

Subject: Response to comments received in regards to Public Scoping Meeting
Comments Received: August 9, 2016
Response Date: August 31, 2016

Comment 1. The Study must comply with the requirements of Section 5 of the Rivers and Harbors Act of 1935 which requires every Corps report:

"...looking to the improvement of the entrance at the mouth of any river or at any inlet ..." to "...contain information concerning the configuration of the shore line and the probable effect thereon that may be expected to result from the improvement having particular reference to erosion and/or accretion for a distance of not less than ten miles on either side of the said entrance."

The Corps did not address this legal requirement in its 1980 report.

Response 1: The above quote is only partial and does not capture the full text of the law. The actual text is as follows:

*74TH CONGRESS. SESSION 1. CHS. 829-831. AUGUST 30, 1935, [H.R. 6250] [Public, No. 409]
SEC. 5. Every report submitted to Congress in pursuance of any provision of law for preliminary examination and survey looking to the improvement of the entrance at the mouth of any river or at any inlet, in addition to other information which the Congress has directed shall be given, shall contain information concerning the configuration of the shore line and the probable effect thereon that may be expected to result from the improvement having particular reference to erosion and/or accretion for a distance of not less than ten miles on either side of the said entrance.*

The current GRR study is not for "preliminary examination and survey" but rather for evaluation of options for construction within the congressionally authorized dimensions of the navigation channel. Also, under Corps procedures and regulations, the GRR study will not be submitted to Congress, but will be reviewed and approved within the Corps at the appropriate level. For these reasons, Section 5 does not directly apply to the current study.

However, this does not mean that the information required by that section will not be studied during the GRR process as Corps regulation (ER 1105-2-100) requires, "each investigation on navigation improvements potentially affecting adjacent shoreline will include analysis of the probable effects on shoreline configurations. A distance of not less than ten miles along the shore on either side of the improvement should be analyzed."

Comment 2. The Study must acknowledge the existence of and address the findings, conclusions, and recommendations contained in the Corps' 1978 Draft Report entitled "Feasibility Report for Beach Erosion Control and Hurricane Protection, Mobile County (Including Dauphin Island)". The Corps acknowledged in the 1978 report, for the first and only time, that maintenance of the Mobile Harbor

Outer Bar Channel is unquestionably contributing to the erosion of Dauphin Island. To this date, the Corps has consistently ignored both the existence of and the contents of the 1978 report.

Response 2: The conclusions of the 1978 report were based on observational information: maps, charts, and photos. This may have been an appropriate methodology at the time, but, because of technological improvements in the intervening four decades, the hydrodynamic and sediment transport modeling used for this study will more accurately characterize coastal processes. This will allow us to assess potential impacts by a proposed change to the navigation channel dimensions as well as beneficial placement of dredged material. Any relevant data from the 1978 report will be included in the Mobile Harbor GRR.

Comment 3. The 1978 report contained July 9, 1975 letters from Mobile District Engineer COL Drake Wilson to Congressman Jack Edwards, the Mobile County Commission, and the City of Mobile stating that the Dauphin Island erosion problem would be addressed in the District's separate study of Mobile Harbor that ultimately resulted in the 1980 report which led to the WRDA of 1986 authorization to deepen and widen the ship channel. However, the 1980 "Survey Report on Mobile Harbor, Alabama" inexplicably ignored the Dauphin Island erosion issue.

Response 3: The 1980 Survey Report on Mobile Harbor, Alabama did recognize that Dauphin Island was experiencing erosion problems and that there could be opportunities for placement of sand in the littoral system. However, even though the report indicated that there may be opportunities for placement of sand in littoral system, Congress in the WRDA 1986 directed that all dredged material would be disposed in the Gulf.

Comment 4. Since the January 12, 2016 Public Scoping Meeting, the Corps has forged ahead with conduct of the Study. Regarding Corps planning process terminology, what is the present status of its efforts to (1) identify Problems and Opportunities in the study area, (2) develop Planning Objectives, and (3) identify Alternative Management Measures? When does the Corps plan to provide this information to the public for review and feedback?

Response 4: This navigation study will examine the costs and benefits as well as the environmental impacts of modifying the dimensions of the existing Federal navigation project within its authorized limits. The purpose of the study will be to determine improvements for safety and efficiency of harbor users. The public scoping meeting helped to inform the Problems and Opportunities, Planning Objectives, and Management Measures that have been identified for the navigation study. The public scoping meeting also informed the initial array of alternatives that was developed and screened to narrow the range of widths and depths to be considered. While this information can be obtained from the Alternatives Milestone Meeting documents located on the Mobile District Website for the Mobile Harbor GRR (<http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/>), it should be noted that this information is preliminary and subject to change. Public review and comment will be solicited once the draft GRR has been prepared.

Comment 5. During the over 36 years since the Corps' 1980 report was completed, maintenance of the Outer Bar Channel has continued, further contributing to the erosion of Dauphin Island. Between 1974 to 2000 alone, Corps records show that over 20,000,000 cubic yards of dredged beach quality sand was deposited in the open Gulf and permanently lost from the littoral drift system. Since the 1980 report did not address this loss of sand, the new GRR Study must address the impact of the historical sand deficit to Dauphin Island caused by maintenance of the Outer Bar Channel. The Corps' Elizabeth Godsey and Justin McDonald stated at the Scoping Meeting the Study will not address the historic sand losses caused by the Corps maintenance dredging practices of the Outer Bar Channel. How can the Corps justify ignoring this significant sand loss and its effect on the erosion of Dauphin Island as a key feature of the "Without Project" condition? The loss of sand must be addressed and mitigation measures identified to replenish both the historic and future project losses for both "Without" and "With" project conditions, whether the channel is deepened and widened or not.

Response 5: The Corps position is that dredging and placement practices associated with operation and maintenance of the Mobile Harbor Channel have not had a measurable impact on Dauphin Island. This view is supported by Byrnes et al. (2010). Byrnes et al. (2010) evaluated the impact of construction and maintenance dredging in the Mobile Outer Bar Channel on the ebb tidal shoal and Dauphin Island shorelines. Byrnes et al. (2010) concluded the following: "Based on all available information, there appears to be no measurable negative impacts to ebb-tidal shoals or Dauphin Island beaches associated with historical channel dredging across the Mobile Pass Outer Bar" (pg. 206). The GRR will address potential effects of proposed channel improvements to the existing navigation project. See response to question 6 for discussion on the without project condition.

Comment 6. It is crucial that both the Study's "Without Project" condition and the "No Action Alternative" must include and clearly define the significant historic, ongoing, and future projected erosion of Dauphin Island and acknowledge that an unmet mitigation needs exists, and has existed since at least 1980, that is associated with maintenance of the present Outer Bar Channel and will be intensified in the future should that channel segment be deepened and widened. Mitigation of the sand losses should be an integral component of both the "No Action Alternative" and all "Action Alternatives" considered, including the Tentatively Selected Plan and the Recommended Plan. All applicable federal laws dealing with mitigation of project effects should be addressed. In addition, the Study should assure compliance with Chapter 220-4-.09(1) of the State of Alabama Administrative Code (Placement and Configuration of Piers and Other Improvements on State Submerged Lands) which states: "To the maximum extent feasible, all beach compatible dredge materials taken from the tidal coastal system shall be placed on beaches or within the nearshore sand system".

Response 6: As defined in ER 1105-2-100, Section 2-4, the without-project condition is the most likely condition expected to exist in the future in the absence of a proposed water resources project. The forecast of future without-project conditions shall consider all other actions, plans and programs that would be implemented in the future to address the problems and opportunities in the study area in the absence of a proposed project. Comparison of conditions with the project to conditions without the project will be performed to identify the beneficial and adverse effects of proposed plans. Expected

environmental conditions, especially trends in ecosystem change, shall be considered in forecasting with- and without-project conditions.

The baseline for developing the without-project condition is the conditions existing at the time the study is being conducted. If analyses indicate adverse environmental impacts are a result of proposed channel modifications, mitigation of those impacts will be considered.

For Navigation, the Federal requirements apply rather than the Alabama Administrative Code. The "Supremacy Clause", found in Article VI of the U.S. Constitution, shields federal activities from state regulation unless there is a clear and unambiguous congressional action or mandate authorizing such state regulation. There has been no such congressional action or mandate that would require application of this Alabama Administrative Code requirement.

Comment 7. The Corps has the discretion to select a plan, other than the National Economic Development (NED) plan, if there is an important overriding reason for choosing an alternative that would not maximize net economic benefits. For navigation projects, part of the overall NED plan is the "Federal Standard", or "least cost" plan, for disposal of dredged material. The Water Resources Development Act of 1996 allows for a disposal method that is not the "least-cost" option, provided the incremental costs of an alternative disposal method are reasonable in relation to the environmental benefits, including the benefits to the control of shoreline erosion. The Corps cannot ignore the leeway that it is provided (by both law and regulation) to finally correct the erosion of Dauphin Island attributable to the Outer Bar Channel.

Response 7: Guidance that will be followed for disposal of dredged material is provided in ER 1105-2-100, which includes language on other than least-cost disposal in Section E-14 Special Considerations, pages E-67 to E-68. Paragraph g.(2) defines "reasonable." The complete reference is as follows:

g. Beneficial Use of Dredged Material. Construction and maintenance dredging of Federal navigation projects shall normally be accomplished in the least costly manner possible (ER 1130-2-520). Section 204 of the WRDA of 1992 established programmatic authority which allows the Corps to carry out ecosystem restoration projects in connection with dredging for construction, operation or maintenance of authorized navigation projects. Guidance for Section 204 is provided in Appendix F. Section 207 modifies Section 204 to allow the Corps select a disposal method that is not the least cost if determined that the incremental costs are reasonable in relation to the environmental benefits. Section 207 establishes an authority which is separate and distinct from the authority established by Section 204. Section 207 projects are not subject to the programmatic limitation of Section 204 and are budgeted through the standard appropriation process. Cost-sharing and decision making criteria are described in the following subparagraphs.

(1) Cost-Sharing. The cost-sharing for Section 207 projects is the same as Section 204 projects. The non-Federal interests must enter into a cooperative agreement in accordance with the requirements of section 221 of the Flood Control Act of 1970 in which the non-Federal interests agree to provide 25

percent of the cost associated with construction of the project for the protection, restoration, and creation of aquatic and ecologically related habitats, including provision of all lands, easements, rights-of-way, and necessary relocations; and pay 100 percent of the operation, maintenance, replacement, and rehabilitation costs associated with the project.

(2) Decision-Making Criteria. The decision making criteria is whether the incremental cost is reasonable in relation to the environmental benefits achieved. Where the incremental Federal costs is 25 percent of the total project cost or \$300,000, whichever is less, the incremental costs are judged to be "reasonable" in relation to the environmental benefits without the need for detailed analysis. However, it must still be demonstrated that the environmental resources to be protected, restored, or created are valuable, the environmental outputs can be quantified and described and the environmentally beneficial disposal method is supported by Federal and state resource agencies. The environmental disposal method would be subject to appropriate National Environmental Policy Act requirements. For environmentally beneficial disposal methods that have incremental Federal costs which exceed 25 percent or \$300,000, the incremental costs must be justified by demonstrating that the monetary and non-monetary benefits (outputs) of the ecosystem restoration project justify its incremental costs using cost effectiveness and incremental cost analysis. Where the environmentally beneficial use involves separable increments each increment must be justified. Refer to Section V of this appendix for further information on cost effectiveness and incremental cost analysis.

Comment 8. Since 1987, the Corps has increasingly placed dredged sands removed from the Outer Bar Channel in the Sand Island Beneficial Use Area (SIBUA). The stated intent of the SIBUA is for littoral drift processes to transport the sand to the Dauphin Island shoreline to counter erosion. However, the Corps has never scientifically verified the SIBUA accomplishes its intended purpose, and no monitoring program exists to verify sand from the SIBUA is in fact reaching Dauphin Island. And all the while, Dauphin Island has continued to erode. The Study must: (1) designate a more suitable disposal site closer to Dauphin Island; and (2) recommend implementation of disposal measures that include placement of the sand in the nearshore waters of Dauphin Island in a manner similar to that recently recommended by the Corps to restore Petit Bois Island and Ship Island.

Response 8: The Mobile Harbor GRR and the National Fish and Wildlife Foundation (NFWF) Alabama Barrier Island Restoration Assessment present a great opportunity to increase the scientific understanding of the coastal processes influencing the ebb tidal shoal and nearshore areas, including Dauphin Island. The Mobile Harbor study will evaluate changes in the sediment transport processes on the ebb tidal shoal and nearshore coastal areas, including Dauphin Island, due to the proposed channel modifications (i.e. deepening or widening beyond the current depths and widths). The baseline for comparison (a.k.a the future without project condition) will be the existing condition, with the current channel dimensions, projected into the future over a 50-year planning horizon to account for sea level rise, per USACE guidance. If the results of the future without project vs. the future with project condition (i.e. modified channel dimensions) show negative effects on Dauphin Island, appropriate mitigation measures will be evaluated and recommended. Potential measures could include a revision to the sand placement location at SIBUA.

If comparison of the future without and the future with project conditions shows no significant negative effect on Dauphin Island, there will be no efforts under the Mobile Harbor study to evaluate alternate placement locations. However, alternate placement locations will be evaluated as part of the NFWF Alabama Barrier Island Restoration Assessment to identify potential beneficial use options that could result in a more resilient and sustainable island in support of the critical natural habitats and resources over a 50-year planning horizon. If there are feasible opportunities to improve the sand placement practices for Mobile Harbor that are supported by the information generated from these two efforts, the Mobile District will evaluate those options for potential implementation in accordance with applicable law and policy.

Comment 9. The Study should thoroughly assess and document how maintenance of the Outer Bar Channel has also influenced the erosion of the Mississippi barrier islands to the west, an impact alluded to in the Corps' final Mississippi Barrier Island Restoration Project EIS.

Response 9: As part of the DIPOA settlement agreement Byrnes performed a study specifically evaluating the impact of the construction and maintenance dredging in the Mobile Outer Bar Channel on the ebb tidal shoal and Dauphin Island shorelines. Byrnes et al. 2010 concluded the following: "based on all available information, there appears to be no measurable negative impacts to ebb-tidal shoals or Dauphin Island beaches associated with historical channel dredging across the Mobile Pass Outer Bar" (pg. 206).

Additional analysis conducted as part of the engineering and design for the Mississippi Coastal Improvements Program (MsCIP) Comprehensive Barrier Island Restoration Plan expanded on this study to cover the Mississippi barrier islands of Petit Bois, Horn, and Ship. The study determined the channel at Petit Bois Pass has been filling since the 1960s, potentially providing a more efficient pathway for sand transport from Dauphin Island to Petit Bois Island. In contrast it indicated a net deficit in the sand transport budget from Petit Bois to Horn Island implicating the dredging and dredged material placement of the Horn Island Pass channels (Byrnes, et al. 2012). Based on this information we see no need to do any further studies on the Mississippi Barrier Islands and their response to activities at the Mobile Main Pass.

As stated in the response to comment #8, the Mobile Harbor GRR and the NFWF Alabama Barrier Island Restoration Assessment present a great opportunity to increase the scientific understanding of the coastal processes influencing the ebb tidal shoal and nearshore areas. If additional information/insight is generated from these two efforts, it will be included in the GRR feasibility report and integrated supplemental EIS.

References:

Byrnes, M. R., S. F., Griffiee, and M. S. Osler, 2010. Channel Dredging and Geomorphic Response at and Adjacent to Mobile Pass, Alabama. Technical Report ERDC/CHL TR-10-8, U.S Army Engineer Research and Development Center, Vicksburg, MS, 309 p.

Byrnes, Mark R., Julie D. Rosati, Sarah F. Griffiee, and Jennifer L. Berlinghoff, 2012. Littoral Sediment Budget for the Mississippi Sound Barrier Islands. Technical Report ERDC/CHL TR-12-9, U.S Army Engineer Research and Development Center, Vicksburg, MS, 184 p.

Comment 10. The Study must also incorporate and fully address the ongoing work of the Mobile Bay Interagency Working Group (IWG) that was established by the Corps to evaluate alternative dredged material disposal strategies, including beneficial use. The work of the IWG is focused essentially on dredged material removed from the Mobile Harbor ship channel. To date this work has been conducted in a piecemeal manner instead of being evaluated as a comprehensive program as required by the National Environmental Policy Act. As such, the public has not been afforded an adequate opportunity to be involved at the "front end" of each IWG action and only allowed to comment during the Water Quality Certification Public Notice process where the Corps only considers comments in a perfunctory fashion. The work of the IWG dealing with future strategies for disposal of Mobile Harbor dredged material in Mobile Bay is certainly relevant to the enlargement of the ship channel in at least two areas: (1) thin layer disposal of dredged material over the bottoms of Mobile Bay; and (2) future disposal in the 1,200-acre dredged material disposal island the Corps and the Port Authority plans to construct in Upper Mobile Bay.

Response 10: Mobile Harbor GRR with an Integrated Supplemental Environmental Impact Statement will address cumulative impacts as defined by the §1508.7 of the Code of Federal Regulations (40 CFR). This section specifically states, "Cumulative impact' is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." This analysis will consider the impacts of the Proposed Action in conjunction with other projects in the Mobile Bay, Mississippi Sound, and the northern Gulf of Mexico and in the vicinity of the Mobile Harbor Navigation Channel or other projects along the Gulf coast within 15 miles of Mobile Bay. The IWG addresses sediment management practices and strategies within Mobile Bay but it is only one of many actions within the Mobile area that will be addressed in the Integrated Supplemental Environmental Impact Statement's cumulative impacts. As such, the conceptual beneficial use site in the upper Mobile Bay will also be considered as well as other foreseeable activities.

The Mobile Harbor GRR with an Integrated Supplemental Environmental Impact Statement will evaluate disposal options and capacities to ensure sufficient disposal site(s) exist for the new work material as well as future operations and maintenance material anticipated for the next 20-years. As part of those disposal sites, beneficial use will also be considered as an option should it be an environmentally acceptable solution. Information gained from previous studies will be used to inform and support the Mobile Harbor GRR with an Integrated Supplemental Environmental Impact Statement.