APPENDIX Q

AGENCY CORRESPONDENCE

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Final

Programmatic Agreement
Among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer,
And
The Advisory Council on Historic Preservation
Regarding the
Hurricane Storm Damage Risk Reduction System (HSDRRS)
Lake Pontchartrain & Vicinity and
West Bank & Vicinity
Mitigation Projects

WHEREAS, Hurricane Katrina and Hurricane Rita resulted in major damage to businesses, residences and infrastructure and to the Federal and non-Federal flood control and hurricane and storm damage reduction structures in the Greater New Orleans Metropolitan area, in Louisiana in August and September 2005; and

WHEREAS, Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (4th Supplemental) and Public Law 110-28, U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (5th Supplemental), and Public Law 110-252, Supplemental Appropriations Act, 2008 (6th Supplemental) direct the Secretary of the Army, through the Chief of Engineers, to accelerate completion of unconstructed portions, to raise levee and floodwall heights and to otherwise improve the Lake Pontchartrain & Vicinity (LPV) and the West Bank & Vicinity (WBV) hurricane and storm damage risk reduction projects to provide the level of protection necessary to achieve the certification required to participate in the National Flood Insurance Program; and

WHEREAS, the projects will be implemented with funds appropriated by Congress for Flood Control and Coastal Emergencies related to Hurricane Katrina as set forth above in the area covered by the disaster declaration made by President George W. Bush under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, 88 Stat 143, as amended (42 U.S.C. sec. 121 et seq); and

WHEREAS, the USACE has elected to fulfill its obligations under Section 106 of the National Historic Preservation Act of 1966, as amended through the execution and implementation of this Programmatic Agreement (Agreement) as provided in 36 CFR Part 800; and

WHEREAS, the USACE has negotiated Emergency Alternative Arrangements with the Council on Environmental Quality (Federal Register Volume 72, Number 48, Tuesday, March 13, 2007) to comply with the National Environmental Policy Act (NEPA) and its

implementing regulations (40 CFR Part 1500) for proposed actions with significant environmental effects that respond to the emergency, pursuant to 40 CFR 1506.11. Pursuant to the Emergency Alternative Arrangements, proposed actions are to be evaluated in an Individual Environmental Report (IER); and

WHEREAS, the USACE seeks to avoid and minimize environmental impacts to the maximum extent practical while developing the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS), and when habitat losses occur, the Corps will offset such losses through compensatory environmental mitigation. Compensatory environmental mitigation is an important part of the HSDRRS effort and could include habitat creation, restoration and/or enhancement. Separate plans to compensate for habitat losses caused by HSDRRS construction are being developed for LPV and WBV; and

WHEREAS, the USACE notified the Advisory Council on Historic Preservation (ACHP) of the potential for this undertaking to adversely affect historic properties pursuant to the ACHP's regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 USC 470f); and

WHEREAS, the ACHP accepted the invitation to participate in consultation to develop this agreement and to seek ways to avoid, minimize, or mitigate adverse effects; and

WHEREAS, the USACE, the ACHP, Louisiana State Historic Preservation Officer (LA SHPO), and federally recognized Indian Tribes as defined under 36 CFR 800.16(m), and other appropriate consulting parties have consulted to develop this Agreement to define efficient and cost effective processes for taking into consideration the effects of the LPV and WBV Mitigation projects upon historic properties pursuant to 36 CFR 800.14(b) consistent with the NEPA Emergency Alternative Arrangements and in the public interest; and

WHEREAS, the USACE acknowledges federally recognized Indian Tribes as sovereign nations which have a unique government-to-government relationship with the federal government and its agencies; USACE further acknowledges its Trust Responsibility to those federally recognized Indian Tribes; and

WHEREAS, the USACE, has notified affected federally recognized Indian Tribes and shall fulfill its tribal consultation responsibilities through ongoing consultation with federally recognized Indian Tribes that attach religious and cultural significance to historic properties that may be affected by the undertaking; and

WHEREAS, the USACE will invite any interested federally recognized Indian Tribe to sign this Agreement as an Invited Signatory Party, and those federally recognized Indian Tribes not requesting to sign this Agreement as an Invited Signatory Party will be invited to sign as a Concurring Party; and

WHEREAS, the USACE, in coordination with the LA SHPO, has taken appropriate measures to identify other consulting parties and to invite such parties to participate in the development and execution of this Agreement; and

WHEREAS, the USACE has requested the participation of local governments and the public by mail and will take appropriate steps to involve and notify those parties, as appropriate, during the implementation of the terms of this Agreement; and

NOW, THEREFORE, the USACE, ACHP, and LA SHPO agree that the implementation of the following stipulations will evidence that the USACE has taken into account the effects of the HSDRRS LPV and WBV Mitigation projects upon historic properties.

STIPULATIONS

The USACE shall adhere to the process and protocols set forth in this Agreement.

I. Tribal Consultation

A. The USACE has invited the Alabama-Coushatta Tribe of Texas, Caddo Nation of Oklahoma, Chitimacha Tribe of Louisiana, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, Quapaw Tribe of Oklahoma, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and Tunica-Biloxi Indian Tribe to consult in the development of the Programmatic Agreement. The Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, and the Mississippi Band of Choctaw Indians have participated in the development of the Programmatic Agreement and will sign the Programmatic Agreement as an Invited Signatory Party (hereafter also known as "signatory Indian Tribes"). The USACE will provide the signatory Indian Tribes with a copy of the Final Programmatic Agreement.

B. The USACE shall provide the signatory Indian Tribes with copies of all plans, determinations, and findings that are provided to the LA SHPO to assist in identifying activities that are part of the HSDRRS LPV and WBV Mitigation projects.

II. Public Involvement

A. The USACE, in coordination with the LA SHPO, shall identify and provide members of the public likely to be interested in the effects of the HSDRRS LPV and WBV Mitigation projects upon historic properties

with a description of the undertaking and the provisions of the Agreement.

B. The USACE will involve the public through the National Environmental Policy Act (NEPA) process, which affords all persons, organizations and government agencies the opportunity to review and comment on proposed major federal actions that are evaluated by a NEPA document.

C. The USACE will release a draft IER for the HSDRRS LPV Mitigation projects and a draft IER for the WBV Mitigation projects to the public for a review period of thirty (30) calendar days. Substantive comments received during this review period will be incorporated into the final IERs. The development of this Agreement will be communicated to the public during the IER development process and comments will be solicited regarding the Agreement and any other historic preservation concerns.

D. To the extent permitted under applicable federal laws and regulations, including Section 304 of the NHPA, the USACE will release to the public, documents developed pursuant to this Agreement, effects determinations, and Interim Progress Reports.

III. Other Consulting Parties

A. The USACE, in coordination with LA SHPO, will continue efforts during the duration of this Agreement to identify other parties with demonstrated interests in preservation issues and invite them to participate as consulting parties.

B. The USACE will document the consulting parties in the consultation process for each of the IERs and maintain it as part of the project record.

C. If any dispute arises about the right to be recognized as a consulting party, the USACE will contact the ACHP and provide all appropriate documentation. The ACHP will participate in the resolution of the issue.

IV. Determination of HSDRRS Mitigation Projects

A. If the USACE determines that it is appropriate and environmentally preferable based on consideration of relevant factors to mitigate the loss of habitat caused by construction of the HSDRRS through purchase of Mitigation Bank Credits, the purchase of such credits would have no effects on historic properties. If USACE purchases Mitigation Bank Credits to offset identified losses of habitat, documentation of the

purchase of Mitigation Bank Credits will be provided to all Signatories to this agreement as evidence that the USACE has met its obligations under Section 106 of the NHPA for this project. If Mitigation Bank Credits are purchased to partially offset habitat losses, USACE will provide documentation of that purchase to all Signatories as evidence that USACE has met its obligations under Section 106 of the NHPA for that portion of the project.

B. If USACE determines that it is environmentally preferable based on consideration of relevant factors to construct mitigation projects to offset habitat losses caused by the HSDRRS, USACE will develop Corps-constructed mitigation proposals. For all Corps-constructed mitigation proposals developed by USACE to compensate for habitat losses due to development of the HSDRRS, the USACE will ensure that each individual proposal will be assessed for its effect on historic properties as outlined in this Agreement.

C. For Mitigation proposed on National Park Service lands within the Jean Lafitte National Historical Park and Preserve, the USACE will assess those proposals for effects to historic properties in accordance with this Agreement. The National Park Service will conduct its own consultation with the LA SHPO and Indian Tribes in accordance with Section 106 of the NHPA independently of this Agreement. The USACE will continue to coordinate with the National Park Service to ensure that information being provided to the LA SHPO and Indian Tribes is consistent between the two agencies.

V. Identification and Evaluation of Historic Properties for Corps-Constructed Mitigation Projects

A. The USACE, in consultation with the LA SHPO and signatory Indian Tribes, will define and document the area of potential effect (APE) for each proposed Corps-constructed mitigation project activity area. The APE associated with each activity area will anticipate the potential for direct, indirect, and cumulative effects upon historic properties. The reasonable and good faith identification and evaluation efforts will be limited to the APE.

B. Following the delineation of the APE for each Corps-constructed mitigation project, the USACE will ensure that a reasonable and good faith effort to identify historic properties within it will be conducted. The USACE will ensure that the results of the identification efforts for each recommended mitigation project are documented in a report that meets the standards of the Louisiana Division of Archaeology, and will ensure that the reports are submitted to the LA SHPO and signatory Indian

Tribes for review and comment. The USACE will ensure that the comments provided by the LA SHPO and signatory Indian Tribes are incorporated into a final report for each Corps-constructed mitigation project. The USACE will ensure that all collections and associated records developed from each Corps-constructed mitigation project identification effort are curated in accordance with 36 CFR 79.

C. At the completion of the Identification effort, historic properties identified within an APE will be assessed for their eligibility for the National Register of Historic Places following 36CFR800.4(c), if such properties cannot be avoided through project design. If eligible properties cannot be avoided, the USACE will proceed in accordance with Stipulation VII. If undetermined properties cannot be avoided, the USACE, in consultation with LA SHPO and signatory Indian Tribes, will develop plans to evaluate the eligibility of each property. The USACE will ensure that the results of the evaluation efforts for each mitigation project are documented in a report that meets the standards of the Louisiana Division of Archaeology, and will ensure that the reports are submitted to the LA SHPO and signatory Indian Tribes for review and comment. The USACE will ensure that the comments provided by the LA SHPO and signatory Indian Tribes are incorporated into a final report for each Corps-constructed mitigation project evaluation effort. The USACE will ensure that all collections and associated records developed from each Corps-constructed mitigation project evaluation effort are curated in accordance with 36 CFR 79.

D. In the event of disagreement between the USACE, LA SHPO, and/or signatory Indian Tribes concerning the eligibility of a property for listing in the National Register of Historic Places under 36 CFR 60, the USACE shall request a formal determination of eligibility for that property from the Keeper of the National Register of Historic Places (Keeper). The determination by the Keeper will serve as the final decision regarding the National Register eligibility of the property.

VI. Coordination of Effects Determinations

A. All standard response timeframes established by 36 CFR 800 will apply to this Agreement, unless an alternative response timeframe is agreed to by the LA SHPO and signatory Indian Tribes. The USACE may request expedited review by the LA SHPO and Indian Tribes on a case by case basis. Such expedited review period shall not be less than 15 calendar days.

B. Electronic mail (email) will serve as the official correspondence method for all communications regarding this Programmatic Agreement and its

provisions. See Appendix A for a list of contacts and email addresses. Contact information in Appendix A may be updated as needed without an amendment to this Agreement. It is the responsibility of each Signatory and Invited Signatories to immediately inform the USACE of any changes in the name, address, email address or phone number of any point-of-contact for the Signatory and Invited Signatories. The USACE will forward this information to the Signatories and Invited Signatories by email. The failure of any party to this Agreement to notify the USACE of changes to their point-of-contacts information shall not be grounds for asserting that notice of a proposed action was not received.

C. The USACE shall evaluate the effects of an Action on historic properties in a holistic manner and will not segment activities. In the event the USACE determines that any aspect of the Action will have an effect or adverse effect on a historic property within the Action's APE, the entire Action will be reviewed accordingly.

D. Consultation under this Agreement will be concluded for USACE findings of *no historic properties affected* and *no adverse effect* when the LA SHPO and signatory Indian Tribes have reviewed the written documentation and do not object with the USACE finding, and subject to the provisions of this Agreement.

E. Following submission of written documentation to the SHPO and signatory Indian tribes, the USACE may propose a finding of *no adverse effect with conditions*, as appropriate. Such conditions may include, but are not limited to:

    1. Avoidance and/or preservation in-place of historic properties;

    2. Modifications or conditions to ensure consistency with the Secretary of Interior's *Standards for the Treatment of Historic Properties* and applicable guidelines.

F. Should the LA SHPO or signatory Indian Tribes object to the USACE's findings of *no historic properties affected*, findings of *no adverse effect*, findings of *no adverse effect with conditions*, or should USACE determine that it cannot accept conditions requested by LA SHPO and/or signatory Indian Tribes, the USACE shall seek to resolve such objection through consultation in accordance with Stipulation XI Dispute Resolution Provisions of this Agreement.

VII. Resolution of Adverse Effects

A. If USACE, in consultation with the LA SHPO and Indian Tribes, determines that the implementation of a project activity may result in an adverse effect upon historic properties as defined in 36 CFR 800.5(a) (1) and (2) of the ACHP's regulations, the USACE shall notify the LA SHPO, the ACHP, signatory Indian Tribes, other interested parties and the public. If the project activity will affect a National Historic Landmark, USACE shall also notify the National Park Service (NPS). The Adverse Effect notification shall include the following documentation:

1. Summary description of the activity area;

2. Summary of identification efforts in accordance with this Agreement;

3. Summary analysis of effects to historic properties;

4. Summary of alternatives considered to avoid adverse effects;

5. Proposed standard mitigation measures in accordance with Stipulation VIII of this Agreement; and

6. Request for ACHP comment and involvement, as appropriate.

B. The ACHP, LA SHPO, signatory Indian Tribes, interested parties, including NPS, as appropriate, and the public shall be afforded an opportunity to review and to comment on the adverse effect notification for a period of thirty (30) days after receipt of the adverse effect notification.

C. Should the USACE, LA SHPO, and signatory Indian Tribes disagree on the proposed mitigation measures, the USACE shall seek to resolve such objection through consultation in accordance with Stipulation XI. Dispute Resolution of this Agreement.

VIII. Standard Mitigation Measures

A. The USACE, in coordination with the LA SHPO, ACHP, and signatory Indian Tribes will develop Standard Mitigation Measures for adverse effects to historic properties. Standard mitigation measures will be tailored to the significance of the historic property, and may include but are not limited to the following:

1. Public Interpretation and development of educational materials;

2. Documentation consistent with the Level II Standards of the Historic American Building Survey/ Historic American Engineering Record (HABS/HAER);

3. Historical, Architectural or Archeological Monographs;

4. Rehabilitation of historic buildings in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (36 CFR 68);

5. Off-site mitigation, including acquisition of property or preservation easements on property, as appropriate, containing threatened resources of comparable significance in circumstances where there is an imminent need to proceed with construction activity and it is in the public interest;

6. Ethnographic studies;

7. Studies of traditional cultural properties;

8. Relocation of historic properties to sites that the LA SHPO agrees possess similar overall character; and

9. Data recovery for archeological properties where data recovery has been determined to be the appropriate treatment whether or not they are eligible for the National Register under criterion "D."

B. In the event that, in the opinion of the LA SHPO, ACHP, and/or signatory Indian Tribes, standard mitigation measures as proposed are not adequate or are inappropriate to resolve adverse effects, the USACE, LA SHPO, and signatory Indian Tribes will consult to negotiate different or additional mitigation measures. Other consulting parties may express their concerns regarding the adequacy of the mitigation through written comments submitted to any of the signatories to the Agreement. Once consulting parties agree to the terms of the expanded mitigation, such agreement will be formalized through an MOA executed and implemented pursuant to 36 CFR 800.6(c). If there is a disagreement that cannot be resolved, the formal dispute provisions at Section XI will be implemented.

IX. Unanticipated Discoveries and Effects

A. In the event that the USACE discovers a previously unidentified historic property, including archeological sites, human remains, and properties of traditional religious and cultural significance to Indian Tribes, during the execution of the project, the USACE immediately shall secure the jobsite and suspend work in the vicinity of the affected resource. If the USACE determines that the proposed work has or will adversely affect a previously unidentified historic property or a known historic property in an unanticipated manner, the USACE shall notify the LA SHPO and signatory Indian Tribes immediately. The USACE, in consultation with the LA SHPO and Indian Tribes, will develop a treatment plan or Standard Mitigation Measures agreement. The USACE will implement the plan or Standard Mitigation Measures agreement once agreed to by the LA SHPO and signatory Indian Tribes.

B. USACE shall insure that all contractors are made aware of the requirements of this Agreement. In the event that a contractor discovers a previously unidentified historic property, the contractor shall immediately notify the USACE and refrain from further project activities within the immediate vicinity of the discovery and shall take reasonable efforts to avoid and minimize harm to the historic property. USACE shall implement additional measures to secure the historic property for safety and security concerns, as appropriate.

C. In the event that previously unidentified -adverse effects to historic properties are identified following the completion of work within an activity area, any party may provide the USACE with evidence of such effects for a period of twelve (12) months from the completion of the Corps-constructed mitigation project that may have caused the adverse effect. The USACE, in consultation with the LA SHPO, signatory Indian Tribes, and ACHP will review the effect in accordance with the provisions of this agreement.

D. If the USACE, LA SHPO, Indian Tribes, consulting parties, or member of the public, as appropriate cannot agree on an appropriate course of action to address the discovery situation, the USACE shall initiate the dispute resolution process set forth in Stipulation XI.

X. Treatment of Human Remains

A. The USACE recognizes that the respectful treatment of human remains and funerary objects is a paramount concern. The USACE will ensure

that the views of living descendants, including Indian Tribes, and other interested parties, are fully considered in the decision-making process.

B. Unanticipated discovery of human remains

1. When human remains or indications of a burial are discovered, the individual(s) who made the discovery shall immediately notify the local law enforcement and the USACE, New Orleans District.

2. In the event that the USACE is notified of a previously unidentified burial, including burial sites, human skeletal remains, or burial artifacts, on private or state land during the execution of any of the Undertakings, the USACE will ensure that the procedures established in the Louisiana Unmarked Human Burial Sites Preservation Act (La. R.S. 8:671-681) will be followed.

3. In the event that the USACE is notified of a previously unidentified burial, including burial sites, human remains or funerary objects, on federal or tribal land during the execution of any of the undertakings, the USACE will ensure that procedures established by the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 and the regulations that implement it (43 CFR Part 10) and the Archaeological Resources Protection Act of 1979 (Public Law 96-95; 16 U.S.C. 470aa-mm), as amended, and implementing regulations (43 CFR Part 7) will be followed.

4. The USACE shall have an archaeologist immediately survey or resurvey the general area where the remains were found to determine the nature of the remains and evaluate the possibility of preserving the remains in place or whether they will need to be exhumed/moved. Federally recognized Indian Tribes likely to have a cultural affiliation with the remains will be notified by telephone immediately in accordance with 43 CFR 10.4(b). If possible Tribal representative(s) shall be present to advise on appropriate treatment of the exposed remains and on the most appropriate long-term solution.

5. The USACE shall provide information collected on the nature of the remains and a recommended plan of action pursuant to 43 CFR 10.5(e) within five (5) working days to the signatory Indian Tribes and the LA SHPO. The USACE shall consult with all relevant parties to determine the appropriate course of

action with regard to the human remains and any accompanying artifacts, grave goods, or funerary objects.

6. All signatories to the PA agree that the most appropriate treatment, if feasible, is to protect the remains and permanently preserve the burial in situ.

7. If the USACE, after consultation, determines that protection, avoidance, or repair is not feasible, disinterment shall be conducted in accordance with methods and procedures developed in accordance with the appropriate federal and state laws and in consultation with the signatory Indian Tribes and the LA SHPO.

8. The USACE may authorize the activity in the direct discovery areas to resume as soon as the remains have been removed from the ground.

XI. Dispute Resolution

A. Except for the resolution of eligibility issues, as set forth in Stipulation VI. D. above, should the LA SHPO, Indian Tribes, or member of the public disagree on the implementation of the provisions of this agreement, they will notify the USACE, who will seek to resolve such objection through consultation.

B. If the dispute cannot be resolved through consultation, USACE shall forward all documentation relevant to the dispute to the ACHP, including any proposed resolution identified during consultation. Within seven (7) calendar days after receipt of all pertinent documentation, the ACHP may:

1. Provide USACE with recommendations to take into account in reaching final decision regarding the dispute; or

2. Notify USACE that it will comment pursuant to 36 CFR 800.7(c) and provide formal comments within twenty-one (21) calendar days.

C. Any recommendation or comment provided by ACHP will be understood to pertain only to the subject of the dispute, and USACE's responsibilities to fulfill all actions that are not subject of the dispute will remain unchanged.

D. If the ACHP does not provide USACE with recommendations or notification of its intent to provide formal comments within seven (7) calendar days, USACE may assume that the ACHP does not object to its recommended approach and it will proceed accordingly.

XII. Administration and Duration of this Agreement

A. This Programmatic Agreement will remain in effect for eight (8) years from the date of execution, unless extended for a two-year period by written agreement negotiated by all signatories.
B. The USACE, LA SHPO, and signatory Indian Tribes shall meet annually to evaluate the effectiveness of this Agreement. The USACE shall coordinate such annual meetings following the execution of this Agreement.

XIII. Comprehensive Review

A. At the conclusion of all of the distinct project actions, the USACE will analyze the HSDRRS LPV and WBV Mitigation undertaking holistically to identify cumulative effects upon historic properties.

B. Holistic analysis of the undertaking's cumulative effects will be coordinated with the preparation of the draft supplemental comprehensive environmental document to be prepared in accordance with the NEPA Emergency Alternative Arrangements approved by the Council on Environmental Quality.

C. The USACE, in coordination with the signatories to this Agreement, shall identify and shall implement additional mitigation measures to address adverse cumulative effects, as appropriate.

XIV. Amendment and Termination

A. Notwithstanding any provision of this Agreement, any signatory may request in writing that it be amended and shall include in such request the reasons for the proposed amendment. The signatories will consult to consider the requested amendment. The USACE will initiate consultation within thirty (30) days of receipt of the written request. Any amendment will be in writing and will be signed by the USACE, the LA SHPO, the signatory Indian Tribes, and the ACHP, and shall be effective on the date of the final signature.

B. Any Invited Signatory Party may terminate its participation in this Agreement by providing thirty (30) days advance written notification to all other parties. In the event of termination by one signatory, the Agreement will remain in effect for the USACE and other signatories.

Execution of this PA by the USACE, the LA SHPO, and ACHP and implementation of its terms, evidences that the USACE has taken into account the effects of the HSDRRS LPV and WBV Mitigation projects upon historic properties and has afforded the ACHP an opportunity to comment.

Final

Programmatic Agreement
Among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer
And
The Advisory Council on Historic Preservation
Regarding the
Hurricane Storm Damage Risk Reduction System (HSDRRS)
Lake Pontchartrain & Vicinity and West Bank & Vicinity
Mitigation Projects

Signatories:

United States Army Corps of Engineers

By: _____ Date: 17 May 2013
Colonel Edward Fleming
District Commander
U.S. Army Corps of Engineers, New Orleans District

Louisiana State Historic Preservation Officer

By: _____ Date: May 7, 2013
Pam Breaux
Louisiana State Historic Preservation Officer
Louisiana Office of Cultural Development

Advisory Council on Historic Preservation

By: _____ Date: 6/18/13
John M. Fowler
Executive Director
Advisory Council on Historic Preservation

Final

Programmatic Agreement
Among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer
And
The Advisory Council on Historic Preservation
Regarding the
Hurricane Storm Damage Risk Reduction System (HSDRRS)
Lake Pontchartrain & Vicinity and West Bank & Vicinity
Mitigation Projects

Invited Signatory Party:

Choctaw Nation of Oklahoma

By:_____ Date:_____
Gregory E. Pyle, Chief

Final

Programmatic Agreement
Among
The United States Army Corps of Engineers,
Louisiana State Historic Preservation Officer
And
The Advisory Council on Historic Preservation
Regarding the
Hurricane Storm Damage Risk Reduction System (HSDRRS)
Lake Pontchartrain & Vicinity and West Bank & Vicinity
Mitigation Projects

Invited Signatory Party:

Jena Band of Choctaw Indians

By: B. Cheryl Smith Date: 4-29-13
B. Cheryl Smith, Principal Chief

Choctaw Nation of Oklahoma

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

Gregory E. Pyle
Chief

Gary Batton
Assistant Chief

May 3, 2013

U.S. Army Corps of Engineers, New Orleans District
ATTN: Joan M. Exnicios
Chief, Environmental Planning Branch
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Programmatic Agreement for the Hurricane and Storm Damage Risk Reduction System (HSDRRS), Lake Pontchartrain and Vicinity (LPV) and West Bank and Vicinity (WBV) Mitigation Project, Louisiana

Ms. Exnicios,

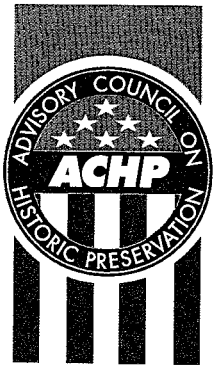
The Choctaw Nation of Oklahoma thanks you for the consultation regarding the above mentioned Programmatic Agreement. I have attached a copy of the agreement along with all the signed signature pages. If you have any questions or concerns please contact us at the Choctaw Nation Historic Preservation Office, 580-924-8280 Ext 2631.

Sincerely,

Dr. Ian Thompson
Director, Historic Preservation Department
Tribal Archaeologist, NAGPRA Specialist

By: Lindsey Huffman

Lindsey Huffman
Administrative Assistant
lhuffman@choctawnation.com
Choctaw Nation of Oklahoma
P.O. Drawer 1210
Durant, OK 74701



Preserving America's Heritage

June 18, 2013

Ms. Joan Exnicios
Chief, Environmental Branch
U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

REF: Hurricane and Storm Damage Risk Reduction System, Lake Pontchartrain-West Bank and Vicinity

Dear Ms. Exnicios:

Enclosed is the executed Programmatic Agreement for the referenced program. By carrying out the terms of the Agreement, the Corps of Engineers will have fulfilled its responsibilities under Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's regulations.

If you have any questions, please call Dr. Tom McCulloch at 202-606-8554 or via email at tmcculloch@achp.gov

Sincerely,

Tom Mc

Caroline D. Hall
Assistant Director
Federal Property Management Section
Office of Federal Agency Programs

Enclosure

United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506

February 21, 2014

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

Dear Colonel Hansen:

Please reference your office's draft Programmatic Individual Environmental Report (PIER #37) that is being prepared under the approval of the Council on Environmental Quality (CEQ) and that will partially fulfill the U.S. Army Corps of Engineers' (Corps) compliance with the National Environmental Policy Act of 1969 (NEPA) (83 Stat. 852, as amended; 42 U.S.C. 4321- 4347). Individual Environmental Reports are CEQ-approved alternative arrangements for compliance with NEPA that would allow expedited implementation of improved hurricane protection measures in Louisiana. Work proposed under this PIER would mitigate impacts resulting from the improved hurricane protection measures and would be conducted under the authority of Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4). That law authorized the Corps to upgrade two existing hurricane protection projects (i.e., the Westbank and Vicinity of New Orleans [WBV] and the Lake Pontchartrain and Vicinity [LPV]) in the Greater New Orleans area in southeast Louisiana.

The Fish and Wildlife Service provides the enclosed report to assist your staff in fulfilling mitigation needs associated with those efforts in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). This report does not constitute the report of the Secretary of the Interior as required by Section 2(b) of that Act. Furthermore, additional comments are provided in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d), and the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.). Copies of this draft report will be provided to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries and their comments will be incorporated into the final report. Additionally we have included NMFS' September 24, 2013, letter providing comments to the Corps on the Draft PIER for LPV in the appendices because those comments are applicable to this effort.

We will continue to work closely with your staff to ensure that fish and wildlife resources are conserved. Toward that end, please have your staff advise Mr. David Walther (337/291-3122) if you or your staff has any questions regarding this matter.

Sincerely,

Jeffrey D. Weller
Field Supervisor
Louisiana Ecological Services Office

cc: Jean Lafitte National Historical Park and Preserve, New Orleans, LA
National Marine Fisheries Service, Baton Rouge, LA
Environmental Protection Agency, Dallas, TX
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources (CMD), Baton Rouge, LA
LA CPRA, Baton Rouge, LA

Fish and Wildlife Coordination Act Report
for the
Hurricane and Storm Damage Risk Reduction System (HSDRRS),
West Bank and Vicinity (WBV)
Mitigation Projects

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

PREPARED BY
ANGELA TRAHAN
FISH AND WILDLIFE BIOLOGIST
AND
DAVID WALTHER

FISH AND WILDLIFE SERVICE
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U.S. FISH AND WILDLIFE SERVICE – SOUTHEAST REGION

CORPS OF ENGINEERS

HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM

WEST BANK AND VICINITY
MITIGATION PROJECT

FISH AND WILDLIFE COORDINATION ACT REPORT

MITIGATION PLAN

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EXECUTIVE SUMMARY

This Fish and Wildlife Coordination Act (FWCA) Report of the Fish and Wildlife Service (Service) documents proposed mitigation measures for impacts to forested areas and fresh marsh resulting from the Corps of Engineers' (Corps) activities associated with implementation of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), West Bank and Vicinity (WBV). Our findings and recommendations are presented in accordance with the FWCA (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and have been developed on the basis of surveys and analyses of project impacts and potential improvement of mitigation areas for fish and wildlife resources. This report does not constitute the final report of the Secretary of the Interior as required by Section 2(b) of that Act. The Service has provided copies of this report to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF), and their comments will be incorporated into the final report.

The Corps is preparing a Programmatic IER (PIER) to address the mitigation plan for WBV project impacts. The purchase of mitigation bank credits for approximately 261.96 Average Annual Habitat Units (AAHUs) of wet bottomland hardwood impacts are recommended for implementation at this time as a constructible feature. The other mitigation features of the plan will be addressed in subsequent NEPA documents, or Tiered Individual Environmental Reports (TIERs). We support the current constructible features and recognize that additional TERs will further address individual mitigation features that are still in planning. Those features include approximately 222 acres of agricultural land that would be converted to wet bottomland hardwoods (BLH) at the Lake Boeuf project site. Approximately 12 acres of open water would be converted to wet BLH at the Jean Lafitte National and Historical Park and Preserve (JLNHPP) project sites. Approximately 320 acres of agricultural land would be converted to swamp at the Lake Boeuf project site. To mitigate impacts to swamp on the JLNHPP approximately 20 acres of open water and scrub shrub habitat would be converted to swamp. Approximately 142 acres of open water would be converted to fresh marsh in the Jean Lafitte site and approximately 20 acres of open water would be converted to fresh marsh in the JLNHPP site.

This report addresses the mitigation plan for the WBV hurricane protection project and it also supplements our November 26, 2007, Draft FWCA Report that provided twenty-six programmatic recommendations for the HSDRRS authorized work to help avoid and minimize impacts to fisheries, wetlands, forested habitats, migratory birds, and public lands, and incorporates and supplements the numerous FWCA Reports provided for the work authorized under 4th and 5th Supplemental Appropriations Acts. Impacts and mitigation needs resulting from government- (IER 18) and contractor-provided borrow areas have been addressed in an October 25, 2007, and a November 1, 2007, FWCA reports, respectively, therefore this report will not address those project features.

The Corps is continuing to refine the mitigation needs through the habitat assessments based on forthcoming as-built drawings of levee footprint impacts. Therefore, initial acreages assessed in each habitat assessment project information sheet may not correlate with proposed acreages in the Tentatively Selected Plan (TSP). Further, mitigation site data is needed to refine design of the mitigation features. Therefore, proposed mitigation feature footprints cannot be finalized at

this time. Continued coordination with the interagency team is essential throughout the finalization of engineering and design of the mitigation features. Additional Service recommendations may be provided in supplemental reports as those plans are more fully developed.

Construction and implementation of the WBV hurricane protection project improvements resulted in the loss of approximately 809.6 acres [460.5 Average Annual Habitat Units (AAHUs)] to forested wetlands and estuarine and non-estuarine emergent marsh. Some impacts occurred on lands within public ownership/oversight, specifically the Bayou aux Carpes 404c area (Bayou aux Carpes), JLNHPP and the Bayou Segnette State Park. Impacts resulted primarily from the expansion of levee right-of-way (ROW) and construction of levees, floodwalls, navigable floodgates, and associated features.

Through the Corps' alternative evaluation process (AEP) selection of the TSP plan was completed. After the identification of the mitigation TSP the Corps came to a determination that lands that were transferred from the Crops ownership into JLNHPP in 2009 and were impacted by levee construction would not be considered impacts occurring on JLNHPP. Because mitigation on NPS lands were sized to included mitigation for impacts in the Commercial Investment Trust (CIT) Tract the Corps re-assessed impacts to the JLNHPP and the mitigation requirement for both Park/404(c) and Non- Park/404(c) BLH and swamp were adjusted accordingly resulting in the following mitigation TSP alternative (TSPA) presented in the table below.

Habitat Type	TSMP Project	AAHUs Impacted	Mitigation Project Acres
Non-Park PS BLH-Wet/Dry	Mitigation Bank	261.96 AAHUs	TBD
Non-Park FS BLH-Wet	Lake Boeuf	121.78 AAHUs	221.9
Non-Park FS Swamp	Lake Boeuf	134.52 AAHUs	319.8
Non- Park FS Fresh Marsh	Jean Lafitte	65.92 AAHUs	138
Park/404(c) FS BLH-Wet	Jean Lafitte	3.08 AAHUs	12.16
Park/404(c) FS Swamp	Jean Lafitte	7.19 AAHUs	20.44
Park/404(c)FS Fresh Marsh	Jean Lafitte	3.20 AAHUs	20.4

Because of the uncertainty regarding total impacts to the JLNHPP, the Service recommends that the Corps delay any final design work and continue to coordinate with the JLNHPP staff prior to finalizing mitigation features that may be affected by the final determination of on-park impacts.

Implementation of the proposed mitigation plans is predicted to improve and maintain the habitat value of the BLH, swamp and marsh habitat for fish and wildlife. Mitigation-area habitat values would increase due to the increased quantity and quality of mast-producing trees, and moderate increases in shrub and herbaceous cover after planting of forested areas and due to the creation of higher-quality vegetated estuarine habitats in marsh areas.

For work authorized within the Bayou aux Carpes 404(c) area, Environmental Protection Agency (EPA) outlined terms and conditions in a 2009 Modification of the Bayou aux Carpes Clean Water Act (CWA) Section 404(c) Final Determination. Alterations to the Bayou aux Carpes 404(c) area would be ameliorated through the construction of mitigation and augmentation

features. Selection and implementation of the final augmentation features and development of a long-term monitoring plan remain to be accomplished.

The Service supports the Corps' current constructible features and recognizes that additional Tiered IERs will further address individual mitigation features that are still in early design phases. We support the Corps' plan to mitigate impacts to fish and wildlife resources associated with WBV HSDRRS provided that the following fish and wildlife conservation recommendations are incorporated into future project planning and implementation and outstanding issues are adequately resolved via ongoing planning efforts:

1. Impacts to Essential Fish Habitat (EFH) should be avoided and minimized to the greatest extent possible. Because impacts to designated EFH habitat may need to be mitigated the Corps should coordination with the NMFS regarding this need.

2. Impacts to wetland habitat (including SAV habitat) and non-wet BLH associated with the construction of the mitigation features should be avoided and minimized to the greatest extent possible. The Corps shall fully compensate for any unavoidable losses of wetland habitat or non-wet BLH caused by mitigation features preferably through resizing of the mitigation features in close coordination with the natural resource agencies.

3. Sediment borrow sites for the marsh creation areas should be designed to avoid and minimize impacts to water quality. The general guidelines for borrow design found in Appendix B should be incorporated into project design, and close coordination with the natural resource agencies should continue since borrow design can be case specific and influenced by a number of factors.

4. Prior to beginning work on IERs tiered off of this PIER the Corps should coordinate with the natural resource agencies to ensure that necessary information to conduct detailed project planning/design and finalize the WVA analysis is developed and available. Final sizing of mitigation must be based on revised WVAs conducted on advanced project designs

5. Further detailed planning of project features (e.g., Design Documentation Report, Engineering Documentation Report, Plans and Specifications, Water Control Plans, or other similar documents) should be coordinated with the Service, NMFS, LDWF, EPA and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.

6. If applicable, a General Plan should be developed by the Corps, the Service, and the managing natural resource agency in accordance with Section 3(b) of the FWCA for mitigation lands.

7. A fully defined mitigation plan should be included in the authorizing report and

Chief of Engineers Report. The mitigation plan should be developed including locations and AAHUs vetted through the natural resource agencies during the feasibility process. Only existing mitigation banks and existing credits released by Corps Regulatory Branch may be considered in cost estimating. Alternatives may be considered provided planning details are sufficient to generate draft AAHUs and both bank and non-bank options are included in the authorizing document

8. We recommend that the Corps consider the availability of credits at a bank and within a hydrologic unit when evaluating the mitigation bank alternative to avoid exhausting credits available for individual landowners/permittees within a particular hydrologic unit.

9. If mitigation lands are purchased for inclusion within publicly managed lands, those lands may need to meet certain requirements. Land-managing natural resource agencies may have requirements that must be met prior to accepting mitigation lands; therefore, if they are proposed as a manager of a mitigation site they should be contacted early in the planning phase regarding such requirements. The local sponsor should also be made aware of the above requirements should it be their responsibility to transfer mitigation lands to the land-managing agency.

10. The Corps should continue to coordinate with land managing agencies during planning of mitigation features that may be built on their lands or lands to be turned over to them for management. Coordination should continue until construction of the projects are complete and prior to any subsequent maintenance. Points of contacts National Park Service (NPS) lands within the area please contact Superintendent Lance Hatten, (504) 589-3882 extension 108, (lance_hatten@nps.gov) or Chief of Resource Management Guy Hughes (504) 589-3882 extension 128, (guy_hughes@nps.gov). Please contact Mr. John Lavin at 1-888-677-1400 regarding work on the Bayou Segnette State Park which is operated by the Louisiana Department of Culture, Recreation and Tourism, Office of State Parks areas.

11. Because of the uncertainty regarding total impacts to the JLNHPP, the Service recommends that the Corps delay any final design work and continue to coordinate with the JLNHPP staff prior to finalizing mitigation features that may be affected by the final determination of on park impacts.

12. If the local project-sponsor is unable to fulfill the financial mitigation requirements for operation and/or maintenance of mitigation lands, then the Corps should provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.

13. Any proposed change in mitigation features or plans should be coordinated in advance with the Service, NMFS, LDWF, EPA and LDNR.

14. The Service encourages the Corps to finalize mitigation plans and proceed to mitigation construction so that it will be concurrent with project construction. If construction is not concurrent with mitigation implementation then revising the impact and mitigation period-of-analysis to reflect additional temporal losses will be required

15. The Service recommends that the Corps immediately finalize selection and approval of mitigation and augmentation features in coordination with federal and state natural resource agencies and with required approval from EPA. All necessary studies for the mitigation and augmentation features have been completed and agencies have reached agreement on those features. Further, the Service recommends that all such mitigation and augmentation features be implemented as soon as possible. All terms and conditions specified in the EPA 2009 Modification to the Bayou aux Carpes CWA Section 404(c) Final Determination should be followed with regard to mitigation and augmentation requirements.

16. The Corps should immediately develop a long-term monitoring plan for the Bayou aux Carpes 404(c) area, as required under the EPA 2009 Modification to the Bayou aux Carpes CWA Section 404(c) Final Determination. The plan should be coordinated with the natural resources agencies and approved by EPA. All terms and conditions specified in the EPA 2009 Modification to the Bayou aux Carpes CWA Section 404(c) Final Determination with regard to the long-term monitoring and operation plan should be followed. Once approved, that plan should be implemented as soon as possible.

17. The Service recommends that all of the terms and conditions outlined in the EPA Bayou aux Carpes 404(c) 2009 modification be implemented without delay. The Corps is responsible for funding all mitigation and augmentation features in this agreement. A link to the 2009 final modified determination may be found at www.nolaenvironmental.gov under the EPA heading for IER 12.

18. The Service recommends that the Corps work with the natural resource agencies to incorporate proposed modifications (Appendix G) and finalize the "GUIDELINES – WET BLH HABITAT ENHANCEMENT, SWAMP HABITAT RESTORATION, AND SWAMP HABITAT ENHANCEMENT" and the untitled document for marsh mitigation (Appendix F).

19. The Service recommends that the Corps maintain full responsibility for any BLH mitigation project for a minimum of 4-years post planting. The Corps should maintain full responsibility for all marsh mitigation projects until monitoring guidelines to be developed are completed and demonstrate the projects are fully compliant with success and performance requirements. Documentation should be provided and referenced to demonstrate funding obligation for the Corps to fulfill initial success criteria at a minimum.

20. The Service recommends that all mitigation planning documents should describe in detail actions needed by the Corps and/or the local sponsor if mitigation is not succeeding as planned.

21. The Corps should avoid adverse impacts to bald eagle and osprey nesting locations and wading bird colonies through careful design project features and timing of construction. Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.

22. We recommend that the Corps re-initiate ESA consultation with this office to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat. Subsequently, ESA consultation should be reinitiated should the proposed project features change significantly or are not implemented within one year of the last ESA consultation with this office to ensure that the proposed project does not adversely affect any federally listed threatened or endangered species or their habitat.

INTRODUCTION

This Fish and Wildlife Coordination Act (FWCA) Report of the Fish and Wildlife Service (Service) addresses the mitigation plan for project-associated impacts to forested wetlands and estuarine marsh by the Corps of Engineers' (Corps) for activities associated with implementation of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), West Bank and Vicinity (WBV) Project. Our findings and recommendations are presented in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and have been developed on the basis of surveys and analyses of project impacts and potential improvement of mitigation areas for fish and wildlife resources. This report does not constitute the final report of the Secretary of the Interior as required by Section 2(b) of that Act. Furthermore, additional comments are provided in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d), the Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.). The Service has provided copies of this report to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF), and their comments have been incorporated into the final report.

Hurricane Katrina, a Category 3 storm, made landfall on the west bank of the Mississippi River and continued northeastward with the eye crossing Plaquemines, St. Bernard, Orleans and St. Tammany parishes in Louisiana. Hurricane surge inundated lower elevation areas in southeast Louisiana, and overtopped hurricane and flood control levees. As a result and under the authority of Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (4th Supplemental) and Public Law 110-28, U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (5th Supplemental), the Corps improved two existing hurricane protection projects [i.e., Westbank and Vicinity of New Orleans (WBV) and Lake Pontchartrain and Vicinity (LPV)] in the Greater New Orleans area. The Corps focused on strengthening and improving the system so that it will provide a 100-year level of risk reduction for WBV and be capable of withstanding the effects of a storm having a 1% chance of occurring each year. The Corps is preparing Individual Environmental Reports (IER) under the approval of the Council on Environmental Quality (CEQ). Those IERs will partially fulfill the Corps compliance with the National Environmental Policy Act of 1969 (83 Stat. 852, as amended; 42 U.S.C. 4321- 4347). IERs are a CEQ-approved alternative arrangement for compliance with NEPA that has allowed expedited implementation of improved hurricane protection measures.

The Corps is preparing a Programmatic IER (PIER) to address the mitigation plan for project-associated impacts. The purchase of mitigation bank credits for wet bottomland hardwood impacts are recommended for implementation at this time as constructible features. The other mitigation features of the plan will be addressed in subsequent NEPA documents, or Tiered Individual Environmental Reports (TIERs). This report also supplements our November 26, 2007, Draft FWCA Report that provided twenty-six programmatic recommendations for the HSDRRS authorized work to help avoid and minimize impacts to fisheries, wetlands, forested

habitats, migratory birds, and public lands, and incorporates, and supplements the numerous FWCA Reports provided for the work authorized under 4th and 5th Supplemental for the WBV Hurricane Protection Project only (i.e., IERs 11-17, including supplemental documents). Impacts and mitigation needs resulting from government and contractor provided borrow areas (IER 18) have been addressed in an October 2007, a November 2007, and an October 2013 FWCA reports, respectively, therefore this report will not address those project features.

The 4th and 5th Supplemental directed the Corps to proceed with engineering, design, modification, and construction, where necessary, of the LPV and the WBV Hurricane Protection Projects so those projects would provide 100-year hurricane protection. Construction and implementation of the WBV hurricane protection project improvements, thus far, has resulted in approximately 809.6 acres (460.5 average annual habitat units [AAHUs]) of impacts to forested areas and fresh marsh, some of which occurred on lands within public ownership/oversight, specifically Bayou aux Carpes 404(c) area (Bayou aux Carpes), the Jean Lafitte National Historical Park and Preserve (JLNHPP) and the Bayou Segnette State Park. As impact assessments continue to be refined, mitigation needs will be revised accordingly.

DESCRIPTIONS OF THE AREA'S FISH AND WILDLIFE RESOURCES

As previously mentioned, the Service has provided several FWCA Reports for the entire HSDRRS project. Those reports contain a thorough discussion of the significant fish and wildlife resources (including those habitats) that occur within the study area. For brevity, that discussion is incorporated by reference herein but the following brief descriptions are provided to update the previously mentioned information.

The study area is located within the Mississippi River Deltaic Plain of the Lower Mississippi River Ecosystem. Portions of Jefferson, Orleans, St. Charles and Plaquemines Parishes are included in the study area. Higher elevations occur on the natural levees of the Mississippi River and its distributaries. Developed lands are primarily associated with natural levees, but extensive wetlands have been leveed and drained to accommodate residential, commercial, and agricultural development. Federal, State, and local levees have been installed for flood protection purposes, often with negative effects on adjacent wetlands. Navigation channels such as the Gulf Intracoastal Waterway (GIWW), including the Harvey Canal portion, the Bayou Segnette Waterway and the Barataria Bay Waterway are also prominent landscape features, as are extensive oil and gas industry access channels and pipeline canals, all of which have altered the landscapes hydrology. Extensive wetlands and associated shallow open waters dominate the landscape outside the flood control levees. Major water bodies include Lakes Cataouatche and Salvador located south of the project area and the Mississippi River which bisects the project area.

Habitat types in the project area include forested wetlands [i.e., bottomland hardwoods (BLH) and/or swamps], non-wet BLH, marsh, open water, and developed areas. Due to urban development and a forced-drainage system, the hydrology of most of the forested habitat within the levee system has been altered. The forced-drainage system has been in operation for many years, and subsidence is evident throughout the areas enclosed by levees.

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

Factors that will strongly influence future fish and wildlife resource conditions outside of the protection levees include freshwater input and loss of coastal wetlands. Depending upon the deterioration rate of marshes, the frequency of occasional short-term saltwater events may increase. Under that scenario, tidal action in the project area may increase gradually as the buffering effect of marshes is lost, and use of that area by estuarine-dependent fishes and shellfish tolerant of saltwater conditions would likely increase. Regardless of which of the above factors ultimately has the greatest influence, freshwater wetlands and forested areas within and adjacent to the project area will probably experience losses due to development, subsidence, and erosion.

The ongoing loss of coastal Louisiana wetlands (approximately 1,149 square miles between 1956 and 2004; average loss rate of 24 square miles per year) was exacerbated by Hurricanes Katrina and Rita in 2005. Those hurricanes caused an initial loss of wetlands equivalent to 9 years (approximately 217 square miles) of mean annual losses (Barras 2007). Louisiana wetlands provide 26 percent of the seafood landed in the conterminous United States and over 5 million migratory waterfowl utilize those wetlands every year. In addition, those wetlands provide protection to coastal towns, cities and their infrastructure, as well as important infrastructure for the nation's oil and gas industry.

Non-wet BLH within the project area also provide habitat for wildlife resources. Between 1932 and 1984, the acreage of BLH in Louisiana declined by 45 percent (Rudis and Birdsey 1986). By 1970, Jefferson Parish was classified as entirely urban or non-forested in the U.S. Forest Service's forest inventory with most of this loss resulting from development within non-wet areas inside the hurricane protection levees. A large percentage of the original BLH within the Mississippi River floodplain in the Deltaic Plain are located within levees. However, losses of that habitat type are not regulated or mitigated with the exception of impacts resulting from Corps projects as required by Section 906(b) of the Water Resources Development Act of 1986 and Section 2036 (a) of the Water Resource Development Act of 2007.

Mammals known to occur in the project-area BLH and marsh habitats include mink, raccoon, swamp rabbit, nutria, river otter, and muskrat. Those habitats also support a variety of birds including herons, egrets, ibises, least bittern, rails, gallinules, neotropic cormorant, white pelican, pied-billed grebe, black-necked stilt, sandpipers, gulls, and terns. Forested and scrub-shrub habitats within the study area also provide habitat for many resident passerine birds and essential resting areas for many migratory songbirds including warblers, orioles, thrushes, vireos, tanagers, grosbeaks, buntings, flycatchers, and cuckoos (Lowery 1974). Many of these and other passerine birds have undergone a decline in population primarily due to habitat loss.

Given the extent of development and drainage, waterfowl use within the hurricane protection system is likely minimal, except in the adjacent wetlands outside the levees. Swamps, fresh and intermediate marshes usually receive greater waterfowl utilization than brackish and saline marshes because they generally provide more waterfowl food.

The Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.) and the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) offer protection to many bird species within the project area including colonial nesting birds, osprey, and the bald eagle (*Haliaeetus leucocephalus*). We continue to recommend that a qualified biologist inspect proposed work sites for the presence of undocumented nesting colonies during the nesting season (e.g. February through September depending on the species). If colonies exist work should not be conducted within 1,000 feet of the colony during the nesting season.

On-site personnel should also be informed of the possible presence of nesting bald eagles and ospreys within the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest is located within 660 feet of the proposed activities, the Corps should completed an on-line evaluation (http://www.fws.gov/southeast/es/baldeagle) to determine potential disturbance to nesting bald eagles and any protective measures necessary. A copy of that evaluation should be provided to this office. If assistance is needed in completing the evaluation please contact this office.

Open water habitat in the study area consists of drainage canals; major waterways including the GIWW, Barataria Waterway, and Mississippi River; and Lakes Cataouatche and Salvador. Drainage canals do not support significant fishery resources because of dense vegetation, poor water quality, and inadequate depth. Freshwater sport fishes present in the project area, but outside of the levees, include largemouth bass, crappie, bluegill, redear sunfish, warmouth, channel catfish, and blue catfish. Other fishes likely to be present include yellow bullhead, freshwater drum, bowfin, carp, buffalo, and gar. Estuarine-dependent fishes and shellfishes such as Atlantic croaker, red drum, spot, sand seatrout, spotted seatrout, southern flounder, Gulf menhaden, striped mullet, brown shrimp, white shrimp, and blue crab are found in the intermediate to saline marshes of Lakes Cataouatche and Salvador and adjacent waterbodies.

Some of the waterbodies in the project area meet criteria for primary and secondary contact recreation and partially meets criteria for fish and wildlife propagation, while others do not meet the criteria for fish and wildlife propagation (LDEQ 2012). Causes determined by the Louisiana Department of Environmental Quality (LDEQ) for not fully meeting fish and wildlife propagation criteria include excessive nutrients, organic enrichment, low dissolved oxygen levels, flow and habitat alteration, pathogens and noxious aquatic plants. Indicated sources of those problems include hydromodification, habitat modification, recreational activities, and unspecified upstream sources. Municipal point sources, urban runoff, storm sewers, and onsite wastewater treatment systems are also known contributors to poor water quality in the area.

Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297) set forth a new mandate for National Oceanic Atmospheric Administration's National Marine Fisheries Service (NMFS), regional fishery management councils (FMC), and other federal agencies to identify and protect important marine and anadromous fish habitat. The Essential Fish Habitats (EFH) provisions of the Magnuson-Stevens Act support one of the nation's overall marine resource management goals of maintaining sustainable fisheries. Essential to achieving this goal is the maintenance of suitable marine fishery habitat quality and quantity. Detailed information on Federally-managed fisheries and their EFH is provided in the 1999 generic amendment of the Fishery Management Plans (FMP) for the Gulf of Mexico prepared by the Gulf of Mexico FMC (GMFMC). The generic FMP subsequently was updated and revised in 2005 and became effective in January 2006 (70 FR 76216). NMFS administers EFH regulations. Categories of EFH in the project area include the estuarine waters, estuarine emergent wetlands and mud, sand, and shell water bottoms, and rock substrates.

Coastal wetlands also provide nursery and foraging habitat that supports economically important marine fishery species such as spotted seatrout, sand seatrout, southern flounder, Atlantic croaker, spot, gulf menhaden, striped mullet, white mullet , killifish, kingfish, pompano, anchovies, and blue crab. Some of these species serve as prey for other fish species managed under the Magnuson-Stevens Act by the GMFMC (e.g., mackerels, snappers, and groupers) and highly migratory species managed by NMFS (e.g., billfishes and sharks). Portions of the WBV study area have been designated as EFH for post-larval, juvenile, and sub-adult life stages of brown shrimp, white shrimp, and red drum. Under future without project conditions there would be no change to EFH.

Where tidally-influenced waters designated as EFH are converted to a non-tidal elevation, loss of EFH would result. Should EFH be impacted, those losses should be quantified. Close coordination with the NMFS is recommended because mitigation for those impacts to these areas may be necessary.

Endangered and Threatened Species

To aid the Corps in complying with their proactive consultation responsibilities under the Endangered Species Act (ESA), the Service provided a list of threatened and endangered species and their critical habitats within the coastal parishes of the New Orleans District in a June 22, 2011, electronic mail transmittal to the Corps. The Corps made a "no effect" determination in a January 17, 2014, letter to the Service for all mitigation projects. That determination addressed potential impacts to the West Indian manatee and the pallid sturgeon. They stated that best management practices (BMPs) would be employed in habitats that may be utilized by those species.

The Service provides the following additional information and guidance on BMPs for features of mitigation plans.

The endangered West Indian manatee (*Trichechus manatus*) is known to regularly occur in Lakes Pontchartrain and Maurepas and their associated coastal waters and streams, however, manatee occurrences in southeastern Louisiana appear to be increasing. Based on data maintained by the Louisiana Natural Heritage Program (LNHP), over 80 percent of reported manatee sightings (1999-2011) in Louisiana have occurred from the months of June through December, mostly while the average water temperature is warm. Cold weather and outbreaks of red tide may adversely affect these animals. However, human activity is the primary cause for declines in species number due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution.

During in-water work in areas that potentially support manatees all personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the ESA of 1973. Additionally, personnel should be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable. All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following to minimize potential impacts to manatees in areas of their potential presence:

- All work, equipment, and vessel operation should cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s).

- If a manatee(s) is sighted in or near the project area, all vessels associated with the project should operate at "no wake/idle" speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.

- If used, siltation or turbidity barriers should be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.

- Temporary signs concerning manatees should be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities should display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½ " X 11" reading language similar to the following: "CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A second temporary sign measuring 8½ " X 11" should be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to

the following: "CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".

- Collisions with, injury to, or sightings of manatees should be immediately reported to the Service's Louisiana Ecological Services Office (337/291-3100) and the LDWF, Natural Heritage Program (225/765-2821). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

Should a proposed action directly or indirectly affect the West Indian manatee, further consultation with this office will be necessary.

We recommend the following to minimize potential impacts to pallid sturgeon associated with dredging: (1) the cutterhead should remain completely buried in the bottom material during dredging operations. If pumping water through the cutterhead is necessary to dislodge material or to clean the pumps or cutterhead, etc., the pumping rate should be reduced to the lowest rate possible until the cutterhead is at mid-depth, where the pumping rate can then be increase; (2) during dredging, the pumping rates should be reduced to the slowest speed feasible while the cutterhead is descending to the channel bottom.

Should a proposed action directly or indirectly affect the pallid sturgeon, further consultation with this office will be necessary.

In addition to the above, two species have recently been listed as candidate species for federal listing as a threatened or endangered species. Candidate species are those taxa for which the Service has on file sufficient information regarding biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

The red knot *(Calidris canutus rufa)*, is a medium-sized shorebird about 9 to 11 inches in length with a proportionately small head, small eyes, short neck, and short legs and it can be found in Louisiana during the winter months (generally October through March). In the southeastern United States, red knots forage along sandy beaches, tidal mudflats, salt marshes, peat banks, oyster reefs, and exposed bay bottoms and roost on high sand flats, reefs, and other sites protected from high tides. In wintering and migration habitats, red knots commonly forage on bivalves, gastropods, and crustaceans. Coquina clams (*Donax variabilis*), a frequent and often important food resource for red knots, are common along many gulf beaches. Major threats to this species along the Gulf of Mexico include the loss and degradation of habitat due to erosion and shoreline stabilization development, disturbance by humans and pets, and predation.

The Sprague's pipit (*Anthus spragueii*), is a candidate species for federal listing as a threatened or endangered species. Sprague's pipit is a small (4 to 6 inches in length) passerine bird that winters in Louisiana, arriving from its northern breeding grounds in September and remaining until April. Migration and wintering ecology of this species is poorly known, but Sprague's pipit exhibits a strong preference for open grassland (i.e., native prairie) with native grasses of

intermediate height and thickness, and it avoids areas with too much shrub encroachment. Its use of an area is dependent upon habitat conditions. This species is a ground feeder and forages mainly on insects but will occasionally eat seeds.

There is currently no requirement under the ESA for consultation regarding project impacts on candidate species. In the interest of conserving the Sprague's pipit and the red knot, we encourage you to avoid project activities that would adversely affect this species or its habitat. Should either one be federally listed as threatened or endangered in the future further consultation on project impacts to these species would then be necessary.

Public/Protected Lands

Lands within public ownership/oversight impacted by the WBV project include the Barataria Preserve unit of JLNHPP managed by the National Park Service (NPS), some lands within the Bayou aux Carpes 404(c) area which also has Environmental Protection Agency (EPA) oversight, and the Bayou Segnette State Park which is managed by the Louisiana Office of State Parks.

Expansion of the existing federal levee impacted land previously owned by the Commercial Investment Trust. The so called CIT Tract consists of swamp owned by the Corps as the result of a 1994 lawsuit. The passage of the Omnibus Public Lands Management Act in April 2009 (Omnibus Act) transferred management jurisdiction of these lands from the Corps the JLNHPP, incorporating them into the park.

The Barataria Preserve unit of the JLNHPP is managed by the NPS and IER 12, 14 and 15 are located adjacent to that unit. For additional information concerning NPS lands to be impacted by proposed mitigation please contact Superintendent Lance Hatten, (504) 589-3882 extension 108 or Chief of Resource Management Guy Hughes (504) 589-3882 extension 128, (guy_hughes@nps.gov)

An area adjacent to IER 12 and forming the western boundary of the JLNHPP was subject to an EPA Final Determination under the Clean Water Act (CWA) Section 404(c) in 1985. According to the EPA Final Determination, the discharge of any dredged or fill material within the approximately 3,200 acre site, referred to as the Bayou aux Carpes 404(c) area, is restricted. EPA's determination of the 404(c) area serves as an advance planning notification to the public and agencies that may propose work in this area. The Bayou aux Carpes 404(c) area is one of only 13 such actions ever completed by EPA. Approximately 2,800 acres within the site are in Federal ownership and Congress in the Omnibus Act also authorized the adjustment of the boundary of the JLNHPP Barataria Preserve to include this area within the park. Therefore, the Corps should contact both the NPS (see contacts above) and EPA (Ms. Barbara Keeler, 214/665-6698) regarding any proposed mitigation/augmentation project feature that may be implemented in that area. Because these 404(c) lands were placed into the JLNHPP, impact and mitigation acreage and AAHUs are often, but not always combined in tables within this report.

Located in the IER 15 project area is the Bayou Segnette State Park which is operated by the Louisiana Department of Culture, Recreation and Tourism, Office of State Parks. Please contact

Mr. John Lavin at 1-888-677-1400 regarding proposed mitigation in or on property that may be turned over to that park for management.

The Service continues to recommend and support the mitigation of public lands impacts to be done on public lands within the managing agencies jurisdiction. If mitigation lands are purchased for inclusion within a managed area, those lands may have to meet certain requirements; individual agencies may have different requirements therefore each agency should be contacted. If an agency is proposed as a manager of a mitigation site they should also be contacted early in the planning phase regarding such requirements and costs.

PROJECT IMPACTS AND MITIGATION

Project impacts resulted primarily from the expansion of levee right-of-way (ROW) and construction of levees, borrow pits, floodwalls, navigable floodgates, and associated features. Because development is ongoing within the hurricane protection levees and Task Force Guardian (TFG) restored hurricane protection to pre-Hurricane Katrina levels, the Service has assumed that project-induced development is insignificant and that implementation of the HSDRRS project would not further induce development to areas not already developed or planned for development. Construction and implementation of the WBV hurricane protection project improvements resulted in approximately 809.6 acres (460.5 Average Annual Habitat Units [AAHUs]) of impacts to forested wetlands and estuarine and non-estuarine emergent marsh (Appendix A), some of which occurred on public lands. Acreages and AAHUs being mitigated are those known to have occurred by the date of our report May 17, 2013. In addition to impacts related to the construction of the HSDRRS project, impacts to fish and wildlife habitats during the construction of mitigation projects may occur. Impacts that would occur within the footprint of the mitigation feature have been evaluated in the Wetland Value Assessment (WVA) and the mitigation area will be reconfigured to offset those impacts. However, the location of access ROWs, staging areas, and borrow areas have not been finalized nor assessed by the resource agencies at this time. Coordination with the natural resource agencies during advanced design (i.e., post 35% design) is recommended in order to ensure that the agencies are granted adequate time to provide input into the design. This will ensure that unnecessary impacts are avoided and mitigation project are designed to effectively offset impacts. Appendix B provides general marsh creation guidelines to aid in the development of plans and specification.

FWCA reports and supplemental reports were provided as project designs changed or post-construction impacts were calculated. This report derives lost AAHUs from the latest impact acreage calculations utilizing Geographic Information System ROW data provided by the Corps and recent aerial photography. Because some construction activities are still ongoing, acreage and AAHUs may be revised in future FWCA reports. However, this report supplements all previously provided acreage and AAHU losses denoted in our previous reports.

The Service's Mitigation Policy (Federal Register, Volume 46, No. 15, January 23, 1981) identifies four resource categories that are used to ensure that the level of mitigation recommended by Service biologists will be consistent with the fish and wildlife resource values impacted. For impacts that occurred entirely within the existing ROW (i.e., maintained, non-wet grassland) and/or impacted low quality non-wet or prevalent habitats (e.g., open water without

aquatic vegetation, dry fields, etc.) the Service did not recommend mitigation as they are Category 4 Resources. Considering the high value of forested wetlands and marsh for fish and wildlife and the relative scarcity of that habitat type, those wetlands were designated as Resource Category 2, the mitigation goal for which is no net loss of in-kind habitat value. Degraded (i.e., non-wet) BLH forests and any wet pastures that were impacted were placed in Resource Category 3 due to their reduced value to wildlife, fisheries and lost/degraded fish and wildlife functions. The mitigation goal for Resource Category 3 habitats is no net loss of habitat value. To ensure no net loss of in-kind habitat value the TSPA includes the restoration and enhancement of BLH habitat and the restoration of marsh and swamp habitat.

Impacts to open water bottoms are anticipated as a result of borrow activities. Regardless of depth, open water bottoms with no submerged aquatic vegetation (SAVs) will remain a Category 4 Resource; impacts to those areas are discouraged, if feasible, and measures to minimize impacts to water quality from borrow sites should be incorporated. Appendix B provides general guidelines for borrow design; however, close coordination with the resource agencies should continue during the design of borrow sites. SAV beds are currently considered a Category 2, and lost functions and values should be replaced. However, because of the relatively low success rate of SAV replanting, mitigating in-kind may not be practicable. Potential impacts to any SAVs should first go through the mitigation sequencing of avoidance, minimization, and rectification, prior to compensation of impacts.

Because open water bottoms without SAVs are considered a Category 4 Resource for our trust resources the Service does not recommend mitigation. However, some tidally-influenced unvegetated water bottoms are designated as EFH, and the conversion of that habitat to a non-tidal elevation would result in a loss of EFH. Should EFH be impacted, coordination with the NMFS is recommended as mitigation for impacts to these areas may be necessary.

Public/Protected Lands

For work authorized by IER 12 and within the Bayou aux Carpes 404(c) area, EPA outlined terms and conditions in a 2009 Modification of the Bayou aux Carpes CWA Section 404(c) Final Determination. The Corps is responsible for funding and implementing all mitigation and augmentation features approved in accordance with the stipulations of this agreement. The Corps must also seek final approval from EPA for any mitigation feature offsetting impacts to the 404(c) area as stipulated in that determination. A link to the 2009 final modified determination may be found at www.nolaenvironmental.gov under the EPA heading for IER 12 and an excerpt of the determination is attached in Appendix C.

Mitigation procedures and requirements regarding impacts within the Bayou aux Carpes 404(c) area are being coordinated with the EPA, Service, USGS, NMFS, NPS, and other state representatives on the interagency review team. The District Commander for the Corps, in a letter to the Regional Administrator for EPA Region 6 dated November 4, 2008, committed to mitigate for all unavoidable adverse impacts to the Bayou aux Carpes CWA Section 404(c) area within the Bayou aux Carpes CWA Section 404(c) area and/or Jean Lafitte National Historical Park and Preserve, as determined by EPA and the resource agencies. Furthermore, the Corps committed that mitigation projects will be designed and implemented concurrently

with the design and construction of the project. The District Commander in that letter also stated that "full mitigation within this unique environment may require mitigation in addition to acres indicated by the Wetland Value Assessment."

Based on the minimum mitigation that the Corps has committed to and is required to perform pursuant to Section 2036 of the Water Resources Development Act of 2007, as well as on the Corps' commitment to provide additional mitigation and augmentation features, EPA believes that the discharges of dredged or fill material associated with the Corps' West Closure Complex (a HSDRRS project feature) would not result in unacceptable adverse effects to the Bayou aux Carpes wetland resources. Additionally, EPA expects the final mitigation plan to be adequate to offset unavoidable impacts consistent with mitigation regulations (33 CFR 332) with the goal to ensure no net loss of either wetland acres or functions. EPA must agree with the proposed mitigation plan prior to the plan being finalized. In addition to mitigation, project augmentation measures will be considered by the interagency team to enhance the wetland functions and values of the site and provide added compensation for any unavoidable impacts.

The Corps is required to develop a long-term site monitoring plan, to be approved in writing by EPA, after consulting with the federal and state natural resource agencies on the interagency review team. EPA will make the determination as to whether the monitoring plan is adequate and appropriate, and that plan will be documented in a Memorandum of Agreement signed by the interagency review team. The Corps is responsible for ensuring implementation of the plan for the first 50 years of the project life. The long-term monitoring plan will focus on both the mitigation and augmentation features, as well as the impacts of the floodwall. The plan should provide for making adjustments if the mitigation or augmentation features prove not to perform as expected. Though it is not expected that the Corps would need to make future adjustments to the floodwall, the effects of the floodwall are to be monitored to determine unexpected impacts which may warrant other corrective actions.

After the Corps selected the mitigation TSP they came to the interpretation that the Omnibus Act considered lands in the CIT Tract needed for the hurricane protection project would be subject to levee easements; the legislative history of that act repeatedly evidences similar intent.

Because IERS 14.a, which addressed impacts to the CIT Tract, was approved after ownership of the CIT Tract had been transferred to NPS, impacts to swamp habitats in the CIT Tract were considered to be impacts to habitats in the Park. Therefore, mitigation alternatives on NPS lands were sized to included impacts from the CIT Tract based on the premise that the mitigation would have to be provided in the Park.

Since the Corps discovered that the Omnibus Act had considered that lands needed for the hurricane protection project would be subject to levee easements they have determined that those lands on the CIT Tract should not have been assessed as impacts to the Park and the mitigation requirement for both Park/404(c) and Non- Park/404(c) BLH and swamp were adjusted accordingly; this revision became the new TSP but for clarification is referred to as the TSP alternative (TSPA).

The NPS has not concurred with this determination but is continuing to investigate the possible need to have these impacts mitigated on JLNHPP. Therefore, prior to finalizing mitigation that may be affected by only this determination the Service recommends that the Corps delay any final design work and continue to coordinate with the JLNHPP staff.

Habitat Assessments

To quantify project impacts to fish and wildlife resources and anticipated benefits resulting from the proposed mitigation the WVA methodology was utilized. Habitat units fluctuate in response to changes in habitat quality, represented by the Habitat Suitability Index (HSI), and/or quantity (acres); those changes are predicted for various target years over the project life (i.e., 50 years), for future without-project and future with-project scenarios. Target years (TY) were selected for this analysis to capture the effects of important biological events. Values for model variables were obtained from site visits to the area, previous wetland assessments in similar habitats, communication with personnel knowledgeable about the study area and similar habitats, and review of aerial photographs and reports documenting fish and wildlife habitat conditions in the study area and similar habitats. For all the habitat assessments, the products of the resulting HSI values and acreage estimates were then summed and annualized for each habitat type to determine the AAHUs available. The net change (increase or decrease) in AAHUs under future with-project conditions, compared to future without-project conditions, provides a quantitative comparison of anticipated project impact/benefits in AAHUs. By dividing the AAHU by the proposed mitigation project acreage a management or mitigation potential per acre is determined which can then be used to resize the project once mitigation needs are refined. Contractors for the Corps conducted the WVA analysis for all mitigation sites with review by state and federal natural resource agencies. Further explanation of how impacts/benefits are assessed with the WVA and an explanation of the assumptions affecting HSI values are available from the Corps New Orleans District. Impact assessments and mitigation benefit assessments considered sea-level rise, subsidence, accretion, and historic marsh loss trends and were coordinated with other state and federal agencies.

There is no certainty regarding the timeline for mitigation implementation for any habitat type impacted or for any public lands impacted. Therefore, the Service recommends that as 65% designs for mitigation alternatives become available, especially those mitigating impacts to the public or protected lands, that an IER be released expeditiously for public review. Current impact assessments incorporate a 7-year lag to capture the delay as portrayed in Appendix D. As stated in our May 17, 2013, FWCA draft report on the Comprehensive Environmental Document (CED), continued delays may necessitate revisiting the current period-of-analysis used in the impact and mitigation assessments to ensure temporal losses are adequately mitigated. The Service encourages the Corps to finalize mitigation plans and proceed to mitigation construction so that it will be concurrent with project construction and revising the impact and mitigation period-of-analysis to reflect additional temporal losses will not be required.

ALTERNATIVE EVALUATION PROCESS

Because HSDRRS impacts spanned several watersheds it was decided to accept mitigation for project impacts within the basins where impacts occurred. WBV impacts would be undertaken in the Barataria Basin. Some criteria used to screen mitigation proposals were the same each basin (i.e., LPV and WBV); however, differences in impacted habitats, public lands impacts and basin ecology prevented the use of the same criteria for both basins. Criteria used for the WBV basin included:

Proposed measures that did not meet all of the criteria below were eliminated from further consideration:

- Could not convert existing wetlands to uplands;
- Compliant with all applicable laws and policies;
- Located completely within WBV Mitigation Basin;
- Free of known Hazardous, Toxic, or Radioactive Waste (HTRW);
- Provide for in-kind replacement of impacted AAHUs by habitat type (exception: BLH-Dry can be mitigated as BLH-Wet);
- Technically viable (e.g. salinity suitable for target habitat type);
- Could not already be in the Future Without Project Condition;
- Must have independent utility (not dependent on implementation of or modification to other projects);
- Must be easily scaled to meet changing mitigation acreage requirements;
- Could not be a stand-alone BLH-Dry habitat type (requirements allowed for BLH-Dry to be mitigated contiguous with mitigation for other habitat types, and mitigated on flood side or protected side of levee);
- Could not be stand-alone un-confined marsh nourishment measures;
- Could not be preservation of an existing habitat type;
- Measures that address mitigation requirements for impacts to JLNHPP and 404(c) area must be located wholly within the boundary or acquisition boundary of the JLNHPP;
- Protected side BLH-Wet measures must be contiguous with or within an existing resource-managed area (BLH-Wet protected side impacts may be mitigated protected side or flood side);

- Flood side BLH-Wet measures must be contiguous with or within an existing resource-managed area or with the project area of another proposed mitigation measure;

- Swamp measures must be contiguous with (or within) an existing resource-managed area or with another proposed mitigation measure;

- Flood side mitigation measures must be part of proposed mitigation projects that consist of multiple habitat types unless contiguous with or within another resource-managed area and;

- Meet 100% of the mitigation requirement by habitat type according to the following groupings (FS=flood side; PS=protected side):

    - 100% non-park/404(c) BLH-Wet PS (mitigate PS or FS)
    - 100% non-park/404(c) BLH-Wet FS (mitigate FS)
    - 100% non-park/404(c) Swamp FS (mitigate FS)
    - 100% non-park/404(c) Fresh Marsh FS (mitigate FS)
    - 100% park/404(c) BLH-Wet FS (mitigate FS)
    - 100% park/404(c) Swamp FS (mitigate FS)
    - 100% park/404(c) Fresh Marsh FS (mitigate FS)

The selection criteria used during the alternative evaluation process (AEP) process considered the following: 1) Risk & Reliability – uncertainty relative to achieving ecological success, is an adaptive management plan required, long-term sustainability of project benefits, self-sustainability of project once performance standards are met, risk of exposure to stressors/reliability and resiliency of design; 2) Environmental Factors – including impacts and benefits to the human and natural environment; 3) Time; and 4) Cost.

TENTATIVELY SELECTED PLANS

Using the above-mentioned screening and selection criteria the project delivery team (PDT) evaluated the final array of alternatives (Appendix E), and through the alternative evaluation process selected the TSP (Table 1) for mitigating impacts for the WBV hurricane protection project:

Table 1: Mitigation TSP for HSDRRS WBV Impacts

Habitat Type Impacted	TSP
Non-Park PS BLH-Wet/Dry	General Mitigation Bank
Non-Park FS BLH-Wet	Lake Boeuf FS BLH-Wet Restoration
Non- Park FS Swamp	Lake Boeuf FS Swamp Restoration
Non- Park FS Fresh Marsh	Jean Lafitte FS Marsh Restoration
Park/404(c) FS BLH-Wet	Jean Lafitte FS BLH-Wet Restoration
Park/404(c) FS Swamp	Jean Lafitte FS Swamp Restoration
Park/404(c) FS Fresh Marsh	Jean Lafitte FS Marsh Restoration

However, as previously mentioned after identifying the TSP the Corps came to a determination that lands within the CIT Tract would not be considered impacts occurring on JLNHPP. Because mitigation on NPS lands were sized to included mitigation for impacts in the CIT Tract the Corps re-assessed impacts to the JLNHPP and the mitigation requirement for both Park/404(c) and Non- Park/404(c) BLH and swamp were adjusted accordingly.

Additional changes to proposed mitigation features resulted from the reassessment of impacts using the 95-100% HSDRRS design plans, as well as available HSDRRS as-built plans. This resulted in a change in the mitigation requirement for most habitat types. The proposed projects mitigating for general BLH and swamp, as well as Park/404(c) BLH and swamp impacts were affected the most. This resulted in some projects previously evaluated in the AEP being dropped from further consideration because the mitigation sites could no longer contain all proposed mitigation projects due to the increased requirement. The adjusted mitigation requirement including the mitigation requirement from Environmental Assessment (EA) 437 and 439 is shown in Table 2. Those EAs addressed the proposed WBV Previously Authorized Mitigation Project (pre-HSDRRS).

Table 2: Revised WBV Mitigation Requirement TSPA

Habitat Type	TSPA Project	AAHUs Impacted	Mitigation Project Acres
Non-Park PS BLH-Wet/Dry	Mitigation Bank	261.96 AAHUs	TBD
Non-Park FS BLH-Wet	Lake Boeuf	121.78 AAHUs	221.9
Non-Park FS Swamp	Lake Boeuf	134.52 AAHUs	319.8
Non- Park FS Fresh Marsh	Jean Lafitte	65.92 AAHUs	138
Park/404(c) FS BLH-Wet	Jean Lafitte	3.08 AAHUs	12.16
Park/404(c) FS Swamp	Jean Lafitte	7.19 AAHUs	20.44
Park/404(c)FS Fresh Marsh	Jean Lafitte	3.20 AAHUs	20.4

The revised project descriptions based on the above adjusted mitigation requirements are described in the following sections.

Wetland value assessments were conducted by the Corps to determine each project's mitigation potential. As the project is refined the mitigation potential may be adjusted. Should further development of feature designs result in a lower mitigation potential, a supplemental FWCA report may be necessary.

For all BLH and swamp, plantings should be done in accordance with the GUIDELINES – WET BLH HABITAT ENHANCEMENT, SWAMP HABITAT RESTORATION, AND SWAMP HABITAT ENHANCEMENT" however those guidelines are still in draft form and need to be finalized. The draft guidelines are presented in Appendix F and the Service's comments on the draft guidelines are presented in Appendix G.

Mitigation Bank Alternative for protected side BLH (wet and dry)

This alternative assumes that all of the 252.55 protected side BLH-Dry AAHUs and 9.41 protected side BLH-Wet AAHUs could be satisfied through the purchase of mitigation bank BLH-Wet credits.

The particular bank(s) to be utilized is unknown at this time and would be selected through a Request for Qualifications/Solicitation for Proposal process. Through this process any mitigation bank with a perpetual conservation servitude having the appropriate number and habitat type of credits available to meet 100% of the need by habitat type could submit a proposal for selling credits. During the development of screening and selection criteria no marsh mitigation banks were available; therefore, the mitigation bank option of marsh impacts was not considered viable

If at the time of solicitation, no banks exist that can meet all of the mitigation requirement by habitat type or the Corps does not receive satisfactory bids (based on cost and/or other factors), then the second-ranked mitigation project would take its place as the TSP for that habitat type in the TSPA. In addition, if the actual costs for purchasing the mitigation bank credits turn out to be more than what was estimated for the general mitigation bank project during AEP, a re-analysis comparing the mitigation bank project to the other mitigation projects would be conducted to verify the ranking of the projects and the selection of the mitigation bank project as the TSP. If the costs for implementing the mitigation bank project based on the proposals received exceed those for the second ranked project, then the second ranked project would likely become the new TSP for that habitat type in the TSPA.

Bayou Segnette Protected Side BLH-Dry and BLH-Wet Enhancement Alternative

This alternative would involve enhancing an existing degraded bottomland hardwood habitat as mitigation for BLH-Wet and BLH-Dry protected side impacts. The alternative would be located adjacent to the Bayou Segnette State Park (Appendix H), on the protected side of the hurricane protection levee in Jefferson Parish. The proposed BLH restoration would encompass approximately 1,263.8 acres.

The enhancement activities would include the eradication of invasive and nuisance plant species and subsequent planting of native BLH canopy and midstory species. Enhancement of a portion of the area would also include restoring wetland hydrology by the construction of the nearby WBV Previously Authorized Mitigation Project. Following completion of the preceding activities, the area would be planted. It is estimated that this phase would require approximately two to three years to complete.

Dufrene Ponds Protected and Flood Side BLH-Wet Restoration Alternative

For the protected side impacts this alternative would involve restoring BLH-Wet habitat as mitigation for BLH-Dry and BLH-Wet protected side impacts. The sites would be located along the right descending bank of Bayou des Allemands and immediately south of US Highway 90 in Lafourche Parish. The sites are currently open water sites. The two proposed BLH-Wet

restoration features encompass approximately 572.6 acres combined (Appendix H). The two restoration features would be filled to an initial target elevation of +3.0 feet. The total fill quantity required for the BLH-Wet land platforms would be approximately 7,400,000 cubic yards. Target elevation of this feature would be +2.0 feet.

Borrow for earthen fill would be obtained from a 927-acre borrow site in Lake Salvador. The borrow site would be dredged to an elevation of -20 feet or shallower. The estimated construction duration for constructing the retention system and filling the restoration features would be 29 to 32 months. The duration for the subsequent construction project for degrading the retention dikes and planting the features would be 6 to 9 months.

The flood side mitigation alternative at this site would encompass approximately 276.2 acres (Appendix H) of open water. The total fill quantity required to establish the BLH-Wet platform would be approximately 4,100,000 cubic yards. The desired final target elevation is +2.0 feet.

Borrow for earthen fill of the restoration feature would be obtained from an approximately 415 acres site in Lake Salvador that would be excavated (dredged) to an elevation of -20.0 feet, or shallower. The estimated construction duration for constructing the retention system and dredge filling the site is 14 to 17 months. The duration for the subsequent construction project for degrading the retention dikes and planting would be approximately 3 to 5 months.

Lake Boeuf Protected and Flood Side BLH-Dry and BLH-Wet Restoration Alternative

This location is composed of two sites on would restore wet and dry BLH, while the other would restore only wet BLH. This alternative would involve restoring BLH-Dry forests and BLH-Wet forests within existing agricultural fields. The proposed restoration features would encompass a total of approximately 591.6 acres, and would be located in Lafourche Parish, just north of Bayou Lafourche and roughly 2 miles west of Raceland (Appendix H).

Activities necessary prior to planting the BLH-Dry features would include: clearing and grubbing; grading and tilling necessary to level the surface and prepare the area for planting. If necessary, limited application of herbicides to eradicate invasive and nuisance plant species. Since BLH-Wet forests require a wetland hydrologic regime, it is estimated that all of the area within the wetland site would need to be degraded (excavated) to reach the desired elevation. It is estimated that the initial alternative construction phase would last approximately 9 to 12 months.

This wet BLH only mitigation alternative would involve restoring BLH within existing agricultural fields as shown in Appendix H. These proposed restoration features would encompass a total of 221.9 acres. The desired target grade elevation for the proposed BLH-Wet features was set to between +2.0 feet to +2.5 feet, with a preference for elevations closer to +2.0 feet. Based on a review of the existing LiDAR data, it was determined that the majority of the proposed site would need to be degraded to obtain the desired elevation. Approximately 519,000 cubic yards of soil would need to be excavated (degraded) to establish the desired grades within the restoration features. The final plan for use and disposal of the excavated soil would be determined during the PED phase of the project, as would be the final degrading elevations and

contours. It is estimated that the initial project construction phase would last approximately 10 to 15 months.

Plaquemines, Option 2 Protected and Flood Side BLH-Wet Restoration Alternative

This alternative would involve restoring BLH-Wet habitat in an existing open water area and would consist of a single mitigation feature, P3D, which would occupy approximately 417.5 acres. The alternative would be located in Plaquemines Parish near Jesuit Bend. The proposed restoration feature would be created by placing fill to establish a land platform and then planting the feature with native BLH-Wet species.

The retention dike would be approximately 20,000 linear feet in length and borrow needed would be obtained from the Mississippi River near Jesuit Bend. Two borrow sites, each occupying approximately 115 acres, would be used. The borrow quantity that would be needed to construct the proposed BLH-Wet feature is approximately 4,600,000 cubic yards. Each borrow site would be excavated to elevation between -68 feet and -85.0 feet. The estimated construction duration for constructing the retention system and dredge filling the site is approximately 12 to 14 months. These same borrow sites will be used for the flood side BLH-Wet, the swamp and the marsh mitigation features that will be adjacent to this site. Those mitigation sites are described below.

This alternative has a target grade of elevation +2.0 to +2.5 feet. The duration for the construction phase that involves degrading the retention dike and installing plants would be approximately 3 to 4 months

A separate portion of the proposed alternative would involve restoring flood side BLH-Wet habitat in an existing open water area and consist of a single mitigation (restoration) feature, P3C, which would occupy approximately 206.2 acres. The alternative would be located off the right descending bank of the Mississippi River at River Mile 68, in Plaquemines Parish, near Jesuit Bend. The proposed restoration feature would be created by placing fill to establish a land platform and then planting the feature with native BLH-Wet species. The fill would be placed to an initial slurry elevation of +4.0 feet expected to settle to a final target grade of approximately +2.0 to +2.5 feet.

The estimated construction duration for constructing the retention system and dredge filling the site is 9 to 10 months, while the duration for the subsequent construction phase for degrading the retention dike and initial planting would require approximately 3 to 4 months.

MITIGATION FOR NON-PARK/404 (c) SWAMP IMPACTS

Lake Boeuf FS Swamp Restoration Alternative

This alternative would involve restoring agricultural fields, pastures, rangelands, and agricultural ponds (detention areas) to native swamp habitats. The proposed restoration site would be approximately 319.9 acres in size and would be located in Lafourche Parish, just north of Bayou

Lafourche and roughly 2 miles west of Raceland (Appendix H) and adjacent to the proposed BLH mitigation.

Because target elevations for restoration range from +1.1 feet to a maximum of +1.8 feet a majority of the proposed restoration area would need to be degraded to obtain the desired target elevation. In addition to that work, other construction activities necessary prior to planting would likely include: clearing and grubbing; grading and tilling necessary to level the surface, limited application of herbicides to eradicate invasive and nuisance plant species. Hydrologic improvements may be required to achieve an optimal hydroperiod within the features and improve surface water flow and interchange. The need for such improvements would also be examined further during the alternative's detailed planning phase. It is estimated that the initial project construction phase would last approximately 9 to 14 months.

Plaquemines, Option 1 FS Swamp Restoration Alternative

The proposed alternative would be located off the right descending bank of the Mississippi River at River Mile 68, in Plaquemines Parish near Jesuit Bend and adjacent to the proposed BLH restoration site. The alternative would involve restoring swamp habitat in an existing open water area in an approximately 310.8 acre area. Borrow necessary to fill the site would be obtained from one of the two previously mentioned Mississippi River borrow sites near Jesuit Bend. The borrow quantity required to construct the proposed swamp feature is approximately 3,100,000 cubic yards.

Once the fill material has settled to the desired final target grade and the retention dikes are degraded, the mitigation feature would be planted. The duration for the subsequent construction phase for degrading the retention dike and initial planting is approximately 3 to 4 months.

Salvador-Timken FS Swamp Restoration Alternative

This alternative would involve restoring swamp habitat along the western shore of Lake Cataouatche and south of the Louisiana Cypress Lumber Canal in Saint Charles Parish. The site is in an open water area in the Salvador-Timken Wildlife Management Area (WMA) that is managed by the Louisiana Department of Wildlife and Fisheries. The proposed swamp restoration feature would encompass approximately 314.8 acres. The total fill quantity required to create the swamp platform would be approximately 3,100,000 cubic yards.

Borrow for earthen fill for the restoration site would be obtained from an approximately 365-acre borrow site in Lake Cataouatche. The borrow site would be dredged to elevation -20 feet or shallower. The estimated construction duration for constructing the retention system and dredge filling the site is 11 to 14 months. The duration for the construction phase that includes degrading the retention dikes and the initial planting of feature ST1 is 6 to 9 months.

Simoneaux Ponds FS Swamp Restoration Alternative

This alternative would involve restoring swamp habitat in an open water area located along the northern shore of Bayou Gauche, a small outlet of Bayou des Allemands at Black Prince Island

in St. Charles Parish. The swamp restoration feature would be filled to an initial target elevation of +3.0 feet. The total fill quantity required to establish the marsh platform would be approximately 3,733,200 cubic yards. The borrow site would be located in Lake Salvador. This site would be dredged to an elevation of -20.0 feet or shallower. This borrow site would be approximately 442 acres to yield the 7,466,400 cubic yards of borrow required.

The estimated construction duration for constructing the retention system and dredge filling the site is 11 to 14 months. The duration for the subsequent construction project for degrading the retention dike and planting the feature would be from 6 to 9 months.

MITIGATION FOR NON-PARK/404 (c) FLOOD SIDE FRESH MARSH IMPACTS

Dufrene Ponds FS Fresh Marsh Restoration Alternative

The proposed alternative would involve restoration of fresh marsh and would be located along the right descending bank of Bayou des Allemands immediately south of US Highway 90 in Lafourche Parish. The proposed marsh restoration features, as shown in Appendix H, would total approximately 138.6 acres. The site is open water sites.

The two restoration features would be filled to an initial target elevation of +2.5 feet. The total fill quantity required would be approximately 1,678,000 cubic yards. Borrow for fill for the restoration features would be obtained from a 220-acre borrow site in Lake Salvador. The total volume of borrow needed would be approximately 4,182,000 cubic yards. The borrow site would be dredged to an elevation of -20 feet or shallower. The estimated construction duration for constructing the retention system and dredge filling the restoration features would be 9 to 12 months.

Gaps would be excavated in some of the spoil berms to allow aquatic organisms to access from marsh and open water habitats east of the berm. In addition, this phase of project construction would include excavating trenasses or similar shallow water depressions within the two marsh restoration features to create areas of shallow water interspersion. The duration of this construction phase (degrading and armoring dikes, excavating gaps, installation of armoring) would last roughly 2 to 3 months.

Jean Lafitte FS Fresh Marsh Restoration Alternative

This mitigation alternative would involve restoration of FS fresh marsh habitats. Two restoration features are proposed (Appendix H). Feature JL1B5 would be built in an open water portion of Yankee pond, would occupy approximately 91.2 acres, and would be located within the JLNHPP. Feature JL15 would be situated in an area along the shoreline of Lake Salvador where prior work has already largely established a marsh platform that was previously an open water portion of the lake. Feature JL15 would encompass a total of approximately 55.5 acres. Portions of this feature would overlap JLNHPP property, while the remaining portions would be on private lands. Both of the marsh restoration features would be located in Jefferson Parish.

Of the total 8,400 linear feet of dikes required, approximately 3,100 linear feet located along the eastern boundary of feature of JL1B5 adjacent to Bayou Segnette would be armored/capped with stone.

Marsh restoration would require approximately 600,000 cubic yards of material hydraulically dredged from Lake Cataouatche. The borrow site would be approximately 42.0 acres with a maximum depth of 10 feet.

The initial target marsh elevation in JJL1B5 would be +3.5 feet with a final target elevation of approximately +1.0 to +1.5 feet. It is estimated that the initial project construction activities would require approximately 5 to 6 months. The final construction phase would begin following settlement and dewatering of the created marsh platform.

Fish dips (essentially armored gaps) would be constructed in the armored dike segment and would be degraded to design grade elevation of +1.0 to +1.5 feet. The fish dips would allow water exchange and provide aquatic organism access to the marsh feature. It is anticipated that the final phase of construction activities (degrading dikes, constructing trenasses and fish dips, installation of dike armoring) would require approximately 4 to 5 months.

Plaquemines, Option 1 FS Fresh Marsh Restoration Alternative

The proposed alternative would involve restoration of fresh marsh habitat in an open water area, by creating new marsh. The proposed feature would be located off the right descending bank of the Mississippi River at River Mile 68, in Plaquemines Parish near Jesuit Bend (Appendix H), adjacent to the BLH and swamp site. The proposed marsh feature would encompass approximately 171.2 acres.

The required borrow needed for this feature would also be obtained from one of the two borrow sites within the Mississippi River near Jesuit Bend. The borrow quantity is approximately 1,800,000 cubic yards. The fill would be placed to an initial slurry elevation of +3.75 feet with a final target grade elevation of +1.5 feet. The estimated construction duration for constructing the retention system and dredge filling the site is approximately 8 to 9 months.

The dikes along the east and south sides of the marsh feature would be completely degraded to match the final elevation of the marsh platform. "Gaps" would be excavated through the perimeter dikes along the west and north sides of site. In conjunction with this dike degrading effort, trenasses would be constructed as necessary to serve as tidal creeks to facilitate water exchange and create shallow water interspersion features. The duration for the subsequent construction project for degrading the retention dike, spoil berm gapping, and construction of trenasses would be approximately 2 to 3 months.

Salvador-Timken FS Fresh Marsh Restoration Alternative

This alternative would involve restoring fresh marsh. The alternative would be located in an existing open water portion of the Salvador-Timken WM A. The feature would encompass approximately 163.3 acres and is located along the western shore of Lake Cataouatche and south

of the Louisiana Cypress Lumber Canal in St Charles Parish and adjacent to the swamp restoration site.

The length of the retention dike would be approximately 13,100 linear feet. The initial target elevation (slurry elevation) is +2.5 feet with a final target elevation of +1.5 feet; this would require an earthen lift of 5.5 feet. The total fill quantity required to create the marsh platform would be approximately 1,750,000 cubic yards. A trenasse would be constructed during this construction phase. The trenasse would be excavated to an approximate elevation of 0.0 feet. The bottom width would be approximately 6 feet. The duration for the construction phase for degrading the retention dikes and constructing the trenasse would be 3 to 6 months.

Borrow for earthen fill would be obtained from Lake Cataouatche in an approximately 211-acre borrow site. The total borrow quantity needed would be approximately 4,068,000 cubic yards. The borrow site would be dredged to elevation -20 feet or shallower. The estimated construction duration for constructing the retention system and dredge filling the site is 6 to 9 months.

Simoneaux Ponds FS Fresh Marsh Restoration Alternative

This alternative would involve restoring fresh marsh habitat along the northern shore of Bayou Gauche, a small outlet of Bayou des Allemands at Black Prince Island, in St. Charles Parish. The proposed fresh marsh restoration feature is identified as feature SP2 and would occupy approximately 163.3 acres (Appendix H). The site is currently open water.

The fresh marsh restoration feature would be filled to an initial target elevation of +2.5 feet with a target elevation of +1.5 feet. The total fill quantity required to establish the marsh platform would be approximately 1,581,000 cubic yards. A trenasse would be excavated to an elevation 0.0 feet with a 6-foot bottom width. The duration for the subsequent construction project for degrading the retention dike and construction the trenasse would be from 4 to 6 months.

Borrow for earthen fill for the restoration features would be obtained from a 184-acre borrow site in Lake Salvador. The borrow site would be dredged to an elevation of -20 feet or shallower. The estimated construction duration for constructing the retention system and dredge filling the site is 6 to 9 months.

MITIGATION FOR PARK/404 (c) BLH-WET IMPACTS

Jean Lafitte BLH-Wet Restoration Alternative

This alternative would involve restoring native BLH-Wet habitats in an existing borrow pit. The alternative would be located in Jefferson Parish, within the JLNHPP and adjacent to the West Bank HSDRRS Levee. The two proposed restoration are approximately 6.28 acres, and approximately 5.88 acres in size as shown in Appendix H. Both features would be constructed by placing fill material in the borrow pit to establish earthen platforms for the restored habitats. The mitigation features would be filled with an estimated 18 feet of sand to elevation -0.0 feet. A 4-foot clay cap to elevation +3.5 feet would then be placed on top of the sand fill. It is

anticipated that it would take approximately 1 year for the fill materials to settle to the desired final target grade of elevation +2.0 feet.

Approximately 400,000 cubic yards of sand fill and 80,000 cubic yards of the clay cap would be required to fill the 12.2. These borrow materials would be obtained from off-site government furnished and/or contractor furnished borrow pits.

Establishment of the construction access routes would require clearing a corridor, roughly 20-feet wide, through existing wetland habitats. The initial construction phase would last roughly 9 to 10 months and plantings would likely last another approximately 3 to 4 months.

MITIGATION FOR PARK/404 (c) SWAMP IMPACTS

Jean Lafitte Swamp Restoration Alternative

This alternative would involve restoring native swamp habitats in primarily existing open water areas in Jefferson Parish. The three proposed restoration features would include JL7 (approximately 11.31 acres), JL8 (approximately 5.00 acres), and JL9 (approximately 4.13 acres), as shown in Appendix H. All three features would be located in the Park, while features JL8 and JL9 would also be located within the 404c area.

Proposed feature JL7 would encompass a segment of an existing man-made canal, although the far eastern end of this feature would encompass a previously filled and disturbed upland area. A portion of an existing spoil berm running along the north side of JL7 would be cleared and degraded (excavated) to use as a source of fill to establish feature JL7. The existing upland area within the eastern end of JL7's footprint would also be cleared and degraded.

Another component of the JL7 swamp restoration would involve excavating "gaps" in the existing spoil berms adjacent to both sides of Millaudon Canal. Each gap would be degraded to approximately elevation 1.0 feet to match the existing grades typically found in nearby swamp habitats.

The quantity of fill that would be obtained from the degrading of the spoil berm adjacent to JL7 and from degrading the existing upland portion of JL7 is approximately 35,000 cubic yards. Combining this with the material obtained from degrading the Millaudon Canal gaps would yield a total of roughly 36,600 cubic yards that would be placed in the existing canal portion of JL7 to establish the platform for the proposed JL7 swamp. However, it is estimated that an additional 140,000 cubic yards of fill (borrow) would be required to bring the canal portion of JL7 to the initial target grade elevation.

The initial construction phase to establish feature JL7 would require an estimated 8.5 to 9.5 months. Once settled, the restoration feature would be planted native swamp canopy and midstory species in accordance with the swamp planting guidelines contained in Appendix H.

The proposed restoration features JL8 and JL9 would encompass existing canals that would be filled and planted to restore native swamp habitat. Two construction access corridors would be

required to build features JL8 and JL9. There are existing spoil berms on the north and south sides of both restoration features which would be "gapped" to improve surface flow and exchange. Each gap would be degraded to approximately elevation 1.0 feet to match the existing grades typically found in nearby swamp habitats.

It is estimated that approximately 3,600 cubic yards of fill would be obtained through construction of the spoil berm gaps. However, it is estimated that an additional 135,000 cubic yards of fill would be required to establish the earthen platforms for the restored swamp features. This borrow material would be bucket dredged from the GIWW. The proposed borrow area would be approximately 70 feet wide and 5,000 feet long (17.2 acres) and would be dug to 4 feet below existing grade with an allowable 1 foot of overdepth. The initial construction of JL8 and JL9 would require about 3 to 4 months. The final construction phase (e.g. initial planting of features JL8 and JL9) would require roughly 2 to 3 weeks.

MITIGATION FOR PARK/404 (c) FRESH MARSH IMPACTS

Jean Lafitte FS Fresh Marsh Restoration Alternative

This mitigation alternative would involve restoring fresh marsh habitat from open water. The single proposed marsh restoration feature, located in Jefferson Parish within the Park would encompass approximately 20.4 acres (Appendix H). Restoration work would involve establishing a land platform for the new marsh habitat proposed.

Of the total 3,780 linear feet of dikes, approximately 1,780 linear feet would be armored/capped with stone during the second construction phase. Fish dips would be constructed in the armored dike segment.

Marsh restoration would require approximately 150,000 cubic yards of material from Lake Cataouatche. The borrow site would be approximately 10.3 acres with a maximum depth of 10 feet. The initial target marsh elevation (elevation of slurry fill) would be +3.5 feet. It is estimated that the initial project construction activities discussed above would require approximately 3 to 4 months. The final target elevation of this feature is approximately +1.0 to +1.5 feet. The final construction phase would begin following settlement and dewatering of the created marsh platform.

In conjunction with this dike degrading effort, trenasses would be constructed as necessary to serve as tidal creeks to facilitate water exchange and create shallow water interspersion features within JL1B4. It is anticipated that the final phase of construction activities (degrading dikes, constructing trenasses and fish dips, installation of dike armoring) would require approximately 3 to 4 months.

FISH AND WILDLIFE CONSERVATION MEASURES

The goal of the mitigation plan is to provide for equal replacement of the habitat units lost due to improvements to the hurricane protection project. The equal replacement compensation goal

specifies that the gain of one habitat unit can be used to offset the loss of one habitat unit. Achieving this goal would re-establish and maintain BLH and bald cypress forested habitats and fresh marshes. The objectives of the mitigation measures for the forested areas would be to establish and maintain a high diversity of native mast- and fruit-producing trees and shrubs, maximize herbaceous and shrub-layer canopy cover while maintaining a semi-mature to mature age structure. While the objective of the mitigation measures for the marsh restoration projects would be to establish a diversity of native marsh vegetation at elevations that support intertidal marsh functions for a time period no less than that of a natural marsh.

Current benefits projected for the TSPA are based on general assumptions of the project area and design. As the Corps further refines proposed mitigation features, detailed designs should be provided to the natural resource agencies so that recommendations can be provided in an appropriate timeframe and more accurate habitat assessments can be completed. Further, as mitigation plans are refined, the Corps, Service, EPA, LDWF, and NMFS would need to evaluate the plans against the accrued and anticipated benefits and the effect of implementing the proposal on achievement of the mitigation plan goal. Any changes that would prevent the mitigation goal from being achieved would not be recommended for implementation. Furthermore, the following activities are not permitted within a mitigation area for the life of the project:

1. Placing, filling, storing, or dumping of refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste, or other such items on the property.
2. Mechanized land clearing or deposition of soil, shell, rock or other fill on the property without prior request for approval, excluding the existing ROWs.
3. Cutting, removal or destruction of vegetation on the property except in accordance with the restoration plan.
4. Grazing of cattle or other livestock on the property that has been restored or enhanced.
5. Commercial, industrial, agricultural, or residential uses of the property.
6. No other human activities that result in the material degradation of habitat within the area shall occur.

However, it is understood that the mitigation plan shall not prohibit hunting, fishing, trapping, non-consumptive recreational pursuits and exploration and production of minerals. Exploration and production of minerals shall be conducted in accordance with all applicable laws and regulations. The Service acknowledges that such activities have the potential to reduce the ability of the area to achieve the mitigation goal, depending on the extent of the impacts to the mitigation lands.

Modification and finalization of the "GUIDELINES – WET BLH HABITAT ENHANCEMENT, SWAMP HABITAT RESTORATION, AND SWAMP HABITAT ENHANCEMENT" (Appendix H) is needed. This plan addresses restoration and enhancement techniques such as reforestation planting, Chinese tallow tree removal and control methods; monitoring guidelines, schedule and responsibilities; success criteria; and some remedial actions. The Service has provide recommendations to the tree species list and the percentages proposed for planting to ensure successful reforestation, while some modifications have been made some revisions are still needed (Appendix H). In a 2005 report the Service provided Chinese tallow tree removal and control methods for WBV mitigation, since that time the methodology has changed to improve the success of such efforts. The Service also provided recommendations for

the plan in our September 25, 2013, comment letter on the Draft Programmatic IER for the LPV mitigation. These revised methods should be incorporated into the mitigation reforestation plan. The methodology proposed to determine reforestation and restoration of jurisdictional wetland success should be modified to more closely reflect those standards utilized by mitigation banks.

The Service's review of the above document revealed that replanting beyond achievement of the initial success criteria (i.e., 1 year post planting) would be undertaken by the local sponsor. This appears to transfer the Operations Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) to the local sponsor upon attainment of the initial success criteria. The Service recommends that the Corps maintain full responsibility for any mitigation project for a minimum of 4-years post planting. That would allow the 4-year success criteria to be evaluated, prior to turning operation and maintenance responsibilities over to the local sponsor. Based on our experience, it would be virtually impossible to reasonably forecast the likely future success of the mitigation project based solely on mitigation activities accomplished during year one. The second monitoring event, performed 4 years after the initial mitigation activities, would provide significantly more insight into the continued development, success, and effectiveness of the implemented features.

The Corps has been working with the Service and other natural resource agencies to develop marsh mitigation specifications; the Service recommends that necessary revisions and finalization of this document also be undertaken. To further ensure future success of the marsh mitigation projects the Corps should maintain full responsibility for all marsh mitigation projects until monitoring guidelines (to be developed) are completed and demonstrate the projects are fully compliant with success and performance requirements.

At this time none of the mitigation planning documents describe in detail actions needed by the Corps and/or the local sponsor if mitigation is not succeeding as planned. The Service recommends that this important component of the mitigation plan be immediately developed.

The Service encourages the Corps to finalize mitigation plans and proceed to mitigation construction so that it will be concurrent with project construction and revising the impact and mitigation period-of-analysis to reflect additional temporal losses would not be required.

While we are generally in support of the Tentatively Selected Mitigation Plan alternative which includes using mitigation banks, we are concerned that selecting the mitigation bank alternative could have negative repercussions. The Corps has the opportunity and resources to construct a "permittee-responsible" mitigation project. By going to a mitigation bank, the Corps could exhaust credits available in any one mitigation bank thus creating a hardship on an individual landowner/permittee. Mitigation banks provide a cost savings and feasible mitigation alternative for the individual landowner. A mitigation bank serves the individual landowner who does not have the resources to construct a mitigation project or whose project typically does not require the amount of mitigation that warrants a self-mitigation project. We recommend that the Corps consider the availability of credits at a bank and within a hydrologic unit when evaluating the mitigation bank alternative to avoid exhausting all credits available within a hydrologic unit for individual landowners/permittee.

ANTICIPATED BENEFITS FROM THE TSPA

Implementation of the proposed mitigation plans is predicted to improve and maintain the habitat value of the BLH, swamp and marsh habitat for fish and wildlife. Mitigation-area habitat values for forested areas would improve due to the increased quantity and quality of mast-producing trees, and moderate increases in shrub and herbaceous cover after planting and due to the creation of higher-quality vegetated estuarine habitats at marsh mitigation sites. Changes by TY in the HSI's reflect predicted habitat conditions under future-with and without-management scenarios. The difference between future with-management and future without-management AAHU values expected to result from the above-described mitigation scenario reflect the expected net benefit of the management actions. By dividing the AAHU by the proposed mitigation project acreage a management (or mitigation) potential per acre is determined. This value will allow the mitigation projects to be resized as final impact assessments are complete. The mitigation potential for the proposed mitigation sites has been developed by the Corps and is used to determine the acreage of mitigation provided by each alternative in the TSPA. Implementation of the TSPA would restore 221.9 acres of BLH habitat (121.8 AAHUs), 319.8 acres (134.5 AAHUs) of swamp habitat, and 138 acres (65.9 AAHUs) of fresh marsh. In addition, a minimum of 12.2 acres of BLH (3 AAHUs), 20.4 acres of swamp (7.2 AAHUs) and 20.4 acres (3.2 AAHUs) of fresh marsh would be mitigated on the JLNHPP/404 (c) area to offset impacts to those public lands. An additional 261.96 AAHUs of BLH impacts would be purchased from a mitigation bank.

SERVICE POSITION AND RECOMMENDATIONS

The Service supports the Corps' current constructible features and recognizes that additional Tiered IERs will further address individual mitigation features that are still in early design phases. We support the Corps' plan to mitigate impacts to fish and wildlife resources associated with WBV HSDRRS provided that the following fish and wildlife conservation recommendations are incorporated into future project planning and implementation and outstanding issues are adequately resolved via ongoing planning efforts:

1. Impacts to Essential Fish Habitat (EFH) should be avoided and minimized to the greatest extent possible. Because impacts to designated EFH habitat may need to be mitigated the Corps should coordination with the NMFS regarding this need.

2. Impacts to wetland habitat (including SAV habitat) and non-wet BLH associated with the construction of the mitigation features should be avoided and minimized to the greatest extent possible. The Corps shall fully compensate for any unavoidable losses of wetland habitat or non-wet BLH caused by mitigation features preferably through resizing of the mitigation features in close coordination with the natural resource agencies.

3. Sediment borrow sites for the marsh creation areas should be designed to avoid and minimize impacts to water quality. The general guidelines for borrow design found in Appendix B should be incorporated into project design, and close

coordination with the natural resource agencies should continue since borrow design can be case specific and influenced by a number of factors.

4. Prior to beginning work on IERs tiered off of this PIER the Corps should coordinate with the natural resource agencies to ensure that necessary information to conduct detailed project planning/design and finalize the WVA analysis is developed and available. Final sizing of mitigation must be based on revised WVAs conducted on advanced project designs

5. Further detailed planning of project features (e.g., Design Documentation Report, Engineering Documentation Report, Plans and Specifications, Water Control Plans, or other similar documents) should be coordinated with the Service, NMFS, LDWF, EPA and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.

6. If applicable, a General Plan should be developed by the Corps, the Service, and the managing natural resource agency in accordance with Section 3(b) of the FWCA for mitigation lands.

7. A fully defined mitigation plan should be included in the authorizing report and Chief of Engineers Report. The mitigation plan should be developed including locations and AAHUs vetted through the natural resource agencies during the feasibility process. Only existing mitigation banks and existing credits released by Corps Regulatory Branch may be considered in cost estimating. Alternatives may be considered provided planning details are sufficient to generate draft AAHUs and both bank and non-bank options are included in the authorizing document

8. We recommend that the Corps consider the availability of credits at a bank and within a hydrologic unit when evaluating the mitigation bank alternative to avoid exhausting credits available for individual landowners/permittees within a particular hydrologic unit.

9. If mitigation lands are purchased for inclusion within publicly managed lands, those lands may need to meet certain requirements. Land-managing natural resource agencies may have requirements that must be met prior to accepting mitigation lands; therefore, if they are proposed as a manager of a mitigation site they should be contacted early in the planning phase regarding such requirements. The local sponsor should also be made aware of the above requirements should it be their responsibility to transfer mitigation lands to the land-managing agency.

10. The Corps should continue to coordinate with land managing agencies during planning of mitigation features that may be built on their lands or lands to be turned over to them for management. Coordination should continue until construction of the projects are complete and prior to any subsequent maintenance. Points of contacts National Park Service (NPS) lands within the area please contact

Superintendent Lance Hatten, (504) 589-3882 extension 108, (lance_hatten@nps.gov) or Chief of Resource Management Guy Hughes (504) 589-3882 extension 128, (guy_hughes@nps.gov). Please contact Mr. John Lavin at 1-888-677-1400 regarding work on the Bayou Segnette State Park which is operated by the Louisiana Department of Culture, Recreation and Tourism, Office of State Parks areas.

11. Because of the uncertainty regarding total impacts to the JLNHPP, the Service recommends that the Corps delay any final design work and continue to coordinate with the JLNHPP staff prior to finalizing mitigation features that may be affected by the final determination of on park impacts.

12. If the local project-sponsor is unable to fulfill the financial mitigation requirements for operation and/or maintenance of mitigation lands, then the Corps should provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.

13. Any proposed change in mitigation features or plans should be coordinated in advance with the Service, NMFS, LDWF, EPA and LDNR.

14. The Service encourages the Corps to finalize mitigation plans and proceed to mitigation construction so that it will be concurrent with project construction. If construction is not concurrent with mitigation implementation then revising the impact and mitigation period-of-analysis to reflect additional temporal losses will be required

15. The Service recommends that the Corps immediately finalize selection and approval of mitigation and augmentation features in coordination with federal and state natural resource agencies and with required approval from EPA. All necessary studies for the mitigation and augmentation features have been completed and agencies have reached agreement on those features. Further, the Service recommends that all such mitigation and augmentation features be implemented as soon as possible. All terms and conditions specified in the EPA 2009 Modification to the Bayou aux Carpes CWA Section 404(c) Final Determination should be followed with regard to mitigation and augmentation requirements.

16. The Corps should immediately develop a long-term monitoring plan for the Bayou aux Carpes 404(c) area, as required under the EPA 2009 Modification to the Bayou aux Carpes CWA Section 404(c) Final Determination. The plan should be coordinated with the natural resources agencies and approved by EPA. All terms and conditions specified in the EPA 2009 Modification to the Bayou aux Carpes CWA Section 404(c) Final Determination with regard to the long-term monitoring and operation plan should be followed. Once approved, that plan should be implemented as soon as possible.

17. The Service recommends that all of the terms and conditions outlined in the EPA Bayou aux Carpes 404(c) 2009 modification be implemented without delay. The Corps is responsible for funding all mitigation and augmentation features in this agreement. A link to the 2009 final modified determination may be found at www.nolaenvironmental.gov under the EPA heading for IER 12.

18. The Service recommends that the Corps work with the natural resource agencies to incorporate proposed modifications (Appendix G) and finalize the "GUIDELINES – WET BLH HABITAT ENHANCEMENT, SWAMP HABITAT RESTORATION, AND SWAMP HABITAT ENHANCEMENT" and the untitled document for marsh mitigation (Appendix F).

19. The Service recommends that the Corps maintain full responsibility for any BLH mitigation project for a minimum of 4-years post planting. The Corps should maintain full responsibility for all marsh mitigation projects until monitoring guidelines to be developed are completed and demonstrate the projects are fully compliant with success and performance requirements. Documentation should be provided and referenced to demonstrate funding obligation for the Corps to fulfill initial success criteria at a minimum.

20. The Service recommends that all mitigation planning documents should describe in detail actions needed by the Corps and/or the local sponsor if mitigation is not succeeding as planned.

21. The Corps should avoid adverse impacts to bald eagle and osprey nesting locations and wading bird colonies through careful design project features and timing of construction. Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.

22. We recommend that the Corps re-initiate ESA consultation with this office to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat. Subsequently, ESA consultation should be reinitiated should the proposed project features change significantly or are not implemented within one year of the last ESA consultation with this office to ensure that the proposed project does not adversely affect any federally listed threatened or endangered species or their habitat.

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Appendix A

HSDRRS WBV IMPACTS[1]

NEPA	Impact Type		Swamp	BLH Dry	BLH Wet	Fresh	Impact Type Totals	IER Total Impacts
IER 12	Temporary	Acres	6.9	22.2			29.1	216.7
		AAHUs	1.4	7.4			8.8	139.2
	Permanent	Acres	26.0	159.2	2.4		187.6	
		AAHUs	14.0	114.4	2.0		130.4	
IER 13	Temporary	Acres	10.7	2.6	4.5		17.8	58.1
		AAHUs	2.9	0.7	0.9		4.5	24.1
	Permanent	Acres	20.9	14.3	5.1		40.3	
		AAHUs	7.1	9.6	2.9		19.6	
IER 14	Temporary	Acres	0.7		0.4		1.1	229.5
		AAHUs	0.4		0.3		0.7	139.6
	Permanent	Acres	107.9		120.5		228.4	
		AAHUs	61.8		77.1		138.9	
IER 15	Temporary	Acres			0.6	15.0	15.6	62.1
		AAHUs			0.1	3.0	3.1	30.8
	Permanent	Acres			15.2	31.3	46.5	
		AAHUs			8.2	19.5	27.7	
IER 16	Temporary	Acres			3.2	0.7	3.9	219.7
		AAHUs			0.1	0.1	0.2	108.0
	Permanent	Acres			83.6	132.2	215.8	
		AAHUs			42.0	65.8	107.8	
IER 17	Temporary	Acres			3.4		3.4	23.5
		AAHUs			1.6		1.6	18.8
	Permanent	Acres	17.8		2.3		20.1	
		AAHUs	16.1		1.1		17.2	
Total	Temporary	Acres	18.3	24.8	12.1	15.7	70.9	
		AAHUs	4.7	8.1	3.0	3.1	18.9	
	Permanent	Acres	172.6	173.5	229.1	163.5	738.7	
		AAHUs	103.7	132.1	136.3	88.4	441.6	
Total of all impacts		**Acres**	**190.9**	**198.3**	**241.2**	**179.2**		**809.6**
		AAHUs	**103.7**	**132.1**	**136.3**	**88.4**		**460.5**

[1] Includes all impacts (i.e., supplementals and addendums) determined by the date of our CED report, May 17, 2013, unless otherwise noted.

HSDRRS WBV IMPACTS TO PUBLIC LANDS[1]

IER and Public/Protected Lands Impacted	Impact Type		Swamp	Wet BLH	Fresh Marsh	Impact Type Totals	IER Totals
IER 12 404c	Permanent	Acres	4.2	0.3		4.5	9.6
		AAHUs	2.5	0.2		2.7	9
IER 12 404c and NPS	Permanent	Acres	3	2.1		5.1	
		AAHUs	1.8	1.8		3.6	
IER 14 NPS	Temporary	Acres		0.01		0.01	51.81
		AAHUs		0.1		0.1	29.8
	Permanent	Acres	51.7	0.1		51.8	
		AAHUs	29.6	0.1		29.7	
IER 15 Bayou Segnette State Park	Temporary	Acres			15	15	15
		AAHUs			3	3	3
IER 17 Bayou Segnette State Park	Temporary	Acres		3.4		3.4	5.7
		AAHUs		1.6		1.6	2.7
	Permanent	Acres		2.3		2.3	
		AAHUs		1.1		1.1	
Total Impacts to Public/Protected Lands		**Acres**	**58.9**	**8.21**	**15**		**82.11**
		AAHUs	**33.9**	**4.9**	**3**		**41.8**

[1] Includes all impacts (i.e., supplementals and addendums) determined by the date of our CED report, May 17, 2013, unless otherwise noted.

Appendix B

Draft Borrow Design and General Marsh Creation Guidelines for WBV Mitigation

1. Fill elevations - settlement curves should be provided during PED
2. Access corridors across marsh should be backfilled prior to demobilization
3. Earthen Containment and Shoreline Protection (if any) constructed on marsh ultimately would need to be assessed in direct impacts.
4. Earthen Containment in open water - upland portions will not be credited as marsh
5. Degrading/Gapping plan would need to be development and should be tailored case specifically. The following is offered as a general design of dike gapping :
    A. If total dike degradation is not feasible, at a minimum, 1, 25-ft gap (bottom width) no less than every 1,000 ft, every 500 ft is preferred
    B. Depth of gap dependent on if it is in open water or on marsh,
    C. if on a high wave energy or protected energy shoreline:
        a. Open Water - should be to the pre-project water depth;
        b. Marsh - on both sides - should be to average marsh elevation
        c. If scour aprons are included, the bottom should be grubbed out so that the depth is measured to the installed top of the armoring.
        d. Degraded material should be placed on adjacent remaining dikes and not marsh.
6. Spill boxes should be directed into adjacent deteriorating marsh to the greatest extend practicable.
7. Staging areas should be located to avoid and minimize impacts.
8. Borrow Impact Assessment - generically 2,000 ft from shore is sufficient to avoid inducing wave impacts. Further development with the interagency team should be conducted post 35% and AEP and prior to finalization of the IERs.
9. Monitoring of dissolved oxygen and rate of infilling is recommended for the borrow site. It is recommended that monitoring plans used by the USGS for the MRGO Ecosystem Restoration Study and IER 11 be considered as models for developing that monitoring effort.
10. Borrow Pit Design should be case specific but should also consider the following:
    a. Avoidance of oyster reefs to the maximum extent practicable
    b. Avoidance of submerged aquatic vegetation
    c. Avoidance of induced slope failure
    d. Avoidance of induced wave refraction/diffraction erosion of shoreline
    e. Avoidance of pipelines
    f. Avoidance of inducing hypoxia – close coordination with the resource agencies is recommended as this is case specific and influenced by a number of factors such as water column stratification, current velocities and patterns, infilling rates, and urban discharge, etc. Other factors will need to be considered such as impacts to threatened or endangered species habitat and SAVs.

Appendix C

Modification of Bayou aux Carpes CWA Section 404(c) Final Determination

Excerpt Only – This is not a complete document

B. Modification and Conditions

The October 16, 1985, Bayou aux Carpes Final Determination is hereby modified, subject to conditions specified below, by adding the following: The US Army Corps of Engineers may discharge dredged or fill material for the purpose of constructing the West Closure Complex alternative, as described by Colonel Alvin B. Lee, District Commander for the New Orleans District, in the November 4, 2008, letter requesting modification of the 1985 Bayou aux Carpes 404(c) FD. In this letter (Appendix 1), Colonel Lee requested modification of the 404(c) designation of the site to allow for the construction of a 4,200 foot floodwall and earthen berm within a 100 ft by 4,200 ft corridor along the eastern boundary of the Bayou aux Carpes 404(c) site, Jefferson Parish, Louisiana.

As stated above, this modification is subject to the specific conditions that EPA found were necessary in order for the Agency to grant this modification. The conditions are consistent with EPA and Corps regulations for mitigation and must be implemented in order for any discharges of dredged or fill material to comply with the terms of the 1985 Bayou aux Carpes 404(c) Final Determination. Not-with-standing the fact that the conditions contained in the Final Determination are binding requirements on the Corps, in order to demonstrate the high level of inter-agency cooperation and commitment that compensatory mitigation projects will be provided and maintained, a letter agreeing to the conditions below must be provided by the Corps to EPA (e.g., a formal, documented commitment from a government agency or public authority) (33 CFR 332.3 (n)), as soon as possible and in any event prior to any construction activities authorized by this Final Determination modification. The District Commander for the New Orleans Corps District must provide in writing to EPA AAOW a commitment to plan, design, ensure full funding, implement and monitor all mitigation, augmentation and monitoring measures that are conditions on which this modification was based to the satisfaction of EPA. EPA recognizes that full funding of the mitigation, augmentation and monitoring measures is subject to the availability of appropriated funds, however the District Commander for the New Orleans Corps District would agree to request through the Corps' budget process the funding that is necessary to fully implement and monitor the mitigation, augmentation and monitoring measures as detailed below.

As set forth in this modification, this action is reflective of a unique set of circumstances. The modification granted today does not have any bearing on any other CWA Section 404(c) designations or modification requests. Each CWA Section 404(c) designation represents a unique situation that responds to a specific set of parameters unlike any other.

i. Project Design and Construction

1. During final project design, the New Orleans District of the Corps (Corps) shall utilize all feasible engineering and construction practices to reduce impacts to the Bayou aux Carpes CWA Section 404(c) wetlands.[1]

2. During project construction, the Corps shall comply with the conservation recommendations as specified in the "Fish and Wildlife Coordination
Act Report, Individual Environmental Report (IER) 12, Harvey to Algiers" (February 18, 2009), or as they may be amended by the USFWS, Ecological Service, Lafayette.

ii. Mitigation

1. The New Orleans District of the Corps shall insure full funding and implementation of mitigation measures to compensate for the unavoidable adverse impacts of the project. EPA will make the final determination as to whether compensation is adequate, appropriate, and satisfactorily implemented in a timely manner.

2. The New Orleans District of the Corps shall obtain written approval from EPA Region 6, after consulting with the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (GNOHSDRRS) interagency review team, prior to implementing any mitigation feature. At a minimum, the Corps shall document for EPA Region 6 the concurrence or non-concurrence on each mitigation feature by the National Park Service (Jean Lafitte National Historical Park and Preserve), US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), US Geological Survey (USGS), Louisiana Department of Natural Resources, Louisiana Department of Environmental Quality, and Louisiana Department of Wildlife and Fisheries.

3. The New Orleans District of the Corps shall be responsible for obtaining all necessary permits and conducting all required regulatory coordination and approvals prior to implementing any mitigation feature. The Corps shall coordinate with the Jean Lafitte National Historical Park and Preserve to determine the appropriate lead agency for conducting the interagency coordination and approval processes and shall obtain all necessary National Park Service permits.

iii. Augmentation Features

1. The New Orleans District of the Corps shall insure full funding and implementation of augmentation features to enhance the wetland functions and values of the site. EPA will make the determination as to whether augmentation features are adequate, appropriate, and satisfactorily implemented in a timely manner.

2. The New Orleans District of the Corps shall obtain written approval from EPA Region 6, after consulting with the GNOHSDRRS interagency review team, prior to implementing any augmentation feature. At a minimum, the Corps shall document for EPA Region 6 the concurrence or non-concurrence on each augmentation feature by the NPS (Jean Lafitte National

[1] This commitment was stated in a November 4, 2008, request for Section 404(c) modification letter to Mr. Lawrence E. Starfield, Deputy Regional Administrator EPA Region 6 from Colonel Alvin B. Lee, District Commander for the New Orleans District for the US Army Corps of Engineers (Appendix 1). Note: enclosed documents referenced in this letter are not attached in Appendix 1, but can be found in EPA Region 6 Recommended Determination dated April 2, 2009.

Historical Park and Preserve), USFWS, NMFS, USGS, Louisiana Department of Natural Resources, Louisiana Department of Environmental Quality, and Louisiana Department of Wildlife and Fisheries.

3. The Corps shall be responsible for obtaining all necessary permits and conducting all required regulatory coordination and approvals prior to implementing any augmentation feature. The Corps shall coordinate with the Jean Lafitte National Historical Park and Preserve to determine the appropriate lead agency for conducting the interagency coordination and approval processes and shall obtain all necessary National Park Service permits.

iv. Long-term Monitoring and Operation

1. The New Orleans District of the Corps shall coordinate the development of a long-term site monitoring plan, to be approved in writing by EPA, after consulting with the GNOHSDRRS interagency review team. EPA will make the determination as to whether the monitoring plan is adequate and appropriate.

2. The New Orleans District of the Corps and EPA Region 6 shall develop and sign a Memorandum of Agreement with those willing and active State, federal, and local participants with natural resource management missions who have participated on the IER # 12 [2]interagency review team. The Memorandum of Agreement shall document the commitment to participate in the planning and analyses specified by the long-term monitoring plan.

3. The New Orleans District of the Corps shall obtain written approval from EPA Region 6, after consulting with the GNOHSDRRS interagency review team, prior to implementing the long-term monitoring plan. At a minimum, the Corps shall document for EPA Region 6 the concurrence or non-concurrence on the long-term monitoring plan by the NPS (Jean Lafitte National Historical Park and Preserve), USFWS, NMFS, USGS, Louisiana Department of Natural Resources, Louisiana Department of Environmental Quality, and Louisiana Department of Wildlife and Fisheries.

4. The New Orleans District of the Corps shall be responsible for ensuring implementation of a long-term site monitoring plan, to extend no less than the first 50 years of the Corps project life, unless otherwise addressed in a long-term agreement with another party approved by EPA.[3] The long-term monitoring plan for the Bayou aux Carpes Modification mitigation and augmentation features will focus on monitoring both the mitigation and augmentation features, as well as the impacts of the floodwall. The plan should provide for making adjustments if the mitigation or

[2] The Corps has divided the study area for the GNOHSDRRS into 17 project component areas. Each of these component areas will report on plans for those areas in Individual Environmental Reports (IERs). The proposed plans for the Bayou aux Carpes CWA Section 404(c) area are reported in IER #12.

[3] The ultimate responsibility to plan, design, fully fund, implement and monitor all mitigation, augmentation and monitoring measures that are conditions on which this determination was based are the responsibility of the U.S. Army Corps of Engineers. Although the Corps may enter into long term agreements with another party with respect to the work authorized by this modification, such agreements do not obviate the Corps' responsibility for meeting the conditions of this modification, and any concerns EPA may have will be raised with the Corps, not other involved parties.

augmentation features prove not to perform as expected. Though it is not expected that the Corps would need to make future adjustments to the floodwall, the effects of the floodwall are to be monitored to determine unexpected impacts which may warrant other corrective actions.

5. The New Orleans District of the Corps shall provide EPA Region 6 with digital aerial photography of the site (season and flood stage to be determined jointly) prior to constructing the floodwall along the perimeter of the site and annually for the first five years after its construction, and at other times as specified by EPA Region 6.

6. The New Orleans District of the Corps shall gather the monitoring data and report results to EPA Region 6 annually, on a schedule to be specified by EPA Region 6, each year for the first five years, and at other times as specified by EPA Region 6.

7. Throughout the life of the project, the New Orleans District of the Corps shall ensure that any necessary adaptive construction modifications, including removal or repair, of any mitigation or augmentation feature is instituted based on the recommendations of EPA.

8. In the event that EPA determines during the life of the project that operation, maintenance, or long-term management by the Corps of the flood protection/risk reduction features, mitigation features, or augmentation features is causing unanticipated and unacceptable wetland impacts, EPA may modify the terms of these conditions.

Appendix D

Period of Analyses Timeline

Appendix E

Final Array of Alternatives

The 38 mitigation measures that were refined resulted in the following final array of 22 potential mitigation projects by habitat type. All mitigation projects were designed using the intermediate sea level rise (SLR) scenario.

Non-Park/404(c) BLH-Dry/BLH-Wet Protected Side Impacts

- Bayou Segnette PS BLH-Dry & BLH-Wet Enhancement
- Dufrene Ponds PS BLH-Wet Restoration
- Lake Boeuf PS BLH-Dry & BLH-Wet Restoration
- Plaquemines, Alt. 2 PS BLH-Wet Restoration
- General Mitigation Bank

Non-Park/404(c) BLH-Wet Flood Side Impacts

- Dufrene Ponds FS BLH-Wet Restoration
- Lake Boeuf FS BLH-Wet Restoration
- Plaquemines, Alt. 2 FS BLH-Wet Restoration

Non-Park/404(c) Swamp Flood Side Impacts

- Dufrene Ponds FS Swamp Restoration
- Lake Boeuf FS Swamp Restoration
- Plaquemines, Alt. 1 FS Swamp Restoration
- Plaquemines, Alt. 2 FS Swamp Restoration
- Salvador-Timken FS Swamp Restoration
- Simoneaux Ponds FS Swamp Restoration

Non-Park/404(c) Fresh Marsh Flood Side Impacts

- Dufrene Ponds FS Marsh Restoration
- Jean Lafitte FS Marsh Restoration
- Plaquemines, Alt. 1 FS Marsh Restoration
- Salvador-Timken FS Marsh Restoration
- Simoneaux Ponds FS Marsh Restoration

Park/404(c) BLH-Wet Flood Side Impacts

- Jean Lafitte FS BLH-Wet Restoration

Park/404(c) Swamp Flood Side Impacts

- Jean Lafitte FS Swamp Restoration

Park/404(c) Marsh Flood Side Impacts

- Jean Lafitte FS Marsh Restoration

Appendix F

"Guidelines – Wet BLH Habitat Enhancement, Swamp Habitat Restoration, and Swamp Habitat Enhancement" Document And "Draft Standardized Assumptions for Marsh" Document

GUIDELINES –
WET BOTTOMLAND HARDWOOD HABITAT ENHANCEMENT, SWAMP HABITAT RESTORATION, AND SWAMP HABITAT ENHANCEMENT

Planting Guidelines for Wet Bottomland Hardwood Habitat Enhancement

Canopy species will be planted on 9-foot centers (average) to achieve a minimum initial stand density of 538 seedlings (trees) per acre. Midstory species will be planted on 20-foot centers (average) to achieve a minimum initial stand density of 109 seedlings per acre. Stock will be at least 1 year old, at least 2 feet in height, and must be obtained from a registered licensed regional nursery/grower and of a regional eco-type species properly stored and handled to ensure viability. The plants will typically be installed during the period from December through March 15 (planting season/dormant season); however, unanticipated events such as spring flooding may delay plantings until late spring or early summer. The seedlings will be installed in a manner that that avoids monotypic rows of canopy and midstory species (i.e. goal is to have spatial diversity and mixture of planted species). If herbivory may threaten seedling survival, then seedling protection devices such as chicken-wire fencing or plastic seedling protectors will be installed around each planted seedling.

The canopy species installed will be in general accordance with the species lists provided in Tables 1A and 1B. Plantings will be conducted such that the total number if plants installed in a given area consists of approximately 60% hard mast-producing species (Table 1A) and approximately 40% soft mast-producing species (Table 1B). The species composition of the plantings for each of the two groups of canopy species (e.g. hard mast species and soft mast species) should mimic the percent composition guidelines indicated in Tables 1A and 1B. However, site conditions (factors such as hydrologic regime, soils, composition of existing native canopy species, etc.) and planting stock availability may necessitate deviations from the species lists and/or the percent composition guidelines indicated in Tables 1A and 1B. In general, a minimum of 3 hard mast species and a minimum of 3 soft mast species should be utilized.

The midstory species installed will be selected from the species list provided in Table 2. Plantings will consist of at least 3 different species. The species used and the proportion of the total midstory plantings represented by each species (percent composition) will be dependent on various factors including site conditions (composition and frequency of existing native midstory species, hydrologic regime, soils, etc.) and planting stock availability.

Where initial enhancement activities include the eradication of invasive and nuisance plant species, significant numbers of native canopy and/or midstory species may remain, but in a spatial distribution that leaves relatively large "gaps" in the canopy stratum and/or the midstory stratum. In such cases, areas measuring approximately 25 feet by 25 feet that are devoid of native canopy species should be planted and areas measuring approximately 45 feet by 45 feet that are devoid of native midstory species should be planted.

The initial enhancement actions involved within a particular mitigation site could include a variety measures such as the eradication of invasive and nuisance plant species, topographic alterations (excavation, filling, grading, etc.), and hydrologic enhancement actions (alterations to drainage patterns/features, installation of water control structures, etc.). These actions may result in areas of variable size that require planting of both canopy and midstory species using the typical densities/spacing described above. There may also be areas where several native canopy and/or midstory species remain, thus potentially altering the general guidelines described as regards the spacing of plantings, and/or the species to be planted, and/or the percent composition of planted species. Similarly, areas that must be re-planted due to failure in achieving applicable mitigation success criteria may involve cases where the general guidelines discussed above will not necessarily be applicable.

Given these uncertainties, initial planting plans specific to the mitigation site will be required and must be specified in the Mitigation Work Plan for the site. The initial planting plans will be developed by the USACE in cooperation with the Interagency Team. Initial plantings will be the responsibility of the USACE. If re-planting of an area is necessary following initial plantings, a specific re-planting plan must also be prepared

and must be approved by the USACE in cooperation with the Interagency Team prior to re-planting. With the exception of any re-planting actions necessary to attain the initial survivorship success criteria (i.e. survival required 1 year following completion of initial plantings), the Sponsor will be responsible for preparing re-planting plans and conducting re-planting activities. Re-planting necessary to achieve the initial survivorship criteria will be the responsibility of the USACE.

Table 1A: Preliminary Planting List for Wet Bottomland Hardwood Habitat, Hard Mast-Producing Canopy Species (60% of Total Canopy Species)

Common Name	Scientific name	Percent Composition
Nuttall oak	*Quercus nuttalli*	20% - 30%
Willow oak	*Quercus phellos*	20% - 30%
Water oak	*Quercus nigra*	20% - 30%
Overcup oak	*Quercus lyrata*	10% - 20%
Swamp chestnut oak	*Quercus michauxii*	10% - 20%
Bitter pecan	*Carya x lecontei*	10% - 20%
Water hickory	*Carya aquatica*	10% - 20%

Table 1B: Preliminary Planting List for Wet Bottomland Hardwood Habitat, Soft Mast-Producing Canopy Species (40% of Total Canopy Species)

Common Name	Scientific name	Percent Composition
Drummond red maple	*Acer rubrum* var. *drummondii*	15% - 25%
Sugarberry	*Celtis laevigata*	15% - 25%
Green ash	*Fraxinus pennsylvanica*	15% - 25%
Sweetgum	*Liquidambar styraciflua*	10% - 20%
American elm	*Ulmus americana*	10% - 20%
Slippery elm	*Ulmus rubra*	10% - 20%
White ash	*Fraxinus americana*	5% - 15%
Bald cypress	*Taxodium distichum*	5% - 15%

Table 2: Preliminary Planting List for Wet Bottomland Hardwood Habitat, Midstory Species

Common Name	Scientific name	Percent Composition
Saltbush	*Baccharis halimifolia*	TBD
Buttonbush	*Cephalanthus occidentalis*	TBD
Roughleaf dogwood	*Cornus drummondii*	TBD
Mayhaw	*Crataegus opaca*	TBD
Green hawthorn	*Crataegus viridis*	TBD
Common persimmon	*Diospyros virginiana*	TBD
Honey locust	*Gleditsia triacanthos*	TBD
Possumhaw	*Ilex decidua*	TBD
Yaupon	*Ilex vomitoria*	TBD
Red mulberry	*Morus rubra*	TBD
Wax myrtle	*Myrica cerifera*	TBD
Swamp bay	*Persea palustris*	TBD
Dwarf palmetto	*Sabal minor*	TBD

TBD = To Be Determined

Planting Guidelines for Swamp Habitat Restoration and Swamp Habitat Enhancement

Canopy species will be planted on 9-foot centers (average) to achieve a minimum initial stand density of 538 seedlings (trees) per acre. Midstory species will be planted on 20-foot centers (average) to achieve a

minimum initial stand density of 109 seedlings per acre. Stock used for canopy species will be at least 1 year old, at least 3 feet tall, and have a root collar diameter that exceeds 0.5 inch. Stock used for midstory species will be at least 1 year old and will be at least 3 feet tall. All stock must be obtained from a registered licensed regional nursery/grower and of a regional eco-type species properly stored and handled to ensure viability. The plants will typically be installed during the period from December through March 15 (planting season/dormant season); however, unanticipated events may delay plantings until late spring or early summer. The seedlings will be installed in a manner that that avoids monotypic rows of canopy and midstory species (i.e. goal is to have spatial diversity and mixture of planted species). If herbivory may threaten seedling survival, then seedling protection devices such as chicken-wire fencing or plastic seedling protectors will be installed around each planted seedling.

The canopy species installed will be in general accordance with the species lists provided in Table 3. The species composition of the plantings should mimic the percent composition guidelines indicated in this table. However, site conditions (factors such as hydrologic regime, soils, composition of existing native canopy species, etc.) and planting stock availability may necessitate deviations from the species lists and/or the percent composition guidelines indicated in Table 3. In general, a minimum of 3 canopy species should be utilized, the plantings must include baldcypress and tupelogum, and baldcypress should typically comprise at least 50% of the total number of seedlings installed.

The midstory species installed will be selected from the species list provided in Table 4. Plantings will consist of at least 2 different species. The species used and the proportion of the total midstory plantings represented by each species (percent composition) will be dependent on various factors including site conditions (composition and frequency of existing native midstory species, hydrologic regime, soils, etc.) and planting stock availability.

For swamp enhancement projects that include the eradication of invasive and nuisance plant species, significant numbers of native canopy and/or midstory species may remain, but in a spatial distribution that leaves relatively large "gaps" in the canopy stratum and/or the midstory stratum. In such cases, areas measuring approximately 25 feet by 25 feet that are devoid of native canopy species should be planted and areas measuring approximately 45 feet by 45 feet that are devoid of native midstory species should be planted.

The initial enhancement actions involved within a particular swamp enhancement mitigation site could include a variety measures such as the eradication of invasive and nuisance plant species, topographic alterations (excavation, filling, grading, etc.), and hydrologic enhancement actions (alterations to drainage patterns/features, installation of water control structures, etc.). These actions may result in areas of variable size that require planting of both canopy and midstory species using the typical densities/spacing described above. There may also be areas where several native canopy and/or midstory species remain, thus potentially altering the general guidelines described as regards the spacing of plantings, and/or the species to be planted, and/or the percent composition of planted species. Similarly, areas that must be re-planted due to failure in achieving applicable mitigation success criteria may involve cases where the general guidelines discussed above will not necessarily be applicable.

Given these uncertainties, initial planting plans specific to a mitigation site will be required and must be specified in the Mitigation Work Plan for the site. The initial planting plans will be developed by the USACE in cooperation with the Interagency Team. Initial plantings will be the responsibility of the USACE. If re-planting of an area is necessary following initial plantings, a specific re-planting plan must also be prepared and must be approved by the USACE in cooperation with the Interagency Team prior to re-planting. With the exception of any re-planting actions necessary to attain the initial survivorship success criteria (i.e. survival required 1 year following completion of initial plantings), the Sponsor will be responsible for preparing re-planting plans and conducting re-planting activities. Re-planting necessary to achieve the initial survivorship criteria will be the responsibility of the USACE.

Table 3: Preliminary Planting List for Swamp Habitat, Canopy Species

Common Name	Scientific name	Percent Composition
Bald cypress	*Taxodium distichum*	50% - 65%
Tupelogum	*Nyssa aquatic*	20% - 25%
Green ash	*Fraxinus pennsylvanica*	10% - 15%
Drummond red maple	*Acer rubrum* var. *drummondii*	5% - 10%
Bitter pecan	*Carya aquatic*	5% - 10%

Table 4: Preliminary Planting List for Swamp Habitat, Midstory Species

Common Name	Scientific name	Percent Composition
Buttonbush	*Cephalanthus occidentalis*	TBD
Roughleaf dogwood	*Cornus drummondii*	TBD
Swamp privet	*Forestiera acuminata*	TBD
Possumhaw	*Ilex decidua*	TBD
Virginia willow	*Itea virginica*	TBD
Wax myrtle	*Myrica cerifera*	TBD
Swamp rose	*Rosa palustris*	TBD
Snowbell	*Styrax americana*	TBD

TBD = To Be Determined

Guidelines for the Eradication and Control of Invasive and Nuisance Plant Species

The eradication of invasive and nuisance plant species may incorporate a variety of eradication methods including mechanized removal (ex. hydroaxes, gyro-tracs, heavy machinery used in areas slated for topographic alterations), non-mechanized removal (use of hand implements such as chain saws and machetes, with subsequent herbicide applications, direct uprooting by hand), and directed herbicide applications. Regardless of the methods involved, care will be exercised to avoid damage to desirable native species to the greatest extent practicable. During the initial eradication process, larger quantities of felled materials will generally be removed from the mitigation site and disposed in a duly-licensed facility. Some felled woody plants may be chipped on-site; however chipping will be avoided unless deemed necessary to best preserve desirable vegetation and provide for re-growth of desirable plants. Where chipping is employed, chips will be segregated into a limited number of scattered piles rather than spreading the chips. Felled woody plants may also be gathered and stacked "teepee" style in scattered locations. In certain cases, larger invasive trees may be killed and allowed to remain standing if it is determined this would not interfere with mitigation goals. The Mitigation Work Plan must address the specific measures proposed to conduct initial eradication efforts and the recommended measures for the subsequent control of invasive and nuisance plant species.

The USACE will be responsible for the initial eradication of invasive and nuisance plants as well as for any subsequent eradication efforts necessary to achieve attainment of success criteria 1 year following the completion of the initial eradication activities. Thereafter, the Sponsor will be responsible for the successful control and eradication of invasive and nuisance plant species. The management objectives will be to maintain the mitigation site such that it is essentially free from invasive and nuisance plant species immediately following a given maintenance event and such that the total vegetative cover accounted for by invasive and nuisance species each constitute less than 5% of the total plant cover during periods between maintenance events.

Guidelines for Clearing, Grading, and Other Earthwork Activities

Enhancement or restoration activities in certain mitigation areas may include alterations to existing topography. This includes an array of potential actions such as lowering grades over relatively large areas,

breaching or removal of existing berms and spoil banks, filling of drainage canals and ditches, construction of containment berms, etc. The construction process could involve mechanized clearing and grubbing of the areas to be graded followed by the actual grading work.

Prior to the clearing, grubbing, grading, and related earthwork activities, the exact limits of zones requiring clearing and grading/earthwork will be determined in the field and will be marked with protective barriers such as flagging, ropes, stakes, silt fence, enviro-fence, or a combination of such items. These marker barriers will remain in place until grading activities are completed. Prior to initiation of the clearing and grading/earthwork activities, silt fences will also be installed at appropriate locations adjacent to existing wetlands to control erosion and sediment transport. These erosion/sediment control devices will remain in place until earthwork activities are completed and the disturbed areas are stabilized. Machinery/vehicle ingress and egress routes to the areas requiring earthwork will be restricted to avoid unnecessary damage to nearby upland and wetland areas.

Cleared vegetation will be removed from the mitigation site for disposal either within a duly licensed off-site disposal facility. Soil removed during the grading/earthwork process will either be disposed off-site in a licensed facility or used within the mitigation site as fill if the material is suitable and fill is needed. All other debris generated during the clearing and grading process will be disposed in a duly-licensed off-site facility.

If grading or other earthwork activities are necessary, the Mitigation Work Plan must include detailed plans depicting the required activities (ex. grading contours, cross-sections, stormwater pollution prevention plans, etc.). These plans will be developed by the USACE in coordination with the Interagency Team. The USACE will be responsible for the successful completion of all initial earthwork activities. The Sponsor will be responsible for any subsequent earthwork activities necessary for the proper maintenance of the mitigation site. However if the primary purpose of the initial grading/earthwork activities is to enhance site hydrology, then the USACE will be responsible for conducting any additional grading/earthwork activities necessary to ensure the hydrologic enhancement objectives (success criteria) are achieved. Once it is demonstrated that these objectives have been satisfied, the Sponsor will then be responsible for any further earthwork activities needed to ensure proper maintenance.

Guidelines for Surface Water Management Features and Structures

Enhancement or restoration efforts in some mitigation areas may include construction of surface water management systems and/or installation of water conveyance or water control structures (ex. drainage culverts, flap gates, weirs). If such actions are necessary the Mitigation Work Plan must include detailed plans for these activities as well as operational specifications if applicable. These plans and specifications will be developed by the USACE in coordination with the Interagency Team. The USACE will be responsible for the successful construction of any surface water management features, drainage structures, and water control structures. The Sponsor will be responsible for the subsequent maintenance and operation activities required.

Swamp Hydrology Guidelines

The optimal hydrologic regime for baldcypress/tupelogum (water tupelo) swamps involves both seasonal flooding and good surface water exchange between a particular swamp and adjacent systems. The typical hydroperiod should include several periods of flooding (inundation) and drawdown, or a "pulsing" hydrology. Surface water should be present for extended periods, especially during portions of the growing season, but should be absent (water table at or below the soil surface) by the end of the growing season in most years. At a minimum, standing surface water should be absent for approximately 2 months during the growing season once every 5 years. Abundant and consistent freshwater input from riverine systems is most desirable, as is relatively consistent surface water flow through the swamp during flooded periods. However, other sources of sheetflow into the swamp can be similarly beneficial. The main objective is to have good surface water exchange between the swamp and adjacent habitats. Situations involving permanent flooding and/or no surface water exchange should be avoided when possible.

The following provides some general hydrologic guidelines for mitigation projects involving swamp restoration and for those mitigation projects involving swamp enhancement where enhancement of the existing hydrologic regime is a component of the mitigation work program.

- Strive for a minimum of about 200 consecutive days but no more than roughly 300 consecutive days of inundation (flooding). This period of inundation should overlap a portion of the growing season (preferably the early portion or late portion).
- Strive for a minimum of roughly 40 to 60 consecutive days during the growing season where the water table is at or below the soil surface (i.e. non-inundated period). This non-inundated period should preferably occur during the middle portion of the growing season. The non-inundated period should not exceed approximately 90 to 120 days.
- Strive to achieve an average maximum (peak) water table elevation that ranges between approximately 1.0 feet to 2.0 feet above the soil surface (i.e. depth of average peak inundation is 1.0 to 2.0 feet). Water table elevations greater than 2 feet above the soil surface may occur, however such occurrences should be of relatively short duration (i.e. brief "spikes" in the depth of inundation).
- Locate the mitigation area such that it naturally receives freshwater inputs via surface flow from adjacent lands and such that, during periods of inundation, there is good sheet flow through the mitigation area including a means for surface water discharge from the mitigation area. If the mitigation area cannot be located to attain these goals naturally, then mitigation activities should include actions to achieve these goals to the greatest degree practicable (e.g. include measures to provide for good surface water exchange between the swamp and adjacent systems), while at the same time not jeopardizing hydrology objectives pertaining to the swamp's hydroperiod.

Wet Bottomland Hardwood Hydrology Guidelines

The optimal hydrologic regime for wet bottomland hardwood (BLH) forests also involves both brief seasonal flooding and good surface water exchange between the forest and adjacent systems. Wet BLH forests are commonly flooded for some portion of the year, although the timing, extent, depth, duration, and source of floodwaters can be highly variable. The hydroperiod commonly includes temporary flooding for brief periods during the growing season; however the water table is typically below the soil surface for the majority of the growing season. When flooding (inundation) does occur, freshwater input from riverine systems is most desirable as is relatively consistent surface water flow through the forest. Having good surface water exchange between the BLH forest and adjacent habitats is the primary objective, thus other sources of sheetflow into the forest besides riverine sources can be similarly beneficial.

The following provides some general hydrologic guidelines for mitigation projects involving BLH habitat restoration and for those mitigation projects involving BLH habitat enhancement where enhancement of the existing hydrologic regime is a component of the mitigation work program.

- Avoid extended periods of inundation, particularly during the early portion of the growing season. Brief periods of flooding typically should occur during the winter and early spring, but the water table should be greater than 1 foot below the soil surface for an extended period during the growing season.
- The hydroperiod should be such that the forest is irregularly inundated or soils are saturated to the soil surface for a period ranging from approximately 15 to 30 days during the growing season.
- Locate the mitigation area such that it naturally receives occasional freshwater inputs via surface flow from adjacent lands and such that, during periods of inundation, there is good sheet flow through the mitigation area including a means for surface water discharge from the mitigation area. If the mitigation area cannot be located to attain these goals naturally, then mitigation activities should include actions to achieve these goals to the greatest degree practicable (e.g. include measures to provide for good surface water exchange between the BLH forest and adjacent systems), while at the same time not jeopardizing hydrology objectives pertaining to the forest's hydroperiod.

WET BOTTOMLAND HARDWOOD HABITAT ENHANCEMENT – MITIGATION SUCCESS CRITERIA

General Construction

As applicable, complete all necessary initial earthwork and related construction activities by the end of Mitigation TY1 (2014). The necessary activities will vary with the mitigation site. Examples include, but are not limited to: clearing, grubbing, and grading activities; construction of new water management features (weirs, flap-gates, diversion ditches, etc.); modifications/alterations to existing water control structures and surface water management systems.

Native Vegetation

Complete initial planting of canopy and midstory species.

1 Year Following Completion of Initial Plantings (at end of first growing season following plantings) –

- Achieve a minimum average survival of 50% of planted canopy species (i.e. achieve a minimum average canopy species density of 266/ac.). The surviving plants must approximate the species composition and the species percentages specified in the initial plantings component of the Mitigation Work Plan (composition = 60% hard mast, 40% soft mass; percentages = see planting table). These criteria will apply to the initial plantings as well as any subsequent replantings necessary to achieve this initial success requirement.
- Achieve a minimum average survival of 85% of planted midstory species (i.e. achieve a minimum average midstory species density of 93/ac.). The surviving plants must approximate the species composition percentages specified in the initial plantings component of the Mitigation Work Plan. These criteria will apply to the initial plantings as well as any subsequent replantings necessary to achieve this initial success requirement.

4 Years Following Completion of Initial Plantings –

- Achieve a minimum average density of 300 living native canopy species per acre (planted trees and/or naturally recruited native canopy species).
- Achieve a minimum average density of 120 living, native, hard mast-producing species in the canopy stratum but no more than approximately 150 living hard-mast producing species in the canopy stratum (planted trees and/or naturally recruited native canopy species). The remaining trees in the canopy stratum must be comprised of soft-mass producing native species. These criteria will thereafter remain in effect for the duration of the overall monitoring period.
- Achieve a minimum average density of 85 living native midstory species per acre (planted midstory and/or naturally recruited native midstory species).
- Demonstrate that vegetation satisfies USACE hydrophytic vegetation criteria. This criterion will thereafter remain in effect for the duration of the overall monitoring period.

Within 10 Years Following Completion of Initial Plantings –

- Attain a minimum average cover of 80% by planted canopy species and/or naturally recruited native canopy species. This criterion will thereafter remain in effect for the duration of the overall monitoring period.

15 Years Following Completion of Initial Plantings –

- Achieve a minimum average density of 75 living native plants per acre in the midstory stratum (planted midstory and/or naturally recruited native midstory species).

25 Years Following Completion of Initial Plantings –

- Average cover by native species in the midstory stratum must be greater than 20% but cannot exceed 50%. This criterion will thereafter remain in effect for the duration of the overall monitoring period.
- Average cover by native species in the understory stratum must be greater than 30% but cannot exceed 60%. This criterion will thereafter remain in effect for the duration of the overall monitoring period.

Invasive and Nuisance Vegetation

Complete the initial eradication of invasive and nuisance plant species.

Maintain all areas such that they are essentially free from invasive and nuisance plant species immediately following a given maintenance event and such that the total vegetative cover accounted for by invasive and nuisance species each constitute less than 5% of the total plant cover during periods between maintenance events. These criteria must be satisfied throughout the duration of the overall monitoring period.

Thinning of Native Vegetation (Timber Management)

The USACE, in cooperation with the Interagency Team, may determine that thinning of the canopy and/or midstory strata is warranted to maintain or enhance the ecological value of the site. This determination will be made 15 years following completion of initial plantings. If it is decided that timber management efforts are necessary, the Sponsor will develop a Timber Stand Improvement/Timber Management Plan in coordination with the USACE and Interagency Team and, following approval of the plan, will perform the necessary thinning operations.

Hydrology

In a year having essentially normal rainfall, demonstrate that the water table is less than or equal to 12 inches below the soil surface for a period of at least 14 consecutive days.

If the mitigation program includes actions intended to enhance site hydrology or hydroperiod, demonstrate that the affected site is irregularly inundated or soils are saturated to the soil surface for a period ranging from 7% to approximately 13% of the growing season during a year having essentially normal rainfall. The Mitigation Work Plan for a specific site may establish more specific hydrologic enhancement goals. If this is the case, demonstrate attainment of the specific goals identified in the plan.

WET BOTTOMLAND HARDWOOD HABITAT ENHANCEMENT – MITIGATION MONITORING GUIDELINES

"Time Zero" Monitoring Report ---

Shortly after completion of all initial mitigation activities (e.g. initial eradication of invasive and nuisance plants, first/initial planting of native species, completion of initial earthwork, grading, surface water management system alterations/construction, etc.), the mitigation site will be monitored and a "time zero" or "baseline" monitoring report prepared. Information provided will include the following items:

A detailed discussion of all mitigation activities completed.

A description of the various features and habitats within the mitigation site.

A plan view drawing of the mitigation site showing the approximate boundaries of different mitigation features (ex. planted areas, areas only involving eradication of invasive and nuisance plant species; surface water management features, etc.), monitoring transect locations, sampling plot locations, photo station locations, and piezometer and staff gage locations.

An as-built survey of finished grades for any relatively large areas subject to topographic alterations and an as-built survey of any surface water drainage features, drainage culverts, and/or water control structures constructed. Detailed surveys of topographic alterations simply involving the removal of existing linear features such as berms/spoil banks, or involving the filling of existing linear ditches or canals, will not be required. However, the as-built survey will include spot cross-sections of such features sufficient to represent typical conditions. The as-built survey must include a survey of areas where existing berms, spoil banks, or levees have been breached in sporadic locations.

A detailed inventory of all canopy and midstory species planted, including the number of each species planted and the stock size planted. In addition, provide a breakdown itemization indicating the number of each species planted in a particular portion of the mitigation site and correlate this itemization to the various areas depicted on the plan view drawing of the mitigation site.

All monitoring reports generated after the initial "time zero" report will provide the following information unless otherwise noted:

A plan view drawing of the mitigation site showing the approximate boundaries of different mitigation features (ex. planted areas, areas only involving eradication of invasive and nuisance plant species; surface water management features, etc.), monitoring transect locations, sampling plot locations, photo station locations, and piezometer and staff gage locations.

A brief description of maintenance and/or management and/or mitigation work performed since the previous monitoring report along with a discussion of any other significant occurrences.

Photographs documenting conditions in the mitigation site at the time of monitoring. Photos will be taken at permanent photo stations within the mitigation site. At least two photos will be taken at each station with the view of each photo always oriented in the same general direction from one monitoring event to the next. The number of photo stations required as well as the locations of these stations will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Permanent photo stations will primarily be established in areas slated for planting of canopy and midstory species, but some may also be located in areas where plantings are not needed.

Quantitative plant data collected from permanent monitoring plots measuring approximately 90 feet X 90 feet in size or from circular plots having a radius of approximately 53 feet. Data recorded in each plot will include: number of living planted canopy species present and the species composition; number of living planted midstory species present and the species composition; average density of all native species in the canopy stratum, the total number of each species present, and the wetland indicator status of each species; average cover by native species in the canopy stratum; average density of all native species in the midstory stratum, the total number of each species present, and the wetland indicator status of each species; average cover by native species in the midstory stratum; average percent cover accounted for by invasive plant species (all vegetative strata combined); average percent cover accounted for by nuisance plant species (all vegetative strata combined). The permanent monitoring plots will be located within mitigation areas where initial planting of canopy and midstory species is necessary. The number of plots required as well as the locations of these plots will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Typically there will be at least one monitoring plot for every 20 acres planted.

Quantitative plant data collected from either: (1) permanent transects sampled using the point-centered quarter method with a minimum of 20 sampling points established along the course of each transect, or; (2) permanent belt transects approximately 50 feet wide. The number of transects necessary as well as the location and length of each transect will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Data recorded from the sampling transects will include: average density of living planted canopy species present and the species composition; average density of living planted midstory species present and the species composition; average density of all native species in the canopy stratum along with the species composition and the wetland indicator status of each species; average percent cover by all native species in the canopy stratum; average height of native species in the canopy stratum; average density of native species in the midstory stratum, the total number of each species present, and the wetland indicator status of each species; average percent cover by native species in the midstory stratum; average height of native species in the midstory stratum; if present, average percent cover accounted for by invasive and nuisance species present in the canopy and midstory strata (combined).

Quantitative data concerning plants in the understory (ground cover) stratum and concerning invasive and nuisance plant species will be gathered from sampling quadrats. These sampling quadrats will be

established either along the axis of the belt transects discussed above, or at sampling points established along point-centered quarter transects discussed above, depending on which sampling method is used. Each sampling quadrat will be approximately 2 meters X 2 meters in size. The total number of sampling quadrats needed along each sampling transect will be determined by the USACE with the Interagency Team and will specify be specified in the Mitigation Monitoring Plan. Data recorded from the sampling quadrats will include: average percent cover by native subcanopy species; composition of native subcanopy species and the wetland indicator status of each species; average percent cover by invasive plant species; average percent cover by nuisance plant species.

A summary of rainfall data collected during the year preceding the monitoring report based on rainfall data recorded at a station located on or in close proximity to the mitigation site. Once all hydrology success criteria have been achieved, collection and reporting of rainfall data will no longer be required.

A summary of water table elevation data collected from piezometers coupled with staff gages installed within the mitigation site. Data (water table elevations) will be collected at least bi-weekly. Once the monitoring indicates the water table may be rising to an elevation that would meet hydrologic success criteria, water table elevations will be collected on a daily basis until it is evident the success criteria has been satisfied. The schedule of water table elevation readings can shift back to a bi-weekly basis for the remainder of the monitoring period. The number of piezometers and staff gages required as well as the locations of these devices will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Once hydrology success criteria have been satisfied, water table monitoring will no longer be required. However, monitoring reports generated subsequent to the attainment of success criteria will include a general discussion of water levels and hydroperiod based on qualitative observations.

Various qualitative observations will be made in the mitigation site to help assess the status and success of mitigation and maintenance activities. These observations will include: general estimates of the average percent cover by native plant species in the canopy, midstory, and understory strata; general estimate of the average percent cover by invasive and nuisance plant species; general estimates concerning the growth of planted canopy and midstory species; general observations concerning the colonization by volunteer native plant species. General observations made during the course of monitoring will also address potential problem zones, general condition of native vegetation, trends in the composition of the plant communities, wildlife utilization as observed during monitoring, and other pertinent factors.

A summary assessment of all data and observations along with recommendations as to actions necessary to help meet mitigation and management/maintenance goals and mitigation success criteria.

Brief description of anticipated maintenance/management work to be conducted during the period from the current monitoring report to the next monitoring report.

Monitoring Reports Involving Timber Management Activities ---

In cases where timber management activities (thinning of trees and/or shrubs in the canopy and/or midstory strata) have been approved by the USACE in coordination with the Interagency Team, monitoring will be required in the year immediately preceding and in the year following completion of the timber management activities (i.e. pre-timber management and post-timber management reports). These reports must include data and information that are in addition to the typical monitoring requirements. The Sponsor's proposed Timber Stand Improvement/Timber Management Plan must include the proposed monitoring data and information that will be included in the pre-timber management and post-timber management monitoring reports. The proposed monitoring plan must be approved by the USACE in coordination with the Interagency Team prior to the monitoring events and implementation of the timber management activities.

Monitoring Reports Following Re-Planting Activities ---

Re-planting of certain areas within the mitigation site may be necessary to ensure attainment of applicable native vegetation success criteria. Any monitoring report submitted following completion of a re-planting event must include an inventory of the number of each species planted and the stock size used. It must also

include a depiction of the areas re-planted, cross-referenced to a listing of the species and number of each species planted in each area.

WET BOTTOMLAND HARDWOOD HABITAT ENHANCEMENT – MONITORING SCHEDULE AND RESPONSIBILITIES

Monitoring will typically take place during the spring of the year of monitoring, but may be delayed until later in the growing season due to site conditions or other unforeseen circumstances. Monitoring reports will be submitted by December 31 of each year of monitoring. Monitoring reports will be provided to the USACE and to agencies comprising the Interagency Team. Table 5 lists the years monitoring events are anticipated to be conducted and monitoring reports submitted in conjunction with these events. It also indicates the party responsible for conducting the monitoring and preparing the monitoring report for each year.

Table 5: Anticipated Mitigation Monitoring Schedule

Year of Monitoring		Monitoring Responsibility
Mitigation Target Year	Calendar Year	
0	2013	N/A (start of mitigation work)
2	2015	USACE (time zero monitoring)
3	2016	USACE
6	2019	Sponsor
9	2022	Sponsor
12	2025	Sponsor
17	2030	Sponsor
22	2035	Sponsor
27	2040	Sponsor
32	2045	Sponsor
37	2050	Sponsor
42	2055	Sponsor
47	2060	Sponsor
52	2065	Sponsor (final monitoring)

If the initial survival criteria for planted canopy and midstory species are not achieved (i.e. the 1-year survival criteria), a monitoring report will be required for each consecutive year until two annual sequential reports indicate that all survival criteria have been satisfied (i.e. that corrective actions were successful). The USACE will be responsible for conducting this additional monitoring and preparing the monitoring reports. Similarly, if the native vegetation success criteria specified for 4 years following completion initial plantings are not achieved, a monitoring report will be required for each consecutive year until two annual sequential reports indicate that these criteria have been satisfied. The Sponsor will be responsible for conducting this additional monitoring and preparing the monitoring reports.

The two scenarios above are not accounted for in Table 5. This table also does not account for additional monitoring events and reports associated with any timber management activities. If such activities are conducted, the Sponsor will be responsible for conducting the additional monitoring and preparing the associated monitoring reports (pre-timber management and post-timber management reports).

Once monitoring responsibilities have transferred to the Sponsor, the Sponsor will retain the ability to modify the monitoring plan and the monitoring schedule should this become necessary due to unforeseen events or to improve the information provided through monitoring. Twenty years following completion of initial plantings, the number of monitoring plots and/or monitoring transects that must be sampled during monitoring events may be reduced substantially (by as much as 50%) if it is clear that mitigation success is

proceeding as anticipated. Any significant modifications to the monitoring plan or the monitoring schedule must first be approved by the USACE in coordination with the Interagency Team.

SWAMP HABITAT ENHANCEMENT & RESTORATION – MITIGATION SUCCESS CRITERIA

The success criteria specified herein apply to both swamp restoration projects and swamp enhancement projects unless otherwise indicated.

General Construction

As applicable, complete all necessary initial earthwork and related construction activities by the end of Mitigation TY1 (2014). The necessary activities will vary with the mitigation site. Examples include, but are not limited to: clearing, grubbing, and grading activities; construction of new water management features (weirs, flap-gates, diversion ditches, etc.); modifications/alterations to existing water control structures and surface water management systems.

Native Vegetation

Complete initial planting of canopy and midstory species.

1 Year Following Completion of Initial Plantings (at end of first growing season following plantings) –

- Achieve a minimum average survival of 50% of planted canopy species (i.e. achieve a minimum average canopy species density of 266/ac.). The surviving plants must approximate the species composition and the species percentages specified in the initial plantings component of the Mitigation Work Plan. These criteria will apply to the initial plantings as well as any subsequent replantings necessary to achieve this initial success requirement.
- Achieve a minimum average survival of 85% of planted midstory species (i.e. achieve a minimum average midstory species density of 93/ac.). The surviving plants must approximate the species composition percentages specified in the initial plantings component of the Mitigation Work Plan. These criteria will apply to the initial plantings as well as any subsequent replantings necessary to achieve this initial success requirement.

4 Years Following Completion of Initial Plantings –

- Achieve a minimum average density of 250 living native canopy species per acre (planted trees and/or naturally recruited native canopy species).
- Achieve a minimum average density of 125 living baldcypress trees (planted trees and/or naturally recruited native canopy species). The species composition of the additional native canopy species present must be generally consistent with the planted ratios for such species. These criteria will thereafter remain in effect for the duration of the overall monitoring period.
- Achieve a minimum average density of 85 living native midstory species per acre (planted midstory and/or naturally recruited native midstory species).
- Demonstrate that vegetation satisfies USACE hydrophytic vegetation criteria. This criterion will thereafter remain in effect for the duration of the overall monitoring period.

Within 15 Years Following Completion of Initial Plantings –

- Achieve one of the two following vegetative cover requirements:

    1. The average percent cover by native species in the canopy stratum is at least 50%, and; the average percent cover by native species in the midstory stratum exceeds 33%, and; the average percent cover by native species in the ground cover stratum (herbaceous cover) exceeds 33%.
    2. The average percent cover by native species in the canopy stratum is at least 75%, and: (a) the average percent cover by native species in the midstory stratum exceeds 33%, or; (b) the average percent cover by native species in the ground cover stratum (herbaceous cover) exceeds 33%.

- Following attainment of one of the above criteria, the requirement to satisfy one of the two criteria specified above will thereafter remain in effect for the duration of the overall monitoring period.

Within 45 Years Following Completion of Initial Plantings –

- Demonstrate that the average diameter at breast height (DBH) of living baldcypress trees exceeds 16 inches. This criterion will thereafter remain in effect for the duration of the overall monitoring period.
- Demonstrate that the average DBH of the other living native trees in the canopy stratum (trees other than baldcypress) exceeds 12 inches. This criterion will thereafter remain in effect for the duration of the overall monitoring period.
- Demonstrate that the average total basal area accounted for by all living native trees in the canopy stratum combined exceeds approximately 161 square feet per acre. This criterion will thereafter remain in effect for the duration of the overall monitoring period.

Invasive and Nuisance Vegetation

Complete the initial eradication of invasive and nuisance plant species.

Maintain all areas such that they are essentially free from invasive and nuisance plant species immediately following a given maintenance event and such that the total vegetative cover accounted for by invasive and nuisance species each constitute less than 5% of the total plant cover during periods between maintenance events. These criteria must be satisfied throughout the duration of the overall monitoring period.

Thinning of Native Vegetation (Timber Management)

The USACE, in cooperation with the Interagency Team, may determine that thinning of the canopy and/or midstory strata is warranted to maintain or enhance the ecological value of the site. This determination will likely be made after it is demonstrated that the average total basal area accounted for by living native canopy species exceeds 170 square feet per acre. If it is decided that timber management efforts are necessary, the Sponsor will develop a Timber Stand Improvement/Timber Management Plan in coordination with the USACE and Interagency Team and, following approval of the plan, will perform the necessary thinning operations.

Hydrology

The following applies to mitigation areas involving swamp restoration and to those involving swamp enhancement where hydrologic enhancement is a component of the mitigation program.

In a year having essentially normal rainfall, demonstrate compliance with each of the following criteria:

- Achieve inundation of the majority of the mitigation area for a minimum of 200 consecutive days but for no more than approximately 300 consecutive days, preferably with periods of inundation overlapping a portion of the growing season.
- Achieve non-inundation of the majority of the mitigation (water table at or below the soil surface) for a minimum of approximately 60 consecutive days but for no more than approximately 90 consecutive days, preferably during the period from June through August.
- The average maximum (peak) water table elevation must range between approximately 1.0 feet to 2.0 feet above the soil surface.

Note that the specific mitigation work program generated for the mitigation area may include deviations from one or more of the above criteria to better reflect the desired wetland hydroperiod. Such deviations must be approved by the USACE in coordination with the Interagency Team, and would supersede the above criteria once approved.

The following applies to swamp enhancement mitigation areas where hydrologic enhancement is not a component of the mitigation program.

- In a year having essentially normal rainfall, demonstrate that the water table is less than or equal to 12 inches below the soil surface for a period of at least 14 consecutive days.

SWAMP HABITAT ENHANCEMENT & RESTORATION –
MITIGATION MONITORING GUIDELINES

"Time Zero" Monitoring Report ---

Shortly after completion of all initial mitigation activities (e.g. initial eradication of invasive and nuisance plants, first/initial planting of native species, completion of initial earthwork, grading, surface water management system alterations/construction, etc.), the mitigation site will be monitored and a "time zero" or "baseline" monitoring report prepared. Information provided will include the following items:

A detailed discussion of all mitigation activities completed.

A description of the various features and habitats within the mitigation site.

A plan view drawing of the mitigation site showing the approximate boundaries of different mitigation features (ex. planted areas, areas only involving eradication of invasive and nuisance plant species; surface water management features, etc.), monitoring transect locations, sampling plot locations, photo station locations, and piezometer and staff gage locations.

An as-built survey of finished grades for any relatively large areas subject to topographic alterations and an as-built survey of any surface water drainage features, drainage culverts, and/or water control structures constructed. Detailed surveys of topographic alterations simply involving the removal of existing linear features such as berms/spoil banks, or involving the filling of existing linear ditches or canals, will not be required. However, the as-built survey will include spot cross-sections of such features sufficient to represent typical conditions. The as-built survey must include a survey of areas where existing berms, spoil banks, or levees have been breached in sporadic locations.

A detailed inventory of all canopy and midstory species planted, including the number of each species planted and the stock size planted. In addition, provide a breakdown itemization indicating the number of each species planted in a particular portion of the mitigation site and correlate this itemization to the various areas depicted on the plan view drawing of the mitigation site.

All monitoring reports generated after the initial "time zero" report will provide the following information unless otherwise noted:

A plan view drawing of the mitigation site showing the approximate boundaries of different mitigation features (ex. planted areas, areas only involving eradication of invasive and nuisance plant species; surface water management features, etc.), monitoring transect locations, sampling plot locations, photo station locations, and piezometer and staff gage locations.

A brief description of maintenance and/or management and/or mitigation work performed since the previous monitoring report along with a discussion of any other significant occurrences.

Photographs documenting conditions in the mitigation site at the time of monitoring. Photos will be taken at permanent photo stations within the mitigation site. At least two photos will be taken at each station with the view of each photo always oriented in the same general direction from one monitoring event to the next. The number of photo stations required as well as the locations of these stations will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Permanent photo stations will primarily be established in areas slated for planting of canopy and midstory species. For mitigation involving swamp enhancement, some photo stations may also be located in areas where plantings are not needed.

Quantitative plant data collected from permanent monitoring plots measuring approximately 80 feet X 80 feet in size. Data recorded in each plot will include: number of living planted canopy species present and the

species composition; number of living planted midstory species present and the species composition; average density of all native species in the canopy stratum, the total number of each species present, and the wetland indicator status of each species; average percent cover by native species in the canopy stratum; average density of all native species in the midstory stratum, the total number of each species present, and the wetland indicator status of each species; average percent cover by native species in the midstory stratum; average percent cover accounted for by invasive plant species (all vegetative strata combined); average percent cover accounted for by nuisance plant species (all vegetative strata combined). In addition to these data, the following information will be recorded for native tree species in the canopy stratum: the average diameter at breast height (DBH; expressed in inches) of baldcypress trees; average DBH of all other native tree species excluding baldcypress; the average total basal area of living native trees (expressed in square feet per acre). The DBH of planted canopy species will not need to be documented until the average DBH of these trees reaches approximately 2 inches. Total basal area data will also not need to be documented until such time that the average total basal area is estimated to exceed approximately 100 square feet per acre. The permanent monitoring plots will typically be located within mitigation areas where initial planting of canopy and midstory species is necessary. The number of plots required as well as the locations of these plots will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan.

Quantitative data concerning plants in the understory (ground cover) stratum and concerning invasive and nuisance plant species will be gathered from permanent sampling quadrats nested within the permanent monitoring plots described above. There will be a total of 4 quadrats with each quadrat measuring approximately 2 meters X 2 meters in size. Data recorded from the sampling quadrats will include: average percent cover by native ground cover species; composition of native ground cover species and the wetland indicator status of each species; average percent cover by invasive plant species; average percent cover by nuisance plant species.

Quantitative plant data collected from either: (1) permanent transects sampled using the point-centered quarter method with a minimum of 20 sampling points established along the course of each transect, or; (2) permanent belt transects approximately 50 feet wide. The number of transects necessary as well as the location and length of each transect will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Data recorded from the sampling transects will include: average density of living planted canopy species present and the species composition; average density of living planted midstory species present and the species composition; average density of all native species in the canopy stratum along with the species composition and the wetland indicator status of each species; average percent cover by all native species in the canopy stratum; average density of native species in the midstory stratum, the total number of each species present, and the wetland indicator status of each species; average percent cover by native species in the midstory stratum; if present, average percent cover accounted for by invasive and nuisance species present in the canopy and midstory strata (combined). In addition to these data, the following information will be recorded for native tree species in the canopy stratum: the average diameter at breast height (DBH; expressed in inches) of baldcypress trees; average DBH of all other native tree species excluding baldcypress; the average total basal area of living native trees (expressed in square feet per acre). The DBH of planted canopy species will not need to be documented until the average DBH of these trees reaches approximately 2 inches. Total basal area data will also not need to be documented until such time that the average total basal area is estimated to exceed approximately 100 square feet per acre.

Quantitative data concerning plants in the understory (ground cover) stratum and concerning invasive and nuisance plant species will be gathered from sampling quadrats. These sampling quadrats will be established either along the axis of the belt transects discussed above, or at sampling points established along point-centered quarter transects discussed above, depending on which sampling method is used. Each sampling quadrat will be approximately 2 meters X 2 meters in size. The total number of sampling quadrats needed along each sampling transect will be determined by the USACE with the Interagency Team and will specify be specified in the Mitigation Monitoring Plan. Data recorded from the sampling quadrats will include: average percent cover by native ground cover species; composition of native ground cover species and the wetland indicator status of each species; average percent cover by invasive plant species; average percent cover by nuisance plant species.

A summary of rainfall data collected during the year preceding the monitoring report based on rainfall data recorded at a station located on or in close proximity to the mitigation site. Once all hydrology success criteria have been achieved, collection and reporting of rainfall data will no longer be required.

A summary of water table elevation data collected from piezometers coupled with staff gages installed within the mitigation site. The number of piezometers and staff gages required as well as the locations of these devices will vary depending on the mitigation site. The USACE will make this determination in coordination with the Interagency Team and will specify the requirements in the Mitigation Monitoring Plan. Data (water table elevations) will be collected at least bi-weekly throughout the year. For mitigation areas involving swamp enhancement where hydrologic enhancement is not a component of the mitigation program, it may also be necessary to collect water table elevations on a daily basis over the course of 3 to 4 weeks in order to demonstrate that the water table is less than or equal to 12 inches below the soil surface for a period of at least 14 consecutive days during the growing season. Once it is demonstrated that all applicable hydrology success criteria have been satisfied, water table monitoring will no longer be required. However, monitoring reports generated subsequent to the attainment of success criteria will include a general discussion of water levels and hydroperiod based on qualitative observations.

Various qualitative observations will be made in the mitigation site to help assess the status and success of mitigation and maintenance activities. These observations will include: general estimates of the average percent cover by native plant species in the canopy, midstory, and ground cover strata; general estimate of the average percent cover by invasive and nuisance plant species; general estimates concerning the growth of planted canopy and midstory species; general observations concerning the colonization by volunteer native plant species; general observations regarding the growth of non-planted native species in the canopy and midstory strata. General observations made during the course of monitoring will also address potential problem zones, general condition of native vegetation, trends in the composition of the plant communities, wildlife utilization as observed during monitoring, and other pertinent factors.

A summary assessment of all data and observations along with recommendations as to actions necessary to help meet mitigation and management/maintenance goals and mitigation success criteria.

Brief description of anticipated maintenance/management work to be conducted during the period from the current monitoring report to the next monitoring report.

Monitoring Reports Involving Timber Management Activities ---

In cases where timber management activities (thinning of trees and/or shrubs in the canopy and/or midstory strata) have been approved by the USACE in coordination with the Interagency Team, monitoring will be required in the year immediately preceding and in the year following completion of the timber management activities (i.e. pre-timber management and post-timber management reports). These reports must include data and information that are in addition to the typical monitoring requirements. The Sponsor's proposed Timber Stand Improvement/Timber Management Plan must include the proposed monitoring data and information that will be included in the pre-timber management and post-timber management monitoring reports. The proposed monitoring plan must be approved by the USACE in coordination with the Interagency Team prior to the monitoring events and implementation of the timber management activities.

Monitoring Reports Following Re-Planting Activities ---

Re-planting of certain areas within the mitigation site may be necessary to ensure attainment of applicable native vegetation success criteria. Any monitoring report submitted following completion of a re-planting event must include an inventory of the number of each species planted and the stock size used. It must also include a depiction of the areas re-planted, cross-referenced to a listing of the species and number of each species planted in each area.

SWAMP HABITAT ENHANCEMENT & SWAMP HABITAT RESTORATION – MONITORING SCHEDULE AND RESPONSIBILITIES

Monitoring will typically take place during the summer of the year of monitoring, but may be delayed until later in the growing season due to site conditions or other unforeseen circumstances. Monitoring reports will be submitted by December 31 of each year of monitoring. Monitoring reports will be provided to the USACE and to agencies comprising the Interagency Team. Table 6 lists the years monitoring events are anticipated to be conducted and monitoring reports submitted in conjunction with these events. It also indicates the party responsible for conducting the monitoring and preparing the monitoring report for each year.

Table 6: Anticipated Mitigation Monitoring Schedule

Year of Monitoring		Monitoring Responsibility
Mitigation Target Year	Calendar Year	
0	2013	N/A (start of mitigation work)
2	2015	USACE (time zero monitoring)
3	2016	USACE
6	2019	Sponsor
9	2022	Sponsor
12	2025	Sponsor
17	2030	Sponsor
22	2035	Sponsor
27	2040	Sponsor
32	2045	Sponsor
37	2050	Sponsor
42	2055	Sponsor
47	2060	Sponsor
52	2065	Sponsor (final monitoring)

If the initial survival criteria for planted canopy and midstory species are not achieved (i.e. the 1-year survival criteria), a monitoring report will be required for each consecutive year until two annual sequential reports indicate that all survival criteria have been satisfied (i.e. that corrective actions were successful). The USACE will be responsible for conducting this additional monitoring and preparing the monitoring reports. Similarly, if the native vegetation success criteria specified for 4 years following completion initial plantings are not achieved, a monitoring report will be required for each consecutive year until two annual sequential reports indicate that these criteria have been satisfied. The Sponsor will be responsible for conducting this additional monitoring and preparing the monitoring reports.

The two scenarios above are not accounted for in Table 6. This table also does not account for additional monitoring events and reports associated with any timber management activities. If such activities are conducted, the Sponsor will be responsible for conducting the additional monitoring and preparing the associated monitoring reports (pre-timber management and post-timber management reports).

Once monitoring responsibilities have transferred to the Sponsor, the Sponsor will retain the ability to modify the monitoring plan and the monitoring schedule should this become necessary due to unforeseen events or to improve the information provided through monitoring. Twenty years following completion of initial plantings, the number of monitoring plots and/or monitoring transects that must be sampled during monitoring events may be reduced substantially (by as much as 50%) if it is clear that mitigation success is proceeding as anticipated. However, any monitoring event used to document attainment of DBH and basal area success criteria for the canopy stratum must employ all applicable monitoring plots and transects called

for at the start of the mitigation monitoring program. Any significant modifications to the monitoring plan or the monitoring schedule must first be approved by the USACE in coordination with the Interagency Team.

DEFINITION OF TERMS

Certain terms used herein shall have the meaning discussed in the following section.

Invasive Plant Species
All plant species identified as invasive or as non-indigenous (exotic) in the following two sources:

> Louisiana Aquatic Invasive Species Task Force. 2005. State Management Plan for Aquatic Invasive Species in Louisiana, Appendix B. Invasive Species in Louisiana (plants). Center for Bioenvironmental Research, Tulane & Xavier Universities, New Orleans, LA.
> (Website - http://is.cbr.tulane.edu/docs_IS/LAISMP7.pdf)
>
> U.S. Gelogical Survey. 2011. NAS – Nonindigenous Aquatic Species, Louisiana.
> Website - http://nas.er.usgs.gov/queries/SpeciesList.aspx?group=Plants&state=LA&Sortby=2

In addition, invasive plant species include; Japanese climbing fern (*Lygodium japonicum*), tall fescue (*Festuca arundinacea*), chinaberry (*Miscanthus sinensis*), Brazil vervain (*Verbena litoralis* var. *brevibrateata*), and rescuegrass (*Bromus catharticus*).

Nuisance Plant Species
Nuisance plant species will include native species deemed detrimental due to their potential adverse competition with desirable native species. Examples of potential nuisance plant species include; dog-fennel (*Eupatorium* spp.), ragweed (*Ambrosia* spp.), cattail (*Typha* spp.), grapevine (*Vitis* spp.), wild balsam apple (*Momordica charantia*), climbing hempvine (*Mikania scandens, M. micrantha*), pepper vine (*Ampelopsis arborea*), common reed (*Phragmites australis*), catbrier (*Smilax* spp.), black willow (*Salix nigra*), and boxelder (*Acer negundo*). The determination of whether a particular plant species should be considered as a nuisance species and therefore eradicated or controlled will be determined by the USACE in coordination with the Interagency Team, based on conditions present within a particular mitigation area.

Native Plant Species
This category includes all plant species that are not classified as invasive plant species and are not considered to be nuisance plant species.

USACE Hydrophytic Vegetation Criteria
Reference to satisfaction of USACE hydrophytic vegetation criteria (i.e. plant community is dominated by hydrophytic vegetation) shall mean that sampling of the plant community demonstrates that one or more of the hydrophytic vegetation indicators set forth in the following reference is achieved:

> USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0); ERDC/EL TR-10-20. USACE Engineer Research and Development Center, Vicksburg, MS.

Wetland Indicator Status of Plant Species
The wetland indicator status of plants is a means of classifying the estimated probability of a species occurring in wetlands versus non-wetlands. Indicator categories include; obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and obligate upland (UPL). The wetland indicator status of a particular plant species shall be as it is set forth in the following reference, using the Region 2 listing contained therein:

> Reed, P. B., Jr. 1988. National List of Plant Species that Occur in Wetlands: 1988 National Summary. Biological Report 88(24). Washington, DC: U.S. Fish and Wildlife Service.
> (website - http://www.usace.army.mil/CECW/Documents/cecwo/reg/plants/list88.pdf)

However, if the USACE approves and adopts a new list in the future, then the currently approved list will apply.

Growing Season
As used herein, the growing season is considered to be the period from April through October of any given year.

Planting Season
This is generally considered to be the period from approximately December 15 through March 15, although some deviation from this typical range is allowed.

Point-Centered Quarter Method
A plot-less method of forest sampling. Use of this method will be in general compliance with the applicable methodology described in the following reference:

> Cottam, Grant and J. T. Curtis. The use of distance measures in phytosociological sampling. Ecology, 37(3):451-460.

Piezometer
Typically a small-diameter observation well employed as a means of measuring water elevations in the surficial aquifer (water table elevations). Piezometers used for monitoring purposes should be constructed in general accordance with the following reference, unless otherwise approved by the USACE:

> U. S. Army Corps of Engineers. 2005. Technical standard for water-table monitoring of potential wetland sites. ERDC TN-WRAP-05-02. Vicksburg, MS: U.S. Army Engineer Research and Development Center. (website - http://el.erdc.usace.army.mil/wrap/pdf/tnwrap05-2.pdf)

DRAFT STANDARDIZED ASSUMPTIONS FOR MARSH
Date: February 2, 2011

These following represents a cut and paste from the standards previously developed by the natural resource agencies, used in the mitigation bank agreements, and since slightly modified through adaptive management under the NOD's civil works program.

A. Performance Standards

In order for the proposed project to be considered acceptable for mitigating wetland impacts, the site vegetation, soils, and hydrology shall be restored such that the site meets wetland criteria as described in the Corps 1987 Wetlands Delineation Manual. Additionally, the following criteria are applicable:

1. INITIAL SUCCESS CRITERIA

Initial placement of dredged material is completed and at least 80 percent of site is within "as-built" or initial construction elevation. Resource agencies will review the sponsor's proposed initial construction elevation, but it will be the sponsor's responsibility to select the initial construction elevation based on the desired post-compaction, "functional marsh" elevation identified by the natural resource agencies.

2. YEAR THREE SUCCESS CRITERIA

a. After at least two full years following construction, no less than 90% of the marsh creation site is within the "functional marsh" elevation range to be determined by the natural resource agencies on a project-specific basis (e.g., +1.0 feet NAVD88 to + 1.5 feet NAVD88).
b. At least 80% of the dredge material disposal area should be vegetated.
c. Containment dikes breached and tidal creeks constructed and functioning as determined by the natural resource agencies.
d. At least 80% of the vegetative cover is species classified as Facultative (FAC) or wetter, as verified by monitoring reports and verified by the natural resource agencies if necessary.

3. YEAR FIVE SUCCESS CRITERIA

a. Five years after construction, at least 75% of the created marsh remains within the "functional marsh" target elevation range.
b. Demonstrated use of the created marsh area by estuarine-dependent marine fishery species (not just forage species) typical of that marsh type as shown by sampling on a quarterly basis during years four and five using cast nets and/or seines in open water within the project area.
c. Observed use of created marsh by wildlife species typically found in natural marsh habitats of similar salinity regime.

B. Reporting Protocols and Monitoring Plan

1. **AS-BUILT REPORTS**
The Corp / Local Sponsor will submit an As-Built Report to the LDWF, NMFS, EPA, and USFWS within one year following completion of each project specific work. The As-Built Report shall contain a survey providing the areal extent of the filled area and the settled grade of the dredged material and adjacent marsh areas. A licensed surveyor shall certify the survey.

2. **MONITORING PROVISIONS**
The Corps / Local agrees to perform all necessary work to monitor on a project specific basis. The monitoring program shall follow the guidelines established below:

a. **Visual Description:** Visual descriptions shall be provided with each monitoring report by one of the following means.
   i. Photographs of each vegetation plot and hydrology monitoring station [permanent markers shall be established to ensure that the same locations (and view directions) are monitored in each monitoring period]; or,
   ii. One color aerial photograph (8" x 10" or larger) depicting the entire site. An aerial photograph should be taken once the site has been constructed, stabilized and planted (preferably in the 3rd or 5th year following completion of initial work).

b. **Hydrology:**
   i. Tidal influence shall be discussed using indicators of high and low tides referenced to a known datum.
   ii. The condition of the constructed tidal channels and ponds noting general flow characteristics, noting excessive scouring and/or silting in of channels.

c. **Vegetation:**
   i. The Corps / Local Sponsor or designee shall establish survey plots along systematically spaced linear transects (e.g, approximately 20 transects for each marsh cell) at the time of construction, and shall conduct a survey of each tract at or near the end of the first growing season. Surveys shall be conducted in accordance with an accepted academic or industrial sampling methodology (e.g. Steyer et. al. 1995). The State of Louisiana shall establish one-hundredth-acre permanent continuous monitoring plots that account for at least 2 % of the total created marsh area. The species and percentage coverage by species within each plot shall be documented. The State of Louisiana will begin monitoring the continuous monitoring plots and submit monitoring reports to the LDWF, NMFS, EPA, and USFWS at required intervals.
   ii. The Corps / Local Sponsor shall provide a written report to the LDWF, NMFS, EPA, and USFWS that documenting the number and percentage of surviving installed plants. In addition to plant material survivorship, the report shall describe the developing vegetative communities developing within the marsh creation cells by determining:

2

- Dominant vegetation species;
- A coverage assessment;
- The number and species rated FAC or wetter (excluding FAC-) growing in wetlands (total and #/acre);
- The percentage of dominant species FAC or wetter (excluding FAC-); and
- An invasive/noxious species assessment.

i. The report shall describe the general condition of the vegetation, and discuss likely causes for any observed mortality.

d. **Site Elevation:** The Corps / Local Sponsor shall provide a topographic survey with elevations shot along the transect lines established for determining plant survivorship, vegetation cover, and species composition. Surveys should be included in monitoring reports for years 1, 3, 5, 10, and 20 for years 1, 3, 5, 10, 20, 30, 40, and 50..

a. **Timing:**
   i. Monitoring shall be conducted during the growing season following years 1, 3, 5, 10 and every 10 years thereafter for 50 years.
   ii. Monitoring for the first year or any year following construction shall take place between August and October;

3. **MONITORING REPORTS**
   a. Upon achievement of the initial success criteria, the Corps / Local Sponsor shall document the results of his monitoring in a report submitted to the LDWF, NMFS, EPA, the and USFWS. Additional reports will be submitted following years 3, 5, 10, 20, 30, 40 and 50.
   b. The reports shall contain a description of the conditions of the mitigation project relating those conditions to the success criteria and shall contain the following:
      i. An aerial photograph (only in report submitted after years one, three and five) taken during the growing season, depicting a completed tract of the mitigation project with the photo date and approximate scale noted.
      ii. Ground level photographs.
      iii. A detailed narrative summarizing the condition of the mitigation project and all regular maintenance activities.
      iv. A drawing based upon the site plan that depicts topography, sampling plots and permanent photo stations.
      v. Results of tidal monitoring, including mean high and low water elevations.
      vi. Results of vegetation survey including visual estimates of percentage (%) overall cover and % cover by each species, % exotic vegetation, total % "facultative" and total % "upland" species in each vegetation layer, survival rate of planted vegetation (if planted), an estimate of natural re-vegetation, and a qualitative estimate of plant vigor as measured by evidence of reproduction.
      vii. If Year 1 success criteria is obtained, but all performance criteria have not been met in the 3rd year, a monitoring report shall be required for each consecutive year until

two annual sequential reports indicate that all criteria have been successfully satisfied (i.e., that corrective actions were successful).

viii. Reports will be submitted by December 31 of each monitoring year.

ix. Monitoring reports shall be provided to the LDWF, NMFS, EPA, and USFWS and made available to other members of the natural resource agencies upon request.

C. Contingency and Remedial Actions and Responsibilities

In the event monitoring reveals that initial success criteria have not been met, the Corps / Local Sponsor shall take measures to achieve those criteria in accordance with the following plan:

1. **FILL MATERIAL ELEVATIONS AND AREA**
   a. Should the initial placement of dredged material not meet the 80% target construction elevation or areal coverage, the Corps / Local Sponsor shall either deposit additional dredged material or redistribute existing material as necessary to achieve the target percentage and areal coverage.
   b. At year 5, if less than 75% of the marsh creation area contains emergent vegetation (at least 50% of which have a FAC or wetter designation), then the State of Louisiana may be required, at the discretion of the natural resource agencies, to deposit and plant (according to their specifications) additional dredged material. Should the natural resource agencies decide that such measures are necessary, the location and extent of fill placement and vegetative plantings will be determined in consultation with, and with their approval.
   c. From years 6 through 20, if less than 50% of the marsh creation area contains emergent vegetation (at least 50% of which have a FAC or wetter designation), then the State of Louisiana may be required, at the discretion of the natural resource agencies, to deposit additional dredged material and plant these areas (according to their specifications) so that the extent of marsh coverage is at minimum 50% at year 20. Should the natural resource agencies decide that such measures are necessary, the location and extent of fill placement and vegetative plantings will be determined in consultation with, and with their approval.

2. **VEGETATIVE PLANTINGS**
   a. If vegetative plantings survival is less than 50 percent per acre as determined by sampling or by observing high mortality at any location within the planted tract, the Corps / Local Sponsor shall take appropriate actions, as recommended by the natural resource agencies, to address the causes of mortality and shall replace all dead plantings during the following planting season. Replanting and monitoring and reporting, shall occur as needed to achieve and document the required one-year survival rate. If the survival criterion is not met after a second unsuccessful attempt, the Corps / Local Sponsor will convene a meeting to decide if replanting should continue. Should the natural resource agencies determine that achieving the required survival rate would not be likely, the State of Louisiana shall be required to provide replacement mitigation for the increment of value that did not accrue within the unsuccessful tracts within one year

of this decision. In addition, the natural resource agencies will reassess the project specific created marsh to determine if a new management potential should be calculated incorporating the new conditions or whether the use of the specific site should be discontinued.

b. Year 5 monitoring shall verify vegetation composition and survivorship goals. The State of Louisiana shall implement remedial action, as deemed necessary by the natural resource agencies, to ensure attainment of Year 5 survivorship and composition criteria.

D. Long-term Maintenance and Protection

The Corps / Local Sponsor shall be responsible for protecting lands contained within the mitigation project area in perpetuity, unless bank lands are transferred or sold to a state or federal resource agency or non-profit conservation organization. The conservation servitude shall incorporate this mitigation monitoring plan by reference and bind the Sponsor, its heirs, assigns, and future owners to complying with the terms of this copy of the mitigation monitoring plan. A copy of the conservation servitude to be filed in the real estate records of the Mortgage and Conveyance Office for the parish in which the site is located and shall be provided to the Corps for review and approval prior to filing. After filing, a copy of the recorded conservation servitude, clearly showing the book, page and date of filing, will be provided to the LDWF, NMFS, EPA, and USFWS.

Appendix G

FWS COMMENTS "GUIDELINES – WET BLH HABITAT ENHANCEMENT, SWAMP HABITAT RESTORATION, AND SWAMP HABITAT ENHANCEMENT"

Page 1, Planting Guidelines for Wet BLH Habitat Enhancement – We recommend using standards established by the Natural Resources Conservation Service for seedling selection (e.g., 3/8"-diameter root collar, 12" – 18" stem height plus 8" – 10" root length, and 4 - 8 lateral roots). Those standards (NRCS, Code 612, "Establishment Specifications - Tree/Shrub Establishment") were provided in an attachment to a June 9, 2011, electronic mail message from our office, and can be supplied again, if necessary. The fourth sentence of this paragraph states that planting could be delayed until late spring or early summer. The Service strongly recommends against the planting of bare-root seedlings beyond the standard March 15 deadline. Based on our experience, we would anticipate very high mortality rates for bare-root seedlings that are not dormant when planted.

Page 1, second and third paragraphs - As written a minimum of 3 hard mast and 3 soft mast tree species is required. The Service believes this number is too low to achieve a diverse forest and could result in low survival rates; therefore the Service recommends that this number be increased to 4 hard mast and 5 soft mast species.

Page 2, Table 1A - Table 1A's percent composition for water oak should be no greater than 5% because of poor survival of this species. White ash should be replaced with pumpkin ash.

Page 2, Table 2 - Saltbush, roughleaf dogwood, honey locust, and dwarf palmetto should be removed from this table based on factors such as site suitability, likelihood of natural regeneration, value to wildlife, and commercial availability of seedlings.

Page 3, last paragraph - The Service note's that replanting beyond achievement of the initial success criteria (i.e., 1 year post planting) would be undertaken by the local sponsor. This appears to transfer the Operations Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) to the local sponsor upon attainment of the initial success criteria. The Service recommends that the Corps maintain full responsibility for any mitigation project for a minimum of 4-years post planting. That would allow the 4-year success criteria to be evaluated, prior to turning operation and maintenance responsibilities over to the local sponsor. Based on our experience, it is difficult to reasonably forecast the likely future success of the mitigation project based solely on mitigation activities accomplished during year one. The second monitoring event, performed 4 years after the initial mitigation activities, would provide significantly more insight into the continued development, success, and effectiveness of the implemented features. Because mitigation is a project feature, we believe that waiting for the 4 year monitoring event is analogous to waiting for the completion of a levee lift to start OMRR&R; prior to that, the determination of success or completeness of a project (or project feature) would be lacking.

Page 4, Tables 3 and 4 - Increase the maximum percentage of bald cypress to 70 or 75% and reduce the Drummond red maple percentage to no more than 5%. Bitter pecan should be replaced with water hickory. In Table 4 delete roughleaf dogwood, swamp privet, and swamp rose.

Page 4, Guidelines for the Eradication and Control of Invasive and Nuisance Plant Species - The following information presents a more detailed description of eradication and control methods recommended by the Service. If a site is forested with mature Chinese tallow trees, we recommend that the site be mechanically cleared prior to the application of any chemical. Chemically treating a mature may prove largely unsuccessful due to the relatively uneven canopy structure, which would result in an uneven application, leaving many mid-story and understory stems completely untreated. Mechanical clearing of the site 1 month after chemical treatment, as proposed, would not allow sufficient time for chemicals to be fully transported to the roots (significantly increasing the likelihood of root-sprouting). The proposed timeline for applying ground herbicide following mechanical clearing may also be ineffective because most of the future resprouting would take longer than 1 week to occur.

In order to increase the success of the proposed Chinese tallow-tree eradication, the Service recommends the following sequence of actions (they are listed in chronological order):

1) Mechanically clear the site with a hydro-axe or similar equipment. We support either tree disposal or mulching techniques as previously proposed.

2) Allow a minimum of 2 months (during the growing season) for root resprouting to occur.

3) Use a tractor with boom-sprayer to apply chemicals to the Chinese tallow-tree resprouts. With this method, more cost-effective alternatives to Clearcast® may be used (if a foliar-application chemical is used, then it would not be necessary to use a discriminant/selective chemical such as Clearcast®). Chemical treatment should occur in the late summer or fall, when plant resources are being transported to the roots; this increases the likelihood of a complete "root-kill." The acceptable chemical treatment period is June 1 through October 15, with the optimum period occurring September 1 through October 15. To ensure effectiveness, the treatment must occur before the leaves begin to change color for the autumn season.

4) Allow adequate time for seed germination/sprouting to occur (i.e., a second growing season). Most seeds that did not germinate during the first year of site preparation, should germinate during the second growing season. Chemically treat the site as described in "3" above.

5) Plant bare-root seedlings during the following dormant season (December 15 – March 15). This would allow a minimum of 2 months between the second chemical treatment and the planting of seedlings.

Page 6, third bullet – While allowing water depths of 1 to 2 feet to occur over the swamp such depths could adversely impact seedling survival during the first several years following planting. Therefore, the Service recommends that such water depths be only allowed after almost all seedlings are taller than the expected depth of flooding.

Appendix H

Draft Project Description Sheets

WBV Mitigation PIER 37
Project Descriptions

The following aspects are common to all mitigation features

- It is anticipated that several plants installed at the time of the initial planting would not survive for a year; thus, it was estimated that about 20 percent of the total number of plants initially installed in each feature would need to be re-planted one year after completion of the initial plantings. Additional activities that would occur during the project construction phase would include periodic eradication of invasive/nuisance plant species within the mitigation feature as well as mitigation monitoring and reporting conducted in accordance with the applicable guidelines (i.e. monitoring and reporting necessary prior to transfer of the project to the NFS).
- Various activities would be necessary during the OMRR&R phase of the project. At a minimum, these would include periodic eradication of invasive/nuisance plants in the mitigation feature and mitigation monitoring and reporting. Additional activities may need to be performed to ensure compliance with applicable mitigation success criteria.

The following aspects are common to all mitigation features constructed within open water unless otherwise stated within the feature specific descriptions

- Earthen retention dikes would be mechanically constructed along the perimeter of the proposed mitigation feature.
- The retention dike borrow would be obtained from within the mitigation project footprint.
- A freeboard of one foot is required on all retention dikes.
- Adjustable spill boxes would be placed in the retention dikes to drain excess water from the mitigation site during the hydraulic fill operation.
- Borrow for the mitigation feature would be obtained using a hydraulic cutter-head dredge.
- The fill material would be piped from the borrow site to the mitigation feature in slurry.
- The pipeline corridor would be 100-feet wide except when crossing land and roadways where it would be reduced as necessary.
- Floating pipeline would be marked on 150-foot centers to prevent navigation hazards. Markers would include lighted and reflective buoys.
- Lake borrow sites would be situated a minimum 2,000 feet from the lake shoreline.
- Marsh tracked vehicles would move the discharge pipeline within the restoration sites when pumping, and maintain the retention dikes as needed for the duration of the dredge fill operation.

- Existing lake bottom elevations vary (Lakes Salvador and Cataouatche); however, in designing the project, an existing average lake bottom elevation within the footprint of the borrow site of -8.0 feet was assumed.
- Once the dredge and fill operation required to establish the land platforms for the restoration features is complete, an idle period of approximately one year would allow hydraulically placed fill time to settle and dewater to the desired final target elevation.
- At the end of the idle period the perimeter dikes would be degraded to equal the final target elevation.
- After degrading the retention dikes, each mitigation feature (except marsh) would be planted in accordance with the applicable planting guidelines.
- Mitigation activities in restoration features slated for fresh marsh restoration would not include planting native vegetation. It is anticipated that native herbaceous marsh plants would rapidly colonize the area.

MITIGATION FOR IMPACTS TO NON-PARK/404c PROTECTED SIDE BLH-DRY & BLH-WET

General Mitigation Bank Project

Bayou Segnette BLH-Dry & BLH-Wet Enhancement Project

This project would involve enhancing an existing degraded bottomland hardwood habitat as mitigation for BLH-Wet and BLH-Dry protected side general impacts. The project would be located adjacent to the Bayou Segnette State Park, on the protected side of the HPL in Jefferson Parish. The proposed site is bounded to the south by the existing Westbank Hurricane Protection Levee (HPL) and to the north by Nicolle Boulevard and the NOLA Motorsports Park. The proposed BLH restoration features are identified as BS2 (approximately 1,141.2 acres), BS3A (approximately 37.6 acres), BS4 (approximately 63.4 acres), and BS6 (approximately 21.6 acres), and would encompass approximately 1,263.8 acres combined.

The enhancement activities involved in the proposed project would include the eradication of invasive and nuisance plant species and subsequent planting of native BLH canopy and midstory species in all the enhancement features. Enhancement of feature BLS3A would include restoring wetland hydrology by the construction of the nearby Pre-Katrina project.

A preliminary estimate of the potential borrow that might be needed is 10,000 cubic yards. It is emphasized, however, that this is a preliminary estimate. It is possible that that some of the borrow (fill) needed could be obtained by degrading existing spoil berms located within the proposed mitigation features.

Following completion of the preceding activities, the three BLH-Dry features would be planted. It is estimated that this phase would require approximately two to three years to complete.

Dufrene Ponds BLH-Wet Restoration Project (for Protected Side Impacts)

This project would involve restoring BLH-Wet habitat as mitigation for BLH-Dry and BLH-Wet protected side general impacts. The sites established for restoration would be located along the right descending bank (RDB) of Bayou des Allemands and immediately south of US Highway 90 in Lafourche Parish. The sites established for restoration are currently open water sites. The two proposed BLH-Wet restoration features are identified in plan view as DP1A (approximately 251.1 acres) and DP4A (approximately 321.5 acres), and would encompass approximately 572.6 acres combined.

The length of the retention dikes would be approximately 36,000 linear feet. Total dike volume would be 1,200,000 cubic yards.

The two restoration features would be filled to an initial target elevation of +3.0 feet. The total fill quantity required for the BLH-Wet land platforms would be approximately 7,400,000 cubic yards.

Borrow for earthen fill for the restoration features would be obtained from a 927-acre borrow site in Lake Salvador. The borrow site would be dredged to an elevation of -20 feet or shallower.

The borrow pipeline would be roughly 84,000 feet long. The corridor would be placed near the banks of Bayou des Allemands in an effort to minimally impact navigation in the bayou. The estimated construction duration for constructing the retention system and dredge filling the restoration features would be 29 to 32 months.

Target elevation of this feature would be +2.0 feet. The plantings would be in accordance with the BLH-Wet planting guidelines. The duration for the subsequent construction project for degrading the retention dikes and planting the features would be 6 to 9 months.

Lake Boeuf BLH-Dry & BLH-Wet Restoration Project (for Protected Side Impacts)

This project would involve restoring BLH-Dry forests and BLH-Wet forests within existing agricultural fields. Three BLH-Dry restoration features are proposed; BDP1 (approximately 96.0 acres), BDP2 (approximately 270.3 acres), and BDP3 (approximately 207.3 acres). One BLH-Wet restoration feature is proposed, which is identified as feature BWP1 (approximately 18.1 acres). These proposed restoration features would encompass a total of approximately 591.6 acres, and would be located in Lafourche Parish, just north of Bayou Lafourche and roughly 2 miles west of Raceland. Another component of the project would involve the establishment of "mitigation roadways" .

Activities necessary prior to planting the BLH-Dry features would include: clearing and grubbing; grading and tilling necessary to level the surface and prepare the area for planting. If necessary, limited application of herbicides to eradicate invasive and nuisance plant species. Since BLH-Wet forests require a wetland hydrologic regime, it is estimated that approximately 100 percent of the area within feature BWP1 would need to be degraded (excavated) to reach the desired target grade elevation.

The proposed project would require three "mitigation roadways". The 3 mitigation roadways involved would total approximately 2.7 miles and would encompass a total of roughly 9.7 acres based on an assumed right-of-way width of 30 feet. All of the proposed mitigation roadways would coincide with existing roadways; however various improvements to these roads would likely be required.

The restoration features would be planted in accordance with the BLH-Dry and BLH-Wet planting guidelines.

Construction work would be allowed to occur 6 days per week (Monday through Saturday) during daylight hours. An appropriate traffic control plan would be implemented during construction to help minimize traffic congestion on Highway 308 near the project mitigation roadways and to help minimize traffic safety hazards. It is estimated that the initial project construction phase would last approximately 9 to 12 months.

Plaquemines Option 2 BLH-Wet Restoration Project (for Protected Side Impacts)

This project would involve restoring BLH-Wet habitat in an existing open water area and would consist of a single mitigation feature, P3D, which would occupy approximately 417.5 acres. The project would be located in Plaquemines Parish near Jesuit Bend. The proposed restoration feature would be created by placing fill to establish a land platform and then planting the feature with native BLH-Wet species.

The retention dike would be approximately 20,000 linear feet in length. The remaining borrow needed would be obtained from the Mississippi River near Jesuit Bend. Two borrow sites, each occupying approximately 115 acres, would be used. The borrow quantity that would be needed to construct the proposed BLH-Wet feature is approximately 4,600,000 cubic yards. Each borrow site would be excavated to elevation -85.0 feet. The pipeline segment extending from the borrow site to the right descending bank of the river would be submerged along the river bottom and coordinated with the US Coast Guard so as to not adversely impact river navigation.

The remainder of the pipeline from the river bank to the mitigation feature would primarily be above ground. This pipeline segment would be routed beneath Highways 11 and 23 and beneath an existing railroad. Thirty-six inch diameter culverts would be jack-and-bored at each of these crossings and the pipeline routed through the culverts. The estimated construction duration for constructing the retention system and dredge filling the site is approximately 12 to 14 months.

This project has a target grade of elevation +2.0 to +2.5 feet. Plantings would be in accordance with the swamp planting guidelines. The duration for the construction phase that involves degrading the retention dike and installing plants would be approximately 3 to 4 months

MITIGATION FOR IMPACTS TO NON-PARK/404c FLOOD SIDE BLH-WET

Dufrene Ponds BLH-Wet Restoration Project (for Flood Side Impacts)

This project would involve restoring wet bottomland hardwood habitat as mitigation for BLH-Wet flood side general impacts. The project would be located along the right descending bank (RDB) of Bayou des Allemands and immediately south of US Highway 90 in Lafourche Parish. The proposed BLH-Wet restoration feature is identified in the plan as DP1B and would encompass approximately 276.2 acres. The site established for restoration is currently an open water site.

The retention dikes would be built to a length of approximately 14,600 linear feet using barge mounted equipment. The total dike volume would be roughly 462,000 cy.

The assumed average existing elevation of the DP1B footprint is -4.0 feet. The total fill quantity required to establish the BLH-Wet platform would be approximately 4,100,000 cubic yards.

Borrow for earthen fill of the restoration feature would be obtained from Lake Salvador from a site occupying approximately 415 acres. The borrow site would be excavated (dredged) to an elevation of -20.0 feet, or shallower.

The borrow pipeline would be roughly 82,000 long. Floating pipeline would be primarily be used where the pipeline would need to cross the bayou, a small segment of submerged pipeline would be installed and appropriate signage would be installed to ensure safe passage of vessels over the line. The estimated construction duration for constructing the retention system and dredge filling the site is 14 to 17 months.

The desired final target elevation for this feature is +2.0 feet. Plantings would be in accordance with the BLH-Wet planting guidelines. The duration for the subsequent construction project for degrading the retention dikes and planting feature DP1B would be approximately 3 to 5 months.

Lake Boeuf BLH-Wet Restoration Project (for Flood Side Impacts)

This project would involve restoring BLH-Wet forests within existing agricultural fields. The project would be located in Lafourche Parish, just north of Bayou Lafourche and roughly 2 miles west of Raceland. Five BLH-Wet restoration features are proposed. These proposed restoration features would encompass a total of 221.9 acres. Another component of the project would involve the establishment of "mitigation roadways".

The desired target grade elevation for the proposed BLH-Wet features was set to be in the range of +2.0 feet to +2.5 feet, with a preference for elevations closer to +2.0 feet. Based on a review of the existing LiDAR data, it was determined that the majority of the proposed restoration features would need to be degraded to obtain the desired target grade elevation.

It is estimated that a total of approximately 519,000 cubic yards of soil would need to be excavated (degraded) to establish the desired grades within the restoration features. The final plan for use and disposal of the excavated soil would be determined during the PED phase of the project, as would be the final degrading elevations and contours.

The proposed project would require five "mitigation roadways". The five mitigation roadways involved would total approximately 6.1 miles and would encompass a total of roughly 22.2 acres based on an assumed right-of-way width of 30 feet.

The restoration features would be planted in accordance with the BLH-Wet planting guidelines to restore a BLH-Wet forest.

Construction work would be allowed to occur 6 days per week (Monday through Saturday) during daylight hours. Construction access to the features would be via the 5 mitigation roadways and Highway 308. An appropriate traffic control plan would be implemented during construction to help minimize traffic congestion on Highway 308 near the project mitigation roadways and to help minimize traffic safety hazards. It is estimated that the initial project construction phase would last approximately 10 to 15 months.

Plaquemines Option 2 BLH-Wet Restoration Project (for Flood Side Impacts)

This proposed project would involve restoring BLH-Wet habitat in an existing open water area and would consist of a single mitigation (restoration) feature, P3C, which would occupy approximately 206.2 acres. The project would be located off the right descending bank (RDB) of the Mississippi River at River Mile 68, in Plaquemines Parish, near Jesuit Bend. The proposed restoration feature would be created by placing fill to establish a land platform and then planting the feature with native BLH-Wet species.

The retention dike would be approximately 11,000 linear feet in length.

The borrow needed for the mitigation platform would be obtained from the Mississippi River near Jesuit Bend. Two borrow sites, each occupying approximately 115 acres, would be used. The borrow quantity that would be needed to construct the proposed BLH-Wet feature is approximately 2,300,000 cubic yards. Each borrow site would be excavated to elevation -70.0 feet.

The pipeline segment extending from the borrow site to the right descending bank of the river would be submerged along the river bottom and coordinated with the US Coast Guard so as to not adversely impact river navigation. The remainder of the pipeline from the river bank to the mitigation feature would primarily be above ground. This pipeline segment would be routed beneath Highways 11 and 23 and beneath an existing railroad. Thirty-six inch diameter culverts would be jack-and-bored at each of these crossings and the pipeline routed through the culverts.

The fill would be placed to an initial slurry elevation of +4.0 feet expected to settle to a final target grade of approximately +2.0 to +2.5 feet. The estimated construction duration for constructing the retention system and dredge filling the site is 9 to 10 months. Plantings would be in accordance with the BLH-Wet planting guidelines. The duration for the subsequent construction phase for degrading the retention dike and initial planting would require approximately 3 to 4 months.

MITIGATION FOR IMPACTS TO NON-PARK/404c SWAMP

Lake Boeuf Swamp Restoration Project

This project would involve restoring agricultural fields, pastures, rangelands, and agricultural ponds (detention areas) to native swamp habitats. Ten swamp restoration features are proposed; S1 (approximately 13.1 acres), S2 (approximately 26.3 acres), S3 (approximately 19.5 acres), S4 (approximately 33.5 acres), S5 (approximately 60.5 acres), S6 (approximately 5.4 acres), S7 (approximately 7.1 acres), S8 (approximately 47.1 acres), S9 (approximately 35.5 acres), and S10 (approximately 71.8 acres). These proposed restoration features would encompass a total of approximately 319.9 acres, and would be located

in Lafourche Parish, just north of Bayou Lafourche and roughly 2 miles west of Raceland. Another component of the project would involve the establishment of "mitigation roadways".

Target grade elevation ranging from +1.1 feet to a maximum of +1.8 feet was established for the design of the restoration features. It was determined that the majority of the proposed restoration features would need to be degraded to obtain the desired target grade elevation. In addition to the degrading work, other construction activities necessary prior to planting the restoration features would likely include: clearing and grubbing; grading and tilling necessary to level the surface and prepare the area for planting and if necessary, limited application of herbicides to eradicate invasive and nuisance plant species. Hydrologic improvements may be required to achieve an optimal hydroperiod within the features and improve surface water flow and interchange. The need for such improvements would also be examined further during the project's PED phase.

The proposed project would require a network of "mitigation roadways". The mitigation roadways involved would total approximately 6.7 miles and would encompass a total of roughly 24.3 acres based on an assumed right-of-way width of 30 feet.

After all the initial clearing/grubbing, grading, and related earthwork activities are completed within the mitigation features themselves, each feature would be planted planted in accordance with the swamp planting guidelines.

Construction work would be allowed to occur 6 days per week (Monday through Saturday) during daylight hours. An appropriate traffic control plan would be implanted during construction to help minimize traffic congestion on Highway 308 near the project mitigation roadways and to help minimize traffic safety hazards. It is estimated that the initial project construction phase would last approximately 9 to 14 months.

Plaquemines Option 1 Swamp Restoration Project

The proposed project would be located off the right descending bank (RDB) of the Mississippi River at River Mile 68, in Plaquemines Parish near Jesuit Bend. The project would involve restoring swamp habitat in an existing open water area to mitigate for general impacts to swamp habitats. A single restoration feature, feature P1, occupying approximately 310.8 acres would be created by placing fill to establish a land platform and then planting the feature with native swamp species.

The retention dike would be approximately 18,500 linear feet in length.

The borrow needed to fill feature P1 would be obtained from the Mississippi River near Jesuit Bend. There would be two borrow sites with each site occupying approximately 115 acres. The borrow quantity that would be needed to construct the proposed swamp feature is approximately 3,100,000 cubic yards. Each borrow site would be excavated to elevation -75.0 feet using a hydraulic cutter-head dredge. The borrow pipeline segment extending from the borrow site to the right descending bank of the river would be submerged along the river bottom and coordinated with the US Coast Guard so as to not adversely impact river navigation.

Once the fill material has settled to the desired final target grade and the retention dikes are degraded, the mitigation feature would be planted in accordance with the swamp planting guidelines. The duration for the

subsequent construction phase for degrading the retention dike and initial planting is approximately 3 to 4 months.

Salvador-Timken Swamp Restoration Project

This project would involve restoring swamp habitat as mitigation for swamp flood side general impacts. The site established for restoration would be located along the western shore of Lake Cataouatche and south of the Louisiana Cypress Lumber Canal in Saint Charles Parish. The project would be located in an existing open water portion of the Salvador-Timken Wildlife Management Area (WMA). The proposed swamp restoration feature is identified in the plan as ST1 and would encompass approximately 314.8 acres.

The length of the retention dike would be 18,500 linear feet. The total dike volume would be roughly 329,000 cubic yards.

Feature ST1 would be filled to an initial target elevation (slurry elevation) of +3.0 feet with a final target elevation of +2.0 feet. The total fill quantity required to create the swamp platform would be approximately 3,100,000 cubic yards.

Borrow for earthen fill for the restoration site would be obtained from an approximately 365-acre borrow site situated in Lake Cataouatche. The borrow site would be dredged to elevation -20 feet or shallower.

The borrow pipeline would be about 9,300 long (see Figure ?)and would be a floating pipeline. The estimated construction duration for constructing the retention system and dredge filling the site is 11 to 14 months.

Plantings would be in accordance with the swamp planting guidelines. The duration for the construction phase that includes degrading the retention dikes and the initial planting of feature ST1 is 6 to 9 months.

Simoneaux Ponds Swamp Restoration Project

This project would involve restoring swamp habitat as mitigation for swamp flood side general impacts. The proposed swamp restoration feature is identified as feature SP3 and would occupy approximately 314.8 acres. The site established for restoration is an open water area located along the northern shore of Bayou Gauche, a small outlet of Bayou des Allemands at Black Prince Island in St. Charles Parish.

Retention dikes would be built to a length of 19,900 linear feet. Total dike volume would be 431,200 cubic yards.

The swamp restoration feature would be filled to an initial target elevation of +3.0 feet. The total fill quantity required to establish the marsh platform would be approximately 3,733,200 cubic yards.

The borrow site would be located in Lake Salvador. This site would be dredged (excavated) to an elevation of -20.0 feet or shallower. This borrow site would occupy approximately 442 acres to yield the 7,466,400 cubic yards of borrow required.

The total length of the borrow pipeline would be approximately 57,000 feet. The corridor would be placed near the banks of Bayou des Allemands in an effort to minimally impact boat navigation in the bayou. A necessary land crossing would be approximately 1,600 linear feet long and the pipeline corridor here would be reduced to a 50-foot width. The land crossing includes a jack-andbore beneath Bayou Gauche Road. A permanent culvert would be installed beneath the highway and the slurry pipeline would be routed through this culvert.

The estimated construction duration for constructing the retention system and dredge filling the site is 11 to 14 months. Plantings would be in accordance with the swamp planting guidelines. The duration for the subsequent construction project for degrading the retention dike and planting the feature would be from 6 to 9 months.

MITIGATION FOR IMPACTS TO NON-PARK/404c FRESH MARSH

Dufrene Ponds Fresh Marsh Restoration Project

The proposed project would involve restoration of fresh marsh habitats as mitigation for fresh marsh general impacts. The sites established for restoration would be located along the right descending bank (RDB) of Bayou des Allemands and immediately south of US Highway 90 in Lafourche Parish. The proposed marsh restoration features are identified as DP3 (approximately 94.7 acres) and DP5 (approximately 43.9 acres) and together would total approximately 138.6 acres. The features are currently open water sites.

Retention dikes would be built to a combined length of 15,900 linear feet. Total dike volume would be 413,000 cubic yards.

The two restoration features would be filled to an initial target elevation of +2.5 feet. The total fill quantity required would be approximately 1,678,000 cubic yards.

Borrow for earthen fill for the restoration features would be obtained from a 220-acre borrow site in Lake Salvador. The total volume of borrow needed would be approximately 4,182,000 cubic yards. The borrow site would be dredged to an elevation of -20 feet or shallower.

The borrow pipeline would be roughly 78,000 feet long. The floating pipeline corridor would be placed near the banks of Bayou des Allemands in an effort to minimally impact navigation in the bayou.

The estimated construction duration for constructing the retention system and dredge filling the restoration features would be 9 to 12 months.

Feature DP3 would be located adjacent to an existing spoil berm running along the eastern side of DP3. Gaps would be excavated in this spoil berm to allow aquatic organisms to access marsh DP3 from marsh and open water habitats situated east of the berm. In addition, this phase of project construction would include excavating trenasses or similar shallow water depressions within the two marsh restoration features to create areas of shallow water interspersion. The duration of this construction phase (degrading and armoring dikes, excavating gaps, installation of armoring) would last roughly 2 to 3 months.

Jean Lafitte (JLNHPP) Fresh Marsh Restoration Project (for Non-Park/404c Impacts)

This mitigation project would involve restoration fresh marsh habitats. Two restoration features are proposed. Feature JL1B5 would be built in an open water portion of Yankee pond, would occupy approximately 91.2 acres, and would be located within the Park. Feature JL15 would be situated in an area along the shoreline of Lake Salvador where prior work has already largely established a marsh platform that was previously an open water portion of the lake. Feature JL15 would encompass a total of approximately 55.5 acres. Portions of this feature would overlap Park property, while the remaining portions would overlap lands not currently owned by NPS. Both of the marsh restoration features would be located in Jefferson Parish.

Approximately 8,400 linear feet of retention dike would be required. Of the total 8,400 linear feet of dikes, approximately 3,100 linear feet would be armored/capped with stone. This armored dike segment would be located along the eastern boundary of feature of JL1B5 adjacent to Bayou Segnette.

Marsh restoration would require approximately 600,000 cubic yards of material hydraulically dredged from Lake Cataouatche. The borrow site would be approximately 1,200 ft X 1,500 ft (roughly 42.0 acres) with a maximum cut of 10 feet. The pipeline would be approximately 18,000 linear feet and routed adjacent to the western bank of Bayou Segnette. As the pipeline would need to cross a portion of Lake Cataouatche, a small segment of submerged pipeline would be installed at the crossing with appropriate signage to ensure safe passage of vessels over the line. Throughout the initial construction phase, project construction would be coordinated with the US Coast Guard.

The initial target marsh elevation in JJL1B5 would be +3.5 feet with a final target elevation of approximately +1.0 to +1.5 feet. It is estimated that the initial project construction activities discussed above would require approximately 5 to 6 months. The final construction phase would begin following settlement and dewatering of the created marsh platform.

"fish dips" (essentially armored gaps) would be constructed in the armored dike segment. The fish dips would allow water exchange and provide aquatic organisms access to the marsh feature. It is anticipated that the final phase of construction activities (degrading dikes, constructing trenasses and fish dips, installation of dike armoring) would require approximately 3 to 4 months.

As part of the proposed project, the JL15 footprint would be degraded to design grade elevation of +1.0 to +1.5 feet.

"fish dips" would be constructed in this dike. The fish dips would allow water exchange and provide aquatic organisms access to the marsh feature. It is anticipated that the final phase of JL15 construction activities (re-grading the marsh platform, refurbishment of rock dike, constructing fish dips) would require approximately 4 to 5 months.

Plaquemines Option 1 Fresh Marsh Restoration Project

The proposed project would involve restoration of fresh marsh habitat in an existing open water area, through creating an earthen platform for the new marsh. The proposed mitigation feature would be located off the right descending bank (RDB) of the Mississippi River at River Mile 68, in Plaquemines Parish near Jesuit Bend. The proposed marsh, feature P2, would encompass approximately 171.2 acres and would serve as mitigation for general fresh marsh impacts.

A retention dike (roughly 15,000 linear feet) would be built along the eastern and southern boundaries of feature P2.

The borrow needed for this feature would be obtained from Two 115-acre borrow sites within the Mississippi River near Jesuit Bend. The borrow quantity that would be needed to construct the proposed marsh feature is approximately 1,800,000 cubic yards. The borrow areas would be excavated to elevation 68.0 feet using a hydraulic cutter-head dredge. The borrow pipeline segment extending from the borrow site to the right descending bank of the river would be submerged along the river bottom and coordinated with the US Coast Guard so as to not adversely impact river navigation. The rest of the pipeline would be primarily above ground. Overall, the total length of pipeline required would be between 10,000 and 12,000 linear feet.

The fill would be placed to an initial slurry elevation of +3.75 feet with a final target grade elevation of +1.5 feet. The estimated construction duration for constructing the retention system and dredge filling the site is approximately 8 to 9 months.

The dikes along the east and south sides of feature P2 would be completely degraded to match the final target elevation of the marsh platform. "Gaps" would be excavated through the perimeter dikes along the west and north sides of P2. In conjunction with this dike degrading effort, trenasses would be constructed as necessary to serve as tidal creeks to facilitate water exchange and create shallow water interspersion features.

The duration for the subsequent construction project for degrading the retention dike, spoil berm gapping, and construction of trenasses would be approximately 2 to 3 months.

Salvador-Timken Fresh Marsh Restoration Project

This project would involve restoring fresh marsh habitat as mitigation for fresh marsh flood side general impacts. The project would be located in an existing open water portion of the Salvador-Timken Wildlife Management Area (WMA). The fresh marsh restoration feature is identified in plan as ST2 and would encompass approximately 163.3 acres. The site established for restoration

is located along the western shore of Lake Cataouatche and south of the Louisiana Cypress Lumber Canal in Saint Charles Parish.

The length of the retention dike would be approximately 13,100 linear feet. The total dike volume would be roughly 284,000 cubic yards.

Feature ST2 would be filled to an initial target elevation (slurry elevation) of +2.5 feet. The final target elevation of +1.5 feet yields a required earthen lift of 5.5 feet. The total fill quantity required to create the marsh platform would be approximately 1,750,000 cubic yards.

Borrow for earthen fill for the restoration site would be obtained from Lake Cataouatche in an approximately 211-acre borrow site. The total borrow quantity needed would be approximately 4,068,000 cubic yards. The borrow site would be dredged to elevation -20 feet or shallower. The borrow pipeline would be about 7,600 long and Floating. The estimated construction duration for constructing the retention system and dredge filling the site is 6 to 9 months.

A trenasse would be constructed during this construction phase. The trenasse would be excavated to an approximate elevation of 0.0 feet. The bottom width would be approximately 6 feet. The duration for the construction phase for degrading the retention dikes and constructing the trenasse would be 3 to 6 months.

Simoneaux Ponds Fresh Marsh Restoration Project

This project would involve restoring fresh marsh habitat as mitigation for fresh marsh flood side general impacts. The site established for restoration would be located along the northern shore of Bayou Gauche, a small outlet of Bayou des Allemands at Black Prince Island, in St. Charles Parish. The proposed fresh marsh restoration feature is identified as feature SP2 and would occupy approximately 163.3 acres. The site established for restoration is currently an open water site.

The length of the perimeter dike would be 13,000 linear feet. Total dike volume would be 231,000 cubic yards.

The fresh marsh restoration feature would be filled to an initial target elevation of +2.5 feet with a target elevation of +1.5 feet. The total fill quantity required to establish the marsh platform would be approximately 1,581,000 cubic yards.

Borrow for earthen fill for the restoration features would be obtained from a 184-acre borrow site in Lake Salvador. The borrow site would be dredged to an elevation of -20 feet or shallower.

The borrow pipeline corridor would be placed near the banks of Bayou des Allemands in an effort to minimally impact boat navigation in the bayou. The pipeline corridor would include a short land crossing at the entrance from Bayou Gauche to Simoneaux Ponds. The land crossing would be approximately 1,600 linear feet long and the pipeline corridor here would be to a 50 foot width. The land crossing includes a jack-and-bore beneath Bayou Gauche Road. A permanent culvert would be installed beneath the highway and the slurry pipeline would be routed through this

culvert. The estimated construction duration for constructing the retention system and dredge filling the site is 6 to 9 months.

A trenasse would be excavated to an elevation 0.0 feet with a 6-foot bottom width. The duration for the subsequent construction project for degrading the retention dike and construction the trenasse would be from 4 to 6 months.

MITIGATION FOR IMPACTS TO PARK/404c BLH-WET

JLNHPP Option 1 BLH-Wet Restoration Project

This project would involve restoring native BLH-Wet habitats in an existing open water area (an existing borrow pit). The project would be located in Jefferson Parish. The proposed restoration features would include JL14A (approximately 6.28 acres), and JL14B (approximately 5.88 acres). Both features would be located within the Park, adjacent to the West Bank HPL.

Features JL14A and JL14B would be constructed by placing fill material in the borrow pit to establish earthen platforms for the restored habitats.

The mitigation features would be filled with an estimated 18 feet of sand to elevation -0.0 feet. A 4-foot clay cap to elevation +3.5 feet would then be placed on top of the sand fill. It is anticipated that it would take approximately 1 year for the fill materials to settle to the desired final target grade of elevation +2.0 feet.

Approximately 400,000 cubic yards of sand fill and 80,000 cubic yards of the clay cap would be required to fill the 12.2 acres being restored to BLH-Wet habitats. These borrow materials would be obtained from off-site government furnished and/or contractor furnished borrow pits.

Project access would be via two roadways extending west from Barataria Boulevard. An appropriate traffic control plan would be implemented during the initial construction phase to minimize traffic congestion and safety hazards.

Establishment of the construction access routes would require clearing a corridor, roughly 20-feet wide, through existing wetland habitats.

The initial construction phase would last roughly 9 to 10 months. Plantings would be in accordance with the BLH-Wet planting guidelines. This secondary construction phase, would likely last approximately 3 to 4 months.

MITIGATION FOR IMPACTS TO PARK/404c SWAMP

JLNHPP Swamp Restoration Project

This project would mainly involve restoring native swamp habitats in primarily existing open water areas. The project would be located in Jefferson Parish. The proposed restoration features would include JL7 (approximately 11.31 acres), JL8 (approximately 5.00 acres), and JL9 (approximately

4.13 acres). All three features would be located in the Park, while features JL8 and JL9 would also be located within the 404c area.

Proposed feature JL7 would mainly encompass a segment of an existing man-made canal, although the far eastern end of this feature would encompass a previously filled and disturbed upland area. A portion of an existing spoil berm running along the north side of JL7 would be cleared and degraded (excavated) to use as a source of fill to establish feature JL7. The existing upland area within the eastern end of JL7's footprint would also be cleared and degraded.

Another component of the JL7 swamp restoration would involve excavating "gaps" in the existing spoil berms adjacent to both sides of Millaudon Canal. Each gap would be degraded to approximately elevation 1.0 feet to match the existing grades typically found in nearby swamp habitats.

The quantity of fill that would be obtained from the degrading of the spoil berm adjacent to JL7 and from degrading the existing upland portion of JL7 is approximately 35,000 cy. Combining this with the material obtained from degrading the Millaudon Canal gaps would yield a total of roughly 36,600 cy that would be placed in the existing canal portion of JL7 to establish the platform for the proposed JL7 swamp. However, it is estimated that an additional 140,000 cy of fill (borrow) would be required to bring the canal portion of JL7 to the initial target grade elevation.

Project access would be via two roadways extending west from Barataria Boulevard. Due to the anticipated volume of dump truck traffic, an appropriate traffic control plan would be implemented during the initial construction phase to minimize traffic congestion and safety hazards.

The initial construction phase to establish feature JL7 would require an estimated 8.5 to 9.5 months. Once settled, the restoration feature would be planted native swamp canopy and midstory species in accordance with the swamp planting guidelines.

The proposed restoration features JL8 and JL9 would encompass existing canals that would be filled and planted to restore native swamp habitat. Two construction access corridors would be required to build features JL8 and JL9.

There are existing spoil berms on the north and south sides of both restoration features which would be "gapped" to improve surface flow and exchange. Each gap would be degraded to approximately elevation 1.0 feet to match the existing grades typically found in nearby swamp habitats.

It is estimated that approximately 3,600 cys of fill would be obtained through construction of the spoil berm gaps. However, it is estimated that an additional 135,000 cys of fill would be required to establish the earthen platforms for the restored swamp features. This material (borrow) would be bucket dredged from the GIWW.

The proposed borrow area would be approximately 70 ft wide and 5,000 ft long (17.2 acres) and would be dug to 4 feet below existing grade with an allowable 1 foot of overdepth. All activities within the GIWW would be coordinated with the US Coast Guard as to not impede navigation.

The initial construction of JL8 and JL9 would require about 3 to 4 months. Plantings would be in accordance with the swamp planting guidelines. The final construction phase (e.g. initial planting of features JL8 and JL9) would require roughly 2 to 3 weeks.

MITIGATION FOR IMPACTS TO PARK/404c FRESH MARSH

JLNHPP Fresh Marsh Restoration Project (for Park/404c Impacts)

This mitigation project would involve restoring fresh marsh habitat from open water. The single proposed marsh restoration feature, JL1B4, would encompass approximately 20.4 acres, located in Jefferson Parish within the Park. Restoration work would involve establishing a land platform for the new marsh habitat proposed.

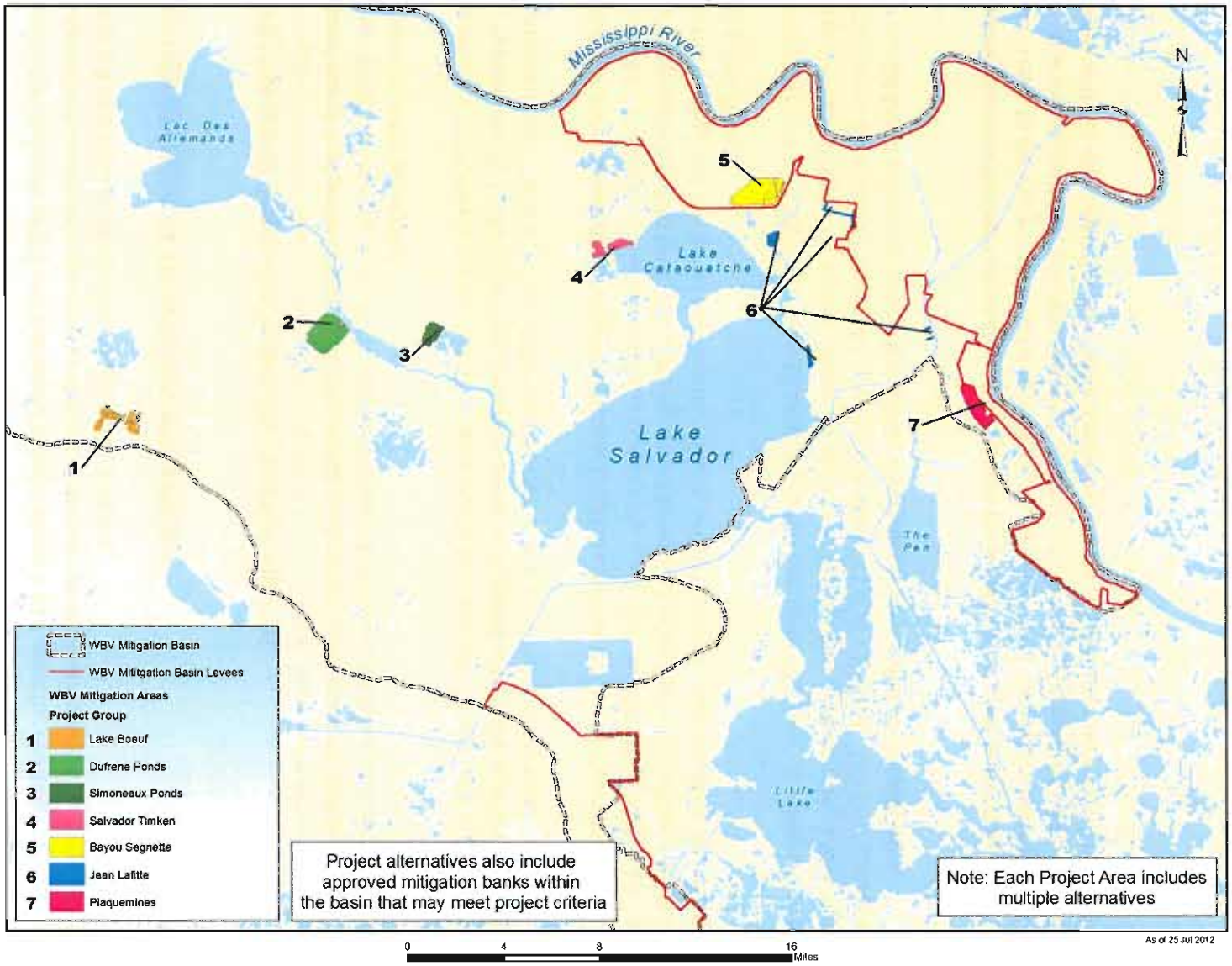
Approximately 3,780 linear feet of retention dike would be required. Of the total 3,780 linear feet of dikes, approximately 1,780 linear feet would be armored/capped with stone during the second project construction phase. "fish dips" would be constructed in the armored dike segment.

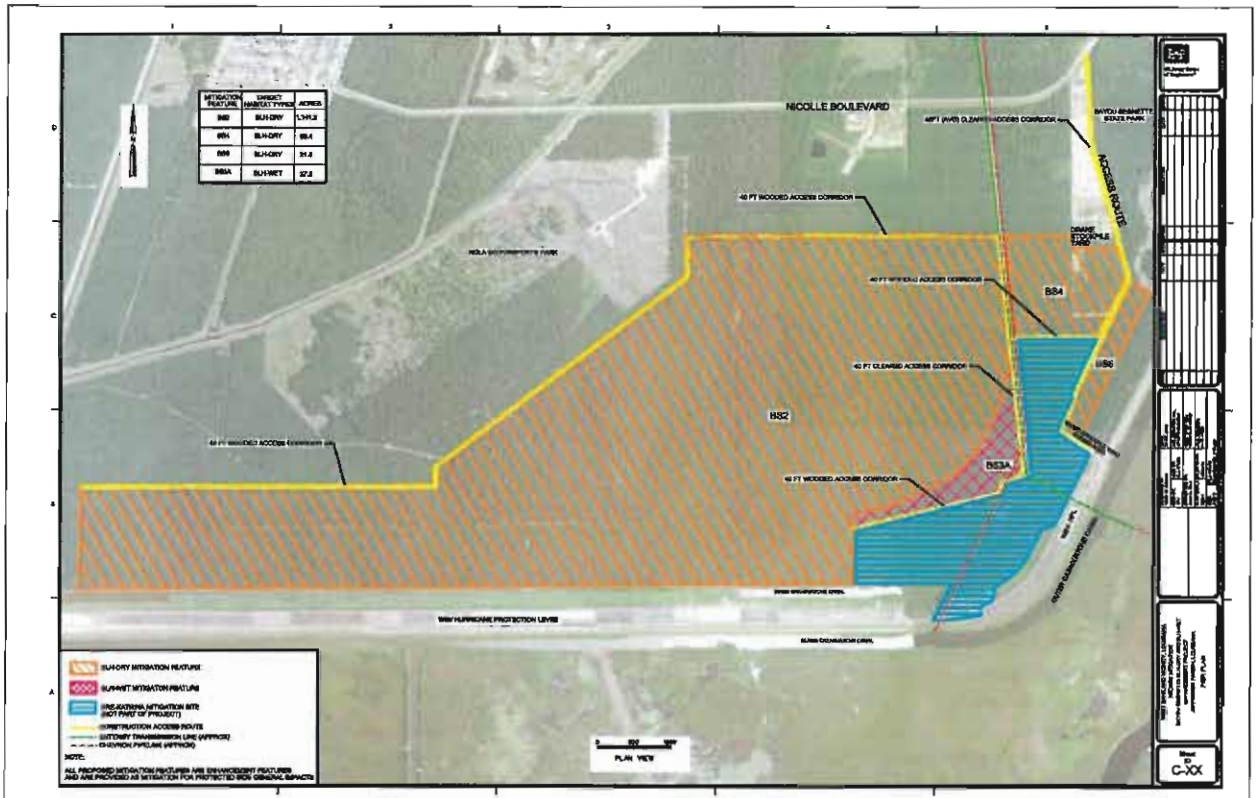
Marsh restoration would require approximately 150,000 cubic yards of material from Lake Cataouatche. The borrow site would be approximately 1,500 feet by 300 feet (roughly 10.3 acres) with a maximum cut of 10 feet. The pipeline would be routed adjacent to the western bank of Bayou Segnette. Throughout the initial construction phase, project construction would be coordinated with the US Coast Guard.

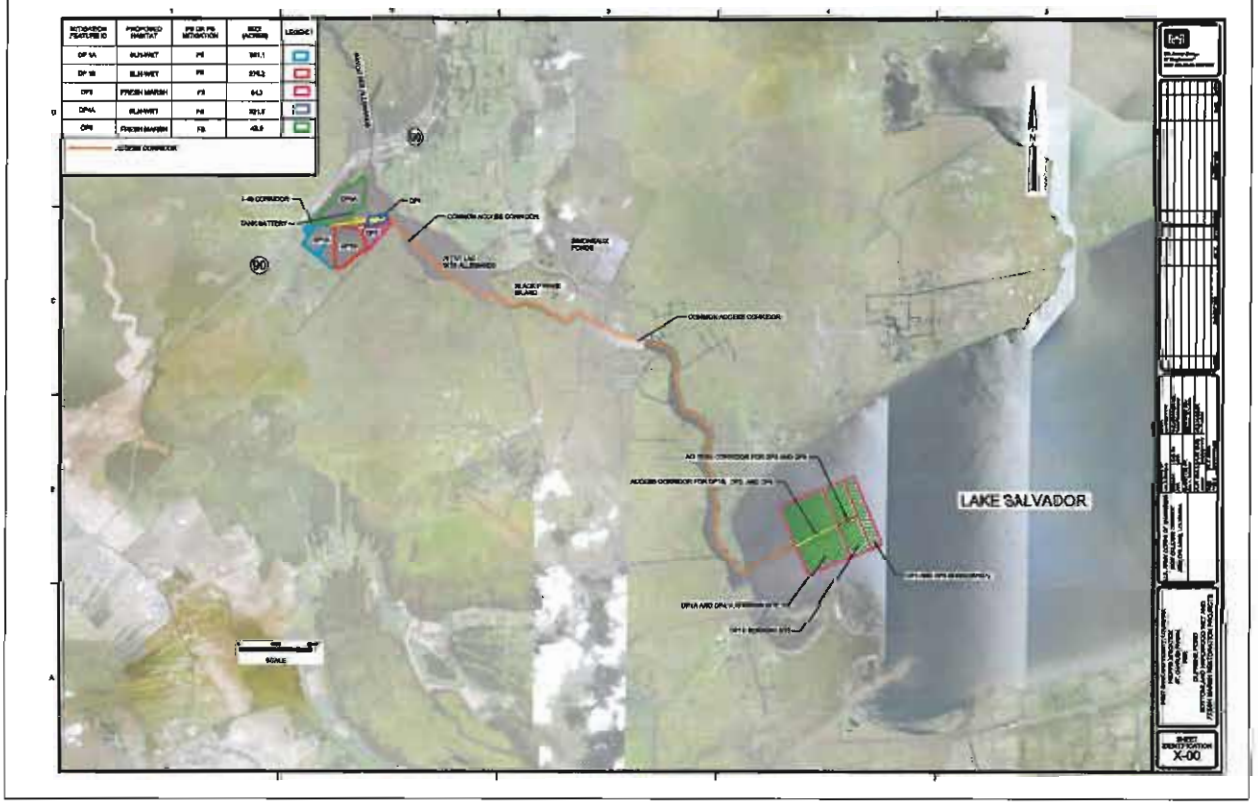
The initial target marsh elevation (elevation of slurry fill) would be +3.5 feet. It is estimated that the initial project construction activities discussed above would require approximately 3 to 4 months. The final target elevation of this feature is approximately +1.0 to +1.5 feet. The final construction phase would begin following settlement and dewatering of the created marsh platform.

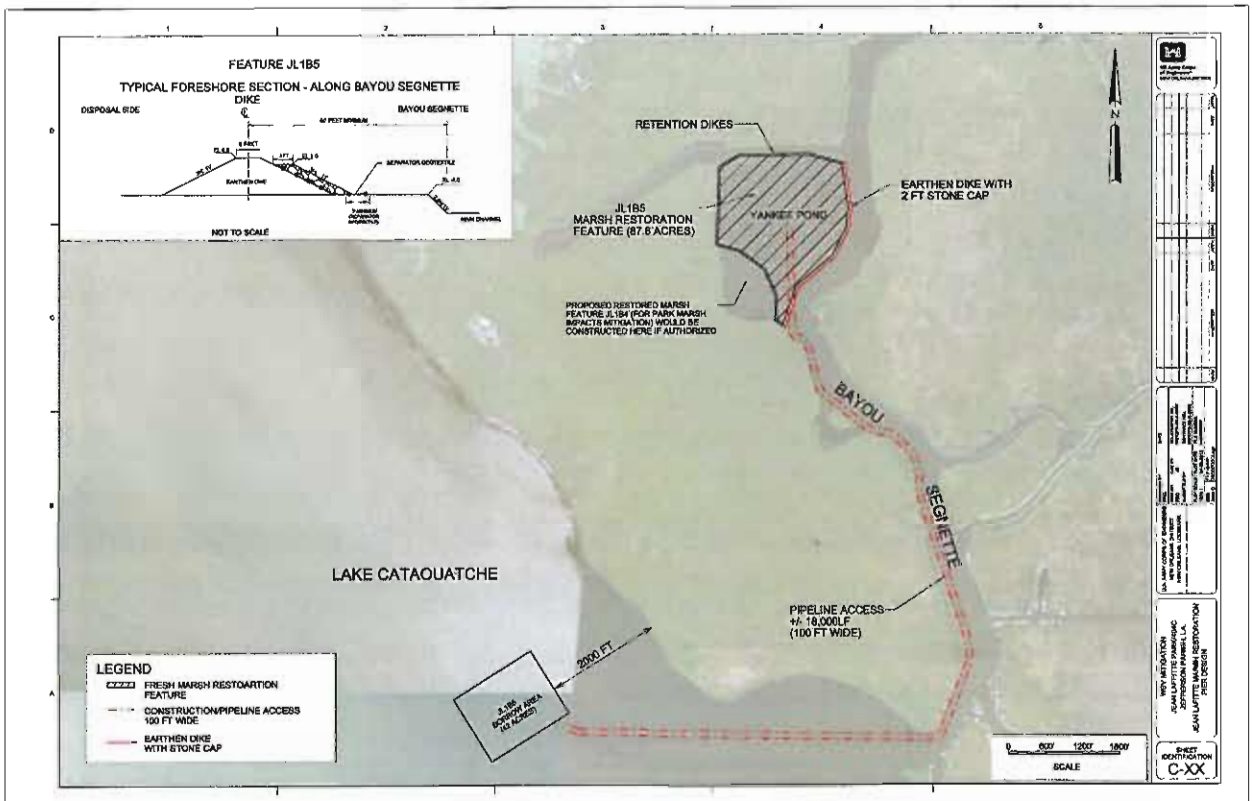
In conjunction with this dike degrading effort, trenasses would be constructed as necessary to serve as tidal creeks to facilitate water exchange and create shallow water interspersion features within JL1B4. It is anticipated that the final phase of construction activities (degrading dikes, constructing trenasses and fish dips, installation of dike armoring) would require approximately 3 to 4 months.

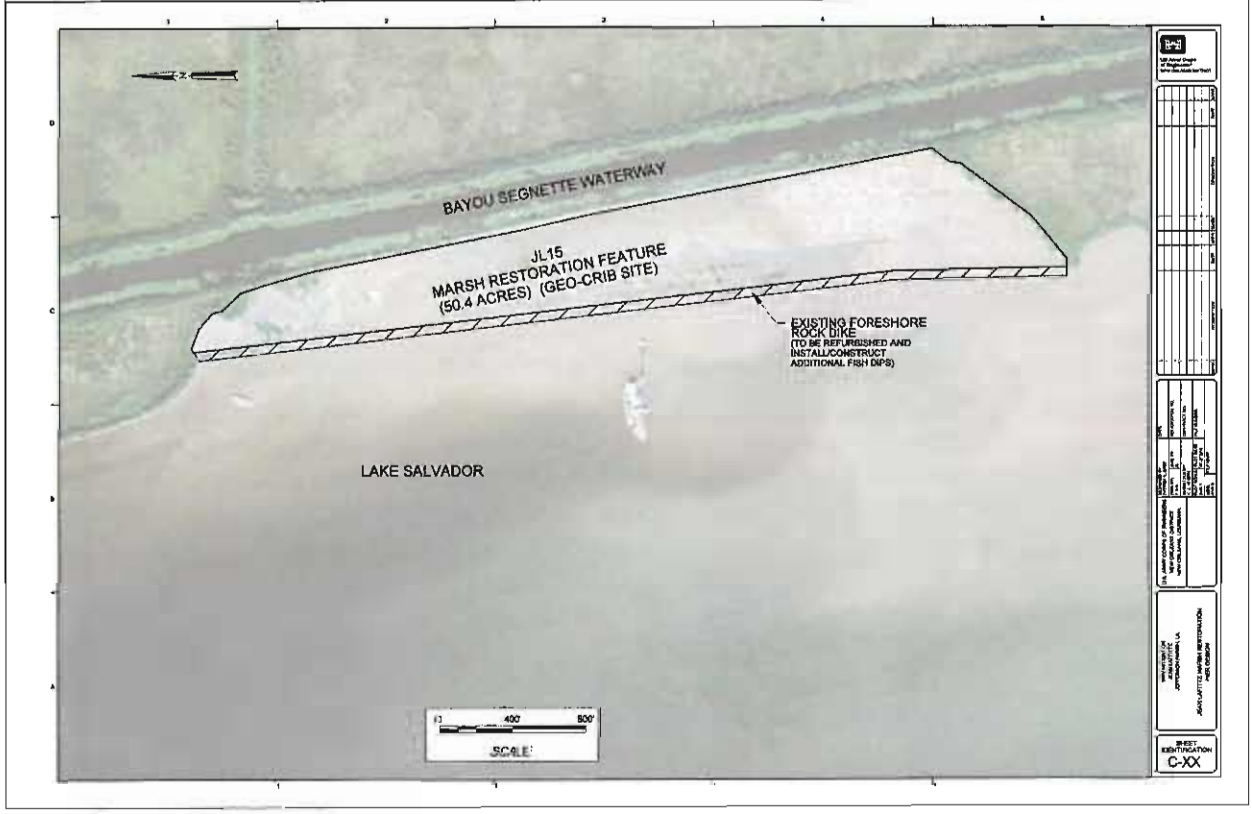
WBV Mitigation Project Areas

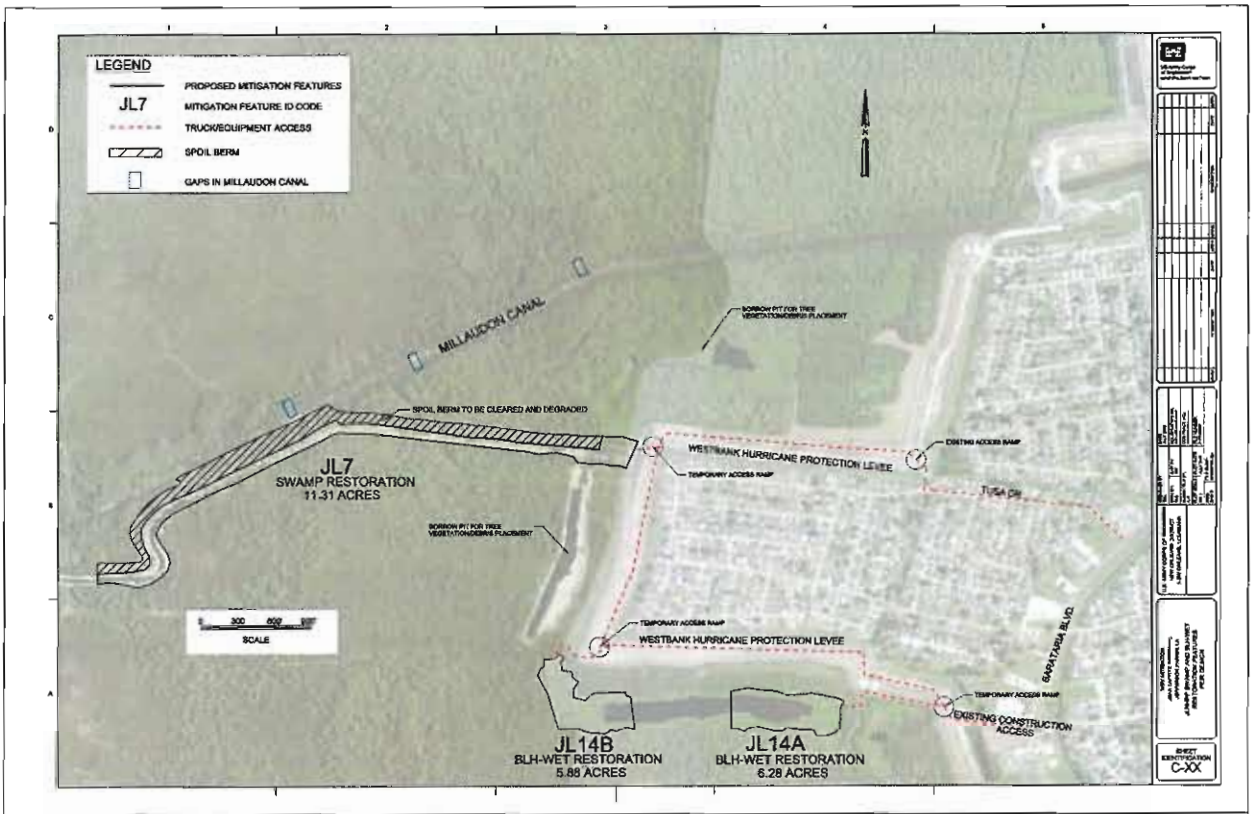


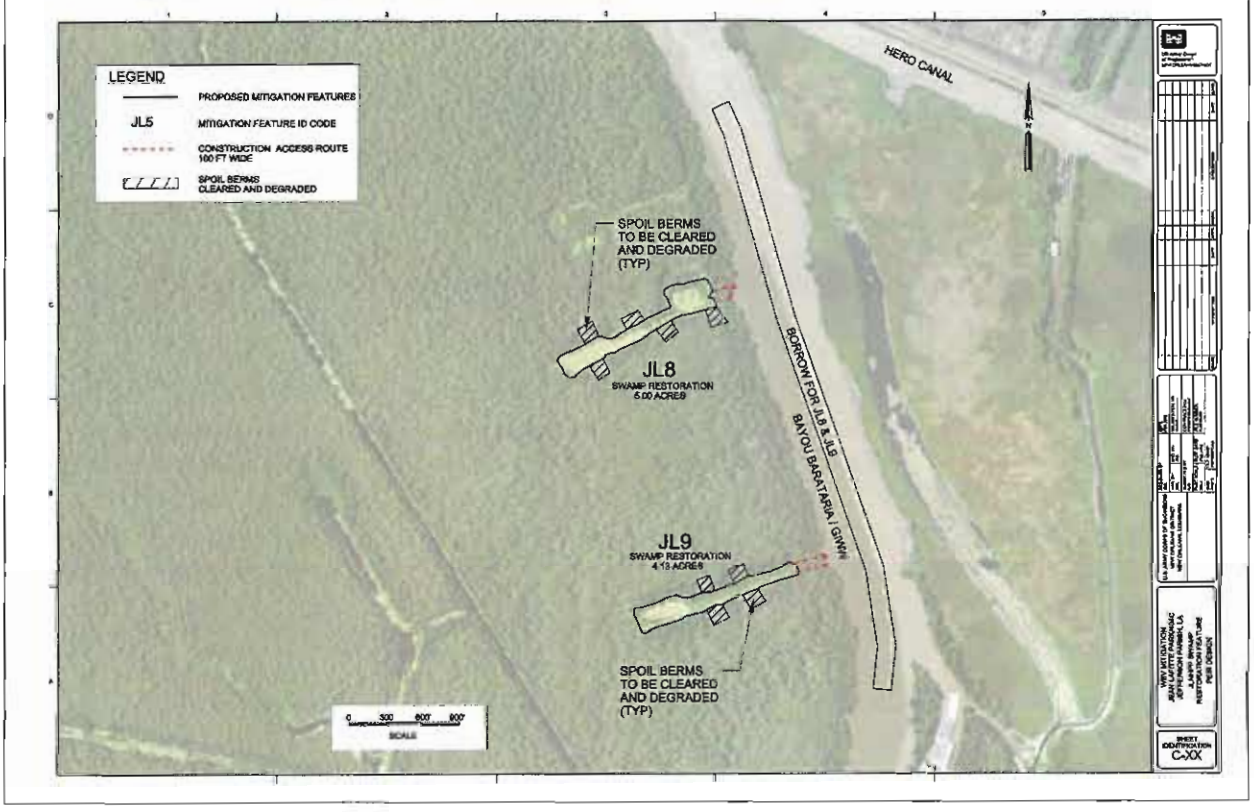

NICOLLE BOULEVARD
BS4
BS6
BS2
BS3A
PLAN VIEW
C-XX

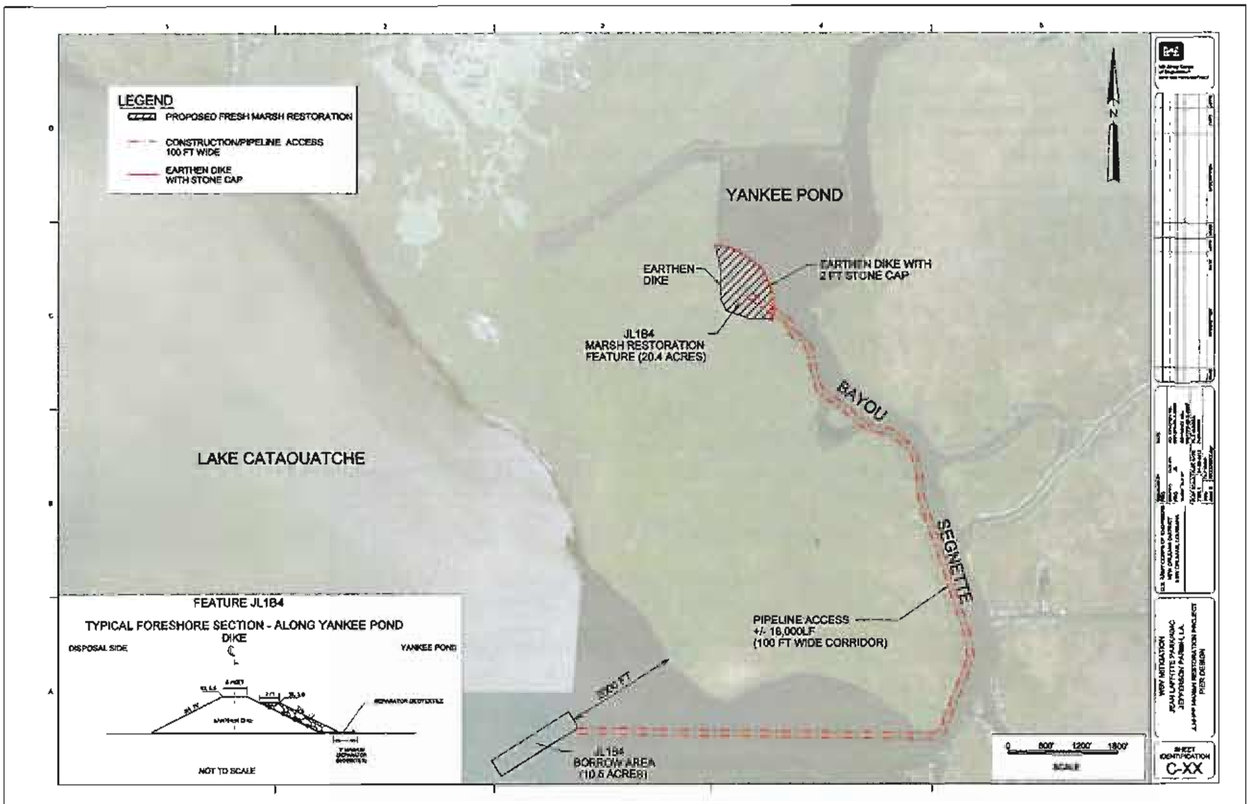

LAKE SALVADOR
X-00

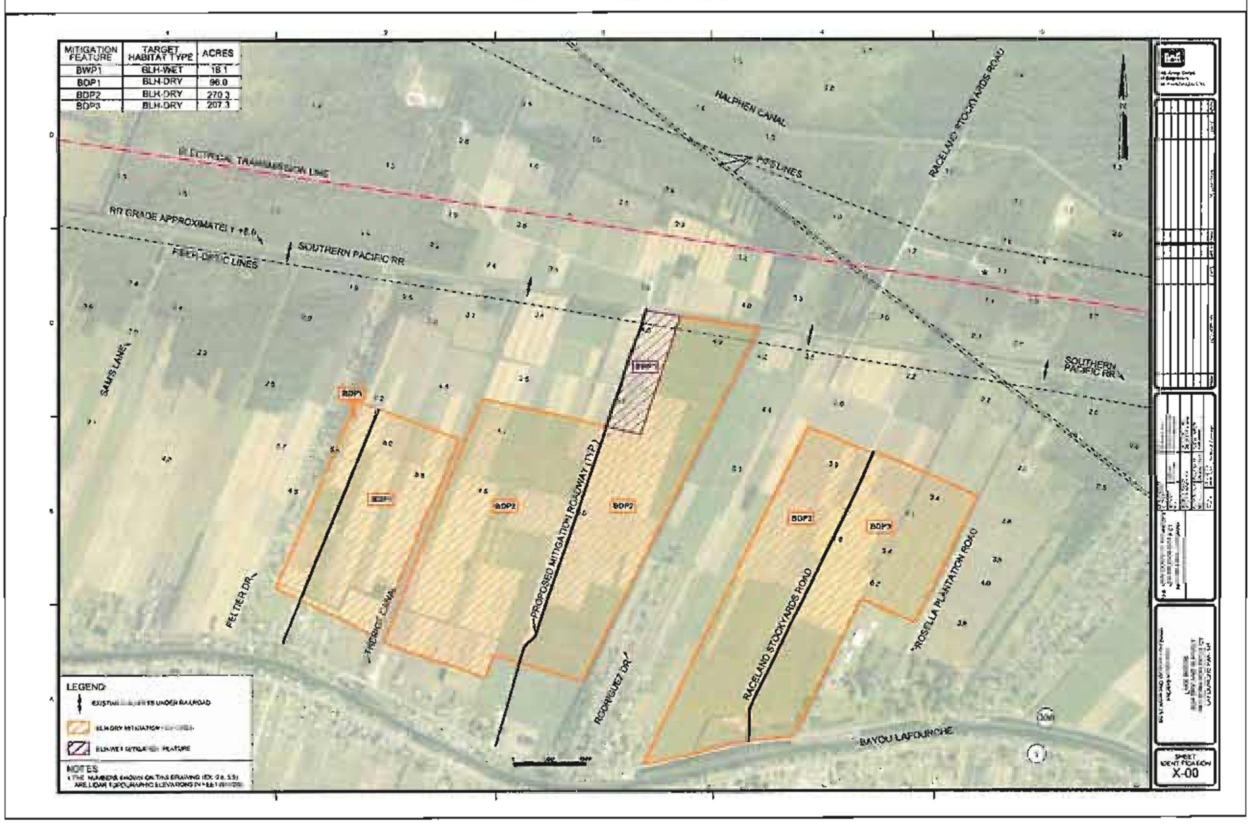

FEATURE JL1B5
TYPICAL FORESHORE SECTION - ALONG BAYOU SEGNETTE
DIKE
DISPOSAL SIDE
BAYOU SEGNETTE
NOT TO SCALE
RETENTION DIKES
JL1B5
MARSH RESTORATION
FEATURE (87.6 ACRES)
YANKEE POND
EARTHEN DIKE WITH
2 FT STONE CAP
PROPOSED RESTORED MARSH
FEATURE JL1B4 (FOR PARK MARSH
IMPACTS MITIGATION) WOULD BE
CONSTRUCTED HERE IF AUTHORIZED
BAYOU
SEGNETTE
LAKE CATAOUATCHE
PIPELINE ACCESS
+/- 18,000LF
(100 FT WIDE)
2000 FT
LEGEND
FRESH MARSH RESTOARTION
FEATURE
CONSTRUCTION/PIPELINE ACCESS
100 FT WIDE
EARTHEN DIKE
WITH STONE CAP
SCALE
SHEET
IDENTIFICATION
C-XX

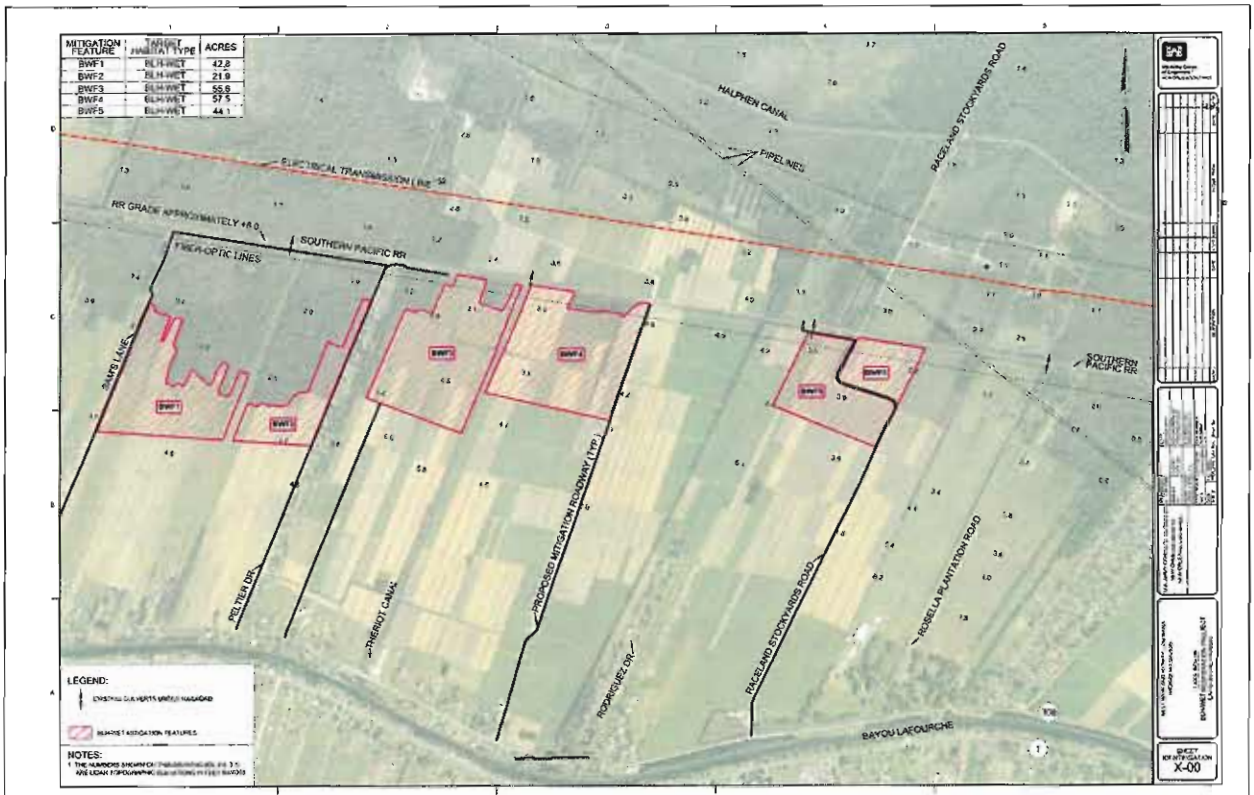

BAYOU SEGNETTE WATERWAY
JL15
MARSH RESTORATION FEATURE
(50.4 ACRES) (GEO-CRIB SITE)
EXISTING FORESHORE
ROCK DIKE
(TO BE REFURBISHED AND
INSTALL/CONSTRUCT
ADDITIONAL FISH DIPS)
LAKE SALVADOR
SCALE
SHEET
IDENTIFICATION
C-XX

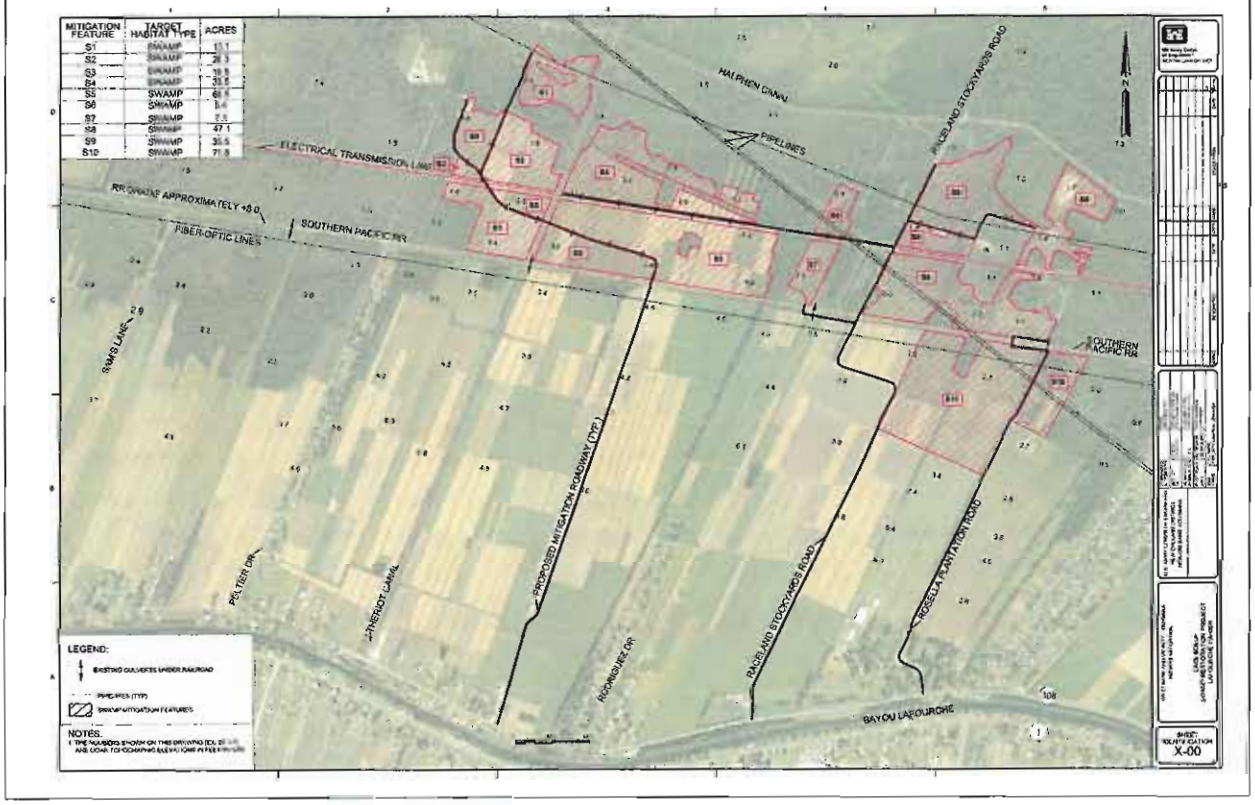

LEGEND
PROPOSED MITIGATION FEATURES
JL7
MITIGATION FEATURE ID CODE
TRUCK/EQUIPMENT ACCESS
SPOIL BERM
GAPS IN MILLAUDON CANAL
MILLAUDON CANAL
BORROW PIT FOR TREE VEGETATION/DEBRIS PLACEMENT
SPOIL BERM TO BE CLEARED AND DEGRADED
JL7
SWAMP RESTORATION
11.31 ACRES
WESTBANK HURRICANE PROTECTION LEVEE
TEMPORARY ACCESS RAMP
EXISTING ACCESS RAMP
TUSA DR
BORROW PIT FOR TREE VEGETATION/DEBRIS PLACEMENT
SCALE
TEMPORARY ACCESS RAMP
WESTBANK HURRICANE PROTECTION LEVEE
BARATARIA BLVD
TEMPORARY ACCESS RAMP
EXISTING CONSTRUCTION ACCESS
JL14B
BLH-WET RESTORATION
5.88 ACRES
JL14A
BLH-WET RESTORATION
6.28 ACRES
SHEET IDENTIFICATION
C-XX

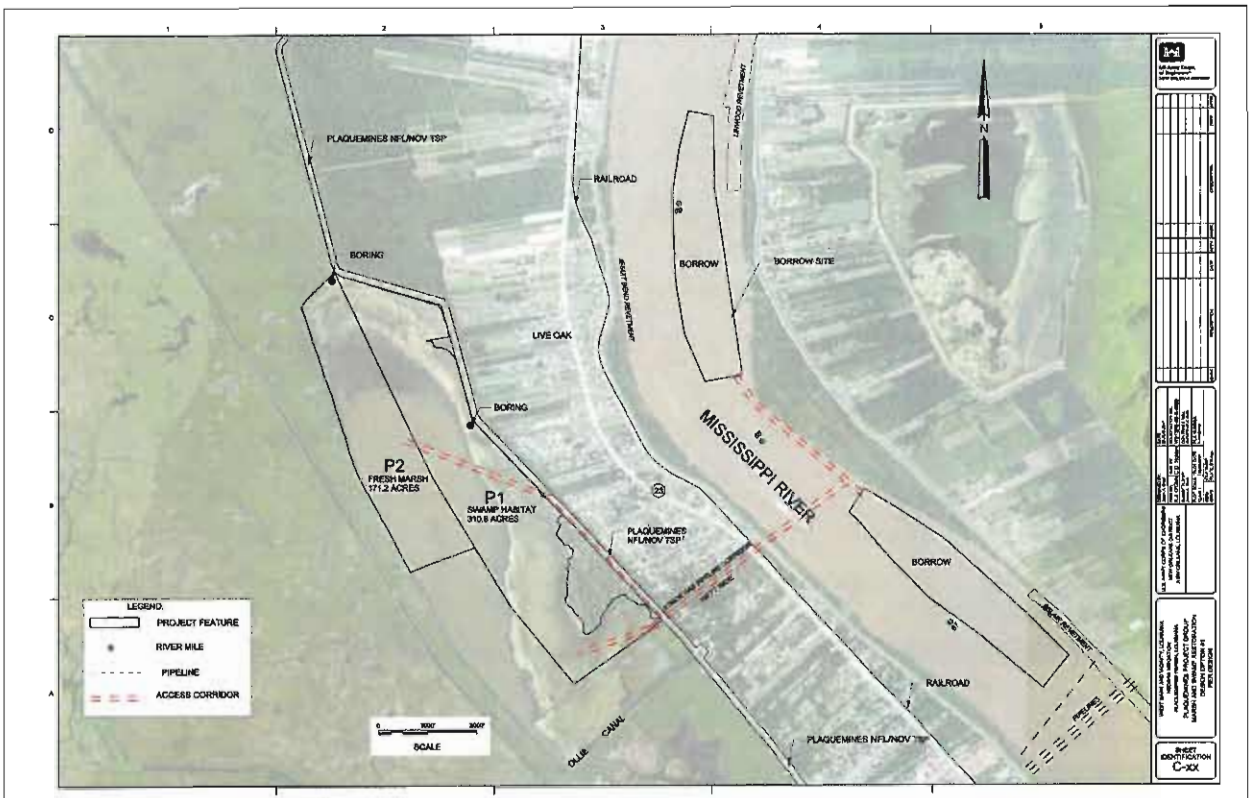

LEGEND
PROPOSED MITIGATION FEATURES
JL5
MITIGATION FEATURE ID CODE
CONSTRUCTION ACCESS ROUTE 100 FT WIDE
SPOIL BERMS CLEARED AND DEGRADED
HERO CANAL
SPOIL BERMS TO BE CLEARED AND DEGRADED (TYP)
JL8
SWAMP RESTORATION
5.00 ACRES
BORROW FOR JL8 & JL9
BAYOU BARATARIA / GIWW
JL9
SWAMP RESTORATION
4.13 ACRES
SPOIL BERMS TO BE CLEARED AND DEGRADED (TYP)
SCALE
SHEET IDENTIFICATION
C-XX

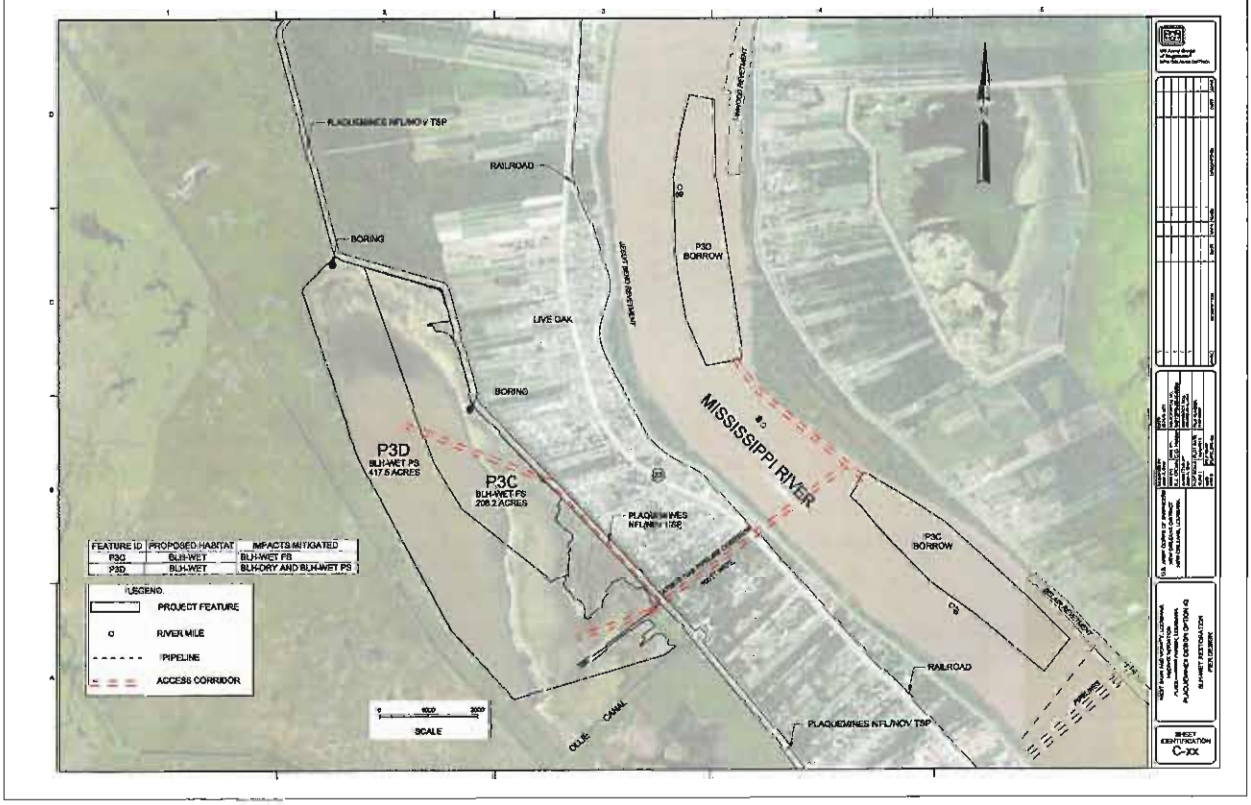

LEGEND
PROPOSED FRESH MARSH RESTORATION
CONSTRUCTION/PIPELINE ACCESS 100 FT WIDE
EARTHEN DIKE WITH STONE CAP
YANKEE POND
EARTHEN DIKE
EARTHEN DIKE WITH 2 FT STONE CAP
JL1B4 MARSH RESTORATION FEATURE (20.4 ACRES)
BAYOU
SEGNETTE
LAKE CATAOUATCHE
FEATURE JL1B4
TYPICAL FORESHORE SECTION - ALONG YANKEE POND DIKE
DISPOSAL SIDE
YANKEE POND
NOT TO SCALE
PIPELINE ACCESS +/- 16,000LF (100 FT WIDE CORRIDOR)
JL1B4 BORROW AREA (10.5 ACRES)
SCALE
SHEET IDENTIFICATION
C-XX

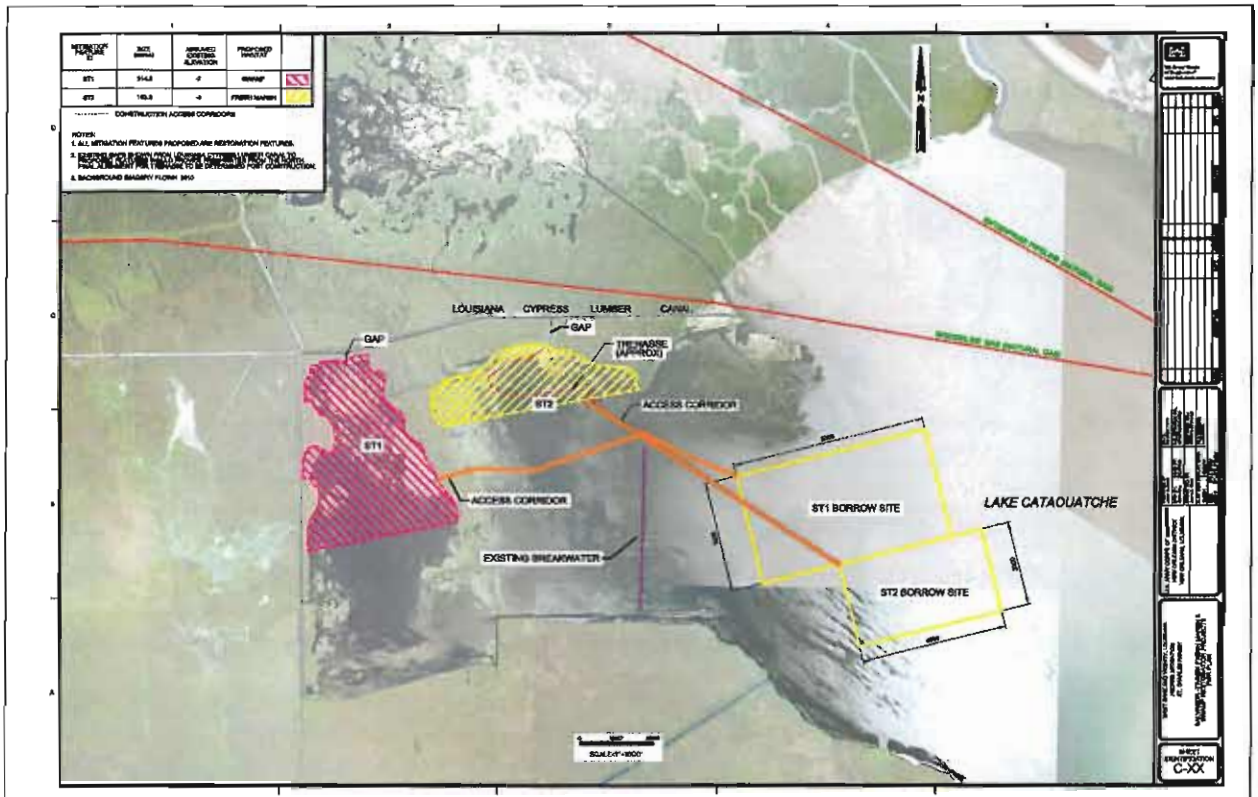

MITIGATION FEATURE | TARGET HABITAT TYPE | ACRES
BWP1 | BLH-WET | 18.1
BDP1 | BLH-DRY | 96.0
BDP2 | BLH-DRY | 270.3
BDP3 | BLH-DRY | 207.3
HALPHEN CANAL
RACELAND STOCKYARDS ROAD
ELECTRICAL TRANSMISSION LINE
P/S LINES
RR GRADE APPROXIMATELY +8 ft
SOUTHERN PACIFIC RR
FIBER OPTIC LINES
SAMS LANE
BDP1
BWP1
BDP2
BDP3
PROPOSED MITIGATION ROADWAY (TYP.)
PELTIER DR.
THERIOT CANAL
RODRIGUEZ DR.
ROSELLA PLANTATION ROAD
BAYOU LAFOURCHE
LEGEND
SHEET IDENTIFICATION
X-00

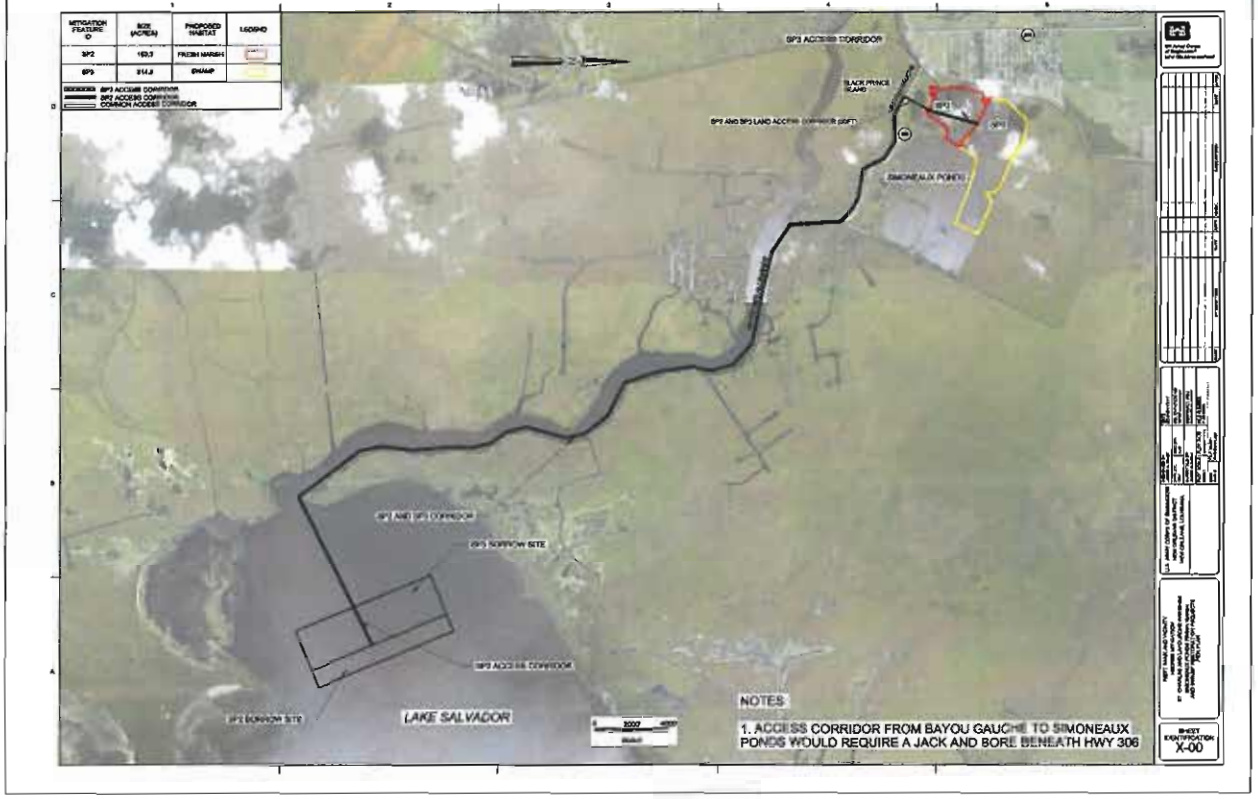

MITIGATION FEATURE
TARGET HABITAT TYPE
ACRES
BWF1 BLH-WET 42.8
BWF2 BLH-WET 21.9
BWF3 BLH-WET 55.8
BWF4 BLH-WET 57.5
BWF5 BLH-WET 44.1
HALPHEN CANAL
PIPELINES
RACELAND STOCKYARDS ROAD
ELECTRICAL TRANSMISSION LINE
RR GRADE APPROXIMATELY +8.0
FIBER-OPTIC LINES
SOUTHERN PACIFIC RR
RAMS LANE
PELTIER DR
THERIOT CANAL
PROPOSED MITIGATION ROADWAY (TYP.)
RODRIGUEZ DR
ROSELLA PLANTATION ROAD
BAYOU LAFOURCHE
LEGEND:
NOTES:
SHEET IDENTIFICATION
X-00


MITIGATION FEATURE
TARGET HABITAT TYPE
ACRES
S1 SWAMP 15.1
S2 SWAMP 26.3
S3 SWAMP 38.9
S4 SWAMP 38.6
S5 SWAMP 66.5
S6 SWAMP 9.4
S7 SWAMP 7.6
S8 SWAMP 47.1
S9 SWAMP 36.5
S10 SWAMP 71.8
HALPHEN CANAL
PIPELINES
RACELAND STOCKYARDS ROAD
ELECTRICAL TRANSMISSION LINE
RR GRADE APPROXIMATELY +8.0
FIBER-OPTIC LINES
SOUTHERN PACIFIC RR
RAMS LANE
PELTIER DR
THERIOT CANAL
PROPOSED MITIGATION ROADWAY (TYP.)
RODRIGUEZ DR
ROSELLA PLANTATION ROAD
BAYOU LAFOURCHE
LEGEND:
NOTES:
SHEET IDENTIFICATION
X-00


PLAQUEMINES NFL/NOV TSP
RAILROAD
BORING
LIVE OAK
BORING
P2
FRESH MARSH
171.2 ACRES
P1
SWAMP HABITAT
310.6 ACRES
MISSISSIPPI RIVER
BORROW
BORROW SITE
PLAQUEMINES NFL/NOV TSP
RAILROAD
OLLE CANAL
LEGEND
PROJECT FEATURE
RIVER MILE
PIPELINE
ACCESS CORRIDOR
SCALE
N


PLAQUEMINES NFL/NOV TSP
RAILROAD
BORING
LIVE OAK
BORING
P3D
BLH-WET PS
417.5 ACRES
P3C
BLH-WET PS
208.3 ACRES
MISSISSIPPI RIVER
P3D BORROW
P3C BORROW
RAILROAD
PLAQUEMINES NFL/NOV TSP
OLLE CANAL
FEATURE ID | PROPOSED HABITAT | IMPACTS MITIGATED
P3C | BLH-WET | BLH-WET PS
P3D | BLH-WET | BLH-ORY AND BLH-WET PS
LEGEND
PROJECT FEATURE
RIVER MILE
PIPELINE
ACCESS CORRIDOR
SCALE


LOUISIANA CYPRESS LUMBER CANAL
GAP
GAP
TRENASSE (APPROX)
ST2
ACCESS CORRIDOR
ST1
ACCESS CORRIDOR
ST1 BORROW SITE
LAKE CATAOUATCHE
EXISTING BREAKWATER
ST2 BORROW SITE


BP3 ACCESS CORRIDOR
BP1 AND BP3 LAND ACCESS CORRIDOR (BP1)
BP1
BP3
SIMONEAUX POINTS
BP1 AND BP3 CORRIDOR
BP3 BORROW SITE
BP3 ACCESS CORRIDOR
BP3 BORROW SITE
LAKE SALVADOR
NOTES
1. ACCESS CORRIDOR FROM BAYOU GAUCHE TO SIMONEAUX PONDS WOULD REQUIRE A JACK AND BORE BENEATH HWY 306

Appendix I

NMFS' September 24, 2013, Draft Programmatic IER Comment Letter

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

September 24, 2013 F/SER46/PW:jk
225/389-0508

Ms. Joan M Exnicios, Chief
Regional Planning and Environmental Division South
New Orleans District Environmental Branch
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Ms. Exnicios:

NOAA's National Marine Fisheries Service (NMFS) has received your letter dated August 9, 2013, transmitting the draft Programmatic Individual Environmental Report (PIER) #36 titled, "**Lake Pontchartrain and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist, and St. Tammany Parishes, Louisiana.**" PIER #36 evaluates alternatives for mitigating unavoidable habitat impacts incurred during the construction of the Lake Pontchartrain and Vicinity (LPV) Hurricane Surge Damage Risk Reduction System (HSDRRS).

The PIER identifies the Tentatively Selected Mitigation Plan Alternative (TSMPA) comprised of various mitigation features. Only the purchase of mitigation bank credits for bottomland hardwoods and swamp impacts are proposed at this time. Other features of the TSMPA, including marsh mitigation, would be detailed and finalized in future documents tiered off this PIER. NMFS has reviewed the draft PIER and overall finds the document thorough and well prepared. We submit the following general comments:

Plan and Final Scaling

Details and recommendations identified in the November 2012, draft Fish and Wildlife Coordination Act Report are necessary items warranting fulfillment as the mitigation features progress. Final scaling of mitigation should be based upon and accomplished during advanced engineering and design, but prior to release of a supplemental PIER. This is to ensure no net loss of wetlands and corresponding functions by basing mitigation projections on final impact numbers and final design. Furthermore, contingency measures and/or adaptive management are necessary to ensure attainment of no net loss of wetlands.

The PIER adequately addresses wetland impacts and mitigation for forested habitats. Because the PIER introduced marsh impacts and corresponding mitigation which will be covered in supplemental documents, NMFS scrutinized the potential adequacy of the marsh mitigation to satisfy impacts to EFH. NMFS recognizes this consultation does not pertain to the marsh impacts. However, we find it prudent to provide preliminary and early feedback on the marsh mitigation. Preliminarily, the mitigation for the fresh and intermediate marsh as conceptualized

in the TSMPA likely would compensate for impacts to EFH. This is based upon a potential net gain of over 100 acres of EFH by constructing marsh mitigation for refuge non-tidal wetlands in tidally influenced areas. The Bayou Sauvage alternative may be acceptable in amount for brackish marsh impacts, but a final determination cannot be made at this time. For brackish marsh, the Bayou Sauvage mitigation will warrant reassessment as a matter of routine as do all final features, but also because the alternative was modified by the USACE to place fill material on approximately 100 acres of existing marsh for the purpose of nourishment. Although we do not object to such nourishment, means should be included to avoid adverse overfilling impacts. The concept would have to be re-evaluated based on the final design and resized according to functional impacts to the existing and created marsh.

Given the amount and rate of loss of coastal marshes in Louisiana, NMFS has long supported marsh creation as the preferred form of mitigation for tidal marsh impacts. The marsh creation projects evaluated under the final array of mitigation alternatives are acceptable to NMFS as compensatory mitigation provided final details are based on advanced design through coordination with NMFS and other interested natural resource agencies. Recent inspections of the marsh creation mitigation projects highlights the importance of capturing functionality lags in the initial scaling of mitigation, as well as to reconcile partial success and attain no net loss of wetlands. For example, it may be impracticable or cause more environmental harm than good to grade high elevations down. Further, it may be more cost effective to create more marsh up front to cover performance uncertainties than to fill relatively small amounts of open water which were supposed to have been marsh, but experienced more settlement that expected. Issues with attainment of success criteria are anticipated for marsh creation mitigation due to variability in elevations resulting from soils, contractor performance, and differential settlement of backfilled in situ borrow canals. Therefore, one option is to improve benefit projections using the Wetland Value Assessment (WVA) for final scaling of mitigation by updating model assumptions to make them realistic and accurate to the maximum extent practicable. Potential examples for improvement are:

1. Future with project loss rates should be based upon the final design (i.e., 100% Design Decision Report) settlement curves for initial and long term performance projections.

2. Re-assess the 50% reduction in historic loss rate assumption used to project the future with project loss rate (prior to any adjustments for accretion or sea level rise).

3. Assume a portion or all of the in-situ borrow does not result in marsh.

4. Assume all or a portion of the containment dikes do not get credit as marsh.

5. Re-assess the duration of functionality lags for tidal function for various WVA variables.

Even with potential improved accuracy of assessments, means to fund corrective or contingency actions in the adaptive management phase should be included in the final PIER and future supplemental documents. If funds are insufficient to support corrective actions, these documents should disclose this limitation and environmental risk to the public.

Open Water Borrow Impacts to Water Quality

NMFS has coordinated often with the U.S. Army Corps of Engineers (USACE) on potential impacts to water quality associated with borrow pits in open water. Literature searches conducted by NMFS were provided to the USACE on this matter and a number of existing borrow pits in Lake Pontchartrain have been demonstrated to create hypoxic conditions. The design of the borrow pits includes sequential means developed with natural resource agencies to site and size borrow in an attempt to minimize creating hypoxia. It is suggested those sequential means be identified as best management practices in the Appendix. Even though pits have been designed in an attempt to minimize impacts to water quality, no monitoring is included to demonstrate adverse impacts do not result. To address potential adverse environmental impacts, approaches exist to address hypoxia concerns through design considerations or after-the-fact with monitoring. Modern design capabilities (e.g., modeling) exist to demonstrate up-front risks to water quality are minimized, but those tools can be costly with residual risk. As the literature suggests, potential environmental impacts from open water borrow pits vary by location and estuary. The USACE is encouraged to include water quality monitoring in supplemental and final PIERs to assess if hypoxia develops. Such monitoring would help with the development of potential contingency measures for future designs if not also for corrective action. The USACE's monitoring of water quality for Individual Environmental Report 11 and the Mississippi River-Gulf Outlet Ecosystem Restoration Study was helpful in this regard. It is suggested scopes of work similar to those be included and repeated annually for three years. NMFS is willing to assist the USACE in further scoping a monitoring plan to assess impacts to water quality.

Timeliness

The completion of mitigation to offset remaining HSDRRS impacts to wetlands (e.g., purchasing of credits or construction) should be expedited. Given the time since impacts occurred, and potential real estate acquisition challenges, NMFS has a growing concern over the increasing delay to finalize and construct mitigation. Across the TSMPA, increasing temporal loss of wetland functions resulting from delayed implementation of mitigation should be assessed and final mitigation increased accordingly. With the fiscal climate and continuing plan evaluations, funding for completion of the mitigation and any needed increases must be safeguarded. Means should be utilized to expedite completion of mitigation. For example, construction of mitigation on National Wildlife Refuge properties should proceed to final design, environmental clearance and construction.

Monitoring

Elevation as an indicator of hydroperiod is of paramount importance to assess mitigation success, especially for marsh mitigation. LIDAR surveys are identified as the type of elevation data to be collected. The implications of its availability and accuracy by marsh and vegetation type should be established with the Project Delivery Team, including the natural resource agencies, for further consideration. Use of LIDAR should not be at the exclusion of conventional elevation survey data if an alternative or check is necessary to meet timing or quality control/quality assurance needs of mitigation performance monitoring.

Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297) requires NMFS provide EFH conservation

recommendations for any federal action which 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 Recommendations

1. The USACE should comply with the recommendations identified in the November 12, 2012, Fish and Wildlife Coordination Act (i.e., 3 – 6, 11 – 13, 17, and 19, relative to EFH).

2. Mitigation for marsh impacts should be rescaled based on revised impact analyses to be conducted on final designs (i.e., 100% Design Decision Reports). If the amount of mitigation increases, the amount of funds should be adjusted accordingly and represented in the financial assurances.

3. The specific dollar amount and mechanism for financial assurances should be identified.

4. Adaptive management or contingency plans should be developed and included to reconcile mitigation shortfalls from overfilling or underfilling marsh creation mitigation sites.

Consistent with Section 305(b)(4)(B) of the Magnuson-Stevens Act and NMFS' implementing regulation at 50 CFR 600.920(k), your office is required to provide a written response to our EFH conservation recommendations within 30 days of receipt. Your response must include a description of measures to be required to avoid, minimize or offset the adverse impacts of the proposed activity. If your response is inconsistent with our EFH conservation recommendations, you must provide a substantive discussion justifying the reasons for not implementing the recommendations. If it is not possible to provide a substantive response within 30 days, the USACE should provide an interim response to NMFS, to be followed by the detailed response. The detailed response should be provided in a manner to ensure it is received by NMFS at least 10 days prior to the final approval of the action (i.e., signature of the final PIER). Recognizing the EFH consultation is included under alternative arrangements for the National Environmental Policy Act, NMFS will work expeditiously with the USACE to resolve the comments.

The NMFS appreciates close and cooperative coordination by the USACE and your staff on HSDRRS mitigation. If you have questions or wish to discuss our comments, please contact Patrick Williams at (225)389-0508, extension 208 or patrick.williams@noaa.gov. Thank for the opportunity to review and comment on the draft PIER.

Sincerely,

Virginia M. Fay

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

c:
FWS, Lafayette, Trahan, Walther
EPA, Dallas, Ettinger
LA DNR, Consistency, Haydel
F/SER46, Swafford
F/SER4, Rolfes, Dale
F/SER, Key, Silverman
NOAA PPI, Nunenkamp
Files

BOBBY JINDAL
GOVERNOR

STEPHEN CHUSTZ
INTERIM SECRETARY

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

February 25, 2014

Tammy Gilmore
Corps of Engineers- New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

RE: **C20140014,** Coastal Zone Consistency
New Orleans District, Corps of Engineers
Direct Federal Action
Programmatic IER # 37 for purchase of mitigation bank credits from within the WBV Basin
Jefferson, St. Charles, Lafourche and Plaquemines Parishes, Louisiana

Dear Ms. Gilmore:

The above referenced project has been reviewed for consistency with the Louisiana Coastal Resources Program in accordance with Section 307 (c) of the Coastal Zone Management Act of 1972, as amended. The project, as proposed in this application, is consistent with the LCRP.

If you have any questions concerning this determination please contact Carol Crapanzano of the Consistency Section at (225) 342-9425 or 1-800-267-4019.

Sincerely,

Don Haydel
Acting Administrator
Interagency Affairs/Field Services Division

DH/JDH/cmc

cc: Dave Butler, LDWF
Kirk Kilgen, OCM
Frank Cole, OCM

Appendix R

Draft PIER 37
Public Review Comments
and CEMVN Responses

TABLE OF CONTENTS

Comment Response Matrices

Date Received	Person	Comment (may be paraphrased or summarized)	Final Response
5/2/2014	Lance Hatten Jean Lafitte NHPP	The NPS supports the location of mitigation for general flood side fresh marsh impacts within the Park as described in the draft section 2.5.5.2.	Acknowledged.
5/2/2014	Lance Hatten Jean Lafitte NHPP	PIER defines impacts to Park resources in a different way than were agreed to in the past. Because of this change, mitigation for these impacts to former exchanged lands would be shifted from inside the park to outside the park. This is described in Section 2.5, page 2-9 and Appendix E of the PIER. The NPS does not agree or support these potential changes in the TSMPA.	Acknowledged. CEMVN has not changed its position on Park impacts.
5/2/2014	Lance Hatten Jean Lafitte NHPP	Rather than provide additional comments on the Park/404c sections and the respective appendices within the PIER at this time, the NPS proposes to address these issues in the Park/404c TIER. The NPS looks forward to working with the USACE and EPA in the development of this TIER in order to find the best solution to these complicated circumstances.	CEMVN appreciates the preliminary feedback and will continue to coordinate closely with NPS as these projects undergo advanced design and further NEPA compliance.
5/2/2014	David T. Palmer, Chitimacha Tribe of Louisiana	Although given the terms of the PA not likely to become an issue, the language about the remote sensing for potential submerged cultural resources in the borrow area seemed ambiguous to me as to whether this surveying was planned or not. Is it planned? Is there any data and modeling available to predict the likelihood of submerged sites within the borrow area?	CEMVN will be evaluating the potential impacts/adverse effects of each of the proposed mitigation projects as they are identified and that the potential impacts/adverse effects of each proposed mitigation project will be addressed in a Tiered IER (TIER), just as with the proposed mitigation projects for PIER 36 (LPV HSDRRS). Section 106 consultation will continue pursuant to the stipulations of the Programmatic Agreement executed on June 18, 2013. The CEMVN will notify the Chitimacha Tribe of Louisiana of its intent to prepare tiered Individual Environmental Reports (TIERs) evaluating the proposed mitigation projects, and upon completion of the cultural resource investigation for each project, CEMVN will provide documentation of the Section 106 finding, including a copy of the cultural resource report, for the tribe's review and comment. A search for existing data in the vicinity of the borrow areas would occur during completion of the TIER to determine the need for any additional surveys. CEMVN will work with the SPHO's office to determine the likelihood of submerged sites and develop a survey strategy.
5/5/2014	Lindsey Bilyeu, Choctaw Nation of Oklahoma	The Choctaw Nation of Oklahoma thanks the US Army Corps of Engineers, New Orleans District, for the correspondence regarding the above referenced project. There is the possibility of encountering Choctaw sites in the project area. We recently have become aware of Choctaw village sites in Louisiana, once of which is approximately 4 to 5 miles away from the project area in Jefferson Parish . While this wouldn't be in the direct APE, it is still important to note its presence and the possibility of encountering artifacts related to the Tribe. Due to the number of sites present in the project area, and the high possibility of encountering unrecorded sites, Choctaw Nation of Oklahoma strongly recommends that the project area and borrow sources be surveyed prior to project activities. We ask that these surveys be sent to our office once available. If you have any questions, please contact our office at 580-924-8280 ext. 2631.	The CEMVN will continue consultation with the Choctaw Nation of Oklahoma pursuant to the stipulations of the Programmatic Agreement executed on June 18, 2013. The CEMVN will notify the Choctaw Nation of its intent to prepare tiered Individual Environmental Reports (TIERs) evaluating the proposed mitigation projects, and upon completion of the cultural resource investigation for each project, CEMVN will provide documentation of the Section 106 finding, including a copy of the cultural resource report, for the tribe's review and comment.
5/5/2014	Virginia M Fay NMFS	The NMFS acknowledges the WBV flood protection features impacted forested wetlands and fresh marsh which were either non-tidal or had limited tidal function. However, some of the proposed mitigation would convert tidal waters designated as essential fish habitat to non-tidal habitat. Therefore, continued coordination with NMFS is appreciated.	CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance.
5/5/2014	Virginia M Fay NMFS	The NMFS encourages the U.S. Corps of Engineers (USACE) to immediately progress to mitigation construction. The intent to implement mitigation concurrent with construction of the levees, floodgates, and pump stations has been exceeded for 60% of the WBV features.	CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance.
5/5/2014	Virginia M Fay NMFS	NMFS is concerned mitigation for non-Federal land may experience implementation delays due to USACE's desire for fee ownership of mitigation lands. The USACE is urged to consider pursuit of non-standard real estate agreements by seeking perpetual conservation servitudes in lieu of fee simple acquisition.	CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance. USACE Engineer Regulation 405-1-12, paragraph 12-9, requires acquisition of fee title for fish and wildlife mitigation lands. The regulation sometimes allows for a lesser interest to be acquired but only if justified based on project-specific circumstances. However, any lesser interest is likely to require a non-standard estate that would have to be approved by Headquarters USACE. Discussions with Mississippi Valley Division staff for other projects indicate that it is highly unlikely that such approval would be granted. From a practical standpoint, acquisition of mitigation lands in fee is necessary to avoid conflicts with the landowner about access to or usage of the property and to ensure perpetual protection of the newly created or enhanced habitats.
5/5/2014	Virginia M Fay NMFS	The final scaling of mitigation should be accomplished while preparing tiered Individual Environmental Reports (TIER). Final scaling is encouraged to be accomplished through interagency coordination to determine benefits based on advanced design details. For marsh mitigation, this generally would involve conducting Wetland Value Assessments (WVA) at both the 35% and 95% Design Documentation Report (DDR) stages for final sizing used for the 100% design. Please note tidal water areas which will be converted to non-tidal forested habitat as mitigation must be assessed under the future-without project scenario using the WVA marsh model to determine the loss of fisheries functions. Those losses must be offset with acceptable mitigation (e.g. marsh creation). If the USACE's schedule is limiting, NMFS is willing to explore means to conservatively size and construct mitigation and reconcile any potential surplus as a tier to the Cumulative Environmental Document.	CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance.
5/5/2014	Virginia M Fay NMFS	Elevation as an indicator of hydro period is of paramount importance to assess success of tidal marsh mitigation. Please note that an adequate density of elevation data is necessary to assess the percentage of the mitigation areas meeting the elevation success criteria. Use of LIDAR should not be at the exclusion of conventional elevation survey data if an alternative or check is necessary to meet timing or quality control/quality assurance needs of mitigation performance monitoring	CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance.
5/5/2014	Virginia M Fay NMFS	NMFS has coordinated often with the U.S. Anny Corps of Engineers (USACE) on potential impacts to water quality associated with borrow pits in open water (e.g. Lakes Cataouatche and Salvador). As the literature suggests, potential environmental impacts from open water borrow pits vary by location and estuary. The USACE is encouraged to include water quality monitoring in supplemental and final PIERs to assess if hypoxia develops. Such monitoring would help with the development of potential contingency measures for future designs if not also for corrective action. The USACE's monitoring of water quality for Individual Environmental Report 11 and the Mississippi River-Gulf Outlet Ecosystem Restoration Study was helpful in this regard. It is suggested scopes of work similar to those be included and repeated annually for three years. NMFS is willing to assist the US ACE in further scoping a monitoring plan to assess impacts to water quality	CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance.
5/5/2014	Virginia M Fay NMFS	The PIER should be revised to include not only the detail and recommendations identified in the February 2014 draft Fish and Wildlife Coordination Act Report, but also comments provided by NMFS on that Report by letter dated April 10,2014.	Recommendations in the Final CAR have been modified as per NMFS 10 April 2014 letter and will be responded to by CEMVN in the final PIER.
5/5/2014	Virginia M Fay NMFS	It should be noted EFH has not been designated for gulf stone crab or pink shrimp in the project area. Therefore, NMFS recommends those species be deleted from the PIER.	Concur
5/5/2014	Virginia M Fay NMFS	The USACE should comply with the recommendations identified in the draft February, 2014, Fish and Wildlife Coordination Act and comments by NMFS letter dated April 10, 2014.	The final CAR for PIER 37 (May 27, 2014) incorporates NMFS April 10, 2014 comments on the draft CAR. Responses to the recommendations in the final CAR have been incorporated into the final PIER in section 8.2.
5/5/2014	Virginia M Fay NMFS	Loss of open water designated as EFH should be assessed in the quantification of mitigation needs. Acceptable mitigation (e.g. marsh creation) for loss of open water habitat should be developed through coordination with NMFS.	Concur
5/5/2014	Virginia M Fay NMFS	Mitigation for marsh impacts should be rescaled based on revised impact analyses to be conducted on advanced and final designs (i.e., 35%, 95% 100% Design Decision Reports). If the amount of mitigation increases, the amount of funds should be adjusted accordingly and represented in the financial assurances.	Mitigation quantities will be based on actual impacts as reflected in as-built drawings. The Corps will mitigate for all unavoidable impacts and has budgeted sufficient funds for the effort.
5/5/2014	Virginia M Fay NMFS	The specific dollar amount and mechanism for financial assurances should be identified.	The WBV Project Partnership Agreement between the CPRA of Louisiana and the Federal Government provides the required financial assurances for this mitigation project. In the event that the non-Federal sponsor fails to perform, the CEMVN has the right to complete, operate, maintain, repair, rehabilitate or replace any project feature, including mitigation features, but such action would not relieve CPRA of is responsibility to meet its obligations and would not preclude the US from pursuing any remedy at law or equity to ensure CPRA's performance.
5/5/2014	Virginia M Fay NMFS	Adaptive management or contingency plans should be developed and included to reconcile mitigation shortfalls from overfilling or under filling marsh creation mitigation sites.	Concur
5/5/2014	Kyle Graham CPRA	The district engineer shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.	Concur
5/5/2014	Kyle Graham CPRA	Delays in the implementation of compensatory mitigation substantially increases the State's share of the cost.	CEMVN disagrees. The impacts from the HSDRRS work were assessed a 57 year period of analysis assuming it would take 7 years from the time the impacts occurred to implement the mitigation. Mitigation projects were anticipated at that time to be on the ground in 2013. Current schedule has these projects on the ground in 2016. Increasing the period of analysis from 57 years to 60 years to capture the additional 3 years of temporal loss would have little effect on the output of the model, minimally increasing the AAHUs required to be offset. Additionally, applying the NFS's cost share to this increased mitigation requirement would result in an extremely small increase in cost to the NFS for implementing the mitigation projects.
5/5/2014	Kyle Graham CPRA	The methodology used in the determination of WBV wetland impacts is unclear to CPRA. We are aware that USFWS used the WVA method to determine wetland impacts…were the wetland impacts solely determined using aerial photography of was an on-the-ground impact assessment used?	All impacts presented in the IERs were assessed using data obtained from field investigations conducted within the footprints stated in the IERs. The footprints in the IERs were based on 35% engineering design. For the mitigation PIERs, the footprint of the HSDRRS work was refined based on the 95-100% plans that were back checked by aerial photography and verified by the project's PM. The field data obtained during completion of the IERs was sufficient for the re-running of WVAs based on the revised footprints. Please note that impacts as stated in the IERs were significantly reduced upon review of the 95-100% plans. Please also reference section 1.4.3.4 in the WBV HSDRRS Mitigation PIER 37.
5/5/2014	Kyle Graham CPRA	There are discrepancies in calculations in Tables 1-3 and 2-4.	As stated in section 1.4.4 in PIER 37, impacts from WBV original construction (as found in EA 437 and 439) are also being mitigated along with the HSDRRS impacts. Please see table 1-4 in that section that presents the additional 125 AAHUs being mitigated along with the impacts found in table 1-3.
5/5/2014	Kyle Graham CPRA	CPRA requests a full explanation of wetland impact calculations accompanied by maps showing impact to protected side and flood side habitat types by reach with a clear demarcation of fully federal vs. cost-shared compensatory wetland mitigation responsibilities by reach.	Mitigation is being carried out for all of the cumulative unavoidable impacts for incurred during the construction of the ach the LPV and WBV projects as a whole. We fund allocate the overall cost of mitigation by habitat type based upon the funding source cost-share of the construction of the feature that caused the impacts, but do not otherwise associate the specific portions of mitigation projects with specific construction contracts. No such association is needed for the fulfillment of mitigation responsibilities for the cumulative construction impacts of the projects. We have attached a tabulation of the acres and associated AAHUs by habitat type and the funding source(s) used to construct each contract in the LPV/WBV projects. We have also attached enclosed a tabular accounting of the AAHUs by habitat type and the funding sources budgeted for each environmental mitigation project.

Date Received	Person	Comment (may be paraphrased or summarized)	Final Response
5/5/2014	Kyle Graham CPRA	USACE has not met the commitments made in letter to Governor Jindal dated March 19, 2010…the project included in the TSP are neither large-scale or within areas identified in the State Master Plan.	The March 19, 2010 letter from Assistant Secretary of the Army (ASA), Jo Ellen Darcy, to Governor Jindal states, "Moreover, the Corps will develop HSDRRS mitigation plans in those high priority areas that also are identified within the state master plan, specifically the West Bank and Lake Pontchartrain areas." Since the recommended plan for the WBV HSDRRS mitigation is in the West Bank area as specified in the March 19, 2010 letter, the projects in the TSMPA are consistent with the ASA's direction. In addition, since all of the WBV HSDRRS mitigation projects were required to meet 100% of the mitigation requirement, we have produced large scale projects that will provide greater ecological benefit within the basin.
5/5/2014	Kyle Graham CPRA	The USACE evaluated two project alternatives put forward by the State that coincide with the 2012 coastal Master Plan. They were screened out based on high costs …the basis for this analysis of costs is not clear, as CPRA has not been allowed to review the cost estimates developed by USACE.	The two marsh project alternatives (Naomi Alternative 1 and Naomi Alternative 2) were screened out for a variety of reasons - including increased costs. In comparison to the Fresh Marsh TSP at Jean Lafitte, both alternatives: - required more acreage since the Naomi Alternatives had a lower mitigation potential than the TSP Project - required more borrow material since water depths at the Naomi sites were deeper than those found at TSP site - were intermediate marsh projects which required planting of native vegetation to ensure success of the project (same for all HSDRRS Mitigation intermediate marsh projects) - would have greater real estate costs (and potentially require condemnation) since most of the land at the proposed Naomi sites were privately owned Due to the above reasons, Naomi Alternative 1 was twice as expensive as the Fresh Marsh TSP. In addition to the above, Naomi Alternative 2 required construction of a foreshore rock dike which caused this alternative to be five times as expensive as the Fresh Marsh TSP. The State of Louisiana declined to pay for the additional costs associated with this Locally Preferred Plan.
5/5/2014	Kyle Graham CPRA	The State also put forward an alternative project identified in the 2012 Coastal Master Plan that would create brackish marsh as mitigation. USACE indicated that this alternative would require demonstration that in-kind mitigation of swamp habitat is not possible or that WRDA 2007 Section 2036(a) must be changed by Congress. It is not clear where in WRDA 2007 it is stated that swamp impacts must be mitigated in-kind. The projects identified in the TSP utilize less established restoration techniques and such have a higher risk of failure.	From the 31 August 2009 Implementation Guidance 2036(a) for the Water Resources Development Act of 2007-Mitigation for Fish and Wildlife and Wetland losses: "Section 2036(a) of the Water Resources Development Act of 2007 amends Section 906(d) of the WRDA of 1986 (U.S.C. 2283 (d)) to: b. ensure other habitat types are mitigated to not less than in-kind conditions to the extent possible". CEMVN disagrees as the conversion of agricultural fields is a common practice in the mitigation banking industry as well as the creation of marsh from open water.
5/5/2014	Kyle Graham CPRA	Given the high rates of subsidence and land loss we are facing along our coast, CPRA does not agree with reducing the elevation of land for the purposes of restoration or mitigation.	Comment noted.
5/5/2014	Kyle Graham CPRA	…guidelines call for maintaining exotic species below 5% of total cover; this requirement will be difficult to attain. These concerns also apply to O&M, it is unclear what CPRA's O&M responsibilities will entail for the various habitat types and how the mitigation success criteria will affect these responsibilities. The required duration of O&M is also unclear.	WRDA 2007 requires that Corps-constructed mitigation projects comply with the standards and policies of the Corps regulatory program. The <5% invasive species requirement is consistent with the regulatory standards used for mitigation banks. Specific monitoring plans for the mitigation projects in the TSMPA will be developed during completion of the TIERs.
5/5/2014	Kyle Graham CPRA	CPRA does not concur with the majority of USACE's proposed non-park/non-404© compensatory mitigation plan for WBV wetland impacts. We do concur with the purchase of credits from a wetland mitigation bank to fulfill compensatory wetland mitigation requirements to protected side BLH-Wet/Dry habitats.	Comment noted.
5/5/2014	Kyle Graham CPRA	We request a presentation on the HSDRRS WBV compensatory wetland mitigation at the May21, 2014 meeting of the CPRA Board.	Do to scheduling conflicts CEMVN personnel were unable to attend this meeting. CEMVN is currently working with CPRA to schedule a future briefing.
5/8/2014	Jeffrey D Weller USFWS	Comments and recommendations provided in our draft Fish and Wildlife Coordination Act Report dated February 21, 2014, still remain valid and are incorporated herein by reference.	Acknowledged.
5/8/2014	Jeffrey D Weller USFWS	The Service cannot support any alternative that would rely on bank credit from mitigation banks that are currently not approved by the Interagency Review Team.	Acknowledged. Only approved mitigation banks would be eligible to sell credits.
5/8/2014	Jeffrey D Weller USFWS	Additional NEPA analysis will investigate design alternatives of the alternative features. It is important that the Service and other natural resource agencies are involved in the analysis of these alternative designs and construction processes and given the opportunity to review and comment on engineering and design reports and plans and specification documents. At that time more detailed Wetland Value Assessments should be conducted by the Service on the proposed mitigation projects, and resizing efforts can be finalized.	Additional NEPA analysis concerning the programmatic elements of the TSMPA will be provided in future TIER(s). During the course of preparing the TIER(s) and through the associated PED process, proposed mitigation design features within a particular Corps-constructed mitigation project will likely be adjusted/modified. We will coordinate such adjustments and/or modifications with the Interagency Team (natural resource agencies), the PDT, and the Non-Federal Sponsor. Such coordination will include preparing more detailed and/or updated WVAs for the proposed mitigation features; however, these WVAs will be generated during the preparation of the TIER(s) rather than during preparation of the final project plans and specifications (P&S), since final P&S cannot be completed until after the TIER(s) is approved. The Interagency Team members and the Non-Federal Sponsor will be provided the opportunity to review and comment on the final P&S and associated engineering design reports.
5/8/2014	Jeffrey D Weller USFWS	Because of the uncertainty regarding total impacts to the Jean Lafitte National and Historical Park and Preserve (Park) as a result of language in the Omnibus Public Land Management Act of 2009, the Service recommends that the Corps delay any final design work and continue to coordinate with the Park staff prior to finalizing mitigation features that may be affected by the final determination of on park impacts.	Acknowledged.
5/8/2014	Jeffrey D Weller USFWS	The Service classifies submerged aquatic vegetation habitat as a Resource Category 2 habitat and, therefore, it should have "in-kind" mitigation. However, we acknowledge the fact that "in-kind" mitigation may be very difficult and somewhat unpredictable compared to marsh mitigation. Therefore, we would accept "out-of-kind" mitigation, that being marsh creation or similar aquatic habitat restoration. Section 3 should be revised to include a Resource Category 2 description.	The second paragraph on page 10 of Chapter 1 states that all open water impacts would be mitigated as marsh per the open water guidelines found in appendix D. The open water guidelines have been modified to include the Resource Category 2 description.
5/8/2014	Jeffrey D Weller USFWS	The Service has worked with the Corps and other natural resource agencies to develop these assumptions and accepts them for use with the LPV and WBV mitigation. These assumptions may be used as a template for future civil works projects; however, for future projects coordination with the natural resource agencies will be necessary to develop area and project specific assumptions.	Concur.
5/8/2014	Jeffrey D Weller USFWS	Appendix L: General Mitigation Guidelines (also present in Appendix H, sub-appendix 3), – Information in this appendix was developed for both the LPV and WBV basins; the Service has previously presented comments on this appendix during our review of PIER 36 (located in Appendix J). The Service incorporates those comments by reference and recommends that they be addressed within this PIER.	CEMVN's 3 December 2013 responses to comments made by USFWS in their 25 September 2013 letter are still valid. For those comments where CEMVN responded that "Site-specific plans will be developed for the Programmatic features of the TSMPA (Corps-constructed mitigation projects) as part of the applicable TIER(s), in coordination with the Interagency Team, the PDT, and the Non-Federal Sponsor" CEMVN would revisit these comments for potential incorporation into the site specific plans.
5/21/2014	Mr. Block	All of the people in this room, all of whom showed up today are against any use of their property.	Comment noted.
5/21/2014	Ms. Luft	I live in the middle of what is being proposed as the mitigation area. My fear, cost of flood insurance when I'm in the middle of a wetland. My fear, losing my house and property when that area floods. My fears are mosquito control, snakes, alligators. I am concerned about losing my home.	Comment noted.
5/21/2014	Ms. Vega	My 12 year old grandchild that lives with me, he lost his mother and he lives with us now, already picked out his lot in the middle of that blue area. This is very unfair. We searched and searched and searched for a piece of property that was in that same flood line, you didn't have to pay flood insurance. That was where we felt protected, we was higher. We wanted to get on higher ground. We paid a higher premium price for that tract of land so that we can live out our future there. I had no plans on moving. If they do this, my kids cannot live in my back yard. And that means that all of us would have to relocate so that we can live together. Who is it that is doing this to us, our state or our federal government, who do you blame this on?	Comment noted.
5/21/2014	Ms. Zeringue	How are they taking soil from this area and putting it somewhere else? I thought that you weren't supposed to cross soil unless that unit had the exact same soil that unit has that you are taking from. When I look at this and she is talking about bottomland hardwood and fresh marsh. The land that is around there is Coteau, I have never seen bottomland hardwood grow on that or in Pistolet.	Because BLH and swamp habitats exist adjacent to the project area that is currently under agricultural production, the ability of the land to support these habitat types is not presently a concern. However, during completion of the TIER addressing the Lake Boeuf projects, detailed analysis of the existing soil conditions and their ability to support the required habitat types would be preformed. Project designs would include modifying the existing soil as necessary to ensure success of the mitigation project.
5/21/2014	Ms. Zeringue	We cannot keep losing farmland. The land that we live on is farmland. It was sugarcane. We also had hay on it and now its soybean.	Comment noted.
5/21/2014	Ms. Zeringue	If I wanted to have the federal government with my land, I would enroll in WRAP, WRP or GRP, WRP is a Wetland Preserve Program. You can enroll in the program, you retain the ownership of that land or you can have a permanent easement and you get paid for your land, you have the use of your land. And they do not take away the royalties on that property; it stays with your family. It's a 30 year easement or a permanent. Most people go with the 30 year easement. It's the same thing with GRP.	Comment noted.
5/21/2014	Ms. Zeringue	I want to let all of the farmers know in this audience that if you any of this land that you are looking at you have a contract on it and that life span is not as its being used, you will be paying back that money plus ten percent to the government. The economic effect for Lafourche Parish for this project, and it doesn't even benefit us, is utterly ridiculous to even think about it. mother-in-law and sister-in-law live on this land. Their income comes from this land. Who is going to pay for the income that they will lose off of this land?	Comment noted.
5/21/2014	Ms. Zeringue	All of our land will flood if you come in to where they want because they want, like I'm telling you, is the middle of our property. When your house starts to sink, walls start to crack, what do you do?	Comment noted.
5/21/2014	Ms. Zeringue	The road that they were talking about building over by the railroad track, who is going to maintain that road? I don't think that they will. I don't want to maintain it.	The NFS would maintain the roadway as part of their operations and maintenance responsibilities for the mitigation project.
5/21/2014	Ms. Zeringue	If you take the middle of the property, what good is the back of the property for me? The value has dropped, who is going to buy it?	Comment noted.
5/21/2014	Mr. Babin	Do you realize the trickling effect that this is going to have when you take it from the sugarcane farmers? Sugar mills are going to have less to grind. We're not going to need as much diesel fuel, as much fertilizer. Everybody in this room is going to feel it.	Comment noted.
5/21/2014	Mr. Babin	You consider this, we want to keep the land, we want to keep farming the land. I am sure that there is other places you can find to do this project. I am not against you doing this project, just find somewhere else that is not as important and not as dear and entrusted to the people in this room.	Comment noted.
5/21/2014	Mr. Foret	Do we really trust what the Corps proposes to do? And can they do what they say they will do?	Comment noted.
5/21/2014	Mr. Foret	If the law that causes this has no paragraphs in it or anything extensive that would allow being in a negative on these mitigation credits to build facilities that will save lives and property, then I urge our elected representatives to go back to Washington and change the law.	Comment noted.

Date Received	Person	Comment (may be paraphrased or summarized)	Final Response
5/21/2014	Mr. Foret	Mother Nature, due to some of the previous Corps work, levees, between Mississippi and other projects have caused this area of South Lafourche to lose hundreds of acres. Many of these acres were once high property areas and now they are flooding. Why can't that acreage be included as the mitigation?	Comment noted.
5/21/2014	Mr. Bourgeois	If I can afford to build my house and I don't need flood insurance, I don't think the federal government should be able to tell me a damn thing about how high I need to build my house.	Comment noted.
5/21/2014	Mr. Toups	I'm going to call a special meeting to the Council and get a Resolution from all of our elected officials and ask all of you all to back off. Why this area was picked, I don't know. I don't know why you all picked here.	Comment noted.
5/21/2014	Ms. Randolph	Today at the Coastal Protection Restoration Authority meeting in Baton Rouge they passed a resolution against this action, the State did.	Comment noted.
5/21/2014	Ms. Randolph	If we would shore up Bayou Boeuf with the coastal protection there rather than taking land away and we could build some land around the areas that were threatened during that last storm which is in the same water shift.	Comment noted.
5/21/2014	Mr. Fields	Next time that you all propose something like this, make sure that you inform the people, the landowners, so that they can explore what you all are asking for, what you all want to do, because these people were not informed. They were not informed and that is very poor on your part	Comment noted.
5/21/2014	Unidentified	The first time when the Corps came out, supposedly the Corps was to come in on our land and look for artifacts and you would save artifacts. When you all mentioned oil somewhere in all of these documents you mentioned some people were in favor of it. People were in favor of wanting to save a few of those artifacts and clay, not doing this project on our land.	Comment noted.
5/21/2014	Ms. Klingman	If this project could possibly lead to private property being appropriated for wetland mitigation. I object vehemently and I think I would speak for everyone in this room.	Comment noted.
5/21/2014	Mr. Carlton	Nobody is above these people (the Corps), nobody, but the army. if they (The Corps) want your land, they are going to take it.	Comment noted.
5/21/2014	Mr. Richard	We can't get a permit to put in a cell tower in Kramer because you guys won't give us a permit for six years in these wetlands. And you're taking land away, I just don't buy it.	Comment noted.
5/21/2014	Ms. Bier	There has to be property somewhere else where you can do what you have planned for this Lake Boeuf area that will not have any residents in the project area.	Comment noted.
5/21/2014	Ms. Bier	What is going to happen to the people's property when water comes back from Lake Boeuf if you have a storm surge of some sort or a storm is pushing water in, it's going to keep coming.	Comment noted.
5/21/2014	Mr. Robichaux	You are going to take it from our land that is constantly sinking and our land is even going to go quicker because you just took our good dirt. I'm not going to do it, we will not do it.	Comment noted.
5/21/2014	Mr. Caballero	Lafourche Parish does not have a lot of land; we are on an alluvial bank that we built over a period of hundreds of years. To go and excavate that and take it out, we will lose farm land permanently. There will be no restoration.	Comment noted.
5/21/2014	Mr. Peltier	There is a priority that the mitigation project should be as close to the area damaged as possible. That area of damage is 40 or 50 miles away from here. You can't tell me that there is nothing in between that could be used. Those areas are all having tremendous erosion problems because of the levee system surrounding New Orleans. And this is all about protecting New Orleans. You've got those marshlands, those hardwood areas, those swamps should be rebuilt in that area, in Orleans, Jefferson and Plaquemines, not in Lafourche Parish.	Comment noted.
5/21/2014	Mr. Foret	Why can't you people decide to go to the canal that runs from Thibodaux all the way down to Raceland from Highway 90 and drain that, fix that, dig that out so that the water can move away from here?	Comment noted.
5/21/2014	Mr Richard	What is going to happen, once you all do mitigation, you cannot do any more digging, so what happens to all of our drainage water? We have a seven foot drop to LA 308 all of the way through the area, what happens to our water.	Comment noted.
5/21/2014	Mr. Tommy	Everyone in this room has been blindsided and they are against it, no matter what you tell us. So your next step is to make sure that we are informed. I'm not going to vote against it or for it if I don't have enough information on it.	Comment noted.
5/21/2014	Mr. Templett	Who is going to make the decision to expropriate this land?	The exercising of eminent domain (in Federal terms, condemnation) is a Corps corporate decision. The Assistant Secretary of the Army ultimately makes the final decision to proceed with condemnation upon execution of the legal document to refer the action to the Department of Justice for filing.
5/21/2014	Ms. Chaisson	Why do u want to take land from people to build a swamp. really, so yall gonna make people sale the land that they had for years to build a swamp, and why Raceland. u will be taking away peoples way of life, like fishing, crabbing, shrimping for a living. people that bring in our seafoods, or people who hunt. Did yall stop and think about the peoples homes that will flood because of this project. why don't yall build the swamp other places, what will happen yall will take this land from people, who want their lands to put down fresh veggies or make a beautiful flower garden, yall worried about New Orleans flooding, how about people in Raceland Louisiana , they could flood, I am sorry but I have to give my voice in saying no to this, find some other place, if yall dig in peoples lands think about u creating a sink hole, think about it, you u want people taking things from u that u had for all of your life.	Comment noted.
5/21/2014	Ms. Parker	It is too late to sell and no offer of compensation has been offered ! This project does not benefit the people of this area. Go somewhere else!!!!! My property is not directly part of the Pier 37 mitigation. However, because of it, my home of 36 years, will be surrounded by water on three sides, (across the street, behind it, and less than 1/4 mile to the end of the street. (Peltier Dr.) There is no doubt that I will flood at some point, not to mention mosquitoes, wild animals, snakes, alligators, and other wild creatures. My property value will be worthless !	Comment noted.
5/21/2014	Mr. Ellenberg	I am a citizen and taxpayer living in Lafourche Parish and I oppose this mitigation plan. I consider myself an environmentalist so I fully support the concept of restoring our wetlands. But to take high ground in a parish that is 2/3 water and turn part of it into an expensive marsh of questionable value is so misguided it is obviously a bureaucratic idea! Instead the mitigation should be done by restoring some of the wetlands being lost along the coast.	Comment noted.
5/22/2014	Mr and Ms Robichaux	This is an infraction upon our freedom to own land where we choose to. There are other choices where there are no residents to do you projects.	Comment noted.
5/21/2014	Ms. Gaubert	Four generations of my family were sugarcane farmers on this property. I DO NOT want this property taken from me and my family	Comment noted.
5/21/2014	Mr. Leroy Foret	Look at land on Hwy 307 from Hwy 182 to Kramer to Chack Bay. Look at building a boat launch and recreation area at Halpen Canal Pass under Hwy 90. why are certain property exempted from this project? I would like to see the Corps clean and dig the Halphen Canal that is in the back of my property. I do not know who is responsible for this canal.	Comment noted.
5/21/2014	Mr. Duplantis	Leave Raceland as it is. This project will hurt our community!	Comment noted.
5/21/2014	Ms Knoblock	We were not made aware of this project until a week ago. We are being lied to. This is a terrible idea. Land has been in families for many generations. Crops would be destroyed, many farmers would be unemployed and the poverty level would skyrocket in the area. you are not only taking family land, you are destroying peoples homes, jobs, and ways of life	Comment noted.
5/21/2014	Vernice Hebert	We flood enough when it rains. Don't flood us to save the city. Don't do to us what you wouldn't want someone to do to you	Comment noted.
5/21/2014	Cindy Dantin	The COE needs to do better research and go elsewhere that doesn't effect the livelihood of any community!!	Comment noted.
5/21/2014	Todd & Dawn Knoblock Breaux	Our sugarcane fields, cattle pastures, fishing/crawfish ponds threatened to be taken. People would be out of jobs and futures. Flood zone C will become a flood zone- threatens to flood our home/lose it and/or not be able to afford flood insurance. Why should we have our possessions taken and threatened to help New Orleans with no help to us!	Comment noted.
5/21/2014	Mr. LeBlanc	My home would be negatively affected by adding to the possibility of flooding and infestation of mosquitoes snakes and other pests that use swamps as their habitat!!	Comment noted.
5/21/2014	Roland Knoblock	Is the northern boundary for the lake Bouef project Sam's Lane as shown on the maps at the meeting held on May 21st in Lafourche parish? We were told it was further north.	Sam's land runs north and south. The mitigation projects are all to the east of Sam's Lane.
5/21/2014	Jody Landry	I am a business owner if these people move or flood and then move my business loses. If Raceland Sugars close down labor gets lost my business loses. When did Raceland flood last? I think everyone that digs ponds refurbishes wetlands.	Comment noted.
5/21/2014	Randy Blouin	I am not in favor of this project because I have future plans to extend my FAA registered runway all the way to the railroad track. This project would not allow me to utilize my property and would create an obstruction hazard and shorten my runway. it would allow the public to access my fenced in property and invite trespassers and expose me to more liability.	Comment noted.
5/22/2014	Tim Bourgeois	I was never informed of any public forums by the Corps in regards to this mitigation initiative. Please keep me on the mailing list	Comment noted.
5/22/2014	Linda Champagne	This project will cause the sugar industry to suffer, farmers will lose their farm land and create a loss in sugar production. It will create a snowball effect on the state of Louisiana. This will probably hurt my son's future and the whole state of Louisiana...DONT DO IT!!	Comment noted.

Date Received	Person	Comment (may be paraphrased or summarized)	Final Response
5/21/2014	Denis Knobloch, Jr.	The land in discussion includes my entire lively hood. I raise sugarcane on the majority of the land. I also have a crawfish pond, fishing canals, and a large cattle pasture, all of which I have invested a large amount of time and money on, between my sugar cane crop and the railroad track to the rear of my property. If this land is taken away from me, I am out of a job. There will be no way I will be able to continue farming with less land than I am currently working since I am struggling already to make ends meet. I am 61 years old. Will you replace my wages and support me since this may be taken away from me, and I do not have any retirement options to fall back on?	Comment noted.
5/21/2014	Denis Knobloch, Jr.	The land I purchased and inherited, and do not desire to lose, has been in the family for 5 generations. It is difficult for me to understand that even though people fight for their country and struggle to hold on to their land in bad times, could still have their land, a prized possession to many in this area, stolen away from them and their future generations. As most other landowner's families also do, my children and my grandchildren enjoy this property that is threatened to be taken away from them. Many know that utilizing property such as this to fish, farm, and raise livestock helps to keep them busy, connected to our south Louisiana culture, and out of trouble. The only thing is most generations from this area, especially sugarcane farmers, can leave their children and future generations is the land and past stories of this land. Is this what you wish to rob from us?	Comment noted.
5/21/2014	Denis Knobloch, Jr.	Most of the land to the rear of my property has to be pumped due to it being low lying land and water coming in and collecting there. I also have a canal located on my property that is needed to drain my property and the neighboring properties. This canal gives me access to my property behind the railroad track. This property is only accessible by boat as it is cut off by railroad track and cross canal. This property includes two railroad trestles that must be left open.	Comment noted.
5/21/2014	Denis Knobloch, Jr.	I could continue at length to explain my point of view and reasoning of why I do not approve of the choices of those who have not taken in to account the lives of those involved in losing land; however, I will conclude here. If there are any questions or if there is a need for recommendations of places with vacant land that does not function to provide for the lives and incomes of others, you can contact me as I would be glad to help.	Comment noted.
5/22/2014	Mary L. Landrieu United States Senator	Impacted communities and individual landowners deserve a seat at the table when these decisions are being made, not after the fact.	The U.S. Army Corps of Engineers, New Orleans District (Corps) solicited public input at multiple public meetings in various locations in the WBV basin. Basic project descriptions were also forwarded to all landowners from whom Right -of-Entry (ROE) for investigations was requested. Additionally, comments received regarding mitigation projects will become part of the official record for PIER #37.
5/22/2014	Mary L. Landrieu United States Senator	I hope you can find suitable mitigation projects that support local communities which are affected everyday by continuing coastal erosion. It is imperative that we address the coastal crisis with a balanced approach that includes both ecosystem restoration initiatives and essential flood protection infrastructure.	Acknowledged
5/22/2014	Mary L. Landrieu United States Senator	I was disappointed that the proposed mitigation projects largely ignored ongoing, state-funded initiatives.	A team comprised of both Corps and CPRA staff members worked together for nine months to identify projects that did coincide with the master plan. The developed alternatives were two to twelve times more expensive than the TSP projects and CPRA was unwilling to incur the additional costs to pursue the "locally-preferred" alternative(s). the Corps believes the WBV Mitigation TSP is consistent with the overall Master Plan's goal concerning habitat restoration that calls for "…an integrated and synergistic approach to ensure a sustainable and resilient coastal landscape." The Corps also considers the TSP projects to be consistent with the Master Plan's restoration goal for the Southeast Coast which is to "…sustain a diversity of coastal habitats including cypress swamps, marshes, ridges, and barrier islands."
5/22/2014	Mary L. Landrieu United States Senator	…many residents and local officials have legitimate questions and concerns that need to be addressed before the mitigation plan I finalized and implemented.	The proposed Lake Boeuf mitigation projects continue to be studied and the concerns expressed by landowners and public officials will be taken into account as the analysis progresses. There would be additional opportunity for comment associated with that TIER as well.
5/22/2014	Mary L. Landrieu United States Senator	…take into account the potential of property devaluation and economic loss into the decision making process	Prior to selection for implementation, the impacts associated with this proposed federal action would be studied in a future TIER.
5/29/2014	Carleen B. Babin, Council Clerk	The Lafourche Parish Council, convened in regular session on May 27, 2014, adopted Resolution No. 14-143 requesting the U. S. Army Corps of Engineers, New Orleans district, to terminate all proceeding related to the construction of mitigation areas in the Raceland area.	Acknowledged.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	I personally attended the public hearing at the Lafourche Parish Government Building in Mathews, Louisiana on May 21, 2014 and was present during the entire hearing. At no time did any Corps representative say that the deadline for comment was June 5, 2014-today.	The 30-day public comment period for the PIER 37 ended May 5th. However, comments submitted at the public meeting on May 21st and comments submitted after the meeting have been
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	The Bordelons' property and others in the vicinity of your proposed project and taking is in the vicinity of four means of interstate transportation--Bayou Lafourche, Louisiana Highway 308, several pipelines and a railroad. Your taking and the permanent restrictions as to the future use of the taken land will make coordinated access to these corridors of commerce difficult or impossible.	Comment noted.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	Your cost estimates for the acreage that you are planning to take are invariably too low--our understanding is that you are planning to take for $1,500 to $2,000 per acre. I can assure you that the Bordelons spent considerably more than those amounts for the property that your plans show will be taken from their tract.	The value for the actual acquisition of the land for mitigation purposes has not been estimated by CEMVN.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	Your taking will involve degrading the safety of pipelines if you take cover from those pipelines in order to lower the sea level elevation of the taken property. If you do not take cover from the pipelines, then will not those pipelines act as levees and keep the replenishment of the new swamp from taking place naturally?	The impact to pipelines under the proposed mitigation project will be addressed during completion of the TIERs.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	Our team's discussions with pipeline representatives have revealed that those pipeline owners and operators are unaware of your plans for their property. We assume that you gave them the same consideration as you gave to the landowners when giving notice of your plans.	Further coordination with property owners and with those who have easements on the property within the proposed footprint of the projects in the TSMPA will occur during completion of the TIERs.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	Our headlines are filled with warnings about West Nile virus and other diseases spread by mosquitoes. Your project will bring those threats very close to every family in the vicinity.	Comment noted.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	You will remove acreage from commercial use that simply cannot be replaced in a parish such as ours in which high land is in such short supply.	Comment noted.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	Our headlines are likewise filled with dire warnings about the effects of coastal erosion and dangers to low lying areas presented by each hurricane's passing. Gallows humor in our community include comments about waiting a little while for our homes to become beachfront property--and you are planning to speed this process.	Comment noted.
6/5/2014	L. Clifton Dickerson III, on behalf of Mr. and Mrs. Benjamin G. Bordelon	We recognize, as do you, that the comment period afforded to landowners was insufficient to allow those landowners to mount an effective defense to the conclusions reached in your years long study of our area.	Comment noted.
6/5/2014	Dan Duplantis, Jr.	We have not had, in the past nor do we have now, any interest in selling our land to the Corps for any reasons, especially to become a wetlands mitigation bank.	Comment noted.

Date Received	Person	Comment (may be paraphrased or summarized)	Final Response
6/5/2014	Dan Duplantis, Jr.	Raceland Raw Sugar LLC employs 95 full time workers and during harvest season, we will grow to 150 workers. That is 150 families that rely on our facility to remain profitable. We receive sugar cane from 40 different growers. Each farm has approximately 10 workers. That is 400 more families that rely on our facility to remain profitable. When all the supply companies are added in (chemicals, fertilizers, part stores, fuel dealers, equipment dealers, etc.), you can see just how many families you touch when excellent agricultural property is taken out of production.	Comment noted.
6/5/2014	Dan Duplantis, Jr.	The tract of land you are targeting is some of the highest and best agricultural land that we have, and any amount of acreage that you are proposing to take out of production definitely weakens our facility in Raceland.	Comment noted.
6/5/2014	Dan Duplantis, Jr.	One of the big reasons why we purchased the property was its close proximately to our processing facility. Freight to our facility is very affordable being just a few miles away. As we go out looking for cane to fill this void, it would definitely come at a much higher rate that would possible make it not economically feasible to process.	Comment noted.
6/5/2014	Dan Duplantis, Jr.	I want the Corps of Engineers to know that by coming to Lafourche parish to solve problems that were created elsewhere will only weaken a farming industry that supports many families and has struggled to stay afloat for many years. We do not think this is fair and do not care to do any business with the Corps of Engineers on this wetland mitigation matter.	Comment noted.

Agency and Public Comments

United States Department of the Interior

NATIONAL PARK SERVICE
Jean Lafitte National Historical Parkand Preserve
New Orleans Jazz National Historical Park
419 Decatur Street
New Orleans, Louisiana 70130-1035

IN REPLY REFER TO:

A.1.2 (BARA)

May 2, 2014

Joan M. Exnicios
Chief, Environmental Planning Branch
US Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160

Dear Ms. Exnicios,

We received the April 2, 2014 notice for Programmatic Individual Environmental Report #37 (PIER) titled "West Bank and Vicinity (WBV) Hurricane Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana prepared by the U.S. Army Corps of Engineers, New Orleans District (USACE). The PIER proposes to implement only one feature of the tentatively selected mitigation plan alternative (TSMPA) at this time, namely the purchase of the mitigation bank credits for protected side bottomland hardwoods general impacts. The NPS supports the location of mitigation for general flood side fresh marsh impacts within the Park as described in the draft section 2.5.5.2.

The National Park Service (NPS) understands that the primary USACE decision addressed in the PIER involves the identification and implementation of the previously described mitigation bank credits. However, there is information in this document that discusses mitigation for past impacts from HSDRRS work in Jean Lafitte National Historical Park and Preserve (Park). Specifically, this PIER defines impacts to Park resources in a different way than were agreed upon in the past. Because of this change, mitigation for these impacts to former exchanged lands would be shifted from inside the park to outside of the park. This is described in Section 2.5, page 2-9 and Appendix E of the PIER. The NPS does not agree or support these potential changes to the TSMPA.

It is our understanding that the mitigation for these impacts within the Park and the Environmental Protection Agency 404c (404c) management area will be addressed subsequently in a separate Park/404c Tiered Individual Environmental Report (TIER). Rather than provide additional comments on the Park/404c sections and the respective appendices within the PIER at this time, the NPS proposes to address these issues in the Park/404c TIER. The NPS looks forward to working with USACE and EPA in the development of this TIER in order to find the best solution to these complicated circumstances. We have always expected those solutions and decisions would be made in working together on the park-specific TIER. Furthermore, the NPS is not a party to the alternative arrangements to NEPA that the USACE is currently operating under in performance of the PIER. If there are further changes to the determination of total park impacts and mitigation acreage, then there will be inconsistencies between the currently described final array of mitigation

projects by habitat type in the PIER, and what may be the final requirements described in the Park/404c TIER and an associated NPS Environmental Assessment (EA).

We appreciate the opportunity to provide comments on the PIER. If you have any questions or concerns about our comments, feel free to contact Guy Hughes, Chief Resource Management at 504-589-3882 ext. 128.

Sincerely,

Lance Hatten
Superintendent

From: Dr. David Palmer
To: MVN Environmental
Cc: Kim Walden; Hill, Rebecca MVN
Subject: [EXTERNAL] PIER 37 draft comments
Date: Friday, May 02, 2014 12:53:52 PM

Dear Ms. Behrens:

We appreciate the opportunity to review and comment on the draft of PIER 37. The draft, together with the PA of June 18, 2013, provides for thorough consideration of, and consultation regarding, cultural resources. We also appreciate the consideration given in the draft of PIER 37 for any nesting bald eagles that might be present in the project areas.

Although given the terms of the PA not likely to become an issue, the language about the remote sensing for potential submerged cultural resources in the borrow area seemed ambiguous to me as to whether this surveying was planned or not. Is it planned? Is there any data and modelling available to predict the likelihood of submerged sites within the borrow area?

I appreciate your attention to these comments and questions.

Sincerely,

David

David T. Palmer, PhD, RPA 12440
Deputy Tribal Historic Preservation Officer
Chitimacha Tribe of Louisiana
P.O. Box 661
Charenton, LA 70523
337-482-5198

From:	Williams, Eric MVN
To:	Behrens, Elizabeth MVN
Subject:	FW: RE: PIER#37, West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, LA (UNCLASSIFIED)
Date:	Wednesday, July 23, 2014 8:05:13 AM

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Hill, Rebecca MVN
Sent: Monday, May 05, 2014 1:18 PM
To: Lindsey Bilyeu
Cc: Williams, Eric MVN
Subject: RE: RE: PIER#37, West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, LA

Dear Ms. Bilyeu,

Thank you for your email and your request for continued consultation. I am copying Eric Williams, the project archaeologist for the LPV and WBV HSDRRS Mitigation projects.

The CEMVN will continue consultation with the Choctaw Nation of Oklahoma pursuant to the stipulations of the Programmatic Agreement executed on June 18, 2013.

The CEMVN will notify the Choctaw Nation of its intent to prepare tiered Individual Environmental Reports (TIERs) evaluating the proposed mitigation projects, and upon completion of the cultural resource investigation for each project, CEMVN will provide documentation of the Section 106 finding, including a copy of the cultural resource report, for the tribe's review and comment.

Please do not hesitate to contact me if I may be of any further assistance with this matter.

Respectfully,
Rebecca

Rebecca E. Hill
Archeologist/Tribal Liaison
US Army Corps of Engineers, New Orleans District

-----Original Message-----
From: Lindsey Bilyeu [mailto:lbilyeu@choctawnation.com]
Sent: Friday, May 02, 2014 3:59 PM
To: Hill, Rebecca MVN
Subject: [EXTERNAL] RE: PIER#37, West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, LA

Dear Rebecca,

The Choctaw Nation of Oklahoma thanks the US Army Corps of Engineers, New Orleans District, for the correspondence regarding the above referenced project. There is the possibility of encountering Choctaw sites in the project area. We recently have become aware of Choctaw village sites in Louisiana, once of which is approximately 4 to 5 miles away from the project area in Jefferson Parish .

While this wouldn't be in the direct APE, it is still important to note its presence and the possibility of encountering artifacts related to the Tribe. Due to the number of sites present in the project area, and the high possibility of encountering unrecorded sites, Choctaw Nation of Oklahoma strongly recommends that the project area and borrow sources be surveyed prior to project activities. We ask that these surveys be sent to our office once available. If you have any questions, please contact our office at 580-924-8280 ext. 2631.

Thank You,

Lindsey Bilyeu

NHPA Senior Section 106 Reviewer

Choctaw Nation of Oklahoma

Historic Preservation Department

P.O. Box 1210

Durant, OK 74702

580-924-8280 Ext. 2631

Classification: UNCLASSIFIED
Caveats: NONE

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 5, 2014 F/SER46/PW:jk
225/389-0508

Ms. Joan M Exnicios, Chief
Regional Planning and Environmental Division South
New Orleans District Environmental Branch
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Ms. Exnicios:

NOAA's National Marine Fisheries Service (NMFS) has received your letter dated April 2, 2014, transmitting the draft Programmatic Individual Environmental Report (PIER) #37 titled, "**West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana**." The PIER #37 document evaluates alternatives for mitigating unavoidable habitat impacts incurred during the construction of the West Bank and Vicinity (WBV) Hurricane Surge Damage Risk Reduction System (HSDRRS).

The PIER identifies the Tentatively Selected Mitigation Plan Alternative (TSMPA) comprised of various mitigation features. Only the purchase of mitigation bank credits for bottomland hardwood impacts are proposed at this time. Other features of the TSMPA, including marsh mitigation, would be detailed and finalized in future documents tiered off this PIER. The NMFS has reviewed the draft PIER and overall finds the document thorough and well prepared. The following general and specific comments are offered.

General Comments

The NMFS acknowledges the WBV flood protection features impacted forested wetlands and fresh marsh which were either non-tidal or had limited tidal function. However, some of the proposed mitigation would convert tidal waters designated as essential fish habitat to non-tidal habitat. Therefore, continued coordination with NMFS is appreciated. The NMFS is supportive of the adopted landscape perspective when screening mitigation alternatives by consolidating mitigation where possible to maximize ecosystem and ecological function and improving cost-efficiency.

The NMFS encourages the U.S. Army Corps of Engineers (USACE) to immediately progress to mitigation construction. The intent to implement mitigation concurrent with construction of the levees, floodgates, and pump stations has been exceeded for 60% of the WBV features. In addition to the already occurred planning and design delays, NMFS is concerned mitigation for

non-Federal land may experience implementation delays due to USACE's desire for fee ownership of mitigation lands. The USACE is urged to consider pursuit of non-standard real estate agreements by seeking perpetual conservation servitudes in lieu of fee simple acquisition.

The final scaling of mitigation should be accomplished while preparing tiered Individual Environmental Reports (TIER). Final scaling is encouraged to be accomplished through interagency coordination to determine benefits based on advanced design details. For marsh mitigation, this generally would involve conducting Wetland Value Assessments (WVA) at both the 35% and 95% Design Documentation Report (DDR) stages for final sizing used for the 100% design. Please note tidal water areas which will be converted to non-tidal forested habitat as mitigation must be assessed under the future-without project scenario using the WVA marsh model to determine the loss of fisheries functions. Those losses must be offset with acceptable mitigation (e.g. marsh creation). If the USACE's schedule is limiting, NMFS is willing to explore means to conservatively size and construct mitigation and reconcile any potential surplus as a tier to the Cumulative Environmental Document.

Elevation as an indicator of hydroperiod is of paramount importance to assess success of tidal marsh mitigation. Please note an adequate density of elevation data is necessary to assess the percentage of the mitigation areas meeting the elevation success criteria. Use of LIDAR should not be at the exclusion of conventional elevation survey data if an alternative or check is necessary to meet timing or quality control/quality assurance needs of mitigation performance monitoring.

The NMFS has coordinated often with USACE on potential impacts to water quality associated with borrow pits in open water (e.g. Lakes Cataouatche and Salvador). As the literature suggests, potential environmental impacts from open water borrow pits vary by location and estuary. The USACE is encouraged to include water quality monitoring in supplemental and final PIERs to assess if hypoxia develops. Such monitoring would help with the development of potential contingency measures for future designs if not also for corrective action. The USACE's monitoring of water quality for Individual Environmental Report 11 and the Mississippi River-Gulf Outlet Ecosystem Restoration Study was helpful in this regard. It is suggested scopes of work similar to those be included and repeated annually for three years. The NMFS is willing to assist USACE in further scoping a monitoring plan to assess impacts to water quality.

Specific Comments

The PIER should be revised to include not only the detail and recommendations identified in the February 2014, draft Fish and Wildlife Coordination Act Report, but also comments provided by NMFS on that Report by letter dated April 10, 2014 (enclosed).

It should be noted EFH has not been designated for gulf stone crab or pink shrimp in the project area. Therefore, NMFS recommends those species be deleted from the PIER.

The mitigation guidelines and success criteria (Section 7) should be drafted project-specifically for each TIER through interagency coordination. It is suggested this be accomplished prior to releasing drafts on public notice for review.

Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297) requires NMFS provide EFH conservation recommendations for any federal action which may result in adverse impacts to EFH. The NMFS has a findings with the New Orleans District that required EFH coordination for civil works projects would be fulfilled through our review of, and comment on, documents prepared in fulfillment of the National Environmental Policy Act. Therefore, NMFS recommends the following to ensure the conservation of EFH and associated marine fishery resources.

EFH Conservation Recommendations

1. The USACE should comply with the recommendations identified in the draft February, 2014, Fish and Wildlife Coordination Act Report and comments by NMFS letter dated April 10, 2014.

2. Loss of open water designated as EFH should be assessed in the quantification of mitigation needs. Acceptable mitigation (e.g. marsh creation) for loss of open water habitat should be developed through coordination with NMFS.

3. Mitigation for marsh impacts should be rescaled based on revised impact analyses to be conducted on advanced and final designs (i.e., 35%, 95% 100% DDRs). If the amount of mitigation increases, the amount of funds should be adjusted accordingly and represented in the financial assurances.

4. The specific dollar amount and mechanism for financial assurances should be identified.

5. Adaptive management or contingency plans should be developed and included to reconcile mitigation shortfalls from overfilling or underfilling marsh creation mitigation sites.

Consistent with Section 305(b)(4)(B) of the Magnuson-Stevens Act and NMFS' implementing regulation at 50 CFR 600.920(k), your office is required to provide a written response to our EFH conservation recommendations within 30 days of receipt. Your response must include a description of measures to be required to avoid, minimize or offset the adverse impacts of the proposed activity. If your response is inconsistent with our EFH conservation recommendations, you must provide a substantive discussion justifying the reasons for not implementing the recommendations. If it is not possible to provide a substantive response within 30 days, the USACE should provide an interim response to NMFS, to be followed by the detailed response. The detailed response should be provided

in a manner to ensure it is received by NMFS at least 10 days prior to the final approval of the action (i.e., signature of the final PIER). Recognizing the EFH consultation is included under alternative arrangements for the National Environmental Policy Act, NMFS will work expeditiously with the USACE to resolve the comments.

The NMFS appreciates close and cooperative coordination by the USACE and your staff on HSDRRS mitigation. If you have questions or wish to discuss our comments, please contact Patrick Williams at (225)389-0508, extension 208 or patrick.williams@noaa.gov. Thank for the opportunity to review and comment on the draft PIER.

Sincerely,

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

Enclosure

c:
FWS, Lafayette, Trahan, Walther
EPA, Dallas, Ettinger
LA DNR, Consistency, Haydel
F/SER46, Swafford
F/SER4, Rolfes, Dale
F/SER, Key, Silverman
NOAA PPI, Nunenkamp
Files

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

State of Louisiana

BOBBY JINDAL
GOVERNOR

May 5, 2014

Colonel Richard L. Hansen
District Commander
U.S. Army Corps of Engineers, New Orleans District
Executive Office
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Colonel Hansen:

This correspondence is intended to convey CPRA's comments on Programmatic Individual Environmental Report # 37 (PIER 37), prepared by the U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN) to assess the compensatory mitigation required due to wetland damages incurred during the construction of the West Bank and Vicinity (WBV) 100-year Hurricane and Storm Damage Risk Reduction System (HSDRRS). Because of the extensive destruction caused by Hurricanes Katrina and Rita in 2005, the accelerated completion of the WBV HSDRSS project was approved by Congress in 2006.

Due to the state of emergency created by Hurricanes Katrina and Rita and the need for expedited construction to reduce the imminent and continuing threat to life and property posed by the weakened and damaged hurricane and storm damage risk reduction system, the White House Council on Environmental Quality (CEQ) allowed CEMVN to deviate from the traditional National Environmental Policy Act (NEPA) compliance process (environmental assessment (EA) or Environmental Impact Statement (EIS)). The NEPA alternative arrangements allowed USACE to analyze the direct and indirect impacts to the natural and human environment in Individual Environmental Reports (IERs) and analyze the cumulative effects, including compensatory wetland mitigation, in a later Comprehensive Environmental Document (CED) and Programmatic IERs; it's our understanding that cumulative impacts will be analyzed within a future supplemental CED. In the Federal Register notice dated March 13, 2007, CEMVN stated its "intent to implement compensatory mitigation as early as possible in the process once unavoidable impacts have been determined." Likewise, Title 33 C.F.R. 332.3 states that "Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of or concurrent with the activity causing the authorized impacts. The district engineer shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity". The construction of the improvements to WBV began in 2007 and to this date, no compensatory mitigation has been performed. In addition, compensatory wetland mitigation has not been completed to date for pre-Katrina HSDRRS WBV construction activities. Delays in the implementation of compensatory mitigation substantially increases the State's share of the cost.

The methodology used in the determination of WBV wetland impacts is unclear to CPRA. The table in the IER Discrepancy Impact Memo in Appendix B of the PIER cites U.S. Fish and Wildlife Service (USFWS) Coordination Act Reports of various years (2009-2012). While we are aware that USFWS used the wetland value assessment (WVA) method to determine wetland impacts, little else is known. Were the wetland impacts solely determined using aerial photography or was an on-the-ground impact assessment used? The PIER contains discrepancies in calculations as well. For example, both Tables 1-3 and 2-4 present impacts by habitat type along with acreage required to mitigate those impacts to those habitats. The total impacts shown in Table 1-3 are 125 AAHUs lower than those presented in Table 2-4. Likewise, the impacts and required acreages by habitat type presented in these two tables do not correspond. CPRA requests a full explanation of wetland impact calculations accompanied by maps showing impacts to protected side and flood side habitat types by reach. These maps should also include a clear demarcation of fully federal vs. cost-shared compensatory wetland mitigation responsibilities by reach.

In a letter to Governor Jindal on March 19, 2010, Assistant Secretary of the Army Jo Ellen Darcy stated "As noted earlier, we are committed to identifying large-scale projects that will mitigate for the impacts caused by the HSDRSS program and provide the most effective benefits to coastal and ecosystem restoration. Moreover, the Corps will develop HSDRSS mitigation plans in those high-priority areas that are also identified within the state master plan, specifically the West Bank and Lake Pontchartrain areas". It is the opinion of CPRA that USACE has not met these commitments. The projects included in the Tentatively Selected Plan (TSP) are neither (a) large-scale in nature nor (b) within areas identified in the State Master Plan.

The March 31, 2008 Final Compensatory Mitigation Rule issued jointly by the Environmental Protection Agency (EPA) and USACE requires a watershed approach in order to sustain aquatic resource functions within the watershed. A watershed approach considers how the types and locations of compensatory mitigation projects function over time in a changing landscape and should consider habitat loss or conversion trends as well as sources of watershed impairment. The watershed in question for this mitigation effort is the Barataria Basin, one of the most imperiled and rapidly eroding watersheds in the United States.

Title 33 C.F.R. 332.3(c) requires the district engineer to use a watershed approach for compensatory mitigation. It further states, "in cases where the district engineer determines that an appropriate watershed plan is available, the watershed approach should be based on that plan." A consideration under 33 C.F.R. 332.3(c)((2)(iv) is that "planning efforts should identify and prioritize aquatic resources restoration, establishment, and enhancement activities, and preservation of existing aquatic resources that are important for maintaining or improving ecological functions of the watershed." The 2012 State Master Plan for a Sustainable Coast (2012 Coastal Master Plan) prioritizes a suite of projects to restore aquatic resources and both maintain and improve ecological functions in the Barataria Basin. The suite of projects identified within the Barataria Basin in the 2012 Coastal Master Plan focus on the creation of brackish marsh and the diversion of sediment/nutrient-laden water from the Mississippi River.

The USACE did evaluate two project alternatives put forward by the State that coincide with the 2012 Coastal Master Plan. These projects were screened out based on high costs relative to those alternatives selected by USACE in the Alternatives Evaluation Process (AEP) and previously identified as the WBV TSP. The basis for this analysis of costs is not clear, as CPRA has not been allowed to review the cost estimates developed by USACE.

The State also put forward an alternative project identified in the 2012 Coastal Master Plan that would create brackish marsh as mitigation. USACE indicated that going forward with this alternative would require demonstration that (a) in-kind mitigation of swamp habitat is not possible, or (b) WRDA 2007 Section 2036(a) must be changed by Congress. After review, it is not clear where in WRDA 2007 it is stated that swamp impacts must be mitigated in-kind. The likelihood of mitigation success is a criterion stated in all guiding legislation. With this in mind, marsh has been successfully created numerous times in the Barataria Basin. The projects identified in the TSP utilize less established restoration techniques and as such have a higher risk of failure.

One of the mitigation projects selected in the TSP calls for the degradation of existing agricultural land for the creation of BLH and swamp habitat. This requires the removal of roughly 1M cubic yards of material solely for the purpose of reducing elevation. Given the high rates of subsidence and land loss we are facing along our coast, CPRA does not agree with reducing the elevation of land for the purposes of restoration or mitigation.

In addition to the above concerns, CPRA generally has concerns with the monitoring requirements/mitigation success criteria set forth in the PIER. For example, for BLH and Swamp habitat types, these guidelines call for maintaining exotic species below 5% of total cover; this requirement will be difficult to attain. These concerns also apply to O&M; it is unclear what CPRA's O&M responsibilities will entail for the various habitat types and how the mitigation success criteria will affect these responsibilities. The required duration of O&M is also unclear.

In summary, CPRA does not concur with the majority of USACE's proposed non-park/non-404(c) compensatory mitigation plan for WBV wetland impacts. We do concur with the purchase of credits from a wetland mitigation bank to fulfill compensatory wetland mitigation requirements to protected side BLH-Wet/Dry habitats. We request a presentation on the HSDRRS WBV compensatory wetland mitigation at the May 21, 2014 meeting of the CPRA Board.

Coastal Protection and Restoration Authority Board
Wed, May 21, 2014 -- 09:30 a.m.
LaSalle Building
LaBelle Room
Baton Rouge, LA 70802
Contact: 225-342-3968

Respectfully,

Kyle Graham
Executive Director, CPRA

United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506

May 8, 2014

Colonel Richard L. Hansen
District Commander
U.S. Army Corps of Engineers
Attention: Ms. Elizabeth Behrens, CEMVN-PDN
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Hansen:

Please reference the U.S. Army Corps of Engineers' (Corps) draft Programmatic Individual Environmental Report # 376 (PIER #37) titled "West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Orleans, Plaquemines, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana." The draft PIER #37 was transmitted via an April 2, 2014, letter from Ms. Joan M. Exnicios, Chief of your Environmental Planning Branch.

PIER #37 is being prepared under the approval of the Council on Environmental Quality (CEQ) that will partially fulfill the Corps compliance with the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852, as amended; 42 U.S.C. 4321- 4347). Individual Environmental Reports are CEQ-approved alternative arrangements for compliance with NEPA that would allow expedited implementation of improved hurricane protection measures. Work proposed in PIER #37 is being conducted under the authority of Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4). That law authorized the Corps to upgrade two existing hurricane protection projects (i.e., Westbank and Vicinity of New Orleans [WBV] and Lake Pontchartrain and Vicinity [LPV]) in the Greater New Orleans area in southeast Louisiana.

The Fish and Wildlife Service (Service) submits the following comments in accordance with provisions of the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852, as amended; 42 U.S.C. 4321 et seq.).

PIER #37 evaluates alternatives for mitigating impacts resulting from the improved hurricane protection measures and identifies the tentatively selected mitigation plan alternative. Under this PIER, only the purchase of mitigation bank credits for protected-side bottomland hardwoods general impacts are recommended for implementation at this time. The other

mitigation features of the plan will be addressed in subsequent NEPA documents, or Tiered Individual Environmental Reports (TIERs).

General Comments

The draft PIER #36 is well written and well organized. It provides an adequate description of fish and wildlife resources in the study area, the purpose and need for the proposed action, and the potential impacts associated with each alternative location. The Service has provided comments throughout the planning process regarding our support for the tentatively-selected plan and timing of mitigation relative to impacts. Comments and recommendations provided in our draft Fish and Wildlife Coordination Act Report dated February 21, 2014, still remain valid and are incorporated herein by reference.

While we are generally in support of the Tentatively Selected Mitigation Plan alternative, we are concerned that during mitigation plan formulation meetings the Corps presented a mitigation concept that would rely on bank/credits from mitigation banks that are currently not approved (or even potentially developed) by the Interagency Review Team. Because this concept does rely on banks that are not approved and functioning and could result in further delays in mitigation implementation the Service cannot support any alternative that would rely on this concept.

Additional NEPA analysis will investigate design alternatives of the alternative features. It is important that the Service and other natural resource agencies (i.e., the National Marine Fisheries Service (NMFS), the Louisiana Department of Wildlife and Fisheries, the Environmental Protection Agency, and the Louisiana Department of Natural Resources) are involved in the analysis of these alternative designs and construction processes. Accordingly, in order to provide feedback regarding potential impacts to natural resources and to provide measures of avoiding and minimizing those impacts, the Service and the other natural resource agencies should be provided opportunities to review and comment on engineering and design reports and plans and specification documents. At that time more detailed Wetland Value Assessments should be conducted by the Service on the proposed mitigation projects, and resizing efforts can be finalized.

Specific Comments

Section 2.5, Changes to Final Array Following AEP and Revised Project Descriptions, page 2-9 and Appendix E – Because of the uncertainty regarding total impacts to the Jean Lafitte National and Historical Park and Preserve (Park) as a result of language in the Omnibus Public Land Management Act of 2009, the Service recommends that the Corps delay any final design work and continue to coordinate with the Park staff prior to finalizing mitigation features that may be affected by the final determination of on park impacts.

Appendix D: Mitigation of Impacts to Open Water Habitats, Section 3, page D-4 – The Service classifies submerged aquatic vegetation habitat as a Resource Category 2 habitat and, therefore, it should have “in-kind” mitigation. However, we acknowledge the fact that “in-

kind" mitigation may be very difficult and somewhat unpredictable compared to marsh mitigation. Therefore, we would accept "out-of-kind" mitigation, that being marsh creation or similar aquatic habitat restoration. Section 3 should be revised to include a Resource Category 2 description.

Appendix K: LPV & WBV HSDRRS Mitigation: Wetland Value Assessment (WVA) Model Assumptions and Related Guidance – The Service has worked with the Corps and other natural resource agencies to develop these assumptions and accepts them for use with the LPV and WBV mitigation. These assumptions may be used as a template for future civil works projects; however, for future projects coordination with the natural resource agencies will be necessary to develop area and project specific assumptions.

Appendix L: General Mitigation Guidelines (also present in Appendix H, sub-appendix 3), – Information in this appendix was developed for both the LPV and WBV basins; the Service has previously presented comments on this appendix during our review of PIER 36 (located in Appendix J). The Service incorporates those comments by reference and recommends that they be addressed within this PIER.

The Service appreciates the opportunity to comment on the draft PIER #37, and we look forward to continuing coordination with the Corps and the other natural resource agencies to develop a feasible hurricane protection project for this region in a timely manner. If your staff has additional questions regarding our comments, please contact David Walther at (337) 291-3122.

Sincerely,

Jeffrey D. Weller
Field Supervisor
Louisiana Ecological Services Office

cc: Jean Lafitte National and Historical Park and Preserve, New Orleans, LA
National Marine Fisheries Service, Baton Rouge, LA
EPA, Dallas, TX
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA
LA Dept. of Natural Resources, CMD, Baton Rouge, LA
CPRA, Baton Rouge, LA

MARY L. LANDRIEU
LOUISIANA

United States Senate

WASHINGTON, DC 20510–1804

May 22, 2014

Colonel Richard Hansen, Commander
New Orleans District
United States Army Corps of Engineers
Post Office Box 60267
New Orleans, LA 70160-0267

Dear Colonel Hansen,

Thank you for this opportunity to comment on the West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation plan outlined in Programmatic Individual Environmental Report #37 (PIER #37). While I fully support responsible mitigation that offsets wetland impacts associated with critical infrastructure projects, I continue to have serious concerns about how the Army Corps selects and implements mitigation projects. Impacted communities and individual landowners deserve a seat at the table when these decisions are being made, not after that fact.

Additionally, I hope you can find suitable mitigation projects that support local communities which are affected everyday by continuing coastal erosion. It is imperative that we address the coastal crisis with a balanced approach that includes both ecosystem restoration initiatives and essential flood protection infrastructure.

The State of Louisiana has invested significant resources in the development of a comprehensive Master Plan to coordinate all coastal protection and restoration projects, and I was disappointed that the proposed mitigation projects largely ignored ongoing, state-funded initiatives. While I appreciate the extension of the public comment period and your participation in the May 21, 2014 public meeting at the Matthews Government Complex in Lafourche Parish, many residents and local officials have legitimate questions and concerns that need to be addressed before the mitigation plan is finalized and implemented.

The Lafourche Parish motto, "Feeding and Fueling America," is fitting as it ranks in the top 10 parishes in the state for sugar, citrus and beef production. The parish also produces seafood, vegetables, timber, hay and livestock, generating over $120 million in economic activity every year. The proposed projects near Lake Boeuf would cut fertile agricultural land and private property in half. Land owners also raised concerns over the potential for flooding and pest issues that could arise with swamp and bottomland hardwood projects in the vicinity, leading to devaluation of their property. While your report noted that the project could "improve aesthetics, and also improve recreational opportunities" in the area, I hope you take into account the potential of property devaluation and economic loss into the decision making process.

Coastal Louisiana is the seventh largest delta on earth, and our wetland loss accounts for 90% of the total coastal land loss in the continental United States. Over the next 20 years, Louisiana will lose an area equivalent to the five boroughs of New York City. We cannot afford to wait. I appreciate your active engagement throughout the development of this report and look forward to working together to responsibly protect the residents of Louisiana and restore our ecosystem.

With kind regards, I am,

Sincerely,

Mary L. Landrieu
United States Senator

MLL:zjm

LAFOURCHE PARISH COUNCIL
feeding & fueling America

402 Green Street • P.O. Drawer 5548
Thibodaux, LA 70301 • Thibodaux, LA 70302
Telephone 985.446.8427 • 800.834.8832 • Fax 985.449.4012

Daniel Lorraine, *Council Chairman*

Carleen B. Babin, *Council Clerk*

May 29, 2014

U. S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, Louisiana 70118

RE: RESOLUTION NO. 14-143 (TERMINATION OF MITIGATION AREAS - RACELAND AREA)

Dear Sir/Madam:

The Lafourche Parish Council, convened in regular session on May 27, 2014, adopted Resolution No. 14-143 (see attached), requesting the U. S. Army Corps of Engineers, New Orleans District, to terminate all proceedings related to the construction of mitigation areas in the Raceland area.

If I may assist you with any further Legislative matters, please contact me by phone at (985) 446-8427, by fax at (985) 449-4012 or by e-mail at councilclerk@lafourchegov.org.

Sincerely,

LAFOURCHE PARISH COUNCIL

Carleen B. Babin

Carleen B. Babin
Council Clerk

CBB/tlh
attachment

cc: New Orleans District, Attn. Col. Richard Hansen, Commander
State and Federal Legislative Delegation
Leroy Foret, 3001 Highway 308, Raceland, LA 70394
Office of the Parish Administrator, Archie Chaisson, III.

Received By
CEMVN-EX
US Army Corps of Engineers
New Orleans District

JUN 2 2014

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

Speaker Request/Comment Card

Meeting
Wed- 5-21-14
Mailed- 5-22-14

Would you like to speak tonight? Yes ☐ No ☑

Comments: The sugar industry will suffer a loss fro~~m~~ this project being done. Farmers will lose there farm land thus creating a lost in the amount of sugar production in Lafourche Parish. All of this will create a snow ball affect going down to the of Louisiana. The people of Lafourche (State) don't want or deserve this to happen to them. Production of Sugarcane is needed. ((Mother of a son that sells Sugar))

Name Linda Champagne **Affiliation** Raceland ~~Resident~~ Resident

Street 158 Twin Oaks Dr. **Phone** 985-537-8870

City, St Zip Raceland, LA. 70394 **Fax**

E-mail Granny1fc@gmail.com

P.S. This will probably hurt my son's Futher and the whole State of Louisiana. Don't Do It

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Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☐

5/22/14

Comments: A couple of last night's people in the audience mentioned other choices where there are NO residents to do your project(s). So there is another answer other than the threat this project & its location poses to our residents - My grandsons are growing up here having a place to hunt and camp (which ultimately keeps them from boredom - Boredom & idleness leads many times to taking drugs & drinking alcohol - this along with this plus other same scenario

Name Francis & Sharon Robichaux **Affiliation** PERSONAL

Street 248 Peltier Drive **Phone** 985 537 4341

City, St Zip RACELAND, LA 70394 **Fax**

E-mail Smrt@charter.net

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☑

Jergus Foret Estate

Comments: My grandfather, His father and father's father were sugarcane farmers on the above mentioned property These generations of ancestors, all of Acadian descent, eked out a living on this parcel of land. This legacy will now be taken from me. How befitting - thrown out of Acadie and now have their land taken from us in Louisiana. I do not want this property taken from me and my family.

Name Charlotte D. Faubert **Affiliation** land owner

Street 305 Ashland Drive **Phone** 985-447-5005

City, St Zip Thibodaux, LA 70301 **Fax** _____

E-mail Chargo305@yahoo.com

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Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☐

Comments: 1. LOOK AT LAND ON Hwy. 307 FROM Hwy. 182 TO KRAMER TO CHACK BAY. THIS AREA HAS THE SAME TYPE LAND AND CLOSE TO LAKE BOEUF.
2. HALPEN CANAL PASS UNDER Hwy. 90. LOOK INTO GETTING LAND IN THE AREA AND DEVELOP A BOAT LAUNCH AND RECREATION AREA FOR THE PEOPLE.
3. WHY CERTAIN PROPERTY ARE EXEMPTED FROM THIS PROJECT.
"I HOPE SOMEONE READS THIS. I BELIEVE THIS IS AN IMPORTANT ITEM

Name LEROY A. FORET **Affiliation** LAND OWNER

Street 3001 Hwy. 308 **Phone** 985-537-3169

City, St Zip RACELAND, LA. 70394-3540 **Fax** _____

E-mail _____

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☒

Comments: Leave Raceland as it is. this project will hurt our community!

Name Darren Duplantis **Affiliation**

Street 134 Pep's Ln **Phone** 985-278-0259

City, St Zip Raceland, LA 70394 **Fax**

E-mail

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☐

Comments: We were not made aware of the potential of this project until a week ago. Even then, we were lied to & continue to be lied to. Coming into this area & taking land from the people of this area would be a terrible idea. Some of this land has been in families for many generations. a lot of the crops would be destroyed, making it pointless to continue farming. Many farmers would be unemployed & the poverty level would skyrocket in the area. You are not only taking family land, you would be destroying people's homes, jobs, & way of (cont.)

Name Dana Knobloch **Affiliation** Father is a landowner & sugarcane farm on 30,

Street 2783 Hwy 308 **Phone** (985) 637-3073

City, St Zip Raceland, LA 70394 **Fax**

E-mail danaknobloch@hotmail.com

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☒

Comments: We flood enough when it rains. Just because we not a city don't flood us to save them. Don't do to us what you wouldn't want someone to do to you.

Name Vernice Hebert **Affiliation**

Street **Phone**

City, St Zip Raceland, La. **Fax**

E-mail

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Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☐

Comments: With all the State & Fed. land available there is no reason WHAT SO EVER to come and take our high property from us. This is majority farm land that we depend upon for our lively hood and to feed our families. We the entire Area effected LIVE off this Land!! It is Ludicrus - the COE needs to do better research and go else where that doesn't effect the lively hood of ~~our~~ AN community!!!

Name Cindy DANTIN **Affiliation** property owner

Street 3682 Hwy 308 **Phone** 985-448-1345

City, St Zip RAceland, LA 70394 **Fax**

E-mail Cindy-1894@msn.com

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Speaker Request/Comment Card

Would you like to speak tonight? **Yes** ☐ **No** ☐

Comments: I WOULD LIKE TO SEE THE CORPS CLEAN AND DIG THE HALPHEN CANAL THAT IS IN THE BACK OF MY PROPERTY. I DO NOT KNOW WHO IS RESPONSIBLE FOR IS CANAL.

Name LEROY A. FORET **Affiliation** PROPERTY OWNER

Street 3001 HWY 308 **Phone** 985-537-3169

City, St Zip RACELAND, LA. 70394-3540 **Fax**

E-mail

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Speaker Request/Comment Card

Would you like to speak tonight? **Yes** ☐ **No** ☑

Comments: My home would be negatively affected by adding to the possibility of flooding, investation of mosquito's, snakes + other pest that use swamps as their habitat!

While my home is not directly in the marked areas it would be directly surrounded on 3 sides by the areas.

Name Ray LeBlanc **Affiliation**

Street 464 Peltier Dr. **Phone** (985) 855 4685

City, St Zip Raceland, LA. 70394 **Fax** —

E-mail RayPLeB@yahoo.com

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Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☑

Comments: I Am A Bisness Owner Of these People Your Takeing this land from mone as flood And then mone my Bisness Looses If Raceland Dreans Close Dawn John Sed Do my Bisnes Looses

When Did Raceland Flood last ? I think Everyone that Digs Ponds Refurbuthe wetlands, Also Pitchholes

Name Jody P. Sardy **Affiliation** Bisness Owner

Street 3945 Hwy 1 **Phone** 985-537-6135

City, St Zip Raceland LA 70394 **Fax**

E-mail JodySAUTO67@yahoo.com

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Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☐

Comments: Our prized possession of 5 generations threatened to be taken— Our Sugarcane fields, cattle pastures, fishing/crawfish ponds— People would be out of jobs & futures— Not fair or considerate We just built our dream house/planned permanent residence on this land — flood zone C will become a Flood Zone— threatens to flood our home/lose it &/or not be able to afford flood insurance due to risk— Why should we who work for a living & struggle to make ends meet have our possessions taken & threatened to help New Orleans? No Help to us!

Name Todd & Dawn Knobloch Breaux **Affiliation**

Street 2853 Hwy 308 **Phone** 985-446-5697

City, St Zip Raceland LA 70394 **Fax** —

E-mail toddbreaux87@yahoo.com

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

Speaker Request/Comment Card

Would you like to speak tonight? Yes ☐ No ☐

Comments: I am not in Favor of the pier #37 project on my property For many of the same reasons of concerns that were expressed through the comments of other Landowners at the meeting. The main reason I'm not in Favor is because I have future plans to extend my FAA registered runway all the way to the Rail Road tract. this project would not allow me to utilize my property and would create a obstruction hazzard and shorten my runway. (tract 119 E-1)
Also I am not in Favor of the use of tract 119 E-2 because it would allow the public to access my fenced in property and invite tresspassers and expose me to more Liability.
thank you for your consideration for my concerns in this matter.

Name Randy Blouin **Affiliation** Landowner
Street 3369 Hwy 308 **Phone** _____
City, St Zip Raceland, La. 70394 **Fax** _____
E-mail _____

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

~~**Speaker Request**~~**/Comment Card** Dated may 22, 2014

Would you like to speak tonight? Yes ☐ No ☑

Comments: I attended the Raceland area meeting on may 21, 2014. I am the owner (of a strip of land) that is owned by PBC Services Inc my company has owned this land for 15 years. The land is in the middle of the area in question of mitigation between Rodrigue Subdivision and Champagne Lane. My Comment is, I was Never informed of any public forums by the Corps in regards to this mitigation inneshitive. I do not live there but happened to read about it on the Houma news paper. Please keep me on your mailing list so that I can get up to date information.

Name Tim Bourgeois **Affiliation** OWNer of PBC ServiNer INC
Street P.O. Box 20640 **Phone** 985-851-3093
City, St Zip Houma, 70360 **Fax** " " 3094
E-mail Timb@pbcservices.Net

Tim Bourgeois

The public meeting tonight will provide an overview of the recently released Programmatic Individual Environmental Report #37 (PIER #37), titled "West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation, Jefferson Lafourche, Plaquemines and St. Charles Parishes

left message June 2, 2014 around 2:00pm

Speaker Request/Comment Card

Would you like to speak tonight? **Yes** ☐ **No** ☐

Comments: Is the northern boundary for the Lake Bouef Project ~~Project~~ Sam's Lane as shown on the maps at the meeting held on May 21st in Lafourche Parish? We were told it was further north. Please reply to this question.

Name Roland Knobloch **Affiliation** Land Owner

Street P.O. Box 40 / 2729 Hwy. 308 **Phone** 985-447-3610

City, St Zip Raceland, LA 70394 **Fax** _____

E-mail _____

COMMENTS FROM DENIS KNOBLOCH, JR.

Owner of Knobloch Farms and Landowner of 160 acres

Although I have never been informed of an opportunity to comment regarding this disturbing issue, the notice I received in the mail the week of May 12th indicates that the deadline for comment was May 5th. Since I did not have the chance to mention or explain my opinion on this matter, my views are briefly explained below.

- The land in discussion includes my entire lively hood. I raise sugarcane on the majority of the land. I also have a crawfish pond, fishing canals, and a large cattle pasture, all of which I have invested a large amount of time and money on, between my sugar cane crop and the railroad track to the rear of my property. If this land is taken away from me, I am out of a job. There will be no way I will be able to continue farming with less land than I am currently working since I am struggling already to make ends meet. I am 61 years old. Will you replace my wages and support me since this ~~is~~ may be taken away from me, and I do not have any retirement options to fall back on?

- The land I purchased and inherited, and do not desire to lose, has been in the family for 5 generations. It is difficult for me to understand that even though people fight for their country and struggle to hold on to their land in bad times, could still have their land, a prized possession to many in this area, stolen away from them and their future generations. As most other landowner's families also do, my children and my grandchildren enjoy this property that that is threatened to be taken away from them. Many know that utilizing property such as this to fish, farm, and raise livestock helps to keep them busy, connected to our south Louisiana culture, and out of trouble. The only thing most generations from this area, especially sugarcane farmers, can leave their children and future generations is the land and past stories of this land. Is this what you wish to rob from us?

- Most of the land to the rear of my property has to be pumped due to it being low lying land and water coming in and collecting there. I also have a canal located on my property that is needed to drain my property and the neighboring properties. This canal gives me access to my property behind the railroad track. This property is only accessible by boat as it is cut off by the railroad track and cross canal. This property includes two railroad trestles that must be left open.

- I could continue at length to explain my point of view and reasoning of why I do not approve of the choices of those who have not taken in to account the lives of those involved in losing land; however, I will conclude here. If there are any questions or if there is a need for recommendations of places with vacant land that does not function to provide for the lives and incomes of others, you can contact me as I would be glad to help.

Sincerely,

Denis P Knobloch Jr

Denis Knobloch, Jr.
985-637-5970
knoblochfarms@yahoo.com

L. CLIFTON DICKERSON III

ATTORNEY AT LAW

P.O. BOX 241

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June 5, 2014

U. S. Army Corps of Engineers
New Orleans, Louisiana

Re: PIER 37; Comment

Dear Sir or Madam:

I write on behalf of Mr. and Mrs. Benjamin G. Bordelon, landowners within the proposed taking area under PIER 37, to oppose that taking and your plans to destroy their property.

1. I personally attended the public hearing at the Lafourche Parish Government Building in Mathews, Louisiana on May 21, 2014 and was present during the entire hearing. At no time did any Corps representative say that the deadline for comment was June 5, 2014 – today.
2. The Bordelons' property and others in the vicinity of your proposed project and taking is in the vicinity of four means of interstate transportation – Bayou Lafourche, Louisiana Highway 308, several pipelines and a railroad. Your taking and the permanent restrictions as to the future use of the taken land will make coordinated access to these corridors of commerce difficult or impossible.
3. Your cost estimates for the acreage that you are planning to take are invariably too low – our understanding is that you are planning to take for $1,500 to $2,000 per acre. I can assure you that the Bordelons spent considerably more than those amounts for the property that your plans show will be taken from their tract.
4. Your taking will involve degrading the safety of pipelines if you take cover from those pipelines in order to lower the sea level elevation of the taken property. If you do not take cover from the pipelines, then will not those pipelines act as levees and keep the replenishment of the new swamp from taking place naturally?
5. Our team's discussions with pipeline representatives have revealed that those pipeline owners and operators are unaware of your plans for their property. We assume that you gave them the same consideration as you gave to the landowners when giving notice of your plans.
6. Our headlines are filled with warnings about West Nile virus and other diseases spread by mosquitos. Your project will bring those threats very close to every family in the vicinity.
7. You will remove acreage from commercial use that simply cannot be replaced in a parish such as ours in which high land is in such short supply.
8. Our headlines are likewise filled with dire warnings about the effects of coastal erosion and dangers to low lying areas presented by each hurricane's passing. Gallows humor in our

community include comments about waiting a little while for our homes to become beachfront property – and you are planning to speed this process.

9. We recognize, as do you, that the comment period afforded to landowners was insufficient to allow those landowners to mount an effective defense to the conclusions reached in your years long study of our area.

In sum, and in light of the little time afforded for effective comment due to your agency's professions of transparency on the one hand and withholding of vital information with all of your other hands, the Bordelons' observation is this: your project just does not make sense in a land of subsidence that is already subject to destruction of its low lying areas from hurricanes. Why are you not creating new marshlands that could actually help to protect our area from the next hurricane?

The Bordelons reserve all legal rights and the right to make such additional comments as may be appropriate in the future.

Sincerely,

L. Clifton Dickerson III

LCDIII/me

RACELAND RAW SUGAR LLC

POST OFFICE BOX 159

RACELAND LOUISIANA 70394

985-537-3533

June 5, 2014

United States Army Corps. of Engineers

To Whom It May Concern:

My name is Dan Duplantis, Jr. and I am the Vice President and the General Manager of Raceland Raw Sugar LLC. Raceland Raw Sugar LLC is a raw sugar factory that processes sugar cane into raw sugar. Raceland Raw Sugar LLC owns property that the Corps of Engineers is interested in obtaining for wetland mitigation. We have received letters from the Corps over the last few years about their interest in our property, and we attended the Pier 37 public meeting on May 21, 2014 at the Lafourche Parish Government Building. We have not had, in the past nor do we have now, any interest in selling our land to the Corps for any reasons, especially to become a wetlands mitigation bank.

Raceland Raw Sugar LLC employs 95 full time workers and during harvest season, we will grow to 150 workers. That is 150 families that rely on our facility to remain profitable. We receive sugar cane from 40 different growers. Each farm has approximately 10 workers. That is 400 more families that rely on our facility to remain profitable. When all the supply companies are added in (chemicals, fertilizers, part stores, fuel dealers, equipment dealers, etc.), you can see just how many families you touch when excellent agricultural property is taken out of production.

The tract of land you are targeting is some of the highest and best agricultural land that we have, and any amount of acreage that you are proposing to take out of production definitely weakens our facility in Raceland. One of the big reasons why we purchased the property was its close proximately to our processing facility. Freight to our facility is very affordable being just a few miles away.

As we go out looking for cane to fill this void, it would definitely come at a much higher rate that would possible make it not economically feasible to process.

Your comments at the public meeting on May 21st said that the Corps would only look to our area if it were not economically feasible to mitigate closer to where the damages occurred.

I want the Corps of Engineers to know that by coming to Lafourche parish to solve problems that were created elsewhere will only weaken a farming industry that supports many families and has struggled to stay afloat for many years. We do not think this is fair and do not care to do any business with the Corps of Engineers on this wetland mitigation matter.

Sincerely,

RACELAND RAW SUGAR LLC

Dan Duplantis, Jr.

Vice President & General Manager

21 May 2014 Public Meeting Transcript

US ARMY CORPS OF ENGINEERS

WEST BANK AND VICINITY (WBV) HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM (HSDRRS) MITIGATION

JEFFERSON, LAFOURCHE, PLAQUEMINES AND ST. CHARLES PARISHES, LOUISIANA

PROGRAMMATIC INDIVIDUAL ENVIRONMENTAL REPORT #37 (PIER #37)

HELD

WEDNESDAY, MAY 21, 2014

6:00 P.M. TO 8:00 P.M.

AT

MATHEWS GOVERNMENT COMPLEX

4876 HIGHWAY 1

MATTHEWS, LOUISIANA 70375

REPORTED BY: DIANE W. MATHEWS

CERTIFIED COURT REPORTER

(WELCOMING STATEMENT)

MR. HOLDER:

Good evening, there are additional places to sit outside and there is an area in the room adjacent to this where you will be able to view the presentation and listen to the comments.

Our project manager is here, Soheila Holley, in the white shirt with the red Corps emblem in case you have a comment that you would like to make or ask a question.

We are going to do a presentation and we have a court reporter who is present and will take down any additional comments, or if you do not feel comfortable addressing the audience, you can fill out a comment card. Additionally, if you have any questions that you would like to ask about the project we will stick around to answer questions after the session.

I just wanted to welcome everyone for coming tonight and to let you know that you have about 20 minutes before we get started. If there is anything that you want to do, this is a great time to ask questions before you come in because I'm sure that if you have some questions about what we need to do, we will be happy to assist you.

Thanks again to everybody for coming.

(Informal discussions)

MR. HOLDER:

President Randolph, would you like to address the audience before we get started with the presentation?

MS. RANDOLPH:

Good evening, I'm Charlotte Randolph, I'm the Parish President.

We're attempting at this point to allow landowners in here first and I know that a lot of you have a support person with you this evening meaning landowner, husband and wife and family.

What we are attempting to do is show the presentation here in this room that is already full, however we are working on another area where you can see the video and hear the audio as well. There is a fire capacity of the number of people for this room and we are probably exceeding it now, not by much, but we just cannot allow any other people in here. That is why we're working on getting other areas so everyone will have an opportunity to hear. That clock is also a little fast, so they will be getting started in a few minutes so everyone who is in the room, please have a seat.

(PUBLIC HEARING COMMENCED AT 6:30 PM)

MR. HOLDER:

Good evening, Ladies and Gentlemen, thank you for attending this public meeting tonight.

Again, we will be getting started in a few minutes, but in the meantime we're trying to find alternative ways to get everybody who wants to be heard in the main room.

We will start by introducing the city leadership followed by congressional delegations and state representatives and councilmembers as well.

The presentation is two parts, so I can give you a rough idea where we are at with this project and we're going to have comments immediately following. The only thing is that tonight the comments will be on Pier 37, you can comment on whatever you want, we will take those comments and I don't mean to discourage that.

What we're here to talk about tonight is Pier 37 and how Pier 37 will give the Corps permission to work with mitigation banks. It doesn't give us permission to take anybody's land or anything like that. So I just wanted to make sure that everybody heard me on the record as well.

This is about us being able to tell you what we are planning to do with the project. It's also very important at this point for me to tell you that

everything that we have is open to comments and we want to get those comments. We have had over 500 meetings with the general public since we started with the hurricane and storm damage risk reduction system. With those 500 meetings we have taken public comments and I will tell you that on many occasions the comments that came in were adapted into the system and used because the folks that are closer to the project know a lot of times better than we do about what everything is like in that area. So I will tell you that your comments tonight are really, really important.

Another thing that I want to tell you that is really, really important for you to remember is that we will not be answering project questions during the public meeting, we will be taking comments. Tonight what I need you to do when you're making your comments, we have a video recording and we have a court reporter. The most important thing that I can ask you is to make your comments. The questions we will answer immediately following by sticking around and doing that, but we need your comments.

And again, Pier 37 doesn't allow us to take anyone's land. All Pier 37 does is allow us to buy mitigation bank credits. With that, I would like to introduce the Deputy Commander Lieutenant Colonel

Handura and he will come up and give you just a little background about why we're here.

DEPUTY COMMANDER HANDURA:

Thank you all and I'm the Deputy Commander for the New Orleans District and I'm here on behalf of Colonel Richard Hanson.

As Ken Holder said, we're here to hear your comments tonight, that is the whole reason we're here and I'm here because Col. Hanson is the ultimate decision authority or decision maker on the mitigation and the plans.

What we're going to do is to take comments and make it to where an impartial decision as the approval authority, so that is why I'm here. I'm the Deputy Commander and like Kenneth said, we will stick around afterwards and you will have an opportunity to talk with us if you have any questions.

The key thing tonight is that no decision has been made as to any particular mitigation. No decision has been made, we are here to get your comments and give us an opportunity to hear what your comments are tonight.

MR. HOLDER:

President Randolph, would you like to make any comments?

MS. RANDOLPH:

Why don't you do you presentation first and then we'll work from there.

MR. HOLDER:

Okay, if I could, there are some folks here who work with the congressional delegation tonight and if I could start with Zach, so if you would introduce yourself. I didn't get a chance to see everybody who is back there but if you are here representing a congressman, just tell us who you are representing and tell us who you are.

Zach.

MR. MONROE:

Zach Monroe, the Southeast Regional Representative for Senator Landrieu.

MR. JEWELL:

Matthew Jewell, the Bayou Field Representative for Congressman Steve Scalise.

MR. CAVELL:

David Cavell with the U.S. Congressman Bill Cassidy in the Thibodaux Regional Office.

MR. DOSS:

David Doss, I'm Senator David Vitter's State Director.

MR. HOLDER:

Any other parish folk or councilmembers that would like to identify the parish they represent, or councilmember?

MR. RICHARD:

Dee Richard, I'm a State Representative and Parish Representative of Thibodaux.

MR. GISCLAIR:

Jerry "Truck" Gisclair, District 54, Central and Southeast State Representative.

MR. TOUPS:

Lindel Toups, Councilman, District 6, Lafourche Parish.

MR. HOLDER:

Okay, folks, thank you very much. We will start out tonight with the presentation and the environmental manager for the project, Elizabeth Behrens.

MS. BEHRENS:

Hi.

MR. HOLDER:

So this is the part where we talk about the way the Corps must protect the environment and there are several things that we do when we talk about how we are going to reduce risks for a hurricane. There are a number of things that go into it. Most importantly,

probably is the thing that goes into it is a good evacuation plan, as we all know. All of those of you that live in the area know that you have to have a good evacuation plan. The other things that go into more resilience of having reasonable verbal alternative actions and ordinances for building and the way we use land.

As you can see by the next slide (indicating) and the reason that we're here tonight, the National Environmental Policy Act (NEPA). You can read all of those things up there, or I can just paraphrase it for you because it's a lot. The most important, the reason that we're doing this is because it's the law and so we're here tonight to listen to what you have to say, we are interested in your comments. Our intent is to comply with the law, that's one reason for the meeting. but the real reason is that we really want to hear to what you have to say.

With that, Lizzie.

MS. BEHRENS:

And so what is involved in designing the Hurricane and Storm Damage and Risk Reduction System (HSDRRS). The Corps made a concerted effort to avoid and minimize environmental impacts to the maximum extent practicable. Through advanced engineering design the

Corps was able to reduce its anticipated impact from around 5,000 acres to about 2,300 acres, half of which, about half of which are on the West Bank.

As Ken mentioned, we're here tonight to hear from you in implementing our plans and to mitigate plans on a minimal impact as has been presented in Pier 37 and which many of you have already looked at.

So for the West Bank and Vicinity of this work we impacted four different habitat types: Bottomland Hardwood Wet and Dry, which are deciduous hardwood forests generally found in lowland flood plains adjacent to large rivers and lakes. Swamp. consisting of floating spans of cypress and different species of gum. And Fresh Marsh found in areas of little to no salinity.

The areas looked at were impacted on both the protected side and the flood side of the levees but only on the flood side of the levees for swamp and marsh.

So during our planning process the Corps came to our nonfederal sponsor, a number of nongovernmental organizations and other federal, state and local agencies for professional ideas to mitigate for these impacts. Our initial guidelines were that these projects had to mitigate in kind for the same type

that project was impacted and also the project needed to be in the same marsh that is where the impact occurred. Often what we concerned with were Corps constructed projects on private land and public land as well as mitigation land. In total we received over 400 different projects. We took all of these projects and ran them through some multiple screening criteria to arrive at a tentatively selected plan. So the Corps in coordination with a resource agency developed some initial screening criteria and encouraged large mitigation projects by grouping our impact into projects mitigated on large contiguous tracts of manageable land instead of looking for multiple projects throughout the basin. That way we maximize our ecological outlook for the project and also have cost efficiency for the projects. The projects that remained after the initial screening were then taken to the 35 level design for the next level of evaluation.

So the next step of our selection process was to compare the remaining projects to one another bypass test sites based on some performance criteria. Now these criteria were the same as we used for all of the district projects, just modified to some degree for mitigation. We looked at our liabilities; we looked at the long run sustainability of the project based upon

how much of the project was left at the end of 50 years. We also looked at were there any potential problems with implementation. Were we sure of the ecological success of these projects. We also looked at the environmental impact from implementing these projects. We looked at water and ecological site consideration, which is basically does the project provide the linkages between other habitat sites. Is it contiguous with another resource managed area. Is it consistent with other water system plans should it occur in the parish where the impact occurred. We also looked at time and cost during this comparison. So this is the result of that screening and tentatively selected mitigation plan alternative.

The properties that are in for the Bottomland Hardwood Wet and for the Fresh Marsh impact to the Jean Lafitte National Historic property and the NEPA for the designated area with private funding with each. For our Bottomland Hardwood Wet and Bottomland Hardwood Dry impact only, the protected side of the levee, we're going to a mitigation bank. So the Bottomland Hardwood Wet, until they pass on the flood plan on the levee through or Lake Boeuf. For the Fresh Marsh flood site impact, we will be dealing with other projects on Jean Lafitte.

So these (indicating) are the acres of mitigation that are being completed at each of the sites. Over half of our mitigation projects are being done on public land and not on mitigation land.

These (indicating) are the projects that are by Lake Boeuf, at that tentative site. The one that is outlined in yellow is not part of the tentatively selected plan but is a project that we might utilize if we are unable to buy mitigation bank credits due to there not being enough credits available at the time or them being too costly. We believe that this is a likely scenario based on current availability in the mitigation bank, there is plenty of bank credits available and we think that we would get a reasonable price.

MALE SPEAKER:

Would you repeat that?

MS. BEHRENS:

About the mitigation bank?

MALE SPEAKER:

About the yellow area.

MS. BEHRENS:

Okay. The yellow area is like a backup project, so it is not currently a selected mitigation plan. We have a mitigation bank for certain portions of our impact. The backup project, if we are unable to do

that one (demonstrating) would be the yellow area, but we really think that that is unlikely. Now according to bank credits, Paradis area has a huge amount of credits and we have gotten prices that are really quite reasonable.

MALE SPEAKER:

Okay, thank you.

MS. BEHRENS:

So what is involved with the construction of these projects is basically lowering the elevation of the existing ground to an elevation that is able to conform with the habitat that we have to mitigate to provide for that hardwood conformance. For that hardwood, you are looking at an elevation between two and 2.5, for form you are looking at an elevation of 1.1 and 1.8. So any material that is generated off of this lower elevation will be removed from the site and we would go in and plant bottomland hardwoods.

We will also maintain land access, adding any roads that are necessary for landowners to get to their property. We will also have to add access to areas that are necessary for our monitoring of this process.

Many of you have already seen Programmatic Individual Environmental Report #37 that has been out to

public review recently. Please remember that the Programmatic Report #37 presents the whole plan for mitigating all of the southeast areas in that but it only recommends the portion of the plan that is mitigated through the mitigation bank at this time. Most construction level alternative designs are complete but for the other alternative plan we will put out another environmental document, a tailored IER for public review.

That is part of the reason that it so important for you all to be here right now because you can give us your comments before we start working on that document.

So this is the summary of the tasks that is necessary to get to construction on the other projects in the tentatively selected plans. The information, as Ken has mentioned to, this document clears us to buy mediation bank credits which would probably occur in the fall of this year.

FEMALE SPEAKER:

We don't want it.

SPEAKER:

Why don't you go somewhere else?

MR. HOLDER:

Please wait until we finish and then we

will take any comments that you would like to make. We are almost there.

So for those of you that I had received some comments that there is an issue with a lot of you folks in that they didn't hear anything as far as about this project being built. I hope that everybody has signed in, I would encourage you to. You can also go to our Facebook and twitter, and other internet sites that have pictures or other items on them. But the most important thing is to go to the Facebook site because we post everything that we're going to do on there and some of the other things you may have questions or comments about. So if you have access to the internet, this will be really, really helpful.

At this time we're going to the feedback session.

President Randolph.

MS. RANDOLPH:

Yes, thank you, Ken.

I think that the first thing that we needed to hear is to interpret what she just said. And what she said is that the first act that they are going to do is look at buying mitigation credits for mitigation banks. That doesn't involve any of your land. That is as simple as I can put it, okay? The first step that

they are considering has nothing to do with your land.

I know Corps language, we've been around a while, okay? And with all of the acronyms that have been thrown around, that is the easiest thing to understand.

The exploration she is talking about is Plan B. If it does not work out that they can pay for this mitigation, the damage that they caused from the projects that they did, then they would go to Plan B and Plan B is a whole other process. All right?

So the concern that we all had about, for lack of understanding of this, was pretty relieved by what she just explained to us. In that it is going to be part of the larger picture that they're considering, but it's not the first part of it. Is that accurate?

MS. BEHRENS:

The first part of it is buying the mitigation bank credits.

MS. RANDOLPH:

We have to buy mitigation credits if we buy a pump station and mess up a little bit of the wetlands around it. Okay? If it's one-sixth of an acre, and Lindel, you've had a fit because the stuff costs $40,000 an acre to buy. But that is what the Corps is looking at occurring elsewhere, in bank, that has ready been

established and again have nothing to do with your land.

I don't understand a universe where a government could come in and build 14 billion dollars worth of projects in another area and then come to this area which doesn't benefit from that hurricane protection system and take land.

That makes no sense and we're not going to stand for that, okay?

(AUDIENCE APPLAUSE.)

But the good news is what was just explained to you is that, and I know you are going to have questions and maybe I can stand on the side of Ken and interpret for you because the Corps does have a tendency to talk in acronyms and in a different language, I'm sorry. But I wanted you to know that what they just said is the best news we could have heard. And I don't mean to take over your meeting.

FEMALE SPEAKER:

Excuse me, but what you heard and what I heard may be a little different. I heard her say that the mitigation bank would be for one part and they are not coming for the land, but the word is that they are coming back for our land and that had nothing to do with the mitigation bank.

MR. HOLDER:

I think Lizzie is going to go through that again for Lake Boeuf again in a moment.

But remember, folks, what we are going to try to do, what I would rather do is just let her answer that but after that, that's it, then you can make your comments. We want to keep it at making comments for this public hearing. We will answer questions at the end of the session; we're staying late after the meeting to meet with anyone who has questions. So as many questions that you want to ask, please stay and ask after the public comments.

But let's get this down, because I think this is the heart of the questions by most of the people who are here.

MS. BEHRENS:

Okay. So when I was talking about the backup project for the mitigation bank, that's the area outlined in yellow. The areas outlined in blue and brown are projects that are proposed projects but they are not being recommended for construction at this time.

The only one being recommended to build at this time is buying mitigation bank credits; the yellow would be the backup if you couldn't, okay? So the others in the blue and the brown are projects that we would move forward with; but like I said, where the

Corps is at right now is for the Corps to buy mitigation bank credit.

We are here to get your comments; because it has not been set in stone, there has been no decision. What you guys tell us is going to be sent to the Commander and so it becomes part of the process of determining what we are going to do. So it's not set in stone but it is proposed if it's blue and brown.

MR. HOLDER:

Okay, folks, before we go any further, if there is anyone who needs to move because they can't hear or can't see, we set up another room there is a room with a television screen over there.

Maybe we can clarify, where is the timeline chart?

MS. BEHRENS:

It's up there now.

MR. HOLDER:

Okay, look at this chart, nowhere on this chart is there any indication about doing anything with anybody's private land. That (demonstrating) is how far away we would be before even exploring that as a possibility. Also there are other possible opportunities and we can talk about that as well.

Sir, you have a question there in the back?

MR. FORET:

Yes, can you put it back up there on the map?

MR. HOLDER:

Yes, sir, I will.

I want to stress again that we're not going to do a question and answer session in open forum, but we will answer any questions after the session. At this time we will go ahead and hear what you have to say.

MR. FORET:

In the blue outlined area, that's what? Is it basically that you all already approved the mitigation bank for that and you have 115 different landowners there, so have they all agreed for mitigation there.

MR. HOLDER:

Ms. Behrens will explain it.

MS. BEHRENS:

No, that's not what –

MR. FORET:

So basically you all have approved the mitigation bank before anybody, any of the landowners agreed to it?

MS. BEHRENS:

When I say we are going to a mitigation

bank, those are mitigation banks that have been approved from the regulatory program, they are everywhere.

MR. FORET:

I understand.

MS. BEHRENS:

We are not making a mitigation bank.

MR. FORET:

You approved that.

MS. BEHRENS:

Listen, wait, let me finish. This is a mitigation bank that is already established. We are not going to make a bank and sell credits to people and stuff like that.

This is a mitigation project, just as if it was an ecosystem restoration project. We would buy the land at a fee; we would restore the habitat and then give it to the state to manage. It's not run like a mitigation bank, it is a restoration project.

MR. FORET:

But if it's already been approved without landowners approval.

MS. BEHRENS:

No, no.

MR. FORET:

That is what you just said, that it is an

approved plan.

MR. HOLDER:

No.

MS. BEHRENS:

It's part of the overall plan right now, but it's not recommended for construction, there is no action on it. We are telling everybody, this is our plan; this is what we think we are going to do. Tell us what you think, that is why we're here right now.

MR. FORET:

How did you choose this area?

MR. HOLDER:

There are four things.

MS. BEHRENS:

This is the list.

MR. HOLDER:

This one (demonstrating) tells you why we did what we did. It has the match; it has the in basin and the in kind for us to be able to do it. So that is what it was, it was in basin and in kind so we looked for areas that matched these four criteria.

Again folks, I don't want to do this tonight. We are not going to do questions all night long, we are here for comments. If you have questions we are going to stay here after the comment session and

answer them. So let's get the comments out of the way so then we can get those going and then we will stay behind and answer the questions. So comments please, not questions, thank you.

MR. BLOCK:

My name is Jerald Block and I'm from Thibodaux and I don't have any property in this area.

But if you go back to that map, would you mind going back to that map?

MR. HOLDER:

Okay.

MR. BLOCK:

Okay. You wanted comments but I just wonder of all of the people in this room, who are in favor of any of this planned project here. Whether it's either the yellow, the blue or the brown?

(NO RESPONSE.)

Who is in favor?

Nobody.

Who is against it?

(AUDIENCE APPLAUSE.)

Everybody is against it. Okay.

So all of these folks, many of whom called me today to talk about this; all of these folks don't want their property taken. Now you can say we're not

doing that, but the concern would be that if we don't object to it, if the people don't object to it, then what is going to happen is that this is going to become a reality. And they don't want that to happen.

So in terms of comments, you want comments? All of the people in this room, all of whom showed up today are against any use of their property. We understand that, I understand that mitigation banks are a different animal, okay? Mitigation banks are different in that you can buy mitigation credit somewhere and you are going to try to mitigate property for the protection levees. But the concern is right now, the blue area, the brown area, and the potential for the yellow area is what everybody is against.

That's very clear, none of these people showed up because they are sitting there and saying, well look, we want to sell our property or we want to have the Corps use our property.

MR. HOLDER:

The Corps is not using their property at this point, sir; I just want to clarify that.

MR. BLOCK:

No, I didn't miss anything. I didn't miss the point that they are not using the property.

MR. HOLDER:

Wait –

MR. BLOCK:

No, no, I didn't miss anything. The point is in the development of this, what you guys want is you want comments to be made.

MR. HOLDER:

It's not up –

MR. BLOCK:

- Excuse me. You want comments to be made so that you will know what the general lay of the land is, what people feel about this.

MR. HOLDER:

Okay.

MR. BLOCK:

They are against any moving forward of this project with the potential of losing their home and that is what they are against.

MS. LUFT:

I would like to come up to the microphone.

MR. HOLDER:

Sure, anybody that wants to come up to the mike, please come up, absolutely.

MS. LUFT:

My name is Myra Luft and unlike most of the people here who have land that would be affected by this

mitigation process, I live in the middle of what is being proposed as the mitigation area.

That (indicating) street right there called Peltier Drive, has been my home for the last 38 years. That area floods, we personally, not the parish, not the city, haul sandbags whenever there's a hurricane approaching or a hard rain, it floods. That area was not swampland; other improvement in other areas caused that particular area to flood. For 15 years that area did not flood, it was high and dry.

I did not buy there to live in a peninsula and that's what it looks like to me. My fear, cost of flood insurance when I'm in the middle of a wetland. My fear, losing my house and property when that area floods. My fears are mosquito control, snakes, alligators. I know what swampland is like, I put on my hip-boots and I walk the swamp, I didn't choose to live in a swamp.

I respect everybody here about not wanting to lose a portion of your land, but it's not your home. I am concerned about losing my home.

Thank you.

MR. HOLDER:

Ma'am, this lady's hand has been up for a while, we will take you next.

MS. VEGA:

Hi, I'm Donna Vega and I live just north of Peltier Drive. We lived in Chauvin for 20 years and we weren't even considered in a real flood level, my house leveled at seven and a half feet and I had water in my house for Rita.

My son, my daughter, my grandkids, they are extremely close to us so we decided that we was going to buy a tract of land where both of our kids could move behind us. My daughter is in the process of getting prices to build in this area in my back yard. Both of my children live in mobile homes at this time and have future plans on building. My 12 year old grandchild that lives with me, he lost his mother and he lives with us now, already picked out his lot in the middle of that blue area. Yeah, we had a tragedy happen to us, but that was Mother Nature. Now who do we blame, our state for this?

This is very unfair. We searched and searched and searched for a piece of property that was in that same flood line, you didn't have to pay flood insurance. That was where we felt protected, we was higher. We may never flood in my lifetime, maybe my kids lifetime, but at least we was going to have a place for me, my kids and my grandkids to all grow up together

the way my family did and we could cut up all day long.

We wanted to get on higher ground. We paid a higher premium price for that tract of land so that we can live out our future there. I had no plans on moving. If they do this, my kids cannot live in my back yard. And that means that all of us would have to relocate so that we can live together.

Who is it that is doing this to us, our state or our federal government, who do you blame this on? This is very unfair. Nobody asked us when we bought and paid a premium price for our property. We paid a higher price per acre. Any other property in Lafourche Parish wasn't that high, but it was a place where the ground was high. You didn't need flood insurance.

My kids, my grandkids all have plans. I have been to this Board, to this building many a time dealing with getting the paperwork done for all of our lots to be subdivided. It's already planned. My daughter's lot, my son's lot, even my grandson's lot is going to put under my daughter's name and all of that so that he has a future.

Who do we thank?

(AUDIENCE APPLAUSE.)

MR. HOLDER:

I just wanted to real quickly mention that if you don't get a chance to say anything tonight or you don't feel comfortable talking to this group, the email address is mvnenvironmental@usace.army.mil you can make your comments there and that will go on the record as well. Thank you.

MS. ZERINGUE:

Lisa Zeringue.

I'm a landowner but I wanted to touch on another part for this lady in Lafourche Parish. When I was looking at what they are looking at doing, now how are they taking soil from this area and putting it somewhere else? I thought that you weren't supposed to cross soil unless that unit had the exact same soil that unit has that you are taking from. That is my one of my questions.

We also looked at where they were talking about what is happening to Lafourche Parish. Urban encroachment is taking away farmland every day of our lives.

We started off with six sugarcane mills in Lafourche Parish, we are down to two. Sugar value in Lafourche Parish at $63 million, what is the value right now for Lafourche Parish?

Cattle is $13 million. And soybean is

1.55.

We cannot keep losing farmland. The land that we live on is farmland. It was sugarcane. We also had hay on it and now its soybean.

When I look at this and she (indicated) is talking about bottomland hardwood and fresh marsh. The land that is around there is Coteau, I have never seen bottomland hardwood grow on that or in Pistolet.

If I wanted to have the federal government with my land, I would enroll in WRAP, WRP or GRP, WRP is a Wetland Preserve Program. You can enroll in the program, you retain the ownership of that land or you can have a permanent easement and you get paid for your land, you have the use of your land. And they do not take away the royalties on that property; it stays with your family. It's a 30 year easement or a permanent. Most people go with the 30 year easement. It's the same thing with GRP.

I want to let all of the farmers know in this audience that if you any of this land that you are looking at you have a contract on it and that life span is not as its being used, you will be paying back that money plus ten percent to the government.

The economic effect for Lafourche Parish for this project, and it doesn't even benefit us, is

utterly ridiculous to even think about it.

The land that we live on, my mother-in-law is 93 years old and she lives on the land. She was born and raised on the land. My sister-in-law, who is mentally handicapped lives on the land, she is 53 years old. Their income comes from this land. Who is going to pay for the income that they will lose off of this land?

All of our land will flood if you come in to where they want because they want, like I'm telling you, is the middle of our property. When your house starts to sink, walls start to crack, what do you do?

The road that they were talking about building over by the railroad track, who is going to maintain that road? I don't think that they will. I don't want to maintain it.

Every day we listen to President Obama and his wife Michelle tell us about feeding the United States, but here they come up and they want farmland. They are not taking marginal property, they are taking farmland.

They talk about exercise. I don't know about the rest of you, but I know that I walk my property and that is where I get my exercise. My children and grandchildren play in the back of the

property.

If you take the middle of the property, what good is the back of the property for me? The value has dropped, who is going to buy it?

I think that everybody should think about this.

Thank you.

(AUDIENCE APPLAUSE.)

MR. HOLDER:

Are there any other comments?

MR. BOURGEOIS:

I would like to speak.

MR. HOLDER:

Would you like to come forward?

MR. BABIN:

I'm fine; I think that everybody can hear me here. I talk loud.

I think I'm like most of these people in here. I was born and raised in this area; I'm a fourth generation sugarcane farmer. I don't own any of the land, I lease it all. I believe that if the Corps has their way and I'm directing it to you, the Corps of Engineers, do you realize the trickling effect that this is going to have when you take it from the sugarcane farmers? Sugar mills are going to have less to grind.

We're not going to need as much diesel fuel, as much fertilizer. Everybody in this room is going to feel it.

These people that is here, I'm sure it's been generations that has been on that land. They have families that have lost their lives in wars to save this country to have their families to be free. What is happening to America?

You consider this, we want to keep the land, we want to keep farming the land. I am sure that there is other places you can find to do this project. I am not against you doing this project, just find somewhere else that is not as important and not as dear and entrusted to the people in this room. Okay?

(AUDIENCE APPLAUSE.)

MR. FORET:

Thank you.

I don't have that gentleman's voice so I am going to use the mike.

I don't have property there but I do have property in Raceland that has been affected by some of the previous work of the Corps of Engineers and I guess my question is: Do we really trust what the Corps proposes to do? And can they do what they say they will do?

The second comment is, based on the

comments that other people made it sounds a little bit like distribution of wealth aka President Obama's plan.

Thirdly, if the law that causes this has no paragraphs in it or anything extensive that would allow being in a negative on these mitigation credits to build facilities that will save lives and property, then I urge our elected representatives to go back to Washington and change the law. We have lost all common sense at both the federal and the state and local levels regarding laws.

And finally, this is not a question, this is a statement, I have to turn it into a statement. Mother Nature, due to some of the previous Corps work, levees, between Mississippi and other projects have caused this area of South Lafourche to lose hundreds of acres. Many of these acres were once high property areas and now they are flooding. Why can't that acreage be included as the mitigation? It's affecting everybody, what do we do, do we just let it flood?

Fly from Houma to Raceland and you will see what I'm talking about, there is water on both sides of Highway 90. You cross the Des Allemands Bridge and you head towards New Orleans. That used to be called Seminole Mounds back when I was a kid, that is all open water. All of this property back was pristine hunting

land and habitat. What these people were trying to create was taken away because of the federal government's action or lack of action regarding coastal erosion and subsidence.

Thank you.

(AUDIENCE APPLAUSE.)

MR. BOURGEOIS:

Hello, my name is Roger Bourgeois.

I grew up here in Raceland and I graduated from Raceland High School and I see many of my classmates in the audience. I live in Houma now. I purchased four acres here in Raceland to build my dream house on. My dream house has been put on hold because I'm not sure at my age and my wife's age that we want to build a plus six in an area that has never been affected by a hurricane.

And furthermore, you can take this message back to the federal government. If I can afford to build my house and I don't need flood insurance, I don't think the federal government should be able to tell me a damn thing about how high I need to build my house. That is a personal risk that I should be allowed to take. And I urge our representatives to take that message back to Washington.

Thank you.

(AUDIENCE APPLAUSE.)

MR. HOLDER:

One of the things that I forgot to mention before the public meeting concludes. If you have any comments, if you would stop by before you leave and speak to the court reporter and give her your name so that we can identify the speaker.

MR. TOUPS:

I have a comment.

MR. HOLDER:

Yes, sir.

MR. TOUPS:

Lindel Toups, Councilman, District 6.

We can hold this meeting until 2:00 o'clock, 10:00 o'clock, 12 o'clock and you ain't going to get nobody to agree with you to do what you want to do.

Myself, as a Councilman, I am asking you all to back off. I'm going to call a special meeting to the Council and get a Resolution from all of our elected officials and ask all of you all to back off.

We can be in this meeting all night. I don't think it will do any good; so far nobody that has talked is for it. Why this area was picked, I don't know. I don't know why you all picked here.

MALE SPEAKER:

According to what I read in the report it is because of the poverty level.

MR. TOUPS:

The what?

MALE SPEAKER:

The report uses the poverty level of the town.

MR. TOUPS:

And?

MALE SPEAKER:

The poor people take less money for their land.

MR. TOUPS:

That is what I mean, we don't. I don't care if we talk here all night, nobody wants it. I'm asking you all as a Councilman to back off and I'm asking the Parish President to call a special meeting and go ahead and send a resolution in. And I'm going to call the representatives to ask them to back us up on that and I'm sure they will

Thank you.

MR. HOLDEN:

Thank you very much.

MS. RANDOLPH:

Charlotte Randolph.

Let me just correct what I said earlier after reviewing a report.

MR. HOLDER:

Yes, ma'am.

MS. RANDOLPH:

Because, I'm sorry, Charlotte Randolph.

Ms. Zeringue is correct, according to this (indicating) that this will need to be addressed because of the different types of trees and ground and everything else surrounding it. Which, I still cannot make sense of it, but that is okay.

Important to note that today at the Coastal Protection Restoration Authority meeting in Baton Rouge they passed a resolution against this action, the State did.

In 2010 there was a bill passed concerning the Amite River Diversion project. Our state representatives are here, we've already contacted the author of that bill to ask for information on this and for our state representatives to do this.

And finally, during Hurricane Isaac, we talked about sandbags earlier, the area Bayou Boeuf was threatened severely with flooding because of the water that came up and that is the same storm that affected La

Place and ports of that water shift. If we would shore up Bayou Boeuf with the coastal protection there rather than taking land away and we could build some land around the areas that were threatened during that last storm which is in the same water shift. Then everyone would benefit from the actions here, not just the people who live in one area and then the cost just to people that live in another area.

We are in the epicenter of the coastal erosion; we need to build land, not taking land.

(AUDIENCE APPLAUSE.)

MR. FIELDS:

My name is Brad Fields and I'm an Agricultural Technician for Lafourche Parish.

My comment is for the Corps. Next time that you all propose something like this, make sure that you inform the people, the landowners, so that they can explore what you all are asking for, what you all want to do, because these people were not informed. They were not informed and that is very poor on your part and you all need to take that back with you.

(AUDIENCE APPLAUSE.)

MALE SPEAKER:

I just want to clarify something just real quickly about this. The first time when the Corps came

out, supposedly the Corps was to come in on our land and look for artifacts and you would save artifacts.

When you all mentioned oil somewhere in all of these documents you mentioned some people were in favor of it. People were in favor of wanting to save a few of those artifacts and clay, not doing this project on our land.

MR. HOLDER:

I understand, thank you.

MS. KLINGMAN:

Hello everybody. Heather Klingman and I'm a Lafourche resident.

My family has property in the area here and I do have several questions but I will just hold those until after.

MR. HOLDER:

Yes, ma'am, no problem.

MS. KLINGMAN:

My one comment is that if this project could possibly lead to private property being appropriated for wetland mitigation. I object vehemently and I think I would speak for everyone in this room.

So that is my comment.

MR. HOLDER:

Thank you.

(AUDIENCE APPLAUSE.)

MR. CARLTON:

Everybody here, can I see a show of hands – my name is Dan Carlton (spelled phonetically).

In this group here, has anybody ever done business with the Corps? I would just like to see a show of hands. Well I have, many, many times. They are the worst people.

(LAUGHTER.)

Hitler's Gestapo has less power than the Corps of Engineers has. Nobody is above these people, nobody, but the army. And when you are going to find out who is in charge, it's certainly not the ones that you are talking to.

Many of my projects were turned down; they are just terrible to do business with. I had a $5,000 report saying it wasn't wetland and they threw it in the garbage can and told me, we can do what we are doing. That is my experience with the Corps.

So I want to tell you all, if they want your land, they are going to take it. And we can do all we want, but they are worse than the Gestapo, big time.

MR. RICHARD:

My name is Dee Richard, State

Representative, and I'm glad to have everybody out here.

I just want to follow what Mr. Fields said, except for the next time you send. The next time -- we've got to fight this time. I like what you're saying but I'm not satisfied. We can't get a permit to put in a cell tower in Kramer because you guys won't give us a permit for six years in these wetlands. And you're taking land away, I just don't buy it. So I'm not here to get the Council to help with that.

MR. HOLDER:

Is the permit still outstanding, or has it been signed?

MR. RICHARD:

The permit was signed after six years of fighting for it to be signed.

MR. HOLDER:

And there certainly was some backlog after Katrina with permits, so I didn't know if yours got in or not.

MS. BIER:

I am just going to speak from here if that is all right.

MR. HOLDER:

Can you just identify yourself, ma'am, so we can get that on the record.

MS. BIER:

My name is Cathy Bier.

MR. HOLDER:

Thank you.

MS. BIER:

I do own some property along the lake. I looked up some of the information in the reports that you have on the Internet. I just looked over it yesterday and today, but you all have three other sites that you can do the project, Bayou Segnette; and Dufrene Ponds I think in Plaquemines, something else. None of those areas have residents in the areas that are going to be affected. The only people that are going to be affected would be the Lake Boeuf project. There has to be property somewhere else where you can do what you have planned for this Lake Boeuf area that will not have any residents in the project area.

And I also have an opinion, some of the people talked about flooding and that if the project goes through to the phase to where you are going to take the land, then something like 519,000 cubic yards of soil would have to be excavated from there. Now what is going to happen to the people's property when water comes back from Lake Boeuf if you have a storm surge of some sort or a storm is pushing water in, it's going to

keep coming. So we think we have flooding problems now.

I don't live on the land that I own now, I live in Thibodaux, but my heart goes out to the people that do live on the land. I have had that, it was no picnic.

MR. ROBICHAUX:

Our land is –

MR. HOLDER:

If you could identify yourself, sir, first of all. Thank you.

MR. ROBICHAUX:

Dickie Robichaux.

We have property in the area. The land in Louisiana, Sorrento, south, La Place, has been sinking for about three or four years, I'm not sure, but it's continuing to happen and it didn't when we were kids.

You all are going to take prime dirt, Cy, am I correct in the location as to what's defined as perfect?

You all are going to take perfect dirt so you can build a perfect levee and that's because you don't want erosion. This area's got good sand and clay and so when you build that level you won't have erosion. You are going to take it from our land that is constantly sinking and our land is even going to go

quicker because you just took our good dirt.

You are going to have to explain to me why you are taking it from us. I'm not going to do it, we will not do it.

MR. HOLDER:

All right, if you will stick around I will answer any questions that you have.

Folks, I'm not going to do it here. Please stick around and we will answer any questions that you have.

MR. GISCLAIR:

Representative Truck Gisclair.

Are there going to be any more hearings, or is this the last one?

MR. HOLDER:

So the important part to remember, thank you very much for that.

The important part to remember is that the project does not affect anything but mitigation credits and mitigation banks. Before we would move to anything else, we would have to deal with other engagements, make sure that there is another engagement situation with you guys.

So there would be a whole, another process where we took public comments.

MR. GISCLAIR:

Okay.

MR. HOLDER:

The basic timeframe, when I put the chart up before and that is why I put the chart up, it's not even on the chart yet. It's obviously not this year, it's not even on the chart.

MR. GISCLAIR:

You want to come back?

MR. HOLDER:

We will come back.

MR. GISCLAIR:

You want to come back, I will come back too.

MR. HOLDER:

We will come back; I understand that it's important.

Yes, sir.

MR. CABALLERO:

My name is George Caballero and I have property along the 308.

Over the past several years I have observed water levels in Lake Boeuf rising to flood stage and staying there. The water doesn't go down. We had an inch of rain a couple of weeks ago, the water in Lake

Boeuf rose about six inches. So we're obviously in a watershed for a very large area and it seems to be increasing over the last, I'd say three to four years.

I worked at Nicholls at Bayou Lafourche and you know what, they have been under water for six months out of the year. Lafourche Parish does not have a lot of land; we are on an alluvial bank that we built over a period of hundreds of years. To go and excavate that and take it out, we will lose farm land permanently. There will be no restoration.

So Lafourche Parish doesn't have a lot of land and dirt and soil to give away. We should be working to improve the drainage, the outflow from Lake Boeuf because it's a trap.

MR. HOLDER:

I believe that is what President Randolph said as well. The public comments will be submitted as well.

MR. CABALLERO:

So that is all I have to say. If you take away what little land that we have will increase mosquito control, alligators. I have alligators on my property, I see them and there are about a half a dozen or a dozen. So the Corps needs to work on some other, not take away the soil.

MR. HOLDER:

Thank you. Back here.

MR. PELTIER:

My name is Stephen Peltier and I am the manager of Peltier Farms, which is a large part of the property that you're looking at, especially if you go to, I think it's the yellow phase.

It's all of the farmland on that tract of land. That property has been in my family for four generations. We are vehemently opposed to this project.

I read through your proposal on the Internet and one of the things that struck me is that there is a priority that the mitigation project should be as close to the area damaged as possible. That area of damage is 40 or 50 miles away from here. You can't tell me that there is nothing in between that could be used. Those areas are all having tremendous erosion problems because of the levee system surrounding New Orleans. And this is all about protecting New Orleans.

(AUDIENCE: That's right, who dat.)

MR. PELTIER:

It seems like to me that that's the area that should be mitigated. You've got those marshlands, those hardwood areas, those swamps should be rebuilt in that area, in Orleans, Jefferson and Plaquemines, not in

Lafourche Parish.

MR. HOLDER:

Thank you, sir.

(AUDIENCE APPLAUSE.)

MR. FORET:

My name is Ralph Foret, 3001 Highway 308 in Raceland.

And Mr. George was right, there is water in the back the railroad tracks and you see dry land. My grandfather farmed it, my father farmed it for a few years and then it started getting wet. Why can't you people decide to go to the canal that runs from Thibodaux all the way down to Raceland from Highway 90 and drain that, fix that, dig that out so that the water can move away from here? No, you want to back it up. Thibodaux's is building houses, day after day after day. More concrete, all of that water is filtered in the back of our property and we're flooding. And now you are going to come over there and dig some more land.

The next thing I know my back yard is going to have two feet of water, that is what you're looking to do, sir?

MR. HOLDER:

Sir, I don't think that is what we're looking to do, but thank you for your comments.

MR. WAGUESPACK:

Yes, my name is Matthew Waguespack, I live in the middle of the blue area and I have a question directed to the Corps.

Will you all continue to pursue this? I would like a simple yes or no answer to my question, please.

MR. HOLDER:

It's not as simple as a yes or no because it has to go to the Commander so after we get all of the comments in, then the recommendation will go to the Commander. And that is why he is not here tonight because he is the honest broker and will make the decision on that.

The folks that work on the project have a vested interest, your comments are important to us, so he has to weigh through all of this equally so that is why he is not here tonight. That is why he is not here because he has to look at all of the comments and then make a decision based on the information.

So that is the best that I can answer that question.

MR. TOMMY:

My name is Tommy (inaudible) I actually live on 308 and I actually inherited property from my

grandfather who actually bought this property over 90 years ago.

Up until about last week I didn't know anything about what was going on. I never was notified. I got a little insight about what was going on and went on the website and read it. I haven't heard anything yet that is in it for me, that is for my benefit. And I just want to say that if you are going to come back to us on the next step, I think you better get the people that is involve, more oriented with what is going on, than to blindside us with it. Everyone in this room has been blindsided and they are against it, no matter what you tell us. So your next step is to make sure that we are informed.

I didn't say that I was for it, but I'm not going to vote against it or for it if I don't have enough information on it.

MR. HOLDER:

I think that is a valued point that came out of this meeting and I will make sure that that gets back, we can do a better job.

(AUDIENCE APPLAUSE.)

Thank you, sir.

MR. TEMPLETT:

My name is Troy Templett and I'm from

Terrebonne Parish and I'm going to try to make just a comment.

Who is going to make the decision to expropriate this land?

MR. HOLDER:

So the process that we will have in place, we're not sure at this point whether it will be the state or whether will be us. Let me clarify that, if we ever got to that place. At this point it's not, we're in mitigation credits but there will be a recommendation if we were to go forward. But it would have to be us or the state and I'm not sure, I'll have to ask our legal department before I come out with that answer so I don't think I have an answer for you at this point.

Okay, folks, this is more questions than comments.

FEMALE SPEAKER:

This is more of a question than a comment.

MR. HOLDER:

So why don't you just stick around and you can ask that question?

FEMALE SPEAKER:

I just want to ask one question.

MR. HOLDER:

Okay.

FEMALE SPEAKER:

Who is going to make the recommendation to the individual who is going to make the final decision?

MR. HOLDER:

There will be a report that is written and the report that is written will go up with the comments that are made here and whatever other comments are submitted. We have comment cards and we have some internet comments. So I would recommend that if you want to fill out one of those comment cards out and give it to us or the email address is up there, mvenvironmental@usace.army.mil. All of those are good avenues for hearing your comments. After we review all of your comments, then we will make the decision.

MR. RICHARD:

My name is Russ Richard and I work for the federal government and I know that our base problem of putting it anywhere is drainage.

What is going to happen, once you all do mitigation, you cannot do any more digging, so what happens to all of our drainage water? We have a seven foot drop to LA 308 all of the way through the area, what happens to our water.

MR. HOLDER:

Thank you for all of your comments.

Any additional comments?

All right, folks, we are going to sit down and answer questions, thank you for coming.

If we move forward, there will be more of these public hearings and sessions.

Thank you for coming.

FEMALE SPEAKER:

I don't want to give my name, I just want to know why questions wasn't answered. We weren't informed of this meeting; we should be able to have all our questions answered. We all want the answers.

MS. LUFT:

Myrna Luft, I just want to make sure that you heard my comments about my fears of losing my home and living in a peninsula.

Okay, the gentleman wasn't sure that it was on there, thank you.

(END OF PUBLIC HEARING.)

REPORTER'S PAGE

I, Diane Mathews, Official Court Reporter, do hereby state on the record that due to the interaction and the spontaneous discourse of these proceedings, dashes (--) have been used to indicate pauses, changes in thought, interruptions, and/or simultaneous speech; that this is the proper method for a court reporter's transcription of the proceedings; and that the dashes (--) do not indicate that words or phrases have been left out of the transcript Any words and/or names which could not be verified through reference material have been denoted with the phrase "(phonetic)" or "(inaudible)"

CERTIFICATE

This certificate is for a transcript transcribed by Diane Mathews, Official and Freelance Court Reporter in and for the State of Louisiana, employed as an official court reporter for the State of Louisiana and the officer by whom this transcript was transcribed.

I certified that this testimony was transcribed by me under my direction and supervision and is a true and correct transcript to the best of my ability and understanding; that the transcript has been prepared in compliance with transcript format guidelines required by statue or by rules of the board or by the Supreme Court of Louisiana and that I am not related to counsel or to the parties herein nor am I otherwise interested in the outcome of this matter.

_____

DIANE MATHEWS, CCR

OFFICIAL COURT REPORTER

CERTIFICATE NO. 87108

CEMVN Responses

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

JUL 18 2014

REPLY TO
ATTENTION OF

Regional Planning and Environment
Division South
Environmental Planning Branch

Mr. Lance Hatten
Superintendent
Jean Lafitte National Historical Park
and Preserve
419 Decatur Street
New Orleans, Louisiana 70130-1035

Dear Mr. Hatten:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) received your agency's comments dated May 2, 2014, on the Programmatic Individual Environmental Report #37 (PIER #37) for the West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation Project, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana. Enclosed are the CEMVN's responses to these comments.

The CEMVN appreciates the National Park Service's comments and looks forward to coordinating with the agency on the upcoming WBV HSDRRS Mitigation Tiered Individual Environmental Reports. If there are any questions concerning our responses, please contact Ms. Elizabeth Behrens, Biologist at (504)-862-2025.

Sincerely,

Richard L. Hansen
Colonel, U.S. Army
District Commander

Enclsoure

General Comments

NPS Comment – Specifically, this PIER defines impacts to Park resources in a different way than were agreed to in the past. Because of this change, mitigation for these impacts to former exchanged lands would be shifted from inside the park to outside the park. This is described in Section 2.5, page 2-9 and Appendix E of the PIER. The NPS does not agree or support these potential changes in the TSMPA.

CEMVN Response – Acknowledged. CEMVN has not changed its position on Park impacts.

Specific Comments

NPS Comment – However, there is information in this document that discusses mitigation for past impacts from HSDRRS work in Jean Lafitte National It is our understanding that the mitigation for these impacts within the Park and the Environmental Protection Agency 404c (404c) management area will be addressed subsequently in a separate Park/404c Tiered Individual Environmental Report (TIER). Rather than provide additional comments on the Park/404c sections and the respective appendices within the PIER at this time, the NPS proposes to address these issues in the Park/404c TIER. The NPS looks forward to working with the USACE and EPA in the development of this TIER in order to find the best solution to these complicated circumstances.

CEMVN Response – CEMVN appreciates the preliminary feedback and will continue to coordinate closely with NPS as these projects undergo advanced design and further NEPA compliance.

From:	Williams, Eric MVN
To:	Hill, Rebecca MVN; davidp@chitimacha.gov
Cc:	"kswalden@chitimacha.gov"
Subject:	RE: PIER 37 draft comments (UNCLASSIFIED)
Date:	Monday, May 05, 2014 5:15:27 PM

Classification: UNCLASSIFIED
Caveats: NONE

Dr. Palmer,
We usually do remote sensing surveys in off-shore borrow locations if previous surveys have not been completed. In some cases the off-shore borrow areas have been previously surveyed and there is existing data. Once plans are finalized and the borrow areas are determined I will look at existing data and determine the need for any additional surveys. During that time I work with our contractor to determine the likelihood of submerged sites and develop the best strategy to proceed with surveys. I am available at your convenience to discuss the identification of borrow areas, existing data, and plans for any additional surveys.

Thank you for your email and I look forward to additional conversations with you regarding cultural resources investigations for the proposed PIER 37 projects.

Eric M. Williams
Archaeologist
RPEDS, South/CEMVN-PDN-NCR
504/862-2862
Fax: 504/862-2088
eric.m.williams@usace.army.mil

-----Original Message-----
From: Hill, Rebecca MVN
Sent: Monday, May 05, 2014 2:45 PM
To: davidp@chitimacha.gov
Cc: 'kswalden@chitimacha.gov'; Williams, Eric MVN
Subject: FW: PIER 37 draft comments

Dear Dr. Palmer,

Thank you for your email and request for continued consultation. I am copying Mr. Eric Williams, archaeologist for the LPV and WBV HSDRRS Mitigation projects, as I am unaware of the details of the proposed cultural resource investigations for PIER 37.

It is my understanding that CEMVN will be evaluating the potential impacts/adverse effects of each of the proposed mitigation projects as they are identified and that the potential impacts/adverse effects of each proposed mitigation project will be addressed in a Tiered IER (TIER), just as with the proposed mitigation projects for PIER 36 (LPV HSDRRS). Section 106 consultation will continue pursuant to the stipulations of the Programmatic Agreement executed on June 18, 2013.

The CEMVN will notify the Chitimacha Tribe of Louisiana of its intent to prepare tiered Individual Environmental Reports (TIERs) evaluating the proposed mitigation projects, and upon completion of the cultural resource investigation for each project, CEMVN will provide documentation of the Section 106 finding, including a copy of the cultural resource report, for the tribe's review and comment.

I hope this information is helpful, and Mr. Williams can fill in the gaps. Please do not hesitate to contact either me or Mr. Williams directly, and please copy me on any correspondence with Mr. Williams.

Respectfully,
Rebecca

Rebecca E. Hill
Archeologist/Tribal Liaison
US Army Corps of Engineers, New Orleans District

-----Original Message-----
From: Dr. David Palmer [mailto:davidp@chitimacha.gov]
Sent: Friday, May 02, 2014 12:53 PM
To: MVN Environmental
Cc: Kim Walden; Hill, Rebecca MVN
Subject: [EXTERNAL] PIER 37 draft comments

Dear Ms. Behrens:

We appreciate the opportunity to review and comment on the draft of PIER 37. The draft, together with the PA of June 18, 2013, provides for thorough consideration of, and consultation regarding, cultural resources. We also appreciate the consideration given in the draft of PIER 37 for any nesting bald eagles that might be present in the project areas.

Although given the terms of the PA not likely to become an issue, the language about the remote sensing for potential submerged cultural resources in the borrow area seemed ambiguous to me as to whether this surveying was planned or not. Is it planned? Is there any data and modelling available to predict the likelihood of submerged sites within the borrow area?

I appreciate your attention to these comments and questions.

Sincerely,

David

David T. Palmer, PhD, RPA 12440
Deputy Tribal Historic Preservation Officer
Chitimacha Tribe of Louisiana
P.O. Box 661
Charenton, LA 70523
337-482-5198

Classification: UNCLASSIFIED
Caveats: NONE

From:	Williams, Eric MVN
To:	Behrens, Elizabeth MVN
Subject:	FW: RE: PIER#37, West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, LA (UNCLASSIFIED)
Date:	Wednesday, July 23, 2014 8:05:13 AM

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Hill, Rebecca MVN
Sent: Monday, May 05, 2014 1:18 PM
To: Lindsey Bilyeu
Cc: Williams, Eric MVN
Subject: RE: RE: PIER#37, West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, LA

Dear Ms. Bilyeu,

Thank you for your email and your request for continued consultation. I am copying Eric Williams, the project archaeologist for the LPV and WBV HSDRRS Mitigation projects.

The CEMVN will continue consultation with the Choctaw Nation of Oklahoma pursuant to the stipulations of the Programmatic Agreement executed on June 18, 2013.

The CEMVN will notify the Choctaw Nation of its intent to prepare tiered Individual Environmental Reports (TIERs) evaluating the proposed mitigation projects, and upon completion of the cultural resource investigation for each project, CEMVN will provide documentation of the Section 106 finding, including a copy of the cultural resource report, for the tribe's review and comment.

Please do not hesitate to contact me if I may be of any further assistance with this matter.

Respectfully,
Rebecca

Rebecca E. Hill
Archeologist/Tribal Liaison
US Army Corps of Engineers, New Orleans District

-----Original Message-----
From: Lindsey Bilyeu [mailto:lbilyeu@choctawnation.com]
Sent: Friday, May 02, 2014 3:59 PM
To: Hill, Rebecca MVN
Subject: [EXTERNAL] RE: PIER#37, West Bank and Vicinity Hurricane Storm Damage Risk Reduction System Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, LA

Dear Rebecca,

The Choctaw Nation of Oklahoma thanks the US Army Corps of Engineers, New Orleans District, for the correspondence regarding the above referenced project. There is the possibility of encountering Choctaw sites in the project area. We recently have become aware of Choctaw village sites in Louisiana, once of which is approximately 4 to 5 miles away from the project area in Jefferson Parish .

While this wouldn't be in the direct APE, it is still important to note its presence and the possibility of encountering artifacts related to the Tribe. Due to the number of sites present in the project area, and the high possibility of encountering unrecorded sites, Choctaw Nation of Oklahoma strongly recommends that the project area and borrow sources be surveyed prior to project activities. We ask that these surveys be sent to our office once available. If you have any questions, please contact our office at 580-924-8280 ext. 2631.

Thank You,

Lindsey Bilyeu

NHPA Senior Section 106 Reviewer

Choctaw Nation of Oklahoma

Historic Preservation Department

P.O. Box 1210

Durant, OK 74702

580-924-8280 Ext. 2631

Classification: UNCLASSIFIED
Caveats: NONE

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

July 16, 2014

REPLY TO
ATTENTION OF

Regional Planning and Environment
Division South
Environmental Planning Branch

Ms. Virginia M. Fay
Field Supervisor
Assistant Regional Administrator
Habitat Conservation Division
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Fl 33701

Dear Ms. Fay:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) received your agency's comments dated May 5, 2014 on the Programmatic Individual Environmental Report #37 (PIER #37) for the West Bank and Vicinity (WBV) Hurricane Storm Damage and Risk Reduction (HSDRRS) Mitigation Project, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana. Attached are CEMVN's responses to these comments.

CEMVN appreciates the NMFS's comments and looks forward to coordinating with the agency on the upcoming WBV HSDRRS Mitigation Tiered Individual Environmental Reports (TIERs). If there are any questions concerning our responses please contact Elizabeth Behrens at (504)-862-2025.

Sincerely,

Sandra Stiles for
Joan M. Exnicios
Chief, Environmental Planning Branch

General Comments

NMFS Comment – The NMFS acknowledges the WBV flood protection features impacted forested wetlands and fresh marsh which were either non-tidal or had limited tidal function. However, some of the proposed mitigation would convert tidal waters designated as essential fish habitat to non-tidal habitat. Therefore, continued coordination with NMFS is appreciated.

NMFS Comment – The NMFS encourages the U.S. Army Corps of Engineers (USACE) to immediately progress to mitigation construction. The intent to implement mitigation concurrent with construction of the levees, floodgates, and pump stations has been exceeded for 60% of the WBV features.

NMFS Comment – The final scaling of mitigation should be accomplished while preparing tiered Individual Environmental Reports (TIER). Final scaling is encouraged to be accomplished through interagency coordination to determine benefits based on advanced design details. For marsh mitigation, this generally would involve conducting Wetland Value Assessments (WVA) at both the 35% and 95% Design Documentation Report (DDR) stages for final sizing used for the 100% design. Please note tidal water areas which will be converted to non-tidal forested habitat as mitigation must be assessed under the future-without project scenario using the WVA marsh model to determine the loss of fisheries functions. Those losses must be offset with acceptable mitigation (e.g. marsh creation). If the USACE's schedule is limiting, NMFS is willing to explore means to conservatively size and construct mitigation and reconcile any potential surplus as a tier to the Cumulative Environmental Document.

NMFS Comment – Elevation as an indicator of hydroperiod is of paramount importance to assess success of tidal marsh mitigation. Please note an adequate density of elevation data is necessary to assess the percentage of the mitigation areas meeting the elevation success criteria. Use of LIDAR should not be at the exclusion of conventional elevation survey data if an alternative or check is necessary to meet timing or quality control/quality assurance needs of mitigation performance monitoring.

NMFS Comment – The NMFS has coordinated often with USACE on potential impacts to water quality associated with borrow pits in open water (e.g. Lakes Cataouatche and Salvador). As the literature suggests, potential environmental impacts from open water borrow pits vary by location and estuary. The USACE is encouraged to include water quality monitoring in supplemental and final PIERs to assess if hypoxia develops. Such monitoring would help with the development of potential contingency measures for future designs if not also for corrective action. The USACE's monitoring of water quality for Individual Environmental Report 11 and the Mississippi River-Gulf Outlet Ecosystem Restoration Study was helpful in this regard. It is suggested scopes of work similar to those be included and repeated annually for three years. The NMFS is willing to assist USACE in further scoping a monitoring plan to assess impacts to water quality.

CEMVN Response to the 5 General Comments Above – CEMVN appreciates the

preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance.

NMFS Comment – In addition to the already occurred planning and design delays, NMFS is concerned mitigation for non-Federal land may experience implementation delays due to USACE's desire for fee ownership of mitigation lands. The USACE is urged to consider pursuit of non-standard real estate agreements by seeking perpetual conservation servitudes in lieu of fee simple acquisition.

CEMVN Response – CEMVN appreciates the preliminary and early feedback provided on the HSDRRS marsh mitigation projects and will continue to coordinate closely with NMFS as these projects undergo advanced design and further NEPA compliance. USACE Engineer Regulation 405-1-12, paragraph 12-9, requires acquisition of fee title for fish and wildlife mitigation lands. The regulation sometimes allows for a lesser interest to be acquired but only if justified based on project-specific circumstances. However, any lesser interest is likely to require a non-standard estate that would have to be approved by Headquarters USACE. Discussions with Mississippi Valley Division staff for other projects indicate that it is highly unlikely that such approval would be granted. From a practical standpoint, acquisition of mitigation lands in fee is necessary to avoid conflicts with the landowner about access to or usage of the property and to ensure perpetual protection of the newly created or enhanced habitats.

Specific Comments

NMFS Comment – The PIER should be revised to include not only the detail and recommendations identified in the February 2014 draft Fish and Wildlife Coordination Act Report, but also comments provided by NMFS on that Report by letter dated April 10,2014.

CEMVN Response – Recommendations in the Final CAR have been modified as per NMFS 10 April 2014 letter and will be responded to by CEMVN in the final PIER.

NMFS Comment – It should be noted EFH has not been designated for gulf stone crab or pink shrimp in the project area. Therefore, NMFS recommends those species be deleted from the PIER.

CEMVN Response – Edits have been made to the final PIER.

NMFS Comment – The mitigation guidelines and success criteria (Section 7) should be drafted project-specifically for each TIER through interagency coordination. It is suggested this be accomplished prior to releasing drafts on public notice for review.

CEMVN Response – Site-specific plans will be developed for the programmatic features of the TSMPA (Corps-constructed mitigation projects) as part of the applicable TIER(s), in coordination with the Interagency Team, the PDT, and the Non-Federal Sponsor.

NMFS Comment – The USACE should comply with the recommendations identified in the draft February, 2014, Fish and Wildlife Coordination Act Report and comments by NMFS letter dated April 10, 2014.

CEMVN Response – The final CAR for PIER 37 (May 27, 2014) incorporates NMFS April 10, 2014 comments on the draft CAR. Responses to the recommendations in the final CAR have been incorporated into the final PIER in section 8.2.

NMFS Comment – Loss of open water designated as EFH should be assessed in the quantification of mitigation needs. Acceptable mitigation (e.g. marsh creation) for loss of open water habitat should be developed through coordination with NMFS.

CEMVN Response – Concur.

NMFS Comment – Mitigation for marsh impacts should be rescaled based on revised impact analyses to be conducted on advanced and final designs (i.e., 35%, 95% 100% DDRs). If the amount of mitigation increases, the amount of funds should be adjusted accordingly and represented in the financial assurances.

CEMVN Response – Mitigation quantities will be based on actual impacts as reflected in as-built drawings. The Corps will mitigate for all marsh impacts and has budgeted sufficient funds for the effort.

NMFS Comment – The specific dollar amount and mechanism for financial assurances should be identified.

CEMVN Response – The WBV Project Partnership Agreement between the CPRA of Louisiana and the Federal Government provides the required financial assurances for this mitigation project. In the event that the non-Federal sponsor fails to perform, the CEMVN has the right to complete, operate, maintain, repair, rehabilitate or replace any project feature, including mitigation features, but such action would not relieve CPRA of is responsibility to meet its obligations and would not preclude the US from pursuing any remedy at law or equity to ensure CPRA's performance.

NMFS Comment – Adaptive management or contingency plans should be developed and included to reconcile mitigation shortfalls from overfilling or underfilling marsh creation mitigation sites.

CEMVN Response – Concur.

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

JUL 18 2014

REPLY TO
ATTENTION OF

Regional Planning and Environment
Division South
Environmental Planning Branch

Mr. Kyle Graham
Executive Director
Coastal Protection and Restoration Authority
P.O. Box 44027
Baton Rouge, Louisiana 70804-4027

Dear Mr. Graham:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) received your agency's comments dated May 5, 2014 on the Programmatic Individual Environmental Report #37 (PIER #37) for the West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System(HSDRRS) Mitigation, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana Project. Enclosed are CEMVN's responses to these comments.

The CEMVN appreciates the Coastal Protection and Restoration Authority's comments and looks forward to coordinating with the agency on the upcoming WBV HSDRRS Mitigation Tiered Individual Environmental Reports. If there are any questions concerning our responses, please contact Ms. Elizabeth Behrens, Biologist, at (504) 862-2025.

Sincerely,

Richard L. Hansen
Colonel, U.S. Army
District Commander

Enclosure

Comments and Responses

CPRA Comment – The district engineer shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.

CEMVN Response – Concur.

CPRA Comment – Delays in the implementation of compensatory mitigation substantially increases the State's share of the cost.

CEMVN Response – CEMVN disagrees. The impacts from the HSDRRS work were assessed a 57 year period of analysis assuming it would take 7 years from the time the impacts occurred to implement the mitigation. Mitigation projects were anticipated at that time to be on the ground in 2013. Current schedule has these projects on the ground in 2016. Increasing the period of analysis from 57 years to 60 years to capture the additional 3 years of temporal loss would have little effect on the output of the model, minimally increasing the AAHUs required to be offset. Additionally, applying the NFS's cost share to this increased mitigation requirement would result in an extremely small increase in cost to the NFS for implementing the mitigation projects.

CPRA Comment – The methodology used in the determination of WBV wetland impacts is unclear to CPRA. We are aware that USFWS used the WVA method to determine wetland impacts…were the wetland impacts solely determined using aerial photography of was an on-the-ground impact assessment used?

CEMVN Response – All impacts presented in the IERs were assessed using data obtained from field investigations conducted within the footprints stated in the IERs. The footprints in the IERs were based on 35% engineering design. For the mitigation PIERs, the footprint of the HSDRRS work was refined based on the 95-100% plans that were back checked by aerial photography and verified by the project's PM. The field data obtained during completion of the IERs was sufficient for the re-running of WVAs based on the revised footprints. Please note that impacts as stated in the IERs were significantly reduced upon review of the 95-100% plans. Please also reference section 1.4.3.4 in the WBV HSDRRS Mitigation PIER 37.

CPRA Comment – There are discrepancies in calculations in Tables 1-3 and 2-4.

CEMVN Response – As stated in section 1.4.4 in PIER 37, impacts from WBV original construction (as found in EA 437 and 439) are also being mitigated along with the HSDRRS impacts. Please see table 1-4 in that section that presents the additional 125 AAHUs being mitigated along with the impacts found in table 1-3.

CPRA Comment – CPRA requests a full explanation of wetland impact calculations accompanied by maps showing impact to protected side and flood side habitat types by reach with a clear demarcation of fully federal vs. cost-shared compensatory wetland mitigation responsibilities by reach.

CEMVN Response – Mitigation is being carried out for all of the cumulative unavoidable impacts for incurred during the construction of the ach the LPV and WBV projects as a whole. We fund allocate the overall cost of mitigation by habitat type based upon the funding source cost-share

of the construction of the feature that caused the impacts, but do not otherwise associate the specific portions of mitigation projects with specific construction contracts. No such association is needed for the fulfillment of mitigation responsibilities for the cumulative construction impacts of the projects. We have attached a tabulation of the acres and associated AAHUs by habitat type and the funding source(s) used to construct each contract in the LPV/WBV projects. We have also attached enclosed a tabular accounting of the AAHUs by habitat type and the funding sources budgeted for each environmental mitigation project.

CPRA Comment – USACE has not met the commitments made in letter to Governor Jindal dated March 19, 2010…the project included in the TSP are neither large-scale or within areas identified in the State Master Plan.

CEMVN Response – The March 19, 2010 letter from Assistant Secretary of the Army (ASA), Jo Ellen Darcy, to Governor Jindal states: "Moreover, the Corps will develop HSDRRS mitigation plans in those high priority areas that also are identified within the state master plan, specifically the West Bank and Lake Pontchartrain areas". Since the recommended plan for the WBV HSDRRS mitigation is in the West Bank area as specified in the March 19, 2010 letter, the projects in the TSMPA are consistent with the ASA's direction. In addition, since all of the WBV HSDRRS mitigation projects were required to meet 100% of the mitigation requirement, we have produced large scale projects that will provide greater ecological benefit within the basin.

CPRA Comment – The USACE evaluated two project alternatives put forward by the State that coincide with the 2012 coastal Master Plan. They were screened out based on high costs …the basis for this analysis of costs is not clear, as CPRA has not been allowed to review the cost estimates developed by USACE.

CEMVN Response – The two marsh project alternatives (Naomi Alternative 1 and Naomi Alternative 2) were screened out for a variety of reasons - including increased costs. In comparison to the Fresh Marsh TSP at Jean Lafitte, both alternatives:

- required more acreage since the Naomi Alternatives had a lower mitigation potential than the TSP Project.
- required more borrow material since water depths at the Naomi sites were deeper than those found at TSP site..
- were intermediate marsh projects which required planting of native vegetation to ensure success of the project (same for all HSDRRS Mitigation intermediate marsh projects).
- would have greater real estate costs (and potentially require condemnation) since most of the land at the proposed Naomi sites were privately owned.

Due to the above reasons, Naomi Alternative 1 was twice as expensive as the Fresh Marsh TSP. In addition to the above, Naomi Alternative 2 required construction of a foreshore rock dike which caused this alternative to be five times as expensive as the Fresh Marsh TSP. The State of Louisiana declined to pay for the additional costs associated with this Locally Preferred Plan.

CPRA Comment – The State also put forward an alternative project identified in the 2012 Coastal Master Plan that would create brackish marsh as mitigation. USACE indicated that this alternative would require demonstration that in-kind mitigation of swamp habitat is not possible or that WRDA 2007 Section 2036(a) must be changed by Congress. It is not clear where in

WRDA 2007 it is stated that swamp impacts must be mitigated in-kind. The projects identified in the TSP utilize less established restoration techniques and such have a higher risk of failure.

CEMVN Response – From the 31 August 2009 Implementation Guidance 2036(a) for the Water Resources Development Act of 2007-Mitigation for Fish and Wildlife and Wetland losses: "Section 2036(a) of the Water Resources Development Act of 2007 amends Section 906(d) of the WRDA of 1986 (U.S.C. 2283 (d)) to: b. ensure other habitat types are mitigated to not less than in-kind conditions to the extent possible". CEMVN disagrees as the conversion of agricultural fields is a common practice in the mitigation banking industry as well as the creation of marsh from open water.

CPRA Comment – Given the high rates of subsidence and land loss we are facing along our coast, CPRA does not agree with reducing the elevation of land for the purposes of restoration or mitigation.

CEMVN Response – Comment noted.

CPRA Comment – ...guidelines call for maintaining exotic species below 5% of total cover; this requirement will be difficult to attain. These concerns also apply to O&M, it is unclear what CPRA's O&M responsibilities will entail for the various habitat types and how the mitigation success criteria will affect these responsibilities. The required duration of O&M is also unclear.

CEMVN Response – WRDA 2007 requires that Corps-constructed mitigation projects comply with the standards and policies of the Corps regulatory program. The <5% invasive species requirement is consistent with the regulatory standards used for mitigation banks. Specific monitoring plans for the mitigation projects in the TSMPA will be developed during completion of the TIERs.

CPRA Comment – CPRA does not concur with the majority of USACE's proposed non-park/non-404© compensatory mitigation plan for WBV wetland impacts. We do concur with the purchase of credits from a wetland mitigation bank to fulfill compensatory wetland mitigation requirements to protected side BLH-Wet/Dry habitats.

CEMVN Response – Comment noted.

CPRA Comment – We request a presentation on the HSDRRS WBV compensatory wetland mitigation at the May21, 2014 meeting of the CPRA Board.

CEMVN Response – Do to scheduling conflicts CEMVN personnel were unable to attend this meeting. CEMVN is currently working with CPRA to schedule a future briefing.

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

JUL 18 2014

Regional Planning and Environment
Division South
Environmental Planning Branch

Mr. Jeffrey D. Weller
Field Supervisor
U.S. Fish and Wildlife Service
646 Cajundome Blvd Suite 400
Lafayette, Louisiana 70506

Dear Mr. Weller:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN) received your agency's comments dated May 8, 2014, on the Programmatic Individual Environmental Report #37 (PIER #37) for the West Bank and Vicinity (WBV) Hurricane and Storm Damage Risk Reduction System (HSDRRS) Mitigation Project, Jefferson, Lafourche, Plaquemines, and St. Charles Parishes, Louisiana. Enclosed are the CEMVN's responses to these comments.

The CEMVN appreciates the U.S. Fish and Wildlife Service's comments and looks forward to coordinating with the agency on the upcoming WBV HSDRRS Mitigation Tiered Individual Environmental Reports. If there are any questions concerning our responses, please contact Ms. Elizabeth Behrens, Biologist, at (504)-862-2025.

Sincerely,

Richard L. Hansen
Colonel, U.S. Army
District Commander

Enclosure

General Comments

USFWS Comment – While we are generally in support of the Tentatively Selected Mitigation Plan alternative, we are concerned that during mitigation plan formulation meetings the Corps presented a mitigation concept that would rely on bank/credits from mitigation banks that are currently not approved (or even potentially developed) by the Interagency Review Team. Because this concept does not rely on banks that are not approved and functioning and could result in further delays in mitigation implementation the Service cannot support any alternative that would rely on this concept.

CEMVN Response – Acknowledged. Only approved mitigation banks would be eligible to sell credits.

USFWS Comment – Additional NEPA analysis will investigate design alternatives of the alternative features. It is important that the Service and other natural resource agencies (i.e., the National Marine Fisheries Service (NMFS), the Louisiana Department of Wildlife and Fisheries, the Environmental Protection Agency, and the Louisiana Department of Natural Resources) are involved in the analysis of these alternative designs and construction processes. Accordingly, in order to provide feedback regarding potential impacts to natural resources and to provide measures of avoiding and minimizing those impacts, the Service and the other natural resource agencies should be provided opportunities to review and comment on engineering and design reports and plans and specification documents. At that time more detailed Wetland Value Assessments should be conducted by the Service on the proposed mitigation projects, and resizing efforts can be finalized.

CEMVN Response – Additional NEPA analysis concerning the programmatic elements of the TSMPA will be provided in future TIER(s). During the course of preparing the TIER(s) and through the associated PED process, proposed mitigation design features within a particular Corps-constructed mitigation project will likely be adjusted/modified. We will coordinate such adjustments and/or modifications with the Interagency Team (natural resource agencies), the PDT, and the Non-Federal Sponsor. Such coordination will include preparing more detailed and/or updated WVAs for the proposed mitigation features; however, these WVAs will be generated during the preparation of the TIER(s) rather than during preparation of the final project plans and specifications (P&S), since final P&S cannot be completed until after the TIER(s) is approved. The Interagency Team members and the Non-Federal Sponsor will be provided the opportunity to review and comment on the final P&S and associated engineering design reports.

Specific Comments

USFWS Comment – Section 2.5, Changes to Final Array Following AEP and Revised Project Descriptions, page 2-9 and Appendix E – Because of the uncertainty regarding total impacts to the Jean Lafitte National and Historical Park and Preserve (Park) as a result of language in the Omnibus Public Land Management Act of 2009, the Service recommends that the Corps delay any final design work and continue to coordinate with the Park staff prior to finalizing mitigation features that may be affected by the final determination of on park impacts.

CEMVN Response – Acknowledged.

USFWS Comment – Appendix D: Mitigation of Impacts to Open Water Habitats, Section 3, page

D-4 – The Service classifies submerged aquatic vegetation habitat as a Resource Category 2 habitat and, therefore, it should have “in-kind” mitigation. However, we acknowledge the fact that “in-kind” mitigation may be very difficult and somewhat unpredictable compared to marsh mitigation. Therefore, we would accept “out-of-kind” mitigation, that being marsh creation or similar aquatic habitat restoration. Section 3 should be revised to include a Resource Category 2 description.

CEMVN Response – The second paragraph on page 10 of Chapter 1 states that all open water impacts would be mitigated as marsh per the open water guidelines found in appendix D. The open water guidelines have been modified to include the Resource Category 2 description.

USFWS Comment – Appendix K: LPV&WBV HSDRRS Mitigation: Wetland Value Assessment (WVA) Model Assumptions and Related Guidance – The Service has worked with the Corps and other natural resource agencies to develop these assumptions and accepts them for use with the LPV and WBV mitigation. These assumptions may be used as a template for future civil works projects; however, for future projects coordination with the natural resource agencies will be necessary to develop area and project specific assumptions.

CEMVN Response – Concur.

USFWS Comment – Appendix L: General Mitigation Guidelines (also present in Appendix H, sub-appendix 3) – Information in this appendix was developed for both the LPV and WBV basins; the Service has previously presented comments on this appendix during our review of PIER 36 (located in Appendix J). The Service incorporates those comments by reference and recommends that they be addressed within this PIER.

CEMVN Response – CEMVN's 3 December 2013 responses to comments made by USFWS in their 25 September 2013 letter are still valid. For those comments where CEMVN responded that "Site-specific plans will be developed for the Programmatic features of the TSMPA (Corps-constructed mitigation projects) as part of the applicable TIER(s), in coordination with the Interagency Team, the PDT, and the Non-Federal Sponsor" CEMVN would revisit these comments for potential incorporation into the site specific plans.

CEMVN appreciates the USFWS’s comments and looks forward to coordinating with the agency on upcoming TIERs. If there are any questions concerning our responses please contact Elizabeth Behrens at (504)-862-2025.