



Attn: Steve Roberts
U.S. Army Corps of Engineers (PDC-CEC)
P.O. Box 60267
New Orleans, LA 70160-0267

June 15, 2015

Thank you for the opportunity to offer scoping comments. Herein we provide specific comments concerning the Proposed Scope of a Draft Supplemental Environmental Impact Statement (EIS) for the Mississippi River Ship Channel Gulf to Baton Rouge, Louisiana, General Reevaluation Study. In addition to reviewing the public notice for this reevaluation study, we have also reviewed salient portions of the 1981 Feasibility Study and EIS that the public notice references.

At the outset we would make one over-arching observation: efficient and successful navigation of the lower Mississippi River is critical to the US economy, and we strongly support efforts to maintain the competitive advantages for the port systems along the Lower Mississippi River. Those advantages are good for both national and Louisiana interests.

Within that context, and regarding the scope of this investigation, we strongly urge the U.S. Army Corps of Engineers (USACE) to seize the opportunity to fully integrate this effort with work already underway on the Mississippi River to find the means to successfully forge a united path forward for the people, economy, culture and environment of the Lower Mississippi River. The continuing rate of land loss within the delta coupled with a changing and uncertain future require a new and a management paradigm for the lower river - management that recognizes the need to realistically and pro-actively balance navigation, flood control and the utilization of ecosystem services. The survival of the Lower Mississippi River and its delta depends upon it.

Let it not be said of us in the future that by failing to think about and examine the broader implications of the project before us, we made the same mistake here as we made in the past, which was to discount the potential impacts of a project because we so favor the potential benefits. An article in National Geographic published in 1897 explained that traditional approach well:

“No doubt the great benefit to the present and two or three following generations accruing from a complete system of absolutely protective levees, excluding the flood waters entirely from the lower delta country, far outweighs the disadvantages to future generations from the subsidence of the Gulf delta lands below the level of the sea and their gradual abandonment due to this cause. While it would be generally conceded that the present generation should not be selfish yet is safe to say that the development of the delta country during the twentieth century by a fully protective levee system, at whatever cost to the riparian states and the federal government will be so remarkable that people of the whole United States can well afford, when the time comes, to build a protective levee against the Gulf waters, . . .”

As we struggle today in coastal Louisiana, testing the efficacy of the 1897 cost/benefit argument, we encourage the USACE not to assume that impacts associated with current decisions are appropriately pushed off to future generations, particularly as we, the “two or three following generations” of the 1897 decisions - those of us who live in coastal Louisiana - are now dealing with that misguided approach. We simply should not do that again and have the opportunity to build a better, more resilient future for the following two to three generations.

SPECIFIC COMMENTS:

LONG-TERM MANAGEMENT OF THE LOWER MISSISSIPPI RIVER (LMR): This reevaluation study provides a key opportunity to consider the long-term future of the navigation system and to integrate its needs with the ecosystem restoration program and flood control system of the Lower Mississippi River (LMR). This study should intersect with the ongoing Mississippi River Hydrodynamic and Delta Management Study (MRHDM) and the Mississippi River Flowline Study and Water Control Manual Update to create a vision for comprehensive management of the LMR. All three studies are being developed separately by the USACE. Integrating these efforts would be far more effective than treating them as separate factors that are pitted against one another competing for limited financial and natural resources. The long-term sustainability of the navigation channel, and the efficacy of the flood storm risk reduction system for millions of people and vital infrastructure relies upon a robust Mississippi River Delta providing ecosystem service such as storm surge attenuation and floodplain management. Comprehensive management of the river can provide more robust means to manage user needs, fitted together to strengthen the whole.

BASELINE CONDITIONS OF THE LMR: In order to fully identify and assess the potential direct, indirect and cumulative impacts of this navigational deepening project, it is essential to use the best science available to define baseline conditions of the LMR. It is not a static system. The 2014 MRHDM geomorphic assessment of the LMR by Little and Biedenharn observed significant decadal timescale changes in the stability of the river channel. The reach of the river between Empire and River Mile (RM) 4, part of which will likely require dredging if the channel is deepened to 50-ft, has shifted from a trend where the channel was deepening over time (degradation) in 1960s and 1970s to a trend where the channel is filling in over time (aggradation) in the 1990s and 2000s. This shift to aggradation suggests that this reach of the river channel which might not have required dredging in 1981, would now require dredging to maintain the existing 45-ft channel, let alone 48-ft or 50-ft channel depth. Channel stability is not the only baseline condition of the system that has changed since the 1981 EIS, relative sea level has risen at least 10-inches between 1981 and 2014. This and many other conditions of the river and the surrounding system may have changed since the 1981 study.

Compared to 1981, there is much more information available about baseline environmental conditions, such as subsidence, sea level rise, the hydrodynamics and sediment dynamics of the river and how they can affect the navigation channel, infrastructure and the amount and frequency of required dredging and wetland loss and the resulting reduced storm surge buffering capacity of the system. Indeed, in accordance with 40 CFR 1502.9(c)(1)(i), the amount of new information and evidence of changing circumstances relating to a discussion of baseline conditions at the mouth of the river over the next 50

years is so vast compared to the information and analytic capability available in 1981 it is appropriate for the Corps to undertake a robust, new and thorough assessment of current and projected baseline conditions and not view this assessment simply as a “supplement”. This supplemental EIS should use the MRHDM study and others sources of new data and modeling capacity to provide a whole new assessment of these dynamic baseline conditions and how they are affecting the sustainability of the 45-ft channel. In general, the question should be what the implications of these shifting forces are on the integrity and sustainability of the current navigation channel at 45-feet and then use that as starting place to look forward by decade over the next 50 years.

Another aspect of the changing environment that an examination of river channel deepening must consider is the delta restoration program that Congress authorized in Title VII of 2007 WRDA and that Louisiana’s 2012 Coastal Master Plan (2012 CMP) describes. By the time this supplemental EIS is completed, the State will have made substantial progress on projects selected in the 2012 CMP and made considerable progress on its 2017 Coastal Master Plan. A description of various options for the restoration program and the timing of the implementation of that program is necessary since deepening of the navigation channel could have an impact on the restoration program, and the restoration program could affect the channel and the benefits and costs of maintaining a deeper channel. Since, at a conceptual level, the goal of the restoration program is to convey sediment from the LMR into the delta wetland complex via diversions and/or dredging and pumping, the potential exists to control disposal of sediment in the navigation channel where it requires dredging and to promote deposition at upstream points where the material can be used beneficially via dredging and pumping for sustainable wetland creation higher in the estuarine basins on either side of the lower river.

IMPACTS OF CHANNEL DEEPENING AND ENVIRONMENTAL UNCERTAINTIES: The major environmental impacts identified in the 1981 study, marsh loss and salt wedge migration, should be reexamined using information available today. In addition, changes in the hydro and sediment dynamics in the river and storm surge propagation upriver associated with deepening the navigation channel should be investigated. The ongoing MRHDM effort has developed a full suite of modeling tools that should be used in this study, including the local and regional Delft3D models, FVCOM, AdH and HEC-6T. By using the full suite of tools, the forecasted impacts of channel deepening on a local and regional scale can be better refined and the effects of shifting conditions and environmental uncertainties on the navigation channel and dredging needs, such as future *sea level rise*, *subsidence*, *changes in river discharge patterns* and *changes in precipitations patterns*, can be forecasted to estimate the dredging needed to maintain the project alternatives over the 50-years.

- *Salt wedge migration:* As part of the 1981 feasibility analysis, a saltwater sill and freshwater holding facilities were considered part of the USACE mitigation responsibility for the adverse impacts of the salt wedge migration upwards within the deeper channel. A sill was constructed in 1988 and again in 2012 at -45-ft, five feet higher than a -50-ft channel and 10-ft higher than a -55-ft channel. A sill constructed at this height is clearly in conflict with the proposed depths of the channel whose purpose is for navigation. Complicating matters further, the borrow source identified with construction of the sill is the same source identified as a borrow site for marsh

creation projects within the 2012 CMP. This study should anticipate conflicts in resource needs along the river and develop mutually-agreeable solutions.

- *Marsh loss:* The 1981 study presents estimates of the number of acres of marsh near the mouth of the river and over a broader area that are likely to be lost with no deepening of the river below its then depth of 40-ft. That study projected loss of different marsh types without the channel deepening at 10 years intervals. The supplemental EIS should include similar forecasts for changes in marsh acreage *with* and *without project* based on the latest information from the USGS 2011 land area change study, the 2012 CMP, and the MRHDM study. Additionally, projections of the number of acres of marsh that would be created by decade with material dredged from the initial channel deepening and maintenance of the project alternatives should be compared with that information with a 50-foot channel in place. The 1981 EIS seemed to assume that new marsh created in this manner was sustainable. In any event, any new marsh created at the mouth would erode and subside just like existing marsh. These processes should be identified, since environmental benefit claims are time sensitive and not permanent.
- *Changes in hydro and sediment dynamics in the river:* The deepening of the river channel from 45 to 50-ft may shift the location and quantity of sediment deposited in the LMR channel and the location of bars in the river that have been identified as resources needed for coastal restoration projects. This supplemental study should use the tools developed through the MRDHM study to examine possible changes to the hydro and sediment dynamics of the river due to channel deepening over the 50 year life of the project that could have implications for the delta restoration program, particularly changes that could impact the availability of sediment for sediment diversions and dredging and pumping higher up in the estuarine system. Additionally, this study should collaborate with the MRDHM study to investigate the potential benefits of reduced dredging requirements that could be reaped from sediment diversion projects. The possible impacts of this deepening project on the resources needed for ecosystem restoration and the dredging-reduction benefits that may be derived from sediment diversion projects again highlights the need for an integrated river management that proactively balances navigation, flood protection and ecosystem restoration.
- *Storm surge propagation upriver:* Hurricanes can lead to storm surge propagating up the Mississippi River. During Hurricanes Katrina and Isaac, storm surge increased river stage at the USACE Carrollton gage in New Orleans by at least 10-ft and 6-ft, respectively. An important impact to consider as part of this deepening study is the increased storm surge height and distance of propagation upriver that may result, intensifying pressure on the river levees, particularly those in Plaquemines Parish.

CONSISTENCY: The final selected plan for possible channel deepening should be consistent with the currently approved State Master Plan. It is incumbent for both Federal and State partners to recognize the consistency requirements as they relate to the state master plan and that they endeavor to establish consistency within the execution of the channel deepening study.

INCLUSION OF A DETAILED MITIGATION PLAN FOR ANY UNAVOIDABLE IMPACTS: Mitigation is required under 33 U.S.C. section 2283(d) and the Clean Water Act, for “damages to ecological resources, including terrestrial and aquatic resources, and fish and wildlife losses created by such project” unless the Secretary of the Army issues a written determination that the project will have “negligible adverse impact on ecological resources and fish and wildlife without the implementation of mitigation measures.” In developing the required mitigation plan, the EIS/Re-Evaluation report should consider piping dredged material from the deeper channel upstream further into the Barataria Basin and the Breton Sound Basin where the wetlands created could be more sustainable because of their location in these estuaries and because they could be sustained with sediment delivery into the basins via sediment diversions.

EVALUATION OF ALTERNATIVES THAT WOULD ACCOMPLISH MULTI-PURPOSE MANAGEMENT GOALS: The National Water Resources Planning Policy established by Congress in 2007 states that “all water resources projects” shall “protect[] and restor[e] the functions of natural systems and mitigat[e] any unavoidable damage to natural systems.” 33 U.S.C 1962-3 (established by § 2031(a) of the Water Resources Development Act of 2007, and immediately applicable to all water resources projects). Accordingly, this SEIS must evaluate alternatives that would promote protection and restoration of the natural land-building and Delta wetland preservation functions of the Mississippi River, and must ultimately select an alternative that is consonant with these objectives. In combination with the “no action”, 48-ft navigation channel and a 50-ft navigation channel alternatives outlined in the scoping notice, this study should therefore also consider, in each alternative, the possibility for the integrated use of sediment diversion projects to help defray the costs of maintaining a deeper navigation channel and to restore and preserve Delta wetlands.

Thus, consistent with the purpose of an investigation of reasonable alternatives as set forth in ER 1105-2-100 G-16(14) and 40 CFR 1502.14(a) and 1508.25 and the requirements of the National Water Resources Planning Policy, the EIS should present as an alternative a broader framework for assessing the proposed deepening of the navigation channel that looks at the relationships between navigation, flood control, risk reduction and ecosystem restoration actions and strategies for integrating those actions and making them mutually supportive. Today they are often in conflict. This framework should recognize the long-term dependency of the navigation system on a healthy delta ecosystem. The reevaluation of a deeper channel provides an opportunity to advance thinking about better ways of managing the LMR to achieve multiple purposes rather than one purpose at a time. Indeed, evaluating the 50-ft channel in this broader LMR management context is the only way to assure its long-term sustainability.

Sincerely,

**National Audubon Society • Coalition to Restore Coastal Louisiana • Environmental Defense Fund
Lake Pontchartrain Basin Foundation • Louisiana Wildlife Federation
National Wildlife Federation**

Cc:

Mark Wingate, U.S. Army Corps of Engineers

Chip Kline, Coastal Protection and Restoration Authority

Kyle Graham, Coastal Protection and Restoration Authority

Sharon Balfour, Louisiana Department of Transportation and Development