 5.1.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
State of Louisiana, Department of Culture, Recreation, and Tourism, Office of Cultural Development – Pam Breaux, State Historic Preservation Officer	54	Management Summary: Based upon the report and subsequent discussions with Dr. Bretton Somers, GSRC Corporation, concerning certain sites, we concur that sites 16PL206, 16PL208, 16PL210, 16PL212, 16PL214, 16PL215, 16PL216, 16PL219, 16PL220, 16PL238, and 16PL245 are undetermined with respect to their eligibility for nomination to the National Register of Historic Places. We further concur that sites, or the portions of these sites within the project ROW, 16PL207, 16PL209, 16PL211, 16PL213, 16PL218, 16PL221, 16PL222, 16PL223, 16PL224, 16PL225, 16PL226, 16PL227, 16PL228, 16PL229, 16PL232, 16PL233, 16PL234, 16PL235, 16PL236, 16PL237, 16PL239, 16PL240, 16PL241, 16PL242, 16PL234, 16PL244, 16PL246, 16PL247 and 16PL248 are not eligible for nomination to the National Register. We also concur that site 16PL231 Loci 1, 2, and 3 are eligible for nomination to the National Register. We do not agree that site 16PL230 is undetermined, rather, given the absence of any archaeological deposits around the two concrete features and the paucity of cultural data that could be obtained from these two features, our office believes that 16PL230 should be recommended not eligible for the National Register. Site 16PL217 is recommended eligible in the report based primarily upon its probable association with a historic plantation at this location; however, to date, no eligible archaeological deposits have been identified within the portion of the site within the ROW, thus its determination should be 'undetermined' until further investigation can determine the nature of the archaeological deposits and their association with the plantation.	Concurrence on undetermined, not eligible, and eligible sites noted. Site 16PL230 will be changed from "undetermined" to "not eligible" per SHPO recommendation. Site 16PL217 will be changed from "eligible" to "undetermined" per SHPO recommendation.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) – Miles Croom, Assistant Regional Administrator, Habitat Conservation Division	55	NMFS recommends the following to ensure the conservation of Essential Fish Habitat (EFH) and associated marine fishery resources: EFH Conservation Recommendation: Adequate mitigation should be developed through coordination with NMFS and other interested natural resource agencies. The mitigation should be planned, fully funded, and implemented in a timely manner such that functional losses are offset. Mitigation details should be made available for public and agency review and comment prior to issuing a Final Supplemental Environmental Impact Statement or signing a Record of Decision.	A Mitigation Plan for NOV impacts has been coordinated with the appropriate agencies including USFWS, NMFS, LDWF, LDNR, and USEPA, and incorporated into the final EIS. Once a mitigation site or method (such as purchasing fee-title and restoring habitat or mitigation credits) has been selected, a Mitigation Work Plan will be coordinated in a supplemental environmental document after the Record of Decision. The Plan will be written in accordance with the Water Resources Development Act (WRDA) of 2007 Section 2036 and 2009 USACE Implementation Guidance. The Mitigation Work Plan will be coordinated with the Interagency Team including the agencies listed above prior to implementation. Full compensatory mitigation for the selected alternative impacts and associated borrow will be conducted concurrently with project construction. Adequate funding for this effort has been budgeted to proceed once construction commences, as is described in the Financial Assurances section of the Mitigation Plan in Appendix F.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	56	Consistent with Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act and NMFS' implementing regulation at 50 CFR 600.920(k), the Vicksburg District is required to provide a written response to our EFH conservation recommendation within 30 days of receipt. If the Vicksburg Districts will not be able to complete a ROD or other final action within 30 days of receiving our EFH conservation recommendation, the Vicksburg District should provide NMFS with an interim response within 30 days. In that case, a detailed response should be provided in a manner to ensure that it is received by NMFS at least 10 days prior to the signing of a ROD for this project.	CEMVK has provided an interim response to NMFS and will provide a detailed response in writing at least 10 days prior to the signing of the Record of Decision (ROD). The EFH Conservation Recommendations have been addressed in Section 5.55 – 5.63, Section 6.31 – 6.42, and in the Mitigation Plan, Appendix F.
NOAA NMFS - Miles Croom	57	NMFS does not object to hurricane protection to reduce risk to life or property nor do we object to the proposed levee alignment. However, we find the SEIS lacks information necessary to demonstrate that adequate mitigation would be accomplished in compliance with Corps of Engineers (COE) and Environmental Protection Agency (EPA) 2008 mitigation regulations and stipulations of the Water Resources Development Act of 2007 related to mitigation requirements for water resource projects. The mitigation plan in Appendix F proposes conceptual mitigation and does not propose specific projects that would be implemented to offset adverse wetland impacts. The proposed plan does not have sufficient information to demonstrate compliance with the 12 "items" required in the 2008 mitigation regulations. This information is necessary for project planning purposes, including alternatives analysis, and equally important for public disclosure of the type and location of the mitigation and its dependent borrow needs. Considering the document lacks all the required components of a mitigation plan, it is NMFS' determination that the essential fish habitat (EFH) Assessment intended to be represented in the SEIS lacks sufficient details to demonstrate that the project's adverse impacts to EFH would be fully compensated.	See response to comment 55 in this comment matrix.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	58	Of the 12 components of mitigation plans required by the 2008 mitigation regulations, NMFS finds that financial assurances to demonstrate that mitigation can be constructed to be one of the more crucial issues needing to be addressed. As it relates to the mitigation regulations and guidance in the Council of Environmental Quality's Memorandum on Appropriate Use of Mitigation and Monitoring dated January 14, 2011, insufficient information is provided in the SEIS to demonstrate that adequate financial resources are available to ensure mitigation would be performed. The SEIS and appendices includes no discussion of 1) estimated funds needed for the projected mitigation; 2) verification that the funds for the NOV mitigation are set aside and not at risk from debiting to satisfy needs for the Greater New Orleans Hurricane Surge Damage Risk Reduction System (GNOHSDRRS) mitigation, and 3) a commitment to seek funding if there is a shortfall. NMFS is aware that the mitigation cost per acre by habitat type assumed in the project cost estimates does not include the cost for design or administrative oversight. Also, we believe the assumed costs included for monitoring, and operations and maintenance of mitigation are insufficient to ensure compliance with the requisite success criteria.	See response to comment 55 in this comment matrix. Appendix F (Mitigation Plan) has been revised, and the financial assurances section of Appendix F does address the available funding for mitigation implementation. The funding for NOV mitigation is separate from GNOHSDRRS and the amounts funded are presently set aside for concurrent mitigation as construction progresses. USACE, an Administrative agency of the Federal government, cannot lobby the Legislative branch of government.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	59	The Final SEIS should clarify the extent that funds would be available from both the Federal and local sponsor to ensure that mitigation for the NOV is completed (i.e., designed, constructed, maintained, and monitored). Lacking that clarification, the Final SEIS should disclose the potential lack of mitigation funding and discuss the implications for compliance with the Clean Water Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson- Stevens Act; P.L. 104-297). The Final SEIS should include a commitment to seek funds if it is reasonably foreseeable that funding for implementation of mitigation may be unavailable at any time during the life of the project. The cost for mitigation is based on the mitigation potential (i.e., Average Annual Habitat Unit/mitigation acre) averaged from other civil works projects. The COE should understand that the mitigation potential changes with project specific design; therefore the cost to construct and maintain a mitigation project may increase and result in a finding shortfall. This is another reason NMFS is concerned about the issue of financial assurances and why we recommend a Final SEIS not be completed until all details of a mitigation plan have been developed and included in the Final SEIS.	The alternative footprints developed for the SEIS were intentionally exaggerated in order to account for minor design changes that may occur in the future. If designs do change and fall outside the designed footprint, additional NEPA coordination will be initiated with the Interagency PDT to analyze said changes and to account for additional mitigation requirements. Also, see responses to comments 55 and 58 in this comment matrix.
NOAA NMFS - Miles Croom	60	Appendix F of the SEIS is a conceptual mitigation plan by title and content. It incorporates by reference projects and provisions identified in the Draft Fish and Wildlife Coordination Act (FWCA) Report. The Cumulative Impacts section of the SEIS also discusses mitigation. Appendix F and the Draft FWCA Report are a reasonable starting point. However, none of these three provide sufficient details or specificity on a mitigation project to conclude that, if implemented, the adverse wetland impacts would be adequately offset. Noticeably absent from the mitigation plan are site selection criteria, site protection instruments, and a mitigation work plan. Further, locating property that the government may acquire fee title ownership may be a substantial limiting factor, as well as feasible borrow sources. A fully developed mitigation plan should be prepared through coordination with the resource agencies and that plan should be included in the Final SEIS.	Appendix F (Mitigation Plan) has been revised to reflect full flexibility of site selection once the mitigation site has been decided upon by the Interagency PDT. A fully detailed mitigation work plan will be prepared under separate NEPA documentation. See response to comment 55 in this comment matrix.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	61	As mentioned above, the mitigation potential (Average Annual Habitat Unit per mitigation acre) will need to be re-calculated based on the final mitigation project and its design. Wetland Value Assessment (WVA) assumptions have been developed for GNOHSDRRS mitigation at the 35% design level. Those assumptions should be the starting point for WVAs conducted for any selected mitigation. Once the initial WVA for the mitigation has been completed, the mitigation potential can be recalculated and the corresponding funds can be refined and budgeted.	WVAs will be conducted on all marsh mitigation sites proposed to determine actual mitigation value. This will serve to allow the USACE to remain current with its mitigation obligations and to ensure that sufficient compensatory mitigation is completed for the proposed project.
NOAA NMFS - Miles Croom	62	The performance standards and monitoring described in Appendix F and the referenced Draft FWCA Report are fairly thorough. However the latest performance standards and monitoring requirements that were developed for the GNOHSDRRS should be used for the NOV. That information is contained in the Final FWCA Report and the Final SEIS should be revised accordingly. If improvements are made to those criteria hereafter through programmatic coordination, NMFS will so advise staff of the Vicksburg District.	Appendix F has been revised. The refined performance standards and requirements are included in the final FWCA Report, located in Appendix G.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	63	NMFS is viewing the submittal of the SEIS as the intent of the COE to initiate an EFH consultation as required by provisions of the Magnuson-Stevens Act. Our response is submitted in accordance with section 600.920(i)(4) of the EFH rules and regulations and includes focus on whether sections of the draft SEIS adequately constitute the required EFH assessment. Based on our review of the SEIS, we have determined that although the document contains the four items required of an EFH assessment listed in section 600.920(e)(3) of the Magnuson- Stevens Act, the details in those items are insufficient. NMFS does not wish to preempt the COE's responsibility, as Federal action agency, to prepare an EFH assessment. An EFH assessment includes an analysis of effects, including mitigation, to determine the net and cumulative impact to EFH. The mitigation project is unknown and therefore net benefits to EFH are undeterminable at this time. However, we acknowledge that if tidal marsh is created as mitigation in a timely manner sufficient in amount, location, type, and function, then overall project effects on EFH could be adequately offset.	Comment noted. Consultation with NMFS is ongoing. The revised Mitigation Plan for the proposed action is located in Appendix F. Once a mitigation site or method has been selected, a Mitigation Work Plan will be coordinated in a supplemental environmental document after the Record of Decision. The Work Plan will supplement the revised Mitigation Plan and will also be written in accordance with WRDA 2007 Section 2036 and 2009 USACE Implementation Guidance. The Mitigation Work Plan will be coordinated with the Interagency Team prior to implementation. Full compensatory mitigation for the selected alternative impacts and associated borrow will be conducted concurrently with project construction. Adequate funding for this effort has been budgeted to proceed once construction commences, as is described in the Financial Assurances section of the Mitigation Plan in Appendix F.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	64	The Abstract, Summary, and Need for and Objectives of Actions sections appear internally inconsistent on when the NOV project would be constructed and to what extent funding limitations affect project construction, including mitigation. Section 1.6 stipulates that the first NOV contracts are proposed to be awarded in April 2012 with construction completion proposed for 2015 despite no reference to constructing mitigation. Further, Section 3.15 indicates that the proposed action is divided into 14 individual projects designed to be bid independently, again with no reference to mitigation. In contrast, the Abstract and Summary indicated that deficiencies in the Mississippi River levee portions of the NOV project would be funded and constructed by the Mississippi River and Tributaries (MR&T) program prior to the construction of the other portions of the NOV project. The Final SEIS should clarify the construction sequence, including mitigation, as it relates both to the MR&T program and potential funding limitations. The clarification should include: 1) whether the non-Mississippi River portions would be constructed after the MR&T upgrades are complete and how that effects the proposed 2012 and 2015 construction and completion dates for the NOV project; and, 2) the construction order of the NOV reaches and concurrent mitigation based on funding limitations.	Construction priorities within available funding for the NOV project are based on development of a back levee line of defense for the project area on the west bank of the river along with fronting protection for all the pump stations including those on the east bank, then addressing deficiencies on the Mississippi River side of the project area on the west bank and the back levees on the east bank. Funding and implementation of mitigation will be concurrent with construction placement. This was included in Section 1.7 for the Final SEIS.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	65	Section 1. Summary - Section 404 Findings - Page EIS-6, l.10 This section indicates that "full compensatory mitigation" would be provided for the unavoidable adverse impacts on wetlands. Due to incompleteness of the mitigation plan and associated discussion in the SEIS, NMFS does not concur at this time with the determination that "full" compensation would be provided. The FEIS should include all the required components of a mitigation plan or this section of the document should be revised to clarify that full compensation of project-induced adverse impacts on wetlands is contingent upon development of adequate mitigation that has yet to occur.	Comment noted. A revised Mitigation Plan can be found in Appendix F. The proposed Work Plan for a selected mitigation site will be coordinated in a supplemental environmental document after the Record of Decision. Revised Appendix F of the SEIS outlines the proposed plans for mitigation and achieves fundamental compliance with WRDA 2007 Section 2036 and 2009 USACE Implementation Guidance. Full compensatory mitigation for the selected alternative impacts and associated borrow will be conducted concurrently with project construction. Adequate funding for this effort has been budgeted to proceed once construction commences, as is described in the Financial Assurances section of the Mitigation Plan in Appendix F. Once a mitigation site is selected, the USACE and interagency PDT will evaluate its value as EFH. At this time, overall project effects can be fully evaluated.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	66	Section 3. Need for and Objective of Actions - Page EIS-29 The legends for the map figures in this section and in other sections were cut off. This should be checked throughout the document and appendices and corrected in the Final SEIS.	The maps were only truncated in the version that was located on the CEMVN website. This will be fixed for subsequent versions.
NOAA NMFS - Miles Croom	67	Section 4. Alternatives Comparative Impacts of Alternatives - Page EIS-43 - Table 4-1 For Alternative Two, the acres of impact are 211.25. For Alternative Three, 671.7 acres would be impacted resulting in 376.9 Average Annual Habitat Units (AAHUs) of impact. We recommend the SEIS be revised accordingly. NMFS staff is available to discuss these and, other potential data discrepancies with the COE or their contractor.	The acres of EFH comprised of brackish, intermediate, and saline marsh were corrected in the SEIS in Tables 4-1, 6-6 and 6-7.
NOAA NMFS - Miles Croom	68	Section 5. Affected Environment - Page EIS-68, 5.50 We suggest this paragraph referencing EFH be moved to the EFH section and inserted before 5.58.	Revised as suggested.
NOAA NMFS - Miles Croom	69	Section 6. Environmental Consequences - Page EIS-162, Table 6-3 A negative sign should be inserted for the brackish marsh impacts for Alternative Three.	A negative sign was inserted before 27.57 for brackish marsh in Table 6.3 and in the WVA report. This also changed the total for Alt 3 to 791.07 which were also corrected in Table 6.3 and in the WVA report.
NOAA NMFS - Miles Croom	70	Page EIS-166, Table 6-6. Based on Table 6-2, the acres of intermediate marsh should be 75.26, unless a portion are located on the protected side of the levee (i.e., non-tidal). The acres of saline marsh should be revised as 21.89, 25.04, 22.14, and 36.92 for levee sections two, six, seven, and eight, respectively. The total of saline marsh impacts should be 105.99 acres. The COE and their contractor may discuss these items with NMFS as needed. If the SEIS is verified as being in error, the corrections should be made in the Final SEIS.	The totals were corrected in Table 6-6, the subsequent paragraph, and Table 4-1. The total acres of existing EFH marsh and open water bottoms would be 219.03 acres with 211.25 acres comprised of brackish, saline and intermediate marsh.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	71	Page EIS-166, 6.37 The total acres should be revised to 211.25. This section stipulates that "the marsh creation" would compensate for these EFH impacts. A mitigation project has not been identified. Lacking a complete mitigation plan, NMFS does not concur with this determination.	After correcting the acres of intermediate and saline marshes the calculation for total acres equaled 211.25 acres. This was corrected in the SEIS. Unavoidable impacts to EFH will be compensated as described in the Mitigation Plan in Appendix F. For more clarification, refer to response to comment 55 in this comment matrix.
NOAA NMFS - Miles Croom	72	Page EIS-167, 6.41 The total AAHUs of impact that would result from Alternative Three are 671.7. This potential discrepancy should be verified and a correction should be made in the Final SEIS, if needed. NMFS staff are available to discuss as necessary.	After correcting the acres of intermediate and saline marshes the calculation for total acres equaled 671.73 acres. This was corrected in the SEIS.
NOAA NMFS - Miles Croom	73	Summary of Cumulative Impacts Analysis - Water Quality, Fisheries, and EFH Page EIS-213, 6.236 It is not likely that operation of the Bonnet Carre Spillway would contribute to cumulative effects to water quality or fisheries in the NOV study area. We recommend deleting the reference to Bonnet Carre. The last sentence of this paragraphs states, "NMFS mitigation planning would be implemented to minimize cumulative impacts on marine and aquatic species." It is unclear what planning this is referencing. Mitigation is the responsibility of the COE as Federal action agency. NMFS will continue to coordinate with the COE to provide recommendations for the development of adequate mitigation.	Removed reference to Bonne Carre spillway per NMFS recommendation. Clarified sentence to state "Mitigation planning in coordination with resource agencies would be implemented to minimize cumulative impacts on marine and aquatic species."

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	74	Mitigation - Aquatics - Page EIS-215, 6.247 Reference is made therein to the total acres and AAHUs of impact requiring compensation. This section should be expanded to improve public disclosure of the scale of mitigation necessary to offset these impacts. Assuming the mitigation potential of 0.27 AAHUs per mitigation acre, almost 500 acres of marsh creation would be necessary. This mitigation potential is an average and may vary case-specifically, which could result in more acres of marsh creation being necessary to provide adequate mitigation sufficient to offset the temporal loss of marsh function that would result from any delay in mitigation construction. To improve transparency, the Final SEIS should be revised to identify the mitigation potential, that it is an estimate subject to case-specific revisions, and that approximately 500 acres of marsh creation mitigation is needed for the proposed action.	This text regarding 500 acres of mitigation for EFH was included in the Aquatics Section of the Mitigation Section of the SEIS per NMFS recommendation.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
NOAA NMFS - Miles Croom	75	Appendix F. Conceptual Wetland and Bottomland Hardwood Restoration Plan for the Mitigation of Impact. NMFS acknowledges this is a conceptual plan. However, a final mitigation plan should be developed prior to a Final SEIS to conclude that the mitigation is adequate. The aforementioned recommendations (e-g., site selection criteria, site protection instrument, mitigation work plan, financial assurances, and updating performance standards and monitoring requirements per the latest from the GNOHSDRRS) should be fully resolved and reported in detail in the Final SEIS. It should be noted that these components of a mitigation plan are required by COE and EPA guidelines promulgated in 2008, and that Section 2036 of the 2007 Water Resources Development Act requires that mitigation for water resource projects "complies with the mitigation standards and policies established pursuant to the regulatory program administered by the Secretary". With regard to the mitigation work plan, Section 3.3.1 Site Design will require revisiting. More refinement on the containment plan, initial and settled target fill elevations, containment gapping, and planting plans warrant more development though coordination with NMFS and other interested agencies. Containment plans should be pursued that allow construction of the within one year rather than over multiple years. This may include multiple cells with primary and secondary (i.e., training) dikes to facilitate staggered pumping to allow partial dewatering prior to acceptance. Target settled elevations must be selected through coordination with NMFS and be based on adjacent healthy natural marsh. NMFS encourages adopting a design goal such that the settled target elevation is demonstrated (i.e., with settlement curves) to be within the tidal range as soon as possible and lasts as long possible over the period of analysis. Dikes should be degraded and/or gapped after the material is consolidated, but no later than three years after placement. The minimum acceptable gapping consists of one 25-ft wide gap every 1,000 feet down to the 0.0 feet NAVD 88. This is a generic gapping plan that should be coordinated with NMFS for mitigation project-specific adaptation. Similarly, the planting plan should be developed with interested stakeholders on a case-specific basis.	Comment noted. A revised Mitigation Plan can be found in Appendix F and is in compliance with Section 2036 of the 2007 WRDA. A mitigation work plan will be prepared under separate NEPA documentation. See response to comment 55 in this comment matrix. Coordination with resource agencies and interested stakeholders is a routine and regularly occurring endeavor.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
National Wildlife Federation – David Muth, Louisiana State Director	76	**Project Cost** The abstract states the project funded at $769 million to provide for the repair work, restoration to a 2% authorized grade, project acceleration and armoring of critical elements. However, the estimate of the fully funded cost of the project is $857 – 1,286 million. **Section 1.17 Unresolved Issues** indicated that due to fund availability it is possible that some levee sections may not proceed beyond the design phase, but the prioritization of the levee sections (or floodgates) is not suggested within the document. Prioritization of the levee sections would allow a better understanding of the environmental impacts that may result from the project construction. As of May 1, 2011 the modified Charleston method of mitigation was adopted by the Corps which could result in a 1:2 mitigation ratio, thus increasing the cost of the project significantly. Is this project subject to the increased mitigation requirements or is it held to previous standards?	Rough Order of Magnitude costs were prepared in early 2010 following development of the 2% authorized levee grades. These estimated costs include updated design criteria and reflect updated material costs also, thus explaining the difference between these costs and the originally funded amount. Priorities are described in the response to comment 64. The Civil Works program will continue to utilize the WVA method developed by the USFWS for all project alternative assessments and proposed mitigation areas.
National Wildlife Federation – David Muth, Louisiana State Director	77	**2% Design Grade** A 50-year level of risk reduction allows for a consideration that the levees will be overtopped at least twice in a 100-year period. In addition, the report does not address the timeline where the effects of subsidence and sea level rise reduce the project protection level. The Corps must emphasize these factors with the general public to reduce the possibility of a false sense of security.	Level of risk reduction is discussed in Section 3.8 and 3.9

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
National Wildlife Federation – David Muth, Louisiana State Director	78	**Interagency Coordination** Section NOV-1 is in the approximate area of the proposed freshwater/sediment diversion at White Ditch. The purpose of the White Ditch diversion is to deliver freshwater, nutrients and sediment to maintain the current marsh area that is habitat for native fish and wildlife. The White Ditch Diversion is intended to mimic natural processes that have been cut off by the Mississippi River levee system. In April of 2007, the Association of State Flood Plain Managers issued recommendation stating that the Corps should strive to protect existing natural functions, and during repair or reconstruction of levee systems the Corps should restore them to the maximum extent possible to account for past adverse impacts. It is our recommendation that the Corps' project teams coordinate their efforts to determine if there are opportunities for project cost sharing for these and other necessities. However, if the design or proposed alignment of the New Orleans to Venice, LA Federal Hurricane Protection Levee requires increases to the cost of authorized projects such as White Ditch, such increases in cost should be assigned to the levee project and not the diversion project. How will the costs be assigned and how will they impact cost-benefit ratios? Were these costs considered in the choice of potential alignments?	The project area for the White Ditch diversion is located north of the project area for NOV 01 and would not be directly impacted by the proposed action. The project delivery team for the NOV project has coordinated with the team developing the White Ditch Diversion project as well as other teams involved in coastal restoration activities. We do not anticipate the levee enlargements to result in significant cost increases for the diversion project since the existing levee would have to be dealt with as part of the plan for the diversion. Our goal is to complement ongoing coastal restoration activities through project mitigation, resulting in significant improvements to the coastal environment. It should be noted that funding to complete the NOV project cannot be used to offset the cost of another federal project such as the White Ditch Diversion, even if both projects have areas in common. However, project delivery teams can work together to make sure each activity is well coordinated so delays are minimized and project benefits are maximized.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
National Wildlife Federation – David Muth, Louisiana State Director	79	**Non-Structural Risk Reduction Alternatives** In Section 4.6, non-structural alternatives were evaluated and eliminated from consideration. There are numerous hurricane risk reduction projects under consideration for coastal Louisiana, and many of these will require non-structural alternatives. The Corps, and the New Orleans District in particular, needs to stop looking at non-structural as a stand-alone alternative (as it has for each instance in this project), and consider the benefits of non-structural risk reduction in conjunction with structural methods. The seeming inertia with which this Corps District continues to eliminate non-structural alternatives is damaging and counter to its own objectives. The Corps has within its own organization a National Non-Structural Floodproofing Committee that should be invited to review and comment on this draft EIS. Given that the project will increase the level of risk reduction to a 50-year level, there is a strong potential of a false sense of security with respect to the levees during a hurricane event and despite the State and Parish's best mandatory evacuation efforts, there may be those that decide to remain. For these and other reasons stated above, the integration of non-structural and structural methods is required.	In accordance with WRDA 1974 and Engineer Regulation 1105-2-100, nonstructural alternatives were evaluated independently and in combination with structural alternatives based on engineering effectiveness, economic efficiency, and environmental and social acceptability. Each nonstructural alternative or combination, when compared to structural alternatives, was deemed to be structurally infeasible and/or cost prohibitive. For this reason, all nonstructural alternatives were removed from further consideration. Section 4.6 has been modified to better clarify this discussion.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
United States Environmental Protection Agency, Region 6 – Rhonda Smith, Chief, Office of Planning and Coordination	80	**General Comment -** EPA fully supports the efforts of the Corps to provide storm damage risk reduction measures for the residents and businesses of south Louisiana. While EPA has no conceptual concerns regarding this segment of the post-Katrina storm surge protection upgrades, we do have some concerns regarding the adequacy of the documentation, and in some cases, the adequacy of the environmental analyses presented in the DSEIS the New Orleans to Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana. With regard to the first concern, the DSEIS for the New Orleans to Venice (NOV) Federal levee work often presents data with very little or no interpretation. It is the interpretation which should allow the public to weigh the costs, benefits, and impacts of the proposed project. This weighing of impacts and the evaluation of alternatives is a fundamental principle of the National Environmental Policy Act (NEPA).	Comment noted. The environmental consequences of the proposed project have been discussed in full in the SEIS. The SEIS was revised in various sections (noted throughout this comment matrix) to provide more thorough analysis and to provide enhanced interpretation for public review.
USEPA – Rhonda Smith	81	**General Comment -** The DSEIS does not provide clear documentation as to whether sufficient funding is available to complete the project, which could have serious ramifications for funding and implementing the mitigation and monitoring features. There is a similar lack of specificity regarding the local availability of construction borrow material. If the work is not planned to proceed immediately, it would seem that additional time would be available for developing the necessary specificity to provide a clear understanding of the borrow material issues and for developing a thorough wetland mitigation plan.	Regarding funding concerns, see response to comment 64 in this comment matrix. Clarification of project construction timeline has been included in Section 1.8

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	82	**General Comment -** The concern about the environmental analyses is exemplified by the lack of a specific wetland mitigation plan. With respect to compensatory mitigation for wetland impacts, the DSEIS should include enough specificity to support a determination of compliance with the Clean Water Act Section 404(b)(l) Guidelines, Section 2036 of the Water Resources Development Act of 2007, and with the 2008 joint Environmental Protection Agency (EPA)/Department of the Army final rule on compensatory mitigation for losses of aquatic resources. The DSEIS (Appendix G) contains a draft "conceptual" plan, which incorporates the recommendations from the January 19, 2011, U.S. Fish and Wildlife Service's Fish and Wildlife Coordination Act Report and the results of the December 2010 Wetland Value Assessment. This is an excellent starting point. However, no specific wetland mitigation projects are identified to compensate for any unavoidable adverse impacts to wetlands from the project construction and from the removal of construction borrow material. The FSEIS should ensure that adequate mitigation has been planned and that it will be funded and implemented in a timely manner such that all lost wetland functions are offset concurrent with project implementation. These details should be made available in the FSEIS for public and agency review prior to issuing the Corps' Record of Decision and prior to the initiation of construction.	A revised Mitigation Plan can be found in Appendix F. See response to comment 55 in this comment matrix.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	83	Abstract, page EIS-2, and Section 3.1, page EIS-23: These sections discuss related work to complete deficiencies in two miles of levees from River Mile 46.5 to River Mile 44, which need to be raised prior to the commencement of work on this project. It is noted, however, that the schedule for the initial work is subject to congressional appropriation and will be analyzed in a separate National Environmental Policy Act (NEPA) document. This document should explain why a separate NEPA analyses will be necessary and why this NEPA analysis is proceeding in light of the unknown schedule for the initial work.	A short section of the west bank Mississippi River Levee is slightly below the authorized grade required for the Mississippi River and Tributaries (MR&T) Project flow line (based on high flows in the Mississippi River), which provides risk reduction from a riverine flooding event. The authorized grades for the NOV Project based on hurricane surge are greater than for the MR&T Project and the projects are funded separately based on the authorizations. MR&T levee construction has been ongoing for many years based on existing NEPA documents and will continue for years to come. Work on the NOV Project will be coordinated with the MR&T team prior to construction to make sure MR&T requirements are satisfied before the NOV work commences.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	84	Also, this NEPA analysis should explain why the NOV federal project and the NOV non- federal project, both funded by post-Katrina emergency supplemental appropriations bills, are being analyzed in separate NEPA documents. There are many data gaps in the DSEIS for the non-federal levee project and questions about the availability of funding. Accordingly, it would not seem that any of these related projects are scheduled to proceed in the immediate future. Therefore, the public could be well-served by using the intervening time to present a comprehensive analysis in a consolidated NEPA document.	The environmental analysis for the non-Federal and Federal levee projects were separated because there was no existing data for incorporation of the private NFL project into the Federal levee system, and the appropriations for each project were separate. Each project has stand-alone utility and each project can be constructed without the necessity of the other project's construction. Project timelines have been better clarified in Section 1.8
USEPA – Rhonda Smith	85	This document should also provide an explanation as to why the environmental analyses for the work described therein were not conducted in the same fashion as the rest of the post- Katrina work funded under the same emergency supplemental appropriations bills. The NEPA analyses for the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (GNOHSDRRS) Project have been prepared according to alternative NEPA procedures, under guidance from the White House Counsel on Environmental Quality (CEQ), in an effort to fast track that work. The standard EIS approach was used for this project, implying that it not being fast tracked. Therefore, it would seem possible to take the time to tie together the environmental analyses for all the work proposed for the mainline Mississippi River Levees from New Orleans to Venice and to present a thorough analysis for public review.	While this project is not part of the GNOHSDRRS project and, therefore, not being fast-tracked under alternative NEPA procedures, this project is on an accelerated schedule to be completed in order to provide increased hurricane risk reduction to Plaquemines Parish. Also, see response to comment 81 in this comment matrix for timeline clarification. Further, New Orleans to Venice projects that have stand-alone utility have been evaluated separately.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	86	The funding identified for this project is the same funding source as that for the rest of the major post-Katrina levee upgrade work, i.e. the work being conducted by the New Orleans District of the Corps for the GNOHSDRRS Project and for the NOV non-federal levee sections. In fact, the two NOV projects will tie into the GNOHDRRS work and will comprise a portion of the overall risk reduction system. The recently released DEIS for the NOV non-federal levee portion provides contradictory information as to whether the required federal funding is available. This leads to questions as to the current availability of funding for the federal portion of that work, described in this DSEIS. This should be clarified in the FSEIS.	See the response to comment 64 for a discussion of priorities and comment 76 for a discussion of project cost. Available funds are being used to implement the project as described including mitigation. Activities are underway to identify cost savings to enable more of the authorized work to be completed. Any uncompleted work will be designed to a level where more accurate costs are available. Priorities for the non-Federal levees are discussed in the EIS prepared for that effort.
USEPA – Rhonda Smith	87	Section 1.10, page EIS-6, and Section 1.12, page EIS-7: This DSEIS should include a detailed wetlands mitigation plan. The DSEIS includes only a draft "conceptual" plan. No explanation was provided as to the necessity for postponing the development of a detailed mitigation plan. No information is provided as to when the plan will be prepared and presented for public review. The environmental acceptability of the proposed project will largely rest upon the decisions with regard to the location of borrow material and the detailed wetland mitigation plan with specific commitments for implementation and adequate funding assurances. These issues should be clarified in the FSEIS.	See response to comment 55 in this comment matrix. A revised Mitigation Plan can found in Appendix F. It is assumed that the project will use government-furnished and/or contractor-furnished borrow from areas already evaluated through the NEPA process.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides “Concur” require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	88	Tables 1-1, pages EIS-9 to EIS-11: Due to the fact that the borrow areas have not yet been identified, it is unclear as to how a determination could be made that the borrow areas are "partially compliant" with any of the listed statutes. This concern should be clarified in the FSEIS. A detailed wetland mitigation plan has not yet been developed. Therefore, it is unclear as to how Alternatives 2 and 3 could be evaluated to be "partially compliant" with Section 404 of the Clean Water Act. Mention is made as to where marsh mitigation sites might "ideally" be located and that some bottomland hardwood wetland mitigation sites "would likely" occur within the same watershed as the impacted area, "to the extent practicable." These vague intentions do not meet the test of adequate public disclosure or adequate planning documentation. Nor do they support a finding of full or partial compliance with the Clean Water Act Section 404 and the related guidance, rules, and Executive Orders. Also, if there are no requirements for USACE projects authorized by Congress to be in compliance with the River and Harbors Act and if no navigable waters will be obstructed by the project, as stated in the document, the entries under the heading for that Act should more appropriately read "not applicable."	It is assumed that this project would use government-furnished and contractor-furnished borrow areas that have already been approved through the NEPA process. However, since a contractor may choose to use a borrow site that has not already been through the NEPA process they had to be listed as “partially compliant” Alternatives 2 and 3 would be partially compliant because the mitigation process has been started and a 404(b)(1) analysis prepared. A full compliance is not given because these are not yet completed. Rivers and Harbors Act revised to NA.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	89	Section 3: This Federal project, as well as the related non-Federal NOV project, is being designed to tie into the GNOHSDRRS project, which is being built to provide risk reduction for a one percent storm surge. This project is being built to the two percent level of risk reduction. An explanation should be provided in the FSEIS as to whether there are any engineering vulnerabilities associated with a transition between one percent and two percent flood protection at the tie-in points.	This project is authorized to provide a 2%, or 50-year level of risk reduction for the project area. Authorizations/appropriations to increase the level of risk reduction to 1%, or 100-year, are not anticipated for this project. USACE evaluated this transition zone during the review of environmental documents for the West Bank and Vicinity Project. The GNOHSDRRS is a closed system. The West Bank and Vicinity Project includes a closure across Highway 23 which ties into the Mississippi River Levee System and reduces risk from storm surge overtopping of the adjacent levees. The NOV system evaluated in the SEIS will not directly tie in to the GNOHSDRRS. Designs for the non-Federal levees incorporated updated hurricane modeling results to insure impacts were addressed as part of design efforts, including armoring and design grade determinations.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	90	Section 3.13, page EIS-27; Section 4.21, page EIS-39; and Section 4.22, page EIS-39: The DSEIS mentions new sector gates as features included in segments NOV 13 and NOV 14 yet no details are provided. Considering the high price tag for such features, the FSEIS should clarify whether the current project funding is sufficient to support the selected alternatives for these reaches. Also, projections for the amount of dredged material that might be generated during installation of the sector gates should be provided. A disposal plan for the dredged material should be included in the FSEIS, highlighting any potential for beneficially using that material to restore or create coastal wetland habitat.	The Empire Floodgate is prioritized as part of the back levee line of defense and is under design. The floodgate at the Empire Lock will be prioritized based on available funding along with the levee items along the Mississippi River. It is estimated that 45,000 cubic yards of material will be excavated for the new channel for the NOV 13 project. The disposal plan has not been developed as design has just begun. It is anticipated that the dredged material will be placed along the protected side of the existing levees within the project area. The proposed plan for NOV 13 includes construction of an 84-foot wide sector gate on the north (protected) side of the existing Empire Floodgate. The NOV 14 (Empire Lock) project recommended plan has not been determined as of this date and the amount of dredged material (if any) is unknown at this time. This text was added to Section 4.21.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	91	Section 4.6, page EIS-36: This presentation provides no explanation of whether a risk reduction alternative was evaluated which would comprise a mix of relocations, raising in place, and flood proofing. The document should also clarify the level of analysis that any of these nonstructural options alone or in combination were given. It would seem that they fell out of the screening because the Corps determined that the cost of these measures exceeded the amount allocated to the project and/or are measures not within the authority of the Vicksburg District of the Corps. If this determination was decisive at the outset, a clear presentation should be provided of the Corps position regarding how this meets the CEQ guidance on alternatives development and analysis. According to CEQ (http:llceq.hss.doe.gov/nepa/regs/40/40p2.htm), alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies.	See response to comment 79 in this comment matrix.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	92	Section 4.25, page EIS-40: The information presented does not allow the public to evaluate and compare the costs and benefits of Alternatives 2 and 3. The documentation of the risks and reliability of Alternative 3 is insubstantial. The only information that is given is that Alternative 3 would reduce the risk of hurricane surge and wave-driven flooding in any given year "to various levels above or below the 2% elevation." This should be clarified.	Alternative 3 was based on project levee grades developed prior to Hurricane Katrina. The levee grades were assumed to have a consistent level of risk reduction even though they were not based on the updated hurricane models developed following Hurricane Katrina. An assessment of these levee grades using the updated models yielded results that indicated the levees would have varying overtopping frequencies, however in general they were similar to a 2% or 50 year level of risk reduction. The authorized grade was, therefore, established at the 2% or 50 year level of risk reduction for design purposes based on the updated models. From a frequency perspective, Alternative 3 would provide inconsistent levels of risk reduction for a given levee section. On the back levees between St. Jude and Venice for example, some sections would be greater than a 50 year level of risk reduction and some would be lower. Assuming a storm surge along this entire reach at the 50 year frequency, the portions that fall below this level would overtop first and eventually inundate areas behind levees with elevations above the 50 year overtopping frequency. It would be difficult if not impossible to quantify the risk and reliability of Alternative 3 given the inconsistency of the levee grades based on the updated hurricane models. Qualitatively, the risk would be greater than Alternative 2 since Alternative 2 is designed to a consistent 2% or 50 year level of risk reduction. It could also be argued that Alternative 3 would result in the commitment of resources for levee construction at higher elevations than necessary along with associated impacts to the environment. These factors clearly supported a decision to move forward with Alternative 2 for the proposed work.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	93	Table 4-1, page EIS-42: This table indicates that significant impacts will be expected from the Tentatively Selected Plan on wetland resources, including permanent, direct, and long- term impacts on approximately 367 acres of jurisdictional wetlands. The comparative impacts of alternatives with regard to wetland resources simply cannot be properly evaluated in the absence of a proposed wetland mitigation plan. This should be rectified in the FSEIS.	Please see response to comment 55 in this comment matrix.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	94	Section 4.41, page EIS-48; Tables 4-3 through 4-5, pages EIS-50 to EIS-51; Section 6.3, page EIS-155; and Section 6.202, page EIS-202: The environmental and cost/benefit evaluations of the potential sites from which the borrow material may be acquired do not clarify whether the sites already evaluated for the GNOHSDRRS project are likely to be available for use in this project. Considering the high demands for the GNOHSDRRS project, the NOV non-Federal levee project, and this project, a discussion is warranted as to the projected borrow material demands vs. projected borrow material availability. This FSEIS should be clear as to the availability of local or other borrow material required for this piece of the south Louisiana levee upgrades.	Approximately 10 million cubic yards of Government-approved borrow material has been allocated to on-going projects. Remaining Government-approved borrow would potentially be available for use on the NFL and NOV projects. Based upon current estimates, adequate borrow material has been identified to support the project. The GNOHSDRRS is rapidly approaching completion. The remaining borrow providers are currently soliciting information regarding this project. Decreasing demand resulting from the completion of the GNOHSDRRS will likely result in competitive pricing for borrow material. Added following statement to Section 6.202: "If pre-approved CF borrow sites are available, it is not known whether any of these CF borrow sites would be utilized nor the acreages of borrow taken from those sites."

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	95	The availability of the Government-approved borrow sites will also have ramifications for the borrow material transportation estimates of over 150 million miles of road traveled to deliver an estimated 1.5 million truck loads of borrow material (see Sections 6.57 - 6.71). Based on this tremendous demand, it would also seem that the borrow material purchase price might be expected to escalate significantly for this portion of the south Louisiana storm surge risk reduction projects, which would have later construction start dates. This should be clarified in the FSEIS.	See response to comment 94 in this comment matrix.
USEPA – Rhonda Smith	96	Section 6.111, page EIS- 182: Since the borrow material areas are unidentified, the impacts associated with staging and transporting the projected 1.5 million loads of borrow material (over 150 million miles of roads) are not presented in any sort of site-specific context. The impacts on local roads could be tremendous but it is hard to get that impression from the DSEIS. This should be clarified in the FSEIS.	Local roads that would be used in the project area are described in the Transportation section of Section 6 (6.98 – 6.101). Text was clarified to state that major roadways such as LA 23, LA 39, and Hwy 15 would result in a minimal reduction of LOS and a moderate to major reduction of LOS on local road segments. This would result in moderate, temporary impacts.
USEPA – Rhonda Smith	97	Section 6.154, page EIS- 193: The FSEIS should include an analysis of the projected impacts to publically funded facilities, such as coastal wetland restoration projects in the immediate vicinity of the project. Examples include, at a minimum, the West Point a la Hache Siphon Diversion, Outfall Management, and Marsh Creation Project and the Naomi Siphon Diversion and Outfall Management Project. Maps should be provided showing all of the related projects in relationship to the proposed NOV non-federal project and to the NOV federal project.	There are no projected direct impacts to any of the coastal restoration projects. Cumulative impacts on the coastal restoration projects are discussed in Section 6 under the Cumulative Impacts section.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	98	Section 6.176, page EIS- 196: The FSEIS should summarize the wetland mitigation plan, in addition to referring the reader to Appendix F. Wetlands impacts and wetlands mitigation should be a key element of the EIS. It is unclear as to why the wetlands mitigation plan is still only at the draft conceptual phase in the DSEIS and an explanation should be provided. Also, a specific commitment should be included in the body of the DSEIS that the Corps will adhere to the mitigation priority areas established in the Draft Fish and Wildlife Coordination Report (Appendix G). Please address in the FSEIS.	A revised Mitigation Plan can be found in Appendix F and an additional Mitigation Work plan will be prepared under separate NEPA documentation. See response to comment 55 in this comment matrix. The SEIS was revised to include a summary of the conceptual wetland and BLH restoration plan (see Section 5 under wetland resources and Section 6 – Mitigation – wetland resources).
USEPA – Rhonda Smith	99	Section 6.183, page EIS- 198: This section explains that the effort to identify bottomland hardwood mitigation sites for the as yet unspecified government-furnished borrow sites is occurring concurrently with the project planning process in an effort to construct mitigation projects expeditiously. However, the document should explain why the mitigation work could not be completed prior to publishing this NEPA document and there is no commitment to complete the mitigation work concurrently with the project implementation. Funding assurances for the jurisdictional and non-jurisdictional wetland mitigation work should be provided in the FSEIS. Since this NEPA documentation is not being prepared under the fast-tracked procedures approved by CEQ for the GNOHSDRRS project, it would seem that there would be sufficient time to allow public review of the mitigation plans.	A revised Mitigation Plan can be found in Appendix F and an additional Mitigation Work plan will be prepared under separate NEPA documentation. While this project is not part of the GNOHSDRRS project and, therefore, not being fast tracked under alternative NEPA procedures, this project is on an accelerated schedule to be completed in order to provide hurricane risk reduction to Plaquemines Parish.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	100	Section 6.203, page EIS-202, and Section 6.178, pages EIS-196 to EIS-197: These two sections appear to present significantly inconsistent policies regarding the selection of borrow sites that would incur impacts to jurisdictional wetlands. Section 6.178 says that government-sponsored borrow sites which would entail impacts to jurisdictional wetlands will be avoided. Section 6.203 implies that the standards for contractor-furnished borrow sites would be different, allowing for the use of sites that would involve wetland impacts subject to regulation under the Clean Water Act Section 404. This should be clarified in the FSEIS.	For government-furnished and contractor-furnished borrow areas previously evaluated under NEPA for potential use in HSDRRS projects, jurisdictional wetlands have been avoided. However, if a different contractor-furnished borrow area is proposed, the landowner would be required to apply for a CWA Section 404 permit, and if approved, would be required to provide the necessary mitigation before USACE would use the borrow.
USEPA – Rhonda Smith	101	Section 6.231, page EIS-211: In addition to providing a list of coastal restoration projects within the area of influence of this project, the cumulative impacts section of the FSEIS should provide information as to whether there will be any impacts to those projects from this proposed action and how such impacts might be avoided or mitigated. In other words, not only is the geographic proximity of other projects of interest but any relationships between the projects should be explored with regard to engineering design, project maintenance and operation, environmental and social impacts, etc. In addition, a web link could be provided for information on each of those deemed to have environmental consequences with regard to the proposed action in this DSEIS.	There would be no direct impacts on these coastal restoration projects due to the NOV proposed action. Cumulative impacts from the coastal restoration projects are discussed within the Cumulative Impact analysis section.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur D - Do Not Concur E - Exception X - Delete Comment
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	102	Section 6.235, page EIS-212: The qualified wording that it is "anticipated" that all Federal actions, "like the NOV levee project," would be required to provide compensatory mitigation to ensure that no net loss of wetlands would occur does not rise to the level of assurance necessary regarding the requirements for avoiding, minimizing, and mitigating unavoidable wetland impacts.	Section 6.235 changed to Section 6.236 in the Final SEIS. "Anticipated" was removed from the sentence. The sentence now reads "All Federal actions, including the NOV levee project, would be required to provide compensatory mitigation to ensure that no net loss of wetlands would occur, in compliance with EO 11988."
USEPA – Rhonda Smith	103	Appendix F: The wetlands mitigation plan should be more than conceptual at this point in the supplementary NEPA process. The mitigation plan should provide assurances that all feasible efforts have been employed to avoid and minimize impacts to wetlands. The plan should provide assurances that the project will not proceed to the construction stage in the absence of adequate funding for the mitigation features. Assurances should also be provided that mitigation features will be completed concurrent with the rest of the project. The body of the FSEIS should summarize the wetland mitigation plan, in addition to referring the reader to Appendix F. A specific commitment should be included in the body of the FSEIS that the Corps will adhere to the mitigation priority areas established in the Draft Fish and Wildlife Coordination Act Report.	Appendix F (Mitigation Plan) has been revised. As specified in the revised mitigation plan in Appendix F, USACE is committed to offsetting unavoidable impacts to wetlands through compensatory mitigation that will be procured concurrently with construction progress. A summary of the conceptual wetland and BLH restoration plan was added to the SEIS in Section 5 under wetland resources and Section 6 – Mitigation – wetland resources.
USEPA – Rhonda Smith	104	**Air Quality:** Any demolition, construction, rehabilitation, repair, dredging, or filling activities have the potential to emit air pollutants and EPA Region 6 recommends best management practices be implemented to minimize the impact of any air pollutants. Furthermore, construction and waste disposal activities should be conducted in accordance with applicable local, state and Federal statutes and regulations. Please address in the FSEIS.	A discussion of air quality, emissions and BMPs were included in Sections 5 and 6 of the Draft SEIS.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	105	**Greenhouse Gas Emissions and Climate Change**: By statutes, Executive Orders, and agency policies, the Federal government is committed to the goals of energy conservation, reducing energy use, and eliminating or reducing greenhouse gas (GHG) emissions. Although the proposed project's annual GHG emissions are projected to be less than 25,000 metric tons per year, EPA recommends the FSEIS include a discussion of GHG emissions and climate change. Please see CEQ's "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions" for guidance.	A discussion of GHG emissions and climate change was already included in the *Air Quality* section of *Section 5 Affected Environment*. The proposed project's annual GHG emissions are projected to be more than 25,000 metric tons per year.
USEPA – Rhonda Smith	106	**Executive Order (EO) 13045-Protection of Children from Environmental Health Risks and Safety Risks**: EPA recommends the FSEIS consider the April 1997 Executive Order (EO) 13045 - Protection of Children from Environmental Health Risks and Safety Risks when evaluating project impacts. This EO requires that all Federal agencies "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children, and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."	The SEIS was revised to add a discussion of EO 13045 and additional analysis for Protection of Children to Section 1.16, 5.290, 5.318, and 6.173 and Table 1-1.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	107	**Environmental Justice - Benefits of the Project:** The most important and crucial benefit of this project is that it will help safeguard human safety and property as mentioned above. The levee restoration and repair also will encourage and enhance new economic opportunities for Plaquemines Parish through tourism, growth of industry, improved transportation systems, job growth, and increased agricultural opportunities. These positive impacts will benefit all the Plaquemines Parish residents. Plaquemines Parish is not considered particularly low income (at 18%, below the poverty level), however, 22 of the 39 census tracts in the project area do fall below the State's 19.6% poverty rate, as of 2000 (Census Bureau estimate). These figures have probably worsened due to Hurricane Katrina and the British Petroleum oil spill. Regarding minority status, 20 census tracts had minority percentages greater than those of the minority population Plaquemines Parish in 2000. The entire Parish had a 32% minority population. Louisiana's minority percentage in 2000 was 38.9%, and 16 census tracts had higher minority percentages. Eleven census tracts had higher than both the State's minority percentage and the State's percentage of residents below the poverty level. Under the Executive Order on Environmental Justice, it is necessary to determine if there are "disproportionately high and adverse impacts" affecting these low-income and minority communities as a result this project.	It was stated in Section 6 under Environmental Justice and Protection of Children that with the implementation of the TSP, disproportionate impacts on minorities, low- income families and children would be expected to be adverse or neutral. Because the majority of the NOV levee project corridor is considered to be an area subject to disproportionate effects on minorities and low-income populations, there would likely be short-term moderate disproportionate impacts on the population in the project area. However, there would also be beneficial impacts as a result of the project to all population regardless of race, nationality, ethnicity, or income.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	108	**Environmental Justice – Negative Impacts:** Some of the negative impacts of the project will be temporary and short-lived (such as increased traffic and traffic delays, increased noise and dust as each section is being repaired). These negative impacts will be experienced by all the residents equally, but for a short duration. There are potentially negative aspects of the project, however, that could impact low-income and minority residents disproportionately regarding fishing and oyster gathering in the inlets, marshes and bays along the Mississippi. The DSEIS provides great detail regarding the probable destruction or damage of many wetlands areas. This can affect the fishing in these areas. While some fishermen engaging in this occupation are not low-income, many are, including many Cajuns, Vietnamese, and Indian (particularly the Houma) fishermen and they are more vulnerable and less resilient than their more prosperous counterparts are. They fish, gather oysters, and trap animals as part of their traditional way of life and as an essential part of their livelihood. The DSEIS explains that mitigation for the destroyed wetlands will be carried out by creating new wetlands in other places. It does not explain about compensation for the potential losses that may be experienced by low-income and minority fishermen.	Added statement to Section 6 under Environmental Justice (6.173) regarding disproportionate impacts to Native American and low-income and minority fisherman and oyster gatherers.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	109	**Environmental Justice – Tribal Concerns:** Currently in Plaquemines Parish 2.5% of the population is Indian. Most of the Indians who live in the Parish are of Houma Tribe ancestry, and they are dispersed along the marshes, bays and inlets, and make their living primarily by fishing, trapping and hunting in the traditional manner. Many different Tribal groups lived there temporarily in the early days of Spanish and French exploration/colonization. The DSEIS clearly details the correct protocols followed with regard to archeological/anthropological findings. There are three traditional sites near the project area (Buras Mounds, Adams's Bay Site, Pointe a la Hache) but none in the project area and these will not be affected by any of the activities. No ruins related to Tribal groups are expected to be found under the existing levees that will be excavated. In the event that any relics, etc. are found, the appropriate authorities and Tribes will be notified. The following Tribes are being consulted: Jena Band of Choctaws, Mississippi Band of Choctaws, Chitimacha Tribe of Louisiana, Coushatta Tribe of Louisiana, Tunica-Biloxi Indians of Louisiana, Caddo Tribe in Texas, United Houma Nation, Alabama Coushatta, Caddo Adala Tribe and several Tribes in Oklahoma. The Alabama Coushatta have replied that they have no concerns about the project. Because this project will not affect any traditional fishing rights that the Tribes may have, Tribes also will not be disproportionately and adversely affected by this project. Only the Alabama Coushatta Tribal Government has responded that they have no concerns about this project.	Comment noted - Tribes with affinity for the project area have been coordinated with and have been provided with the opportunities for comment and input.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
USEPA – Rhonda Smith	110	**Environmental Justice – Tribal Concerns – Negative Impacts:** The negative impacts that will potentially be experienced by Native Americans are described above under Negative Impacts. They relate to possible impacts on the traditional fishing grounds of the Indians, who are mostly of Houma Tribal ancestry. The Indians may also be negatively impacted because of the medicinal plants they harvest in the marshes and wetlands. Coastal erosion is devastating to the United Houma Tribe in Terrebonne Parish, but this problem also is affecting the Indian population in Plaquemines Parish. How these problems will be addressed is not clear in the DSEIS, but this concern should be addressed in the FSEIS.	The SEIS was revised to include a statement (Section 6 under Environmental Justice) regarding disproportionate impacts to Native American and low-income and minority fisherman and oyster gatherers. The proposed project is not a Congressionally authorized coastal restoration project.
USEPA – Rhonda Smith	111	**Environmental Justice – Conclusion:** The project detailed in this DSEIS, raises no environmental justice or Tribal concerns except for the fact that wetlands areas and fishing grounds may be negatively impacted. The FSEIS should explain how the mitigation plans for destroyed wetlands will also benefit the low-income, minority fishermen. Otherwise, their culture and way of life may be irreparably harmed. The other negative impacts will affect ALL residents, but they will be minor, temporary and short-term in nature. The DSEIS makes it clear that the positive benefits of this levee restoration/replacement/repair project will be enjoyed equally by ALL residents, as well. Therefore, there appear to be no disproportionately high or adverse impacts that will be caused by this project except for impacts on fishing.	Comment noted.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Environmental Defense Fund - James T.B. Tripp, Senior Counsel	112	**The TSP Construction Activities Do Not Constitute Routine Maintenance:** The SEIS states that "[i]mpacts resulting from the construction of proposed NOV levee sections would require coordination and 404(b)(1) analysis from CEMVK and Section 401 authorization from LDEQ, once the TSP is ultimately selected." (New Orleans to Venice SEIS, at EIS-157.) We would like to see a more direct statement acknowledging the permitting requirements to which this project is subject under section 404 of the Clean Water Act. It is apparent that the construction activities associated the project will not qualify for the maintenance exception to the permitting program. The narrowness of the maintenance exception is reflected in the Corps' guidelines, which states that "maintenance does not include any modification that changes the character, scope, or size of the original fill design." (33 C.F.R. §323.4(a)(2) (emphasis added).) Accordingly, the TSP calls for new levee construction and expansion, the Plaquemines Parish project will be subject to the full permitting requirements of section 404.	USACE is required to evaluate any discharges into waters of the United States per Section 404 of the Clean Water Act, but is not required to obtain a Section 404 permit as described in 33 CFR Part 323: "Discharges of dredged or fill material into waters of the United States done by or on behalf of any Federal agency, other than the Corps of Engineers (see 33 CFR Part 209.145), are subject to the authorization procedures of these regulations." A Section 404(b)(1) evaluation was prepared and added as Appendix K.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Environmental Defense Fund - James T.B. Tripp, Senior Counsel	113	**The SEIS Understates the Project's Environmental Impacts:** Section 6.14 of the SEIS states that the TSP would result in permanent impacts to approximately 146.6 acres of WUS, 366.5 acres of jurisdictional wetlands, and 11 acres of other waters. These figures significantly understate the impact that the project will have on Louisiana's wetlands. While this assessment may accurately reflect the direct effects that will be felt within the project's construction footprint, it fails to capture the cumulative effects that the project will have on the deltaic ecosystem. The Mississippi River and its associated wetlands and floodplains constitute an interconnected ecosystem. In evaluating the impacts that proposed construction activities will have on the river, the ecosystem does not lend itself well to facile demarcation. Flood control efforts in one area have repercussions in other areas. By raising levees and altering the river's relationship with its natural floodplain, the TSP will impact the ecosystem beyond the boundaries of Plaquemines Parish. The SEIS fails to recognize this: it analyzes only those environmental consequences directly related to the project's construction footprint in Plaquemines Parish. Accordingly, the SEIS understates the environmental effects, as well as the mitigation required to offset those effects. USACE must fix this deficiency before moving forward with the proposed action.	Cumulative effects on wetland resources are described in the Cumulative Impacts section in Section 6. More detail was added to this section to describe the cumulative impacts on wetland resources throughout the region.

Public Draft SEIS Comments Matrix

PROJECT: **NEW ORLEANS TO VENICE (NOV) FEDERAL HURRICANE PROTECTION LEVEE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

PROJECT MILESTONE: **Final SEIS**

RESPONSE LEGEND:
A - Concur **D - Do Not Concur** **E - Exception** **X - Delete Comment**
(All responses besides "Concur" require a brief explanation from the Designer.)

REVIEWER	COMMENT NO.	REVIEW COMMENT	RESPONSE
Environmental Defense Fund - James T.B. Tripp, Senior Counsel	114	The Corps' construction plans for Plaquemines Parish will exacerbate the trend outlined above. Without adequate freshwater, sediment, and nutrients, the coastal ecosystem will continue to deteriorate. It may be difficult to determine the amount of freshwater, sediment, and nutrient deprivation that the Plaquemines Parish project will account for. It may also be difficult to determine the fractional share of damage that the TSP- induced "ingredient" deprivation will have on the coastal ecosystem. However, it will certainly have some effect, and the Corps is remiss to have elided the issue in its SEIS. The Corps' myopic focus on levees has prevented the agency from appreciating the role that wetlands play in protecting human civilization from the elements. Wetland erosion increases the risks associated with tropical storms, as Hurricane Katrina tragically demonstrated in 2005. In supplementing its analysis of the Plaquemines Parish's project environmental impacts, the Corps' should give due weight not only to the wildlife, recreational, and aesthetic value of wetlands, but to their human safety value as well. The current mitigation plans calls for measures "to fully offset the impacts to habitats located in Plaquemines Parish related to the construction of the NOV levee system." (Appendix F at 1-1.) For reasons outlined above, this is insufficient. The project will affect habitats beyond the boundaries of Plaquemines Parish, and the Corps should supplement its SEIS in order to reflect those effects and comply with section 404.	The beneficial impact of the coastal restoration projects in the region and the wetland mitigation for NOV is described in the cumulative impacts section. Further, this NEPA document evaluates that which Congress and the President has already approved and authorized for construction.

APPENDIX J
TRANSPORTATION REPORT

TRANSPORTATION REPORT FOR THE CONSTRUCTION OF THE 100-YEAR HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM

US Army Corps of Engineers®

MARCH 2009

Summary

This document describes and characterizes the environmental impacts of alternatives for transporting the materials necessary to construct the 100-year Hurricane and Storm Damage Risk Reduction System (HSDRRS) for New Orleans, Louisiana. The analyses address the effects of using the public highways, railways, and waterways to supply earthen borrow, structural steel (e.g., sheetpile, pipe pile, H-pile), ready-mix concrete, concrete pile, aggregate, and rock to over 100 different construction projects for the Lake Pontchartrain and Vicinity and West Bank and Vicinity Projects. These construction projects are scheduled for completion by 2011 at a total cost of over $15 billion. The database of projects used to analyze effects contains 105 projects that include material quantities shown below in table S-1.

Table S-1. Major Materials Quantities

Material	Quantity	Units
Earthen Fill	29,616,300	cubic yards
Concrete	1,137,800	cubic yards
Aggregate	3,307,200	tons
Sheet Pile	16,915,000	square feet
H-Pile	9,753,900	linear feet
Pipe Pile	1,066,700	linear feet
Concrete Pile	792,100	linear feet
Rock	1,733,200	tons

The CEMVN is separately preparing a Comprehensive Environmental Document (CED) to address the overall cumulative impacts of construction and future operations and maintenance for the HSDRRS. This analysis is more limited in scope, but will support the CED.

Alternatives

Four transportation alternatives have been developed to provide a range of meaningfully different alternatives for assessing. They are maximum truck use, maximum barge use, maximum rail use, and the likely scenario identifying the actions most likely to occur.

When considering the differences among the alternatives, it is important to note that the majority of all trips necessary to construct the HSRRS are for the transportation of borrow (earthen fill) and this material cannot be economically transported by rail or barge. Borrow can only be transported by truck because the source sites lack the infrastructure to accommodate the use of rail or barge and significant costs accrue when borrow is handled multiple times (the loading and

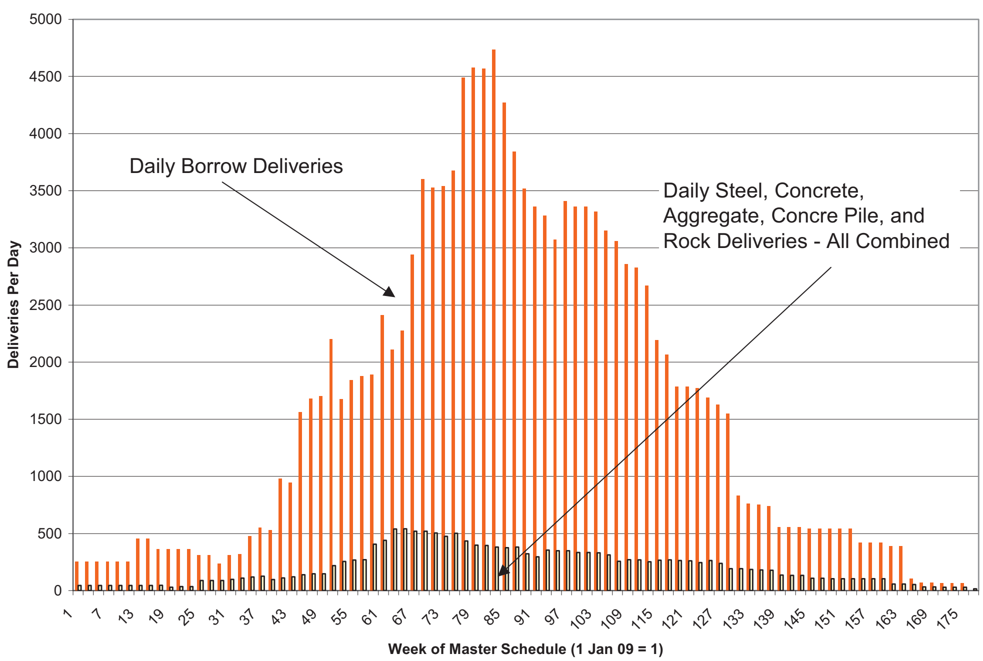
unloading of material). For this reason, multiple modes of transportation (e.g., truck to rail to truck and truck to barge to truck) of borrow were not evaluated.

Figures S-1 through S-4 show truck deliveries per day for all project materials distributed across a master schedule,[1] beginning on 1 January 2009.[2] The figures consistently show daily borrow deliveries of:

- over 1,000 for 100 weeks;
- over 2,000 for 60 weeks;
- over 3,000 for 40 weeks; and
- over 4,000 for 10 weeks.

Most importantly, the figures show that differences in the number of trips between the four alternatives are negligible because the vast majority of trips are made for the delivery of borrow, which is transported exclusively by truck in each of the four alternatives.

Figure S-1 Truck Trips Distributed Across Schedule
Maximum Truck Scenario



[1]The master schedule was established based on CEMVN's milestone database as of July 2009.
[2]The period of analysis includes roughly 380 weeks. Construction at a select few sites began as early as July 2007, and the number trips associated with deliveries to those sites does not exceed 300 per day. Figures S-1 through S-4 show the trips beginning on 1 January 2009 and proceeding for 180 weeks.

Figure S-2 Truck Trips Distributed Across Schedule Maximum Barge Scenario

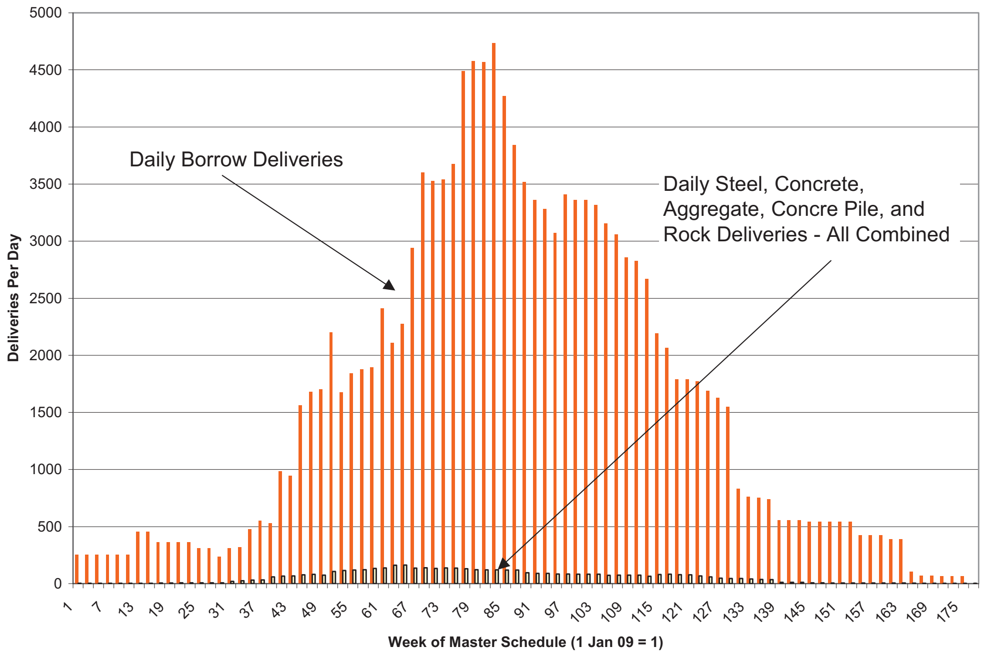


Figure S-3 Truck Trips Distributed Across Schedule Maximum Rail Scenario

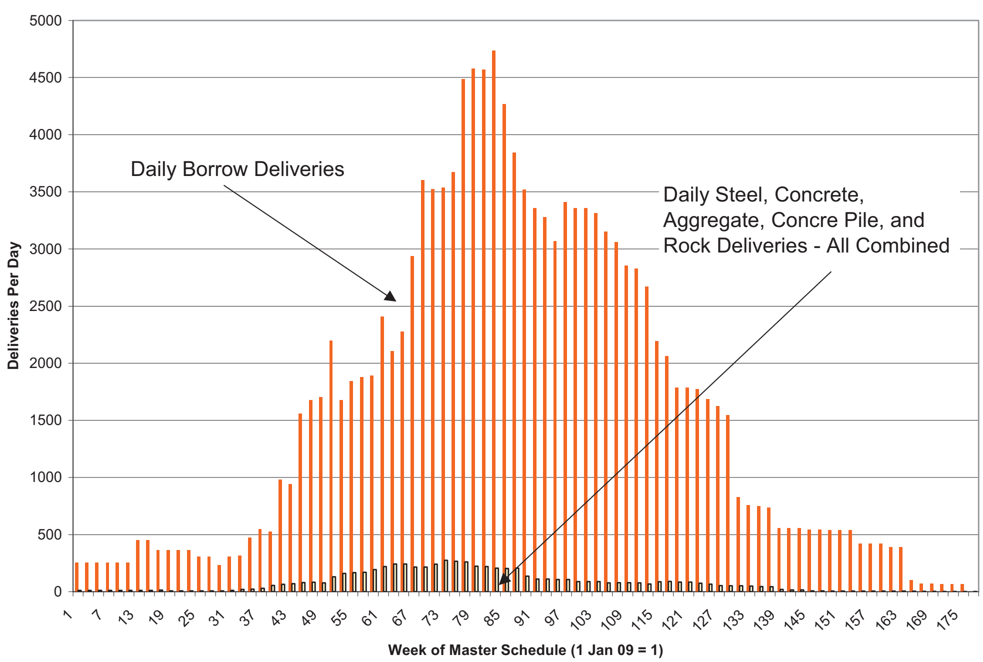
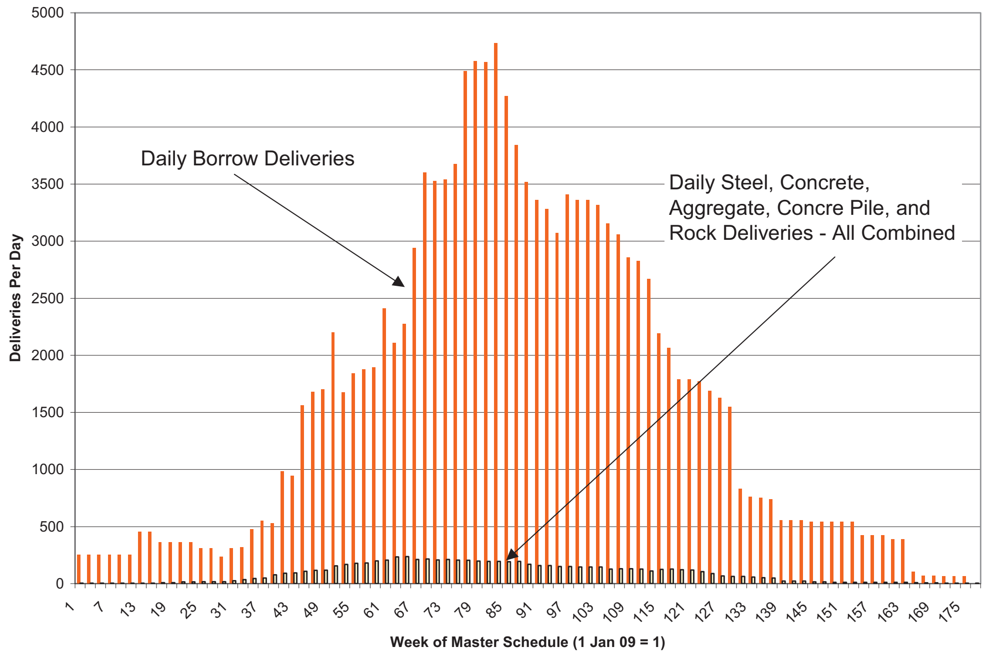


Figure S-4 Truck Trips Distributed Across Schedule Likely Scenario



Assessment

Transportation impacts were evaluated by attaching the number of truck trips per day, over the course of each project construction, to each road segment traversed, by the route carrying materials, from the material origin to the roadway exit point, and returning to the origin. For each road segment used in each of the four alternative transportation scenarios, the number of trucks traversing each road segment during each week of the construction project was summed. This quantification provided the total number of trucks traversing any part of the transportation network at any time in the project schedule. This allows the estimation of the effects to traffic congestion, infrastructure degradation, accident risks, and diesel emissions.

Findings

The environmental consequences for transportation were modeled using materials quantities from ongoing construction designs in various stages of completion, with associated schedule changes, based on standardized truck, rail, and barge loading factors, and transported along unspecified routes to construction projects. This analysis depicts what the effects would be if there were no design or schedules changes after July 2009, and all of the simplifying assumptions described in this report were uniformly correct. Predicting traffic or road surface conditions on a particular segment of route, on a given day in the project schedule is not a realistic expectation from this analysis.

However, these limitations should not diminish the value of the analysis or the validity of the alternatives comparison. Each of the four alternatives (Max Truck, Max Barge, Max Rail, and Likely Scenario) is evaluated to compare the effects to traffic congestion, infrastructure degradation, accidents, and emissions. The similarities and limited differences between the alternatives are valuable for the consideration of transportation alternatives. There are slight differences in some of the metrics (e.g., truckloads) because of different rounding assumptions as the data were manipulated; this does not diminish the value of the assessment to decision makers.

Congestion

The alternative-specific transportation routes developed were parsed into approximately 8,000 route segments. These route segments, along with schedules for delivery and the demand-driven truck trips, formed the basis for the calculation of incremental changes to the Regional Planning Commission's Congestion Management Index. These changes provide a relative assessment of the predicted changes in traffic. Over 3 million separate changes in the CMI were calculated for the transportation route segments, for the six DOTD classes of roads in greater New Orleans, for each of the 380 weeks of the project analysis period, for each of the four alternatives, moving more than 2 million truckloads.

Table S-2 presents the maximum calculated change in the CMI for any of the 8,000 segments within the six DOTD road classifications. These data indicate no discernable difference between the alternatives with respect to the effects on congestion.

Table S-2. Alternative Comparison – Maximum Change in CMI

LADOTD Road Classification	Class Description	Max Truck	Max Barge	Max Rail	Likely Scenario
1	Interstate	0.007	0.007	0.007	0.007
2	Expressway	0.048	0.048	0.048	0.048
3	Principal Arterial	0.037	0.031	0.033	0.031
4	Minor Arterial	0.052	0.036	0.036	0.036
5	Urban Collector	0.000	0.000	0.000	0.000
8	Local Road	0.023	0.023	0.023	0.023

An additional method was used to increase the understanding and improve the communication of truck congestion resulting from materials delivery. This method was based on the need to identify individual, highly utilized roads for community-level planning and public awareness. A key component of the analysis was the establishment of truck traffic thresholds. The thresholds, shown in table S-3, were used as a proxy to suggest the level of truck traffic at which the roadway users and adjacent property owners would likely perceive an increase.

Table S-3. Truck Frequency Thresholds by Functional Road Class

Functional Road Class	Materials Transportation Trucks Per 12-Hour Workday	Truck Frequency
1	1,500	30 seconds
2	1,500	30 seconds
3	360	2 minutes
4	240	3 minutes
5	150	5 minutes
8	50	15 minutes

To better understand the overall effect on single roadways, multiple segments (of the 8,000 route segments) were dissolved into single road segments where both name and functional classification were shared. By consolidating segments in this fashion, the most impacted roads of each functional classification could be identified within the materials transportation routes. These roads were then examined to determine how many of the roads exceeded the functional-class specific traffic thresholds under each of the four alternatives. Table S-4 summarizes the number of roads, by functional classification, that are predicted to exceed the thresholds.

Table S-4. Numbers of Roads Exceeding Truck Frequency Thresholds by Functional Class and Alternative

DOTD Class	Maximum Truck	Maximum Barge	Maximum Rail	Likely	Used for Transport
1	0	0	0	0	6
2	0	0	0	0	6
3	7	6	7	6	35
4	19	12	13	12	44
5	10	8	8	8	17
8	41	32	35	32	62

Figure S-5 shows the roads included in the routing of project materials deliveries under the likely scenario. Figure S-6 shows the locations of roads that are expected to exceed frequency thresholds for the likely scenario.

Figure S-5. Road Network Used for Project Materials Delivery (Likely Scenario)

Figure S-6. Roads Exceeding Thresholds (Likely Scenario)

The following four tables (S-5 through S-8) identify the functional class-specific roads that exceed the truck frequency thresholds shown in table S-3. For the identified roads, the tables provide the number of months the threshold would be exceeded, the minimum number of trucks per day that triggered the first exceedance, the maximum number of trucks per day, and the average number of trucks per day. The roadways are sorted in descending order by the number of months the truck thresholds are exceeded. Roads listed in these tables are those predicted to be most affected by increases in truck traffic and the durations for which these effects are expected.

Table S-5. DOTD Road Class 3
Number of Days Threshold of 360 Material Delivery Trucks Per Day Exceeded

		Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded		
Roadway	Number of Months Threshold Exceeded	Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
US-90	15	360	1,064	2,252
Lapalco Boulevard	8	497	738	1,250
SR-39	7	372	445	457
US-61	6	383	458	640
SR-23	3	381	425	543
Walker Road	1	378	378	378

Table S-6. DOTD Road Class 4
Number of Days Threshold of 240 Material Delivery Trucks Per Day Exceeded

		Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded		
Roadway	Number of Months Threshold Exceeded	Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
US-61	25	251	840	2,570
US-11	16	287	659	1,043
US-90	16	289	661	1,047
Michoud Boulevard	16	287	657	1,039
SR-46	12	264	459	698
Bayou Road	9	240	267	298
Ames Boulevard	8	326	842	2,147
Westwood Drive	7	291	653	1,248
Engineers Road	5	269	270	273
SR-3134	3	349	349	349
SR-45	3	347	348	349
Lakeshore Drive	2	268	315	346

Table S-7. DOTD Road Class 5
Number of Days Threshold of 150 Material Delivery Trucks Per Day Exceeded

		Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded		
Roadway	Months Threshold is Exceeded	Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
SR-45	9	160	562	1,808
Bayou Road	9	240	267	298
Ames Boulevard	8	347	347	347
Westwood Drive	8	189	588	1,248
41st Street	3	190	190	190
Vintage Drive	3	190	190	190
Ames Boulevard	3	347	347	347
Barriere Road	2	382	382	382

Table S-8. DOTD Road Class 8
Number of Days Threshold of 50 Material Delivery Trucks Per Day Exceeded

Roadway	Months Threshold is Exceeded	Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded: Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
Kenner Avenue	29	76	612	2,146
SR-46	27	100	332	698
Live Oak Boulevard	25	127	555	1,676
Bayou Road	19	62	144	298
Walker Road	19	52	198	756
Vintage Drive	18	52	126	348
Lapalco Boulevard	12	60	422	1,248
Concord Road	11	60	104	153
Engineers Road	11	52	142	273
Victory Drive	11	85	432	1,188
Macarthur Avenue	10	52	58	69
Almonaster Avenue	9	108	108	108
SR-3134	8	52	174	349
Carrie Lane	8	50	172	347
Mildred Street	8	57	167	392
40th Street	7	52	109	174
Loyola Drive	7	52	109	174
Beta Street	7	92	92	92
Laroussini Street	7	92	92	92
North Street	7	92	92	92
South Street	7	92	92	92
Vic A Pitre Drive	7	92	92	92
Caryota Drive	7	54	122	190
David Drive	7	54	122	190
Barriere Road	6	57	159	375
SR-23	5	165	165	165
Nashville Avenue	4	50	61	94
Hickory Avenue	3	95	95	95

Infrastructure Degradation

The relatively small number of train and barge trips defined in the alternatives would not be expected to have any discernable effects to the rail or marine terminal infrastructure in greater New Orleans. Therefore, the discussion of the effects to infrastructure focused exclusively on the effects of truck transportation.

As show in table S-9, regardless of which alternative was implemented, between 1,100 and 1,300 lane miles of roadway within greater New Orleans would be traversed with between 2.19 and 2.35 million truck trips; the cost to infrastructure is estimated at between $550 and $650 million dollars for all of the alternatives. These similarities derive from the fact that the extent of truck transportation within greater New Orleans under each of the alternatives is substantially the same, because earthen fill accounts for more than 85-percent of all trips for each of the alternatives. There are no stark contrasts between the alternatives with respect to the number of lane miles potentially affected by the project within greater New Orleans.

Table S-9. Alternative Comparison – Infrastructure Degradation

LADOTD Road Classification	Class Description	Max Truck	Max Barge	Max Rail	Likely Scenario
1	Interstate	334.0	295.3	252.1	335.6
2	Expressway	64.9	48.7	44.7	64.3
3	Principal Arterial	459.5	414.4	418.0	481.5
4	Minor Arterial	312.6	303.2	307.5	311.3
5	Urban Collector	28.0	26.4	27.5	30.6
8	Local Road	57.6	55.1	58.7	57.7
Unknown	Unknown	10.6	10.4	8.3	10.6
Estimated Total Miles		1,267	1,154	1,117	1,292
Estimated Total Truckloads (millions)		2.4	2.2	2.3	2.2
Estimated Infrastructure Cost ($ millions)[3]		633.6	576.8	558.4	645.8

Transportation Risks

As show in table S-10, Maximum Truck reflects the greatest collective accident risk for all three types of accidents. This is because of the significantly larger distance of truck travel (150 million miles traveled vs. less than 70 million) required under the Maximum Truck alternative

[3] Cost of approximately $500,000 per lane mile based on cost per lane mile from the Submerged Road Program (RPC, 2009a).

when compared to the other three alternatives. The accident risks for the other three alternatives are substantially the same and primarily derive from the approximately 60-70 million miles of truck travel that is unavoidable. When transporting materials from remote locations to greater New Orleans by rail or barge, accident risks decrease.

Table S-10. Alternative Comparison - Projected Accidents

Mode	Estimated Miles Traveled	Projected Accidents		
		Property Damage Only	Injury Only	Fatality
Max Truck	150,426,000	230.2	76.9	3.1
Max Barge	60,395,160	111.1	31.3	1.3
Max Rail	62,030,650	104.6	34.5	2.0
Likely Scenario	68,943,520	106.2	35.1	1.4

Emissions

Table S-11 shows the estimated alternative-specific emissions. While the Max Truck alternative requires significantly more miles to be traveled, the per mile emissions from truck transportation are considerably less than emissions from tugboats or locomotives. Therefore, the alternatives that include the usage of barge or rail transportation have greater emissions of VOCs, NOx, CO, and PM than when truck transportation alone was assumed.

Table S-11. Comparison of the Alternatives – Diesel Emissions (tons)

Alternative	Miles (millions)	Gallons of Diesel (millions)	VOCs	NOx	CO_2	CO	$PM_{2.5}$	PM_{10}	SO_2	NH_3
Max Truck	150.4	23.4	76.8	1,393	265,362	371.0	27.9	30.3	2.5	4.4
Max Barge	60.4	25.6	166.4	3,957	278,718	433.5	73.3	79.7	335.8	1.8
Max Rail	62.0	17.3	98.0	2,046	192,379	328.5	44.7	47.6	94.4	1.8
Likely Scenario	68.9	22.3	131.9	3,062	244,557	373.5	57.1	62.0	*239.8	2.0

*No separate emission factor used for SO_2 for tug emissions. Reported as SO_x.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 Introduction

This document describes and characterizes the environmental impacts of alternatives for transporting the materials necessary to construct the 100-year Hurricane and Storm Damage Risk Reduction System (HSDRRS) for New Orleans, Louisiana. The analyses address the effects of using the public highways, railways, and waterways to supply earthen borrow, structural steel (e.g., sheetpile, pipe pile, H-pile), ready-mix concrete, concrete pile, aggregate, and rock to approximately 105 different construction projects for the Lake Pontchartrain and Vicinity and West Bank and Vicinity Projects. The magnitude of the construction effort, in conjunction with the schedule for completion, dictates the examination of the cumulative environmental consequences of transportation. Transportation decisions being made will be able to account for the environmental trade offs from changes to traffic congestion, diesel fuel use and emissions, infrastructure degradation, and accidents.

The construction-related negative effects resulting from providing the 100-year level of hurricane damage risk reduction for these projects may potentially represent the largest cumulative environmental consequences in the New Orleans region for the next 4 to 7 years. Cumulative impacts for the actions considered in all of the IERs will be incorporated into the CED. In order to construct the HSDRRS, substantial quantities of building materials need to be brought to and transported within greater New Orleans. Quantifying the cumulative environmental effects from the transportation of these materials to, and within, New Orleans is the focus of this study.

This analysis has been prepared with the engineering design reports for many of the projects not yet finalized. As such, the analysis of transportation effects has been performed prior to the completion of final design and is based on materials quantities estimated to construct the HSDRRS. Estimates were developed from design calculations, best professional judgment, and design reports completed for similar levee and floodwall alignments nearby. The description of the projects, materials, and transportation analysis does not represent a formal commitment to final design, equipment for use, vendors for supply of materials, or methods of construction, but gives an approximation of how the materials needed could be transported to the necessary construction projects.

1.1 Purpose and Need for Corps Action

On 29 August 2005, Hurricane Katrina caused major damage to the Federal and non-Federal flood control and Hurricane and Storm Damage Risk Reduction System (HSDRRS) in southeast Louisiana. Hurricane Rita followed this storm on 24 September 2005, and made landfall on the Louisiana-Texas state border, causing damage to the HSDRRS in southern Louisiana. Since the storms, the USACE has been working with state and local officials to restore the Federal and non-Federal flood control and HSDRRS projects and related works in the affected area.

To date, approximately 60 percent of the New Orleans population has returned to the area. Many residences and businesses are waiting to see positive improvements in the level of protection before returning to the area. A USACE goal of June 2011 has been set for completion of much of the work that will raise the level of protection in the New Orleans area to a new standard and provide a level of security to residents and businesses that will allow and encourage them to return to the area.

The purpose of the proposed action is to construct and maintain 100-year risk reduction for greater New Orleans within the Lake Pontchartrain and Vicinity (LPV) and West Bank and Vicinity (WBV) Projects. The proposed action results from a defined need to reduce flood risk and storm damage to residences, businesses, and other infrastructure from hurricanes (100-year storm events) and other high water events. The completed HSDRRS would lower the risk of harm to citizens, and damage to infrastructure during a storm event. The safety of people in the region is the highest priority of the CEMVN.

The LPV Project (IERs #1-11) extends approximately 125 miles in length from the La Branch Wetlands Levee in St. Charles Parish to the Inner Harbor Navigation Canal Floodgates in Orleans and St. Bernard Parishes. The LPV Project provides risk reduction to the East Bank of New Orleans. The WBV project, (IERs #12-17) extends approximately 66 miles in length from the Western Tie-in (IER #16) in St. Charles and Jefferson Parishes to the Hero Canal Levee and Eastern Terminus in Plaquemines Parish (IER #13).

1.2 Authority for the Projects

The authority for the proposed actions 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 that gave additional authority to the USACE to construct 100-year HSDRRS projects.

The LPV project was authorized under the Flood Control Act of 1965 (P.L. [Public Law] 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); and Energy and Water Development Appropriations Acts of 1992 (PL 102-104, Title I, Construction, General); 1993 (PL 102-377, Title I, Construction, General); and 1994 (PL 103-126, Title I, Construction, General).

The WBV project was authorized under the WRDA, as cited previously. 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 (P.L. 106-53, Section 328) 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 percent 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 authorized a 100-year level of protection; the replacement or reinforcement of floodwalls; 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 Requirement for Evaluation

The National Environmental Policy Act (NEPA) requires CEMVN to consider the environmental consequences of their major federal actions and to make informed decisions. One component of examining the consequences of decision-making is a consideration of the effects to the human environment from transportation of construction materials. When transportation is such a major component of a proposed action, the environmental impacts of such transport should be analyzed, even when CEMVN is not directly responsible for the transportation.

The CEQ regulations require that in preparing an EIS, an agency consider three types of impacts on the environment: direct, indirect, and cumulative. Indirect impacts are defined as those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable" (40 CFR §1508.8). A cumulative impact is defined as an "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. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR §1508.7).

This study quantifies the effects from transportation of large quantities of materials, over the same transportation routes, to and within greater New Orleans. These successive trips, through the same geographic areas, may result in cumulative effects on infrastructure, traffic congestion, air quality, and accident risks to the public.

Both NEPA and the CEQ regulations require that CEMVN consider and evaluate appropriate alternatives to proposed actions that will effect the environment. Section 102(2)(E) of NEPA provides that all agencies of the Federal Government shall "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

1.4 Cargo Capacity Assumptions

The dimensions of units used to transport freight vary widely within each of the three modes (rail, truck, and barge) of transportation evaluated in this report. In order to facilitate a meaningful cross-modal comparison, standard dimensions of the units used by each mode were defined. In comparing the modes, the capacity of the unit of transport were analyzed, not the average load. In this manner, all three modes could be evaluated on the same scale.

1.4.1 Truck Transport

The typical bulk commodity truck's body type, axle configuration, fuel, gross, tare, and cargo weight used in this study were developed based on interviews with various trucking entities and comparison to similar studies (e.g., MARAD, 2007). The typical truck for this study is a Heavy Duty Diesel Vehicle with a GVWR of 80,000 lbs providing 40,000 lbs (20 tons) of cargo weight for the transport of steel and concrete pile, 22.5 tons for the transport of rock and aggregate, and 14.5 cubic yards of borrow. The typical axle configuration is that of a typical tractor-trailer truck (i.e., an 18-wheeler) with a steering axle and two tandem axles, or five total axles.

1.4.2 Barge Transport

The most common dimension of shallow draft barges carrying dry bulk are approximately 200 feet long by 35 feet wide. The average cargo capacity for barges of approximately this size is approximately 1,757 short tons (MARAD, 2007), rounded down to 1,200 tons for use in this study in most cases. For direct delivery of rock and concrete pile to Lake Pontchartrain project sites, barges were assumed to be light loaded at 500 tons. The analysis also assumes that barges would not be transported singly by a tug, but would be part of a barge fleet where 10 barges (2 x 5) were moved per tug.

1.4.3 Rail Transport

There is significant variation in railroad carload capacities depending on the specific material being hauled. According to the Association of American Railroads, the average carload for coal was 112.5 tons in 2006 and general-purpose tank cars carry up to 125 tons (MARAD, 2007). For this study, the standard rail car load was assumed to be 110 tons. The standard train was assumed to consist of 100 railcars and three locomotives.

1.4.4 Comparison of Mode Capacity

The standard capacities for the various freight units, across all three modes of transportation are summarized in table 1-1. Table 1-2 provides a comparison of the carrying capacity of each mode of transportation. Table 1-3 provides the standard cargo capacity comparison when considering a shipping unit of a trainload or barge tow that includes multiple railcars or barges within the shipping event.

Table 1-1. Assumed Freight Unit Capacities

Freight Unit	Standard Cargo Capacity (Tons)
Highway – Truck Trailer	20, 22.5, 14.5 CY
Railroad – Single Rail Car	110
Riverine – Single Barge	1,200

Table 1-2. Number of Units Needed to Move 1,500 Tons of Material

Mode of Transport	Units Needed to Move 1,200 Tons of Material
Truck Trailer	60
Single Rail Car	11
Single Barge	1

Table 1-3. Standard Cargo Capacity Comparison

Mode of Transport	Configuration	Cargo Capacity (tons)
Truck Trailer	Single Tractor With Trailer	20, 22.5
Unit Train (multiple rail cars)	100 Railcars, 3 Locomotives	11,000
Barge Tow	10 Barge Tow (5 x 2)	12,000

1.5 Materials Delivery Assumptions

The primary objectives in the transportation and traffic impact analysis were to determine the logical path for delivering construction materials from the respective origins to the project sites (destinations) and assess the impact of this transportation. To assist in this analysis and assessment effort, the LaDOTD highway classification scheme and the Congestion Management Index data from the New Orleans Regional Planning Commission were mapped to the existing street data.

The determination of the logical path of travel required the identification of construction materials source locations (borrow pits, concrete plants, etc.) and locations where project vehicles would leave the roadway to gain access to the construction sites. GIS roadway routing software was used to determine the fastest round-trip route from each material source location to each project roadway exit point, except for borrow. Government-furnished borrow source location and roadway exit point locations were explicitly paired to link origins and destinations. Round-trip route paths were modeled such that routes using divided highways and one-way streets used separate street segments for return paths. Multiple material source locations were modeled for steel and concrete, thereby providing alternative source locations depending on the means of bringing these materials into the greater New Orleans area.

These alternative source locations include New Orleans marine terminals, rail yards, and I-10, if transported by barge, rail, or truck, respectively. From the list of all possible routes, the shortest route for each material to each roadway exit point for each transportation mode was selected as the most likely origin location to be used for each roadway exit point (destination). These most likely routes were matched to the materials used at each project to determine which routes would be presumed to transport materials to each project. This process of matching routes to project materials requirements was performed for all projects and all major materials.

The transportation and traffic impact assessment was conducted by attaching the number of truck trips per day over the course of each project's construction timeframe, to each road segment traversed by the route carrying each type of material from the origin to the destination and returning to the origin. For each road segment used, the number of trucks traversing each road segment during each week of the construction project was aggregated. This quantification provided the total number of trucks traversing any part of the transportation network at any time in the project schedule.[4] These values represent the added traffic load anticipated as a result of project construction.

[4] Construction start date and duration were established based on CEMVN's milestone database as of July, 2009.

2 Projects and Quantities

Sections 2.1 through 2.17 provide quantity estimates for material needed to construct the projects evaluated in all 17 IERs.

The database of projects used to analyze quantities, trips, and timing of trips contains 105 projects, which were analyzed in 17 IERs. In total, 105 projects account total materials quantities of:

Material	Quantity	Units
Earthen Fill	29,616,300	cubic yards
Concrete	1,137,800	cubic yards
Aggregate	3,307,200	tons
Sheet Pile	16,915,000	square feet
H-Pile	9,753,900	linear feet
Pipe Pile	1,066,700	linear feet
Concrete Pile	792,100	linear feet
Rock	1,733,200	tons

For each IER, seven separate tables provide details about the materials used to construct the HSDRRS. The tables reflect quantities data collected from design documents, project management reports, borrow tracking reports, milestone reports, and project management scheduling output.

Tables designated as “a” summarize the quantities and type of materials needed for each of the construction projects associated with that IER. For each project, the “a” tables show the quantities of earthen fill, concrete, aggregate, sheet pile, H-pile, pipe pile, concrete pile, and rock

Tables “b” through “g” provide the scheduled demand for each project’s earthen fill, steel, concrete, aggregate, concrete pile, and rock. Information on duration (in calendar days) and the expected Notice to Proceed (NTP) for each project is also included.

Tables “b” through “g” show demand separated into three equal time periods:

- first third;
- second third;
- and final third.

Separating a project demand schedule into thirds allows a more realistic depiction of the uneven demand for materials during construction. For example, during the first third of any earthen levee project, 10 percent of the earthen material required for construction is assumed to be delivered to the site. This assumption allows time for site preparation and earthwork prior to full-scale production of the earthen levee. Similar assumptions have been made for all other types of materials and projects.

The assumed proportions of materials required for construction during each project third is shown below.

Material	First Third	Second Third	Final Third
Borrow	10%	70%	20%
Steel	100%	0%	0%
Concrete	20%	40%	40%
Aggregate	20%	40%	40%
Concrete Pile	100%	0%	0%
Rock	0%	0%	100%

Note that the data shown for steel in the "c" tables, and concrete pile in the "f" tables do not match the data for quantities shown in the "a" tables. Steel is shown in the "a" tables in square feet for sheet pile, and linear feet for H-pile and pipe pile. Similarly, concrete pile is shown in the "a" tables in linear feet. This is because the quantities shown in the "a" tables are taken from design documents, and provide a traceable link to the data sources. Tables "b" through "f" show materials after any necessary conversion to tons for truckloads.

2.1 IER #1 - La Branche Wetlands Levee, St. Charles Parish, Louisiana

The proposed actions for IER #1 include raising approximately nine miles of earthen levees, replacing over 3,000 feet of floodwalls, rebuilding or modifying four drainage structures, closing one drainage structure, and modifying one railroad gate in St. Charles Parish, Louisiana. Details of the proposed action are available in the Final IER at www.nolaenvironmental.gov. Individual contracts included in IER 1 are listed below, and figure 2-1 provides an overview of the projects.

LPV03d.2	Airport Runway 10 Levee - Phase 2
LPV04.1	St. Charles Levee - Reach 1A, 1B & 2A - Phase 1
LPV04.2A	Levee - Reach 1A - Phase 2
LPV04.2B	Levee - Reach 1B - Phase 2
LPV05.2A	Levee - Reach 2A - Phase 2
LPV05.2B	Levee - Reach 2B - Phase 2
LPV06a.2	Bayou Trepagnier Complex Floodwall
LPV06e.2	Floodwall Under I-310 - Phase 2
LPV06f.2	Canadian National Railroad Gate
LPV07b.2	Cross Bayou Drainage Structure Tie-ins - Phase 2
LPV07c.2	St. Rose Drainage Structure - Phase 2
LPV07d.2	Almeidia / Walker Drainage Structure - Phase 2

Figure 2-1. IER #1 Project Area

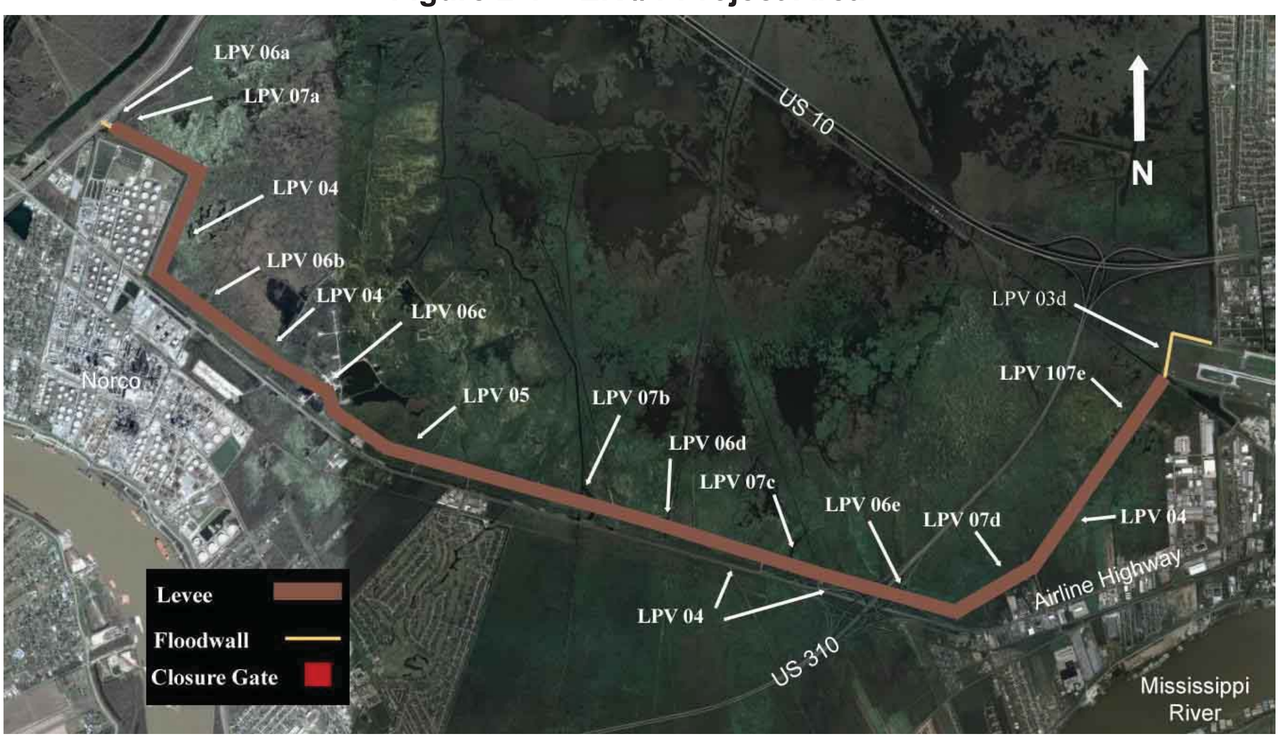


Table 2-1a. Materials Quantities for Construction Reaches in IER #1

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV03d.2	202,000			500				
LPV04.1	1,312,000							
LPV04.2A	408,000							
LPV04.2B	620,000							
LPV05.2A	440,000							
LPV05.2B	1,200,000							
LPV06a.2	10,000	4,800	7,300	127,100	72,300			
LPV06e.2		14,300	21,600	54,800	41,600	2,200		
LPV06f.2	14,000	1,000	1,500	36,600	12,000			
LPV07b.2		1,900	2,800	37,300	38,300	4,100		
LPV07c.2	180,000	1,800	2,800	41,200	34,700	3,700		
LPV07d.2	20,000	1,800	2,800	37,300	32,400	5,600		

Table 2-1b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #1

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03d.2	200	Feb-10	20,200	300	141,400	2,120	40,400	610
LPV04.1	730	Jul-07	131,200	540	918,400	3,770	262,400	1,080
LPV04.2A	420	Sep-09	40,800	290	285,600	2,040	81,600	580
LPV04.2B	420	Oct-09	62,000	440	434,000	3,100	124,000	890
LPV05.2A	420	Nov-09	44,000	310	308,000	2,200	88,000	630
LPV05.2B	530	Sep-09	120,000	680	840,000	4,750	240,000	1,360
LPV06a.2	310	Sep-09	1,000	LT10	7,000	70	2,000	20
LPV06e.2	390	Nov-09						
LPV06f.2	370	Jan-10	1,400	10	9,800	80	2,800	20
LPV07b.2	510	Dec-09						
LPV07c.2	500	Jan-10	18,000	110	126,000	760	36,000	220
LPV07d.2	270	Aug-09	2,000	20	14,000	160	4,000	40

Table 2-1c. Steel Demand (Tons) by Project Period in IER #1

Reach	Project Duration	NTP Mo & Yr	First Third Total In Period	First Third Total Per Day	Second Third Total In Period	Second Third Total Per Day	Final Third Total In Period	Final Third Total Per Day
LPV03d.2	200	Feb-10	10	LT10				
LPV04.1	730	Jul-07						
LPV04.2A	420	Sep-09						
LPV04.2B	420	Oct-09						
LPV05.2A	420	Nov-09						
LPV05.2B	530	Sep-09						
LPV06a.2	310	Sep-09	5,760	60				
LPV06e.2	390	Nov-09	3,090	20				
LPV06f.2	370	Jan-10	1,260	10				
LPV07b.2	510	Dec-09	2,700	20				
LPV07c.2	500	Jan-10	2,600	20				
LPV07d.2	270	Aug-09	2,540	30				

Table 2-1d. Concrete Demand (Cubic Yards) by Project Period in IER #1

Reach	Project Duration	NTP Mo & Yr	First Third Total In Period	First Third Total Per Day	Second Third Total In Period	Second Third Total Per Day	Final Third Total In Period	Final Third Total Per Day
LPV03d.2	200	Feb-10						
LPV04.1	730	Jul-07						
LPV04.2A	420	Sep-09						
LPV04.2B	420	Oct-09						
LPV05.2A	420	Nov-09						
LPV05.2B	530	Sep-09						
LPV06a.2	310	Sep-09	970	LT10	1,940	20	1,940	20
LPV06e.2	390	Nov-09	2,860	20	5,720	40	5,720	40
LPV06f.2	370	Jan-10	200	LT10	410	LT10	410	LT10
LPV07b.2	510	Dec-09	370	LT10	740	LT10	740	LT10
LPV07c.2	500	Jan-10	370	LT10	730	LT10	730	LT10
LPV07d.2	270	Aug-09	370	LT10	730	LT10	730	LT10

Table 2-1e. Aggregate Demand (Tons) by Project Period in IER #1

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03d.2	200	Feb-10						
LPV04.1	730	Jul-07						
LPV04.2A	420	Sep-09						
LPV04.2B	420	Oct-09						
LPV05.2A	420	Nov-09						
LPV05.2B	530	Sep-09						
LPV06a.2	310	Sep-09	1,470	10	2,930	30	2,930	30
LPV06e.2	390	Nov-09	4,320	30	8,650	70	8,650	70
LPV06f.2	370	Jan-10	310	LT10	620	LT10	620	LT10
LPV07b.2	510	Dec-09	560	LT10	1,120	LT10	1,120	LT10
LPV07c.2	500	Jan-10	550	LT10	1,100	LT10	1,100	LT10
LPV07d.2	270	Aug-09	550	LT10	1,100	10	1,100	10

None of the projects require concrete pile, or rock for construction. Tables 2-1f and 2-1g have been omitted.

2.2 IER #2 – West Return Floodwall, Jefferson-St. Charles Parish, Louisiana

The proposed actions for IER #2 is the replacement of approximately 3.4 miles of floodwalls: West Return Floodwall, Floodwall under I-10, and Recurve I-Wall in Northwest Kenner. Details of the proposed action are available in the Final IER at www.nolaenvironmental.gov.

Individual contracts included in IER 2 are listed below, and figure 2-2 provides an overview of the projects.

LPV03.2A	West Return Floodwall - Phase 2
LPV03.2B	West Return Floodwall - Phase 2

Figure 2-2. IER #2 Project Area

Table 2-2a. Materials Quantities for Construction Reaches in IER #2

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV03.2A	42,000	100,100	151,400	616,900	1,467,700			87,700
LPV03.2B	128,000							

Table 2-2b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #2

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03.2A	540	Feb-10	4,200	20	29,400	160	8,400	50
LPV03.2B	540	Feb-10	12,800	70	89,600	500	25,600	140

Table 2-2c. Steel Demand (Tons) by Project Period in IER #2

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03.2A	540	Feb-10	77,650	430				
LPV03.2B	540	Feb-10						

Table 2-2d. Concrete Demand (Cubic Yards) by Project Period in IER #2

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03.2A	540	Feb-10	20,030	110	40,060	220	40,060	220
LPV03.2B	540	Feb-10						

Table 2-2e. Aggregate Demand (Tons) by Project Period in IER #2

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03.2A	540	Feb-10	30,280	170	60,570	340	60,570	340
LPV03.2B	540	Feb-10						

None of the projects require concrete pile for construction. Table 2-2f has been omitted.

Table 2-2g. Rock Demand (Tons) by Project Period in IER #2

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV03.2A	540	Feb-10					87,700	490
LPV03.2B	540	Feb-10						

2.3 IER #3 – Jefferson East Bank, Jefferson Parish Louisiana

The proposed actions for IER #3 are 11 separate construction projects that collectively rebuild 9.5 miles of earthen levees along the Lake Pontchartrain waterfront, upgrade the foreshore protection, replace two floodgates, and construct fronting protection and breakwaters at four pumping stations. Details of the proposed actions are available in the Final IER at www.nolaenvironmental.gov. Individual contracts included in IER 3 are listed below, and figure 2-3 provides an overview of the projects.

LPV00.2	Reach 1 Lakefront Levee - Phase 2
LPV01.2	Foreshore Protection A - Phase 2
LPV02.2	Reach 3 - Lakefront Levee - Phase 2
LPV09.2	Pump Station #1 (Bonnabel) Modification, Fronting Protection - Phase 2
LPV09a.2	Pump Station #1 Breakwater - Phase 2
LPV12a.2	Pump Station #4 Breakwater - Phase 2
LPV16.2	Floodwall and Gate at Bonnabel Boat Launch - Phase 2
LPV17.2	Bridge Abutment and Floodwall Tie-ins at Causeway Bridge - Phase 2
LPV18.2	Floodwall and Gate at Williams Boat Launch - Phase 2
LPV19.2	Reach 4 Lakefront Levee - Phase 2
LPV20.2	Foreshore Protection B

Figure 2-3. IER # 3 Project Area

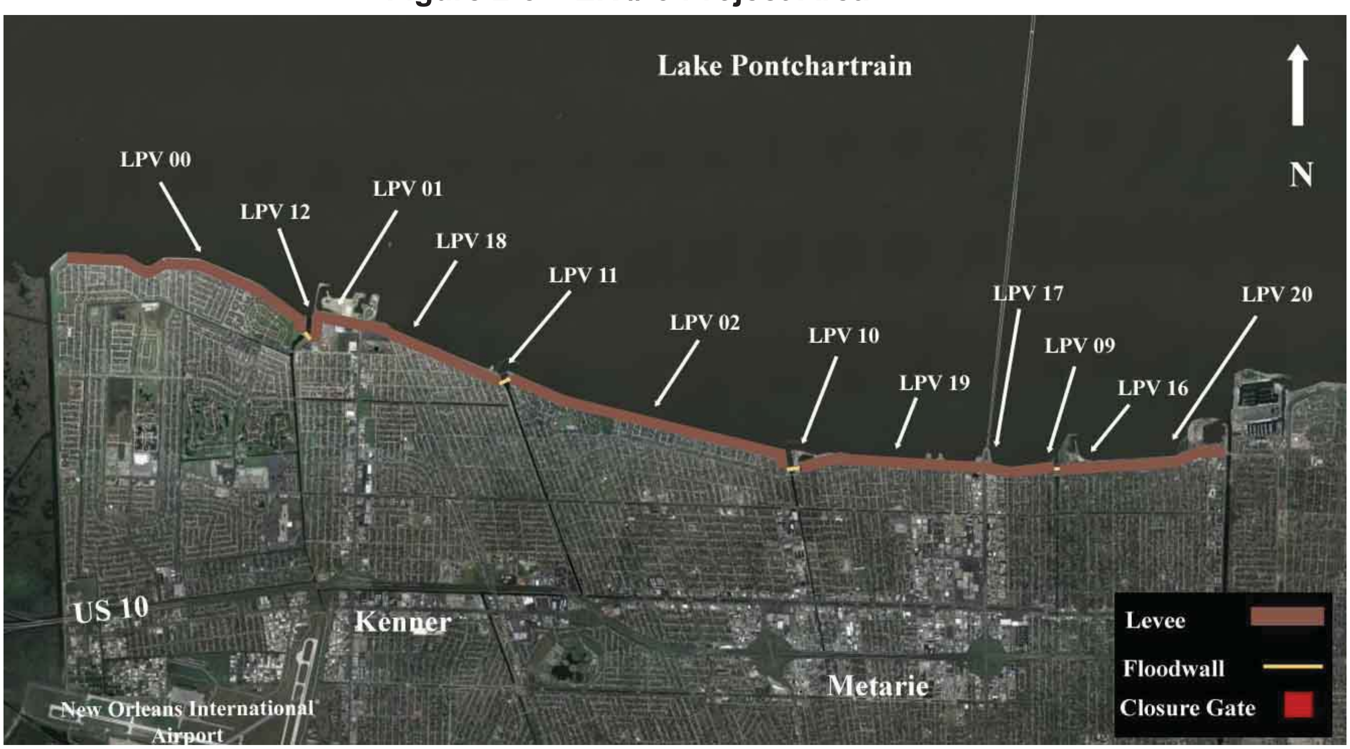


Table 2-3a. Materials Quantities for Construction Reaches in IER #3

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV00.2	149,000							130,900
LPV01.2	202,000							69,900
LPV02.2	184,000							131,000
LPV09.2		27,700	41,800	214,600	212,900	36,200	99,100	33,800
LPV09a.2				15,500			20,200	35,000
LPV12a.2		1,500	2,300	10,800			17,400	3,800
LPV16.2		500	800				3,300	
LPV17.2	76,000	200	300	49,100				
LPV18.2		500	800				1,300	
LPV19.2	116,000							72,900
LPV20.2								61,000

Table 2-3b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #3

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV00.2	280	Sep-09	14,900	160	104,300	1,120	29,800	320
LPV01.2	310	Mar-10	20,200	200	141,400	1,370	40,400	390
LPV02.2	290	Jul-09	18,400	190	128,800	1,330	36,800	380
LPV09.2	1470	Oct-09						
LPV09a.2	190	May-09						
LPV12a.2	250	Aug-09						
LPV16.2	150	Nov-09						
LPV17.2	680	May-10	7,600	30	53,200	230	15,200	70
LPV18.2	130	Sep-09						
LPV19.2	240	Aug-09	11,600	150	81,200	1,020	23,200	290
LPV20.2	300	Mar-10						

Table 2-3c. Steel Demand (Tons) by Project Period in IER #3

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV00.2	280	Sep-09						
LPV01.2	310	Mar-10						
LPV02.2	290	Jul-09						
LPV09.2	1470	Oct-09	16,050	30				
LPV09a.2	190	May-09	310	LT10				
LPV12a.2	250	Aug-09	220	LT10				
LPV16.2	150	Nov-09						
LPV17.2	680	May-10	980	LT10				
LPV18.2	130	Sep-09						
LPV19.2	240	Aug-09						
LPV20.2	300	Mar-10						

Table 2-3d. Concrete Demand (Cubic Yards) by Project Period in IER #3

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV00.2	280	Sep-09						
LPV01.2	310	Mar-10						
LPV02.2	290	Jul-09						
LPV09.2	1470	Oct-09	5,530	10	11,070	20	11,070	20
LPV09a.2	190	May-09						
LPV12a.2	250	Aug-09	300	LT10	600	LT10	600	LT10
LPV16.2	150	Nov-09	100	LT10	200	LT10	200	LT10
LPV17.2	680	May-10	50	LT10	90	LT10	90	LT10
LPV18.2	130	Sep-09	100	LT10	210	LT10	210	LT10
LPV19.2	240	Aug-09						
LPV20.2	300	Mar-10						

Table 2-3e. Aggregate Demand (Tons) by Project Period in IER #3

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV00.2	280	Sep-09						
LPV01.2	310	Mar-10						
LPV02.2	290	Jul-09						
LPV09.2	1470	Oct-09	8,370	20	16,730	30	16,730	30
LPV09a.2	190	May-09						
LPV12a.2	250	Aug-09	460	LT10	910	10	910	10
LPV16.2	150	Nov-09	150	LT10	300	LT10	300	LT10
LPV17.2	680	May-10	70	LT10	140	LT10	140	LT10
LPV18.2	130	Sep-09	160	LT10	310	LT10	310	LT10
LPV19.2	240	Aug-09						
LPV20.2	300	Mar-10						

Table 2-3f. Concrete Pile Demand (Tons) by Project Period in IER #3

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV00.2	280	Sep-09						
LPV01.2	310	Mar-10						
LPV02.2	290	Jul-09						
LPV09.2	1470	Oct-09	26,450	50				
LPV09a.2	190	May-09	5,380	80				
LPV12a.2	250	Aug-09	4,640	60				
LPV16.2	150	Nov-09	880	20				
LPV17.2	680	May-10						
LPV18.2	130	Sep-09	350	LT10				
LPV19.2	240	Aug-09						
LPV20.2	300	Mar-10						

Table 2-3g. Rock Demand (Tons) by Project Period in IER #3

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV00.2	280	Sep-09					130,900	1,400
LPV01.2	310	Mar-10					69,940	680
LPV02.2	290	Jul-09					131,040	1,360
LPV09.2	1470	Oct-09					33,810	70
LPV09a.2	190	May-09					35,000	550
LPV12a.2	250	Aug-09					3,770	50
LPV16.2	150	Nov-09						
LPV17.2	680	May-10						
LPV18.2	130	Sep-09						
LPV19.2	240	Aug-09					72,930	910
LPV20.2	300	Mar-10					60,970	610

2.4 IER #4 – New Orleans Lakefront Levee, West of Inner Harbor Navigation Canal, Orleans Parish, Louisiana

The proposed actions for IER #4 rebuild approximately 4.4 miles of earthen levee, 7,600 feet of floodwall, 16 vehicle access gates, and one sector gate along the Lake Pontchartrain waterfront in Orleans Parish. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 4 are listed below, and figure 2-4 provides an overview of the projects.

LPV101.2	Lakefront Levee OEB -17th St. Canal to Topaz St.- Phase 2
LPV103.01A	Lakefront Levee OEB -LPV 101-103.01A
LPV103.01A2	Lakefront Levee OEB - Orleans Canal to London Ave
LPV104.01a	Lakefront Levee OEB- London Ave Canal to IHNC - Phase 1A
LPV104.02	Lakefront Levee OEB -London Ave Canal to IHNC - Phase 2

Figure 2-4. IER # 4 Project Area

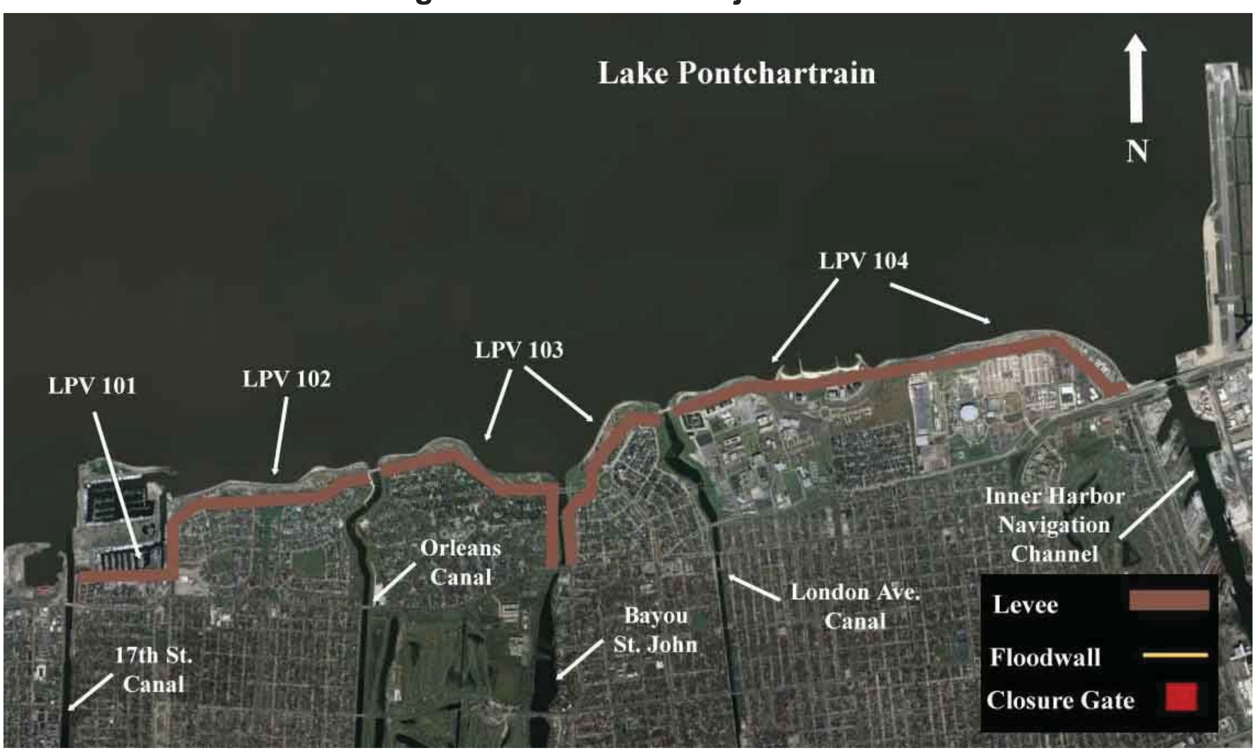


Table 2-4a. Materials Quantities for Construction Reaches in IER #4

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV101.2		16,500	25,000	55,900	77,800		16,500	1,800
LPV103.01A	150,000	5,000	7,600	57,800	28,300		4,700	
LPV103.01A2	150,000	1,700	2,500	19,300	9,400		1,600	
LPV104.01a	102,000							
LPV104.02	10,000	2,400	3,600	46,900	102,000			

Table 2-4b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #4

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV101.2	700	Jul-09						
LPV103.01A	400	Aug-09	15,000	110	105,000	790	30,000	230
LPV103.01A2	200	Jan-10	15,000	230	105,000	1,580	30,000	450
LPV104.01a	390	Sep-09	10,200	80	71,400	550	20,400	160
LPV104.02	560	Oct-09	1,000	LT10	7,000	40	2,000	10

Table 2-4c. Steel Demand (Tons) by Project Period in IER #4

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV101.2	700	Jul-09	4,580	20				
LPV103.01A	400	Aug-09	2,410	20				
LPV103.01A2	200	Jan-10	800	10				
LPV104.01a	390	Sep-09						
LPV104.02	560	Oct-09	5,480	30				

Table 2-4d. Concrete Demand (Cubic Yards) by Project Period in IER #4

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV101.2	700	Jul-09	3,300	10	6,600	30	6,600	30
LPV103.01A	400	Aug-09	1,010	LT10	2,010	20	2,010	20
LPV103.01A2	200	Jan-10	340	LT10	670	10	670	10
LPV104.01a	390	Sep-09						
LPV104.02	560	Oct-09	480	LT10	950	LT10	950	LT10

Table 2-4e. Aggregate Demand (Tons) by Project Period in IER #4

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV101.2	700	Jul-09	4,990	20	9,980	40	9,980	40
LPV103.01A	400	Aug-09	1,520	10	3,040	20	3,040	20
LPV103.01A2	200	Jan-10	510	LT10	1,010	20	1,010	20
LPV104.01a	390	Sep-09						
LPV104.02	560	Oct-09	720	LT10	1,440	LT10	1,440	LT10

Table 2-4f. Concrete Pile Demand (Tons) by Project Period in IER #4

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV101.2	700	Jul-09	4,410	20				
LPV103.01A	400	Aug-09	1,240	LT10				
LPV103.01A2	200	Jan-10	410	LT10				
LPV104.01a	390	Sep-09						
LPV104.02	560	Oct-09						

Table 2-4g. Rock Demand (Tons) by Project Period in IER #4

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV101.2	700	Jul-09					1,770	LT10
LPV103.01A	400	Aug-09						
LPV103.01A2	200	Jan-10						
LPV104.01a	390	Sep-09						
LPV104.02	560	Oct-09						

2.5 IER #5 – Outfall Canal Closure Structures, 17th Street Canal, Orleans Avenue Canal, and London Avenue Canal, Orleans and Jefferson Parishes, Louisiana

The proposed actions for IER #5 provide new closure structures and pumping stations for each of three canals (17^{th} Street Canal, Orleans Outfall Canal, and London Avenue Canal) all under a single construction project, PCCP-01. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 5 are listed below, and figure 2-5 provides an overview of the projects.

PCCP-01	PCCP -Pump Stations for Outfall Canal Closures

Figure 2-5. IER # 5 Project Area

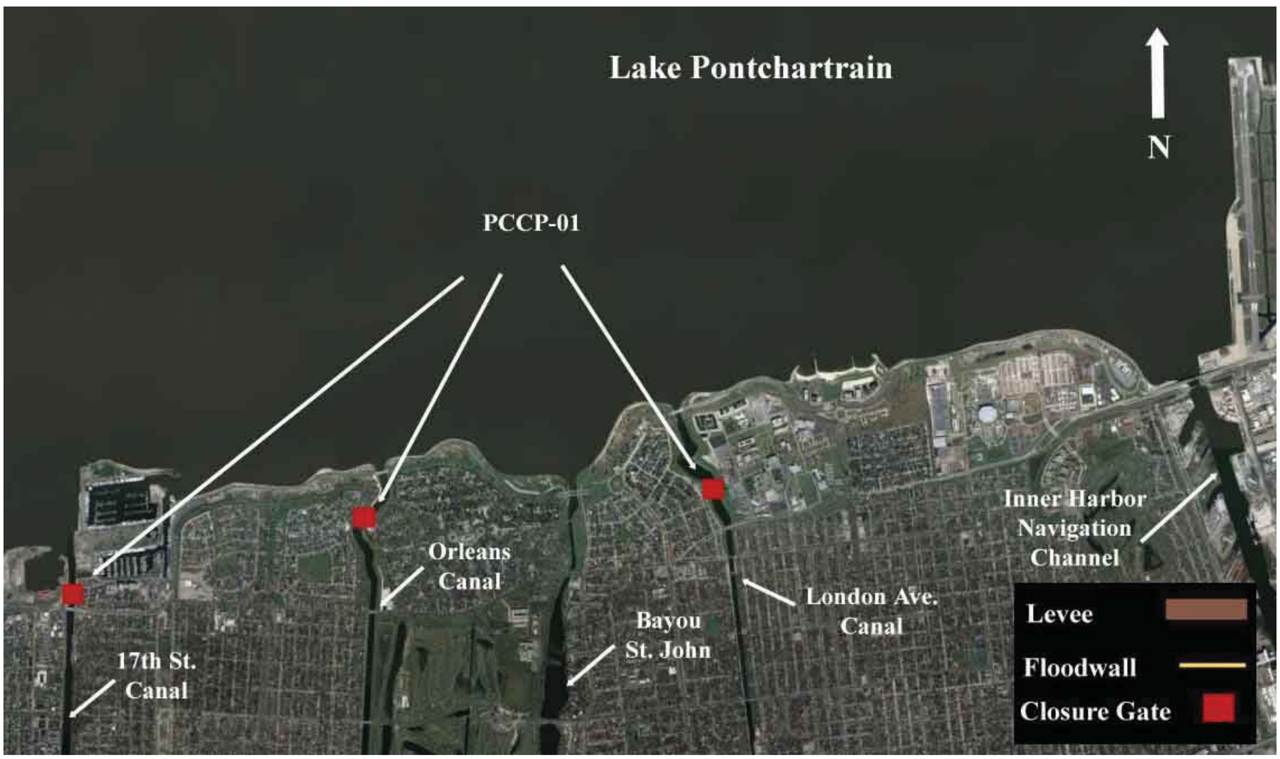


Table 2-5a. Materials Quantities for Construction Reaches in IER #5

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
PCCP01		11,100	16,700	285,800	326,900			

The projects do not require earthen fill, concrete pile, or rock. Tables 2-5b, 2-5f, and 2-5g have been omitted.

Table 2-5c. Steel Demand (Tons) by Project Period in IER #5

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
PCCP-01	1200	Aug-10	20,260	50				

Table 2-5d. Concrete Demand (Cubic Yards) by Project Period in IER #5

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
PCCP-01	1200	Aug-10	2,210	LT10	4,420	10	4,420	10

Table 2-5e. Aggregate Demand (Tons) by Project Period in IER #5

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
PCCP-01	1200	Aug-10	3,340	LT10	6,680	20	6,680	20

2.6 IER #6 – New Orleans East, Orleans Parish, Louisiana

The proposed actions for IER #6 provide 6 miles of levee or 1.9 miles of levee and conversion of 4.1 miles of levees to floodwall and replacement of two miles of floodwalls and four floodgates. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 6 are listed below, and figure 2-6 provides an overview of the projects.

LPV105.01	Lakefront Airport Floodwalls- West
LPV105.02	T-Wall Existing Alignment-Lakefront Airport- East
LPV106	Raise Levee- Paris Rd to Lakefront Airport
LPV106.01	Breakwater / Foreshore Protection NOE Lakefront Levee
LPV107	Replace Gate at Lincoln Beach

Figure 2-6. IER # 6 Project Area

Table 2-6a. Materials Quantities for Construction Reaches in IER #6

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV105.01	12,000	15,300	23,100	155,600	218,000			
LPV105.02	56,000	5,400	8,100	31,300	80,100			
LPV106	52,000	40,500	61,300	1,366,000	696,000			
LPV106.01								80,000
LPV107	40,000	700	1,100	30,000	10,500			

Table 2-6b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #6

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV105.01	380	Jan-10	1,200	LT10	8,400	70	2,400	20
LPV105.02	380	Feb-10	5,600	40	39,200	310	11,200	90
LPV106	360	Dec-09	5,200	40	36,400	300	10,400	90
LPV106.01	740	Sep-09						
LPV107	280	Jan-10	4,000	40	28,000	300	8,000	90

Table 2-6c. Steel Demand (Tons) by Project Period in IER #6

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV105.01	380	Jan-10	12,810	100				
LPV105.02	380	Feb-10	4,190	30				
LPV106	360	Dec-09	58,290	490				
LPV106.01	740	Sep-09						
LPV107	280	Jan-10	1,070	10				

Table 2-6d. Concrete Demand (Cubic Yards) by Project Period in IER #6

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV105.01	380	Jan-10	3,060	20	6,120	50	6,120	50
LPV105.02	380	Feb-10	1,080	LT10	2,150	20	2,150	20
LPV106	360	Dec-09	8,110	70	16,220	140	16,220	140
LPV106.01	740	Sep-09						
LPV107	280	Jan-10	150	LT10	300	LT10	300	LT10

Table 2-6e. Aggregate Demand (Tons) by Project Period in IER #6

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV105.01	380	Jan-10	4,620	40	9,250	70	9,250	70
LPV105.02	380	Feb-10	1,630	10	3,260	30	3,260	30
LPV106	360	Dec-09	12,260	100	24,520	200	24,520	200
LPV106.01	740	Sep-09						
LPV107	280	Jan-10	230	LT10	450	LT10	450	LT10

None of the projects require concrete pile for construction. Table 2-6f has been omitted.

Table 2-6g. Rock Demand (Tons) by Project Period in IER #6

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV105.01	380	Jan-10						
LPV105.02	380	Feb-10						
LPV106	360	Dec-09						
LPV106.01	740	Sep-09					80,000	320
LPV107	280	Jan-10						

2.7 IER #7 – New Orleans East, Orleans Parish, Louisiana

The proposed actions for IER #7 provide 19.3 miles of levee and three floodgates. Details of the proposed actions are available at www.nolaenvironmental.gov. Individual contracts included in IER 7 are listed below, and figure 2-7 provides an overview of the projects.

LPV108	Levee Raise-Paris Rd to South Point
LPV109.02a	Levee raise to 100-Year Elevation
LPV109.02b	I-10 Floodwall & Crossing
LPV109.02c	US11 & US 90 Gates & Crossing
LPV110	Modify CSX RR Gate
LPV111.01	100 Year Levee Raise-CSX RR to Michoud Canal
LPV111.02	Raisewall at Pumpstation#15- CSXRR to Michoud Canal
LPV113	Citrus Back Levee (Michoud Canal to Slip)

Figure 2-7. IER # 7 Project Area

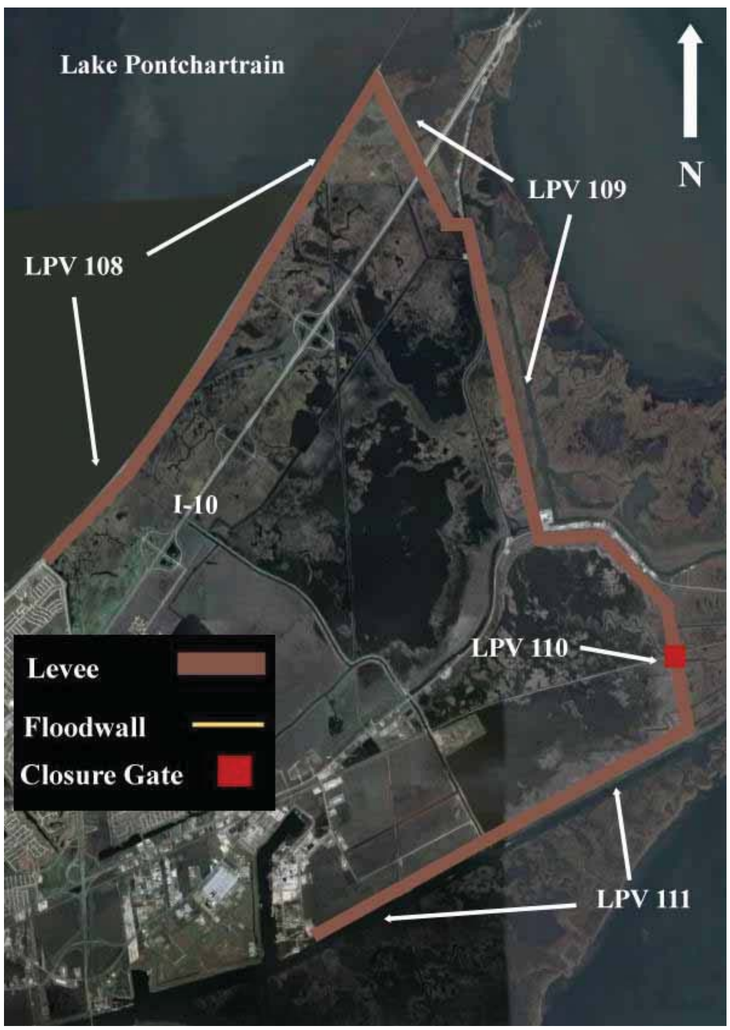


Table 2-7a. Materials Quantities for Construction Reaches in IER #7

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV108	450,000							121,000
LPV109.02a	4,910,000	600	1,000					2,500
LPV109.02b	115,000							
LPV109.02c	40,000	1,700	2,500	21,600	15,700			
LPV110	40,000	300	500	20,400	2,600			
LPV111.01	2,460,000			184,800				
LPV111.02	10,000	11,900	18,000	42,500		7,600		
LPV113	648,000							

Table 2-7b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #7

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV108	280	Dec-08	45,000	480	315,000	3,380	90,000	960
LPV109.02a	710	Mar-10	491,000	2,070	3,437,000	14,520	982,000	4,150
LPV109.02b	510	Mar-10	11,500	70	80,500	470	23,000	140
LPV109.02c	200	Dec-09	4,000	60	28,000	420	8,000	120
LPV110	400	Apr-10	4,000	30	28,000	210	8,000	60
LPV111.01	840	Aug-09	246,000	880	1,722,000	6,150	492,000	1,760
LPV111.02	270	Dec-09	1,000	10	7,000	80	2,000	20
LPV113	240	Jul-09	64,800	810	453,600	5,670	129,600	1,620

Table 2-7c. Steel Demand (Tons) by Project Period in IER #7

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV108	280	Dec-08						
LPV109.02a	710	Mar-10						
LPV109.02b	510	Mar-10						
LPV109.02c	200	Dec-09	1,130	20				
LPV110	400	Apr-10	520	LT10				
LPV111.01	840	Aug-09	3,700	10				
LPV111.02	270	Dec-09	1,330	10				
LPV113	240	Jul-09						

Table 2-7d. Concrete Demand (Cubic Yards) by Project Period in IER #7

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV108	280	Dec-08						
LPV109.02a	710	Mar-10	130	LT10	260	LT10	260	LT10
LPV109.02b	510	Mar-10						
LPV109.02c	200	Dec-09	330	LT10	660	LT10	660	LT10
LPV110	400	Apr-10	60	LT10	120	LT10	120	LT10
LPV111.01	840	Aug-09						
LPV111.02	270	Dec-09	2,380	30	4,760	50	4,760	50
LPV113	240	Jul-09						

Table 2-7e. Aggregate Demand (Tons) by Project Period in IER #7

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV108	280	Dec-08						
LPV109.02a	710	Mar-10	190	LT10	390	LT10	390	LT10
LPV109.02b	510	Mar-10						
LPV109.02c	200	Dec-09	500	LT10	1,000	20	1,000	20
LPV110	400	Apr-10	90	LT10	190	LT10	190	LT10
LPV111.01	840	Aug-09						
LPV111.02	270	Dec-09	3,600	40	7,200	80	7,200	80
LPV113	240	Jul-09						

None of the projects require concrete pile for construction. Table 2-7f has been omitted.

Table 2-7g. Rock Demand (Tons) by Project Period in IER #7

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV108	280	Dec-08					121,000	1,300
LPV109.02a	710	Mar-10					2,540	10
LPV109.02b	510	Mar-10						
LPV109.02c	200	Dec-09						
LPV110	400	Apr-10						
LPV111.01	840	Aug-09						
LPV111.02	270	Dec-09						
LPV113	240	Jul-09						

2.8 IER #8 – Bayou Bienvenue and Bayou Dupre Control Structures, St. Bernard Parish, Louisiana

The proposed actions for IER #8 require the replacement of approximately 1,000 linear feet of floodwalls and the replacement of two navigable floodgates. This project is being completed under one construction projects, LPV 144, Bayou Bienvenue and Bayou Dupre Floodgate Structures. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 8 are listed below, and figure 2-8 provides an overview of the projects.

LPV144	Chalmette Loop Levee, St. Bernard Parish

Figure 2-8. IER #8 Project Area

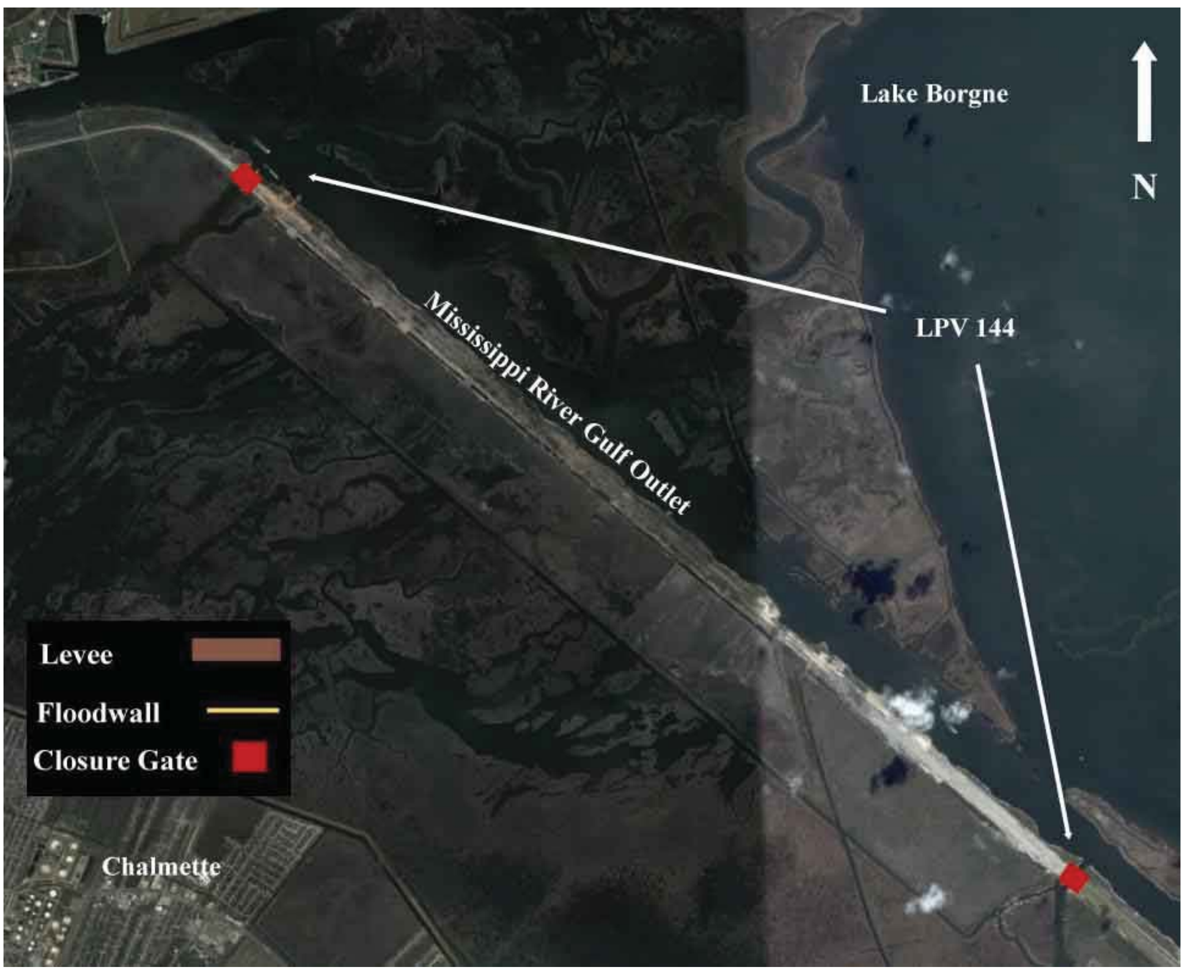


Table 2-8a. Materials Quantities for Construction Reaches in IER #8

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV144	300	14,900	22,500	33,400	94,100			13,200

Table 2-8b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #8

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV144	510	Dec-09	30	LT10	180	LT10	50	LT10

Table 2-8c. Steel Demand (Tons) by Project Period in IER #8

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV144	510	Dec-09	4,860	30				

Table 2-8d. Concrete Demand (Cubic Yards) by Project Period in IER #8

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV144	510	Dec-09	2,980	20	5,950	40	5,950	40

Table 2-8e. Aggregate Demand (Tons) by Project Period in IER #8

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV144	510	Dec-09	4,500	30	9,000	50	9,000	50

The project does not require concrete pile for construction. Table 2-8f has been omitted.

Table 2-8g. Rock Demand (Tons) by Project Period in IER #8

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV144	510	Dec-09					13,220	80

2.9 IER #9 – Caernarvon Floodwall, St. Bernard Parish, Louisiana

The proposed actions for IER #9 involve the replacement of two floodgates, the reconstruction of 1,500 feet of floodwall, and possible realignment of levee. This project is being completed under a single construction project: LPV 149, Caernarvon Floodwall. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 9 are listed below, and figure 2-9 provides an overview of the projects.

LPV149	Chalmette Loop Levee, St. Bernard Parish

Figure 2-9. IER # 9 Project Area

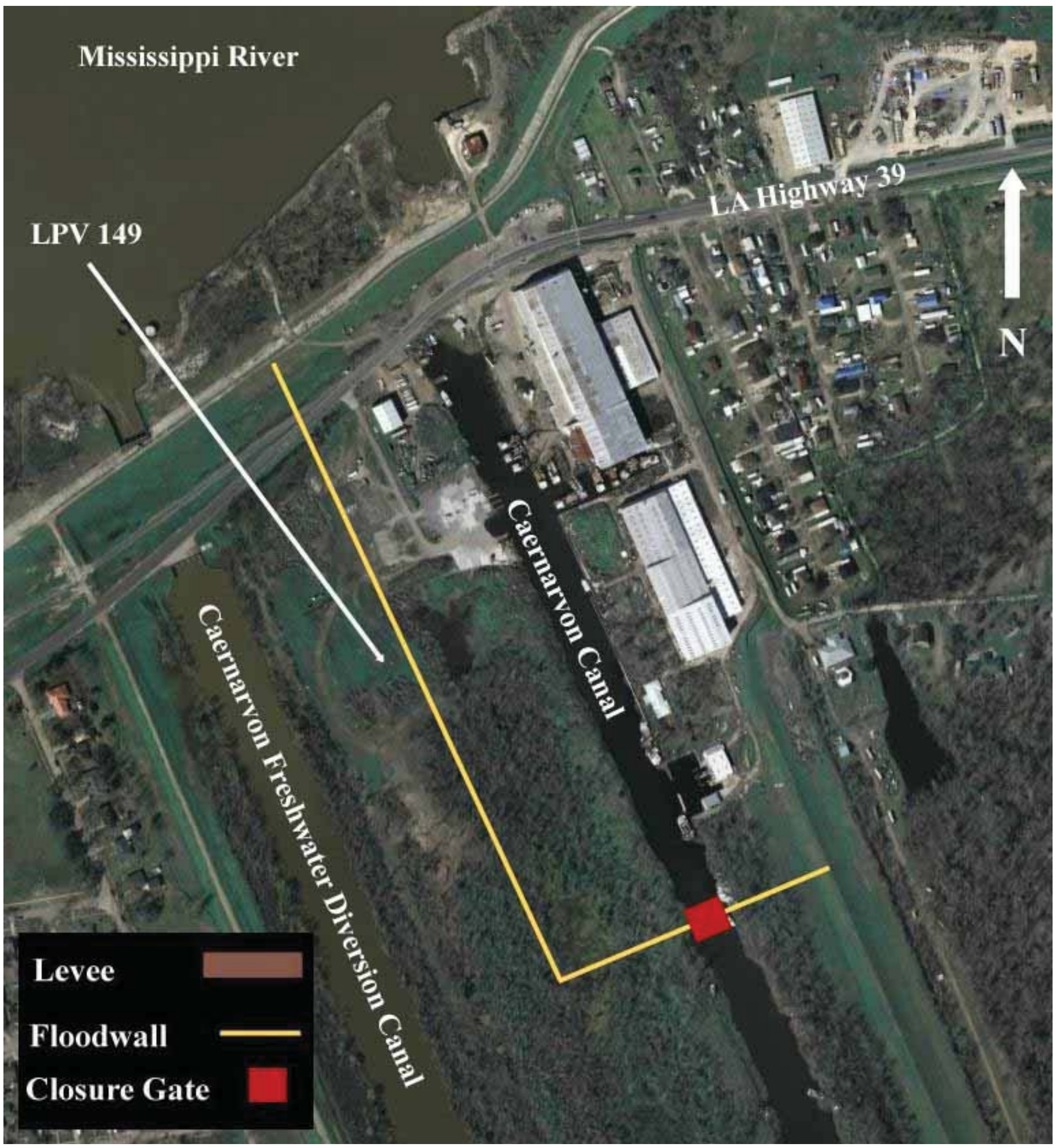


Table 2-9a. Materials Quantities for Construction Reaches in IER #9

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV149	141,000	12,000	18,100	69,200	102,000			

Table 2-9b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #9

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV149	500	Feb-10	14,100	80	98,700	590	28,200	170

Table 2-9c. Steel Demand (Tons) by Project Period in IER #9

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV149	500	Feb-10	5,920	40				

Table 2-9d. Concrete Demand (Cubic Yards) by Project Period in IER #9

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV149	500	Feb-10	2,400	10	4,800	30	4,800	30

Table 2-9e. Aggregate Demand (Tons) by Project Period in IER #9

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV149	500	Feb-10	3,630	20	7,260	40	7,260	40

The project does not require concrete pile or rock for construction. Tables 2-9f and 2-9g have been omitted.

2.10 IER #10 – Chalmette Loop, St. Bernard Parish, Louisiana

The proposed actions for IER #10 provide 100-year elevation of risk reduction for 22 miles of levee, 1,500 linear feet of floodwalls, and three floodgates. This project is being completed under four discrete construction projects: LPV 145, Bayou Bienvenue to Bayou Dupre Levee; LPV 146, Bayou Dupre to Hwy 46 Levee; LPV 147, Hwy 46 Crossing and Bayou Road Flood Gate; and LPV 148.02, Verret to Caernarvon Levee. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 10 are listed below, and figure 2-10 provides an overview of the projects.

LPV145	Chalmette Loop: Bayou Bienvenue to Bayou Dupre Levee, St. Bernard Parish
LPV146	Chalmette Loop: Bayou Dupre to Hwy 46 Levee
LPV147	Chalmette Loop: Hwy 46 Crossing and Bayou Road Flood Gate
LPV148.02	Chalmette Loop: Verret to Caernarvon Levee

Figure 2-10. IER # 10 Project Area

Table 2-10a. Materials Quantities for Construction Reaches in IER #10

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
LPV145	600,000	64,900	98,200	1,807,700	1,346,700			77,400
LPV146	600,000	101,200	153,000	2,102,200	1,430,900			197,100
LPV147	16,000	5,700	8,600	12,200	48,000		19,400	
LPV148.02	1,300,000	132,600	200,500	2,164,800	1,155,500			2,500

Table 2-10b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #10

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV145	800	Dec-09	60,000	230	420,000	1,580	120,000	450
LPV146	770	Dec-09	60,000	230	420,000	1,640	120,000	470
LPV147	480	Dec-09	1,600	LT10	11,200	70	3,200	20
LPV148.02	810	Feb-10	130,000	480	910,000	3,370	260,000	960

Table 2-10c. Steel Demand (Tons) by Project Period in IER #10

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV145	800	Dec-09	96,080	360				
LPV146	770	Dec-09	105,720	410				
LPV147	480	Dec-09	2,380	10				
LPV148.02	810	Feb-10	94,720	350				

Table 2-10d. Concrete Demand (Cubic Yards) by Project Period in IER #10

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV145	800	Dec-09	12,990	50	25,970	100	25,970	100
LPV146	770	Dec-09	20,240	80	40,480	160	40,480	160
LPV147	480	Dec-09	1,140	LT10	2,280	10	2,280	10
LPV148.02	810	Feb-10	26,510	100	53,030	200	53,030	200

Table 2-10e. Aggregate Demand (Tons) by Project Period in IER #10

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV145	800	Dec-09	19,640	70	39,270	150	39,270	150
LPV146	770	Dec-09	30,610	120	61,210	240	61,210	240
LPV147	480	Dec-09	1,720	10	3,440	20	3,440	20
LPV148.02	810	Feb-10	40,090	150	80,180	300	80,180	300

Table 2-10f. Concrete Pile Demand (Tons) by Project Period in IER #10

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV145	800	Dec-09						
LPV146	770	Dec-09						
LPV147	480	Dec-09	5,170	30				
LPV148.02	810	Feb-10						

Table 2-10g. Rock Demand (Tons) by Project Period in IER #10

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
LPV145	800	Dec-09					77,440	290
LPV146	770	Dec-09					197,060	770
LPV147	480	Dec-09						
LPV148.02	810	Feb-10					2,460	LT10

2.11 IER #11 – Improved Protection on the Inner Harbor Navigation Canal, Orleans and St. Bernard Parishes, Louisiana

The proposed actions under IER #11 would provide structural barriers to prevent damaging storm surges from entering the IHNC from Lake Pontchartrain and/or the Gulf Intracoastal Waterway (GIWW)-Mississippi River Gulf Outlet (MRGO)-Lake Borgne complex ("Lake Borgne complex"). The first proposed action, referred to as "Borgne 1," encompasses a location range within which a barrier could be built to address storm surge from the Lake Borgne complex. The second proposed action, referred to as "Pontchartrain 2," encompasses a location range within which a barrier could be built to address storm surge from the Lake Pontchartrain. Details of the proposed actions are available at www.nolaenvironmental.gov.

Individual contracts included in IER 11 are listed below, and figure 2-11 provides an overview of the projects.

IHNC01	IHNC-1 Protection from Lake Pontchartrain
IHNC02a	IHNC-2 Protection from Lake Borgne a
IHNC02b	IHNC-2 Protection from Lake Borgne b
IHNC02c	IHNC-2 Protection from Lake Borgne c
IHNC02d	IHNC-2 Protection from Lake Borgne d

Figure 2-11. IER # 11 Project Area

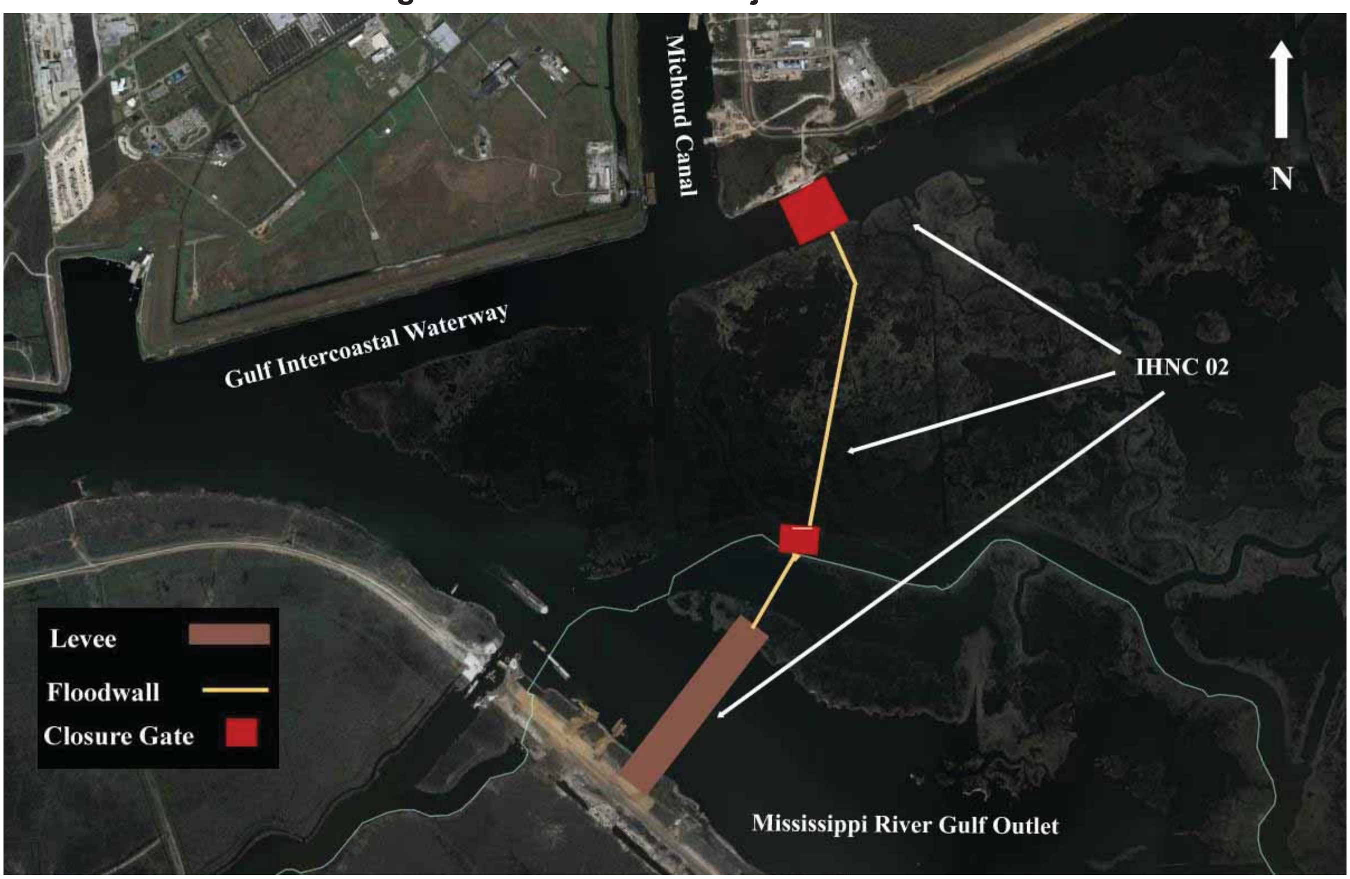


Table 2-11a. Materials Quantities for Construction Reaches in IER #11

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
IHNC01								
IHNC2a		33,900	51,300	110,500		102,000		6,000
IHNC2b		9,600	14,500	54,700		57,900		3,200
IHNC2c		100,900	152,600			265,000	148,200	172,000
IHNC2d		23,000	34,800			113,800	56,200	148,000

The project does not require earthen fill for construction. Table 2-11b has been omitted.

Table 2-11c. Steel Demand (Tons) by Project Period in IER #11

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
IHNC01	700	Feb-10						
IHNC-2a	1150	Apr-08	8,640	20				
IHNC-2b	1150	Apr-08	4,740	10				
IHNC-2c	1150	Apr-08	16,700	40				
IHNC-2d	1150	Apr-08	7,170	20				

Table 2-11d. Concrete Demand (Cubic Yards) by Project Period in IER #11

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
IHNC01	700	Feb-10						
IHNC-2a	1150	Apr-08	6,780	20	13,560	40	13,560	40
IHNC-2b	1150	Apr-08	1,920	LT10	3,840	10	3,840	10
IHNC-2c	1150	Apr-08	20,180	50	40,360	110	40,360	110
IHNC-2d	1150	Apr-08	4,600	10	9,200	20	9,200	20

Table 2-11e. Aggregate Demand (Tons) by Project Period in IER #11

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
IHNC01	700	Feb-10						
IHNC-2a	1150	Apr-08	10,250	30	20,500	50	20,500	50
IHNC-2b	1150	Apr-08	2,900	LT10	5,810	20	5,810	20
IHNC-2c	1150	Apr-08	30,510	80	61,020	160	61,020	160
IHNC-2d	1150	Apr-08	6,960	20	13,910	40	13,910	40

Table 2-11f. Concrete Pile Demand (Tons) by Project Period in IER #11

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
IHNC01	700	Feb-10						
IHNC-2a	1150	Apr-08						
IHNC-2b	1150	Apr-08						
IHNC-2c	1150	Apr-08	90,180	240				
IHNC-2d	1150	Apr-08	34,200	90				

Table 2-11g. Rock Demand (Tons) by Project Period in IER #11

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
IHNC01	700	Feb-10						
IHNC-2a	1150	Apr-08					6,000	20
IHNC-2b	1150	Apr-08					3,200	LT10
IHNC-2c	1150	Apr-08					172,000	450
IHNC-2d	1150	Apr-08					148,000	390

2.12 IER #12 – GIWW, Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana

The proposed action for IER # 12 would consist of constructing approximately 3 miles of levee and floodwall that would reduce the length of the current alignment by eliminating the need for 25 miles of existing parallel protection. The proposed action also includes providing a 100-year level of risk reduction fronting protection for pump stations and backflow prevention. Existing pump stations in the detention basin behind the surge barrier would receive fronting protection (El. 8.5 ft, less than 100-year level of risk reduction) and backflow prevention. Details of the proposed actions are available in the IER at www.nolaenvironmental.gov.

Individual contracts included in IER 12 are listed below, and figure 2-12 provides an overview of the projects.

WBV03a	Contract 3a, Hero PS to Algiers Canal
WBV03b	Contract 3b, Hero PS to Algiers Canal
WBV04.2	Belle Chasse Hwy to Hero Cutoff - Reach 1 - Phase 2
WBV05.2	Belle Chasse Hwy to Hero Cutoff - Reach 2 - Phase 2
WBV06.2	Belle Chasse Hwy to Hero Cutoff - Reach 3 & 4 - Phase 2
WBV06a.2	Belle Chasse Hwy to Hero Cutoff - Phase 2
WBV07	Planters PS Fronting Protection and Modifications
WBV08	S&WB PS #13 Fronting Protection and Modifications
WBV10	Belle Chasse PS #1 (Plaquemines PS) Fronting Protection and Modifications
WBV11	Belle Chasse PS #2 Fronting Protection and Modifications
WBV13	S&WB PS #11 Fronting Protection and Modifications
WBV14a.2	Estelle PS to Vicinity of LaPalco Overpass - Phase 2
WBV14g.2	Estelle PS Vicinity Floodwalls
WBV23	New Estelle PS Floodwall Modifications
WBV33	Old Estelle PS Fronting Protection and Modifications
WBV38.2	Cousins PS - Phase 2
WBV44	Whitney Barataria PS Floodwall Modifications

WBV46.2	Cousins Canal Walls - Destrehan Bridge to Sector Gate
WBV47.1	Algiers Lock to Belle Chase Hwy (West) - Phase 1
WBV48.2	Belle Chase Hwy to Algiers Lock (West) - Phase 2
WBV49.1	Hero Levee to Belle Chase Hwy (East) - Phase 1
WBV90	GIWW West Closure Complex

Figure 2-12. IER #12 Project Area

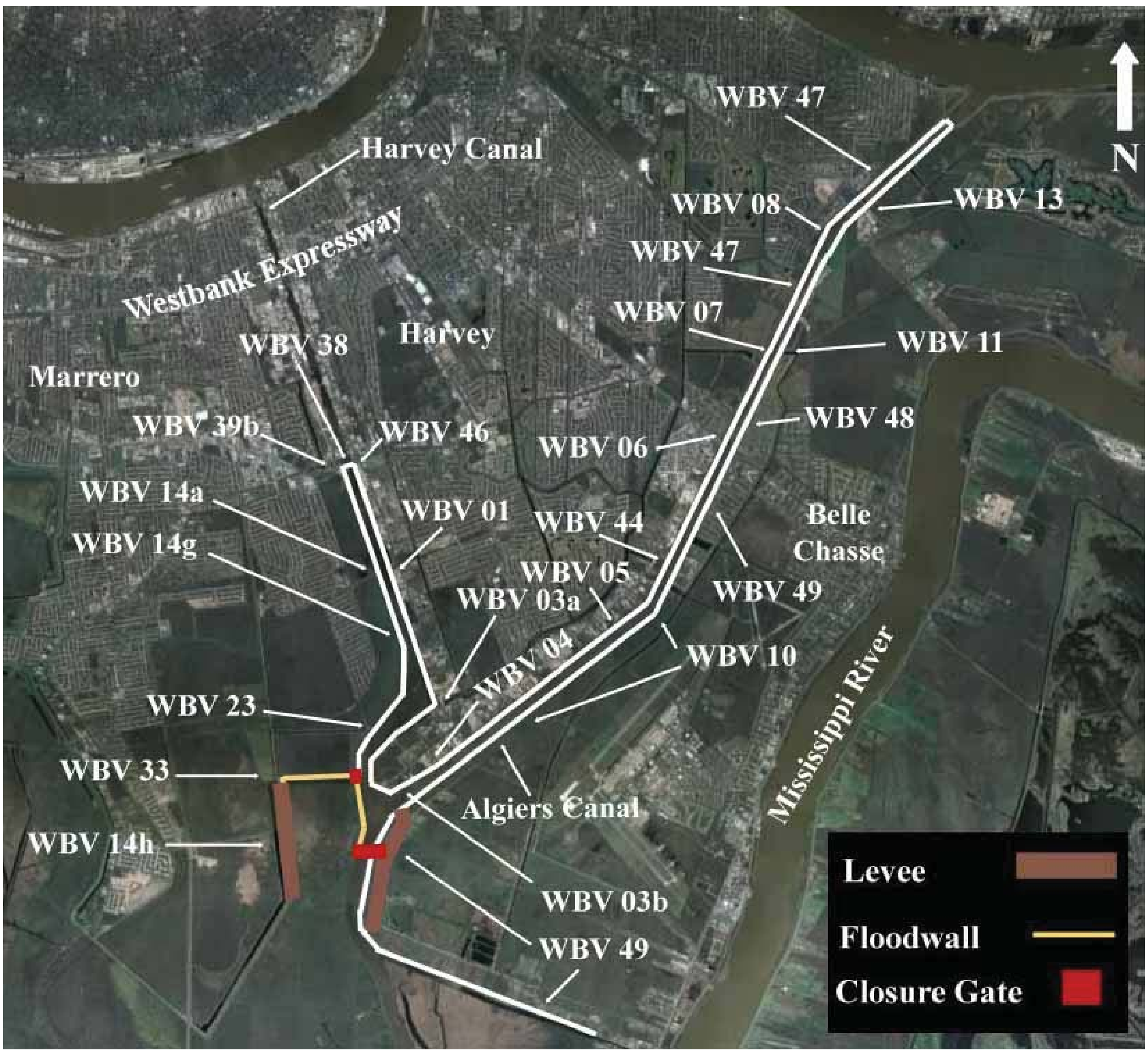


Table 2-12a. Materials Quantities for Construction Reaches in IER #12

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
WBV03a		2,600	4,000	14,800	34,300	1,900	9,900	
WBV03b	444,000	8,700	13,100	31,700			57,600	
WBV04.2		400	600	11,000	8,600			
WBV05.2		1,000	1,600	23,800	22,700			
WBV06.2		5,700	8,600	12,100	57,500			
WBV06a.2		5,300	8,000	1,084,200				
WBV07		2,200	3,300	31,500	21,800	2,300	12,200	
WBV08		2,500	3,700	25,200	29,200	14,800		
WBV10		1,600	2,400	13,200	22,700			
WBV11		900	1,400	10,700	11,800			
WBV13		2,200	3,300	23,800	22,400	2,200	10,300	
WBV14a.2		6,600	10,000	263,300	91,300			
WBV14g.2	28,000	12,400	18,800	210,400	193,900			700
WBV23		2,100	3,200	50,000	28,400			2,000
WBV33		3,300	4,900	36,800	40,200			900
WBV38.2		1,700	2,500	24,700	35,000			200
WBV44		7,000	10,600	42,000	71,200			1,900
WBV46.2		1,900	2,900	24,000	34,800			
WBV47.1	318,000			970,800				
WBV48.2		19,700	29,700	971,200	353,400			
WBV49.1	222,000	3,600	5,400	1,424,000	69,800			
WBV90		199,800	302,200	623,500	268,600	335,400	132,100	240,300

Table 2-12b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #12

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV03a	780	Jul-08						
WBV03b	490	Dec-08	44,400	270	310,800	1,900	88,800	540
WBV04.2	210	Oct-09						
WBV05.2	210	Oct-09						
WBV06.2	250	Jan-10						
WBV06a.2	370	May-10						
WBV07	580	Oct-09						
WBV08	590	Oct-09						
WBV10	620	Oct-09						
WBV11	540	Sep-09						
WBV13	680	Oct-09						
WBV14a.2	360	Dec-09						
WBV14g.2	780	Sep-09	2,800	10	19,600	80	5,600	20
WBV23	380	Feb-10						
WBV33	560	Oct-09						
WBV38.2	320	May-10						
WBV44	470	Feb-10						
WBV46.2	330	Dec-09						
WBV47.1	240	May-10	31,800	400	222,600	2,780	63,600	800
WBV48.2	370	May-10						
WBV49.1	180	Apr-10	22,200	370	155,400	2,590	44,400	740
WBV90	1720	Feb-10						

Table 2-12c. Steel Demand (Tons) by Project Period in IER #12

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV03a	780	Jul-08	1,940	LT10				
WBV03b	490	Dec-08	630	LT10				
WBV04.2	210	Oct-09	610	LT10				
WBV05.2	210	Oct-09	1,480	20				
WBV06.2	250	Jan-10	2,800	30				
WBV06a.2	370	May-10	21,680	180				
WBV07	580	Oct-09	1,750	LT10				
WBV08	590	Oct-09	2,740	10				
WBV10	620	Oct-09	1,270	LT10				
WBV11	540	Sep-09	740	LT10				
WBV13	680	Oct-09	1,620	LT10				
WBV14a.2	360	Dec-09	9,330	80				
WBV14g.2	780	Sep-09	12,830	50				
WBV23	380	Feb-10	2,270	20				
WBV33	560	Oct-09	2,530	10				
WBV38.2	320	May-10	2,050	20				
WBV44	470	Feb-10	4,010	30				
WBV46.2	330	Dec-09	2,030	20				
WBV47.1	240	May-10	19,420	240				
WBV48.2	370	May-10	35,150	280				
WBV49.1	180	Apr-10	31,590	530				
WBV90	1720	Feb-10	45,560	80				

Table 2-12d. Concrete Demand (Cubic Yards) by Project Period in IER #12

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV03a	780	Jul-08	520	LT10	1,050	LT10	1,050	LT10
WBV03b	490	Dec-08	1,730	10	3,460	20	3,460	20
WBV04.2	210	Oct-09	90	LT10	170	LT10	170	LT10
WBV05.2	210	Oct-09	210	LT10	410	LT10	410	LT10
WBV06.2	250	Jan-10	1,140	10	2,270	30	2,270	30
WBV06a.2	370	May-10	1,060	LT10	2,130	20	2,130	20
WBV07	580	Oct-09	440	LT10	880	LT10	880	LT10
WBV08	590	Oct-09	490	LT10	980	LT10	980	LT10
WBV10	620	Oct-09	310	LT10	630	LT10	630	LT10
WBV11	540	Sep-09	180	LT10	370	LT10	370	LT10
WBV13	680	Oct-09	440	LT10	880	LT10	880	LT10
WBV14a.2	360	Dec-09	1,320	10	2,640	20	2,640	20
WBV14g.2	780	Sep-09	2,490	LT10	4,970	20	4,970	20
WBV23	380	Feb-10	420	LT10	830	LT10	830	LT10
WBV33	560	Oct-09	650	LT10	1,310	LT10	1,310	LT10
WBV38.2	320	May-10	340	LT10	670	LT10	670	LT10
WBV44	470	Feb-10	1,410	LT10	2,820	20	2,820	20
WBV46.2	330	Dec-09	390	LT10	780	LT10	780	LT10
WBV47.1	240	May-10						
WBV48.2	370	May-10	3,930	30	7,870	60	7,870	60
WBV49.1	180	Apr-10	710	10	1,420	20	1,420	20
WBV90	1720	Feb-10	39,970	70	79,930	140	79,930	140

Table 2-12e. Aggregate Demand (Tons) by Project Period in IER #12

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV03a	780	Jul-08	790	LT10	1,590	LT10	1,590	LT10
WBV03b	490	Dec-08	2,620	20	5,240	30	5,240	30
WBV04.2	210	Oct-09	130	LT10	260	LT10	260	LT10
WBV05.2	210	Oct-09	310	LT10	620	LT10	620	LT10
WBV06.2	250	Jan-10	1,720	20	3,440	40	3,440	40
WBV06a.2	370	May-10	1,610	10	3,220	30	3,220	30
WBV07	580	Oct-09	670	LT10	1,330	LT10	1,330	LT10
WBV08	590	Oct-09	740	LT10	1,490	LT10	1,490	LT10
WBV10	620	Oct-09	470	LT10	950	LT10	950	LT10
WBV11	540	Sep-09	280	LT10	550	LT10	550	LT10
WBV13	680	Oct-09	670	LT10	1,330	LT10	1,330	LT10
WBV14a.2	360	Dec-09	2,000	20	3,990	30	3,990	30
WBV14g.2	780	Sep-09	3,760	10	7,520	30	7,520	30
WBV23	380	Feb-10	630	LT10	1,260	LT10	1,260	LT10
WBV33	560	Oct-09	990	LT10	1,980	10	1,980	10
WBV38.2	320	May-10	510	LT10	1,010	LT10	1,010	LT10
WBV44	470	Feb-10	2,130	10	4,260	30	4,260	30
WBV46.2	330	Dec-09	590	LT10	1,180	10	1,180	10
WBV47.1	240	May-10						
WBV48.2	370	May-10	5,950	50	11,900	100	11,900	100
WBV49.1	180	Apr-10	1,080	20	2,150	40	2,150	40
WBV90	1720	Feb-10	60,430	110	120,860	210	120,860	210

Table 2-12f. Concrete Pile Demand (Tons) by Project Period in IER #12

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV03a	780	Jul-08	2,650	10				
WBV03b	490	Dec-08	15,390	90				
WBV04.2	210	Oct-09						
WBV05.2	210	Oct-09						
WBV06.2	250	Jan-10						
WBV06a.2	370	May-10						
WBV07	580	Oct-09	3,260	20				
WBV08	590	Oct-09						
WBV10	620	Oct-09						
WBV11	540	Sep-09						
WBV13	680	Oct-09	2,760	10				
WBV14a.2	360	Dec-09						
WBV14g.2	780	Sep-09						
WBV23	380	Feb-10						
WBV33	560	Oct-09						
WBV38.2	320	May-10						
WBV44	470	Feb-10						
WBV46.2	330	Dec-09						
WBV47.1	240	May-10						
WBV48.2	370	May-10						
WBV49.1	180	Apr-10						
WBV90	1720	Feb-10	35,280	60				

Table 2-12g. Rock Demand (Tons) by Project Period in IER #12

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV03a	780	Jul-08						
WBV03b	490	Dec-08						
WBV04.2	210	Oct-09						
WBV05.2	210	Oct-09						
WBV06.2	250	Jan-10						
WBV06a.2	370	May-10						
WBV07	580	Oct-09						
WBV08	590	Oct-09						
WBV10	620	Oct-09						
WBV11	540	Sep-09						
WBV13	680	Oct-09						
WBV14a.2	360	Dec-09						
WBV14g.2	780	Sep-09					710	LT10
WBV23	380	Feb-10					2,000	20
WBV33	560	Oct-09					940	LT10
WBV38.2	320	May-10					200	LT10
WBV44	470	Feb-10					1,860	10
WBV46.2	330	Dec-09						
WBV47.1	240	May-10						
WBV48.2	370	May-10						
WBV49.1	180	Apr-10						
WBV90	1720	Feb-10					240,340	420

2.13 IER #13 – Hero Canal Levee and Eastern Terminus, Plaquemines Parish, Louisiana

The proposed actions for IER #13 include raising approximately nine miles of earthen levees, replacing over 3,000 feet of floodwalls, rebuilding or modifying four drainage structures, closing one drainage structure, and modifying one railroad gate. Details of the proposed action are available in the Final IER at www.nolaenvironmental.gov.

Individual contracts included in IER 13 are listed below, and figure 2-13 provides an overview of the projects.

WBV09a	Hero Canal to Oakville - Levees
WBV09b	Hero Canal to Oakville - Structures
WBV12	Hero Canal Reach 1 - 2nd Enlgt

Figure 2-13. IER #13 Project Area

Table 2-13a. Materials Quantities for Construction Reaches in IER #13

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
WBV09a	500,000							
WBV09b		5,000	7,600	59,000	87,900			
WBV12	550,000							800

Table 2-13b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #13

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV09a	450	Mar-10	50,000	330	350,000	2,330	100,000	670
WBV09b	470	Feb-10						
WBV12	390	Jun-10	55,000	420	385,000	2,960	110,000	850

Table 2-13c. Steel Demand (Tons) by Project Period in IER #13

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV09a	450	Mar-10						
WBV09b	470	Feb-10	5,090	30				
WBV12	390	Jun-10						

Table 2-13d. Concrete Demand (Cubic Yards) by Project Period in IER #13

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV09a	450	Mar-10						
WBV09b	470	Feb-10	1,000	LT10	2,000	10	2,000	10
WBV12	390	Jun-10						

Table 2-13e. Aggregate Demand (Tons) by Project Period in IER #13

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV09a	450	Mar-10						
WBV09b	470	Feb-10	1,510	LT10	3,020	20	3,020	20
WBV12	390	Jun-10						

None of the projects require concrete pile for construction. Table 2-13f has been omitted.

Table 2-13g. Rock Demand (Tons) by Project Period in IER #13

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV09a	450	Mar-10						
WBV09b	470	Feb-10						
WBV12	390	Jun-10					840	LT10

2.14 IER #14 – Westwego to Harvey Levee, Jefferson Parish, Louisiana

The proposed actions for IER #14 would increase the elevation of five existing levee reaches to meet the 100-year level of risk reduction and replace all existing pumping station fronting protection floodwalls with higher floodwall. Details of the proposed action are available in the Final IER at www.nolaenvironmental.gov.

Individual contracts included in IER 14 are listed below, and figure 2-14 provides an overview of the projects.

WBV14b.2	Orleans Village to Hwy 45 Levee - Phase 2
WBV14c.2	New Westwego PS to Vicinity Orleans Village - Phase 2
WBV14d	V- Line Floodwall
WBV14e.2	V- Line Levee,East of Vertex - Phase 2
WBV14f.2	Hwy 45 Levee - Phase 2
WBV14i	WBV-14i V-Line Levee, LA 3134 Highway Crossing
WBV30	Westminister PS Fronting Protection and Modifications
WBV37	Ames / Mt;. Kennedy Pump Station

Figure 2-14. IER #14 Project Area

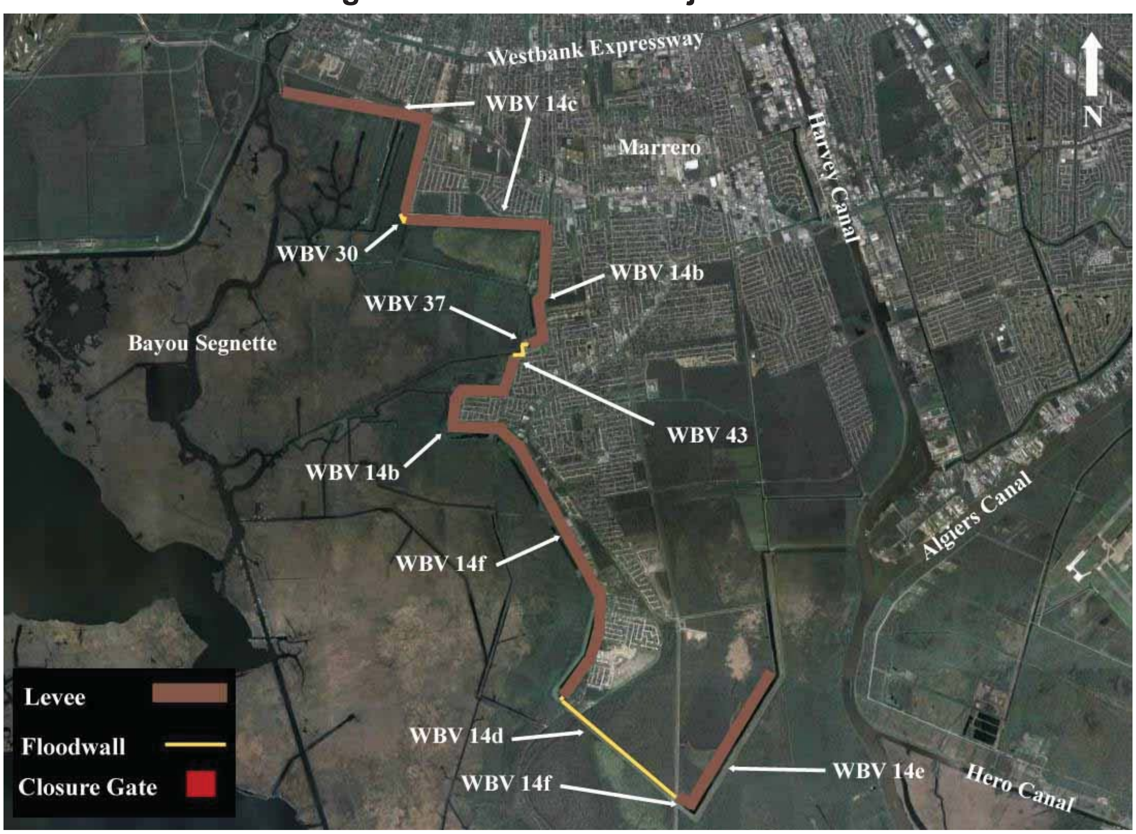


Table 2-14a. Materials Quantities for Construction Reaches in IER #14

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
WBV14b.2	520,000							200
WBV14c.2	1,350,000							100
WBV14d	120,000	7,500	11,300	202,700			96,900	
WBV14e.2	570,000	100	200					
WBV14f.2	188,000	600	800					
WBV14i	210,000							
WBV30	4,000	200	300	24,400	25,600			1,200
WBV37	4,000	2,500	3,700	29,900	13,600		12,900	800

Table 2-14b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #14

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV14b.2	170	Sep-09	52,000	920	364,000	6,420	104,000	1,840
WBV14c.2	330	Dec-09	135,000	1,230	945,000	8,590	270,000	2,450
WBV14d	580	Jul-09	12,000	60	84,000	430	24,000	120
WBV14e.2	240	Sep-09	57,000	710	399,000	4,990	114,000	1,430
WBV14f.2	270	Aug-09	18,800	210	131,600	1,460	37,600	420
WBV14i	240	Sep-09	21,000	260	147,000	1,840	42,000	530
WBV30	450	Aug-09	400	LT10	2,800	20	800	LT10
WBV37	730	Mar-10	400	LT10	2,800	10	800	LT10

Table 2-14c. Steel Demand (Tons) by Project Period in IER #14

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV14b.2	170	Sep-09						
WBV14c.2	330	Dec-09						
WBV14d	580	Jul-09	4,050	20				
WBV14e.2	240	Sep-09						
WBV14f.2	270	Aug-09						
WBV14i	240	Sep-09						
WBV30	450	Aug-09	1,630	10				
WBV37	730	Mar-10	1,200	LT10				

Table 2-14d. Concrete Demand (Cubic Yards) by Project Period in IER #14

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV14b.2	170	Sep-09						
WBV14c.2	330	Dec-09						
WBV14d	580	Jul-09	1,500	LT10	2,990	20	2,990	20
WBV14e.2	240	Sep-09	20	LT10	40	LT10	40	LT10
WBV14f.2	270	Aug-09	110	LT10	220	LT10	220	LT10
WBV14i	240	Sep-09						
WBV30	450	Aug-09	30	LT10	70	LT10	70	LT10
WBV37	730	Mar-10	490	LT10	980	LT10	980	LT10

Table 2-14e. Aggregate Demand (Tons) by Project Period in IER #14

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV14b.2	170	Sep-09						
WBV14c.2	330	Dec-09						
WBV14d	580	Jul-09	2,260	10	4,530	20	4,530	20
WBV14e.2	240	Sep-09	30	LT10	70	LT10	70	LT10
WBV14f.2	270	Aug-09	170	LT10	340	LT10	340	LT10
WBV14i	240	Sep-09						
WBV30	450	Aug-09	50	LT10	100	LT10	100	LT10
WBV37	730	Mar-10	740	LT10	1,490	LT10	1,490	LT10

Table 2-14f. Concrete Pile Demand (Tons) by Project Period in IER #14

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV14b.2	170	Sep-09						
WBV14c.2	330	Dec-09						
WBV14d	580	Jul-09	25,880	130				
WBV14e.2	240	Sep-09						
WBV14f.2	270	Aug-09						
WBV14i	240	Sep-09						
WBV30	450	Aug-09						
WBV37	730	Mar-10	3,440	10				

Table 2-14g. Rock Demand (Tons) by Project Period in IER #14

Reach	Project Duration	NTP Mo & Yr	First Third		Second Third		Final Third	
			Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV14b.2	170	Sep-09					170	LT10
WBV14c.2	330	Dec-09					110	LT10
WBV14d	580	Jul-09						
WBV14e.2	240	Sep-09						
WBV14f.2	270	Aug-09						
WBV14i	240	Sep-09						
WBV30	450	Aug-09					1,160	LT10
WBV37	730	Mar-10					840	LT10

2.15 IER #15 – Lake Cataouatche Levee, Jefferson Parish, Louisiana

The proposed actions for IER #15 would increase the elevation of approximately 8 miles of the Lake Cataouatche Levee and the Lake Cataouatche Pumping Station fronting protection to meet the 100-year level of risk reduction. Details of the proposed action are available in the Final IER at www.nolaenvironmental.gov.

Individual contracts included in IER 15 are listed below, and figure 2-15 provides an overview of the projects.

WBV15a.2	Lake Cataouatche PS to Segnette State Park - Phase 2
WBV15b.2	Lake Cataouatche PS Fronting Protection, Modifications - Phase 2
WBV17b.1	Station 160+00 to Hwy 90 - Phase 1
WBV17b.2	Station 160+00 to Hwy 90 - Phase 2
WBV18.2	Hwy 90 to Lake Cataouatche PS - Phase 2

Figure 2-15. IER #15 Project Area

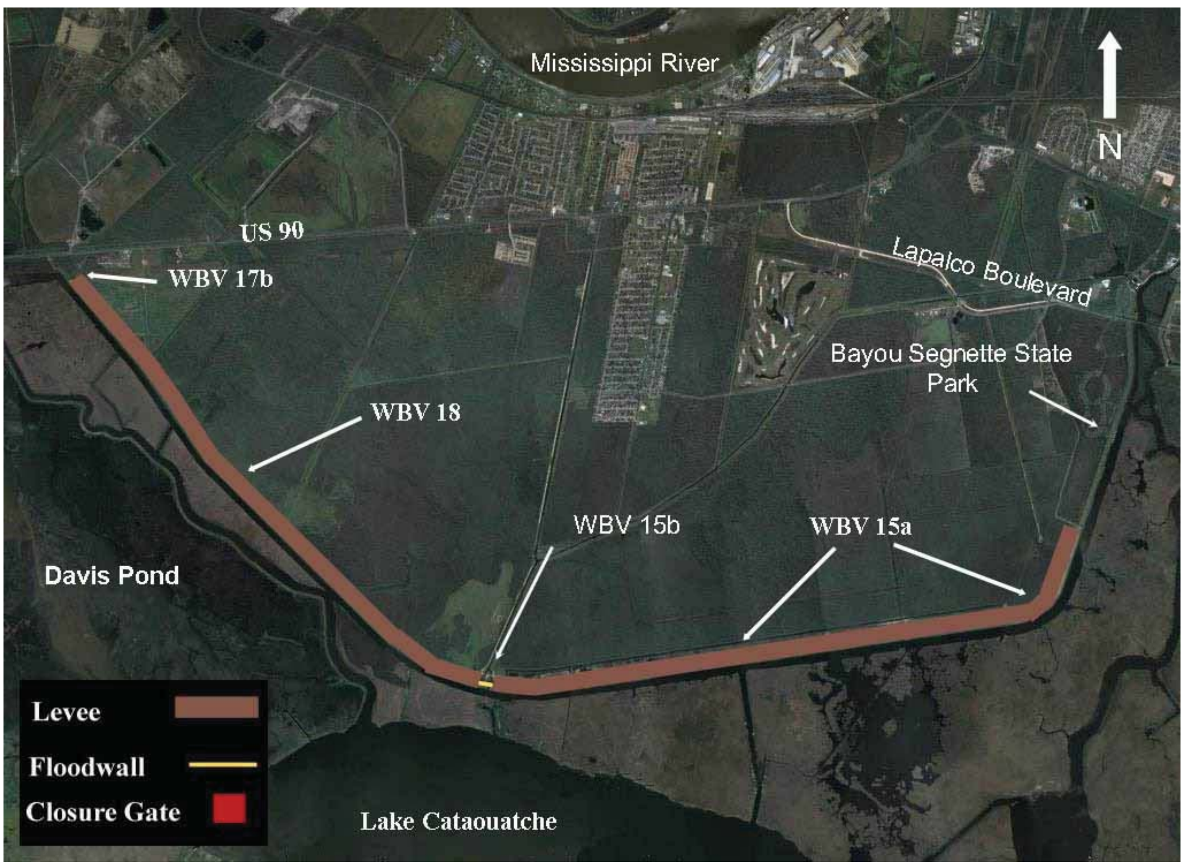


Table 2-15a. Materials Quantities for Construction Reaches in IER #15

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
WBV15a.2	1,284,000							
WBV15b.2		4,700	7,100	22,400	91,600			
WBV17b.1	500,000							
WBV17b.2	160,000							
WBV18.2	1,880,000							

Table 2-15b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #15

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV15a.2	430	Nov-09	128,400	900	898,800	6,270	256,800	1,790
WBV15b.2	550	Apr-09						
WBV17b.1	560	Mar-08	50,000	270	350,000	1,880	100,000	540
WBV17b.2	160	Dec-09	16,000	300	112,000	2,100	32,000	600
WBV18.2	550	Aug-09	188,000	1,030	1,316,000	7,180	376,000	2,050

Table 2-15c. Steel Demand (Tons) by Project Period in IER #15

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV15a.2	430	Nov-09						
WBV15b.2	550	Apr-09	4,520	20				
WBV17b.1	560	Mar-08						
WBV17b.2	160	Dec-09						
WBV18.2	550	Aug-09						

Table 2-15d. Concrete Demand (Cubic Yards) by Project Period in IER #15

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV15a.2	430	Nov-09						
WBV15b.2	550	Apr-09	930	LT10	1,870	10	1,870	10
WBV17b.1	560	Mar-08						
WBV17b.2	160	Dec-09						
WBV18.2	550	Aug-09						

Table 2-15e. Aggregate Demand (Tons) by Project Period in IER #15

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV15a.2	430	Nov-09						
WBV15b.2	550	Apr-09	1,410	LT10	2,820	20	2,820	20
WBV17b.1	560	Mar-08						
WBV17b.2	160	Dec-09						
WBV18.2	550	Aug-09						

None of the projects require concrete pile or rock for construction. Tables 2-15f and 2-15g have been omitted.

2.16 IER #16 – Western Tie-In, Jefferson and St. Charles Parishes, Louisiana

The proposed actions for IER #16 would require construction of new levee, floodwall, and closure structures to complete the western terminus of the West Bank and Vicinity Project; although authorized, the western tie in (connecting to the Mississippi River Levee) was never completed. The proposed action is an alignment south of Hwy 90 and south of the Outer Cataouatche Canal and then north along the eastern side of the Davis Pond Freshwater Diversion Canal to the Mississippi River Levee. The western tie in is being completed under six separate construction projects: WBV 70, 71, 72, 73, 74, and 75. Details of the proposed action are available at www.nolaenvironmental.gov.

Individual contracts included in IER 16 are listed below, and figure 2-16 provides an overview of the projects.

WBV70	Western Tie-In Levees (South)
WBV71	Western Tie-In Levees (North)
WBV72	Western Tie-In Levees (East - West)
WBV73	Western Tie-In Hwy 90 X-ing
WBV74	Western Tie-In Sector Gate / Drainage
WBV75	Western Tie-In Railroad

Figure 2-16. IER #16 Project Area

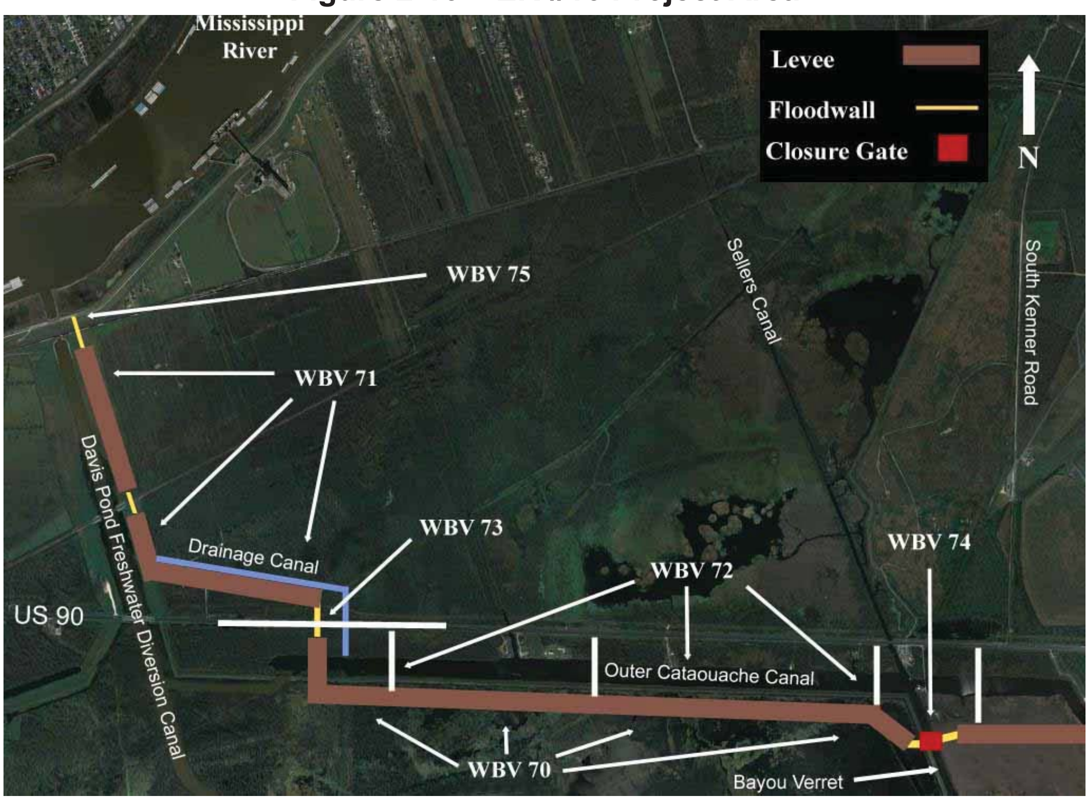


Table 2-16a. Materials Quantities for Construction Reaches in IER #16

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
WBV70								1,586,800
WBV71	150,000							
WBV72	3,000,000							1,600
WBV73	170,000	10,100	15,300	27,900	37,600		66,500	12,800
WBV74		5,500	8,400	102,800	39,600			6,400
WBV75		700	1,000	16,900	5,200		5,700	100

Table 2-16b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #16

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV70	240	Aug-09						
WBV71	150	Sep-09	15,000	300	105,000	2,100	30,000	600
WBV72	450	Jan-10	300,000	2,000	2,100,000	14,000	600,000	4,000
WBV73	540	Nov-09	17,000	90	119,000	660	34,000	190
WBV74	600	Nov-09						
WBV75	150	Sep-09						

Table 2-16c. Steel Demand (Tons) by Project Period in IER #16

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV70	240	Aug-09						
WBV71	150	Sep-09						
WBV72	450	Jan-10						
WBV73	540	Nov-09	2,230	10				
WBV74	600	Nov-09	3,820	20				
WBV75	150	Sep-09	570	10				

Table 2-16d. Concrete Demand (Cubic Yards) by Project Period in IER #16

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV70	240	Aug-09						
WBV71	150	Sep-09						
WBV72	450	Jan-10						
WBV73	540	Nov-09	2,020	10	4,040	20	4,040	20
WBV74	600	Nov-09	1,110	LT10	2,210	10	2,210	10
WBV75	150	Sep-09	140	LT10	270	LT10	270	LT10

Table 2-16e. Aggregate Demand (Tons) by Project Period in IER #16

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV70	240	Aug-09	317,360	3,970	634,720	7,930	634,720	7,930
WBV71	150	Sep-09						
WBV72	450	Jan-10						
WBV73	540	Nov-09	3,050	20	6,100	30	6,100	30
WBV74	600	Nov-09	1,670	LT10	3,340	20	3,340	20
WBV75	150	Sep-09	210	LT10	410	LT10	410	LT10

Table 2-16f. Concrete Pile Demand (Tons) by Project Period in IER #16

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV70	240	Aug-09						
WBV71	150	Sep-09						
WBV72	450	Jan-10						
WBV73	540	Nov-09	17,750	100				
WBV74	600	Nov-09						
WBV75	150	Sep-09	1,530	30				

Table 2-16g. Rock Demand (Tons) by Project Period in IER #16

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV70	240	Aug-09						
WBV71	150	Sep-09						
WBV72	450	Jan-10					1,600	10
WBV73	540	Nov-09					12,750	70
WBV74	600	Nov-09					6,400	30
WBV75	150	Sep-09					140	LT10

2.17 IER #17 – Company Canal Floodwall, Jefferson Parish, Louisiana

The proposed action for IER #17 would provide 100-year level of risk reduction for the Company Canal Floodwall from the Bayou Segnette State Park to the New Westwego Pumping Station. The existing floodwall is approximately 15,000 feet long and includes fronting protection for two pumping stations. A segment of the proposed action is on a new alignment; details of the proposed action are available in the Final IER at www.nolaenvironmental.gov.

Individual contracts included in IER 17 are listed below, and figure 2-17 provides an overview of the projects.

WBV16.2	Bayou Segnette Complex
WBV16b	Segnette PS Fronting Protection and Modifications
WBV20	New Westwego PS Fronting Protection and Modifications
WBV21	Old Westwego PS Fronting Protection and Modifications
WBV22	Westwego Floodwall
WBV24	Segnette State Park Floodwall

Figure 2-17. IER # 17 Project Area

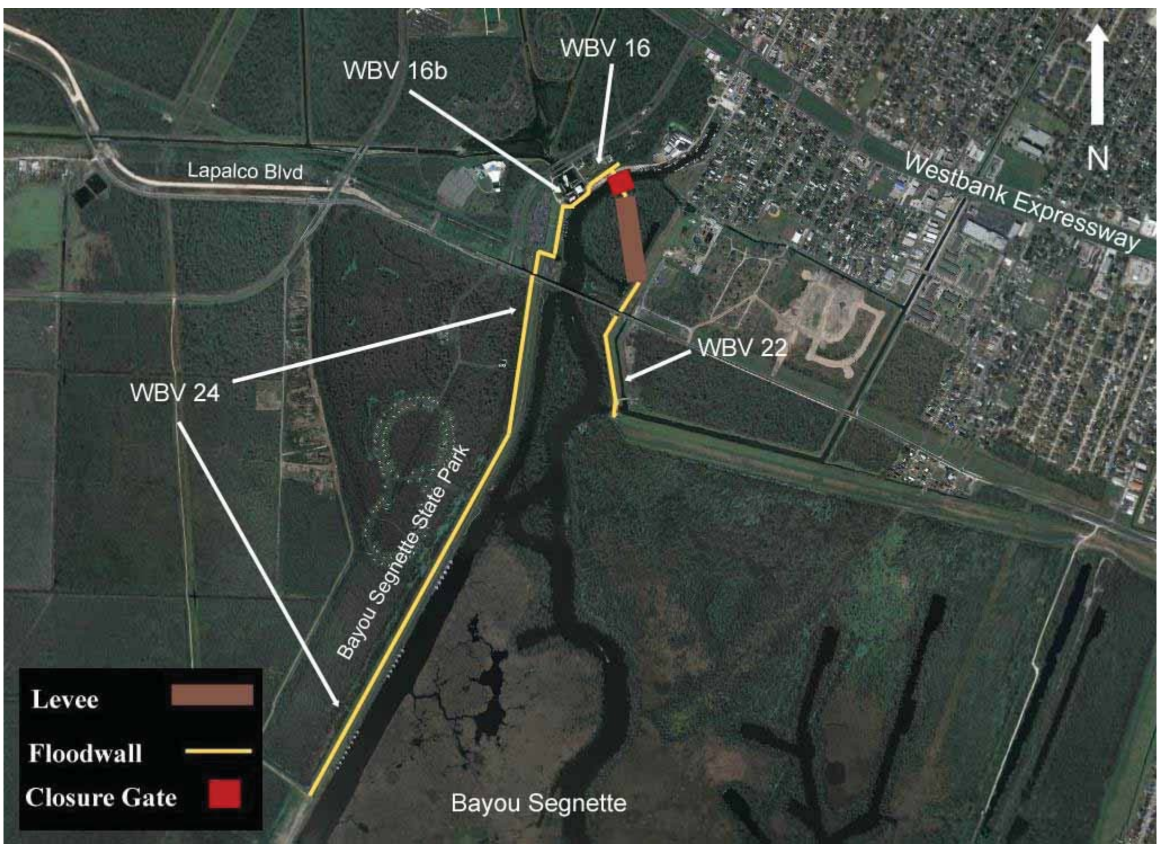


Table 2-17a. Materials Quantities for Construction Reaches in IER #17

Reach	Earthen Fill (CY)	Concrete (CY)	Aggregate (Tons)	Sheet Pile (SF)	H Pile (LF)	Pipe Pile (LF)	Concrete Pile (LF)	Rock (Tons)
WBV16.2	194,000	11,500	17,400	118,200	112,400	2,300		9,700
WBV16b		3,900	5,900	27,200	27,800	8,000		700
WBV20		2,200	3,300	29,700	25,700	1,900		
WBV21		1,100	1,700	24,200	15,000			300
WBV22		3,100	4,700	42,800	73,000		200	1,800
WBV24	45,000	20,000	30,200	350,000	125,000	100,000		

Table 2-17b. Earthen Fill Demand (Cubic Yards) by Project Period in IER #17

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV16.2	610	Feb-10	19,400	100	135,800	670	38,800	190
WBV16b	600	Dec-09						
WBV20	450	Nov-09						
WBV21	400	Nov-09						
WBV22	220	Nov-09						
WBV24	640	Nov-09	4,500	20	31,500	150	9,000	40

Table 2-17c. Steel Demand (Tons) by Project Period in IER #17

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV16.2	610	Feb-10	7,510	40				
WBV16b	600	Dec-09	2,280	10				
WBV20	450	Nov-09	1,860	10				
WBV21	400	Nov-09	1,150	LT10				
WBV22	220	Nov-09	4,100	60				
WBV24	640	Nov-09	18,860	90				

Table 2-17d. Concrete Demand (Cubic Yards) by Project Period in IER #17

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV16.2	610	Feb-10	2,300	10	4,610	20	4,610	20
WBV16b	600	Dec-09	790	LT10	1,570	LT10	1,570	LT10
WBV20	450	Nov-09	440	LT10	880	LT10	880	LT10
WBV21	400	Nov-09	220	LT10	440	LT10	440	LT10
WBV22	220	Nov-09	620	LT10	1,240	20	1,240	20
WBV24	640	Nov-09	4,000	20	8,000	40	8,000	40

Table 2-17e. Aggregate Demand (Tons) by Project Period in IER #17

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV16.2	610	Feb-10	3,480	20	6,960	30	6,960	30
WBV16b	600	Dec-09	1,190	LT10	2,380	10	2,380	10
WBV20	450	Nov-09	660	LT10	1,330	LT10	1,330	LT10
WBV21	400	Nov-09	340	LT10	670	LT10	670	LT10
WBV22	220	Nov-09	930	10	1,870	30	1,870	30
WBV24	640	Nov-09	6,050	30	12,100	60	12,100	60

Table 2-17f. Concrete Pile Demand (Tons) by Project Period in IER #17

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV16.2	610	Feb-10						
WBV16b	600	Dec-09						
WBV20	450	Nov-09						
WBV21	400	Nov-09						
WBV22	220	Nov-09	40	LT10				
WBV24	640	Nov-09						

Table 2-17g. Rock Demand (Tons) by Project Period in IER #17

			First Third		Second Third		Final Third	
Reach	Project Duration	NTP Mo & Yr	Total In Period	Total Per Day	Total In Period	Total Per Day	Total In Period	Total Per Day
WBV16.2	610	Feb-10					9,690	50
WBV16b	600	Dec-09					670	LT10
WBV20	450	Nov-09						
WBV21	400	Nov-09					330	LT10
WBV22	220	Nov-09					1,750	20
WBV24	640	Nov-09						

3 Transportation Alternatives

Both NEPA and the President's Council on Environmental Quality (CEQ) regulations require that the CEMVN consider and evaluate appropriate alternatives to proposed actions that have the potential for significant effects on the environment. Section 102(2)(E) of NEPA provides that all agencies of the Federal Government shall "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." Given the quantities of materials to be moved, the accessibility of different modes of transportation, the origin and destination pairs, and different routes that could be used, thousands of 'alternatives' could be identified and assessed.

While CEMVN is not required to select any particular materials transportation alternative, and the examination of alternatives need not be exhaustive, it must be sufficient to demonstrate reasoned decision making. Four transportation alternatives have been developed to provide a range of meaningfully different alternatives for assessing. They are:

- Maximum Truck Use (3.1),
- Maximum Barge Use (3.2),
- Maximum Rail Use (3.3), and
- The Likely Scenario (3.4)

When considering the differences among the alternatives, bear in mind that the vast majority of all trips necessary to construct the HSRRS are for the transportation of borrow material that is not able to be moved by rail or barge; borrow can only be moved by truck.

The alternatives were developed assuming that the materials movement would still be bound by rational decision-making. For example, when the price of material being transported is low relative to the cost of transportation, barge transportation was assumed (e.g., rock being brought to greater New Orleans).

3.1 Maximum Truck Use

The Maximum Truck Use Scenario assumes that no material will be moved by any transportation mode other than truck. Assumptions used in the assignment of materials origins are described below.

3.1.1 Earthen Fill

Trucks would be used to haul earthen fill from assigned government-furnished borrow sites designated by CEMVN (USACE, 2009) to construction sites (roughly 21 million CY). Contractor furnished earthen fill (roughly 9 million CY) cannot be assigned to specific construction projects until those contracts are awarded. Therefore, the contractor furnished earthen fill was assumed to be truck hauled 28.3 miles one-way.[5, 6]

3.1.2 Steel

Under maximum truck use, all Sheet Pile, H-Pile, and Pipe Pile would be shipped by truck from the manufacturing facility to the powder-coating facility, and then to construction sites. Sheetpile was assumed to originate in Petersburg, Virginia and Blytheville, Arkansas shipped directly to New Orleans, LA by truck (an average of the distances from both origins was used). H-pile and Pipe Pile were assumed to be shipped via truck from Blytheville, Arkansas.[7]

3.1.3 Concrete and Aggregate

Under maximum truck use, the contracts requiring less than 25,000 CY of concrete would have the aggregate trucked from Covington, Louisiana and Bogalusa, Louisiana to local ready-mix plants.[8] Ready-mix concrete would then be supplied by truck from major local ready-mix plants closest to the project. For contracts requiring more than 25,000 CY of concrete, it was assumed that batch plants would be used at the construction sites. In these cases, aggregate would be trucked directly to the batch plants from Covington, Louisiana and Bogalusa, Louisiana.

3.1.4 Stone

Under maximum truck use, all stone and rock would be trucked to construction sites in New Orleans from Pine Bluff, Arkansas.[9]

---

[5] Distance based on the median distance from the 24 contractor furnished sites in IERs 19, 23, 26, 29, and 30 to center city New Orleans using Google Maps.

[6] These miles traveled are included in total miles, for use in estimating emissions and accident rates. These vehicle trips cannot be routed or included in the congestion modeling because “origin-destination” pairings cannot be assigned until the contracts are issued. However, an escalation factor will be applied to the congestion modeling in order to estimate the effects of the contractor furnished trips.

[7] The analyses assumed the use of sheetpile suppliers from Blytheville, AR and Petersburg, VA that had provided specialty sheetpile to CEMVN for initial HSDRRS construction projects. Although the supply of other types of steel products (e.g., H-pile, pipe pile) could come from a myriad of other locations, for the purpose of analysis, it was assumed that all steel products would originate from Blytheville, AR and Petersburg, VA. While this simplification may not reflect the distances for these steel products outside of the greater New Orleans area, local miles traveled for the delivery of steel within greater New Orleans has been accurately assessed.

[8] At the time of this analysis, the majority of aggregate used for concrete in initial HSDRRS construction projects was provided from facilities in or near Covington, Louisiana and Bogalusa, Louisiana.

[9] At the time of this analysis, the majority of stone and rock used for initial HSDRRS construction projects originated from Pine Bluff, AR.

3.1.5 Concrete Pile

Under maximum truck use, all Concrete Pile would be trucked directly to construction sites from Pass Christian, Mississippi.

3.1.6 Maximum Truck Use - Miles Traveled By Mode and Material

Tables 3-1 to 3-5 provide summary information on miles, trips, and mode of transportation used to transport materials to project sites. These tables are:

- Table 3-1: Maximum Truck Use - Miles Traveled By Mode and Material shows local and non-local round-trip miles required to deliver project materials. Local and non-local miles are provided for each material class.
- Table 3-2. Maximum Truck Use - Trips By Mode and Material shows the total number of trips required to deliver project materials. Trips are provided for each material class.
- Table 3-3. Summary of Local Truck Miles By IER parses the local miles data provided in table 3-1, aggregated to the IER level.
- Table 3-4. Summary Table of Non-Local Truck Miles By IER parses the non-local miles data provided in table 3-1, aggregated to the IER level.
- Table 3-5. Summary Table of Miles By Mode of Transportation shows the number of local truck miles, non-local truck miles, barge miles, and rail miles incurred in the transportation of project materials. These data also are aggregated to the IER level.

In addition to the tables, figures 3-1, 3-2, and 3-3 graphically depict the magnitude of, and differences between, truck miles, truck trips, and delivery timing for all materials included in the analysis.

Figure 3-1 Truck Miles Traveled shows both local and non-local truck round trip miles traveled for the delivery of materials to project sites. Data used to generate this figure are directly traceable to table 3-1. As shown in the figure, the local miles traveled for the delivery of earthen fill, or borrow (over 57 million miles), vastly outnumber the local miles traveled for the delivery of all other project materials. In this scenario, non-local miles traveled for the delivery of steel also are significant, at a total of nearly 48 million miles.

Figure 3-2 Truck Trips shows all truck trips summarized by material. Data used to generate this figure are directly traceable to table 3-2. As shown in the figure, the number of borrow deliveries (over 2 million) is significantly higher than the number of deliveries for all other materials combined (approximately 310,000).

Figure 3-3 Truck Trips Distributed Across Schedule shows truck deliveries per day for all project materials distributed across a master schedule, beginning on 1 January 2009. The distribution of truck trips across the schedule is based on:

- individual project Notice to Proceed date;
- individual project expected construction duration; and
- individual project sequencing of demand timing for materials (see introduction to section 2 for a discussion of the separation of materials demand schedule separation).

The figure shows daily borrow deliveries of:

- over 1,000 for 100 weeks;
- over 2,000 for 60 weeks;
- over 3,000 for 40 weeks; and
- over 4,000 for 10 weeks.

Figure 3-3 also depicts the magnitude of the differences between the number of borrow deliveries and the number of deliveries for all other materials combined.

Table 3-1. Maximum Truck Use - Miles Traveled By Mode and Material

	Quantity	Units	Truck Miles (Local)	Truck Miles (Non-Local)	Barge Miles	Train Miles
Borrow (trucked)	29,616,300	CY	57,270,000			
Steel Sheet Pile (trucked)	338,300	Tons	1,116,900	24,061,900		
Steel H-Pile (trucked)	434,000	Tons	1,493,300	20,429,000		
Steel Pipe Pile (trucked)	67,200	Tons	237,800	3,165,900		
Steel (SP,HP,PP barged to project site)		Tons				
Steel (SP,HP,PP barged & intermodal)		Tons				
Steel (SP,HP,PP by rail & intermodal)		Tons				
Concrete Pile (trucked)	281,300	Tons	697,300	1,327,700		
Concrete Pile (barged to project site)		Tons				
Concrete Pile (barged & intermodal)		Tons				
Concrete Pile (by rail & intermodal)		Tons				
Ready-Mix Concrete	283,500	CY	408,100			
On-Site Batch Concrete	854,300	CY				
Aggregate (barged to project batch plants)		Tons				
Aggregate (barged to suppliers)		Tons				
Trucked: suppliers to ready-mix plants						
Trucked: suppliers to project						
Aggregate (by rail to suppliers)		Tons				
Trucked: suppliers to ready-mix plants						
Trucked: suppliers to project						
Aggregate (trucked to project)	2,878,500	Tons	4,000,600	4,353,800		
Aggregate (trucked to ready-mix plants)	428,700	Tons	670,600	232,400		
Rock (barged to project site)		Tons				
Rock (barged & intermodal)		Tons				
Rock (by rail & intermodal)		Tons				
Rock (trucked to project site)	1,733,200	Tons	2,381,700	28,579,100		
TOTAL MILES			68,276,300	82,149,800		

Table 3-2. Maximum Truck Use - Trips By Mode and Material

	Quantity	Units	Truck Trips	Barge Trips	Train Trips
Borrow (trucked)	29,616,300	CY	2,042,500		
Steel Sheet Pile (trucked)	338,300	Tons	16,900		
Steel H-Pile (trucked)	434,000	Tons	21,700		
Steel Pipe Pile (trucked)	67,200	Tons	3,400		
Steel (SP,HP,PP barged to project site)		Tons			
Steel (SP,HP,PP barged & intermodal)		Tons			
Steel (SP,HP,PP by rail & intermodal)		Tons			
Concrete Pile (trucked)	281,300	Tons	14,100		
Concrete Pile (barged to project site)		Tons			
Concrete Pile (barged & intermodal)		Tons			
Concrete Pile (by rail & intermodal)		Tons			
Ready-Mix Concrete	283,500	CY	28,400		
On-Site Batch Concrete	854,300	CY			
Aggregate (barged to project batch plants)		Tons			
Aggregate (barged to suppliers)		Tons			
Trucked from suppliers to ready-mix plants					
Trucked from suppliers to project					
Aggregate (by rail to suppliers)		Tons			
Trucked from suppliers to ready-mix plants					
Trucked from suppliers to project					
Aggregate (trucked to project)	2,878,500	Tons	127,900		
Aggregate (trucked to ready-mix plants)	428,700	Tons	19,100		
Rock (barged to project site)		Tons			
Rock (barged & intermodal)		Tons			
Rock (by rail & intermodal)		Tons			
Rock (trucked to project site)	1,733,200	Tons	77,000		
TOTAL TRIPS			2,351,000		

Figure 3-1 Truck Miles Traveled – Maximum Truck Scenario

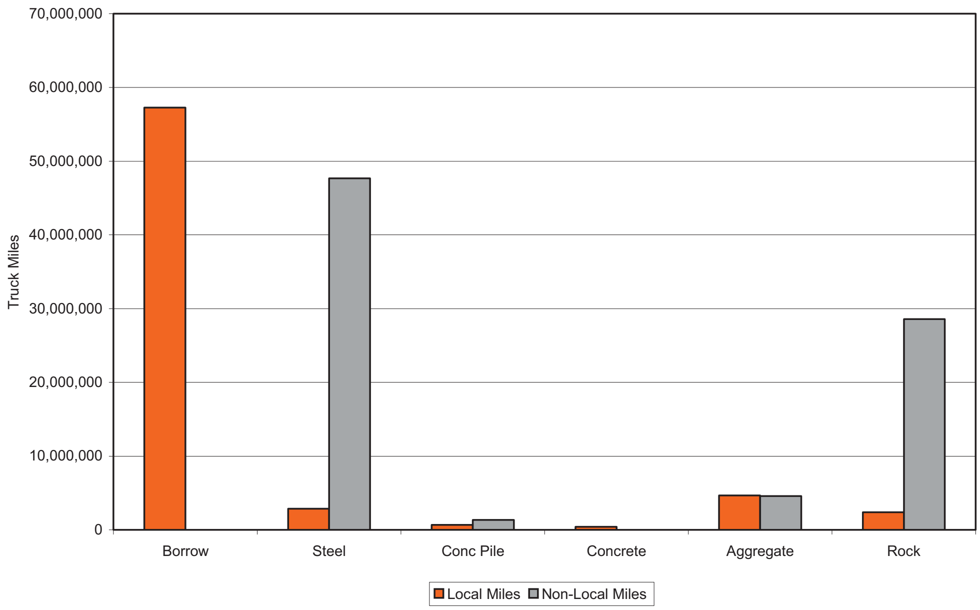


Figure 3-2 Truck Trips – Maximum Truck Scenario

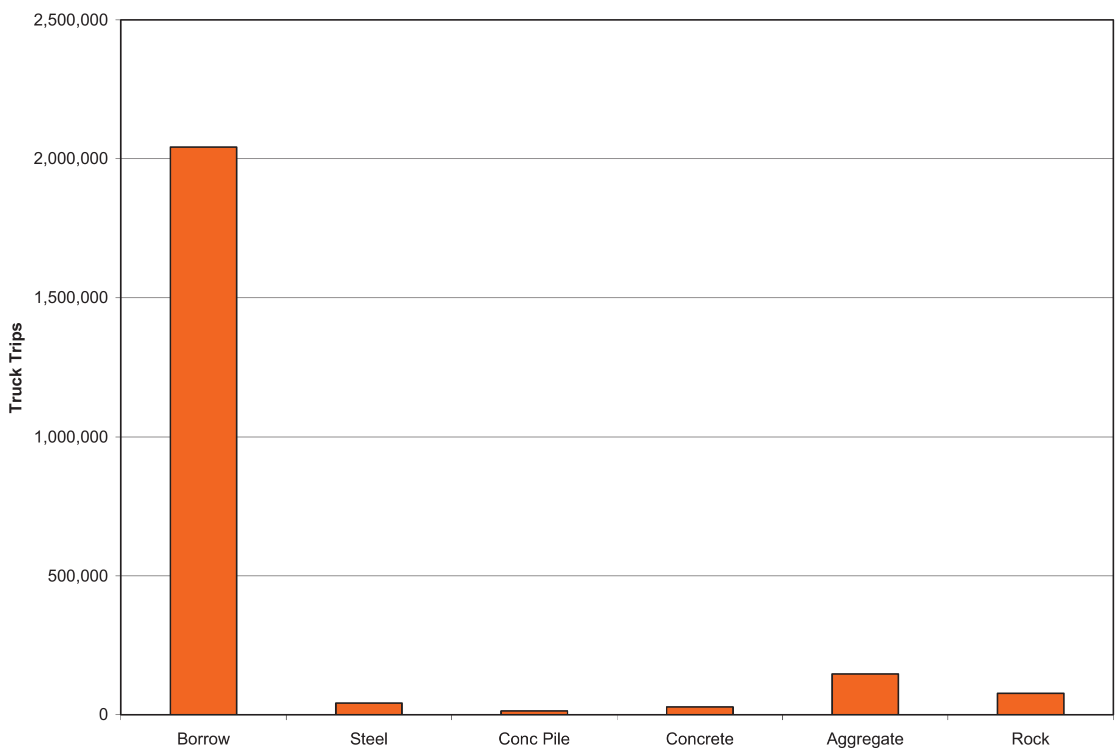


**Figure 3-3 Truck Trips Distributed Across Schedule
Maximum Truck Scenario**

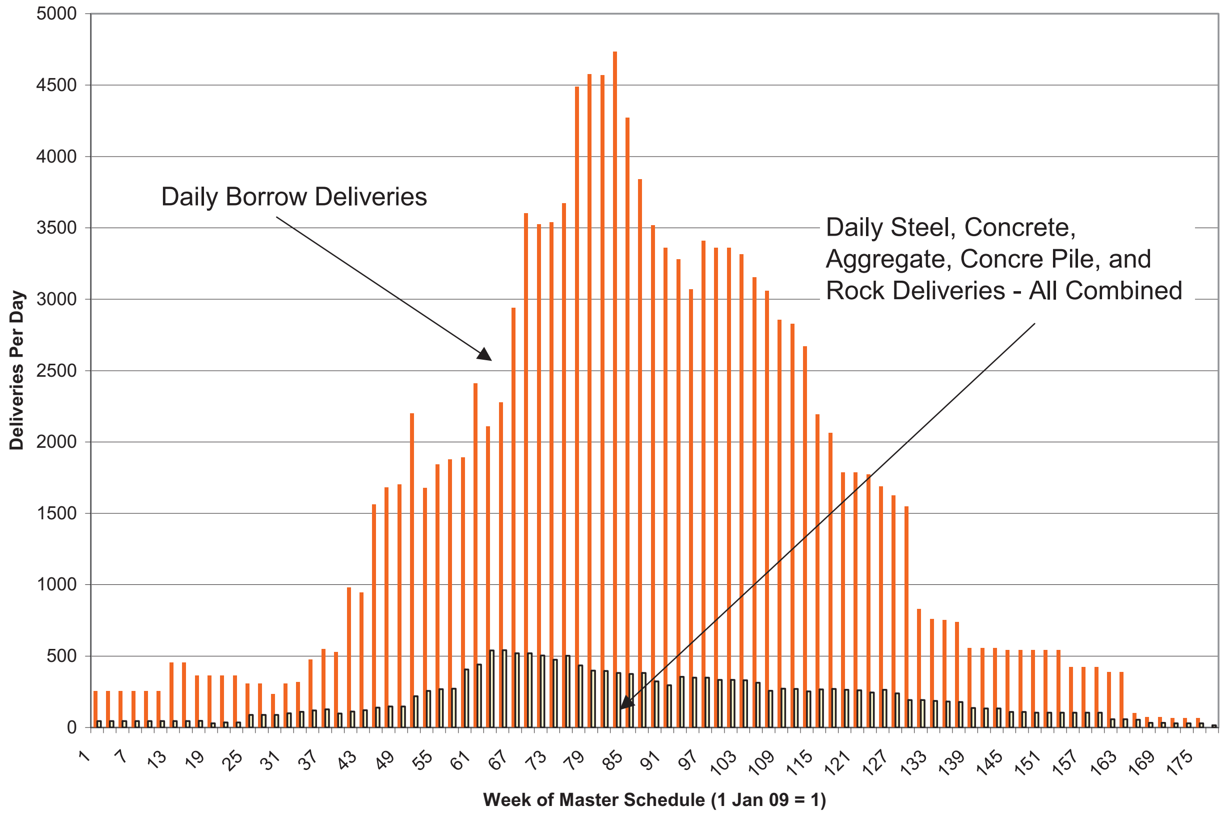


Table 3-3. Summary Table of Local Truck Miles By IER Maximum Truck Use

IER	Earthen Fill Truck Miles Local	Steel Truck Miles Local	Conc Pile Truck Miles Local	Concrete Truck Miles Local	Aggregate Truck Miles Local	Rock Truck Miles Local	Total Truck Miles Local
1	2,764,800	32,720		16,270	60,740		2,874,530
2	305,600	128,350			483,200	58,980	976,130
3	1,604,400	38,680	97,480	3,770	102,090	431,890	2,278,310
4	1,376,900	34,220	14,030	34,340	60,530	1,890	1,521,910
5		50,230		16,120	26,140		92,490
6	323,600	224,460		27,080	100,800	127,850	803,790
7	20,465,100	18,830		18,810	34,310	198,400	20,735,450
8	800	16,370		7,630	35,200	20,590	80,590
9	139,700	24,180		37,240	28,390		229,510
10	7,134,800	1,205,560	16,310	23,740	1,107,240	549,000	10,036,650
11		139,140	148,900		269,970	563,060	1,121,070
12	1,702,000	733,660	233,490	129,430	1,067,510	377,610	4,243,700
13	2,680,200	21,720		15,160	11,830	1,670	2,730,580
14	4,497,000	26,730	110,250	14,740	25,490	3,780	4,677,990
15	2,013,800	14,060		10,380	11,030		2,049,270
16	11,961,900	20,710	76,740	29,650	1,096,410	26,640	13,212,050
17	299,100	118,460	130	23,710	150,320	20,360	612,080
Total	57,269,700	2,848,080	697,330	408,070	4,671,200	2,381,720	68,276,100

Table 3-4. Summary Table of Non-Local Truck Miles By IER Maximum Truck Use

IER	Earthen Fill Truck Miles Non-Local	Steel Truck Miles Non-Local	Conc Pile Truck Miles Non-Local	Concrete Truck Miles Non-Local	Aggregate Truck Miles Non-Local	Rock Truck Miles Non-Local	Total Truck Miles Non-Local
1		1,015,300			21,050		1,036,350
2		3,946,180			164,210	1,446,080	5,556,470
3		967,360	177,980		47,630	8,876,950	10,069,920
4		712,920	28,640		20,970	29,120	791,650
5		1,090,440			9,060		1,099,500
6		4,353,000			253,470	1,319,110	5,925,580
7		445,920			11,890	2,037,040	2,494,850
8		245,680			12,200	217,930	475,810
9		312,780			9,840		322,620
10		16,974,780	24,420		1,743,080	4,566,770	23,309,050
11		1,832,780	587,060		974,190	5,428,140	8,822,170
12		12,459,340	280,050		1,237,850	4,056,950	18,034,190
13		268,020			4,100	13,850	285,970
14		449,080	138,390		8,840	37,540	633,850
15		224,420			3,820		228,240
16		384,060	90,990		13,360	344,580	832,990
17		1,974,780	190		50,700	205,000	2,230,670
Total		47,656,840	1,327,720		4,586,260	28,579,060	82,149,880

Table 3-5. Summary Table of Miles By Mode of Transportation Maximum Truck Use

IER	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles	Total Rail Miles	Total Miles
1	2,874,600	1,036,350			3,910,950
2	976,100	5,556,470			6,532,570
3	2,278,300	10,069,920			12,348,220
4	1,521,900	791,650			2,313,550
5	92,500	1,099,500			1,192,000
6	803,900	5,925,580			6,729,480
7	20,735,400	2,494,850			23,230,250
8	80,600	475,810			556,410
9	229,500	322,620			552,120
10	10,036,700	23,309,050			33,345,750
11	1,121,100	8,822,170			9,943,270
12	4,243,900	18,034,190			22,278,090
13	2,730,600	285,970			3,016,570
14	4,678,200	633,850			5,312,050
15	2,049,300	228,240			2,277,540
16	13,212,100	832,990			14,045,090
17	612,000	2,230,670			2,842,670
Total	68,276,700	82,149,880			150,426,580

3.2 Maximum Barge Use

The Maximum Barge Use Scenario routes materials from their point of origin to greater New Orleans on barges to the extent that such an assumption is reasonable. For all materials other than borrow, this assumption is valid in this scenario. That said, trucks remain a major mode of transportation under this scenario, even for materials shipped on barges. This is because many projects do not have direct water access, and materials would need to be transported from a New Orleans marine terminal to the project site via truck. Those projects with direct water access would receive materials (other than borrow) delivered directly by barge.

3.2.1 Earthen Fill

Trucks would be used to haul earthen fill from assigned government-furnished borrow sites designated by CEMVN (USACE, 2009) to construction sites (roughly 21 million CY). Contractor furnished earthen fill (roughly 9 million CY) cannot be assigned to specific construction projects until those contracts are awarded. Therefore, the contractor furnished earthen fill was assumed to be truck hauled 28.3 miles one-way.[10, 11]

3.2.2 Steel

Under the maximum barge use alternative, steel would be shipped by barge from Blytheville, Arkansas to destinations within greater New Orleans. Sheet Pile, H-Pile, and Pipe Pile supplied to contracts with direct water access to offload steel to construction sites (e.g., Chalmette Loop, IHNC, Harvey Canal) would be shipped from Blytheville, Arkansas directly to the construction site by barge. For maximum barge use, the Sheet Pile, H-pile and Pipe Pile for all other contracts would be shipped by barge from Blytheville, Arkansas to New Orleans marine terminals and unloaded for local truck delivery to the project sites.

3.2.3 Concrete and Aggregate

Under maximum barge use, it was assumed that projects that require less than 25,000 CY of concrete would be supplied by existing major local ready-mix plants. For these projects, the aggregate was assumed to be shipped by barge from Smithland, Kentucky to New Orleans marine terminals, unloaded onto trucks and driven to the local ready-mix plants. Once blended, the ready-mix concrete would then be driven to the construction project.

When construction contracts require more than 25,000 CY of concrete, new batch plants were assumed to be established at the project site. Contracts with direct water access were assumed to receive aggregate via barge from Smithland, Kentucky and blended with cement and water at the site. Those contracts needing more than 25,000 CY of concrete, but without direct water access were assumed to receive aggregate via truck from New Orleans marine terminals after barge transport from Smithland, Kentucky.

---

[10] Distance based on the median distance from the 24 contractor furnished sites in IERs 19, 23, 26, 29, and 30 to center city New Orleans using Google Maps.

[11] These miles traveled are included in total miles, for use in estimating emissions and accident rates. These vehicle trips cannot be routed or included in the congestion modeling because “origin-destination” pairings cannot be assigned until the contracts are issued. However, an escalation factor will be applied to the congestion modeling in order to estimate the effects of the contractor furnished trips.

3.2.4 Stone

Under the maximum barge use alternative, stone would be shipped by barge to New Orleans from Pine Bluff, Arkansas. If direct water access to the construction project is available, rock would be barged directly to the site. All stone necessary for the foreshore protection projects on Lake Pontchartrain would be shipped by light-loaded 500-TON barges directly to the project.

If no direct water access is available at the construction project, stone would be barged from Pine Bluff, Arkansas to a New Orleans marine terminal, offloaded onto trucks and then trucked to the construction site.

3.2.5 Concrete Pile

Under the maximum barge use alternative, concrete pile would be shipped with barge from Pass Christian, Mississippi to projects with direct water access and offloaded at construction sites (e.g., Chalmette Loop, IHNC, Harvey Canal). Concrete pile for those projects without direct water access would be shipped by barge to a local New Orleans marine terminal for local delivery by truck.

3.2.6 Maximum Barge Use - Miles Traveled By Mode and Material

Tables 3-6 to 3-10 provide summary information on miles, trips, and mode of transportation used to transport materials to project sites. These tables are:

- Table 3-6: Maximum Barge Use - Miles Traveled By Mode and Material shows local and non-local round-trip miles required to deliver project materials. Local and non-local miles are provided for each material class. Table 3-6 also includes tons of each type of material shipped by barge directly to the project site, as well as tons of each type of material shipped to a marine terminal for off-loading onto trucks for final delivery to the project site.
- Table 3-7. Maximum Barge Use - Trips By Mode and Material shows the total number of trips required to deliver project materials. Trips are provided for each material class, by each mode of transportation.
- Table 3-8. Summary Table of Local Truck Miles By IER parses the local miles data provided in table 3-6, aggregated to the IER level. It is important to note that local truck miles will remain significant, even with barge delivery of all materials other than borrow.
- Table 3-9. Summary Table of Non-Local Truck Miles By IER parses the non-local truck miles data provided in table 3-6, aggregated to the IER level. Under this alternative, as shown in the table, non-local truck miles for all materials is zero.
- Table 3-10. Summary Table of Miles By Mode of Transportation shows the number of local truck miles, non-local truck miles, barge miles, and rail miles incurred in the transportation of project materials. These data also are aggregated to the IER level.

In addition to the tables, figures 3-4, 3-5, and 3-6 graphically depict the magnitude of, and differences between, truck miles, truck trips, and delivery timing for all materials included in the analysis.

Figure 3-4 Truck Miles Traveled shows both local and non-local truck round trip miles traveled for the delivery of materials to project sites. Non-local truck miles are zero for all materials.

Data used to generate this figure are directly traceable to table 3-6. As shown in the figure, the local miles traveled for the delivery of earthen fill, or borrow (over 57 million miles), vastly outnumber the local miles traveled for the delivery of all other project materials.

Figure 3-5 Truck Trips shows all truck trips summarized by material. Data used to generate this figure are directly traceable to table 3-7. As shown in the figure, the number of borrow deliveries (over 2 million) is significantly higher than the number of deliveries for all other materials combined (approximately 150,000).

Figure 3-6 Truck Trips Distributed Across Schedule shows truck deliveries per day for all project materials distributed across a master schedule, beginning on 1 January 2009. The distribution of truck trips across the schedule is based on:

- individual project Notice to Proceed date;
- individual project expected construction duration; and
- individual project sequencing of demand timing for materials (see introduction to section 2 for a discussion of the separation of materials demand schedule separation).

The figure shows daily borrow deliveries of:

- over 1,000 for 100 weeks;
- over 2,000 for 60 weeks;
- over 3,000 for 40 weeks; and
- over 4,000 for 10 weeks.

Figure 3-6 also depicts the magnitude of the differences between the number of borrow deliveries and the number of deliveries for all other materials combined.

Table 3-6. Maximum Barge Use - Miles Traveled By Mode and Material

	Quantity	Units	Truck Miles (Local)	Truck Miles (Non-Local)	Barge Miles	Train Miles
Borrow (trucked)	29,616,300	CY	57,270,000			
Steel Sheet Pile (trucked)		Tons				
Steel H-Pile (trucked)		Tons				
Steel Pipe Pile (trucked)		Tons				
Steel (SP,HP,PP barged to project site)	571,200	Tons			96,600	
Steel (SP,HP,PP barged & intermodal)	268,400	Tons	401,900		72,400	
Steel (SP,HP,PP by rail & intermodal)		Tons				
Concrete Pile (trucked)		Tons				
Concrete Pile (barged to project site)	229,000	Tons			4,800	
Concrete Pile (barged & intermodal)	52,300	Tons	49,300		500	
Concrete Pile (by rail & intermodal)		Tons				
Ready-Mix Concrete	283,500	CY	408,100			
On-Site Batch Concrete	854,300	CY				
Aggregate (barged to project batch plants)	1,219,600	Tons			203,300	
Aggregate (barged to suppliers)	500,800	Tons			153,900	
Trucked: suppliers to ready-mix plants			294,500			
Trucked: suppliers to project			38,700			
Aggregate (by rail to suppliers)		Tons				
Trucked: suppliers to ready-mix plants						
Trucked: suppliers to project						
Aggregate (trucked to project)	1,586,800	Tons	1,057,900			
Aggregate (trucked to ready-mix plants)		Tons				
Rock (barged to project site)	1,537,300	Tons			185,200	
Rock (barged & intermodal)	195,900	Tons	142,200		16,100	
Rock (by rail & intermodal)		Tons				
Rock (trucked to project site)		Tons				
TOTAL MILES			59,662,600		732,800	

Table 3-7. Maximum Barge Use - Trips By Mode and Material

	Quantity	Units	Truck Trips	Barge Trips	Train Trips
Borrow (trucked)	29,616,300	CY	2,042,500		
Steel Sheet Pile (trucked)		Tons			
Steel H-Pile (trucked)		Tons			
Steel Pipe Pile (trucked)		Tons			
Steel (SP,HP,PP barged to project site)	571,200	Tons		68	
Steel (SP,HP,PP barged & intermodal)	268,400	Tons	13,400	51	
Steel (SP,HP,PP by rail & intermodal)		Tons			
Concrete Pile (trucked)		Tons			
Concrete Pile (barged to project site)	229,000	Tons		58	
Concrete Pile (barged & intermodal)	52,300	Tons	2,600	6	
Concrete Pile (by rail & intermodal)		Tons			
Ready-Mix Concrete	283,500	CY	28,400		
On-Site Batch Concrete	854,300	CY			
Aggregate (barged to project batch plants)	1,219,600	Tons		107	
Aggregate (barged to suppliers)	500,800	Tons		81	
Trucked from suppliers to ready-mix plants			19,100		
Trucked from suppliers to project			3,200		
Aggregate (by rail to suppliers)		Tons			
Trucked from suppliers to ready-mix plants					
Trucked from suppliers to project					
Aggregate (trucked to project)	1,586,800	Tons	70,500		
Aggregate (trucked to ready-mix plants)		Tons			
Rock (barged to project site)	1,537,300	Tons		322	
Rock (barged & intermodal)	195,900	Tons	8,700	28	
Rock (by rail & intermodal)		Tons			
Rock (trucked to project site)		Tons			
TOTAL TRIPS			2,188,400	721	

Figure 3-4 Truck Miles Traveled – Maximum Barge Scenario

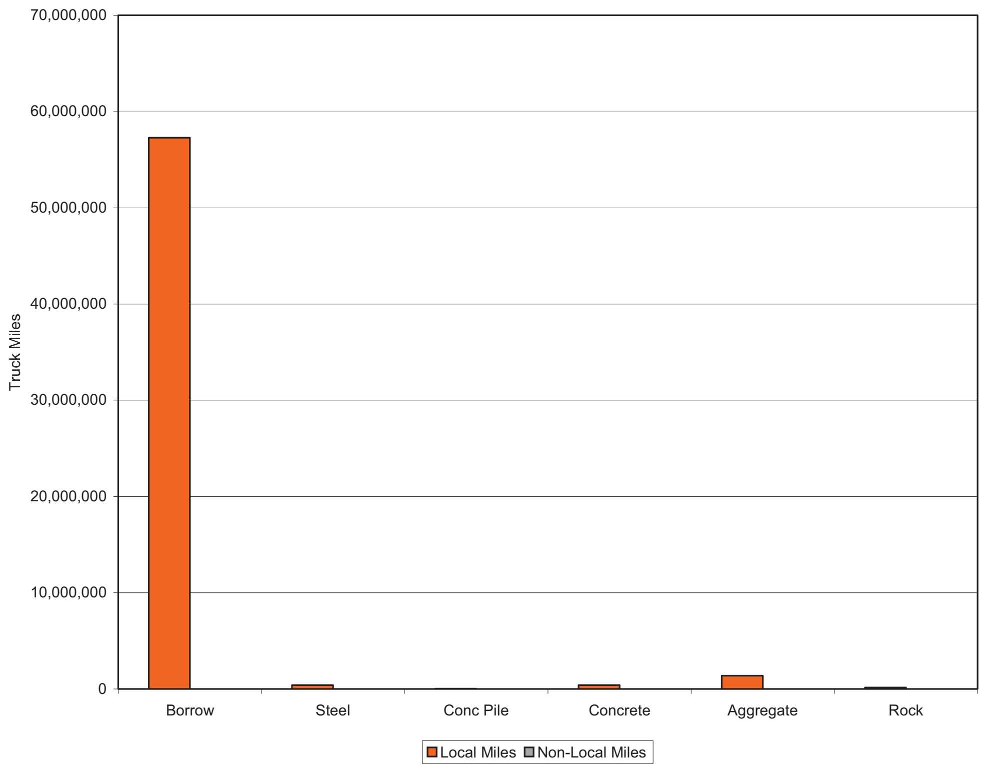


Figure 3-5 Truck Trips – Maximum Barge Scenario

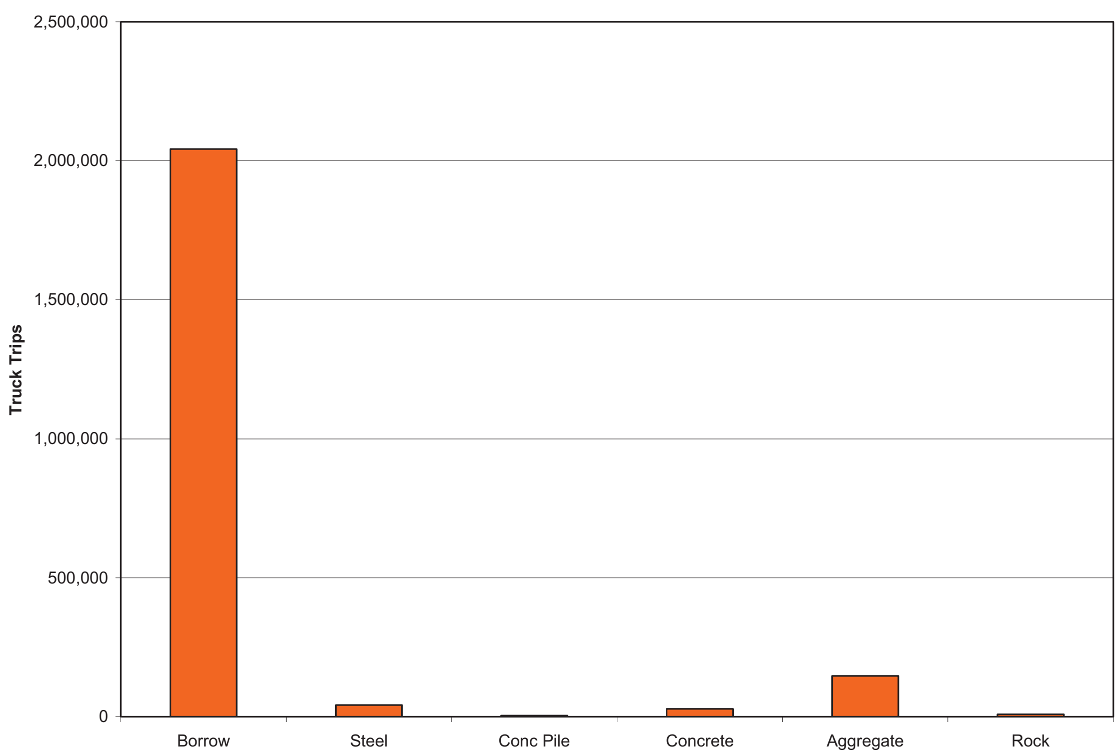


Figure 3-6 Truck Trips Distributed Across Schedule
Maximum Barge Scenario

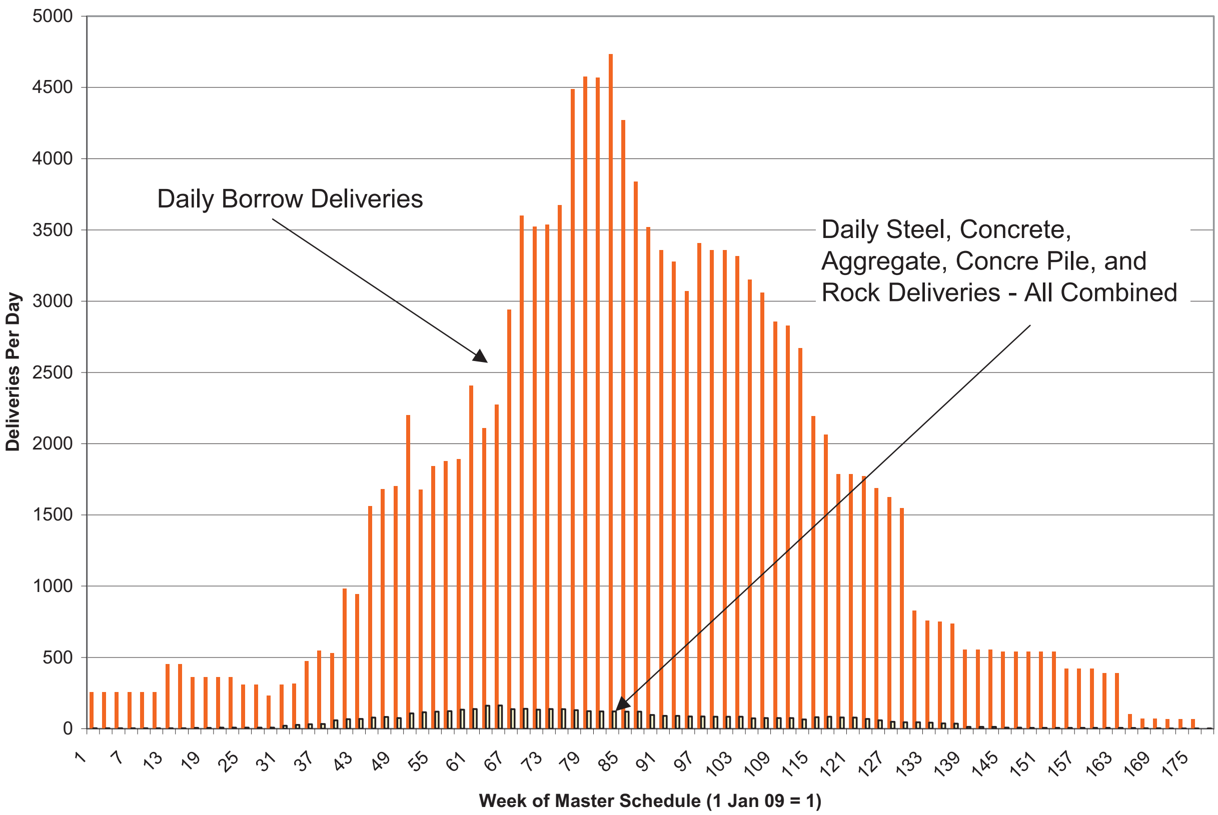


Table 3-8. Summary Table of Local Truck Miles By IER Maximum Barge Use

IER	Earthen Fill Truck Miles Local	Steel Truck Miles Local	Conc Pile Truck Miles Local	Concrete Truck Miles Local	Aggregate Truck Miles Local	Rock Truck Miles Local	Total Truck Miles Local
1	2,764,800	30,360		16,270	26,680		2,838,110
2	305,600	137,050				70,290	512,940
3	1,604,400	17,990	26,790	3,770	28,020	44,410	1,725,380
4	1,376,900	15,240		34,340	26,580		1,453,060
5				16,120	11,480		27,600
6	323,600	147,630		27,080	22,260		520,570
7	20,465,100	16,060		18,810	15,060		20,515,030
8	800			7,630	15,460		23,890
9	139,700			37,240	12,470		189,410
10	7,134,800			23,740	5,910		7,164,450
11							
12	1,702,000			129,430	94,930		1,926,360
13	2,680,200	8,740		15,160	5,190		2,709,290
14	4,497,000	4,710	22,530	14,740	11,200	1,520	4,551,700
15	2,013,800	4,450		10,380	4,840		2,033,470
16	11,961,900	7,320		29,650	1,074,800	21,550	13,095,220
17	299,100	12,320		23,710	36,210	4,460	375,800
Total	57,269,700	401,870	49,320	408,070	1,391,090	142,230	59,662,280

Table 3-9. Summary Table of Non-Local Truck Miles By IER Maximum Barge Use

IER	Earthen Fill Truck Miles Non-Local	Steel Truck Miles Non-Local	Conc Pile Truck Miles Non-Local	Concrete Truck Miles Non-Local	Aggregate Truck Miles Non-Local	Rock Truck Miles Non-Local	Total Truck Miles Non-Local
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Table 3-10. Summary Table of Miles By Mode of Transportation Maximum Barge Use

IER	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles	Total Rail Miles	Total
1	2,838,000		23,240		2,861,240
2	512,900		39,240		552,140
3	1,725,400		82,210		1,807,610
4	1,453,100		17,900		1,471,000
5	27,600		6,640		34,240
6	520,500		40,980		561,480
7	20,515,000		30,140		20,545,140
8	23,900		6,950		30,850
9	189,400		5,220		194,620
10	7,164,500		147,290		7,311,790
11			92,070		92,070
12	1,926,300		172,750		2,099,050
13	2,709,300		3,900		2,713,200
14	4,551,800		16,410		4,568,210
15	2,033,500		3,320		2,036,820
16	13,095,200		15,160		13,110,360
17	375,900		29,440		405,340
Total	59,662,300		732,860		60,395,160

3.3 Maximum Rail Use

The Maximum Rail Use Scenario routes materials from their point of origin to greater New Orleans on rail cars to the extent that such an assumption is reasonable. For all materials other than borrow, this assumption is reasonable in this scenario. Like the maximum barge use alternative, trucks remain a major mode of transportation under this scenario because none of the projects have direct rail access, and materials would need to be transported from a New Orleans rail terminal to the project site via truck.

3.3.1 Earthen Fill

Trucks would be used to haul earthen fill from assigned government-furnished borrow sites designated by CEMVN (USACE, 2009) to construction sites (roughly 21 million CY). Contractor furnished earthen fill (roughly 9 million CY) cannot be assigned to specific construction projects until those contracts are awarded. Therefore, the contractor furnished earthen fill was assumed to be truck hauled 28.3 miles one-way.[12, 13]

3.3.2 Steel

Under maximum rail use, Sheet Pile, H-Pile, and Pipe Pile would be shipped by rail from Blytheville, Arkansas to rail yards within New Orleans. At the rail yards, the steel would be unloaded onto trucks and then trucked to construction projects.

3.3.3 Aggregate

Under the maximum rail use alternative, construction contracts requiring less than 25,000 CY of concrete would be supplied by major local ready-mix plants. For those projects, aggregate would be shipped to New Orleans by rail from Covington, Louisiana and Bogalusa, Louisiana, offloaded at the nearest rail yard, and trucked to the local ready-mix plants. Once blended, the ready-mix concrete would then be driven to the construction project.

For contracts requiring more than 25,000 CY of concrete, new batch plants were assumed to be constructed at the project site. For those projects, aggregate would be shipped to New Orleans by rail from Covington, Louisiana and Bogalusa, Louisiana, offloaded at the nearest rail yard, then trucked to the project batch plant and blending into ready-mix concrete at the site.

3.3.4 Stone

Under the maximum rail alternative, all stone needed for the foreshore protection on Lake Pontchartrain would be shipped from Pine Bluff, AR by 500 TON barges directly to the project (all LPV levee foreshore protection projects). All other rock would be shipped by rail to New Orleans from Pine Bluff, AR offloaded at rail yards, loaded onto trucks and then trucked to the construction sites for local delivery.

[12] Distance based on the median distance from the 24 contractor furnished sites in IERs 19, 23, 26, 29, and 30 to center city New Orleans using Google Maps.
[13] These miles traveled are included in total miles, for use in estimating emissions and accident rates. These vehicle trips cannot be routed or included in the congestion modeling because “origin-destination” pairings cannot be assigned until the contracts are issued. However, an escalation factor will be applied to the congestion modeling in order to estimate the effects of the contractor furnished trips.

3.3.5 Concrete Pile

Under the maximum rail alternative, concrete pile supplied to contracts with direct water access and offloaded at construction sites (e.g., Chalmette Loop, IHNC, Harvey Canal) would be shipped from Pass Christian, Mississippi by barge. All other concrete pile would be shipped by train from Pass Christian, Mississippi to a New Orleans rail terminal for local delivery by truck.

3.3.6 Maximum Rail Use - Miles Traveled By Mode and Material

Tables 3-11 to 3-15 provide summary information on miles, trips, and mode of transportation used to transport materials to project sites. These tables are:

- Table 3-11: Maximum Rail Use - Miles Traveled By Mode and Material shows local and non-local round-trip miles required to deliver project materials. Local and non-local miles are provided for each material class. Table 3-11 also includes tons of each type of material shipped by barge directly to the project site, as well as tons of each type of material shipped to a rail terminal for off-loading onto trucks for final delivery to the project site.
- Table 3-12. Maximum Rail Use - Trips By Mode and Material shows the total number of trips required to deliver project materials. Trips are provided for each material class, by each mode of transportation.
- Table 3-13. Summary Table of Local Truck Miles By IER parses the local miles data provided in table 3-6, aggregated to the IER level. It is important to note that local truck miles will remain significant, even with barge and rail delivery of all materials other than borrow.
- Table 3-14. Summary Table of Non-Local Truck Miles By IER parses the non-local truck miles data provided in table 3-11, aggregated to the IER level. Under this alternative, as shown in the table, non-local truck miles for all materials is zero.
- Table 3-15. Summary Table of Miles By Mode of Transportation shows the number of local truck miles, non-local truck miles, barge miles, and rail miles incurred in the transportation of project materials. These data also are aggregated to the IER level.

In addition to the tables, figures 3-7, 3-8, and 3-9 graphically depict the magnitude of, and differences between, truck miles, truck trips, and delivery timing for all materials included in the analysis.

Figure 3-7 Truck Miles Traveled shows both local and non-local truck round trip miles traveled for the delivery of materials to project sites. Non-local truck miles are zero for all materials. Data used to generate this figure are directly traceable to table 3-11. As shown in the figure, the local miles traveled for the delivery of earthen fill, or borrow (over 57 million miles), vastly outnumber the local miles traveled for the delivery of all other project materials.

Figure 3-8 Truck Trips shows all truck trips summarized by material. Data used to generate this figure are directly traceable to table 3-12. As shown in the figure, the number of borrow deliveries (over 2 million) is significantly higher than the number of deliveries for all other materials combined (approximately 230,000).

Figure 3-9 Truck Trips Distributed Across Schedule shows truck deliveries per day for all project materials distributed across a master schedule, beginning on 1 January 2009. The distribution of truck trips across the schedule is based on:

- individual project Notice to Proceed date;
- individual project expected construction duration; and
- individual project sequencing of demand timing for materials (see introduction to section 2 for a discussion of the separation of materials demand schedule separation).

The figure shows daily borrow deliveries of:

- over 1,000 for 100 weeks;
- over 2,000 for 60 weeks;
- over 3,000 for 40 weeks; and
- over 4,000 for 10 weeks.

Figure 3-9 also depicts the magnitude of the differences between the number of borrow deliveries and the number of deliveries for all other materials combined.

Table 3-11. Maximum Rail Use – Miles Traveled By Mode and Material

	Quantity	Units	Truck Miles (Local)	Truck Miles (Non-Local)	Barge Miles	Train Miles
Borrow (trucked)	29,616,300	CY	57,270,000			
Steel Sheet Pile (trucked)		Tons				
Steel H-Pile (trucked)		Tons				
Steel Pipe Pile (trucked)		Tons				
Steel (SP,HP,PP barged to project site)		Tons				
Steel (SP,HP,PP barged & intermodal)		Tons				
Steel (SP,HP,PP by rail & intermodal)	839,500	Tons	1,062,700			58,800
Concrete Pile (trucked)		Tons				
Concrete Pile (barged to project site)	189,800	Tons			3,700	
Concrete Pile (barged & intermodal)		Tons				
Concrete Pile (by rail & intermodal)	91,500	Tons	87,500			1,000
Ready-Mix Concrete	283,500	CY	408,100			
On-Site Batch Concrete	854,300	CY				
Aggregate (barged to project batch plants)		Tons				
Aggregate (barged to suppliers)		Tons				
Trucked: suppliers to ready-mix plants						
Trucked: suppliers to project						
Aggregate (by rail to suppliers)	1,720,400	Tons				9,400
Trucked: suppliers to ready-mix plants			294,500			
Trucked: suppliers to project			1,456,700			
Aggregate (trucked to project)	1,586,800	Tons	1,057,900			
Aggregate (trucked to ready-mix plants)		Tons				
Rock (barged to project site)	1,537,300	Tons			185,200	
Rock (barged & intermodal)		Tons				
Rock (by rail & intermodal)	195,900	Tons	123,600			11,100
Rock (trucked to project site)		Tons				
TOTAL MILES			61,761,000		188,900	80,300

Table 3-12. Maximum Rail Use - Trips By Mode and Material

	Quantity	Units	Truck Trips	Barge Trips	Train Trips
Borrow (trucked)	29,616,300	CY	2,042,500		
Steel Sheet Pile (trucked)		Tons			
Steel H-Pile (trucked)		Tons			
Steel Pipe Pile (trucked)		Tons			
Steel (SP,HP,PP barged to project site)		Tons			
Steel (SP,HP,PP barged & intermodal)		Tons			
Steel (SP,HP,PP by rail & intermodal)	839,500	Tons	42,000		125
Concrete Pile (trucked)		Tons			
Concrete Pile (barged to project site)	189,800	Tons		44	
Concrete Pile (barged & intermodal)		Tons			
Concrete Pile (by rail & intermodal)	91,500	Tons	4,600		16
Ready-Mix Concrete	283,500	CY	28,400		
On-Site Batch Concrete	854,300	CY			
Aggregate (barged to project batch plants)		Tons			
Aggregate (barged to suppliers)		Tons			
Trucked from suppliers to ready-mix plants					
Trucked from suppliers to project					
Aggregate (by rail to suppliers)	1,720,400	Tons			199
Trucked from suppliers to ready-mix plants			19,100		
Trucked from suppliers to project			57,400		
Aggregate (trucked to project)	1,586,800	Tons	70,500		
Aggregate (trucked to ready-mix plants)		Tons			
Rock (barged to project site)	1,537,300	Tons		322	
Rock (barged & intermodal)		Tons			
Rock (by rail & intermodal)	195,900	Tons	8,700		30
Rock (trucked to project site)		Tons			
TOTAL TRIPS			2,273,200	366	370

Figure 3-7 Truck Miles Traveled – Maximum Rail Scenario

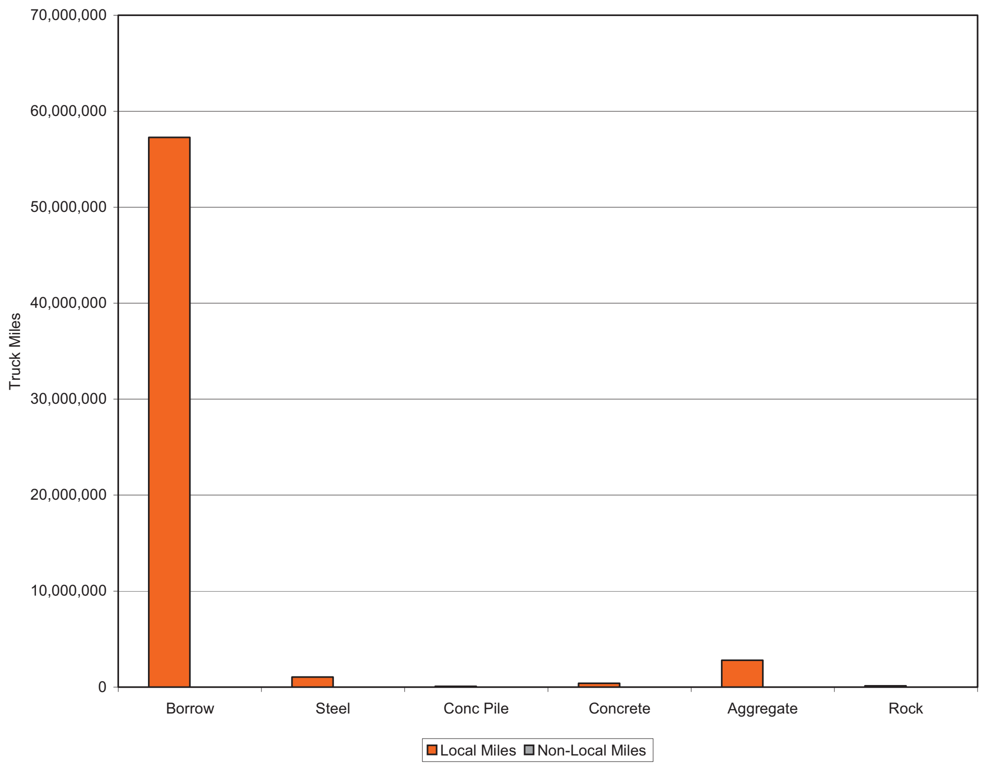


Figure 3-8 Truck Trips – Maximum Rail Scenario

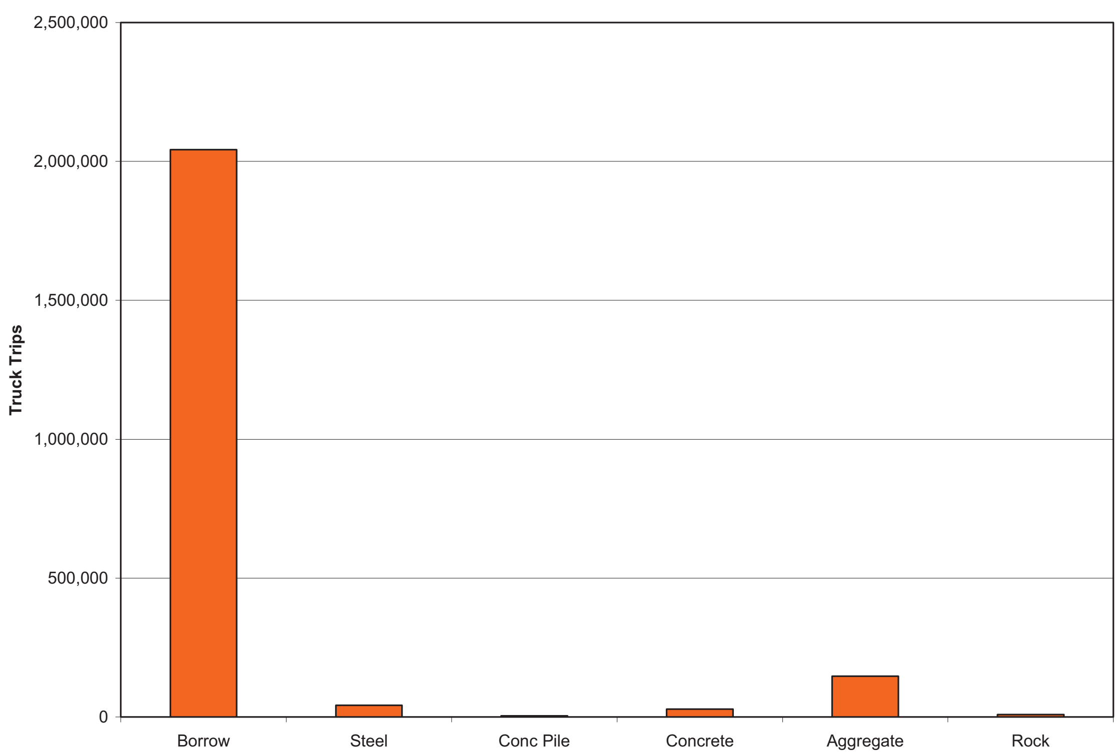


Figure 3-9 Truck Trips Distributed Across Schedule
Maximum Rail Scenario

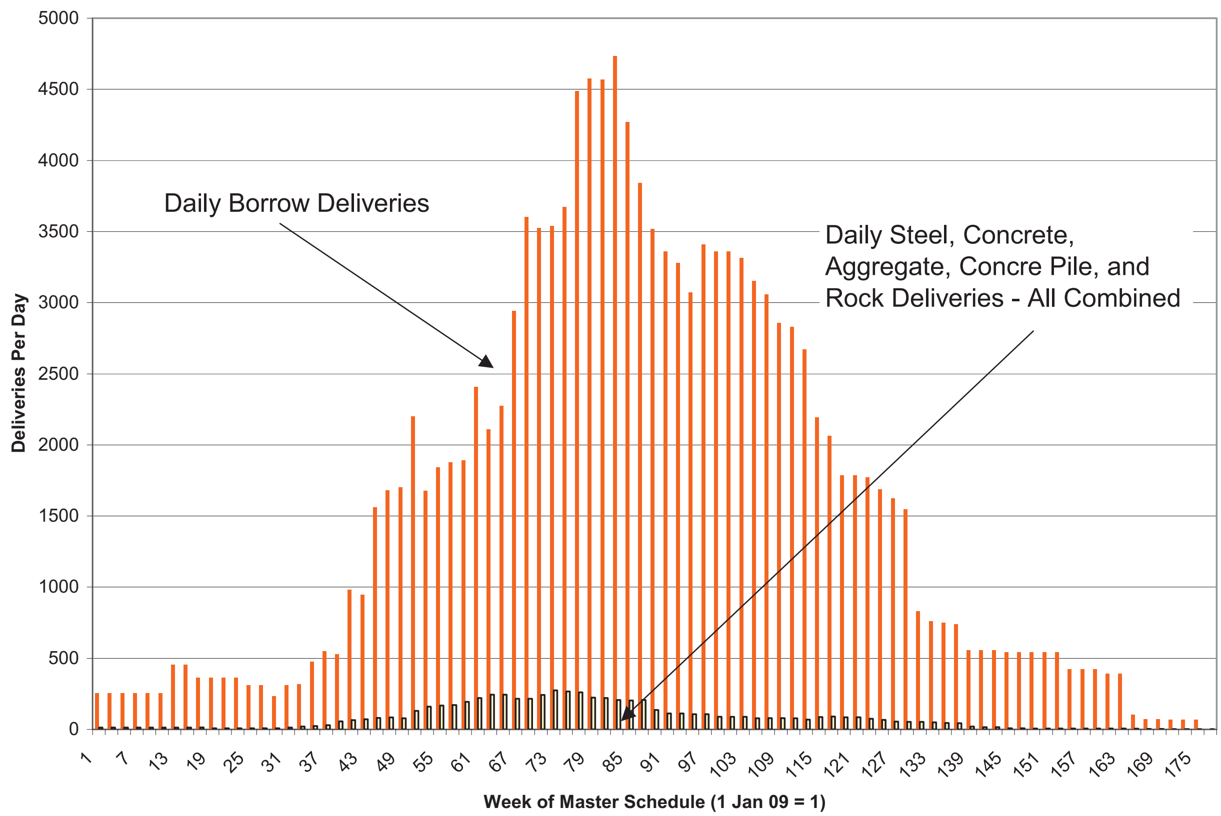


Table 3-13. Summary Table of Local Truck Miles By IER Maximum Rail Use

IER	Earthen Fill Truck Miles Local	Steel Truck Miles Local	Conc Pile Truck Miles Local	Concrete Truck Miles Local	Aggregate Truck Miles Local	Rock Truck Miles Local	Total Truck Miles Local
1	2,764,800	17,090		16,270	26,680		2,824,840
2	305,600	63,340			121,350	63,580	553,870
3	1,604,400	10,610	23,640	3,770	28,020	39,460	1,709,900
4	1,376,900	7,780		34,340	26,580		1,445,600
5		14,550		16,120	11,480		42,150
6	323,600	51,720		27,080	71,860		474,260
7	20,465,100	7,580		18,810	15,060		20,506,550
8	800	3,370		7,630	15,460		27,260
9	139,700	9,950		37,240	12,470		199,360
10	7,134,800	519,520	11,550	23,740	757,580		8,447,190
11		38,620			256,740		295,360
12	1,702,000	274,870		129,430	333,610		2,439,910
13	2,680,200	12,110		15,160	5,190		2,712,660
14	4,497,000	7,670	36,860	14,740	11,200	1,730	4,569,200
15	2,013,800	2,480		10,380	4,840		2,031,500
16	11,961,900	4,440	15,460	29,650	1,074,800	13,260	13,099,510
17	299,100	17,020	20	23,710	36,210	5,590	381,650
Total	57,269,700	1,062,720	87,530	408,070	2,809,130	123,620	61,760,770

Table 3-14. Summary Table of Non-Local Truck Miles By IER Maximum Rail Use

IER	Earthen Fill Truck Miles Non-Local	Steel Truck Miles Non-Local	Conc Pile Truck Miles Non-Local	Concrete Truck Miles Non-Local	Aggregate Truck Miles Non-Local	Rock Truck Miles Non-Local	Total Truck Miles Non-Local
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Table 3-15. Summary Table of Miles By Mode of Transportation Maximum Rail Use

IER	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles	Total Rail Miles	Total
1	2,824,900			3,630	2,828,530
2	553,900			7,390	561,290
3	1,709,900		55,220	6,520	1,771,640
4	1,445,600		820	2,170	1,448,590
5	42,200			1,030	43,230
6	474,200		9,200	5,220	488,620
7	20,506,500		14,960	2,120	20,523,580
8	27,300		1,730	610	29,640
9	199,400			560	199,960
10	8,447,300		32,780	15,730	8,495,810
11	295,400		41,270	3,530	340,200
12	2,440,100		32,310	18,480	2,490,890
13	2,712,700		580	520	2,713,800
14	4,569,300			3,440	4,572,740
15	2,031,500			520	2,032,020
16	13,099,500			3,640	13,103,140
17	381,700			5,270	386,970
Total	61,761,400		188,870	80,380	62,030,650

3.4 Likely Scenario

The Likely Scenario routes materials from their point of origin to greater New Orleans on barges and trucks under the assumption that the choice of transportation mode is driven by transportation cost efficiencies and project access by water and over-land limitations.

3.4.1 Earthen Fill

Trucks would be used to haul earthen fill from assigned government-furnished borrow sites designated by CEMVN (USACE, 2009) to construction sites (roughly 21 million CY). Contractor furnished earthen fill (roughly 9 million CY) cannot be assigned to specific construction projects until those contracts are awarded. Therefore, the contractor furnished earthen fill was assumed to be truck hauled 28.3 miles one-way.[14, 15]

3.4.2 Steel

For the likely scenario, Sheet Pile, H-Pile, and Pipe Pile would be shipped from Blytheville, Arkansas directly to projects with direct water access (e.g., Chalmette Loop, IHNC, Harvey Canal). Steel for projects that require more than 10,000 tons would be shipped by barge to a local marine terminal and unloaded for local truck delivery to the project sites. Those projects that require less than 10,000 tons of steel were assumed to be supplied by truck as follows:

- Sheetpile from Petersburg, Virginia and Blytheville, Arkansas shipped directly to construction projects by truck.
- H-pile from Blytheville, Arkansas shipped directly to construction projects by truck.
- Pipe pile from Blytheville, Arkansas shipped directly to construction projects by truck.

3.4.3 Concrete and Aggregate

Under the likely scenario, projects that require less than 25,000 CY of concrete would be supplied by major local ready-mix plants. For these projects, aggregate would be shipped by truck directly to ready-mix plants from Covington, Louisiana and Bogalusa, Louisiana. Once blended, the ready-mix concrete would be driven to the construction project.

For projects requiring more than 25,000 CY of concrete, batch plants were assumed to be constructed at the project site. For those projects requiring more than 25,000 CY and with direct water access, aggregate would be shipped to the project site by barge from Smithland, Kentucky. For projects requiring more than 25,000 CY of concrete without direct water access, aggregate would be supplied by aggregate via truck from Covington, Louisiana and Bogalusa, Louisiana. In both cases, project the aggregate would be blended with cement and water at the project site.

---

[14] Distance based on the median distance from the 24 contractor furnished sites in IERs 19, 23, 26, 29, and 30 to center city New Orleans using Google Maps.

[15] These miles traveled are included in total miles, for use in estimating emissions and accident rates. These vehicle trips cannot be routed or included in the congestion modeling because "origin-destination" pairings cannot be assigned until the contracts are issued. However, an escalation factor will be applied to the congestion modeling in order to estimate the effects of the contractor furnished trips.

3.4.4 Rock

Under the likely scenario, all rock would be shipped by barge to New Orleans from Pine Bluff, Arkansas. If direct water access to the construction site is available, rock would be barged directly to the site. All rock used for foreshore protection on Lake Pontchartrain would be shipped on light-loaded 500-ton barges directly to the project (all LPV levee foreshore protection projects). If no direct water access is available for the project, rock would be barged to local New Orleans marine terminal, offloaded onto trucks and then trucked to the construction sites.

3.4.5 Concrete Pile:

For the likely alternative, concrete pile supplied to contracts with direct water access would be barged from Pass Christian, Mississippi and offloaded at construction sites (e.g., Chalmette Loop, IHNC, Harvey Canal). Contracts requiring in excess of 20,000 tons in a single project without direct water access would be shipped by barge to a New Orleans marine terminal for local delivery by truck. Those contracts requiring less than 20,000 tons of concrete pile or where there is no direct offload to construction site would be shipped by truck from Pass Christian, Mississippi.

3.4.6 Likely Scenario - Miles Traveled By Mode and Material

Tables 3-16 to 3-20 provide summary information on miles, trips, and mode of transportation used to transport materials to project sites. These tables are:

- Table 3-16: Likely Scenario - Miles Traveled By Mode and Material shows local and non-local round-trip miles required to deliver project materials. Local and non-local miles are provided for each material class. Table 3-16 also includes tons of each type of material shipped by barge directly to the project site, as well as tons of each type of material shipped to a rail terminal for off-loading onto trucks for final delivery to the project site.
- Table 3-17. Likely Scenario - Trips By Mode and Material shows the total number of trips required to deliver project materials. Trips are provided for each material class, by each mode of transportation.
- Table 3-18. Summary Table of Local Truck Miles By IER parses the local miles data provided in table 3-16, aggregated to the IER level. It is important to note that local truck miles will remain significant, even with barge and rail delivery of all materials other than borrow.
- Table 3-19. Summary Table of Non-Local Truck Miles By IER parses the non-local truck miles data provided in table 3-17, aggregated to the IER level. Under this alternative, as shown in the table, non-local truck miles for all materials is zero.
- Table 3-20. Summary Table of Miles By Mode of Transportation shows the number of local truck miles, non-local truck miles, barge miles, and rail miles incurred in the transportation of project materials. These data also are aggregated to the IER level.

In addition to the tables, figures 3-10, 3-11, and 3-12 graphically depict the magnitude of and differences between truck miles, truck trips, and delivery timing for all materials included in the analysis.

Figure 3-10 Truck Miles Traveled shows both local and non-local truck round trip miles traveled for the delivery of materials to project sites. Data used to generate this figure are directly traceable to table 3-16. As shown in the figure, the local miles traveled for the delivery of earthen fill, or borrow (over 57 million miles), vastly outnumber the local miles traveled for the delivery of all other project materials.

Figure 3-11 Truck Trips shows all truck trips summarized by material. Data used to generate this figure are directly traceable to table 3-17. As shown in the figure, the number of borrow deliveries (over 2 million) is significantly higher than the number of deliveries for all other materials combined (approximately 150,000).

Figure 3-12 Truck Trips Distributed Across Schedule shows truck deliveries per day for all project materials distributed across a master schedule, beginning on 1 January 2009. The distribution of truck trips across the schedule is based on:

- individual project Notice to Proceed date;
- individual project expected construction duration; and
- individual project sequencing of demand timing for materials (see introduction to section 2 for a discussion of the separation of materials demand schedule separation).

The figure shows daily borrow deliveries of:

- over 1,000 for 100 weeks;
- over 2,000 for 60 weeks;
- over 3,000 for 40 weeks; and
- over 4,000 for 10 weeks.

Figure 3-12 also depicts the magnitude of the differences between the number of borrow deliveries and the number of deliveries for all other materials combined.

Tables 3-21 through 3-25 provide information on a project-by-project basis for the likely scenario. Data shown in the tables mirrors that of tables 3-16 through 3-20, though the data are shown at the project level, rather than aggregated to the IER level. Table titles are:

- Table 3-21. Local Truck Miles By Construction Project
- Table 3-22. Local Truck Trips By Construction Project
- Table 3-24. Non-Local Truck Trips, and Barge Trips By Construction Project
- Table 3-25. Miles By Mode of Transportation by Project

Table 3-16. Likely Scenario – Miles Traveled By Mode and Material

	Quantity	Units	Truck Miles (Local)	Truck Miles (Non-Local)	Barge Miles	Train Miles
Borrow (trucked)	29,616,300	CY	57,270,000			
Steel Sheet Pile (trucked)	47,400	Tons	138,500	3,385,300		
Steel H-Pile (trucked)	74,200	Tons	209,700	3,503,400		
Steel Pipe Pile (trucked)	10,800	Tons	29,300	510,400		
Steel (SP,HP,PP barged to project site)	571,200	Tons			96,600	
Steel (SP,HP,PP barged & intermodal)	135,900	Tons	256,400		17,000	
Steel (SP,HP,PP by rail & intermodal)		Tons				
Concrete Pile (trucked)	39,200	Tons	136,500	185,000		
Concrete Pile (barged to project site)	189,800	Tons			3,700	
Concrete Pile (barged & intermodal)	52,300	Tons	49,300		500	
Concrete Pile (by rail & intermodal)		Tons				
Ready-Mix Concrete	283,500	CY	408,100			
On-Site Batch Concrete	854,300	CY				
Aggregate (barged to project batch plants)	1,219,600	Tons			203,300	
Aggregate (barged to suppliers)		Tons				
Trucked: suppliers to ready-mix plants						
Trucked: suppliers to project						
Aggregate (by rail to suppliers)		Tons				
Trucked: suppliers to ready-mix plants						
Trucked: suppliers to project						
Aggregate (trucked to project)	1,658,900	Tons	1,252,100	78,200		
Aggregate (trucked to ready-mix plants)	428,700	Tons	670,600	232,400		
Rock (barged to project site)	1,537,300	Tons			185,200	
Rock (barged & intermodal)	195,900	Tons	142,200		16,100	
Rock (by rail & intermodal)		Tons				
Rock (trucked to project site)		Tons				
TOTAL MILES			60,562,700	7,894,700	522,400	

Table 3-17. Likely Scenario - Trips By Mode and Material

	Quantity	Units	Truck Trips	Barge Trips	Train Trips
Borrow (trucked)	29,616,300	CY	2,042,500		
Steel Sheet Pile (trucked)	47,400	Tons	2,400		
Steel H-Pile (trucked)	74,200	Tons	3,700		
Steel Pipe Pile (trucked)	10,800	Tons	500		
Steel (SP,HP,PP barged to project site)	571,200	Tons		68	
Steel (SP,HP,PP barged & intermodal)	135,900	Tons	6,800	12	
Steel (SP,HP,PP by rail & intermodal)		Tons			
Concrete Pile (trucked)	39,200	Tons	2,000		
Concrete Pile (barged to project site)	189,800	Tons		44	
Concrete Pile (barged & intermodal)	52,300	Tons	2,600	6	
Concrete Pile (by rail & intermodal)		Tons			
Ready-Mix Concrete	283,500	CY	28,400		
On-Site Batch Concrete	854,300	CY			
Aggregate (barged to project batch plants)	1,219,600	Tons		107	
Aggregate (barged to suppliers)		Tons			
Trucked from suppliers to ready-mix plants					
Trucked from suppliers to project					
Aggregate (by rail to suppliers)		Tons			
Trucked from suppliers to ready-mix plants					
Trucked from suppliers to project					
Aggregate (trucked to project)	1,658,900	Tons	73,700		
Aggregate (trucked to ready-mix plants)	428,700	Tons	19,100		
Rock (barged to project site)	1,537,300	Tons		322	
Rock (barged & intermodal)	195,900	Tons	8,700	28	
Rock (by rail & intermodal)		Tons			
Rock (trucked to project site)		Tons			
TOTAL TRIPS			2,190,400	587	

Figure 3-10 Truck Miles Traveled – Likely Scenario

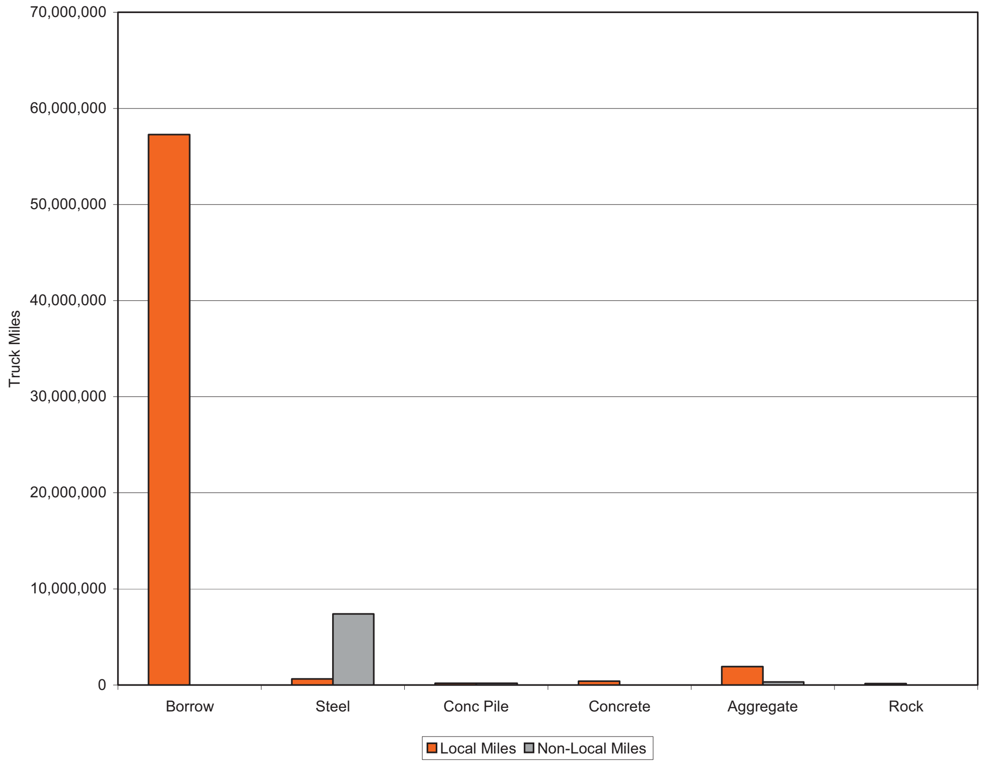


Figure 3-11 Truck Trips – Likely Scenario

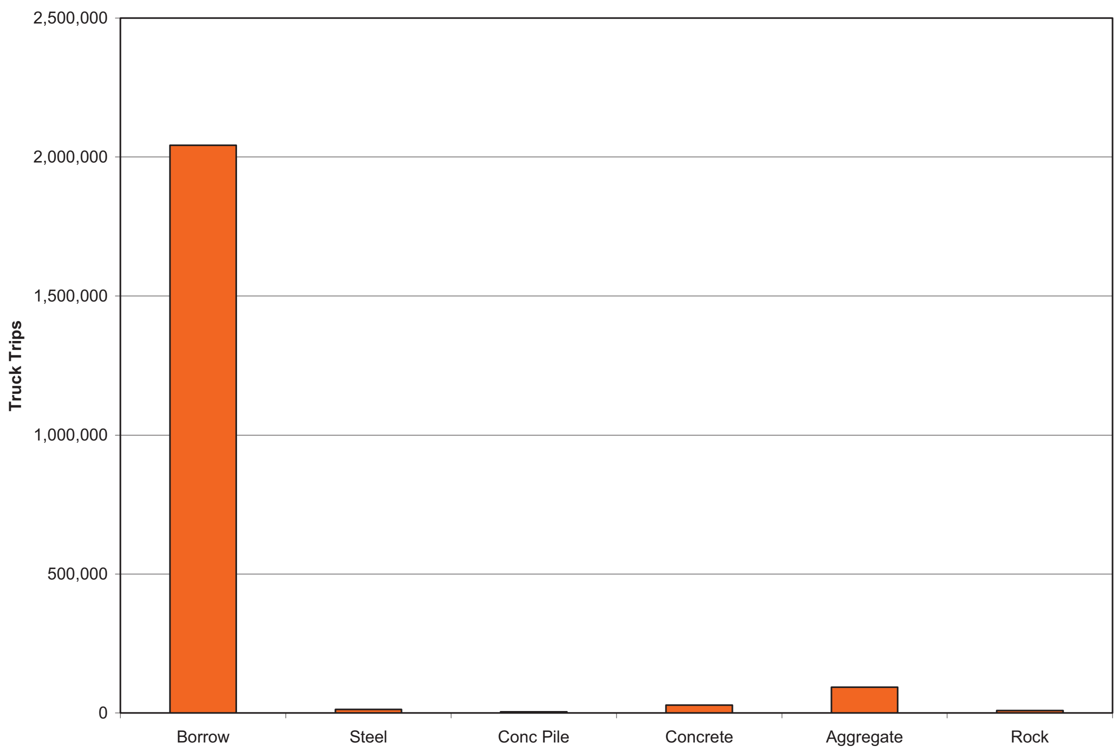


Figure 3-12 Truck Trips Distributed Across Schedule
Likely Scenario

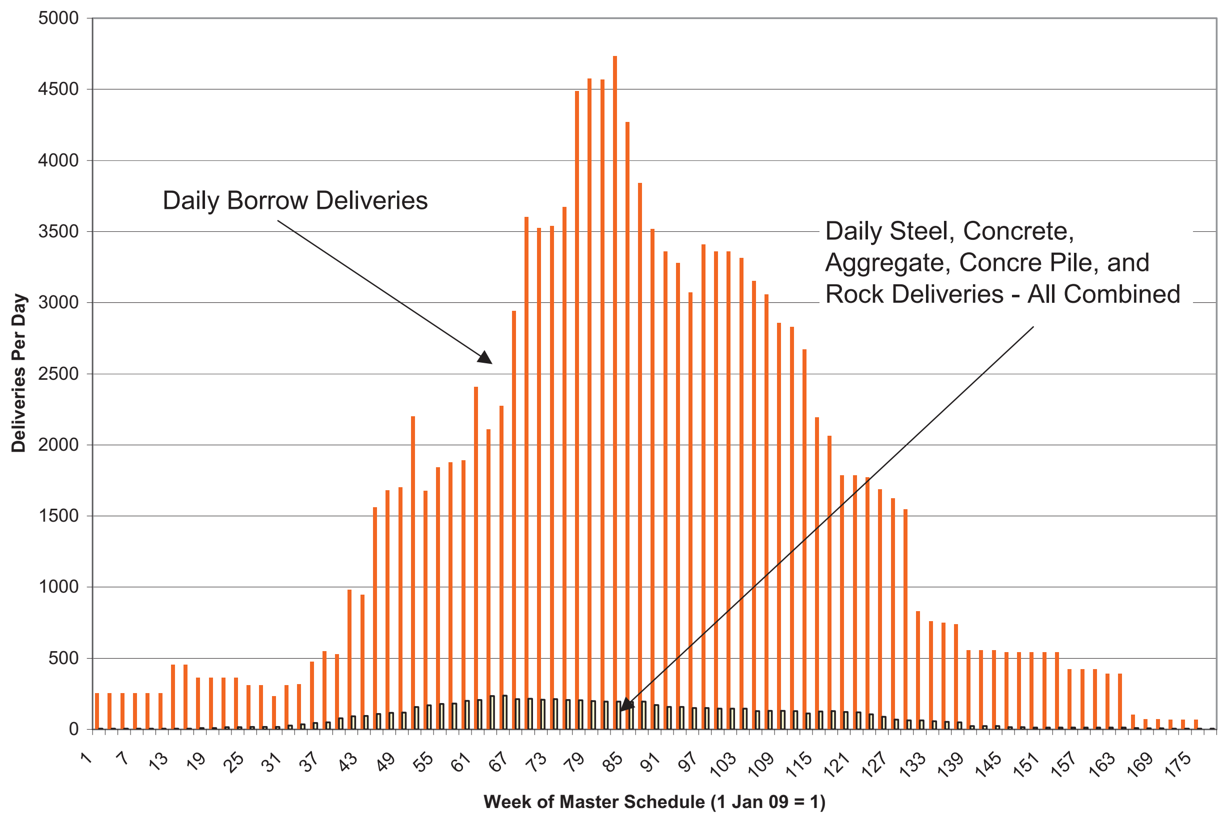


Table 3-18. Summary Table of Local Truck Miles By IER Likely Scenario

IER	Earthen Fill Truck Miles Local	Steel Truck Miles Local	Conc Pile Truck Miles Local	Concrete Truck Miles Local	Aggregate Truck Miles Local	Rock Truck Miles Local	Total Truck Miles Local
1	2,764,800	32,720		16,270	60,740		2,874,530
2	305,600	137,050				70,290	512,940
3	1,604,400	38,680	58,580	3,770	102,090	44,410	1,851,930
4	1,376,900	34,220		34,340	60,530		1,505,990
5				16,120	26,140		42,260
6	323,600	170,740		27,080	50,680		572,100
7	20,465,100	18,830		18,810	34,310		20,537,050
8	800			7,630	35,200		43,630
9	139,700			37,240	28,390		205,330
10	7,134,800		16,310	23,740	13,450		7,188,300
11							
12	1,702,000			129,430	216,110		2,047,540
13	2,680,200	21,720		15,160	11,830		2,728,910
14	4,497,000	26,730	34,070	14,740	25,490	1,520	4,599,550
15	2,013,800	14,060		10,380	11,030		2,049,270
16	11,961,900	20,710	76,740	29,650	1,096,410	21,550	13,206,960
17	299,100	118,460	130	23,710	150,320	4,460	596,180
Total	57,269,700	633,920	185,830	408,070	1,922,720	142,230	60,562,470

Table 3-19. Summary Table of Non-Local Truck Miles By IER Likely Scenario

IER	Earthen Fill Truck Miles Non-Local	Steel Truck Miles Non-Local	Conc Pile Truck Miles Non-Local	Concrete Truck Miles Non-Local	Aggregate Truck Miles Non-Local	Rock Truck Miles Non-Local	Total Truck Miles Non-Local
1		1,015,300			21,050		1,036,350
2							
3		967,360	53,140		47,630		1,068,130
4		712,920			20,970		733,890
5					9,060		9,060
6		957,220			17,560		974,780
7		445,920			11,890		457,810
8					12,200		12,200
9					9,840		9,840
10			24,420		4,660		29,080
11							
12					74,890		74,890
13		268,020			4,100		272,120
14		449,080	16,220		8,840		474,140
15		224,420			3,820		228,240
16		384,060	90,990		13,360		488,410
17		1,974,780	190		50,700		2,025,670
Total		7,399,080	184,960		310,570		7,894,610

Table 3-20. Summary Table of Miles By Mode of Transportation Likely Scenario

IER	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles	Total Rail Miles	Total
1	2,874,600	1,036,350			3,910,950
2	512,900		39,240		552,140
3	1,851,900	1,068,130	59,510		2,979,540
4	1,506,000	733,890	820		2,240,710
5	42,300	9,060	2,840		54,200
6	572,100	974,780	27,700		1,574,580
7	20,537,000	457,810	14,960		21,009,770
8	43,600	12,200	3,150		58,950
9	205,300	9,840	1,420		216,560
10	7,188,300	29,080	145,220		7,362,600
11			92,070		92,070
12	2,047,600	74,890	127,150		2,249,640
13	2,728,900	272,120	580		3,001,600
14	4,599,700	474,140	2,570		5,076,410
15	2,049,300	228,240			2,277,540
16	13,207,100	488,410	2,890		13,698,400
17	596,200	2,025,670	2,320		2,624,190
Total	60,562,800	7,894,610	522,440		68,979,850

Table 3-21. Local Truck Miles By Construction Project Likely Scenario

IER	Project	Earthen Fill Miles	Steel Miles	Concrete Pile Miles	Concrete Miles	Aggregate Miles	Rock Miles
1	LPV03d.2	210,800	50				
1	LPV04.1	423,500					
1	LPV04.2A	131,700					
1	LPV04.2B	478,800					
1	LPV05.2A	339,800					
1	LPV05.2B	926,700					
1	LPV06a.2	39,000	10,330		5,000	11,460	
1	LPV06e.2		5,660		7,890	33,830	
1	LPV06f.2	54,600	2,740		160	2,420	
1	LPV07b.2		4,310		1,920	4,390	
1	LPV07c.2	139,000	4,720		1,010	4,320	
1	LPV07d.2	20,900	4,910		290	4,320	
2	LPV03.2A	75,500	137,050				70,290
2	LPV03.2B	230,100					
3	LPV00.2	267,900					
3	LPV01.2	490,800					
3	LPV02.2	330,800					
3	LPV09.2		35,100	26,790		95,570	20,330
3	LPV09a.2		740	13,370			21,050
3	LPV12a.2		530	15,190	2,410	3,580	3,030
3	LPV16.2			2,190	330	1,180	
3	LPV17.2	203,800	2,310		150	540	
3	LPV18.2			1,040	880	1,220	
3	LPV19.2	311,100					
3	LPV20.2						
4	LPV101.2		11,040		21,200	39,050	
4	LPV103.01A	476,900	5,780		6,450	11,890	
4	LPV103.01A2	476,900	1,960		2,150	3,960	
4	LPV104.01a	385,300					
4	LPV104.02	37,800	15,440		4,540	5,630	

IER	Project	Earthen Fill Miles	Steel Miles	Concrete Pile Miles	Concrete Miles	Aggregate Miles	Rock Miles
5	PCCP-01				16,120	26,140	
6	LPV105.01	46,200	36,190		19,580	36,170	
6	LPV105.02	215,800	12,150		6,890	12,740	
6	LPV106	34,800	119,320				
6	LPV106.01						
6	LPV107	26,800	3,080		610	1,770	
7	LPV108	303,200					
7	LPV109.02a	7,229,900			1,280	1,510	
7	LPV109.02b	448,900					
7	LPV109.02c	156,100	4,080		3,320	3,930	
7	LPV110	156,100	1,510		510	720	
7	LPV111.01	9,602,500	9,250				
7	LPV111.02	39,000	3,990		13,700	28,150	
7	LPV113	2,529,400					
8	LPV144	800			7,630	35,200	
9	LPV149	139,700			37,240	28,390	
10	LPV145	1,233,100					
10	LPV146	819,300					
10	LPV147	7,900		16,310	23,740	13,450	
10	LPV148.02	5,074,500					
11	IHNC01						
11	IHNC-2a						
11	IHNC-2b						
11	IHNC-2c						
11	IHNC-2d						
12	WBV03a				5,980	6,200	
12	WBV03b	851,300			19,750	20,480	
12	WBV04.2				980	1,010	
12	WBV05.2				2,350	2,430	
12	WBV06.2				12,960	13,440	

IER	Project	Earthen Fill Miles	Steel Miles	Concrete Pile Miles	Concrete Miles	Aggregate Miles	Rock Miles
12	WBV06a.2				8,690	12,590	
12	WBV07				3,380	5,220	
12	WBV08				3,420	5,820	
12	WBV10				2,980	3,700	
12	WBV11				1,590	2,160	
12	WBV13				3,300	5,220	
12	WBV14a.2				2,720	15,620	
12	WBV14g.2	109,300			5,120	29,410	
12	WBV23				860	4,930	
12	WBV33				1,350	7,730	
12	WBV38.2				690	3,960	
12	WBV44				11,490	16,650	
12	WBV46.2				800	4,600	
12	WBV47.1	447,400					
12	WBV48.2				34,250	46,530	
12	WBV49.1	294,000			6,770	8,410	
12	WBV90						
13	WBV09a	533,300					
13	WBV09b		21,720		15,160	11,830	
13	WBV12	2,146,900					
14	WBV14b.2	674,200					150
14	WBV14c.2	1,247,600					50
14	WBV14d	468,400	16,320	22,530	11,350	17,700	
14	WBV14e.2	1,336,600			220	260	
14	WBV14f.2	339,300			840	1,310	
14	WBV14i	399,700					
14	WBV30	15,600	5,930		110	410	670
14	WBV37	15,600	4,480	11,540	2,220	5,810	650
15	WBV15a.2						
15	WBV15b.2		14,060		10,380	11,030	
15	WBV17b.1	1,951,700					
15	WBV17b.2	62,100					

IER	Project	Earthen Fill Miles	Steel Miles	Concrete Pile Miles	Concrete Miles	Aggregate Miles	Rock Miles
15	WBV18.2						
16	WBV70					1,057,860	
16	WBV71	117,900					
16	WBV72	11,710,300					1,460
16	WBV73	133,700	6,560	70,660	16,740	23,860	14,150
16	WBV74		12,330		11,780	13,080	5,770
16	WBV75		1,820	6,080	1,130	1,610	170
17	WBV16.2	123,400	27,670		12,380	27,240	3,480
17	WBV16b		6,970		4,460	9,310	230
17	WBV20		6,880		2,360	5,190	
17	WBV21		4,290		1,190	2,620	120
17	WBV22		15,170	130	3,320	7,310	630
17	WBV24	175,700	57,480			98,650	

Table 3-22. Local Truck Trips By Construction Project Likely Scenario

IER	Project	Earthen Fill Local Truck Trips	Steel Local Truck Trips	Conc Pile Local Truck Trips	Concrete Local Truck Trips	Aggregate Local Truck Trips	Rock Local Truck Trips
1	LPV03d.2	13,900					
1	LPV04.1	90,500					
1	LPV04.2A	28,100					
1	LPV04.2B	42,800					
1	LPV05.2A	30,300					
1	LPV05.2B	82,800					
1	LPV06a.2	700	290		480	330	
1	LPV06e.2		160		1,430	960	
1	LPV06f.2	1,000	60		100	70	
1	LPV07b.2		140		190	120	
1	LPV07c.2	12,400	130		180	120	
1	LPV07d.2	1,400	130		180	120	
2	LPV03.2A	2,900	3,880				3,900
2	LPV03.2B	8,800					
3	LPV00.2	10,300					
3	LPV01.2	13,900					
3	LPV02.2	12,700					
3	LPV09.2		800	1,320		1,860	1,500
3	LPV09a.2		20	270			1,560
3	LPV12a.2		10	230	150	100	170
3	LPV16.2			50	50	30	
3	LPV17.2	5,200	50		20	20	
3	LPV18.2			20	50	30	
3	LPV19.2	8,000					
3	LPV20.2						
4	LPV101.2		230		1,650	1,110	
4	LPV103.01A	10,300	120		500	340	
4	LPV103.01A2	10,300	40		170	110	
4	LPV104.01a	7,000					

IER	Project	Earthen Fill Local Truck Trips	Steel Local Truck Trips	Conc Pile Local Truck Trips	Concrete Local Truck Trips	Aggregate Local Truck Trips	Rock Local Truck Trips
4	LPV104.02	700	270		240	160	
5	PCCP-01				1,110	740	
6	LPV105.01	800	640		1,530	1,030	
6	LPV105.02	3,900	210		540	360	
6	LPV106	3,600	2,920				
6	LPV106.01						
6	LPV107	2,800	50		70	50	
7	LPV108	31,000					
7	LPV109.02a	338,600			60	40	
7	LPV109.02b	7,900					
7	LPV109.02c	2,800	60		170	110	
7	LPV110	2,800	30		30	20	
7	LPV111.01	169,700	190				
7	LPV111.02	700	70		1,190	800	
7	LPV113	44,700					
8	LPV144				1,490	1,000	
9	LPV149	9,700			1,200	810	
10	LPV145	41,400					
10	LPV146	41,400					
10	LPV147	1,100		260	570	380	
10	LPV148.02	89,700					
11	IHNC01						
11	IHNC-2a						
11	IHNC-2b						
11	IHNC-2c						
11	IHNC-2d						
12	WBV03a				260	180	
12	WBV03b	30,600			870	580	
12	WBV04.2				40	30	

IER	Project	Earthen Fill Local Truck Trips	Steel Local Truck Trips	Conc Pile Local Truck Trips	Concrete Local Truck Trips	Aggregate Local Truck Trips	Rock Local Truck Trips
12	WBV05.2				100	70	
12	WBV06.2				570	380	
12	WBV06a.2				530	360	
12	WBV07				220	150	
12	WBV08				250	170	
12	WBV10				160	110	
12	WBV11				90	60	
12	WBV13				220	150	
12	WBV14a.2				660	440	
12	WBV14g.2	1,900			1,240	840	
12	WBV23				210	140	
12	WBV33				330	220	
12	WBV38.2				170	110	
12	WBV44				700	470	
12	WBV46.2				190	130	
12	WBV47.1	21,900					
12	WBV48.2				1,970	1,320	
12	WBV49.1	15,300			360	240	
12	WBV90						
13	WBV09a	34,500					
13	WBV09b		260		500	340	
13	WBV12	37,900					
14	WBV14b.2	35,900					10
14	WBV14c.2	93,100					10
14	WBV14d	8,300	200	1,290	750	500	
14	WBV14e.2	39,300			10	10	
14	WBV14f.2	13,000			60	40	
14	WBV14i	14,500					
14	WBV30	300	80		20	10	50
14	WBV37	300	60	170	250	170	40
15	WBV15a.2	88,600					

IER	Project	Earthen Fill Local Truck Trips	Steel Local Truck Trips	Conc Pile Local Truck Trips	Concrete Local Truck Trips	Aggregate Local Truck Trips	Rock Local Truck Trips
15	WBV15b.2		230		470	310	
15	WBV17b.1	34,500					
15	WBV17b.2	11,000					
15	WBV18.2	129,700					
16	WBV70						
16	WBV71	10,300					
16	WBV72	206,900					70
16	WBV73	11,700	110	890	1,010	680	570
16	WBV74		190		550	370	290
16	WBV75		30	80	70	50	10
17	WBV16.2	13,400	380		1,150	770	430
17	WBV16b		120		390	260	30
17	WBV20		90		220	150	
17	WBV21		60		110	70	20
17	WBV22		210		310	210	80
17	WBV24	3,100	940			1,340	

Table 3-23. Non-Local Truck Miles and Barge Miles By Construction Project Likely Scenario

IER	Project	Steel Truck Miles Non-Local	Steel Barge Miles Total	Conc Pile Truck Miles Non-Local	Conc Pile Barge Miles Total	Aggrgte Truck Miles Non-Local	Aggrgte Barge Miles Total	Rock Barge Miles Total
1	LPV03d.2	1,420						
1	LPV04.1							
1	LPV04.2A							
1	LPV04.2B							
1	LPV05.2A							
1	LPV05.2B							
1	LPV06a.2	333,100				3,970		
1	LPV06e.2	172,100				11,720		
1	LPV06f.2	77,920				840		
1	LPV07b.2	147,020				1,520		
1	LPV07c.2	144,240				1,500		
1	LPV07d.2	139,500				1,500		
2	LPV03.2A		9,940				24,700	4,600
2	LPV03.2B							
3	LPV00.2							15,530
3	LPV01.2							8,050
3	LPV02.2							15,530
3	LPV09.2	858,020			250	45,370		1,730
3	LPV09a.2	22,720		25,410				1,730
3	LPV12a.2	15,620		21,920		1,240		580
3	LPV16.2			4,160		410		
3	LPV17.2	71,000				190		
3	LPV18.2			1,650		420		
3	LPV19.2							8,630
3	LPV20.2							7,480
4	LPV101.2	243,080			80	13,530		580
4	LPV103.01A	141,580			80	4,120		
4	LPV103.01A2	48,140			80	1,370		
4	LPV104.01a							

IER	Project	Steel Truck Miles Non-Local	Steel Barge Miles Total	Conc Pile Truck Miles Non-Local	Conc Pile Barge Miles Total	Aggrgte Truck Miles Non-Local	Aggrgte Barge Miles Total	Rock Barge Miles Total
4	LPV104.02	280,120				1,950		
5	PCCP-01		2,840			9,060		
6	LPV105.01	678,360				12,540		
6	LPV105.02	213,700				4,410		
6	LPV106		7,100				11,400	
6	LPV106.01							9,200
6	LPV107	65,160				610		
7	LPV108							14,380
7	LPV109.02a					520		580
7	LPV109.02b							
7	LPV109.02c	64,140				1,360		
7	LPV110	35,460				250		
7	LPV111.01	262,700						
7	LPV111.02	83,620				9,760		
7	LPV113							
8	LPV144		1,420			12,200		1,730
9	LPV149		1,420			9,840		
10	LPV145		12,780				17,100	9,200
10	LPV146		12,780				24,700	23,000
10	LPV147		1,420	24,420		4,660		
10	LPV148.02		11,360				32,300	580
11	IHNC01							
11	IHNC-2a		1,420				9,500	1,150
11	IHNC-2b		1,420				3,800	580
11	IHNC-2c		2,840		1,590		24,700	20,130
11	IHNC-2d		1,420		580		5,700	17,250
12	WBV03a		1,420		80	2,150		
12	WBV03b		1,420		330	7,100		
12	WBV04.2		1,420			350		

IER	Project	Steel Truck Miles Non-Local	Steel Barge Miles Total	Conc Pile Truck Miles Non-Local	Conc Pile Barge Miles Total	Aggrgte Truck Miles Non-Local	Aggrgte Barge Miles Total	Rock Barge Miles Total
12	WBV05.2		1,420			840		
12	WBV06.2		1,420			4,660		
12	WBV06a.2		2,840			4,360		
12	WBV07		1,420		80	1,810		
12	WBV08		1,420			2,020		
12	WBV10		1,420			1,280		
12	WBV11		1,420			750		
12	WBV13		1,420		80	1,810		
12	WBV14a.2		1,420			5,410		
12	WBV14g.2		2,840			10,190		580
12	WBV23		1,420			1,710		580
12	WBV33		1,420			2,680		580
12	WBV38.2		1,420			1,370		580
12	WBV44		1,420			5,770		580
12	WBV46.2		1,420			1,590		
12	WBV47.1		2,840					
12	WBV48.2		4,260			16,130		
12	WBV49.1		4,260			2,910		
12	WBV90		5,680		670		49,400	28,180
13	WBV09a							
13	WBV09b	268,020				4,100		
13	WBV12							580
14	WBV14b.2							580
14	WBV14c.2							580
14	WBV14d	288,260			250	6,140		
14	WBV14e.2					90		
14	WBV14f.2					460		
14	WBV14i							
14	WBV30	89,080				140		580
14	WBV37	71,740		16,220		2,010		580
15	WBV15a.2							

IER	Project	Steel Truck Miles Non-Local	Steel Barge Miles Total	Conc Pile Truck Miles Non-Local	Conc Pile Barge Miles Total	Aggrgte Truck Miles Non-Local	Aggrgte Barge Miles Total	Rock Barge Miles Total
15	WBV15b.2	224,420				3,820		
15	WBV17b.1							
15	WBV17b.2							
15	WBV18.2							
16	WBV70							
16	WBV71							
16	WBV72							580
16	WBV73	118,720		83,780		8,270		1,150
16	WBV74	229,920				4,530		580
16	WBV75	35,420		7,210		560		580
17	WBV16.2	412,440				9,440		580
17	WBV16b	122,480				3,230		580
17	WBV20	102,760				1,800		
17	WBV21	67,460				910		580
17	WBV22	214,280		190		2,530		580
17	WBV24	1,055,360				32,790		

Table 3-24. Non-Local Truck Trips, and Barge Trips By Construction Project Likely Scenario

IER	Project	Steel Truck Trips Non-Local	Steel Barge Trips Total	Conc Pile Truck Trips Non-Local	Conc Pile Barge Trips Total	Aggrgte Truck Trips Non-Local	Aggrgte Barge Trips Total	Rock Barge Trips Total
1	LPV03d.2							
1	LPV04.1							
1	LPV04.2A							
1	LPV04.2B							
1	LPV05.2A							
1	LPV05.2B							
1	LPV06a.2	290				330		
1	LPV06e.2	160				960		
1	LPV06f.2	60				70		
1	LPV07b.2	140				120		
1	LPV07c.2	130				120		
1	LPV07d.2	130				120		
2	LPV03.2A		7				13	8
2	LPV03.2B							
3	LPV00.2							27
3	LPV01.2							14
3	LPV02.2							27
3	LPV09.2	800			3	1,860		3
3	LPV09a.2	20		270				3
3	LPV12a.2	10		230		100		1
3	LPV16.2			50		30		
3	LPV17.2	50				20		
3	LPV18.2			20		30		
3	LPV19.2							15
3	LPV20.2							13
4	LPV101.2	230			1	1,110		1
4	LPV103.01A	120			1	340		
4	LPV103.01A2	40			1	110		
4	LPV104.01a							

IER	Project	Steel Truck Trips Non-Local	Steel Barge Trips Total	Conc Pile Truck Trips Non-Local	Conc Pile Barge Trips Total	Aggrgte Truck Trips Non-Local	Aggrgte Barge Trips Total	Rock Barge Trips Total
4	LPV104.02	270				160		
5	PCCP-01		2			740		
6	LPV105.01	640				1,030		
6	LPV105.02	210				360		
6	LPV106		5				6	
6	LPV106.01							16
6	LPV107	50				50		
7	LPV108							25
7	LPV109.02a					40		1
7	LPV109.02b							
7	LPV109.02c	60				110		
7	LPV110	30				20		
7	LPV111.01	190						
7	LPV111.02	70				800		
7	LPV113							
8	LPV144		1			1,000		3
9	LPV149		1			810		
10	LPV145		9				9	16
10	LPV146		9				13	40
10	LPV147		1	260		380		
10	LPV148.02		8				17	1
11	IHNC01							
11	IHNC-2a		1				5	2
11	IHNC-2b		1				2	1
11	IHNC-2c		2		19		13	35
11	IHNC-2d		1		7		3	30
12	WBV03a		1		1	180		
12	WBV03b		1		4	580		
12	WBV04.2		1			30		

IER	Project	Steel Truck Trips Non-Local	Steel Barge Trips Total	Conc Pile Truck Trips Non-Local	Conc Pile Barge Trips Total	Aggrgte Truck Trips Non-Local	Aggrgte Barge Trips Total	Rock Barge Trips Total
12	WBV05.2		1			70		
12	WBV06.2		1			380		
12	WBV06a.2		2			360		
12	WBV07		1		1	150		
12	WBV08		1			170		
12	WBV10		1			110		
12	WBV11		1			60		
12	WBV13		1		1	150		
12	WBV14a.2		1			440		
12	WBV14g.2		2			840		1
12	WBV23		1			140		1
12	WBV33		1			220		1
12	WBV38.2		1			110		1
12	WBV44		1			470		1
12	WBV46.2		1			130		
12	WBV47.1		2					
12	WBV48.2		3			1,320		
12	WBV49.1		3			240		
12	WBV90		4		8		26	49
13	WBV09a							
13	WBV09b	260				340		
13	WBV12							1
14	WBV14b.2							1
14	WBV14c.2							1
14	WBV14d	200			3	500		
14	WBV14e.2					10		
14	WBV14f.2					40		
14	WBV14i							
14	WBV30	80				10		1
14	WBV37	60		170		170		1
15	WBV15a.2							

IER	Project	Steel Truck Trips Non-Local	Steel Barge Trips Total	Conc Pile Truck Trips Non-Local	Conc Pile Barge Trips Total	Aggrgte Truck Trips Non-Local	Aggrgte Barge Trips Total	Rock Barge Trips Total
15	WBV15b.2	230				310		
15	WBV17b.1							
15	WBV17b.2							
15	WBV18.2							
16	WBV70							
16	WBV71							
16	WBV72							1
16	WBV73	110		890		680		2
16	WBV74	190				370		1
16	WBV75	30		80		50		1
17	WBV16.2	380				770		1
17	WBV16b	120				260		1
17	WBV20	90				150		
17	WBV21	60				70		1
17	WBV22	210				210		1
17	WBV24	940				1,340		

Table 3-25. Miles By Mode of Transportation by Project Likely Scenario

IER	Project	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles
1	LPV03d.2	210,900	1,420	
1	LPV04.1	423,500		
1	LPV04.2A	131,700		
1	LPV04.2B	478,800		
1	LPV05.2A	339,800		
1	LPV05.2B	926,700		
1	LPV06a.2	65,800	337,070	
1	LPV06e.2	47,400	183,820	
1	LPV06f.2	59,900	78,760	
1	LPV07b.2	10,600	148,540	
1	LPV07c.2	149,100	145,740	
1	LPV07d.2	30,400	141,000	
2	LPV03.2A	282,800		39,240
2	LPV03.2B	230,100		
3	LPV00.2	267,900		15,530
3	LPV01.2	490,800		8,050
3	LPV02.2	330,800		15,530
3	LPV09.2	177,800	903,390	1,980
3	LPV09a.2	35,200	48,130	1,730
3	LPV12a.2	24,700	38,780	580
3	LPV16.2	3,700	4,570	
3	LPV17.2	206,800	71,190	
3	LPV18.2	3,100	2,070	
3	LPV19.2	311,100		8,630
3	LPV20.2			7,480
4	LPV101.2	71,300	256,610	660
4	LPV103.01A	501,000	145,700	80
4	LPV103.01A2	485,000	49,510	80
4	LPV104.01a	385,300		

IER	Project	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles
4	LPV104.02	63,400	282,070	
5	PCCP-01	42,300	9,060	2,840
6	LPV105.01	138,100	690,900	
6	LPV105.02	247,600	218,110	
6	LPV106	154,100		18,500
6	LPV106.01			9,200
6	LPV107	32,300	65,770	
7	LPV108	303,200		14,380
7	LPV109.02a	7,232,700	520	580
7	LPV109.02b	448,900		
7	LPV109.02c	167,400	65,500	
7	LPV110	158,800	35,710	
7	LPV111.01	9,611,800	262,700	
7	LPV111.02	84,800	93,380	
7	LPV113	2,529,400		
8	LPV144	43,600	12,200	3,150
9	LPV149	205,300	9,840	1,420
10	LPV145	1,233,100		39,080
10	LPV146	819,300		60,480
10	LPV147	61,400	29,080	1,420
10	LPV148.02	5,074,500		44,240
11	IHNC01			
11	IHNC-2a			12,070
11	IHNC-2b			5,800
11	IHNC-2c			49,250
11	IHNC-2d			24,950
12	WBV03a	12,200	2,150	1,500
12	WBV03b	891,500	7,100	1,750
12	WBV04.2	2,000	350	1,420
12	WBV05.2	4,800	840	1,420

IER	Project	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles
12	WBV06.2	26,400	4,660	1,420
12	WBV06a.2	21,300	4,360	2,840
12	WBV07	8,600	1,810	1,500
12	WBV08	9,200	2,020	1,420
12	WBV10	6,700	1,280	1,420
12	WBV11	3,800	750	1,420
12	WBV13	8,500	1,810	1,500
12	WBV14a.2	18,300	5,410	1,420
12	WBV14g.2	143,800	10,190	3,420
12	WBV23	5,800	1,710	2,000
12	WBV33	9,100	2,680	2,000
12	WBV38.2	4,700	1,370	2,000
12	WBV44	28,100	5,770	2,000
12	WBV46.2	5,400	1,590	1,420
12	WBV47.1	447,400		2,840
12	WBV48.2	80,800	16,130	4,260
12	WBV49.1	309,200	2,910	4,260
12	WBV90			83,920
13	WBV09a	533,300		
13	WBV09b	48,700	272,120	
13	WBV12	2,146,900		580
14	WBV14b.2	674,400		580
14	WBV14c.2	1,247,700		580
14	WBV14d	536,300	294,400	250
14	WBV14e.2	1,337,100	90	
14	WBV14f.2	341,500	460	
14	WBV14i	399,700		
14	WBV30	22,700	89,220	580
14	WBV37	40,300	89,970	580
15	WBV15a.2			
15	WBV15b.2	35,500	228,240	
15	WBV17b.1	1,951,700		

IER	Project	Total Truck Miles Local	Total Truck Miles Non-Local	Total Barge Miles
15	WBV17b.2	62,100		
15	WBV18.2			
16	WBV70	1,057,900		
16	WBV71	117,900		
16	WBV72	11,711,800		580
16	WBV73	265,700	210,770	1,150
16	WBV74	43,000	234,450	580
16	WBV75	10,800	43,190	580
17	WBV16.2	194,200	421,880	580
17	WBV16b	21,000	125,710	580
17	WBV20	14,400	104,560	
17	WBV21	8,200	68,370	580
17	WBV22	26,600	217,000	580
17	WBV24	331,800	1,088,150	

4 Effects Analysis Overview

Assessment of the environmental consequences from the four alternatives for materials transport to and within greater New Orleans focuses on four primary areas:

- Effects to traffic congestion,
- Effects to transportation infrastructure (e.g., road surfaces, bridges, culverts),
- Accident risks (increased risks of fatalities, injuries, and property damage accidents), and
- Diesel emissions.

To predict the effects transportation, the quantities of materials were compiled and converted to trips as described in section 2. Within a GIS environment, the transportation of all quantities was then modeled via all modes. The alternatives described in section 3 compile rational combinations of the transportation modes for the various materials evaluated and the section 3 tables summarize quantities, trips, and distances traveled for each of the four alternatives. With these trips and distances, by alternative, the estimated consequences could be evaluated and the alternatives compared.

Functional classification is the grouping of highways, roads and streets by the character of service they provide and was developed for transportation planning purposes. Basic to this construct is the recognition that each class has a different capacity to assimilate increases in truck traffic.

LADOTD Functional Classification

The Louisiana Department of Transportation and Development (LADOTD) has published a highway functional classification for New Orleans (LADOTD, 2008), segregating the public roads into different categories (1-5, and 8) as follows:

1. Interstate – interstate highways typically receive substantial federal funding and are owned, built, and operated by the state of Louisiana. These roads are controlled access, multiple lane divided highway with the highest rates of speed for traveling in a given area. Interstate 10 is such a road within greater New Orleans.
2. Expressway - an expressway is a divided highway for high-speed traffic with at least partial control of access. The difference between an expressway and the interstate highway or freeway is that expressways have a limited number of driveways and at-grade intersections. The West Bank Expressway (US 90) is an example of this type of road in greater New Orleans.
3. Principal arterial – the principal arterial roads represent the integrated system within greater New Orleans that connect the major centers of activity, are the highest traffic volume corridors, and facilitate the longest trips. These roads carry the major portion of trips entering and leaving the area, as well as the majority of trips simply passing through New Orleans.

   Because of the nature of the travel served by the principal arterial system, almost all fully and partially controlled access roads are part of this functional system including the interstate, other expressways, and other principal arterials (with no control of access).

4. Minor arterial - The minor arterial street system interconnects with and augments the principal arterial system and provides service for trips of moderate length at a somewhat lower level of travel mobility than principal arterials. This system also distributes travel to geographic areas smaller than those identified with the principal arterial system. Such roads typically carry local bus routes, provide intra-community continuity, but typically would not penetrate identifiable neighborhoods. Airline Highway would be an example of a minor arterial.
5. Urban collector - The collector street system provides land access service and traffic circulation within residential neighborhoods, commercial, and industrial areas. It differs from the arterial system in that roads on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Conversely, the collector street also collects traffic from local streets in residential neighborhoods and channels it into the arterial system.
8. Local roads – The local roads offer the lowest level of mobility and are residential or commercial where service for through-traffic movement is deliberately discouraged. Typically these roads do not have public transportation service and are linked to the urban collectors.

It is important to note that roads frequently change functional classification as the same road passes through residential, commercial, or rural areas. This is because the same road may be a 2-lane 30-mph local road with 4-way stops at most intersections (class 8), transition to a 45-mph minor arterial with 4-lane signalized intersections (class 4), and then transition to a 55-mph principal arterial with no signalized intersections (class 3).

Table 4-1 shows the number of roads, sorted by functional classification, identified for the transportation of materials under the likely scenario.[16] Examples of each road functional class are shown in the table. The table also shows that there are six different roads of functional class 1 (Interstate) used for the materials transportation and 62 different segments of local roads (functional class 8) used for materials transportation. Figure 4-1 depicts the network of roads enumerated in table 4-1 that are included in the routing of project materials deliveries under the likely scenario.

[16] Section 1.5 (Materials Delivery Assumptions) described how routes were selected for materials transportation and impact evaluation.

Table 4-1. Roads in DOTD Functional Classes Used to Transport Materials (Likely Scenario)

LADOTD Functional Classification	Classification Description	Example of Road	Number of Roads Used
1	Interstate	I-310; I-10	6
2	Expressway	Westbank Expressway	6
3	Principal Arterial	Lapalco Boulevard Airline Highway (US 61)	35
4	Minor Arterial	Tchoupitoulas Street	44
5	Urban Collector	Bayou Road	17
8	Local Road	Kenner Avenue	62

Figure 4-1. Road Network Used for Project Materials Delivery (Likely Scenario)

4.1 Congestion

4.1.1 Truck Traffic

The Highway Capacity Manual[17] (HCM) is published by the National Science Foundation's Transportation Research Board (TRB) and provides state-of-the-art techniques for estimating the capacity and determining the level of service for transportation facilities (TRB, 2000). The HCM's analyses are based on determining the capacity of a facility (e.g., road, intersection, exit ramp) compared to the demand to use the facility.

The capacity of a facility is the maximum hourly rate at which vehicles can reasonably be expected to traverse a point or a uniform section of lane or roadway during a given time period under prevailing conditions (TRB, 2000). Capacity analysis examines segments or points of a facility under uniform traffic conditions with the reasonable expectancy that the stated capacity for a given facility is a flow rate that can be achieved repeatedly for peak periods of sufficient demand (TRB, 2000). Passenger cars per hour and vehicles per hour are measures that can define capacity.

Demand is the principal measure of the amount of traffic using a given facility. The traffic demand on the facility is based on either traffic data collected or a projection of traffic anticipated to use the facility due to anticipated developments. These traffic volumes are adjusted for many factors including the types of vehicles in the traffic stream, the grade of the roadway, and the characteristics of the traffic flow during peak times. The methodology, in its simplest form, compares the demand to the capacity and identifies the operational conditions as a "level of service" (Terry, 2009).

4.1.1.1 Level of Service

Level of service (LOS) is a quality measure describing the operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, traffic interruptions, freedom to maneuver, and driving comfort and convenience (TRB, 2000). Six LOS are defined with letters A through F designating each level; LOS A representing the best operating conditions and LOS F, the worst. Each LOS represents a range of operating conditions and the driver's perception of those conditions.

Level of service A represents virtually free-flowing conditions, in which the speed of individual vehicles is controlled only by the driver's desire and by prevailing condition, not by the presence of interference from other vehicles. Ability to maneuver within the traffic stream is unrestricted. LOS A occurs late at night in urban areas and frequently in rural areas.

Level of services B, C, and D represent increasing levels of flow rate with correspondingly more interferences from other vehicles in the traffic stream. Average running speed of the stream remains relatively constant through a portion of this range, but the ability of individual drivers to freely select their speed becomes increasingly restricted as the level of serviced worsens (goes from B to C to D). LOS B would have some impingement of maneuverability; two motorists

[17] The Highway Capacity Manual is a publication of the Transportation Research Board and contains concepts, guidelines, and computational procedures for evaluating the capacity and quality of service of various highway facilities, including freeways, highways, arterial roads, roundabouts, signalized and unsignalized intersections, rural highways, and the effects of transit, pedestrians, and bicycles on the performance of these systems.

might be forced to drive side-by-side, limiting lane changes. LOS C would have more congestion than B, where ability to pass or change lanes would not always be assured.

Level of service C is the target for urban highways in many places. At LOS C most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained. LOS D is perhaps the level of service of a busy shopping corridor in the middle of a weekday, or a functional urban highway during commuting hours: speeds are somewhat reduced, motorists are hemmed in by other cars and trucks.

Level of service E is representative of operation at or near capacity conditions. Few gaps in traffic are available, the ability to maneuver within the traffic stream is severely limited, and speeds are low. Operations at this level are unstable and a minor disruption may cause rapid deterioration of flow to level of service F. On highways, this condition is consistent with a road over its designed capacity.

Level of service F represents breakdown or forced flow, where every vehicle moves in lockstep with the vehicle in front of it, with frequent drops in speed to nearly zero mph. At this level, stop-and-go patterns and waves have already been set up in the traffic stream, and operations at a given point may vary widely from minute to minute, as would operations in short, adjacent highway segments, as congestion waves propagate through the traffic stream. Operations at this level are highly unstable and unpredictable. For LOS F, it is difficult to predict flow due to stop-and-start conditions. As a result, the Highway Capacity Manual does not include analytical methods to establish or predict the maximum flow rate for facilities at LOS F (TRB, 2000). LOS F describes a road for which the travel time cannot be predicted and facilities operating at LOS F have more demand than capacity.

4.1.1.2 Factors Affecting Capacity and LOS

In most capacity analyses, prevailing conditions differ from the base conditions, and computation of capacity, service flow rate, and level of service must include adjustments based on roadway conditions. Base conditions assume good weather, good pavement conditions, users familiar with the facility, and no impediments to traffic flow. Examples of base conditions that affect capacity include width of lanes, speed limit, terrain, and impediments to through traffic (e.g., traffic control devices or turning vehicles (TRB, 2000).

Traffic conditions that influence capacity and levels of service include the vehicle type, specifically the effect of heavy vehicles (TRB, 2000). The entry of heavy vehicles (vehicles other than passenger vehicles) into the traffic stream affects the number of vehicles that can be carried on a particular facility (i.e., capacity). Heavy vehicles adversely affect traffic in two ways: (1) they are larger than passenger cars and occupy more road space, and (2) they have poorer operating capabilities than passenger cars, particularly with respect to acceleration, deceleration, and the ability to maintain speed on upgrades (TRB, 2000). The second impact is more critical because heavy vehicles cannot keep pace with passenger cars in many situations creating large gaps in the traffic stream that are difficult to fill by passing maneuvers (TRB, 2000).

4.1.1.3 Regional Planning Commission Traffic Analysis

The Regional Planning Commission (RPC) was created in 1962 by the Louisiana state legislature and local governing body authorization to fulfill federal and state requirements for regional comprehensive and economic development planning in greater New Orleans. Five of the parishes represented in greater New Orleans (Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes) are represented by the RPC. A staff of professionals with broad experience and expertise supports the RPC in urban and regional planning, including transportation analyses.

The development, manipulation and dissemination of transportation-related data is an ongoing task for the RPC. In that role, the RPC advances original data research, collects new data sets, and formulates management strategies to make the data available (RPC, 2007). In addition, the RPC staff create needed subsets of data by maintaining an on-going reconnaiassance and transportation surveillance effort including collecting original data (e.g., vehicle counts, travel times, intersection turning movements, classification of vehicles) (RPC, 2007).

Among the tools used to analyze the compiled data is a computerized transportation demand model. This tool allows the RPC staff to simulate existing and projected traffic volumes for various transportation scenarios. The RPC has also conducted extensive travel surveys in order to amass up-to-date data on typical travel patterns within greater New Orleans. The Congestion Management Planning Process has gathered comprehensive congestion measurements (travel time data, level of service, volume to capacity ratios, speed) and linked it with existing roadway segments in a geographic information database (GIS) (RPC, 2007) to evaluate expected future traffic conditions of traffic congestion using a Congestion Management Index.

4.1.1.4 Congestion Management Index - Quantifying the Effects to LOS from HSDRRS Construction

Within greater New Orleans, the LADOTD reports ADT data at approximately 300 nodes (LADOTD, 2009); the RPC supplements the LADOTD data with additional traffic count data that typically include directional data as well as vehicle classification (passenger vs. commercial). Because of the quality of the RPC's data, the effects of the HSDRRS-traffic on the existing traffic congestion in greater New Orleans was calculated using the RPC's Congestion Management Index.

The CM Index has three primary components – Average Daily Traffic (ADT) per Lane, Travel Speed Ratio (Average Speed to Posted Speed), and percent commercially occupied vehicles (% CVO). Each roadway segment on a congestion management (CM) route is assigned an ordinal rank, 1-5, for each of these measures. Ranking categories are predetermined and summarized in the sections below. Those scores are then applied to a formula, in which each of the measures is weighted for its relative importance to overall congestion.

The formula is:

CM Index = (.75) Travel Speed Ratio Score + (.15) ADT Score + (.10) % CVO Score

The index is calculated for each segment on the region's 32 CM routes. The routes, segments, and their logical termini were determined by RPC staff in consultation with stakeholders from a variety of agencies. Together they make up a road network that carries the vast majority of the region's vehicle miles traveled. Each CM segment can have a possible Index score of 1-5, with five representing the worst congestion and one representing near-free-flow conditions. The RPC asserts that any score over 3.25 is considered "congested." Since the components of the formula are ranked on an ordinal scale, the Index provides a relative score by which the CM segments can be compared against each other. In this sense the Index provides the RPC with a more specific method for determining which of the region's roadways have the "worst" congestion than other measures. Each component of the formula is briefly described below.

Travel Speed Ratio is calculated as the average observed speed on a road segment divided by the posted speed limit. Average travel speeds are determined through actual drive-time testing utilizing GPS tracking equipment. The higher the ratio, the more quickly traffic moves on a roadway segment. The ordinal scores for Travel Speed Ratio are:

Score	Travel Speed Ratio
1	> 1
2	≤ 1
3	≤ 0.75
4	≤ 0.5
5	≤ 0.25

Average Daily Traffic (ADT) data are obtained through a variety of sources, including RPC's consultant contracts, the Parishes and municipalities, and LaDOTD's traffic data collection program. ADT per lane rankings are used in order to normalize data on road segments with varying numbers of lanes. The ADT per lane ordinal scores are:

Score	ADT Per Lane
1	< 4,999
2	≤ 9,999
3	≤ 14,999
4	≤ 19,999
5	≥ 20,000

The percentage of Commercially Operated Vehicles (%COV) is the percentage of total vehicle traffic that is comprised of Class 4 and above vehicles (See FHWA *Traffic Monitoring Guide*, section 4). This data is collected through a variety of sources, including automatic and manual counting methods. The % COV ordinal scores are:

Score	% COV
1	< 3.99%
2	≤ 6.99%
3	≤ 9.99%
4	≤ 12.99%
5	≥ 13%

This congestion management index represents the most complete characterization of the existing congestion conditions within greater New Orleans and serves as the basis for estimating the effects to congestion from the HSDRRS construction.

4.1.1.5 Truck Trip Thresholds

An additional method was used to increase the understanding and improve the communication of truck congestion resulting from materials delivery. This method was based on the need to identify individual, highly utilized roads for community-level planning and public awareness. A key component of the analysis was the establishment of truck traffic thresholds. The thresholds were used as a proxy to suggest the level of truck traffic at which the roadway users and adjacent property owners would likely perceive an increase.

Thresholds of project-related truck traffic increases were identified for each functional road class, and are shown in table 4-2. The table shows the functional-class specific thresholds as a total number of trucks within a 12-hour workday, and indicates the frequency a truck would pass a fixed location.

Table 4-2. Truck Frequency Thresholds by Functional Road Class

Functional Road Class	Materials Transportation Trucks Per 12-Hour Workday	Truck Frequency
1	1,500	30 seconds
2	1,500	30 seconds
3	360	2 minutes
4	240	3 minutes
5	150	5 minutes
8	50	15 minutes

4.1.2 Rail Congestion

In the year 2000, 17 freight railroads operated in Louisiana and these railroads carried more than 1.8 million carloads on 3,187 route-miles of track with interstate movements accounting for 94 percent of Louisiana's 74 million tons of rail traffic (LADOTD, 2003). Overall, rail was projected to grow by 40 percent, though there was a great variance across commodities and regions (LADOTD, 2003).

Because railways operate on a dedicated right-of-way, there are characteristically no congestion problems for rail transportation (MARAD, 1994). However, increased rail traffic, because of its sheer volume, can cause congestion problems for surface roads where road traffic intersects rail traffic. However, because none of the construction sites for the WBV or LPV projects have direct access or offloading facilities from rail cars to construction sites, rail use would require an intermodal transfer to trucks for local transportation to the various construction reaches. While using rail transport for commodities such as steel could decrease the number of truck miles driven, the end result--with respect to congestion--would be similar to the decrease in levels of service observed if only trucks were used to move materials. This would lead to surface road congestion and degradation of levels of service, but the "origin" of materials entering the surface road network in greater New Orleans would be at rail yards.

4.1.3 Barge Congestion

Louisiana is located at the intersection of the two largest waterway networks, the Mississippi River System and the Gulf Intra-Coastal Waterway, comprising 86 percent of the national network in terms of length and 97 percent of the system's overall tonnage (LADOTD, 2003). Louisiana domestic barge tonnage totaled 281 million tons in the Year 2000 (LADOTD, 2003). These highly developed transportation systems are efficient modes of transportation with increasing economies of scale, especially for low-value, high-volume bulk cargoes.

Water transport has few congestion problems (MARAD, 1994). Waterway operators encounter little traffic other than pleasure boaters who steer clear of commercial traffic, and as a rule, each keeps to their 'own' area within a river. The waterway industry has met the increases in additional cargo demand, by building towboats with greater horsepower that are capable of pushing more barges at a time. The result has been fewer, but bigger, tows often with 15 barges in a single tow (MARAD, 1994).

4.2 Infrastructure Impacts

The extent of damage to the existing infrastructure of the New Orleans Metropolitan Area from the Hurricanes Katrina and Rita has been the subject of ongoing investigation. In Jefferson, Orleans, Plaquemines, and St. Bernard Parishes, much of the roadway network was submerged for at least several days and in many cases for weeks (LADOTD, 2005). The South Louisiana Submerged Roads Program (www.pavinglaroads.com) is addressing more than 50 street repair projects in Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany parishes in Phase A, but much of the remaining New Orleans Metropolitan Area has significant maintenance, rehabilitation, and reconstruction issues.[18] These roads are typically receiving a new wearing

[18] Maintenance refers to the least intensive and least costly group of activities – those designed to address minor or spot distress to make the ride more comfortable or to extend the life of the pavement by preventing deterioration. Rehabilitation refers to an intermediate level of roadwork on streets with moderate to severe distress.

course as well as other components at an average cost of approximately $500,000 per lane mile (RPC, 2009a).

According to a 2008 report by the Bureau of Governmental Research, New Orleans' last city street survey (2004) identified 32 percent of New Orleans' streets needed major rehabilitation or total reconstruction and another 34 percent were in need of immediate maintenance prior to Hurricane Katrina (BGR, 2008). The problem allegedly stems from chronic under-funding of necessary maintenance (BRG, 2008). Prior to the disaster, the city was spending $20 million to $30 million a year on major street repairs and reconstruction (BRG, 2008). The City of expects to spend $162 million of locally generated capital funds during the next three years, but spends only $3 million a year on maintenance. The Department of Public Works estimates that it would cost $3 billion to meet rehabilitation and reconstruction needs and another $40 million to $45 million a year to properly maintain the streets (BRG, 2008). While these statistics are only relative to Orleans Parish, they are assumed to be representative of the general pavement conditions within greater New Orleans.

Over the past 10 years Louisiana Department of Transportation and Development (LADOTD) has funded or conducted extensive studies on the effects of heavy load truck transportation on the roadway infrastructure of Louisiana (Roberts, et al, 2005; Roberts and Kjakfar, 1999; Fletcher, 1997) as well as estimating the effects from inundation during Hurricane Katrina (Gaspard et al, 2007). These references provide relevant examples of analyses of the effects of heavy truckloads on road surfaces as well as bridges in Louisiana. However, the vehicle axle configuration of any particular truck strongly affects roadway and bridge degradation. For example, the unit pavement cost per mile for a 3-axle 54,000 GVWR truck is 50-percent higher than the cost of a 5-axle 80,000 GVWR truck on the same road because the per-axle weight is less for the heavier truck (LADOTD, 1999). Projecting actual roadway damage and bridge fatigue is speculative because the fleet of trucks completing the work will be at the discretion contractors that are selected.

4.2.1 Truck Damage to Infrastructure

Roadway pavement, bridges, and culverts are designed and constructed to withstand the repeated loadings inflicted by the number of heavy trucks that were anticipated to use the route. The useful life of a new pavement is typically 20 years, at which point the structural integrity has been worn from the roadway and major rehabilitation is required. The total load expected over the pavement's "lifetime" due to heavy truck traffic, is the primary input in calculating the thickness of the pavement (MARAD, 2007). The design of road, bridge, and culvert construction and the robustness thereof are also, in part, based on the anticipated demand for daily usage by large trucks.

The most robust roadway designs are for the facilities designed to carry the largest number of the heaviest loads on a daily basis: the interstate, expressway, and arterial roads. The design loads expected for the minor arterial, urban collector, and local roads do not account for frequent heavy loads. As such, the effect of using the minor arterial, urban collector, and local roads to haul large quantities of heavy loads would be the accelerated wearing of road surfaces, bridges,

Reconstruction refers to the most intensive and costly approach. It applies to streets that have deteriorated to the point of failure and involves complete removal and replacement of the surface and substructure of the roadway.

and culverts. These facilities were simply not designed to support the anticipated heavy truck traffic demand needed for transporting materials for the HSDRRS.

Using GIS-based routing, distances modeled for truck transportation may be sorted according to road functional classifications of the transportation routes. Minor arterial, urban collector, and local roads are the least robust surface roads that would be used for truck transportation. These three functional classes of roads were designed anticipating the fewest heavy truckloads being applied to their surfaces. According to Louisiana DOTD's "Preliminary Assessment of Pavement Damage Due to Heavier Loads on Louisiana Highways (LADOTD, 1999)," the pavement degradation cost of a 3-axle truck at 54,000 GVWR on a local road is more than 60 times the pavement degradation cost for that same vehicle to travel on an interstate highway.

In addition to the road surfaces themselves, culverts and bridges integral to the transportation routes were designed and constructed based on the functional classification of the road they are within. A statewide examination of bridges identified 13,426 bridges in Louisiana including bridges on local roads and those within the national highway system roads (LADOTD, 2003). Of the 10,851 non-National Highway System bridges, 2,320 (21-percent) were structurally deficient[19] and 1,636 (15-percent) were functionally obsolete[20] (LADOTD, 2003). Of the 2,575 bridges within the National Highway System, 105 were classified as structurally deficient and 530 were functionally obsolete (LADOTD, 2003).

There are approximately 300 crossings where roads likely to be used for materials transportation intersect a bridge, culvert, or similar water conveyance structure. Approximately 103 of the crossings are within roadways classified as minor arterial (62), urban collector (19), or local roads (22). These locations would be the least capable of withstanding the increased burden of heavy truckloads necessary to transport materials to the construction sites.

According to LADOTD's 2005 study "Effects of Hauling Timber, Lignite Coal, and Coke Fuel on Louisiana Highways and Bridges (Roberts et al, 2005)," fatigue costs to state bridges crossed by 80,000 GVWR trucks are minimal because the stresses caused by such loads are within design load. However, parish bridges crossed by the same 80,000 GVWR trucks are subject to substantial damage (Roberts et al, 2005).

4.2.2 Rail and Barge Damage to Infrastructure

The relatively small number of train and barge trips under the Max Barge, Max Rail, and Likely Scenario would not be expected to have any discernable effects to the rail or marine terminal infrastructure in greater New Orleans.

4.3 Accident Risks

Risk identification is an organized approach to synthesizing engineering or scientific information in order to assess the extent of risk to human health, safety, or the environment. Because the assessment of transportation risk involves different modes of transportation, with varying numbers of shipments, over different routes of varying lengths, the relative risks are compared

[19] "Structurally deficient" means the bridge is in need of rehabilitation in order to carry loads for which it was originally designed (LADOTD, 2003).
[20] "Functionally obsolete" means the bridge is structurally sound, yet in most cases with width and/or clearance restrictions.

based on the average impacts estimated for each mile traveled (i.e., "per-mile" unit risks). These unit risks, and the total risks they predict when multiplied by the distances traveled, are intended for comparison purposes only and provide a benchmark with which to understand the relative differences between the risks of the different modes of transport. The unit risks in the comparison were based on data from two primary references: "State-Level Accident Rates of Surface Freight Transportation: A Reexamination" (Saricks and Tompkins, 1999), and "Large Truck Crash Facts – 2005" (USDOT, 2007).

4.3.1 Truck

Transportation of construction materials involves a risk to members of the public and accidents during transportation may cause property damage, injures, and fatalities. The U.S. Department of Transportation's Federal Motor Carrier Safety Administration's motor carrier reporting rules (49 CFR § 390.5) define an accident as an occurrence involving a commercial motor vehicle operating on a public road that results in (1) a fatality and/or (2) bodily injury to a person that requires medical treatment away from the accident scene; and/or (3) one or more involved motor vehicles incurring disabling damage as a result of the accident such that the vehicle must be towed from the scene (Saricks and Tompkins, 1999).

The most recent edition of the U.S. Department of Transportation's Large Truck Crash Facts (USDOT, 2007) contains descriptive statistics about fatal, injury, and property damage only (PDO) crashes involving large trucks from 2005. These summary statistics report the occurrence rates, in events per 100 million miles traveled, for all three categories of large truck accident (fatal, injury, PDO) nationwide. Large trucks are defined as trucks with a gross vehicle weight rating (GVRW) exceeding 10,000 pounds.

For the calendar year 2005 data, the rates of occurrence per 100,000,000 miles traveled are presented in table 4-3 (USDOT, 2007). For every 100,000,000 miles traveled for large trucks, there were 2.34 fatalities, 51.1 injuries, and 159 PDO events.

Table 4-3. Large Truck Accident Rates per 100 Million Miles

Fatalities	Persons Injured	Vehicles With Property Damage Only
2.34	51.1	159

Source: USDOT, 2007.

Estimating the number and type of accidents that could occur under the different transportation alternative scenarios requires multiplying the large truck accident rates (table 4-3) by the number of large truck miles traveled under the respective alternatives.

4.3.2 Rail

Within the Federal Railway Administration's (FRA) rules for the reporting of accidents and incidents (49 USC 20901), rail carriers must file a report with the Secretary of Transportation, not later than 30 days after the end of each month in which an accident or incident occurs, that states the nature, cause, and circumstances of the reported accident or incident.

The criteria for a reportable accident or incident currently encoded in 49 CFR Part 225 are as follows:

- An impact occurs between railroad on-track equipment and (a) a motorized or non-motorized highway or farm vehicle, (b) a pedestrian, or (c) other highway user at a highway-rail crossing,
- A collision, derailment, fire, explosion, act of God, or other event involving the operation of standing or moving railroad on-track equipment results in aggregate damage (to on-track equipment, signals, track and/or other track structures, and/or roadbed) of more than $6,700, and
- An event arising from railroad operation that results in (a) the death of one or more persons; (b) injury to one or more persons, other than railroad employees, that requires medical treatment; (c) injury to one or more employees that requires medical treatment or results in restriction of work or motion for one or more days, one or more lost work days, transfer to another job, termination of employment, or loss of consciousness; and/or (d) any occupational illness of a railroad employee diagnosed by a physician.

Accident rates for railroad operations (accidents/incidents/fatalities) were not based on train miles traveled because construction materials would not always be moved in uniform-length dedicated trains. Instead, unit risk factors for train hauling were based on the railcar-mile of movement (Saricks and Tompkins, 1999). For ease in comparison to the truck risks, these factors were converted to rates per railcar-mile.

Louisiana-specific unit risks were developed by Saricks and Tompkins (1999) by using state accident data for the years 1994-1996 in the numerator and the estimated total in-state railcar distances traveled (loaded and unloaded) as the denominator. Using these numbers, annual risk factors were developed as an accident rate per railcar-mile. The three year's risk factors were averaged to get an average rate per railcar-mi and those risk factors were then multiplied by 100,000,000 miles to provide a basis for comparison between the truck, rail, and barge risks (see table 4-4).

Table 4-4. Rail Car Accident Rates Per 100 Million Rail Car Miles

Fatalities	Persons Injured	Property Damage Only
9	33	20

Estimating the number and type of accidents that could occur under the different transportation alternative scenarios requires multiplying the rail car accident rates (table 4-4) by the number of railcar miles traveled under the respective alternatives.

4.3.3 Barge

Under 46 USC Part 61, Reporting Marine Casualties, criteria have been established required reporting (by vessel operators and owners) of marine casualties and incidents involving all US flag vessels occurring anywhere in the world and any foreign flag vessel operating on waters subject to the jurisdiction of the US. An incident must be reported within five days if it results in:

- Death of an individual,
- Serious injury to an individual,
- Substantial loss of property,
- Damage affecting the seaworthiness or efficiency of the vessel, or
- Significant harm to the environment.

Saricks and Tompkins' (1999) accident rates for waterway operations were developed by combining data from the Coast Guard's Marine Casualty and Pollution Database and summary information from USACE annual publication Waterborne Commerce of the United States. Accident types included allisions (striking of/scraping against stationary structures), collisions (between vessels or involving a vessel and another moving vehicle), barge breakaways, fires, explosions, groundings, structural failures, flooding, capsizing, and sinking that occurred in US inland waters or (identifiably) within 100 miles of the coastline (Saricks and Tomkins, 1999).

Their analyses developed unit risk factors for waterway operations (accidents, injuries, and fatalities) that standardized the risk factors to rates per 500-ton shipment mile by waterway type and by state. The ton-mile estimates were divided by the 500-ton shipment weight to produce a unit risk factor similar to "railcar" and "truckload" as shown in table 4-5.

Table 4-5. Waterborne Vessel Accident Rates per 100 Million Shipment Miles

Fatalities	Persons Injured	Property Damage Only
1	11	270

Estimating the number and type of accidents that could occur under the different transportation alternative scenarios requires multiplying the barge travel accident rates (table 4-5) by the number of railcar miles traveled under the respective alternatives.

4.4 Air Quality - Diesel Emissions

As of April 30, 2004, the four parishes surrounding the New Orleans urbanized area (Jefferson, Orleans, St. Bernard and St. Charles parishes) were determined to be in compliance with the new, 8-hour standard for ozone in accordance with the Clean Air Act Amendments of 1990 (RPC, 2009). The determination was based on three consecutive years of air quality monitoring data that demonstrated compliance with the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. On May 27, 2008, new air quality standards for ozone went into effect as promulgated by the US Environmental Protection Agency and the newer, more stringent standards may have an impact on the region's ability to meet the NAAQS (RPC, 2009).[21]

[21] This standard is currently under reconsideration by the USEPA. USEPA could propose a lower standard by December 2009 and promulgate a final ruling by August 2010.

There are three primary methods for transporting materials to and within greater New Orleans: truck, rail, and barge. However, few construction projects are accessible by barge, none are directly accessible by rail, and all are accessible by truck. To use rail or barge, the material would need to be offloaded from the bulk containers at rail yards and marine terminals, loaded onto trucks, and delivered to the construction projects. In addition, the opportunity to use rail or barge is restricted to the transport of steel, rock, and the aggregate materials used in the production of concrete because no feasible method exists for using barge or rail for earthen material delivery. As such, the emissions from the truck transport for the distribution of earthen borrow within greater New Orleans cannot be reduced by the use of rail or barge.

Sections 4.4.1 through 4.4.3 show the differences in emissions that would be produced for truck, rail, and barge transportation of materials to and within greater New Orleans.

4.4.1 Truck Emissions

The 1990 Federal Clean Air Act Amendments directed the Environmental Protection Agency (EPA) to develop two separate Federal conformity rules. Those rules (promulgated as 40 CFR Parts 51 and 93) are designed to ensure that Federal actions do not cause, or contribute to, air quality violations in areas that do not meet the national ambient air quality standards. The two rules include transportation conformity, which applies to transportation plans, programs, and projects (i.e., projects that involve the building of roads); and general conformity, which applies to all other non transportation-related projects, including the construction of the HSDRRS.

The EPA has set National Ambient Air Quality Standards (NAAQS) for six principal air quality pollutants, called "criteria" pollutants. They are carbon monoxide, nitrogen dioxide, ozone,[22] lead, particulates of 10 microns or less in size (PM-10 and PM-2.5), and sulfur dioxide.

The Clean Air Act General Conformity Rule (58 FR 63214, November 30, 1993, Final Rule, Determining Conformity of General Federal Actions to State or Federal Implementation Plans) was designed to ensure that Federal actions do not impede local efforts to control air pollution. It is called a conformity rule because Federal agencies are required to demonstrate that their actions "conform with" (i.e., do not undermine) the approved State Implementation Plan[23] (SIP) for their geographic area. The final rule dictates that a conformity review be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more of the six NAAQS criteria pollutants.

All of the Parishes within greater New Orleans are in "attainment" of the NAAQS for each of the six criteria pollutants. Because of this, no detailed conformity analyses were required[24] for the IERs. Although not required for a conformity assessment and evaluation of Clean Air Act

[22] Ozone is the only parameter not directly emitted into the air but forms in the atmosphere when three atoms of oxygen (0^3) are combined by a chemical reaction between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC, also known as ozone precursors. Strong sunlight and hot weather can cause ground-level ozone to form in harmful concentrations in the air.

[23] A State Implementation Plan (SIP) is the federally-approved plan by which each state identifies how it will attain and/or maintain the health-related primary and welfare-related secondary National Ambient Air Quality Standards (NAAQS).

[24] If one or more of the priority pollutants had not been in attainment, then the proposed actions would have been subject to detailed conformity determinations unless these actions were clearly *de minimus* emissions. Use of the *de minimus* thresholds assures that the conformity rule covers only major Federal actions (USEPA, 1993).

compliance, the quantification of the mobile source, direct emissions from the materials transportation is necessary to address the cumulative effects under NEPA. The Mobile Source Emission Factor (MOBILE) model is an EPA emission factor model for predicting gram per mile emissions of the priority pollutants and other toxics from on-road vehicles under various conditions.[25] The MOBILE model was used to quanitify the emissions from construction materials transportation. This analysis does not include non-road emissions from demolition, construction equipment used to build the HSDRRS, or emissions from materials transportation off of the public roads within temporary work area easements or at construction sites.

In order to use the MOBILE model to quantify on-road emissions from materials transport, three variables needed to be established:

1. Types of trucks assumed to transport materials,
2. Distances those trucks would travel to complete the project, and
3. Rates at which those trucks would emit pollutants [i.e., emissions factors (grams/mile)] during transportation.

The MOBILE model provides only two classes of heavy-duty diesel vehicles (HDDV). Class 8A are the smaller vehicles where their gross vehicle weight restriction is between 33,001-60,000 pounds; Class 8B represents the larger heavy-duty diesel vehicles where the gross vehicle weight restriction is greater than 60,000 pounds. The assumptions made regarding hypothetical distribution of truck miles traveled in each of the classes (HDDV8A and HDDV8B) are shown in table 4-6. The percentages are different for each of the construction materials based on an assumed distribution of truck size in the fleet.

Table 4-6. Assumed Distances by MOBILE 6.2 HDDV Class

	Earthen Fill	Steel	Ready-Mix Concrete	Concrete Pile	Aggregate	Rock
Assumed Percent HDDV8A	10%	20%	60%	20%	10%	20%
Assumed Percent HDDV8B	90%	80%	40%	80%	90%	80%

MOBILE 6.2 was used to generate emission factors for volatile organic hydrocarbon (VOC), carbon monoxide (CO), oxides of nitrogen (NOx), exhaust particulate matter (PM), sulfur dioxide (SO_2), ammonia (NH_3), and carbon dioxide (CO_2). The model calculates emission rates under various conditions affecting in-use emission levels (e.g., ambient temperatures, average traffic speeds).

The model includes default values for a wide range of conditions that affect emissions. These defaults are designed to represent "national average" input data values. For this analysis,

[25] Online at: http://epa.gov/OMSWWW/m6.htm

additional values were specified in the input file[26] to represent regional atmospheric and climactic conditions for the New Orleans area (e.g., elevation above sea level, time of year, daily high and low temperature, absolute humidity). Based on these input parameters, composite emissions factors or emission rates in grams/mile as well as average fuel efficiency (miles/gallon) were generated by the model, and are shown in table 4-7.

Table 4-7. Composite Emission Factors and Diesel Fuel Use

Pollutant	Vehicle Class from Mobile 6.2	
	HDDV8A (33,001 – 60,000 lbs GVWR) Emission Factor (g/mi)	HDDV8B (>60,000 lbs GVWR) Emission Factor (g/mi)
VOCs	0.4010	0.4800
NOx	7.1800	8.7220
CO_2	1,550.2000	1,626.6000
CO	1.7640	2.3520
PM_{10}	0.1655	0.1880
$PM_{2.5}$	0.1523	0.1731
SO_2	0.0144	0.0152
NH_3	0.0270	0.0270
Miles/Gallon	6.6000	6.3000

4.4.2 Rail Emissions

The USEPA has established emission standards for NOx, HC, CO, and PM for newly manufactured and remanufactured diesel-powered locomotives and locomotive engines (EPA, 2009). Three separate sets of emission standards have been adopted, depending on the date a locomotive was first manufactured. The first set of standards (Tier 0) apply to locomotives and locomotive engines originally manufactured from 1973 through 2001. The second set of standards (Tier 1) apply to locomotives and locomotive engines originally manufactured from 2002 through 2004. The final set of standards (Tier 2) apply to locomotives and locomotive engines originally manufactured in 2005 and later. It is important to emphasize that the emission factors provided by EPA (EPA, 2009) rely on many simplifying assumptions and therefore the emission rates calculated should be considered as approximations.

[26] The input parameters and input file as well as the output file are included as appendix A.

Calculating the non-road emission factors rely on estimates of the amount of a pollutant emitted by a particular type of equipment during a unit of use. Typically, emission factors for non-road sources are reported in grams per horsepower-hour (g/hp-hr), but they also may be reported in grams per mile, grams per hour, and grams per gallon. The EPA has established standards to calculate emissions from railroad locomotives in the form of an expected fleet average for emissions of NOx, PM_{10}, and HC emission factors by calendar year (EPA, 2009); the emissions factors for 2010 were used for this analysis and are presented in table 4-8. The emission factor used to estimate the CO emissions is from previous EPA guidance (EPA, 1997). The EPA guidance (EPA, 2009) does not provide an emission factor for ammonia (NH_4) so the data are reported as not available (N/A).

These EPA emission factors provide a method for estimating emissions when fuel gallons are known. Detailed data for train fuel consumption or composition are generally proprietary, but estimates of average fuel efficiencies have been developed and are approximately 2 to 3 gallons per mile (MARAD, 2007).

Gram per gallon emissions of sulfur dioxide (SO_2) and carbon dioxide (CO_2) are largely independent of engine parameters and are primarily dependent on fuel properties (EPA, 2009). As such, locomotive-specific emission rates are not provided by the EPA emission factor guidance (EPA, 2009). Instead, the Technical Highlights (EPA, 2009) recommends that SO_2 and CO_2 emission rates be calculated based on the properties of the specific fuel being used by the locomotives and the emission rates can be assumed to be the same as for other diesel engines operating on similar fuel. Therefore, the emission factors for SO_2 and CO_2 will be the same as was used for estimating SO_2 and CO_2 emissions for trucks.

Table 4-8. Estimated Emission Rates for Locomotives for Calendar Year 2010

	VOC grams/gal	NOx grams/gal	CO_2 grams/gal	CO grams/gal	$PM_{2.5}$ grams/gal	PM_{10} grams/gal	SO_2 grams/gal
Large Line-Haul	8.7	157.0	10,084.6	26.6	4.6	4.7	1.9

Sources: USEPA, 2009; USEPA, 1997.

4.4.3 Barge (Tug) Emissions

There are different types of tugs and barges that commonly operate on the lower Mississippi: towboats and pushboats. A river tug or pushboat is generally a flat-bottomed boat with a flat bow. The bow meets up against the flat stern of a river barge, the two are secured to each other, and the tug pushes the barge or barges up or down the river. In one variation, the pushboat has a rounded or pointed bow that fits in a notch on the stern of a barge (notch barge) and then commences to push the barge. Less commonly seen are towboats. Unlike a pushboat, the hull of the towboat does not, generally speaking, touch the barge. Instead a long line passes between the towboat and the barge as the towboat pulls the barge forward. Towboats are more commonly used for ocean going barges and on the Great Lakes than they are in the rivers (USEPA, 1999). Tows may be as large as 40 barges per tow on the lower Mississippi River (USEPA, 1999), however table 4-9 summarizes an EPA-published rule of thumb for estimating barge-to-tug ratios per tow.

Table 4-9. Barges Per Tug Assumptions

Tug Horsepower Range	Barges/Tug
3,500 and above	15
1,500-3,500	10
<1,500	5

Source: USEPA, 1999.

Strictly speaking, barges do not emit pollutants; emissions come from the tugboats that push or pull them. The EPA has promulgated emissions standards for marine vessel engines and classifies the barge tugs as non-oceangoing ships. The EPA data on non-oceangoing ships indicate that, based on a sample of approximately 100 vessels, the average rated horsepower for tugs was 4,268 hp (USEPA, 2000). The same source provides suggested load factors of 80-percent (cruise speed), 40-percent (slow cruise), and 20-percent (maneuvering) as a percent of the maximum continuous rating. These loading factors represent the varying conditions under which a tug would operate and the corresponding changes in emissions. Table 4-10 provides emission factors in grams emitted per hour of operation assuming EPA's average horsepower of 4,268 HP for non-oceangoing tugs (USEPA, 2000).

Table 4-10. Emission Factors (grams/hour) For Tugboats

NOx	CO	HC	SOx	PM 2.5	PM 10	CO_2	NO_2
42,015.6	3,501.3	1,591.5	4,144.3	768	834.9	2,132,610	63.66

Source: Capital Regional District Air Contaminant Emissions Inventory for 2004 (2008 Revision), 2008.

5 Transportation Alternatives Assessed and Compared

These analyses evaluate the effects from moving materials to, and within greater New Orleans in order to construct projects with a total cost of over $15 billion. It is important to realize that applied numerical models describe processes and make predictions about where, when and how the modeled phenomenon will occur, but have limits because of the assumptions used in the model.

The environmental consequences for transportation were modeled using materials quantities from ongoing construction designs in various stages of completion, with associated schedule changes, based on standardized truck, rail, and barge loading factors, and transported along unspecified routes to construction projects. This analysis depicts what the effects would be if there were no design or schedules changes after July 2009, and all of the simplifying assumptions described in this report were uniformly correct. Predicting traffic or road surface conditions on a particular segment of route, on a given day in the project schedule is not a realistic expectation from this analysis.

However, these limitations should not diminish the value of the analysis or the validity of the alternatives comparison. Each of the four alternatives (Max Truck, Max Barge, Max Rail, and theLikely Scenario) is evaluated to compare the effects to traffic congestion (5.1), infrastructure degradation (5.2), accidents (5.3), and emissions (5.4). The similarities and limited differences between the alternatives are valuable for the consideration of transportation alternatives. Slight differences in some of the metrics (e.g., truckloads) because of different rounding assumptions as the data were manipulated; this does not diminish the value of the assessment to decisions makers.

5.1 Congestion

Congestion resulting from project implementation was addressed using two methods: RPC's Congestion Management Index (CMI), and by defining thresholds at which the public would be likely to perceive the increase in traffic and identifying which specific roads exceeded those thresholds.

5.1.1 Congestion Impacts Evaluated using the CMI

Using the analytical approach discussed in section 4.1 Congestion, effects to local traffic were estimated for each of the transportation alternatives using the RPC's CMI. Each of the transportation routes are made up of many different road classes as the truck proceeds from origin to destination. In order to assess effects to traffic along the route, each route was parsed into segments by road class. This allows the analysis of the effects to traffic at distinct points along the route.

Likely transportation routes developed as part of this analysis were parsed into approximately 8,000 route segments. These route segments, along with schedules for delivery and the demand-driven truck trips, formed the basis for the calculation of incremental changes to the CMI.

These changes provide a relative assessment of the predicted changes in traffic. Over 3 million separate changes in the CMI were calculated for all transportation route segments, for six classes of roads, for each of the 380 weeks of the project analysis period, for each of the four alternatives, moving more than 2 million truckloads.

Table 5-1. Maximum Truck Use – Changes in CMI

	Minimum			Median			Maximum		
DOTD Class	Existing	With Project	Change	Existing	With Project	Change	Existing	With Project	Change
1	2.814	2.817	0.003	2.814	2.817	0.003	2.814	2.821	0.007
2	2.785	2.790	0.005	2.785	2.790	0.005	2.785	2.833	0.048
3	2.891	2.906	0.015	2.891	2.906	0.015	2.891	2.928	0.037
4	2.822	2.836	0.014	2.822	2.836	0.014	2.822	2.874	0.052
5	2.270	2.270	0.000	2.270	2.270	0.000	2.270	2.270	0.000
8	3.137	3.153	0.016	3.137	3.153	0.016	3.137	3.161	0.023

Table 5-2. Maximum Truck Use – Percent Change in Commercial Vehicles

	Percentile								
DOTD Class	Min	50%	60%	70%	80%	90%	95%	99%	100%
1	0	0	0	1	1	4	7	14	64
2	0	0	1	1	3	5	13	145	317
3	0	0	0	0	2	10	22	89	688
4	0	0	0	0	0	2	15	75	240
5	0	0	0	0	1	3	4	18	72
8	0	0	0	0	0	2	4	32	116

Table 5-3. Maximum Barge Use – Changes in CMI

	Minimum			Median			Maximum		
DOTD Class	Existing	With Project	Change	Existing	With Project	Change	Existing	With Project	Change
1	2.814	2.817	0.003	2.814	2.817	0.003	2.814	2.821	0.007
2	2.785	2.790	0.005	2.785	2.790	0.005	2.785	2.833	0.048
3	2.891	2.906	0.015	2.891	2.906	0.015	2.891	2.922	0.031
4	2.822	2.836	0.014	2.822	2.836	0.014	2.822	2.858	0.036
5	2.270	2.270	0.000	2.270	2.270	0.000	2.270	2.270	0.000
8	3.137	3.153	0.016	3.137	3.153	0.016	3.137	3.161	0.023

Table 5-4 Maximum Barge Use – Percent Change in Commercial Vehicles

	Percentile								
DOTD Class	Min	50%	60%	70%	80%	90%	95%	99%	100%
1	0	0	0	0	0	1	2	9	64
2	0	0	0	0	0	2	9	143	315
3	0	0	0	0	1	5	14	77	688
4	0	0	0	0	0	1	3	47	240
5	0	0	0	0	1	3	3	18	70
8	0	0	0	0	0	0	2	22	116

Table 5-5. Maximum Rail Use – Changes in CMI

	Minimum			Median			Maximum		
DOTD Class	Existing	With Project	Change	Existing	With Project	Change	Existing	With Project	Change
1	2.814	2.817	0.003	2.814	2.817	0.003	2.814	2.821	0.007
2	2.785	2.790	0.005	2.785	2.790	0.005	2.785	2.833	0.048
3	2.891	2.906	0.015	2.891	2.906	0.015	2.891	2.923	0.033
4	2.822	2.836	0.014	2.822	2.836	0.014	2.822	2.858	0.036
5	2.270	2.270	0.000	2.270	2.270	0.000	2.270	2.270	0.000
8	3.137	3.153	0.016	3.137	3.153	0.016	3.137	3.161	0.023

Table 5-6 Maximum Rail Use – Percent Change in Commercial Vehicles

	Percentile								
DOTD Class	Min	50%	60%	70%	80%	90%	95%	99%	100%
1	0	0	0	0	0	1	3	9	64
2	0	0	0	0	1	3	9	145	316
3	0	0	0	0	1	6	15	86	688
4	0	0	0	0	0	1	5	48	240
5	0	0	0	0	1	3	5	18	72
8	0	0	0	0	0	0	2	23	116

Table 5-7. Likely Scenario – Changes in CMI

	Minimum			Median			Maximum		
DOTD Class	Existing	With Project	Change	Existing	With Project	Change	Existing	With Project	Change
1	2.814	2.817	0.003	2.814	2.817	0.003	2.814	2.821	0.007
2	2.785	2.790	0.005	2.785	2.790	0.005	2.785	2.833	0.048
3	2.891	2.906	0.015	2.891	2.906	0.015	2.891	2.923	0.033
4	2.822	2.836	0.014	2.822	2.836	0.014	2.822	2.858	0.036
5	2.270	2.270	0.000	2.270	2.270	0.000	2.270	2.270	0.000
8	3.137	3.153	0.016	3.137	3.153	0.016	3.137	3.161	0.023

Table 5-8 Likely Scenario – Percent Change in Commercial Vehicles

	Percentile								
DOTD Class	Min	50%	60%	70%	80%	90%	95%	99%	100%
1	0	0	0	0	1	2	3	9	64
2	0	0	0	0	1	3	11	148	315
3	0	0	0	0	2	6	20	102	688
4	0	0	0	1	1	5	22	166	240
5	0	0	0	0	0	1	3	18	70
8	0	0	0	0	0	1	3	27	116

Table 5-9 presents the maximum calculated change in the CMI for any of the 8,000 segments within the six DOTD road classifications. These data indicate no discernable difference between the alternatives with respect to the effects on congestion.

Table 5-9. Alternative Comparison – Maximum Change in CMI

LADOTD Road Classification	Class Description	Max Truck	Max Barge	Max Rail	Likely Scenario
1	Interstate	0.007	0.007	0.007	0.007
2	Expressway	0.048	0.048	0.048	0.048
3	Principal Arterial	0.037	0.031	0.033	0.031
4	Minor Arterial	0.052	0.036	0.036	0.036
5	Urban Collector	0.000	0.000	0.000	0.000
8	Local Road	0.023	0.023	0.023	0.023

5.1.2 Congestion Impacts Evaluated using Truck Trip Thresholds

Evaluating the effects to traffic using the CMI calculations did not distinguish the predicted effects to traffic at a street level. In order to improve the public's understanding of the expected increase in truck traffic from materials transportation, truck traffic was evaluated by defining thresholds at which the public would be likely to perceive the increases in traffic. As introduced in section 4.1.1.5, this analysis identifies which specific roads exceeded those thresholds, and the duration of exceedance. Table 5-10 repeats the information shown in table 4-2, but is included again below to support communication of the analysis.

Table 5-10. Truck Frequency Thresholds by Functional Road Class

Functional Road Class	Materials Transportation Trucks Per 12-Hour Workday	Truck Frequency
1	1,500	30 seconds
2	1,500	30 seconds
3	360	2 minutes
4	240	3 minutes
5	150	5 minutes
8	50	15 minutes

Alternative-specific transportation routes, and the discrete roads within those routes, were parsed into approximately 8,000 route segments to evaluate traffic along very small segments for each route. However, to understand the overall effect on single roadways, multiple segments were dissolved into single road segments where both name and functional classification were shared. By consolidating segments in this fashion, the most impacted roads of each functional classification could be identified within the materials transportation routes.

These roads were then examined to determine how many of the roads exceeded the functional-class specific thresholds (table 5-10 above) under each of the four alternatives. Table 5-11 below summarizes the number of roads, by functional classification, that are predicted to exceed the thresholds. For example, none of the six functional class 1 or 2 roads are predicted to exceed the truck frequency threshold of 1,500 trucks per day during the project schedule. However, 19 of the 44 functional class 4 roads used in the materials transportation would be predicted to exceed the threshold of 240 trucks/day under the maximum truck alternative. Only 12 of the 44 functional class 4 roads would be predicted to exceed the threshold of 240 trucks/day for both maximum barge and likely scenarios.

With the exception of the number of functional class 8 (local roads) under the maximum truck alternative, table 5-11 indicates that a substantially similar number of roads would be predicted to exceed the truck frequency thresholds. Because the number of truck trips and routes used for the transportation of borrow is identical for all four scenarios, this result is not unexpected. Given the similarities, the remaining analyses report only the likely scenario.

Table 5-11. Numbers of Roads Exceeding Truck Frequency Thresholds by Functional Class and Alternative

DOTD Class	Maximum Truck	Maximum Barge	Maximum Rail	Likely	Used for Transport
1	0	0	0	0	6
2	0	0	0	0	6
3	7	6	7	6	35
4	19	12	13	12	44
5	10	8	8	8	17
8	41	32	35	32	62

Figure 5-1 (repeated from figure 4-1) shows the roads included in the routing of project materials deliveries under the likely scenario. Figure 5-2 shows the locations of roads within the transportation network that are expected to exceed frequency thresholds for the likely scenario.

Figure 5-1. Road Network Used for Project Materials Delivery (Likely Scenario)

Figure 5-2. Roads Exceeding Thresholds (Likely Scenario)

5.1.2.1 Likely Alternative - Duration of Truck Frequency Threshold Exceedence

Identifying the roads that exceed the truck frequency thresholds omits two important parameters: the duration of the effect (time) and the magnitude of the exceedance. The duration that truck traffic exceeds the frequency thresholds, and the extent to which the thresholds are exceeded is important in characterizing the intensity of the effect. The following four tables (5-12 through 5-15) identify the functional class-specific roads that exceed the truck frequency thresholds shown in figure 5-2. For the identified roads, the tables provide the number of months the threshold is exceeded, the minimum number of trucks per day that triggered the first exceedance, the maximum number of trucks per day, and the average number of trucks per day.

For example, table 5-12 identifies each of the six functional class 3 roads that exceed the truck frequency threshold of 360 trucks per day. In addition, table 5-12 identifies the number of months the threshold is exceeded as well as the minimum, average, and maximum number of trucks per day for the road in question. Within tables 5-12 through 5-15, the roadways are sorted in descending order by the number of months the truck thresholds are exceeded. Roads listed in these tables are those predicted to be most affected by increases in truck traffic and the durations for which these effects are expected.

Table 5-12. DOTD Road Class 3
Number of Days Threshold of 360 Material Delivery Trucks Per Day Exceeded

Roadway	Number of Months Threshold Exceeded	Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded: Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
US-90	15	360	1,064	2,252
Lapalco Boulevard	8	497	738	1,250
SR-39	7	372	445	457
US-61	6	383	458	640
SR-23	3	381	425	543
Walker Road	1	378	378	378

Table 5-13. DOTD Road Class 4
Number of Days Threshold of 240 Material Delivery Trucks Per Day Exceeded

Roadway	Number of Months Threshold Exceeded	Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded: Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
US-61	25	251	840	2,570
US-11	16	287	659	1,043
US-90	16	289	661	1,047
Michoud Boulevard	16	287	657	1,039
SR-46	12	264	459	698
Bayou Road	9	240	267	298
Ames Boulevard	8	326	842	2,147
Westwood Drive	7	291	653	1,248
Engineers Road	5	269	270	273
SR-3134	3	349	349	349
SR-45	3	347	348	349
Lakeshore Drive	2	268	315	346

Table 5-14. DOTD Road Class 5
Number of Days Threshold of 150 Material Delivery Trucks Per Day Exceeded

		Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded		
Roadway	Months Threshold is Exceeded	Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
SR-45	9	160	562	1,808
Bayou Road	9	240	267	298
Ames Boulevard	8	347	347	347
Westwood Drive	8	189	588	1,248
41st Street	3	190	190	190
Vintage Drive	3	190	190	190
Ames Boulevard	3	347	347	347
Barriere Road	2	382	382	382

Table 5-15. DOTD Road Class 8
Number of Days Threshold of 50 Material Delivery Trucks Per Day Exceeded

		Statistics for Days on Which Materials Delivery Truck Count Threshold is Exceeded		
Roadway	Months Threshold is Exceeded	Minimum Trucks per Day	Average Trucks per Day	Maximum Trucks per Day
Kenner Avenue	29	76	612	2,146
SR-46	27	100	332	698
Live Oak Boulevard	25	127	555	1,676
Bayou Road	19	62	144	298
Walker Road	19	52	198	756
Vintage Drive	18	52	126	348
Lapalco Boulevard	12	60	422	1,248
Concord Road	11	60	104	153
Engineers Road	11	52	142	273
Victory Drive	11	85	432	1,188
Macarthur Avenue	10	52	58	69
Almonaster Avenue	9	108	108	108
SR-3134	8	52	174	349
Carrie Lane	8	50	172	347
Mildred Street	8	57	167	392
40th Street	7	52	109	174
Loyola Drive	7	52	109	174
Beta Street	7	92	92	92
Laroussini Street	7	92	92	92
North Street	7	92	92	92
South Street	7	92	92	92
Vic A Pitre Drive	7	92	92	92
Caryota Drive	7	54	122	190
David Drive	7	54	122	190
Barriere Road	6	57	159	375
SR-23	5	165	165	165
Nashville Avenue	4	50	61	94
Hickory Avenue	3	95	95	95

5.2 Infrastructure Degradation

The relatively small number of train and barge trips under the Max Barge, Max Rail, and Likely Scenario would not be expected to have any discernable effects to the rail or marine terminal infrastructure in greater New Orleans. Therefore, the discussion of the effects to infrastructure focuses exclusively on the effects of truck transportation.

As described in section 4.2, the effects to infrastructure are a function of vehicle axle configuration, load, number of trips, road design, and the pre-project condition of the road. Estimating the effect to infrastructure from the alternatives is perforce speculative because essential factors cannot be predicted with certainty. Routes used are uncertain because contractors are allowed to select any route on public roads not specifically prohibited for use by a Parish. Rational assumptions regarding typical truck equipment can be made, but the effects to infrastructure are more highly correlated to the axle configuration of any particular truck than a vehicle's gross vehicle weight.[27] Contractors are not restricted from using any type of trucks, provided they are within the legal weight limits or are permitted as overweight. There will be multiple axle configurations for dump trucks/flatbeds/cement mixers/etc. with different weights per axle. Estimating the damage to infrastructure, based on a hypothetical fleet of trucks, on possible, but not certain routes, necessarily leads to extensive caveats on the use of the results.

When estimating the effects to roads, the concept of lane-mile is important because lane miles are a typical unit used to measure the surface area of a roadway. For example, a two-lane street that is one mile long has two lane miles, and a four-lane street that is one mile long has four lane miles. The width of lane used for this analysis was assumed to be 12 feet, so the area of a lane-mile would be the 12-foot lane width x 5,280 feet/mile = 63,360 square feet or one lane-mile.

Using the GIS route evaluation developed to estimate the effects to congestion (sections 4.1 and 5.1) and a map of the Louisiana DOTD road classifications for greater New Orleans (LADOTD, 2008) the routes used to transport materials were mapped according to their DOTD road classification. Tables 5-16 through 5-19 provide the single path length and the approximate conversion of these distances to lane miles, for each alternative. For each of the alternatives, there were a small number of miles (< 1 %) that could not be classified according to the DOTD road classification for New Orleans and they are reported as "unknown."

To estimate the additional number of lane miles that could be affected by the Contractor Furnished earthen material (~ 9 million cubic yards for which routes are not yet available), the lane miles for DOTD road classes 4, 5, and 8 were multiplied by a scaling factor of 1.428. The scaling factor represents the additional truckloads of Contractor-Furnished earthen fill for which routes are not yet available (9 million cy / 21 million cy = 0.428 or 42.8%). The scaling factor was not applied to the DOTD classes 1-3 as the road segments of this classification within greater New Orleans have already been accounted for in the materials routing.

The number of estimated lane-miles, by road classification is summed in each table to provide an alternative-specific total number of lane miles. When the total number of lane miles is juxtaposed to the total number of truckloads (taken from section 3), the similarity between the alternatives is noteworthy. Regardless of which alternative was implemented, between 1,100 and 1,300 lane miles of roadway within greater New Orleans would be traversed with between

[27] As described in section 4.2, the unit pavement cost per mile for a 3-axle 54,000 GVWR truck is 50-percent higher than the cost of a 5-axle 80,000 GVWR truck on the same road (LADOTD, 1999).

2.19 and 2.35 million truck trips. These similarities derive from the fact that the extent of truck transportation under each of the alternatives is substantially the same with earthen fill more than 85-percent of all trips for each of the alternatives. There are no stark contrasts between the alternatives with respect to the number of lane miles potentially affected by the project with greater New Orleans.

Table 5-16. Maximum Truck Use – Local Truck Transportation Distance and Lane Miles by Functional Road Classification

LADOTD Road Classification	Class Description	Length in Miles	Estimated Number of 12-ft Lane Miles	Number of Truckloads
1	Interstate	111.3	334.0	
2	Expressway	32.4	64.9	
3	Principal Arterial	229.8	459.5	
4	Minor Arterial	109.5	312.6	
5	Urban Collector	19.6	28.0	
8	Local Road	40.3	57.6	
Unknown	Unknown	7.4	10.6	
		Total	1,267.2	2,351,000

Table 5-17. Maximum Barge Use – Local Truck Transportation Distance and Lane Miles by Functional Road Classification

LADOTD Road Classification	Class Description	Length in Miles	Estimated Number of 12-ft Lane Miles	Number of Truckloads
1	Interstate	98.4	295.3	
2	Expressway	24.4	48.7	
3	Principal Arterial	207.2	414.4	
4	Minor Arterial	106.2	303.2	
5	Urban Collector	18.5	26.4	
8	Local Road	38.6	55.1	
Unknown	Unknown	7.3	10.4	
		Total	1,153.7	2,188,400

Table 5-18. Maximum Rail Use – Local Truck Transportation Distance and Lane Miles by Functional Road Classification

LADOTD Road Classification	Class Description	Length in Miles	Estimated Number of 12-ft Lane Miles	Number of Truckloads
1	Interstate	84.0	252.1	
2	Expressway	22.4	44.7	
3	Principal Arterial	209.0	418.0	
4	Minor Arterial	107.7	307.5	
5	Urban Collector	19.3	27.5	
8	Local Road	41.1	58.7	
Unknown	Unknown	5.8	8.3	
		Total	1,116.8	2,273,200

Table 5-19. Likely Scenario– Local Truck Transportation Distance and Lane Miles by Functional Road Classification

LADOTD Road Classification	Class Description	Length in Miles	Estimated Number of 12-ft Lane Miles	Number of Truckloads
1	Interstate	111.9	335.6	
2	Expressway	32.1	64.3	
3	Principal Arterial	240.8	481.5	
4	Minor Arterial	109.0	311.3	
5	Urban Collector	21.4	30.6	
8	Local Road	40.4	57.7	
Unknown	Unknown	7.4	10.6	
		Total	1,291.6	2,190,400

As described in section 4.2, the potential to damage infrastructure is not limited to the road surfaces, but also includes bridges, culvert, and any other crossings. Using GIS layers depicting the bridges and other crossings within the surface road network (provided by the Regional Planning Commission), an intersection of the alternative-specific routing and the RPC's bridges data was performed in GIS. The results have been sorted by DOTD road classification and are presented in table 5-20. As with the road surface, between 4 and 6-percent of the crossings were outside the classified roads, but the majority is identified. For all alternatives, more than 85-percent of all crossings are within roads classes 1, 2, or 3. The robustness of design and construction for these crossings should enable them to withstand an increased load of truck traffic. However, only 8-percent of crossings (23-25 depending on the alternative) are within road classes 4, 5, and 8. These roads are the least able to withstand the effects of large truck traffic and significant increases in loads beyond their design assumptions.

Table 5-20. Local Bridge, Culvert, or Crossings: Materials Routes by Road Type

LADOTD Road Classification	Class Description	Max Truck	Max Barge	Max Rail	Likely Scenario
1	Interstate	205	204	203	205
2	Expressway	81	52	54	81
3	Principal Arterial	71	62	70	71
4	Minor Arterial	25	24	23	25
5	Urban Collector	3	3	3	3
8	Local Road	4	4	5	4
Unknown	Unknown	16	23	18	16
	Total	405	372	376	405
Percent Class 1, 2, and 3		88%	85%	87%	88%
Percent Class 4, 5, and 8		8%	8%	8%	8%

Segments of interstate, expressway, and arterial roads (classifications 1, 2, and 3) have the largest number of truck-trips because these are the most-shared links (i.e., bottle-necks) within most routes. However, these road classifications are the most robust being designed to handle large numbers of trucks on a daily basis. The facility designs for the minor arterial, urban collector, and local roads (classifications 4, 5, and 8) carry fewer trips, but were not designed to support frequent heavy loads. The effect of extensively using the minor arterial, urban collector, and local roads to haul large quantities of heavy loads would be the accelerated wearing of road surfaces, bridges, and culverts.

Section 4.2 cites the Submerged Roads Program cost per lane mile (RPC, 2009a) to rehabilitate roads at approximately $500,000 per lane mile and this cost is assumed to include repair to road surfaces and crossings (i.e., bridges) within the roadway. Table 5-21 summarizes the alternative-specific data from tables 5-16 through 5-19, and approximates a cost to infrastructure for each of the alternatives assuming that all of the lane miles used in the truck transportation would need repair after the project was complete. The costs are similar because between 1,100 and 1,300 lane miles of roadway within greater New Orleans would be traversed with between 2.19 and 2.35 million truck trips, regardless of the alternative.

Table 5-21. Alternative Comparison - Lane Miles by Functional Road Classification

LADOTD Road Classification	Class Description	Max Truck	Max Barge	Max Rail	Likely Scenario
1	Interstate	334.0	295.3	252.1	335.6
2	Expressway	64.9	48.7	44.7	64.3
3	Principal Arterial	459.5	414.4	418.0	481.5
4	Minor Arterial	312.6	303.2	307.5	311.3
5	Urban Collector	28.0	26.4	27.5	30.6
8	Local Road	57.6	55.1	58.7	57.7
Unknown	Unknown	10.6	10.4	8.3	10.6
Estimated Total Miles		1,267	1,154	1,117	1,292
Estimated Total Truckloads (millions)		2.4	2.2	2.3	2.2
Estimated Infrastructure Cost ($ millions)[28]		633.6	576.8	558.4	645.8

5.3 Accident Risks

Using the analytical approach discussed in section 4.3 Accident Risks, the transportation risks were estimated for each of the transportation alternatives. For each alternative, the total collective risk for property damage only, injury only, or fatalities represents the aggregate of risks from each mode of transportation assumed under that alternative. Tables 5-22 through 5-25 present the estimated accident risks for each of the alternatives.

As show in table 5-26, Projected Accidents - Comparison of the Alternatives, Maximum Truck reflects the greatest collective risk of all three types of accidents. This is because of the significantly larger distance of truck travel (150 million miles traveled vs. less than 70 million) required under the Maximum Truck alternative when compared to the other three alternatives. The accident risks for the other three alternatives are substantially the same and primarily derive from the approximately 60-70 million miles of truck travel that is unavoidable. When transporting materials from remote locations to greater New Orleans by rail or barge, accident risks decrease.

[28] Cost of approximately $500,000 per lane mile based on cost per lane mile from the Submerged Road Program (RPC, 2009a).

Table 5-22. Projected Accidents - Maximum Truck

Mode	Estimated Miles Traveled	Projected Accidents		
		Property Damage Only	Injury Only	Fatality
Truck	150,426,000	230.2	76.9	3.1
Barge	0	0	0	0
Rail	0	0	0	0
SUM		230.2	76.9	3.1

Table 5-23. Projected Accidents - Maximum Barge

Mode	Estimated Miles Traveled	Projected Accidents		
		Property Damage Only	Injury Only	Fatality
Truck	59,662,300	91.3	30.5	1.2
Barge	732,860	19.8	0.8	0.1
Rail	0	0.0	0.0	0.0
SUM		111.1	31.3	1.3

Table 5-24. Projected Accidents - Maximum Rail

Mode	Estimated Miles Traveled	Projected Accidents		
		Property Damage Only	Injury Only	Fatality
Truck	61,761,400	94.5	31.6	1.3
Barge	188,870	5.1	0.2	0.0
Rail	80,380	5.0	2.7	0.7
SUM		104.6	34.5	2.0

Table 5-25. Projected Accidents – Likely Scenario

Mode	Estimated Miles Traveled	Projected Accidents		
		Property Damage Only	Injury Only	Fatality
Truck	68,457,410	104.7	35.0	1.4
Barge	522,440	1.4	0.1	0.0
Rail	0	0.0	0.0	0.0
SUM		106.2	35.1	1.4

Table 5-26. Projected Accidents - Comparison of Alternatives

Mode	Estimated Miles Traveled	Projected Accidents		
		Property Damage Only	Injury Only	Fatality
Max Truck	150,426,000	230.2	76.9	3.1
Max Barge	60,395,160	111.1	31.3	1.3
Max Rail	62,030,650	104.6	34.5	2.0
Likely Scenario	68,943,520	106.2	35.1	1.4

5.4 Emissions

Utilizing the alternative-specific distances traveled from section 3, emissions were calculated using the emissions factors described in section 4.4. To enhance the comparison, the total distance traveled (miles) and the calculated quantity of diesel fuel needed (gallons) is also provided. Truck miles have also been segregated into local (within greater New Orleans) and non-local miles to indicate the quantity of local emissions. Because all of the Parishes are currently designated as "in attainment" of all criteria pollutants, further requirements by the Clean Air Act general conformity rule (Section 176.(c)) would not apply. Emissions were therefore not segregated by Parish or separated by the calendar year in which the emissions would occur. Tables 5-27 through 5-30 illustrate the alternative-specific emissions estimated and table 5-31 compares the emissions, by alternative. While the Max Truck requires significantly more miles to be traveled, the per mile emissions from truck transportation are considerably less than emissions from barges or locomotives. Therefore, the alternatives that include the usage of barge or rail transportation have greater emissions of VOCs, NOx, CO, and PM than when truck transportation alone was assumed.

Table 5-27. Maximum Truck Use – Diesel Emissions (tons)

Mode	Miles	Gallons of Diesel	VOCs	NOx	CO_2	CO	$PM_{2.5}$	PM_{10}	SO_2	NH_3
Local Truck	68,276,000	10,717,500	35.5	643	121,768.50	172	12.9	14.0	1.1	2
Non-Local Truck	82,150,000	12,715,600	41.4	750	143,593.00	199	15.1	16.4	1.3	2.4
TOTALS	150,426,000	23,433,000	76.8	1,393	265,361.60	371	27.9	30.3	2.5	4.4

Table 5-28. Maximum Barge Use – Diesel Emissions (tons)

Mode	Miles	Gallons of Diesel	VOCs	NOx	CO_2	CO	$PM_{2.5}$	PM_{10}	SO_2	NH_3
Local Truck	59,662,300	9,417,500	31.0	563.0	106,451.0	150.6	11.2	12.2	1	1.8
Tug / Barge	732,860	16,222,320	135.4	3,393.9	172,266.6	282.8	62.0	67.4	334.8	N/A
TOTALS	60,395,160	25,639,820	166.4	3,956.9	278,717.6	433.5	73.3	79.7	335.8	1.8

Table 5-29. Maximum Rail Use – Diesel Emissions (tons)

Mode	Miles	Gallons of Diesel	VOCs	NOx	CO_2	CO	$PM_{2.5}$	PM_{10}	SO_2	NH_3
Local Truck	61,761,400	9,742,600	32.1	582.7	110,190.2	155.9	11.6	12.6	1.0	1.8
Tug/Barge	188,870	4,181,100	33.1	874.7	44,399.6	72.9	16.0	17.4	86.3	N/A
Rail	80,380	3,399,700	32.8	588.4	37,789.6	99.7	17.1	17.6	7.0	N/A
TOTALS	62,030,650	17,323,400	98.0	2,045.7	192,379.4	328.5	44.7	47.6	94.4	1.8

Table 5-30. Likely Scenario – Diesel Emissions (tons)

Mode	Miles	Gallons of Diesel	VOCs	NOx	CO_2	CO	$PM_{2.5}$	PM_{10}	SO_2	NH_3
Local Truck	60,526,470	9,538,000	31.5	571.4	108,054.4	152.9	11.4	12.4	1.0	1.8
Non-Local Truck	7,894,610	1,212,860	3.9	71.5	13,696.3	19.0	1.4	1.6	0.1	0.2
Tug / Barge	522,440	11,564,600	96.5	2,419.5	122,805.8	201.6	44.2	48.1	*238.6	N/A
TOTALS	68,943,520	22,315,460	131.9	3,062.4	244,556.5	373.5	57.1	62.0	*239.8	2.0

*No separate emission factor used for SO_2 for tug emissions. Reported as SO_x.

Table 5-31. Comparison of the Alternatives – Diesel Emissions (tons)

Alternative	Miles (millions)	Gallons of Diesel (millions)	VOCs	NOx	CO_2	CO	$PM_{2.5}$	PM_{10}	SO_2	NH_3
Max Truck	150.4	23.4	76.8	1,393	265,362	371.0	27.9	30.3	2.5	4.4
Max Barge	60.4	25.6	166.4	3,957	278,718	433.5	73.3	79.7	335.8	1.8
Max Rail	62.0	17.3	98.0	2,046	192,379	328.5	44.7	47.6	94.4	1.8
Likely Scenario	68.9	22.3	131.9	3,062	244,557	373.5	57.1	62.0	*239.8	2.0

*No separate emission factor used for SO_2 for tug emissions. Reported as SO_x.

6 References

Bureau of Governmental Research (BGR). 2008. Street Smarts: Maintaining and Managing New Orleans' Road Network. On Line at: http://www.bgr.org/pdf/reports/Street-Smarts.pdf

Capital Regional District Air Contaminant Emissions Inventory for 2004 (2008 Revision). 2008. Capital Region District, Vancouver, BC. Prepared by SENES Consultants Limited. On Line at: www.crd.bc.ca/airquality/documents/38128_CAC_Inventory_Rev_April_08.pdf

Fletcher, C.A. 1997. Pilot Project for an Improved Sugar Cane Harvest and Transport System. Louisiana Transportation Research Center, Technical Assistance Report No. 13, Louisiana Transportation Research Center.

Gaspard, K., Martinez, M. Zhang, Z., Wu, Z. 2007. Impact of Hurricane Katrina on Roadways in the New Orleans Area. Conducted for the Louisiana Department of Transportation and Development, Louisiana Transportation Research Center. LTRC Pavement Research Group Technical Assistance Report No. 07-2TA.

International Association of the Great Lakes Ports (IAGLP). 1972. Report of the Engineering Committee: The St. Lawrence Seaway: The Quiet, Efficient Marine Highway. Toronto, ON.

Louisiana Department of Transportation and Development (LADOTD). 2003. Final Report. Louisiana Statewide Transportation Plan. On Line at: www.dotd.la.gov/study/home.aspx

Louisiana Department of Transportation and Development (LADOTD). 2005. Special Appropriations Request. On Line at: www.dotd.state.la.us/press/appropriations/Special_Appropriations_Request.pdf

Louisiana Department of Transportation and Development (LADOTD). 2008. New Orleans Highway Functional Classification Urbanized Area Map. On Line at: www.dotd.louisiana.gov/planning/maps_classification/urbanized/New_Orleans.pdf

Louisiana Department of Transportation and Development (LADOTD). 2009. Estimated Annual Average Daily Traffic Sites. On Line at: www.dotd.la.gov/highways/tatv/default.asp.

Regional Planning Commission (RPC). 2007. Metropolitan Transportation Plan, New Orleans Urbanized Area, FY 2032. On Line at: www.norpc.org/projects_programs/transportation/transp_documents/mtp_no-2032.pdf

Regional Planning Commission (RPC). 2009. Transportation Improvement Program, New Orleans Urbanized Area, Fiscal Years 2009-12. On Line at: www.norpc.org.

Regional Planning Commission (RPC). 2009a. Email September 16, 2009 to Lynn Dupont, RPC from David A. Branch, PE HNTB Corporation Indicating Phase A of the Submerged Roads Program Cost Per Lane Mile Approximately $538,700.

Roberts, F.L., Saber, A., Ranadhir, A., and Zhou, X. 2005. Effects of Hauling Timber, Lignite Coal, and Coke Fuel on Louisiana Highways and Bridges. Conducted for Louisiana Department of Transportation and Development, Louisiana Transportation Research Center by Louisiana Tech University, Civil Engineering Program. LTRC Project No. 05-2P, State Project No. 736-99-1299.

Roberts, F.L., James, T.L., and Kjakfar, L. 1999. Preliminary Assessment of Pavement Damage Due to Heavier Loads on Louisiana Highways. Conducted for the Louisiana Department of Transportation and Development, Louisiana Transportation Research Center. State Project No. 736-99-0698; LTCR Project No. 99-1P.

Saricks, C.L. and Tompkins, M.M.. 1999. State-Level Accident Rates of Surface Freight Transportation: A Reexamination. The Center for Transportation Research, Energy Systems Division, Argonne National Laboratory, Argonne, Illinois

Terry, P.A. 2009. HCM 101: A Primer for Non-Technical Decision Makers. Kansas University Transportation Center, On Line at:http://www.kutc.ku.edu/cgiwrap/kutc/pctrans/ezine/2/hcm101.php.

Transportation Research Board. 2000. Highway Capacity Manual (HCM2000). National Academy of Sciences.

U.S. Army Corps of Engineers. 2009. Monthly Borrow Tracking Sheets. New Orleans District.

U.S. Department of Energy (USDOE). 2002. A Resource Handbook on DOE Transportation Risk Assessment, DOE/EM/NTP/HB-01. Prepared for the USDOE Office of Environmental Management National Transportation Program.

U.S. Department of Transportation (USDOT). 2007. Large Truck Crash Facts - 2005. Analysis Division, Federal Motor Carrier Safety Administration.

U.S. Department of Transportation Maritime Administration (MARAD). 1994. Environmental Advantages of Inland Barge Transportation. Office of Market Promotion. On line at: http://www.port.pittsburgh.pa.us/docs/eaibt.pdf

U.S. Department of Transportation Maritime Administration (MARAD). 2007. A Modal Comparison of Domestic Freight Transportation Effects on the General Public. Prepared for the National Waterways Foundation by Center for Ports and Waterways, Texas Transportation Institute, Houston, Texas. Online at: http://www.nationalwaterwaysfoundation.org/study/public%20study.pdf

U.S. Environmental Protection Agency (USEPA). 1997. Technical Highlights, Emission Factors for Locomotives. Office of Mobile Sources, EPA420-F-97-051. On line at: http://www.epa.gov/otaq/regs/nonroad/locomotv/frm/42097051.pdf

U.S. Environmental Protection Agency (USEPA). 1999. Commercial Marine Activity for Great Lake and Inland River Ports in the United States, Final Report. Assessment and Modeling Division, Office of Mobile Sources, Report No. EPA420-R-99-019. On Line at: http://www.epa.gov/otaq/models/nonrdmdl/c-marine/r99019.pdf

U.S. Environmental Protection Agency (USEPA). 2000. Analysis of Commercial Marine Vessels Emissions and Fuel Consumption Data. Office of Transportation and Air Quality. Report No. EPA420-R-00-002. On Line at: http://www.epa.gov/otaq/models/nonrdmdl/c-marine/r00002.pdf

U.S. Environmental Protection Agency (USEPA). 2004. Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling, Compression – Ignition. Report No. NR-009c, revised April 2004. Office of Transportation and Air Quality. On Line at: http://www.epa.gov/otaq/models/nonrdmdl/nonrdmdl2004/420p04009.pdf

U.S. Environmental Protection Agency (USEPA). 2009. Technical Highlights, Emission Factors for Locomotives. Office of Mobile Sources, EPA420-F-09-025. On Line at: http://www.epa.gov/otaq/regs/nonroad/locomotv/420f09025.pdf

Appendix A – MOBILE 6.2 Input File Parameters and Output File

MOBILE 6.2 INPUT FILE

```
MOBILE6 INPUT FILE : EMISSION FACTOR CALCULATION FOR HSDRRS MATERIALS TRANSPORTATION
*CEMVN NOLA HSDRRS MATERIALS TRANSPORTATION AIR QUALITY MODEL
POLLUTANTS         : HC  CO  NOx CO2
PARTICULATES       : SO4 LEAD SO2 NH3 BRAKE TIRE OCARBON ECARBON GASPM
DATABASE OUTPUT    :
WITH FIELDNAMES    :
EMISSIONS TABLE    : NOLARUN.TB1 REPLACE
*EMISSIONS TABLE   : REPLACE
DATABASE VEHICLES  : 11111 11111111 1 111 11111122 111
AGGREGATED OUTPUT  :
AIR TOXICS         :
*ALL VALUES FOR AIR TOXICS BELOW ARE DUMMY VALUES FOR THE GASOLINE FUEL PROPERTIES, EMISSIONS ARE FOR DIESEL ONLY
*GAS AROMATIC%     : 25
*GAS OLEFIN%       : 15
*GAS BENZENE%      : 1.5
*E200              : 50
*E300              : 85
*OXYGENATE         : MTBE   15.1    0.50
*                  : ETBE   17.6    0.05
*                  : ETOH   10.0    0.45
*                  : TAME    6.0    0.00
REPORT FILE        : NOLARPT.TXT REPLACE
RUN DATA
EXPRESS HC AS VOC  :

FUEL RVP           : 9.0
*FUEL REID VAPOR PRESSURE - SUMMER RVP LIMIT IS 9 PSI OR 7.8 PSI.
MIN/MAX TEMPERATURE: 65.  90.
NO REFUELING       :
EXPAND HDDV EFS    :
EXPAND EXHAUST     :
```

EXPAND EVAPORATIVE :
IDLE PM EMISSIONS :
SCENARIO RECORD : NEW ORLEANS, LA
CALENDAR YEAR : 2010
EVALUATION MONTH : 7
*EVALUATION MONTH 7 IS JULY
ABSOLUTE HUMIDITY : 130.0
*ABSOLUTE HUMIDITY CONVERSION AT www.vaisala.com/humiditycalculator/vaisala_humidity_calculator.html?lang=eng
ALTITUDE : 1
*VALUE OF 1 FOR ALTITUDE IS "LOW"
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV PMDDR2.CSV
PARTICLE SIZE : 10
*REPEAT RUN WITH PARTICLE SIZE 10.0 TO GET THE OTHER DATA SET?
DIESEL SULFUR : 15.00
*HDDV 8A (GVRW 33,001 - 60,000 LBS) AND 8B (>60,000 LBS GVWR)
*AVERAGE SPEED : CONDUCT MULTIPLE RUNS WITH THIS ADJUSTED TO ILLUSTRATE THE EFFECT OF SPEED ON EMISSIONS
*DIESEL RQD TO BE <15PPM PER EPA RULE
END OF RUN

Mobile 6.2 Output File (NOLARPT.txt)

```
* # # # # # # # # # # # # # # # # # # # # # # # # #
* NEW ORLEANS, LA
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # # #

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
 M 48 Warning:
       there are no sales for vehicle class HDGV8b

* Reading Ammonia (NH3) Basic Emissiion Rates
* from the external data file PMNH3BER.D

* Reading Ammonia (NH3) Sulfur Deterioration Rates
* from the external data file PMNH3SDR.D
```

Calendar Year: 2010
Month: July
Altitude: Low
Minimum Temperature: 65.0 (F)
Maximum Temperature: 90.0 (F)
Absolute Humidity: 130. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.6 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: NA (See Air Toxics Output)

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:		<6000	>6000	(All)						
VMT Distribution:	0.3478	0.3890	0.1336		0.0359	0.0003	0.0020	0.0860	0.0054	1.0000
Fuel Economy (mpg):	24.1	18.6	14.3	17.2	9.7	32.4	17.0	7.2	50.0	16.5
Composite Emission Factors (g/mi):										
Composite VOC :	0.795	0.812	1.393	0.961	0.978	0.180	0.439	0.392	2.58	0.862
Composite CO :	8.81	9.92	13.63	10.87	9.64	0.903	0.757	1.751	15.85	9.328
Composite NOX :	0.488	0.599	0.920	0.682	2.242	0.415	0.724	6.868	0.97	1.204
Composite CO2 :	368.2	477.8	620.5	514.3	914.7	314.2	597.0	1417.3	177.4	553.75
Exhaust emissions (g/mi):										
VOC Start:	0.153	0.195	0.309	0.224		0.062	0.153		0.398	
VOC Running:	0.169	0.208	0.349	0.244		0.118	0.286		1.225	
VOC Total Exhaust:	0.322	0.403	0.658	0.468	0.282	0.180	0.439	0.392	1.62	0.410
CO Start:	2.10	3.29	4.88	3.70		0.354	0.311		3.386	

```
       CO Running:     6.71     6.63     8.75     7.17              0.549    0.446              12.460
  CO Total Exhaust:     8.81     9.92    13.63    10.87     9.64    0.903    0.757    1.751    15.85    9.328

       NOx Start:    0.078    0.110    0.169    0.125              0.017    0.029              0.306
     NOx Running:    0.409    0.489    0.751    0.556              0.399    0.695              0.667
 NOx Total Exhaust:    0.488    0.599    0.920    0.682    2.242    0.415    0.724    6.868    0.97    1.204
 ---------------------------------------------------------------------------------------------------------------------
Non-Exhaust Emissions (g/mi):
     Hot Soak Loss:    0.156    0.140    0.252    0.169    0.223    0.000    0.000    0.000    0.338    0.152
      Diurnal Loss:    0.029    0.027    0.047    0.032    0.057    0.000    0.000    0.000    0.284    0.030
      Resting Loss:    0.074    0.077    0.149    0.095    0.142    0.000    0.000    0.000    0.332    0.082
      Running Loss:    0.207    0.155    0.278    0.187    0.265    0.000    0.000    0.000    0.000    0.179
    Crankcase Loss:    0.008    0.010    0.010    0.010    0.010    0.000    0.000    0.000    0.000    0.009
    Refueling Loss:    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
 Total Non-Exhaust:    0.474    0.409    0.735    0.494    0.696    0.000    0.000    0.000    0.953    0.452
 ---------------------------------------------------------------------------------------------------------------------
        Veh. Type:   HDDV2B   HDDV3    HDDV4    HDDV5    HDDV6    HDDV7    HDDV8A   HDDV8B
                     ------   ------   ------   ------   ------   ------   ------   ------
          VMT Mix:   0.0091   0.0028   0.0028   0.0013   0.0065   0.0094   0.0112   0.0400
Fuel Economy (mpg):     12.9     11.6     10.2      9.9      8.7      7.5      6.6      6.3
---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
   Composite VOC :    0.163    0.174    0.233    0.246    0.314    0.389    0.401    0.480
   Composite CO  :    0.612    0.644    0.923    0.937    1.046    1.312    1.764    2.352
   Composite NOX :    2.454    2.569    3.632    3.787    4.787    5.971    7.170    8.722
   Composite CO2 :    789.1    875.2   1000.9   1032.7   1171.4   1352.5   1550.2   1626.6
---------------------------------------------------------------------------------------------------------------------
Exhaust emissions (g/mi):
 VOC Total Exhaust:    0.163    0.174    0.233    0.246    0.314    0.389    0.401    0.480
  CO Total Exhaust:    0.612    0.644    0.923    0.937    1.046    1.312    1.764    2.352
 NOx Total Exhaust:    2.454    2.569    3.632    3.787    4.787    5.971    7.170    8.722
---------------------------------------------------------------------------------------------------------------------
Non-Exhaust Emissions (g/mi):
     Hot Soak Loss:    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

Diurnal Loss:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Resting Loss:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Running Loss:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Crankcase Loss:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Refueling Loss:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Non-Exhaust:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
