

MEMORANDUM FOR RECORD

SUBJECT: MISSISSIPPI RIVER GULF OUTLET (MRGO) ECOSYSTEM RESTORATION,
LOUISIANA, CIVIL WORKS REVIEW BOARD (CWRB)

MEETING DATE: 14 JUNE 2012, 2:00 PM

ATTENDEES: Steve Stockton (CRWB), Theodore Brown (CWRB), James Balocki (CWRB), Karen Durham-Aguilera (CWRB), Les Dixon (CWRB), Emma Roach (OMB), Mark McKeivitt (ASA), Scott Murphy (CECC), George Boguslawski (CEMP-CR) Wesley Coleman (OWPR), Patricia Bee (OWPR), Marilyn Benner (OWPR), Joe Redican (MVD-RIT), Beth Marlowe (MVD-RIT), Mike Wyatt (MVD-RIT), MG John Peabody (MVD CG), Rayford Wilbanks (MVD), Edward Belk (MVD), COL Edward Fleming (MVN), Troy Constance (MVN), Mark Wingate (MVN), Greg Miller (MVN), Joshua Carson (MVN), Caroline Lanford (MVN), Sandra Stiles (MVN), Tammy Gilmore (MVN), Sarah Nash (MVN), Garret Graves (State of Louisiana), Jerome Zeringue (State of Louisiana), Bren Hasse (State of Louisiana), Chad Chauvin (State of Louisiana), Karen Johnson-Young (Battelle), Kay Crouch (Crouch Environmental), Amanda Moore (National Wildlife Federation), Courtney Taylor (Environmental Defense Fund), Dr. John Lopez (Lake Ponchartrain Basin Foundation) representing the MRGO Must Go Coalition

MEETING:

Mr. Stockton welcomed the group and explained the Civil Works Review Board (CWRB) process. Each individual provided introductions. Colonel Fleming provided a presentation on the project detailing the history, authorities, project benefits, costs and plan formulation. Colonel Fleming stressed the unique circumstances of the project being before the CWRB without an identified non-Federal sponsor and noted that guidance from the Assistant Secretary of the Army (ASA) requires that this fact be noted in the Chief's Report. The recommended plan consists of a Federally Identified Plan (FIP) which includes a tiered implementation strategy of ecosystem restoration and recreation features. Tier 1 includes features for immediate implementation; Tier 2 includes features that are dependent on specific salinity levels and will be implemented pending confirmation of sufficient salinities; Tier 3 includes features that are freshwater dependent and are recommended for further study, including a freshwater diversion near Violet, Louisiana. The total cost of implementation of the FIP is approximately \$2.9 billion. Colonel Fleming recommended release of the report for State and Agency Review, the next milestone in the Corps review process.

Mr. Stockton requested comments from the State of Louisiana, who attended as a potential future non-Federal sponsor. Garret Graves spoke on behalf of the State. Mr. Graves discussed the fundamental changes to the hydrology of the area that have occurred over time. He discussed the natural delta formation at the outlet of the Mississippi River with aggradation rates that he estimated at $\frac{3}{4}$ -mile per year and contrasted with the current recession of shoreline and loss of wetland along the Louisiana Coast. He noted the dependence of the local economy on wetlands and also discussed the benefits of wetlands to attenuate storm surge events resulting from hurricanes and other coastal storm events and also highlighted the importance of southern Louisiana to the national economy. He indicated State support for the

Federally Identified Plan (FIP) given its consistency with the State Master Plan for the area and noted the State's preference for prioritization of project components such as Biloxi Marsh, the East Orleans Land Bridge, the Central Wetlands area and oyster reef restoration. Mr. Graves referenced a letter to the Corps dated March, 2011 that identified concerns with sequencing, prioritization and compliance with the authorization language. According to Mr. Graves, sequencing and prioritization issues have largely been addressed, however, the State disagrees that the current scope of the MRGO FIP fully addresses all of the problems identified in the authorization language. Mr. Graves estimated that restoration is currently needed on 600,000 acres of wetland whereas the FIP only restores 60,000 acres. He also highlighted the importance of the Violet Diversion as an integral component in the long-term sustainability of restoration in the area and the preferred source of freshwater and sediment for restoration purposes from the State's perspective. Mr. Graves also identified a new issue with Corps real estate requirements which affect the MRGO FIP and other similar ecosystem restoration projects underway within the State of Louisiana. Currently the Corps requires fee title for project partnership to support implementation however Mr. Graves noted a preference by the State for easement acquisition in lieu of fee title. Further, he identified concerns that existing commercial and industrial activity would be constrained in areas where restoration projects occur as a result of real estate acquisition. He detailed the State's twenty year history of easement acquisition for ecosystem restoration and suggested that changes to the Corps real estate acquisition requirements are needed. He detailed the State's preference for easements as a way to cooperatively work with land owners and avoid condemnation which costs time and money. Mr. Graves also stated that the State does not agree with legal interpretations regarding cost-share language included in the project authorizations, but that as a result of the recent oil spill in the Gulf of Mexico, that the State is positioned to receive billions of dollars in compensation which will be utilized on further ecosystem restoration efforts. The State wants to be able to partner and proceed with projects as soon as funds are received which is tentatively scheduled for January, 2013 in Mr. Grave's estimation. Mr. Graves also presented Mr. Stockton with a letter from a coalition of Non-Governmental Organizations (attached), several members of which were in attendance at the meeting.

Mr. Stockton requested comments from a representative of the National Marine Fisheries Service, scheduled to participate via conference call. The agency representative was not present to participate.

Mr. Stockton requested comments from a representative of the U.S. Fish and Wildlife Service (USFWS). Jeff Weller, participating by phone, served as the agency representative. Mr. Weller commended the Corps for the development of the FIP and stated his opinion that implementation of the project would benefit the natural resources of the area. Mr. Weller asked a question regarding slide 38 of the New Orleans District presentation, focusing on Breton Island. Mr. Weller asked if anything additional could be done with this geographic feature to improve the ecosystem benefits of the project. Colonel Fleming noted that the U.S. Geological Survey released a report related to problems affecting Breton Island, however, the Corps does not agree with the conclusions of that report. Restoration at Breton Island was included in the initial of alternatives, but was screened out through the planning process. Colonel Fleming suggested that through State and Agency review, the Corps and USFWS could discuss Breton Island further.

Mr. Stockton requested comments from a representative of the Environmental Protection Agency (EPA). John Ettinger, participating by phone, served as the agency representative. Mr. Ettinger thanked the Corps for including EPA in the discussion and that EPA fully supported the restoration effort. He thought the

Corps did a good job of identifying critical landscape features and areas of critical community importance, especially Bayou Bienvenue, however, Mr. Ettinger noted the outstanding concern regarding a deficit of sediment to the area. Mr. Ettinger identified a preference for utilizing the Mississippi River as a natural conveyance for sediment, consistent with the position of the State of Louisiana. Mr. Ettinger represented an agency position of preferring oyster reefs and other natural features over the use of rock in shoreline stabilization, but adaptive management, in his opinion, could overcome any of his existing concerns. Mr. Ettinger stated that EPA concurs with the State of Louisiana that a freshwater diversion is needed for long-term sustainability.

General Peabody provided a presentation on behalf of the Mississippi Valley Division to concur with the District Engineer's recommendation. General Peabody provided an overview of the history of the MRGO project, the national significance of the region as well as a comparison between the State of Louisiana Master Plan and the MRGO recommendation. General Peabody noted concerns regarding sea level rise and the maintenance of benefits over time and also the uncertainty regarding the benefits of freshwater diversion. He suggested that additional study in optimizing a freshwater diversion was warranted in order to better manage risk and project outputs.

Mr. Jim Baker (SAJ, ECO-PCX) participated by phone to provide a summary of the Agency Technical Review process (ATR). He highlighted the major issues identified in the review process and noted that all issues were resolved.

Ms Karen Johnson-Young and Ms Kay Couch provided a presentation summarizing the Independent External Peer Review process (IEPR). Substantive issues identified by the IEPR panel were discussed and it was noted that all issues were resolved through MVN responses to comments, but that the final changes to the report were not reviewed by the IEPR panel.

The meeting briefly adjourned for a break at 3:40 PM and resumed at 3:55 PM.

Mr. Wesley Coleman provided a presentation on behalf of the Office of Water Project Review, summarizing the vertical team review process. He highlighted the major issues identified in the review process and noted that all issues were resolved. Mr. Stockton asked how far the process could proceed given the lack of a non-Federal sponsor. Mr. Brown responded by stating that the Assistant Secretary of the Army (ASA) must submit a report to Congress to comply with the authorization, but that preconstruction, engineering and design (PED) would not proceed without a sponsor. General Peabody asked if specifically authorized funds were also required to proceed further. Both Mr. Stockton and Mr. McKevitt affirmed the need for additional funding in order to proceed to the next phase of the project.

Mr. Stockton inquired about the viability of freshwater diversion such as the Violet Diversion. Colonel Fleming responded that a significant amount of engineering is still required. He identified challenges such as the existing floodwalls, public opposition received through public comment and the overall effectiveness of delta restoration that would be explored further through additional study. He added that construction of the Violet Diversion is currently estimated at an additional \$500 million, which is not included in the current MRGO estimate.

Mr. Brown inquired as to whether the approach to evaluating future sea level rise is consistent with that utilized on other similar projects in the area. Colonel Fleming confirmed that this is true. Mr. Dixon

asked about the certainty of the sea level rise estimates and whether the certainty would improve in accuracy in the future. Mr. Stockton noted the common use of adaptive management to address issues related to risk and uncertainty. Mr. Graves stated that the State of Louisiana Master Plan addressed uncertainty through sequencing of projects and priorities.

Mr. Stockton opened the floor to the CWRB for formal discussion and questions. Mr. Brown asked Corps real estate experts to discuss the process of accepting easements in lieu of fee title. It was noted that easements are allowed under policy under standard and non-standard estates, but protection of project outputs is paramount. The current discussion with the State of Louisiana does not give the government ownership rights over mineral rights, but if an individual desired to exercise mineral rights, access to the land may be restricted under the easement and standard permits would be required. Colonel Fleming noted that this approach is consistent with other projects in the area and exercising mineral rights would require directional drilling or another non-intrusive method. Mr. Stockton asked if the difference in cost between fee title and easement had been evaluated. Colonel Fleming responded that the issue had been looked at, but he did not have the information readily available. He speculated that utilizing standard estates would likely be more expensive and time consuming. Mr. Balocki added that the Army routinely uses easements in military installation applications. Colonel Fleming noted that of the standard estates available for use in easement acquisition, none specifically are tailored to marsh restoration. Mr. McKevitt added that the Louisiana Coastal Area study established standard estates in 2005 and questioned whether or not those estates were now found to be un-implementable. Colonel Fleming responded that the District is implementing the LCA recommendations, compliant with policy. Mr. Brown explained that the District is exploring additional cost-efficiencies. Mr. Redican noted that the vertical team is exploring the issue as a broader policy question throughout the Division and the Corps. Mr. Brown inquired about the total real estate costs for the project. Colonel Fleming responded that real estate estimates total \$90 million which is less than the 25% threshold for ecosystem restoration under current policy.

Ms Durham-Aguilera identified concerns with some of the recreation objectives. She also noted that the hurricane protection system for the City of New Orleans is a stand-alone project and not dependent on any additional ecosystem restoration. She also noted that the State of Mississippi was not present or participating in the CWRB proceedings. She also added the importance of looking at all of the restoration efforts as a system. Mr. Graves responded that the Violet Diversion was authorized under a separate authority. He indicated that the State of Louisiana would cost-share on the Violet Diversion project if it were conducted under authorities provided by Section 3083 rather than Section 7013 [of the Water Resources Development Act, 2007]. Mr. Graves added that he did not think it was in either party's interest to proceed with the Violet Diversion under the Section 7013 authority. Mr. Graves stated that the State would provide \$100 million for the Violet Diversion if the Corps is ready to proceed with the project. Mr. Dixon inquired about which authorization would be used to pursue the Violet Diversion study. Colonel Fleming explained the difference between the authorizations and stated that he recommends that the study be pursued under Section 3083 authority. Mr. Dixon asked about the current study costs and timeline. Colonel Fleming responded that the MRGO study cost \$15 million and took four years to complete. Mr. Balocki highlighted the perceived importance of the Violet Diversion to the success of the overall project and noted the overall costs of restoration appear to be approximately \$500,000 per acre restored. Colonel Fleming explained the tiering system for project components and the sequencing of implementation. He also added that salinity levels within the study area have been reduced

by up to 50% with the previous closure of the channel. General Peabody added that the science is still immature regarding the use of freshwater diversions and that further study is required.

Mr. Brown asked how the District will ensure the integration of IEPR comments in the final report. Colonel Fleming responded that it is up to the Commander to ensure that commitments are met.

Mr. Brown asked whether there were reasonable and prudent measures were included in the project to protect gulf sturgeon habitat. Ms. Stiles responded that in absence of a jeopardy opinion or take from USFWS or NMFS that there are no official reasonable or prudent measures included in the study, as defined by law however many efforts were undertaken to minimize adverse effects on gulf sturgeon.

Mr. Brown also noted that as with many other ecosystem restoration projects, this project will likely result in un-quantified National Economic Development (NED) benefits and that in the future, the Corps should investigate ways to capture both ecosystem and economic benefits within project analysis.

Ms. Roach inquired about the assumptions regarding funding. Colonel Fleming responded that it was assumed that \$200 million per year would be budgeted for construction, similar to the approach used with the Everglades restoration. Mr. Brown added that it is policy to assume optimal funding. Ms. Roach followed by asking how the costs with MRGO compare to other LCA projects. Colonel Fleming responded that costs are comparable at about \$50,000 per acre. Mr. Stockton noted that the benefits of MRGO extend beyond just the acreage footprint of the project. Ms. Roach added that it would be ideal to quantify the storm surge benefits and questioned the maintenance cycle on marsh nourishment. Mr. Miller clarified that marsh nourishment is governed by an adaptive management plan.

MOTION: Mr. Brown moved to approve release of the report for State and Agency review; SECOND by Stockton; APPROVED upon unanimous consent by the CWRB.

The Mississippi Valley Division offered lessons learned throughout the study development process. Mr. Dixon questioned whether or not a similar approach would have been taken on the project in hindsight. General Peabody responded that uncertainty with the project remains an issue, but is inherent given the state of the science. Mr. Graves added that he hoped the State of Louisiana and the Corps can improve partnership in the future through working more closely and transparently. He reiterated his interest in pursuing the Violet Diversion under Section 3083 authority. Ms Crouch added her accolades for the NEPA document associated with the report.

Adjourned, 5:10 PM.