Draft Section 404(b)(1) Evaluation Report for the Mobile Harbor Supplemental Environmental Assessment for the Upper Bay Channel Widening Project

Mobile County, Alabama

I. DESCRIPTION OF THE AUTHORIZED AND EXISTING FEDERAL PROJECT

As of July 2023, the authorized dimensions of all segments of the Mobile Harbor Project have not all been constructed. A summary of both the authorized and the existing maintained dimensions are listed in **Table 1**. The maintained dimensions of the bay channel are 45' by 400' and the outer bar channel is 47' by 600'. Each of these areas is maintained to a depth that is 10 feet less than the authorized depth. Several additional features of the authorized project have not been constructed at this time. The anchorage areas that would be located south of the mouth of the Mobile River have not been constructed, and the bay channel and the bar channel, have not been fully widened. The new Mobile Harbor Turning Basin (MHTB) opposite McDuffie Island, between Pinto Island and Little Sand Island was constructed in 2010.

Table 1. Authorized and Existing Dimensions for Mobile Harbor

Channel	Authorized Dimensions	Existing Dimensions
Outer Bar Channel (a.)	57' x 700'	47' x 600'
Bay Channel (b.)	55' x 550'	45' x 400'
Anchorage Area (c.)	55' x 750' x 4,000'	*Not Constructed*
Turning Basin (d.)	55' x 1,500' x 1,500'	45' x 755' x 1,320'
River Channel (e.)	40' x 500'-700'	*As Authorized*
Turning Basin (f.)	40' x 800' – 1,000' x 2,500'	*As Authorized*
Turning Basin (g.)	40' x 1,000' x 1,600'	*As Authorized*

Approval for advanced maintenance for the Federal Mobile Harbor navigation project was received from South Atlantic Division in the mid-1990s as per the Navigation Regulations ER1130-2-530, 29 November 1996. As such, the navigation channels have associated advanced maintenance to accomplish dredging in an efficient, cost-effective, and environmentally responsible manner. In addition to the federally-authorized channel dimensions providing for navigation, two (2) sediment basins in the Mobile River and three (3) sediment basins in the bay channel, have been previously authorized and approved. These sediment basins are to provide improved channel maintenance efficiency. Each of these basins are several thousand feet long and have depths ranging from four (4) to ten (10) feet lower than the existing navigation channel bottom. The basins decrease frequency of dredging to provide a more cost effective and reliable channel. In addition to sediment basins, an advanced widening feature is authorized for the bar channel.

II. DESCRIPTION OF THE PROPOSED ACTION:

In May 2019, the USACE Mobile District prepared the Mobile Harbor Integrated General Reevaluation Report with Supplemental Environmental Impact Statement (GRR/SEIS) that was approved with a Record of Decision (ROD) signed in September 2019. The Recommended Plan (RP) consisted of a 5-foot deepening of the channel, or a 52-foot Bar Channel, a 50-foot-deep Bay Channel, and a 3-mile long by 100-foot channel widener in the bay with bend easings and turning basin modifications.

Since completion of the Mobile Harbor GRR/SEIS in May 2019, there has been a need to make design changes to Phase 6 of the Mobile Harbor GRR to further improve navigation safety along the Mobile Harbor navigable channel. The Mobile Harbor navigable channels, as detailed in the Mobile Harbor GRR/SEIS, include the Mobile River Channel, Upper Bay Channel, Lower Bay Channel, and the Bar Channel. Phase 6 includes a design change to the Upper Bay Channel. Details of the proposed changes to the 2019 Mobile Harbor GRR/SEIS recommended plan are provided below.

Mobile Harbor is located in the southwestern part of Alabama at the confluence of the Mobile River and the head of Mobile Bay. Mobile Harbor is approximately 28 miles north of the bay entrance from the Gulf of Mexico. Specifically, the location of the proposed Phase 6 Upper Bay Channel Widener is along a portion of the Upper Bay Channel across from the McDuffie Coal Terminals. The proposed widener will be located on the east side of the channel starting south of the turning basin. The proposed widener extends approximately 3,200 feet south from the turning basin before it begins to taper back to the normal channel width. The tapered area extends approximately 3,400 feet ending just north of the Arlington Channel.

Upper Bay Channel Widener: The change in work (as necessitated and described in Section 1.1 Purpose and Need) associated in Phase 6 includes adding a 100-foot widener along a portion of the Upper Bay Channel across from the McDuffie Coal Terminals. The proposed widener will be located on the east side of the channel starting south of the turning basin. The turning basin was previously proposed and authorized in the 2019 Mobile Harbor GRR. The proposed widener extends approximately 3,200 feet south from the turning basin before it begins to taper back to the normal channel width. The tapered area extends approximately 3,400 feet ending just north of the federally authorized Arlington Channel. The widening of this portion of the channel would be consistent with the authorized improvement depths to -50 feet MLLW as described in the 2019 Mobile Harbor GRR/SEIS. The approximate quantity of new work material is approximately 1.4 million cubic yards (mcy).

Dredge Material Management and Placement Areas: The estimated dredge quantity of new work material (approximately 1.4 mcy) will be placed in totality or in combination of two beneficial use sites (Deer River, Mobile County Restoration and Dauphin Island Causeway Beneficial Use, Mobile County which will be evaluated through the Department of the Army permit process), Relic Shell Mined Areas A-F, and/or the Offshore Dredge Material Disposal Site (ODMDS). All placement sites have been previously reviewed and authorized as part of the Mobile Harbor GRR/SEIS May 2019.

All future Operations and Maintenance (O&M) dredged material may be placed within any of the existing and permitted dredge material placement areas to include USACE upland dredge material placement areas, USACE open water placement areas, and/or ODMDS.

a. General Description of the Dredged or Fill Material. A geotechnical investigation was conducted to determine the physical characteristics of the material contained in the proposed project area. A summary of the findings is discussed below. The sediment proposed for excavation was also sampled and tested for possible contaminants. A summary of this investigation is also summarized below.

(1) Geotechnical Investigation: The geotechnical investigation of the proposed widener included four (4) vibracore samples extending to depths of about 20 feet below the mudline. In general, soils from the core samples consisted of fine sands with varying amounts of clay [SP, SP-SC, SC] overlying fat clays with traces of sand [CH] down to the boring termination depths. Fine sands [SP] were encountered below the fat clay deposits on the northern half of the wider; however, these fine sands were not encountered below the fat clays along the southern half of the widener.

(2) Sediment Contaminant Analyses: Sampling results of recent studies (Mobile Harbor GRR sediment testing (2020)) form a baseline for comparison to future new work sediment analyses during the construction of Phase 6 and the proposed widening of the Upper Bay turning basin dredging unit (DU) 12) of the Mobile Harbor GRR. Sediment samples were analyzed for physical characteristics (grain size determination, specific gravity, and percent solids), bulk sediment analysis, standard and modified elutriate testing, water column bioassays, whole sediment bioassays, and bioaccumulation studies of sediment samples to determine material suitability for placement in the Mobile ODMDS under Section 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972 (full Tier III analysis). Sampled areas included the proposed dredge sites in Phase 6 adjacent to the McDuffie Terminal, a reference site for comparison, and also at the Mobile ODMDS. For greater detail and descriptions of the proceeding discussion, refer to the Sampling and Analysis Report, Mobile Harbor Deepening and Widening Dredged Material Evaluation (2020).

Results of the grain size analysis indicated that sediment from DU12 consisted primarily of sand (66.3%). Metals, PAHs, pentachlorophenol, pesticides, PCB congeners, and dioxin and furan congeners were either not detected or detected at low concentrations in the sediment sample.

Ammonia was the only analyte detected at a concentration that exceeded the USEPA acute WQC for the protection of aquatic life. Ammonia concentrations indicated that a 1.3-fold dilution within 4 hours after placement of sediment at the Mobile ODMDS would be required to meet the LPC. STFATE modeling indicated that a 713-fold dilution would be achieved upon placement in the Mobile ODMDS. Therefore, all constituents meet the LPC for WQC for placement in the Mobile ODMDS.

The TOC concentration was 0.933%. Arsenic, cadmium, chromium, copper, lead,

mercury, nickel, selenium, and zinc were each detected. None of the metals were detected at concentrations that exceeded their respective ERLs (Table 5-2). Eleven PAHs were detected, and the total PAH concentration (135 µg/kg) was substantially less than the ERL for total PAHs (4,022 µg/kg; Table 5-3).

One pesticide, 4,4'-DDE, was detected in the sample at a low concentration below the ERL (Table 54), and total PCB congener concentrations were also below the ERL (Table 5-5).

Eleven of the seventeen dioxin and furan congeners were detected. The total dioxin TEQ calculated using the mammalian TEF was 3.80 ng/kg, and the total dioxin TEQ calculated using the fish TEF was 1.93 ng/kg. When calculating the TEQ with both dioxin and dioxin-like compounds, the TEQ of the sample from DU12 also slightly exceeded the TEQ in the reference site sample (Tables 5-6 and 5-7).

b. General Description of the Discharge Sites.

(1) Location. Mobile Harbor, Mobile, Alabama. Maps illustrating the location of the existing channels and dredge material placement areas are presented in the 2019 Mobile Harbor GRR/SEIS Environmental Appendix C.

(2) Type of Habitat. Previously-approved upland dredge material placement areas (i.e., North Blakeley, ALCOA Mud Lakes, South Blakeley and North Pinto) located in the upper harbor area and the Gaillard Island dredge material placement area are existing upland and confined dredge material placement sites that are approved to accept materials that contain sand and fine-grained sediments. The Mobile ODMDS is a previously designated ocean dredge material placement site and is approved to accept material from this project. The approved in-bay open water placement includes the open water sites adjacent to the channel for long-term O&M as well as relic shell mine areas A-F which were approved in the GRR for new work and O&M associated with the channel improvements. In all, these sites impact approximately 9,000 acres of bay bottoms predominantly composed of mud flats These open water placement sites adjacent to the channel were historically utilized, prior to 1990, and were reapproved for use for the maintenance of the bay channel in 2014. The approved in-bay placement strategies maintain sediment in the system and provide sufficient time for benthic recovery.

(3) Timing and Duration of Discharge. Discharge could occur at any time in the year at any dredge material placement location. This proposed action is merely a recertification of an authorized action.

c. Dredge Material Placement Method. Placement of materials in the approved upland dredge material placement sites (North Blakeley, ALCOA Mud Lakes, South Blakeley and North Pinto) will be accomplished by hydraulic dredge with a pipeline or hopper. Also, placement of materials in the open water placement sites will likely be accomplished by hydraulic pipeline or scow. Also, placement of materials in the Gaillard Island site will be accomplished by hydraulic pipeline. Sediment placed in the Mobile ODMDS will likely be accomplished using a hopper dredge or scow.

III. FACTUAL DETERMINATIONS.

a. Physical Substrate Determinations.

(1) Substrate elevation and slope. Substrates placed in approved upland placement sites, open water in-bay placement, as well as the ODMDS, will be confined within those placement areas. The elevation of the approved upland placement sites ranges from 21 feet to 46 feet. The depths in the open water placement and relic shell mined sites ranges from 7 to 14 feet. The materials placed in open water sites will be broken down by microbials, consolidate and be redistributed by local currents and waves to a more natural configuration consistent with the bay system.

Previous studies of open water placement in Mobile Bay by Nichols (1978), show that dredge material placement initially raised the bed approximately 30 cm and increased the average bed slope from 1:3000 to 1:2000. After placement, mud consolidates, bulk density increases and slopes decrease. Between dredge material placement operations, the placement area bathymetry returns to broad swells and troughs with maximum relief of two (2) feet representing topography modified by waves and tidal currents. Very little long-term mounding has resulted from the dredge material placement of maintenance material in the bay. Significant mounding historically occurred in the Upper Mobile Bay as a result of dredge material placement of new work material from channel deepening in the 1960's. Continued dredge material placement of maintenance material in the upper bay has been through thin layer placement techniques and based on surveys has not added to that mounding.

(2) Sediment type. Approximately 4 million cys of current maintenance dredged material would be removed from the bay channel on an annual basis. New work material grain sizes, associated with the Mobile Harbor GRR improvements, varied based on the area of study.

(3) Dredged/fill material movement. Dredge material placed in the approved upland dredge material placement area sites will be confined. The intent of the in-bay placement is keeping sediment in the bay system and for the relic shell mined areas A-F is to restore sediment to this segment of the bay. Based on field data collection and modeling, the long-term sediment placement of dredge material in the bay is anticipated to have similar to native sediment erosion potential. The data collection and erosion potential analysis indicated that the native surface layer in the Bay (0-2 centimeters) is mobilized at 0.4 - 0.8 Pascals. The wave/current-generated shear stress in the shallow Bay is consistently greater than this value, which indicated that the Bay sediments are frequently mobilized by river, tide and wind generated wave and currents. Furthermore, the modeling of placement scenarios did not indicate significant influence of sediment flux including total suspended sediments near important habitat resources. Salinity associated with the Mobile ODMDS is high enough to promote rapid settling of finer particles. Current velocities range from approximately 8 inches per second (in/s) to 16 in/s at the Mobile ODMDS. The directions of the currents measured during tide conditions moved towards the east while flood tide conditions moved to the north-

northwest.

(4) Physical effects on benthos. Within the open-water dredge material placement sites and the ODMDS, some benthic organisms would be destroyed by the proposed action; however, due to the constant movement of material by currents, benthic organism diversity and abundance would appear to be low. Research conducted by the USACE, ERDC under the Dredged Material Research Program (DMRP) (Berkowitz *et al.*, 2018 (included in reference list for the 2019 Mobile Harbor GRR/SEIS)) suggests that the benthic community is adapted to a wide range of naturally occurring environmental changes and that no significant or long-term changes in community structure or function are expected.

Bottom organisms include polychaete worms, crabs, shrimp, mollusks, and enchinoderms. Non-motile species are directly covered by the dredged material, engulfed by mud flow or covered by heavy siltation within 1,200 feet of the dredge discharge. Responses of benthic infauna to large scale disturbance by dredge material placement were studied in areas around Corpus Christi, Texas. The study looked at biological responses to dredged material disturbance that were linked to both pre-disturbance conditions and differences between disturbed and neighboring undisturbed areas. Results for this study area indicated that benthic communities are poised to respond relatively quickly to disturbances given their historical exposure to impacts and resultant colonization by opportunistic species. The impacts of the dredged material placement were evident for less than a year. The response of benthic communities to placement of dredged material was assessed at three (3) sites in Mississippi Sound in 2006. The findings indicated that adults re-colonized the newly deposited sediments either through vertical migration or later immigration from adjacent areas within a period of three (3) to 10 months. A related study conducted in Mississippi Sound associated with the Gulfport Federal navigation project indicated benthic recovery rates to preplacement conditions occurred within 12 months.

A major factor influencing benthic recovery rates is the prior disturbance history of a particular area. Studies indicate that benthic recovery occurs more rapidly in relatively shallow areas, such as Mobile Bay, where the resident benthic communities are already adapted to dynamic conditions and shifting sediments. Being that Mobile Bay is a depositional shallow water body with dynamic sediment processes, it would be expected that benthic recovery would be consistent with that shown by previous studies.

(5) Other effects. Effects of harbor deepening (such as those proposed for the Mobile GRR) on benthic macrofauna due to salinity intrusion are predicted to be negligible, with minimal effects on higher trophic levels, such as fish, because prey availability and distributions are unlikely to be affected (Berkowitz *et al.*, 2018). No other significant effects due to movement of the physical substrate are noted.

(6) Actions taken to minimize impacts. No actions, which would further reduce impacts due to the placement of the dredged material are deemed necessary.

b. Water Circulation/Fluctuation, and Salinity Determination.

(1) Water

(a) Salinity. No significant effects.

(b) Water chemistry. Sampling results of recent sediment evaluation (2020) and elutriate analyses indicate little, to no discernable changes, on water chemistry for the proposed action.

(c) Clarity. Water clarity may locally be decreased slightly during the proposed placement of dredged material, but this would not be significant.

(d) Color. No effects.

(e) Odor. No effects.

(f) Taste. No effects.

(g) Dissolved gases. No effects.

(h) Nutrients. No effects.

(i) Eutrophication. No effects.

(2) Current Patterns and Circulation

(a) Current patterns and flow. Changes in water circulation and flow due to placement of dredged material in upland sites, the SIBUA, relic mined placement (oyster holes), and the Mobile ODMDS are not expected to occur. Natural currents and flow will occur during tidal, wave, and storm activities.

(b) Velocity. No significant effects.

(c) Stratification. No effects.

(d) Hydrologic effects. No significant effects.

(3) Normal Water Level Fluctuations. No effects.

(4) Salinity Gradients. No significant effects.

(5) Actions That Will Be Taken To Minimize Impacts. No other actions that would minimize impacts on water circulation/fluctuation and salinity are deemed necessary.

c. Suspended Particulate/Turbidity Determinations.

(1) Expected changes in suspended particulate and turbidity levels in the vicinity of the dredge material placement site. The suspended particulate and turbidity levels

are expected to undergo minor increases during dredging and placement activities; however, suspended sediment of this type will quickly return to normal conditions. No significant effects would occur as a result of these increases.

(2) Effects on the chemical and physical properties of the water column.

(a) Light penetration. Increased turbidity levels in the project area as a result of the placement of dredged material would reduce the penetration of light into the water column only slightly and would be a minor short-term impact.

(b) Dissolved oxygen. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(c) Toxic metals and organics. No significant effects.

(d) Pathogens. No effects.

(e) Aesthetics. The placement of dredged material would likely decrease the aesthetic qualities of the project area for a short period of time during and shortly after placement. The dredge material placement areas equilibrate and rapidly return to normal upon exposure to the wave climate.

(f) Others as appropriate. None appropriate.

(3) Effects on biota.

(a) Primary production, photosynthesis. No significant effects greater than those experienced under current project conditions are anticipated.

(b) Suspension/filter feeders. Some local increases in suspended particulates may be encountered during the dredging and placement actions, but these increases would not cause significant impacts to these organisms unless they are directly covered with sediment. If directly covered with dredged material, it is expected that some organisms will be destroyed. Rapid recruitment of these organisms will promote a rapid recovery to normal populations. Overall, the impact to these organisms is expected to be minor and insignificant.

(c) Sight feeders. Sight feeders would avoid impacted areas and return when conditions are suitable. However, it is difficult to relate the presence or absence of sight feeders in an area to the placement of dredged material. Sight feeders, particularly fishes, may vary in abundance as a result of temperature changes, salinity changes, seasonal changes, dissolved oxygen level changes, as well as other variables. No significant impacts are expected to occur on sight feeders.

(4) Actions taken to minimize impacts. No further actions are deemed appropriate.

d. Contaminant Determination. No significant effects. No significant effects.

Sampling results of recent chemical analysis studies (2020) indicated that a few metals and PAHs, pesticides, and insecticides were detected in Mobile Harbor sediments, but did not exceed critical thresholds (PEL levels).

e. Aquatic Ecosystem and Organism Determinations.

(1) Effects on plankton. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(2) Effects on benthos. Benthic organisms would be destroyed by the deposition of dredged material below the waterline in the open water placement areas, but no significant effects are expected on the benthic community as a result of the proposed action.

(3) Effects on nekton. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(4) Effects on aquatic food web. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(5) Effects on special aquatic sites.

(a) Sanctuaries and refuges. Not applicable

(b) Wetlands. As a result, project implementation is not expected to negatively impact wetlands within the study area. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(c) Mud flats. Not applicable.

(d) Vegetated shallows. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(e) Coral reefs. Not applicable.

(f) Riffle and pool complexes. Not applicable.

(6) Threatened and endangered species. The project area is host to fisheries and wildlife on the State and Federal protected species list. Of particular concern in the proposed project vicinity are sea turtles, Florida manatee, and Gulf sturgeon. The proposed activity does not contain any terrestrial component that would affect Loggerhead or Kemp's ridley sea turtles nesting. No USFWS designated critical habitat is present within the proposed channel widening project area. The Alabama red-bellied (Eretmochelys imbricata) turtle and Wood Stork (Mycteria americana) are not likely located in the project area because the proposed action is outside of the preferred habitat.

Potential impacts on the five species of listed sea turtles and Gulf sturgeon from

hopper dredging activities were assessed in the 2003 Gulf Regional Biological Opinion (GRBO). In the opinion, NMFS concluded that sea turtles and Gulf sturgeon can be adversely affected by hopper dredges. The Gulf sturgeon is a subspecies of the Atlantic sturgeon. The proposed project area may be used by Gulf sturgeon for foraging during their migration periods. However, Mobile Bay is not within designated Gulf Sturgeon critical habitat. The proposed activity does not contain any terrestrial component that would affect Loggerhead or Kemp's ridley sea turtles nesting. No USFWS designated critical habitat is present within the proposed channel widening project area.

The Florida manatee is a subspecies of the West Indian Manatee. Although rare, manatee sightings have been documented in Mobile Bay and/or its tributaries for the past several years, during the period May through December. In the unlikely event that a manatee would be located in the vicinity of the project site, and U.S. Fish and Wildlife Service (USFWS) “Standard Manatee Construction Conditions" would be implemented.

The USACE, Mobile District, does not anticipate sperm, blue, fin, humpback, or sei whales would be adversely affected by the varying dredging methods (i.e. hydraulic, hopper, and/or mechanical) described by the proposed action along the entire proposed action area. Given their likely absence, feeding habits, and very low likelihood of interaction, the USACE, Mobile District, does not anticipate the proposed actions identified in this EA will affect these species.

The USACE has determined that the proposed action may affect but is not likely to adversely affect the species discussed above.

(7) Other wildlife. No significant effects.

(8) Actions to minimize impacts. No other actions to minimize impacts on the aquatic ecosystem are deemed appropriate.

f. Proposed Dredge Material Placement Site Determination.

(1) Mixing zone determinations. The Alabama Department of Environmental Management (ADEM) delineates mixing zones on a case-by-case basis. Any requirements placed on the project would be followed to the maximum extent practicable.

(2) Determination of compliance with applicable water quality standards. Preliminary findings show that action would be in compliance to the maximum extent practicable, with all applicable water quality standards.

(3) Potential effects on human use characteristics.

(a) Municipal and private water supply. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(b) Recreational and commercial fisheries. No significant effects greater

than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(c) Water-related recreation. No significant effects greater than those experienced under current project conditions are anticipated (Berkowitz *et al.*, 2018).

(d) Aesthetics. No significant effects.

(e) Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves. Not applicable.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. No significant cumulative effects on the aquatic ecosystem would occur as a result of the proposed action.

h. Determination of Secondary Effects on the Aquatic Ecosystem. No significant effects.

IV. <u>FINDING OF COMPLIANCE</u>.

a. Adaptation of Section 404(b)(1) Guidelines. No significant adaptations to the guidelines were made relative to this evaluation.

b. Alternatives. The proposed action discussed in this EA and Section 404(b)1 only encompasses the design changes to the Upper Bay Channel Widening project as described in Section II above. Therefore, only 'Action' and 'No Action' alternatives have been evaluated in this assessment. It is believed that greater negative safety and economic impacts will result from not constructing the channel widener. Other Alternatives for dredging and placement were evaluated in the 2019 Mobile Harbor GRR/SEIS.

c. Compliance with State Water quality Standards. A Clean Water Act (CWA), Section 401 Water Quality Certification is required for the proposed action. Certification will be coordinated with ADEM for the proposed action.

d. Compliance with Applicable Toxic Effluent Standard or Prohibition under Section 307 of the Clean Water Act. The action is consistent with the Alabama Coastal Program to the maximum extent practicable. Recertification of the existing project will be coordinated through and approved by the State of Alabama.

e. Compliance with Endangered Species Act. The proposed activity is not expected to harm federally-protected species. No critical habitats of any federally-protected species exist within the project area. Regarding potential impacts to federally-protected species, coordination with the appropriate Federal agencies will be initiated through a Public Notice and completed. Sufficient safeguards exist to protect federally-protected species which may enter into the project area.

f. Compliance with Specific Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act. The proposed activity would not result in any significant adverse effects on human health or welfare, including municipal or private water supplies, recreation and commercial fishing, plankton, fish, shellfish, and wildlife. The life stages of aquatic life and other wildlife would not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values would not occur. No wetlands would be impacted by the proposed action.

g. Evaluation of Extent of Degradation of the Waters of the United States. The proposed fill plan is specified as complying with the requirements of these guidelines.

h. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem. The proposed fill plan is specified as complying with the requirements of these guidelines.

i. On the Basis of the Guidelines, the proposed Placement Site for the Discharge of Dredged Material. Specified as complying with the requirements of these guidelines.

DATE: _____

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Jeremy J. Chapman, P.E.
Colonel, U.S. Army
District Commander