CZC-14-1040
POST 45 = PERMIT #

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS

REPLY TO
ATTENTION OF

Planning and Environmental Branch

October 9, 2014

JOINT PUBLIC NOTICE
US Army Corps of Engineers, Charleston District,
69A Hagood Avenue
Charleston, South Carolina 29403-5107
and the
South Carolina Department of Health and Environmental Control

NOTE: THIS IS A US ARMY CORPS OF ENGINEERS CIVIL WORKS PROJECT

TO WHOM IT MAY CONCERN:

SUBJECT: Notice of Availability of a draft Integrated Feasibility Report and Environmental Impact Statement (FR/EIS) pursuant to the authority provided by Section 216 of the Flood Control Act of 1970 (Public Law 91-611) for improvements, modifications, and continued operations of the existing Charleston Harbor Federal Navigation Project, Charleston and Berkeley Counties, South Carolina. The responsible lead agency is the Charleston District, US Army Corps of Engineers.

Notice of the following is hereby given:

a) Pursuant to the relevant provisions of the laws and others as applicable:
   1. The Clean Water Act (33 U.S.C. 1251, et. seq.).
   2. The Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et. seq.).
   3. The National Historic Preservation Act of 1966 (U.S.C. 470, et. seq.) and the Preservation of Historical Archeological Data Act of 1974 (16 U.S.C. 469, et. seq.).
   4. The National Environmental Policy Act of 1969 (42 U.S.C. 4321).
   5. Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1531, et. seq.).
   6. Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 U.S.C. 1801, et. seq.)
   7. The Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 USC 1413)

b) The Charleston District, US Army Corps of Engineers has evaluated the engineering, environmental, and economic acceptability of various alternatives to address navigation

problems in Charleston Harbor over a 50-year analysis period. The draft FR/EIS documents the results of the investigations and analyses that were conducted. The Charleston District is releasing these documents for public review and comment pursuant to the National Environmental Policy Act (NEPA) while the Department of the Army completes its review.

c) Pursuant to Sections 401 and 404 of the Clean Water Act (33 USC 1344), and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 USC1413), notice is hereby given that the Charleston District, US Army Corps of Engineers, is considering a proposal for channel modifications to the Charleston Harbor Federal navigation channel that includes discharge of fill into navigable waters of the US. The discharge will consist of effluent from existing confined disposal facilities into waters of the US and placement of dredged rock at the SC Department of Natural Resources (SCDNR), Charleston Nearshore Reef (located approximately 5km southeast of the mouth of Charleston Harbor).

d) The Charleston District announces the availability to the public of a draft FR/EIS and concerning the action. Copies of the draft FR/EIS have been furnished to Federal, State, local, and other agencies of interest. Electronic copies of the draft FR/EIS can be obtained from the following website: http://www.sac.usace.army.mil/Missions/CivilWorks/CharlestonHarborPost45.aspx.

e) A public workshop will be held during the comment period and is scheduled to occur October 21, 2014 at the Citadel Alumni Center from 5:30 to 8:30 P.M. US Army Corps of Engineers officials will be available to answer questions, provide information, and accept written and dictated comments.

f) Written statements regarding the integrated feasibility study and draft EIS for the proposed action will be received at the Charleston District Office until

NOVEMBER 24, 2014

from those interested in the activity and whose interests may be affected by the proposed action.

EXISTING PROJECT DESCRIPTION:

Charleston Harbor is located in a natural tidal estuary, formed by the confluence of the Cooper, Ashley, and Wando rivers and serves the Port of Charleston. The total area of the harbor is approximately 14 square miles. Charleston Harbor is located approximately half-way between New York City and Miami.

The existing Federal Navigational Channel configurations were derived through a Feasibility Study completed in 1996. Construction of the improvements from the 1996 Study was completed in 2004. The existing channels extend about 27 miles from the North Charleston Terminal on the Cooper River to the 47-foot ocean contour; the seaward 16 mile portion is considered the Entrance Channel. The Entrance Channel is authorized at 47 feet deep (mean

lower low water (MLLW)). The depth of the Entrance Channel is 2 feet deeper than the inner harbor channels to account for wave action and vessel movement seaward of the inlet. Two-way traffic is permitted throughout the 800 foot wide Entrance Channel. Most of the of channels in the lower harbor are 45 feet deep (MLLW) and 600 feet wide with a short reach south of Daniel Island that is 800 feet wide and a 2-mile mile reach from the Cooper River to the Wando Terminal that is 400 feet wide. Two-way traffic is permitted in the lower harbor except within the 400-foot-wide reach to the Wando Terminal. Existing channels depths allow for an additional 4 feet of dredging to account for shoaling and overdepth dredging.

DESCRIPTION OF PROPOSED PROJECT IMPROVEMENTS:

The study area encompasses the offshore entrance channel, offshore and landside confined dredged material disposal sites, inner harbor channels, and any extension of the water bodies and shorelines that could be impacted by proposed improvements. Navigation concerns include three main types of problems which present inefficiencies and safety risks to the current and future vessel fleets: insufficient Federal channel depths, difficult currents, and restrictive channel widths and turning basins.

Alternative plans included nonstructural and structural alternatives. The tentatively selected plan (TSP) optimized at -52 feet to the Wando Welch container facility and the new SCPA container facility on the Cooper River, and -48 feet for the reaches above that facility to the North Charleston container facility. Widening and turning basin expansion measures are also included. The TSP, or proposed project, recommends the following navigation improvements:

1. Deepen the existing entrance channel from a project depth of -47 feet to -54 feet over the existing 800-foot bottom width, while reducing the existing stepped 1,000-foot width to 944 feet from an existing depth of -42 feet to a depth of -49 feet.
2. Extend the entrance channel approximately three miles seaward from the existing location to a depth contour including a -54-foot project depth plus overdepths.
3. Deepen the inner harbor from an existing project depth of -45 feet to -52 feet to the Wando Welch container facility on the Wando River and the new SCPA container facility on the Cooper River, and -48 feet for the reaches above that facility to the Northern Charleston container facility (over expanded bottom widths from 400 to 1,800 feet).
4. Enlarge the existing turning basins to an 1800-foot diameter at the Wando Welch and new SCSPA terminals to accommodate Post Panamax Generation 2 and 3 container ships.
5. Enlarge the North Charleston Terminal turning basin to a 1650-foot diameter for Post Panamax Generation 2 container ships.
6. Place dredged material and raise dikes at the existing upland confined disposal facilities at Clouter Creek, Yellow House Creek, and/or Daniel Island; and for material dredged from the lower harbor, place at the Ocean Dredged Material Disposal Site (ODMDS) and expand. Place rock along the outside of the entrance channel for a beneficial use of dredged material.

PROJECT IMPACTS:

The Draft FR/EIS assesses the potential impacts of the proposed project alternatives on endangered species, wetlands, fisheries, benthic communities, birds, marine mammals, water quality, air quality, environmental justice, historic properties, and potable surface and

groundwater resources. The proposed project would impact approximately 281 acres of wetlands due to changes in salinity, which require mitigation for 831 acres of wetlands, but would not require measures to improve dissolved oxygen. Approximately 29 acres of direct impacts to hardbottom areas within the footprint of the entrance channel require mitigation. Diver investigations of three potential cultural resource targets revealed no culturally significant objects. Mitigation for the wetland and hardbottom impacts includes preservation of 831 acres of wetlands and placement of approximately 3,180,000 cubic yards of rock dredged from the channel to create hardbottom habitat and sediment containment berms. Construction of the proposed project would cause temporary increases in turbidity; however, these levels would not exceed permitted variance levels outside the mixing zone. Impacts to fish species may occur due to loss of habitat from potential salinity changes associated with deepening. The full description of potential environmental impacts and mitigation measures to avoid, minimize, or compensate for adverse environmental impacts associated with the proposed action are included in the Draft FR/EIS.

a) Wetland Impacts. Indirect effects are predicted as a result of the deepening and widening of the channel. The proposed project is anticipated to potentially impact 280.96 acres of wetlands along the Ashley and Cooper Rivers combined. These impacts would be to both palustrine forested wetlands and tidal freshwater marshes. The impacts are indirect and would not be immediate because the potential salt stress would slowly change the community structure from more freshwater dominant vegetation to more salt-tolerant vegetation. All wetland functions would remain, but community structure would be slightly altered.

b) Wetlands Mitigation. Based upon civil works mitigation requirements and the 2008 Mitigation Rule, USACE selected preservation of land and conveyance to the US Forest Service as the environmentally-preferred mitigation alternative. Sufficient mitigation bank or in-lieu fee program credits are not available. Although restoration is preferred over preservation for wetland mitigation, opportunities for in kind restoration are limited, and owing to the type of aquatic resource to be restored, the risk and long-term cost of monitoring are greater.

   Preservation of large tracts with significant aquatic resources is beneficial on a watershed scale. As previously stated the impacts from this proposed project are different from typical wetland impacts; there is no dredging, filling, nor clearing of any wetland. The proposed project's impacts represent a vegetation change that could occur across the wetlands. The Charleston District has determined that preservation of land within the proclamation boundary of the Francis Marion National Forest best meets the compensatory mitigation requirements. The proposed mitigation of preserving ecologically significant parcels would provide important physical, chemical and biological functions for the Cooper River Basin and will contribute to the sustainability of the watershed by ensuring the functions of bottomland hardwood and emergent wetlands on these properties are sustained in perpetuity. The preservation parcels will also enhance lands already within the Francis Marion National Forest by functioning as a buffer to future development.

c) Water Quality in Charleston Harbor. Surface water quality can be affected by the proposed project directly or indirectly and temporarily or permanently. Direct, temporary effects on water quality may occur during dredging operations (project construction); increased turbidity is primary among these effects. Long term effects are anticipated from changed hydrodynamics within the system that could affect parameters such as temperature, salinity, and dissolved oxygen. These are discussed below.

Deepening and widening of Federal navigation channels can result in lower dissolved oxygen (DO) concentrations due to changes in water dynamics. USACE performed an evaluation of DO throughout the project area to ensure compliance with the SCDHEC Total Maximum Daily Load (TMDL) for DO within the harbor. EFDC modeling results indicate the cumulative effect of the proposed project and wastewater dischargers would not have significant effect on the TMDL waste load allocation. The predicted magnitude of the project-induced DO reductions are small and would not significantly impact aquatic organisms or require mitigation to comply with the TMDL. Even though the project's DO impacts are not biologically significant, they are important in regard to 401 Water Quality Certification. The Charleston District is committed to monitoring the impacts of the proposed project and ensuring that they are similar to those predicted by the EFDC model. If monitoring determines that the impacts are greater than predicted, the District has considered several options to mitigate for the DO deficit (discussed in the draft FR/EIS).

The proposed channel deepening will increase the salinity concentrations in the estuary. Two primary concerns regarding salinity changes are: (1) changes to marsh vegetation caused by changes in the salinity regime, and (2) the need for increased freshwater releases from Pinopolis Dam to prevent any salinity from reaching the inlet to the Back River (also known as the Bushy Park Reservoir). The USACE will continue the salinity alert monitoring and the protection of Bushy Park Reservoir from increases in salinity. Changes to marsh vegetation from increased salinity are discussed in the direct impacts to wetland section.

Dredging operations are likely to have a temporary and minor impact to water quality by increasing turbidity and suspended solids near the dredge plant. The proposed project will have dredges operating in various areas of the channel during project construction.

d) Sediment Quality. Sediments in the project footprint proposed for removal during dredging provide some habitat value, particularly in non-silty areas. Infaunal communities in these areas will recover within several months following dredging due the high reproductive rates of resident invertebrates.

The disturbance of aquatic sediments can create environmental problems if contaminants of concern are made available to organisms through various pathways. In order to determine sediment characteristics and contaminant concerns from dredging Charleston Harbor sediments and to obtain a section 103 Marine Protection, Research, and Sanctuaries Act concurrence, samples were collected for chemical and biological evaluations from October

20 through November 19, 2012. The sampling effort revealed that while there are trace levels of some contaminants in the sediments, there is no significant threat to the health of aquatic organisms, the overall estuarine environment, or the human environment.

e) Fisheries Impacts. Direct impacts due to construction are anticipated to be minimal by USACE. Motile species can avoid the dredge equipment. However, there will be some entrainment of slow-moving benthic individuals as well as larvae and eggs (for both fishes and shellfishes) suspended in the water column. When practicable, seasonal "windows" for dredging will be observed by USACE contractors in order to ensure the availability of critical spawning and foraging locations and periods.

In order to determine the long term affects of the alternatives, USACE investigated potential impacts to several fish species based on habitat suitability index (HSI) model outputs and South Carolina Department of Natural Resources fishery data. Species used in analyses included Atlantic and shortnose sturgeon, red drum, striped bass, blueback herring, and southern flounder. These species are representative of important families of fishes in the project area, and their respective life-history phases and behaviors require/use various niches within the inshore ecosystem. Impacts determined for these species (by modeling future habitat suitability based on anticipated physical habitat change in salinity, water depth, DO, etc. and comparing to existing actual use by species) may also occur to other similar species in the estuary. USACE concluded the following in relation to potential impacts to these fishes from the proposed project:

1. For larval and juvenile red drum, there are many areas where habitat may *benefit* due to the proposed project. Many of these locations involve sites without species presence data. However, some of these habitats are located at or near locations where the species has been previously captured.
2. Due to the proposed project, habitat suitability was predicted to *increase* for adult and juvenile striped bass at one location (comprising approximately a dozen model cells). The site/area did not correspond to a known capture site. Future-with-project conditions in approximately two-dozen model cells indicated decreases in striped bass spawning habitat suitability. No adult or juvenile bass were captured in the vicinity of those cells during two SCDNR sampling programs.
3. Inconsequential amounts of habitat critical for juvenile blueback herring would be adversely affected by the proposed project.
4. The proposed project may result in extremely slight adverse changes in southern flounder habitat for several areas, including some areas where the species was captured. However, there are no anticipated habitat changes for most/numerous locations where the species was captured.

f) Hardbottom Habitat. An estimated 28.6 acres of previously undredged hardbottom habitat within the entrance channel will be affected by the proposed project. Due to the anticipated impacts occurring within the entrance channel, USACE performed a Habitat Equivalency

Analysis (HEA) to determine the appropriate amount of mitigation. HEA factors in the service level of the impacted area, the extent of impacts (direct and indirect), and the recovery time of the impacted site, as well as similar variables for the mitigation site. The result of these numbers is a recommended amount of compensatory mitigation, which in this case, for the proposed project, is 29.8 acres. USACE will construct two 33-acre mitigation reefs (1 required, 1 additional) to compensate for the loss of habitat in the channel. In addition to the two mitigation reefs, USACE will construct six other similar reefs for a total of eight new 33-acre reefs that will be accomplished as a beneficial use of dredged material. Four will be located along the north side of the channel and four will be located along the south side of the channel. Prior to construction the locations of these reefs will be refined and coordinated with the resource agencies. At the request of the SCDNR Artificial Reef Program, rock material will also be deposited at the 25-acre Charleston Nearshore Reef site and will be accomplished as a beneficial use of dredged material.

g) Threatened and Endangered Species. A biological assessment of threatened and endangered species (BATES) evaluating the potential impacts of the proposed project on listed species was prepared as part of the Draft EIS. The biological assessment resulted in a determination that the proposed project, "may affect, but is not likely to adversely affect" piping plover, wood stork, West Indian manatee, right whale and humpback whales. During project construction, dredging operations, "may affect, and are likely to adversely affect" sea turtles, shortnose sturgeon, and Atlantic sturgeon. Project plans have been refined to minimize potential effects to the extent feasible.

h) Cultural Resources. Analysis of potential impacts to historic and cultural resources considered both direct and indirect adverse effects. In consultation with the South Carolina Department of Archives and History (SCDAH) and the South Carolina Institute for Archaeology and Anthropology (SCIAA), a background investigation and a remote sensing survey was conducted for the proposed project. The Charleston District has determined that there will be no direct impact to any cultural/historic resource as a result of any of the project alternatives. SCDAH and SCIAA have concurred with this determination with the condition that an archaeologist monitor dredging activities in a portion of the lower harbor as a precautionary measure due to a buried artifact located outside of the channel.

i) Other Effects. No other potentially significant adverse impacts have been identified. Other effects are discussed in Section 5 of the Draft FR/EIS.

AUTHORIZATION REQUIRED FROM THE STATE OF SOUTH CAROLINA:

Coastal Zone Consistency. This notice serves as a request to the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management for a Coastal Zone Management consistency determination. Charleston District has evaluated the proposed project and believes it is consistent with the South Carolina Coastal Zone Management Program to the maximum extent practicable. The District will submit its evaluation to the South Carolina Department of Health and Environmental Control, Office of Ocean and

Coastal Resource Management in Columbia, South Carolina, who administers the program. The State will review the proposed action and determine whether it concurs that the proposed project is consistent with the State's Coastal Zone Management Program to the maximum extent practicable. Any person who desires to comment or object to South Carolina Coastal Zone Management Consistency Certification must do so in writing within 30 days of the date of this notice to the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management; 1362 McMillan Avenue, Suite 400, Charleston, South Carolina 29405 and state the reasons or basis for the objections.

Water Quality Certification. This notice serves as a request to the South Carolina Department of Health and Environmental Control for Section 401 Water Quality Certification and serves as a public notice on their behalf. Section 404 of the Clean Water Act requires this public notice as part of the water quality certification process to authorize the excavation and placement of dredged material, and discharge of effluents to waters of the United States. The South Carolina Department of Health and Environmental Control will review this project in accordance with the provisions of Section 401 of the Clean Water Act, which is required to conduct an activity in, or adjacent to, waters of the State of South Carolina. Any person or agency who desires to comment, object, or request a public hearing relative to State Water Quality Certification must do so within 30 days of the date of this notice, in writing, and state the reasons/basis of objections, or request for a public hearing to the South Carolina Department of Health and Environmental Control, Division of Water Quality, Bureau of Water, 2600 Bull Street, Columbia, South Carolina 29201-1708.

DEPARTMENT OF THE ARMY EVALUATION:

Environmental Impact Statement. The draft FR/EIS documents the conclusions of studies on the potential impacts of construction and maintenance of this proposed project. This draft FR/EIS includes an assessment of several alternatives and the potential environmental impacts. Charleston District announces the availability of this draft FR/EIS for public review and comment. The District is coordinating the document with interested parties while the Department of Army completes its review of this proposal.

Evaluation Factors. The decision whether to proceed with the project as proposed will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed action. That decision will reflect the national concern for both protection and use of important resources. The benefits that reasonably may be expected to accrue from the proposal will be balanced against the reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including the cumulative effects thereof. Among those are conservation, economics, general environmental concerns, navigation and, in general, the needs and welfare of the people. Individual assessments within the draft FR/EIS include the following:

a) Threatened and Endangered Species. A Biological Assessment of Threatened and Endangered Species (BATES) was prepared for this project and is included as an appendix to the Draft FR/EIS. The District is coordinating this BATES with the US Fish and Wildlife Service and NOAA Fisheries Service.

b) Section 404 Evaluation. The District has prepared two Section 404(b)(1) Evaluations in accordance with Section 404(b)(1) Guidelines of the Clean Water Act for the proposed discharges of dredged or fill material and effluent into waters of the United States. One is for the discharge of dredged material effluent into waters of the US from the disposal areas and the other is for the placement of rock at the SCDNR Charleston Nearshore Reef. These evaluations are included in the draft FR/EIS. The Section 404 (b) (1) Evaluations concluded that the proposed discharges associated with this project comply with the Guidelines.

c) Section 103 Evaluation. The suitability of dredged material for transport to and disposal into the approved ocean disposal site has been evaluated pursuant to Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972. This evaluation is included in the Draft EIS. The evaluation concluded that new work and Operation and Maintenance sediments from the proposed project are suitable for transport and disposal in the Savannah Harbor Ocean Dredged Material Disposal Site. The EPA Region concurred with this determination.

d) Cultural Resources. In order to comply with the recommendation made by PanAmerican, SHPO, and SCIAA, USACE will ensure that an archaeologist monitor the dredging in the vicinity of a buried target in the lower harbor, which is approximately 150 feet outside the footprint of the proposed project. In the event of an inadvertent discovery during the proposed project implementation, all work will cease in the immediate area. The USACE will be notified immediately and work will not continue within the area of the finding until examination and consultation by USACE, SCDAH, and SCIAA is complete.

Point of Contact. If there are any questions concerning this public notice, please contact Mr. Mark Messersmith, Planning and Environmental Branch at Chas-Post45-Comments@ usace.army.mil, or 843-329-8162.