UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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DALLAS, TX 75202-2733

February 14, 2011

Colonel Edward R. Fleming
District Commander
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Fleming:

In accordance with the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, Environmental Protection Agency (EPA) Region 6 has reviewed the Corps of Engineers (Corps) December 2010 Draft Environmental Impact Statements (DEIS) for the Mississippi River Gulf Outlet (MRGO) Ecosystem Restoration Plan. EPA offers the following comments and recommendations regarding this DEIS to help the Corps develop and implement the most effective restoration strategy for coastal areas adversely impacted by the MRGO.

EPA strongly supports restoration of areas adversely affected by the MRGO. EPA commend the Corps for its diligent work in assembling a restoration plan which matches in scope the magnitude of the challenges facing this part of the Louisiana coast. The plan focuses primarily on addressing the adverse environmental effects of MRGO (e.g., wetland loss) and, to some extent, the broader underlying causes of wetland loss in coastal Louisiana (e.g., disruption of deltaic processes). The plan addresses critical coastal areas such as the Biloxi Marsh complex, which provides important ecological functions. The plan also addresses potential restoration sites of high community importance, such as the Central Wetlands and Bayou Bienvenue Triangle. High priority aspects of this plan should be implemented as quickly as possible.

Given the scope, schedule, and cost of the proposed MRGO restoration effort, there will be ample opportunity to reevaluate aspects of this plan during a multi-year implementation process. The Corps should continue to closely examine the tradeoffs and potential environmental effects of the proposed large-scale mining of internal borrow sources for marsh creation, as well as the extensive use of rock shoreline protection. While EPA could support targeted near-term application of MRGO restoration activities in high priority locations, EPA is not convinced that full implementation of these two types of measures would be the most

effective and ecologically sound use of restoration funds. EPA would recommend the Corps consider substantially expanding its proposed adaptive management process to include rigorous review of these and other matters based on data gathered from implementation of initial phases of this work, as well as the most current restoration science. Such considerations should not necessarily delay completion of the subject EIS and implementation of high-priority components of the MRGO Ecosystem Restoration Plan.

EPA rates the subject DEIS as ***"EC-2"***, i.e., EPA has environmental concerns and requests additional information in the Final EIS (FEIS). Areas requiring additional consideration include adaptive management; review of internal sediment mining and rock shoreline erosion control; water quality monitoring; and avoidance of impacts to existing wetlands. Detailed comments are enclosed with this letter which more clearly identify our concerns and the informational needs requested for incorporation into the FEIS.

Finally, please note that schedule constraints have affected EPA's ability to fully engage in the interagency development and review of this proposed restoration project. EPA greatly respects the views of our state and Federal partner agencies with responsibilities and expertise pertaining to fish and wildlife impacts. EPA would encourage the Corps to fully address the recommendations of the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and Louisiana Department of Wildlife and Fisheries on any additional information and analysis needed for resources within their purview.

If you have any questions about the 309 Review Process, please contact Michael Jansky, of my staff, at (214) 665-7451 or by e-mail at jansky.michael@epa.gov. If you wish to discuss technical aspects of our comments, please contact John Ettinger at (504) 862-1119 or by e-mail at ettinger.john@epa.gov.

Sincerely yours,

Rhonda M. Smith, Chief
Office of Planning and
Coordination

Enclosure

cc: USFWS, Lafayette, LA
NMFS, Baton Rouge, LA
OCPR, Baton Rouge, LA

DETAILED COMMENTS
ON THE
U.S. ARMY CORPS OF ENGINEERS
MISSISSIPPI RIVER GULF OUTLET ECOSYSTEM RESTORATION PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Air Quality

Any demolition, construction, rehabilitation, repair, dredging, or filling activities have the potential to emit air pollutants and EPA recommends best management practices be implemented to minimize the impact of any air pollutants. Furthermore, construction and waste disposal activities should be conducted in accordance with applicable local, state and Federal statutes and regulations.

Large-Scale Internal Sediment Mining

EPA continues to question the proposal to extensively mine sediments within Lake Borgne for the purpose of marsh creation. EPA understands such "internal" sediment sources are substantially less expensive and involve fewer logistical challenges than taking material from the Mississippi River or other "external" sources. However, internal sediment mining does not address the underlying, systemic sediment deficit caused by disruption of deltaic processes. While EPA understands the benefits of strategic use of internal sediment sources, EPA questions whether it is appropriate when conducted at the scale proposed in this plan. From a policy perspective, there is an argument for focusing restoration funds on those measures which could help address the underlying causes of wetlands loss in coastal Louisiana.

Additionally, there remains uncertainty with respect to the potential adverse impacts of extensive dredging of interior open water areas. EPA appreciates the Corps' efforts to design the borrow pits in a way that might minimize potential reductions in dissolved oxygen. Nevertheless, the extent to which this strategy will in fact minimize such water quality concerns is untested at this scale. Given the size of the area that would be affected, the Corps is encouraged to include measures in this project to monitor the water quality effects of the proposed borrow areas. The information gathered from such monitoring should be used as part of an ongoing adaptive management program that assesses the environmental trade-offs of large-scale internal sediment mining as compared to the use of external sediments. A lower priority should be placed on restoration features that involve extensive dredging of internal sediments until the ecological impacts can be sufficiently analyzed.

Rock Shoreline Protection

EPA is also concerned that the extensive use of rock shoreline protection (approximately 63 miles) would represent a large-scale and unnatural landscape intervention which could have unintended adverse impacts. It appears the proposed rock shoreline protection measures would range in elevation from +3 to +8 feet. Even with periodic gaps, rock barriers of this height and extent could interfere with fish access, marine processes, and marsh hydrology. It is unclear what, if any, assessment has been made of such potential affects. For example, has the Corps evaluated whether the proposed shoreline erosion control features might reduce the input of re-suspended sediments to marsh areas via storms and frontal passages? Such sediment inputs can be vital for marsh sustainability. Extensive use of rocks might also result in future navigation hazards in areas where adjacent wetlands convert to open water.

As with the use of internal sediment mining for marsh creation, the Corps should include provisions in the adaptive management plan calling for ongoing and rigorous evaluation of the ecological effects of large-scale rock shoreline protection. The Corps should fully consider potential ecologically preferable alternatives to rock (e.g., sand or shell), and greater use of artificial oyster reefs. Alternative shoreline protection measures are discussed in the DEIS. However, other than the proposed artificial oyster reefs, it is unclear where, when, and under what conditions alternative shoreline protection measures would be employed instead of rock. EPA believes this can be done in the context of a robust adaptive management plan.

Robust Adaptive Management

The Corps should develop a more comprehensive and rigorous adaptive management process to better gauge the effects of proposed restoration measures beginning at the earliest phase of implementation. Such a process should include continuous reevaluation of the proposed restoration measures based on the most current science, and should allow for significant changes if and when science and restoration policy dictate. In particular, such an adaptive management scheme should include reevaluation of the extensive use of internal sediment mining and rock shoreline protection. It might also include, for example, reevaluating the wetland types currently proposed for restoration in specific areas if future hydrological and landscape conditions indicate that a different wetland type might be more feasible and suitable for the given location. Perhaps most importantly, the adaptive management plan should include a formal process for continuous engagement and input from external scientists and restoration policy experts.

Need for Supplemental NEPA Analysis

Even under an optimistic funding and schedule scenario, full implementation of the proposed ecosystem restoration plan would be phased over approximately 10-15 years or perhaps

many more. This situation poses substantial uncertainties from both fiscal and scientific perspectives. The implications of an unfunded and costly program to be implemented over a long timeframe should be dealt with head on from an environmental review standpoint. The scientific advancements and likelihood of significant changes in habitat condition that could occur over such a time period would indicate that aspects of the current NEPA review will need to be supplemented. A tiered process should be laid out in the FEIS whereby a commitment is made to subject significant restoration measures to additional NEPA and public review whenever the funding is secured, the engineering feasibility is addressed, and the scientific issues are reassessed.

The current document appropriately lists a number of scientific studies that are currently unavailable or in progress. These are studies or data that will be required prior to launching engineering feasibility studies. An example is the *LCA Mississippi River Hydrodynamic Study,* which will include a sediment budget and sediment sources inventory. As the document notes, "[l]imitations in analytical tools to assess ecosystem responses also exist, and were compounded by the short timeframe in which the MRGO ecosystem restoration study was formulated."

In addition, our understanding of the effects of the proposed restoration measures will likely change during the implementation period, as will the landscape itself. The DEIS also provides limited and generalized information for certain measures. For example, there is relatively limited site-specific detail on shoreline protection and marsh creation measures. The quantity of borrow material needed for marsh creation is based on assumptions as opposed to site-specific data and analysis. As noted in the DEIS, the engineering for such features is "considered preliminary and has not yet reached full feasibility level of design."

This is further justification for committing to a process of tiered NEPA studies for this restoration program. The DEIS states that "supplemental NEPA documentation may be necessary for unidentified impacts resulting from project changes." EPA believes that this is such a strong likelihood that a firm commitment to incorporate the additional environmental reviews and analyses of alternatives should be made at this time. In addition, a conceptual process of tiered studies should be proposed. The Corps is encouraged to continue to coordinate with us and our other partner agencies to determine when such additional NEPA analysis is warranted due to substantial changes in restoration measures and potential environmental effects.

Monitoring Water Quality Impacts of Violet Diversion

River reintroduction is an essential tool for restoring coastal Louisiana. Nevertheless, it is important to monitor the potential effects such reintroduction projects might have on receiving waters, and modify operation of the project if necessary to minimize any potential adverse impacts. As with the Corps proposal for the LCA Medium Diversion at White Ditch, the MRGO Ecosystem Restoration Plan should include a commitment to monitor nutrients, metals,

dissolved oxygen, agrochemicals, and other parameters prior to construction and for a period of at least ten years after construction of the Violet diversion.

Avoiding Impacts to Existing Wetlands

Marsh nourishment, cypress swamp restoration, and other proposed activities should not result in adverse impacts to existing wetlands. For example, the DEIS states that, "[d]redged material from the flotation channels would be side cast onto adjacent marsh…" In the absence of clarifying information, it would appear that the Corps is proposing to create spoil banks on existing marsh. These types of wetland impacts would be particularly unacceptable in the context of a restoration plan, and must be avoided to the maximum extent practicable.

The Corps also proposes to construct up to 10,000 acres of temporary retention dikes and earthen weirs. Such features are often a necessary component of marsh creation projects. However, if left in place too long, retention dikes can limit estuarine exchange, reduce marsh drainage, and potentially trap saltwater brought in by a storm surge. The Corps has proposed to degrade the retention dikes after three years (if the dikes have not already naturally degraded). Three years might be longer than necessary for successful marsh restoration. The Corps should re-evaluate this timeline to determine whether retention dikes could be degraded sooner, thereby minimizing the aforementioned potential adverse impacts.

EPA supports the concept of marsh nourishment (e.g., a thin layer application of sediment to extend the life of existing marsh). However, if too much sediment is placed on an existing marsh, existing vegetation is smothered, causing short-term adverse impacts and hindering or possibly precluding natural re-vegetation. It would appear the proposed marsh nourishment could involve additional fill of up to 1.5 feet. Appendix E contains the following statement in that regard: "For marsh nourishment it was assumed that existing marsh is between +0.5 foot and 1.0 feet and fill would be to +2 feet." To minimize potential adverse impacts, EPA generally recommends no more than six inches of sediment be placed on existing marsh. EPA recommends the Corps review its proposed marsh nourishment specifications and protocols to ensure that such measures do not result in excessive and damaging discharges onto existing wetlands.

Environmental Justice

The population of Violet, LA has a 46.5% minority rate (slightly below the 50% minority rate normally used to consider a community to be an "environmental justice" community), while Louisiana has a 38.6% minority population. The poverty rate of 21.7% (slightly over the 20% rate used to normally consider a community an "environmental justice" community), and has therefore received a more careful consideration. The only "adverse" impacts detailed in the EIS are that dust, noise, traffic, and traffic delays would increase during the construction period and

because traffic on two highways will have to be rerouted, temporarily changing them from four-lane highways to two-lane highways. Because the channel will be constructed in a large vacant field, no residences or businesses will have to be relocated, and the noise and dust impacts will be greatly decreased for anyone living or working in the general area.

The Executive Order 12898 mandates that low income or minority residents not be disproportionately and adversely impacted by our environmental policies and laws; however, the delays in traffic will be felt by all the travelers on those highways, and not just by the low-income residents of Violet. Information should be included about the procedures used or to be used regarding notification of the State-Recognized Tribes about this project. State and federally recognized tribes may have burial mounds, fishing/hunting rights and/or use areas in this region for cultural, subsistence or other traditional purposes.