DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-MVD

SEP 2 8 2012

SUBJECT: Mississippi River Gulf Outlet (MRGO) Ecosystem Restoration, Louisiana

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my supplemental report on ecosystem restoration for the areas in the vicinity of the Mississippi River Gulf Outlet (MRGO) in Louisiana. It is accompanied by the report of the New Orleans District Engineer and the Mississippi Valley Division Engineer. These reports are in response to Section 7013 of the Water Resources Development Act (WRDA) of 2007, which deauthorized the MRGO navigation channel. Section 7013(a)(3) required the Secretary of the Army to submit a final report on the deauthorization of the MRGO navigation channel, including a plan to physically modify the MRGO and restore the areas affected by the navigation channel; restore natural features of the ecosystem that will reduce or prevent damage from storm surge; and prevent the intrusion of saltwater into the waterway. It also required that the report include efforts to integrate the recommendations of the Louisiana Coastal Area (LCA) report authorized by Section 7003 and the analysis and design authorized by title I of the Energy and Water Development Appropriations Act of 2006, as well as consideration of the use of native vegetation and diversions of fresh water to restore the Lake Borgne ecosystem. Section 7013(a)(4) authorized the Secretary to carry out a plan to close the MRGO and restore and protect the ecosystem substantially in accordance with the plan required under Section 7013(a)(3) if the Secretary determines that the project is cost-effective, environmentally acceptable, and technically feasible.

2. The MRGO was authorized by a March 29, 1956 Act of Congress (Public Law 84-455) to provide an emergency outlet from the Mississippi River in the interest of National defense and general commerce, as well as a safer and shorter route between the Port of New Orleans and the Gulf of Mexico. In response to Section 7013(a)(3) of WRDA 2007, the Assistant Secretary of the Army for Civil Works (ASA(CW)) forwarded the Final MRGO Deep-Draft Deauthorization Report to Congress on June 5, 2008, regarding deauthorization of the MRGO navigation channel from the Gulf Intracoastal Waterway (GIWW) to the Gulf of Mexico. This report supplements the 2008 report by addressing more fully ecosystem restoration. Because a non-federal sponsor willing to cost share in implementation of the ecosystem restoration plan has not been identified, this report recommends no further action under Section 7013.

3. The reporting officers documented in their findings a federally identified plan to restore aquatic ecosystem structure and function in the vicinity of the MRGO. A non-federal cost-

sharing sponsor willing to comply with the cost-sharing and other applicable requirements of Section 103 of WRDA 1986, as amended by Section 210 of WRDA 1996, has not been identified for shared implementation of the ecosystem restoration plan. The reporting officers recommended that the federally identified plan be implemented contingent upon identification of a non-federal sponsor. In accordance with ASA(CW)'s guidance, dated 9 November 2010, the Corps has completed the MRGO Ecosystem Restoration supplemental report and National Environmental Policy Act process. Along with this supplemental report of the Chief of Engineers, the Corps will provide the reporting officers' report to the ASA(CW) for Administration review under Executive Order 12322 and transmittal to Congress.

4. The reporting officers documented a federally identified plan that would restore and protect approximately 57,000 acres of habitat in the study area, including 14,000 acres of fresh and intermediate marsh; 33,000 acres of brackish marsh; 10,000 acres of cypress swamp; 500 acres of saline marsh; and 50 acres of ridge habitat. The federally identified plan also identifies 71 miles of shoreline protection, which includes 5.8 miles of oyster reef restoration. Elements of the federally identified plan are detailed below:

a. The federally identified plan would result in approximately 38,000 average annual habitat units (AAHUs). The cost of the recommended ecosystem restoration features is justified by the restoration and protection of an institutionally, technically, and publicly significant ecosystem. The institutional significance of the area is demonstrated by numerous laws to protect and restore coastal areas, wetlands, and wildlife and fisheries resources. The Lake Borgne estuarine complex is deteriorating and action is required to protect the integrity of the estuary and prevent exposing national infrastructure investments to open water. The federally identified plan includes actions to restore the productivity and biodiversity of this nationally significant resource. The federally identified plan also includes two recreation features to provide access to area resources for recreational use.

b. The federally identified plan includes a tiered implementation sequence. Plan features were divided into three tiers based on level of design detail and uncertainty regarding conditions for ecological success and long-term sustainability. Low, medium, and high projections of future sea level rise were evaluated with the plan. Results showed that as relative sea level rises, benefits of the federally identified plan diminish and would cease under the high relative sea level rise scenario. An adaptive management plan was developed to guide future monitoring and operation under each scenario. In addition, checkpoints were established at which the Corps and non-federal sponsor would assess the rate of relative sea level rise and determine if further investment in plan features is advisable.

(1) Tier 1 includes features that have been developed to a feasibility level of detail and can be implemented independent of a future freshwater diversion to the area. The reporting officers recommended implementation of these features under Section 7013(a)(4), contingent upon the identification of a non-federal sponsor willing to provide all required items of local cooperation. Implementation of Tier 1 features would result in 2,414 AAHUs. Tier 1 features also include a recreation feature with estimated annual recreation benefits of $349,000.

(2) Tier 2 includes features with feasibility level detail that may be sustainable without the implementation of a freshwater diversion, depending upon further study and assessment of

area salinity levels. Implementation of Tier 2 features is projected to result in 5,694 AAHUs. Tier 2 features also include a recreation feature with estimated annual recreation benefits of $147,000. Further analysis would be required to determine if favorable conditions for ecological success and long term sustainability exist for these features, as defined in the adaptive management plan.

(3) Tier 3 is comprised of features that do not have feasibility level of design and features that require future study under existing authorities. This includes the Violet freshwater diversion (Tier 3A), and features that would not be sustainable without additional fresh water (Tier 3B). The full benefits and costs of a freshwater diversion would be developed and evaluated as a part of the recommended future study under available authorities. Along with Tier 3 features, a need was identified for further study in collaboration with the U.S. Fish and Wildlife Service to investigate erosion of Breton Island National Wildlife Refuge under existing authorities. The study is not linked to salinity conditions in the estuary or the Violet Diversion but is an important part of addressing the needs of the coastal system. This effort would build upon previous work with the Service to identify restoration needs and plans for the Nation's second oldest refuge. Any solutions deemed implementable would be consistent with existing policy. Implementation of remaining Tier 3 features, assuming favorable salinity levels, is projected to result in 29,872 AAHUs.

5. Based on October 2011 price levels, the Project First Cost of the federally identified plan is estimated at $2.9 billion. The cost-share apportionment for the federally identified plan would be $1.9 billion federal and $975 million non-federal. The Project First Cost of Tiers 1 and 2 are estimated at $1.3 billion and $325 million, respectively. The Project First Cost of the Monitoring and Adaptive Management Plan (MAMP) is $190 million, including costs for potential adaptive management actions. The Project First Cost of the MAMP for Tiers 1 and 2 are $104 million and $46 million, respectively.

6. The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRDs) for the federally identified plan is estimated at $99 million. In accordance with Section 103 of WRDA 1986, the provision of LERRDs is a non-federal responsibility. The average annual costs of operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) costs for the federally identified plan is $6 million. The average annual costs of OMRR&R costs for plan features in Tiers 1 and 2 are estimated at $3.1 million and $251,000, respectively. In accordance with Section 103 of WRDA 1986, the cost of OMRR&R is a non-federal responsibility.

7. Based on a 4.0-percent discount rate and a 50-year period of analysis, the total equivalent average annual cost of the federally identified plan is approximately $119,211,000 including OMRR&R, monitoring, and adaptive management. The average annual cost of Tiers 1 and 2 including construction, OMRR&R, monitoring, and adaptive management are $55 million and $16 million respectively. The average annual cost of Tier 3A would be determined through further study. The projected average annual cost of Tier 3B is $49 million, but this tier also requires additional study.

8. I concur with the findings and the designation of the federally identified plan documented by the reporting officers. At this time a non-federal sponsor willing to cost share 65 percent federal and 35 percent non-federal in the implementation of the plan, as required by Section 103 of WRDA 1986, has not been identified. I recommend implementation of the federally identified plan for ecosystem restoration provided that a non-federal sponsor agrees to cost share in the plan in accordance with the requirements of Section 103 of WRDA 1986.

9. This recommendation does not preclude investigation or implementation of the Violet freshwater diversion feature under Section 3083 of WRDA 2007, upon identification of a non-federal sponsor willing to cost share in the study and subject to the specific cost sharing requirements of that authority. Any recommendation for implementation of the Violet freshwater diversion feature would be submitted through reports to the Congress under that authority.

10. The federally identified plan contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. However, prior to transmittal to Congress, the states, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

THOMAS P. BOSTICK
Lieutenant General, US Army
Commanding