CECW-MVD 13 April 2012

MEMORANDUM FOR RECORD

SUBJECT: Louisiana Coastal Area (LCA) Ecosystem Restoration, Barataria Basin Barrier Shoreline Restoration Final Integrated Construction Report and Final Environmental Impact Statement, Civil Works Review Board (CWRB)

1. The subject meeting was held 22 March 2012 from 0800 until 1130 Eastern Daylight Time. The Agenda (Attachment 1) and List of Attendees (Attachment 2) are provided. The Board members were Major General Walsh, Deputy Commanding General, Civil and Emergency Operationsand CWRB Chair; Mr. Theodore Brown, Chief, Planning and Policy Division; Mr. James Dalton, Chief, Engineering and Construction Community of Practice and South Atlantic Division Regional Integration Team; Mr. Richard Lockwood, Acting Chief, Operations and Regulatory Community of Practice, and Lakes and River Division Regional Integration Team; Mr. Les Dixon, Director of Program Management, South Atlantic Division:

2. The purpose of the meeting was to gain approval by the CWRB to release the Barataria Basin Barrier Shoreline Restoration (BBBS) Final Integrated Construction Report and Final Environmental Impact Statement for State and Agency (S&A) Review.

3. The meeting was opened by the Deputy Commanding General for Civil and Emergency Operations, MG Michael Walsh, who offered welcoming remarks and provided an overview of the meeting purpose for the benefit of the project sponsor and others in attendance. The CWRB is a corporate checkpoint to ensure that all policy issues are resolved and that documents are ready for S&A Review. It is required for every project submitted to Congress for authorization. Benefits of CWRB meetings are the increased vertical team interactions, as well as Corps and non-Federal sponsor interactions and the opportunity to learn from each one. MG Walsh encouraged an open and transparent discussion of issues.

4. COL Edward R. Fleming, Commander, New Orleans District, provided the briefing of the BBBS Study, including the need for action, and the significant consequences of no action. He emphasized the rate of coastal Louisiana land loss and how barrier shoreline restoration, as proposed in this study, is one of the three key legs of the stool (along with land building and diversions of freshwater, nutrients and sediment) to stop land loss and restore coastal ecosystems. The briefing covered the specific problems addressed, measures and alternatives considered, the recommended features and their costs and benefits, risks and uncertainty, results of sea level change analysis, and the status of the Agency Technical Review and Independent External Peer Review.

5. The recommended plan would restore portions of the Louisiana Coastal Area at a total first cost of approximately $428,000,000. The recommended restoration plan is based on the recommendations of the LCA near-term plan that was authorized in the Water Resources Development Act of 2007 (WRDA 2007). The near-term plan focuses on projects that mainly

consist of diversions, land creation and barrier island protection. The recommendation for the BBBS is the culmination of 62 months of work, since the signing of the Feasibility Cost Sharing Agreement in 2007, with a goal to sign a Chief's Report by 19 June 2012. The New Orleans District requested approval to release the report for S&A review.

6. The project briefing was followed by statements from the State of Louisiana, represented by Mr. Jerome Zeringue, Executive Director, Coastal Protection and Restoration Authority. Mr. Zeringue conveyed the State's support of the report recommendations, and emphasized the crisis of land loss in Louisiana's coastal area, which is vital to the economic and energy security of the United States and critical to the nation's oil and gas industry, as well as fish and wildlife and Louisiana's culture. He pointed out that the BBBS project is part of the State's Master Plan for coastal restoration. Finally, he urged the Federal government to do more and to treat the loss of Louisiana's coast as a crisis, stating that the current process is unsustainable and not indicative of a crisis response. He relayed the State's desire to continue working together as a team and requested that the role of the non-Federal sponsor and crediting issues be addressed.

7. MG John Peabody, Commander, Mississippi Valley Division, provided Division concurrence with the District Commander's recommended plan. He stated that, while there are some similarities between this issue and other coastal land loss issues he has worked on in his previous two division commands, this issue is different because it involves loss of 90 percent of the nation's coastal wetlands and puts the nation's economic vitality and health at risk by putting our infrastructure under attack. He found the recommended plan complies with laws and policies, is consistent with the Corps' Environmental Operating Principles and the Corps' campaign plan, and that the cost estimates were adequate for moving from the feasibility phase to the pre-construction engineering and design phase.

8. Mr. James Baker, Agency Technical Review (ATR) Team Leader, Jacksonville District, summarized the ATR process for the final integrated report. The review covered assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of results, including whether the product meets the customer's needs consistent with law and existing Corps policy. The ATR also assessed district quality control documentation and determined it appeared to be appropriate and effective. All comments have been resolved and closed in DrChecks.

9. Ms. Karen Johnson-Young, Program Manager, Battelle Memorial Institute, and Dr. Brian Bledsoe, Associate Professor, Colorado State University, summarized the Independent External Peer Review (IEPR) process for the study report, which included five experts. This is the first IEPR conducted under the auspices of the Louisiana Water Resources Council, as required by WRDA 2007. The review panel found that the models, methods and analyses used in the report were sound. Specific concerns were the need for a more detailed monitoring and adaptive

management plan; the preliminary design of the beach fill; and the environmental methods and evaluation. All concerns were resolved to the satisfaction of the panel.

10. Mr. Mark Matusiak, Review Manager, Headquarters Office of Water Project Review (HQ OWPR) presented a summary of areas of significant policy concern during review of the report, as well as their resolution. They were: 1. Operations, Maintenance, Repair, Rehabilitation and Replacement (OMRR&R); 2. Sustainability; and 3. Proposed exploration of non-standard estates during Pre-construction Engineering and Design (PED). He stated that all policy issues have been satisfactorily resolved. With respect to the third issue, the use of fee title is proposed in the BBBS report and was used to develop cost estimates. However, the District and State propose to explore the option of non-standard estate easements in the early stages of PED. HQ OWPR recommended the release of the report for S&A review.

11. Below is a summary of questions and issues raised during the Board's discussion of the report.

a. Several questions were asked regarding recommended plan costs and cost risks. The district responded that costs increased beyond the limit of the WRDA 2007 authorization for several reasons, including increased fuel prices, continued degradation of the sites and the fact that the WRDA 2007 cost estimate price level was not appropriately updated. All agreed that a corpswide strategy is needed to better track risk management plans to ensure they include not just identification of high risks, but also address approaches and measures to mitigate high cost risk items. The State acknowledged its ability to fund its share of the project which was included in the cost risk analysis, and that it was fully committed to making the project a priority if funds become available. If construction start of the final increment is delayed beyond October 2013, a sensitivity analysis showed that quantities on Shell Island are not anticipated to increase significantly, and that cost would be expected to increase only approximately 10 percent. A board member observed that the costs for periodic re-nourishment did not appear to be included in the project cost estimate, but are usually identified for coastal restoration projects. The board requested verification that costs had not been underestimated, and the District committed to provide such verification.

b. Recommended plan benefits were discussed. Benefits were calculated using the Wetland Value Assessment model for the habitat being directly created by the project. The District and State recognize that the project has nationally significant, but ancillary, benefits for: ecosystems; hurricane and storm damage risk reduction projects; oil and gas infrastructure; communities; and recreationally and commercially important fisheries behind and near project locations. These benefits were discussed in the report qualitatively, though they were not able to be quantified. No monetary or life-safety benefits were calculated, although they clearly exist, because the project is authorized as a single-purpose aquatic ecosystem restoration project. It is not possible to determine explicitly what percentage of the historic barrier islands will be

restored by the recommended plan, but it is likely that both islands were historically substantially larger than they are today.

c. The District was asked about Operation, Maintenance, Repair, Rehabilitation and Replacement (OMRR&R). The intent is that as soon as a functional element of the project is complete, it would be turned over to the non-Federal sponsor, and the OMRR&R responsibilities would begin. Permits from the Department of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement for sand and sediment borrow areas are not expected to be an issue; coordination has already begun. Board members commented that the OMRR&R sediment quantities required over the life of the project appear to be large. Both the District and State acknowledged that potential and stated their hope that improvement in the ecosystem health would lead to diminished OMRR&R sediment needs over time. The district acknowledged that a small amount of material placed on Caminada Headland may drift back into the Belle Pass channel over time, but a "do-loop" is not anticipated. Material will be placed at a nodal point only 100 feet off the headland, from which some material naturally moves east, away from the channel from which the material is to be dredged. The return of some material to the channel was included in the analysis.

d. In response to a question about littoral zone placement of re-nourishment sediment, the District stated their Operation Division has used such placement successfully, as have others in Florida and Texas. Models show such placement should work. This leads to a high level of confidence in the effectiveness of such placement.

e. Plan formulation questions focused on the impact of variation in key assumptions on which planning was based, as well as whether benefits would be achieved if only one site was restored, and why Caminada Headland should be the initial increment. Caminada should be constructed first because it currently provides federally designated critical habitat for the piping plover, a threatened species, and because it provides the best "bang for the buck." While restoration of both the Headland and Shell Island are required for restoration of the full function of the barrier island shoreline system, restoration of Caminada Headland only would have independent benefits, both directly and indirectly. Some of the key assumptions are that erosion, subsidence and sea level rates are relatively constant. This scenario was used to evaluate all alternatives, and then tested against low, medium and high seal level rise. The sensitivity testing lends confidence to the conclusion that the project will perform well even if assumptions are not completely correct. The district clarified that there is restoration work already completed and additional work planned under other State, Federal and local programs for the other islands in the Barataria Basin Barrier Shoreline in the future without project condition.

f. The real estate requirements were discussed. There was concern that because the District and State plan to request use of non-standard estate easements for the project during PED, the real estate plan and needs were not finalized. COL Fleming clarified that the question

was finalized. The plan as documented in the report is to obtain fee simple title for all necessary lands. The State confirmed that although they prefer easements, they are prepared to acquire fee title and to condemn property if necessary. MG Walsh commented that with only 16 months before construction is proposed, the request for non-standard estate easements would have to be worked with Headquarters quickly.

g. Board members questioned the State on the strength of their commitment to the project, and if their desire to seek statutory changes to cost-sharing and credit requirements might delay signing of a PPA or construction. They also questioned if it was a priority in the State's updated master plan. Mr. Jerome Zeringue, on behalf of the State, reiterated the project is a critical component of the State Master Plan to protect the coast.

h. In response to a question about the status of an update to the project's vertical datum the District explained that the project was designed with one common vertical datum, and that changes in the datum simply moved the project design template up or down. Quantities would not change, so costs would not be impacted. The reference point would simply change. The District also verified that both project locations lie between two official reference points on Grand Isle, Louisiana and Pensacola, Florida and that there is very little tidal variation at either site or between the sites. This provides confidence that there would be no difference in impact of tides at either location.

12. The five Board members voted unanimously to release the report for S&A review, with the comment that the District investigate and verify that the total project cost were not underestimated.

13. The following is a summary of challenges and lessons learned that were discussed during the meeting:

a. When preparing a report for a project that is already included in a previous Chief's Report (as this project is included in the 2005 LCA Chief's Report), it is critical to follow the requirements in the previous Chief's Report and engage the vertical team and State early to develop alignment.

b. Headquarters should work with engineering and construction staff to share technical lessons learned across the enterprise. In this case, the project delivery team learned that jetties or other hard structures would do more damage than good at the specific locations, and therefore, they were able to rule out measures and alternatives without modeling to quickly narrow down a realistic array of alternatives.

c. It would not have been possible to meet the new "3x3x3" report requirement for this project, particularly the 3-year requirement, given that the district was also dealing with the LCA

6 report, Hurricanes Katrina and Rita and the Greater New Orleans Hurricane Storm Damage Risk Reduction System at the same time. It was acknowledged that such situations require a greater use of regional and national resources.

d. It was also recognized that lessons learned, such as the technical one mentioned by Mr. Dalton are not really learned until we as an agency internalize them. Someone should be identified to catalogue and disseminate such key lessons learned. This should help achieve planning transformation goals as well.

e. Congress will now accept CD's of reports. The Assistant Secretary of the Army (Civil Works) office will now request reports from the District differently, and Wes Coleman of the HQ OWPR is developing submittal requirements that will meet Government Printing Office needs.

14. MG Walsh thanked everyone for their attendance and participation and closed the meeting at approximately 1130 hours.

LOUISIANA COASTAL AREA
BARATARIA BASIN BARRIER SHORELINE RESTORATION, LA

Civil Works Review Board – 22 March 2012
AGENDA

0800	Welcome	MG Michael Walsh *CWRB Chair and Deputy Commander for Civil and Emergency Operations*
0805	Introductions	MG Michael Walsh *CWRB Chair*
0810	Project Briefing	COL Edward Fleming *District Commander, New Orleans District*
0900	Sponsor Support	Mr. Jerome Zeringue *Executive Director, Coastal Protection and Restoration Authority, State of Louisiana*
0910	Division Support	MG John Peabody *Division Commander, Mississippi Valley Division*
0925	Agency Technical Review	Mr. James Baker *(via phone)* *Ecosystem Restoration Planning Center of Expertise*
0930	Independent External Peer Review	Ms. Karen Johnson-Young *IEPR Project Manager, Battelle Memorial Institute*
0940	Break (10 minutes)	MG Michael Walsh *CWRB Chair*
0950	Policy Review Assessment	Mr. Mark Matusiak *Review Lead, Office of Water Project Review*
1005	Board Discussion • Member Questions • Office of ASA(CW), OMB Questions	MG Michael Walsh *CWRB Chair*
1025	Action	Mr. Theodore Brown *Chief, Planning and Policy Division*
1030	Lessons Learned / After Action Report: • What was supposed to happen? • What did happen? • Why did it happen that way? • How will we improve next time?	COL Edward Fleming *District Commander, New Orleans District*
1035	Lessons Learned	MVD, OWPR, Sponsor, Others
1040	Close	MG Michael Walsh *CWRB Chair*

LOUISIANA COASTAL AREA
BARATARIA BASIN BARRIER SHORELINE RESTORATION, LA

Civil Works Review Board
22 March 2012 - 8:00 am

Attendees

Civil Works Review Board (CWRB)	**Name:**
CWRB Chair and Deputy Commanding General for Civil and Emergency Operations	MG Michael Walsh
Chief, Planning and Policy Division	Mr. Theodore (Tab) Brown
Chief, Engineering and Construction Community of Practice	Mr. James Dalton
Chief, Operations and Regulatory Community of Practice	Mr. Richard Lockwood
Director Program Management, South Atlantic Division	Mr. Les Dixon

Office of Management and Budget (OMB)

OMB Examiner	Mr. William (Dick) Feezle
OMB Examiner	Ms. Emma Roach

Department of the Army – Office of Assistant Secretary of the Army for Civil Works

Depty Asst Secretary of the Army (Proj Planning & Review)	Mr. Doug Lamont	(via phone)
Assistant for Water Resources Development	Mr. Mark McKevitt	

Planning and Policy Division

Deputy, Planning and Policy Division	Mr. Bruce Carlson

Office of Counsel

Counsel, USACE	Mr. Scott Murphy

Office of Water Project Review (OWPR)

Chief, Office of Water Project Review	Mr. Wesley Coleman
Policy Review Lead	Mr. Mark Matusiak
Policy Review Team	Mr. Tom Hughes
Policy Review Team	Ms. Andrea Walker
Policy Review Team	Ms. Deborah Scerno
Policy Review Team	Ms. Beth Marlowe
Policy Review Team	Mr. George Boguslawski
Policy Review Team	Mr. Chandra Pathak
Civil Works Review Board Team	Ms. Patricia Bee
Civil Works Review Board Team	Ms. Marilyn Benner

LOUISIANA COASTAL AREA
BARATARIA BASIN BARRIER SHORELINE RESTORATION, LA

Civil Works Review Board
22 March 2012 - 8:00 am

Attendees (cont.)

Mississippi Valley Division Regional Integration Team (MVD RIT)

Civil Works Deputy, Mississippi Valley Division RIT	Mr. Joseph Redican	
Planning Program Manager, MVD RIT	Ms. Beth Marlowe	
Planning Program Manager, MVD RIT	Mr. Eric Fox	

Mississippi Valley Division (MVD)

Division Commander	MG John Peabody	
Chief, Planning	Mr. Rayford Wilbanks	
Director of Programs	Mr. Edward Belk	
Senior Economist	Mr. Larry Kilgo	(via phone)
Senior Planner	Ms. Susan Smith	(via phone)
Engineering	Mr. Charles Shadie	(via phone)
Cost Engineering	Mr. Richard Hurst	(via phone)
Operations Division	Mr. Steve Jones	(via phone)
Counsel	Mr. Bradley Hayes	(via phone)
Chief, District Support Team (DST)	Mr. Greg Ruff	(via phone)
DST Program Manager	Mr. Jim Wojtala	(via phone)
Senior Real Estate Specialist	Ms. Robyn Broils-Cox	(via phone)

New Orleans District (MVN)

District Commander	COL Edward Fleming	
Deputy District Engineer for Project Mgmt	Mr. Thomas Holden, Jr.	
Chief, Regional Planning & Environmental Division South	Mr. Troy Constance	
Chief, Projects and Restoration Branch	Mr. Mark Wingate	
Senior Project Manager	Mr. Darrel Broussard	
Senior Plan Formulator	Ms. Fay Lachney	
Project Manager	Mr. Billy Hicks	
Senior Plan Formulator	Mr. Timothy Axtman	
Environmental Branch Chief	Ms. Joan Exnicios	(via phone)
Environmental Manager	Ms. Sandra Stiles	(via phone)
Environmental Lead	Mr. William Klein	(via phone)
Plan Formulator	Ms. Jerica Richardson	(via phone)
Economist	Mr. Matthew Napolitano	(via phone)
Engineering Technical Lead	Ms. Pamela Deloach	(via phone)
Operations Lead	Mr. Edward Creef	(via phone)
Cost Engineer	Mr. John Petitbon	(via phone)
Real Estate Lead	Ms. Judith Gutierrez	(via phone)
Real Estate	Mr. Robert Lowe	(via phone)
Office of Counsel	Ms. Paula Feldmeier	(via phone)
Cultural Resources	Mr. Gary Demarcay	(via phone)
Recreation	Mr. Andrew Perez	(via phone)
Aesthetics	Mr. Kelly McCaffrey	(via phone)

LOUISIANA COASTAL AREA
BARATARIA BASIN BARRIER SHORELINE RESTORATION, LA

Civil Works Review Board
22 March 2012 - 8:00 am

Attendees (cont.)

State of Louisiana, Coastal Protection and Restoration Authority – Non-Federal Sponsor

CPRA Executive Director		Mr. Jerome Zeringue	
Louisiana Coastal Area Program Manager		Mr. Bren Haase	
Planning Manager		Mr. Joseph "Wes" LeBlanc	
Louisiana Coastal Area Program Manager		Ms. Jammie Favorite	(via phone)
Project Manager		Mr. Chad Chauvin	(via phone)
Project Manager		Ms. Dona Ours	(via phone)
Project Manager		Mr. Harold Daigle	(via phone)
Project Manager		Mr. Brad Miller	(via phone)
Project Manager		Mr. Andrew Beall	(via phone)
Project Engineer		Ms. Catherine Ricks	(via phone)
Study Manager		Ms. Renee Sanders	(via phone)
Study Manager		Ms. Micaela Coner	(via phone)
Study Manager		Ms. Stephanie Zumo	(via phone)
Coastal AE Contractor	(Coastal Engineering Consultants, Inc.)	Dr. Vadim Alymov	(via phone)
Coastal AE Contractor	(Coastal Engineering Consultants, Inc.)	Dr. Michael Stephen	(via phone)
Coastal AE Contractor	(Coastal Engineering Consultants, Inc.)	Mr. Michael Poff	(via phone)
Coastal AE Contractor	(Coastal Planning & Engineering, Inc.)	Mr. Gordon Thomson	(via phone)

Ecosystem Restoration Planning Center of Expertise (ECO PCX) – Mississippi Valley Division

Operating Director, ECO PCX	Ms. Jodi Creswell	(via phone)
Agency Technical Review Manager and Lead Reviewer	Mr. James Baker (Jacksonville District)	(via phone)
Deputy, Coastal Storm Damage Reduction PCX (PCX Manager for Louisiana Water Resources Council IEPR)	Mr. Larry Cocchieri (North Atlantic Division)	

Independent External Peer Review Team (IEPR)

IEPR Program Manager	(Battelle Memorial Institute)	Ms. Karen Johnson-Young	
IEPR Project Manager	(Battelle Memorial Institute)	Ms. Corey Wisneski	(via phone)
Panel Lead - Hydrology/Hydraulics Engineering	(Univ of Florida)	Dr. Brian Bledsoe	(via phone)
Panel - Plan Formulation	(Washington State University)	Dr. Ken Casavant	(via phone)
Panel - Coastal Engineering	(University of Florida)	Dr. Ralph Ellis	(via phone)
Panel - Coastal Geomorphology	(Texas A&M University)	Dr. Chris Houser	(via phone)
Panel - Wetland Ecology/Biology	(Crouch Environmental Services, Inc)	Ms. Kay Crouch	(not available to participate)