



MARINE MAMMAL COMMISSION

18 October 2022

U.S. Army Corps of Engineers
New Orleans District
Attn: CEMVN-RGE; MVN-2012-2806-EOO
7400 Leake Avenue
New Orleans, Louisiana 70118

Louisiana Trustee Implementation Group
c/o U.S. Fish and Wildlife Service
P.O. Box 49567
Atlanta, Georgia 30345

Dear U.S. Army Corps of Engineers and Louisiana Trustee Implementation Group Members:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the U.S. Army Corps of Engineers, New Orleans District's (CEMVN) final Environmental Impact Statement (EIS) for the proposed Mid-Barataria Sediment Diversion (MBSD) project in Plaquemines Parish, Louisiana¹. The final EIS evaluated the Louisiana Trust Implementation Group's (LA TIG) alternatives for restoring Louisiana's wetland, coastal, and nearshore habitats injured by the *Deepwater Horizon* (DWH) oil spill, and the potential impacts of the proposed MBSD project on the natural and human environment. The Commission has provided comments on the proposed MBSD project and its potential impacts on bottlenose dolphins at every step of the restoration planning process², and believes additional comments on the final EIS are warranted considering the immediate, permanent, and major adverse impacts on the Barataria Bay stock of bottlenose dolphins expected to occur as a result of operation of the proposed MBSD project.

The Louisiana Coastal Protection and Restoration Authority (CPRA) and the LA TIG have proposed the MBSD project as an ambitious engineering attempt to rebuild marsh land that has been lost in the Barataria Basin over the course of several decades. The final EIS chose as its preferred alternative the variable flow of up to 75,000 cubic feet per second (cfs) of water and river-borne sediments from the Mississippi River into the Barataria Basin once the MBSD project is operational. The expectation is that river-borne sediments discharged into the Barataria Basin would result in a buildup of approximately 25.3 km² (6,260 acres) of land in the first ten years of operation, and a maximum of 70 km² (17,300 acres) of land by 2050. The CEMVN notes that this buildup "would occur against a backdrop of significant land loss across the region due to subsidence and sea level rise," with a projected net land loss across the Barataria Basin and Mississippi Delta between 2030 and 2070. As a result of this competing land loss, total land accretion by 2070 due to the MBSD project is expected to result in a net increase of approximately 54.2 km² (13,400 acres).

¹ See notice of availability at 87 Fed. Reg. 58083 (23 September 2022).

² See the Commission's [2 June 2021](#), [5 February 2018](#), and [4 December 2015](#) letters.

The projected impacts on the resident stock of Barataria Bay bottlenose dolphins from prolonged exposure to low-salinity conditions resulting from operation of the MBSD project have not changed from the draft EIS, and are expected to be catastrophic (Thomas et al. 2022). The Barataria Bay stock of bottlenose dolphins experienced significant mortality due to the DWH oil spill, with an estimated 45 percent reduction in population size relative to its pre-spill baseline (Schwacke et al. 2022). The most recent abundance estimate for the Barataria Bay stock is 2,071 dolphins (95% CI: 1,832 – 2,309), derived from a capture-mark-recapture (photo-identification) survey conducted in March 2019 (Garrison et al. 2020). Modeling based on the projected 75,000 cfs flow rate of the MBSD project predicted that dolphins in the Central and Western portions of the bay would be functionally extinct after ten years of operation, and the dolphins in the Southeast portion of the bay would have an 85 percent probability of functional extinction (Thomas et al. 2022). After 50 years, there would be a 97 percent decrease in abundance of bottlenose dolphins across the entire bay. Only dolphins in the Island portion of the bay would remain, but even those dolphins are expected to experience a 91 percent decline in abundance over the 50-year duration of the project (Thomas et al. 2022).

In its previous comments, the Commission recommended alternative actions and additional measures that the state of Louisiana could take that would reduce the impacts on dolphins, while still allowing the purposes of the project to be achieved. These included other sediment diversion-related alternatives that could reduce impacts on dolphins, such as setting an operational trigger that would reduce prolonged exposure of dolphins to low-salinity conditions. The CEMVN evaluated alternative flow scenarios for the MBSD in the final EIS, but determined that design and operational triggers, including one based on salinity levels, would not meet the project's purpose and need. These alternatives were eliminated from further consideration (Chapter Two and Appendix D), and the possible use of a salinity-based trigger was not discussed in any detail in the CEMVN's analyses. Furthermore, the CEMVN did not include in the final EIS an evaluation of the potential impacts on bottlenose dolphins associated with design or operational alternatives that might reduce prolonged exposure of dolphins to low-salinity conditions, as the Commission had recommended in its comments on the draft EIS.

In its brief explanation of why operational triggers based on salinity and other factors were eliminated from further evaluation (Appendix D2), the CEMVN indicated that adaptive management of the proposed diversion would be addressed in the Operations Plan and Adaptive Management Plan. However, upon review, the project's Evaluation of Operational Alternatives (Chapter Two) and Monitoring and Adaptive Management Plan (Appendix R) fall short of any meaningful consideration of operational strategies or other mitigation measures that would minimize, to the extent practicable and consistent with the purposes of the project, the project's impacts on bottlenose dolphins, as required by the waiver³ issued to the state of Louisiana under the Marine Mammal Protection Act (MMPA) that authorizes the taking of marine mammals during the construction, operation, and maintenance of the MBSD.

The Commission appreciates the considerable efforts made by the National Marine Fisheries Service (NMFS), a cooperating agency on the draft and final EIS, to include a Dolphin Intervention Plan (Appendix R5) as part of the project's Monitoring and Adaptive Management Plan. The

³ Section 20201 of Public Law 115-123 (the Bipartisan Budget Act of 2018).

Dolphin Intervention Plan outlines the extensive pre- and post-construction monitoring, behavioral observations, enhanced surveillance, and stranding response activities proposed for the project. Those measures are based on the extensive experience of NMFS and other biologists in responding to bottlenose dolphins that have been injured as a result of exposure to low-salinity or freshwater conditions. However, none of the activities outlined in the Dolphin Intervention Plan appear to be targeted at mitigating or preventing harm to or death of bottlenose dolphins expected from exposure to the low-salinity conditions that will result from the MBSD project.

An expert elicitation conducted by Booth and Thomas (2021) noted that dolphins can likely endure exposure to salinity levels below 5 ppt for only a few weeks before their health is compromised. However, the period of tolerable exposure is likely shorter for dolphins exposed to acute changes in salinity, with a median expected time to death of 22 days of continuous exposure to water with salinity levels below 5 ppt. The experts also concluded that, once survival probability begins to decrease, it decreases rapidly, especially in the presence of other environmental or health stressors. The large geographic area and remoteness of Barataria Bay is expected to contribute to delays in detecting and rescuing distressed dolphins. There is also limited capacity to respond to and treat distressed dolphins at existing marine mammal rehabilitation facilities in the northern Gulf of Mexico. Even if dolphins are rescued and rehabilitated, the changes to their habitat in Barataria Bay resulting from the MBSD project would preclude successful reintroduction, forcing them either to remain in captivity or be relocated to other areas with suitable habitat. The combination of these factors provides scant hope that even a well-thought out and fully-funded Dolphin Intervention Plan will be capable of increasing dolphin survival rates beyond those projected by Thomas et al. (2022).

Given these realities, and despite Congress's directive to issue an MMPA waiver for the project, the Commission does not see how the projected mortality of 97 percent of the Barataria Bay bottlenose dolphin stock and the loss of most of its current habitat as a result of project operations can be considered consistent with the spirit and intent of the MMPA. The MMPA was established in part to prevent human activities from causing marine mammal stocks to diminish "beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part"⁴. In its findings and declaration of policy, Congress further directed that "efforts should be made to protect essential habitats, including the rookeries, mating grounds, and areas of similar significance for each species of marine mammal from the adverse effect of man's actions."⁴ The Commission therefore recommends that the CEMVN and LA TIG reconsider the selection of the preferred alternative and instead re-evaluate other alternatives for land building in Barataria Bay that would not result in the mortality of large numbers of dolphins and possible extirpation of the resident stock.

The Commission is also concerned that the LA TIG has yet to fully implement restoration activities designed to promote recovery of bottlenose dolphins from the DWH oil spill. Despite its \$50 million budget for restoring marine mammals, to date, the LA TIG has implemented only one marine mammal project. In previous letters⁵, the Commission identified a number of other projects that should be considered for restoration of bottlenose dolphins in Barataria Bay and other

⁴ 16 U.S.C. § 1361(2)

⁵ See, in particular, the Commission's [2 June 2021](#) letter.

Louisiana bays, estuaries, and coastal waters that were impacted by the DWH oil spill. Although we recognize the enormity of the impact of the oil spill on Louisiana's natural resources and the workload associated with DWH restoration planning, the LA TIG's progress on marine mammal restoration planning seems unnecessarily slow, constrained, and inefficient. The Commission recommends that the LA TIG immediately prepare and publish a restoration plan for bottlenose dolphins in Louisiana to address high-priority restoration projects that can be implemented without delay.

The Commission appreciates the opportunity to review the final EIS and hopes that the CEMVN and LA TIG consider these comments carefully before making a final decision regarding this project. Please contact me if you have any questions concerning any issues raised in this letter.

Sincerely,



Peter O. Thomas, Ph.D.,
Executive Director

cc: Brian Lezina, Louisiana Coastal Protection and Restoration Authority
Kimberly Damon-Randall, NMFS Office of Protected Resources

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