DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

JUL 11 2012

Planning and Policy Division

Heinz J. Mueller, Chief
NEPA Program Office
US Environmental Protection Agency, Region IV
61 Forsyth Street
Atlanta, Georgia 30303-8960

Dear Mr. Mueller:

This is in response to your June 5, 2012, letter to Colonel Hall regarding the State and Agency Review for the Savannah Harbor Expansion Project (SHEP). The U.S. Army Corps of Engineers is pleased that Region 4 believes that the Final Environmental Impact Statement (FEIS) substantially addresses most of your technical concerns over SHEP's impacts and provides important additional information that you had requested.

Your letter identified five primary areas of concern with the project:

a. Water Quality, Dissolved Oxygen (DO), and Modeling Issues: The Corps appreciates your concurrence that oxygen injection, using "Speece Cones" with supporting equipment, is the most cost-effective method for raising dissolved oxygen levels in the harbor during the summer months. We also recognize that the financial assurance that the Georgia Ports Authority (GPA) provided the state of South Carolina Department of Health and Environmental Control in November 2011 provides greater certainty that funds will be available each year to operate and maintain those systems through the life of the project.

b. Aquatic Issues: The Corps is pleased that we have addressed your concerns with the wetland impact and mitigation issues to your satisfaction. As you stated, the post-construction monitoring program will allow identification of the extent of the wetland impacts that actually occur if the project is implemented. If impacts to tidal freshwater marsh exceed those that are expected, funds identified for adaptive management could be made available to perform additional mitigation, including the purchase of additional lands for preservation.

c. Section 103 (Sediment) Issues: The Corps has completed the additional sampling of entrance channel sediments, including the testing (bioaccumulation studies) required for a Section 103 Evaluation. As you stated, this has been provided to your office for review. Our analysis identified two reaches of the entrance channel where the sediments do not meet the Ocean Dumping Criteria. The current plan is to deposit sediments from those two reaches in the existing Jones/Oysterbed Island upland confined disposal facility.

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d. Air Emissions Inventory and Air Toxics Issues: The Corps appreciates recognition of the more detailed assessment of air emissions at the port which was conducted for this project. I am pleased that your agency feels that the additional work which the Georgia Port Authority (GPA) is performing outside this project will provide you with additional information on the air quality near GPA's facilities. Your recommendation for additional actions which the GPA could take in the future, to further reduce air emissions, will be passed on to them.

e. Community Outreach Issues: The Corps appreciates your recognition of the substantial efforts of both the Corps and GPA to inform the public and receive their comments, while working closely with the Stakeholders Evaluation Group, local communities, and State and Federal resource agencies regarding many complex issues associated with the proposed harbor deepening.

Your letter requested the Corps address certain issues and comments, and document the results in the Record of Decision (ROD). The Corps believes that documentation in the ROD will not be necessary. Each of the items you raised is addressed as follows:

a. Monitoring: The FEIS stated that the Corps will develop a baseline data bank for the Savannah Harbor estuary during the Pre-Construction Monitoring period. During that phase, we will also establish ranges of acceptable performance thresholds for critical environmental parameters within the Savannah estuary.

b. Adaptive Management: The FEIS stated that the Monitoring and Adaptive Management phases would (1) evaluate the accuracy of the hydrodynamic and water quality models and improve them if possible using the new data; (2) assess the effectiveness of the mitigation features; (3) modify the project as needed so that the mitigation features perform as intended and mitigate for the observed environmental effects of the project.

c. Financial Assurance: The GRR and FEIS include the Corps' financial assurance to operate the mitigation features. The FEIS also acknowledges that GPA has provided the state of South Carolina with additional assurances of funding to operate the dissolved oxygen systems.

d. Completion of the Section 103 Process: The Corps has placed sediments from the Savannah Harbor entrance channel in the designated Savannah Ocean Dredged Material Disposal Site (ODMDS) for many years. The required studies indicate that deposition of the vast majority of naturally-occurring new work sediments from this harbor deepening would also be suitable for placement at that site. Finally, the Corps supports EPA's position that completion of the Section 103 process is not needed for EPA to reach a final agency decision on the SHEP. The Section 103 process will be completed prior to placement of new work material in the ODMDS.

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e. Air Issues: GPA has assured the Corps that it will complete the study that it is conducting at your request outside of the SHEP.

f. Environmental Justice: The GPA has conducted extensive outreach to communities that live near their terminals in Savannah, including sponsoring job fairs and workshops to explain how to obtain contracts with their organization. They have indicated that they intend to continue those efforts in the future. The Corps will pass along to GPA your support for those activities.

The Corps is glad to have worked with your staff in our joint review of this important project. I appreciate the time and effort expended by your staff on this project over the years. Questions concerning this response may be discussed with the Review Manager, Mr. Lee Ware, at (202) 761-0523.

Sincerely,

Theodore A. Brown, P.E.
Chief, Planning and Policy Division
Directorate of Civil Works

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REPLY TO
ATTENTION OF

JUL 11 2012

Planning and Policy Division

Mr. Roy E. Crabtree
Regional Administrator, National Oceanic
and Atmospheric Administration
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, Florida 33701-5505

Dear Mr. Crabtree:

The U.S. Army Corps of Engineers appreciates your letter dated June 5, 2012, in response to the State and Agency Review for the Savannah Harbor Expansion Project. Below are our responses to the concerns expressed in this letter.

a. Operation and maintenance of the environmental mitigation features. The final sentence of paragraph 5.e. in the proposed report of the Chief of Engineers, states that operation and maintenance for the environmental mitigation features will be handled "in the same manner" as other navigation features. For the Corps, that means the mitigation features would be considered "General Navigation Features" in our cost sharing and budgeting processes. The Corps prioritizes operation of a project's mitigation features so that the project remains in compliance with its environmental clearances. As such, Savannah District has committed to prioritize operation of the dissolved oxygen system above other operational needs, including maintenance dredging. The written commitment from Savannah District is sufficient and the wording does not need to be added to the report of the Chief of Engineers.

b. Atlantic sturgeon. The Corps concurs with the request to also include specific mention of Atlantic sturgeon in the Record of Decision and Chief of Engineers Report and will be making those changes.

c. Comments from Protected Resources Division on the FEIS. The Corps will correct the errors in the FEIS concerning the height of the steel sheetpile guide wall above the channel bottom associated with the fish bypass at the New Savannah Bluff Lock and Dam. The wording in Appendix C of the EIS will be reworded to clarify the estimated cost of the off-channel rock ramp fish passage. As you suggest, the Corps will update the list of threatened and endangered species in Appendix B to include the recently listed Atlantic sturgeon. Thank you for your acknowledgement that the Corps incorporated changes to the fish bypass that you recommended in September 2011.

d. Comments from Habitat Conservation Division on the FEIS. The Corps is presently conducting the surveys for live/hardbottom habitat that may be present within or adjacent to the proposed footprint of the entrance channel extension. The ongoing fulfillment of that commitment is sufficient and it does not need to be included in the Record of Decision or Chief of Engineers' Report. The Corps would reinitiate essential fish habitat consultation if it proposes to deposit dredged material in nearshore areas off Tybee Island in sites for which the Corps does not already have environmental clearances. To clarify, regarding mitigation for loss of brackish marsh, the project would need to restore 28.8 acres of marsh at Disposal Area 1S to fulfill the calculated mitigation needs. The Corps may restore an additional 11.5 acres of that site at the same time to serve as advance mitigation for potential future needs solely for the Savannah Harbor Navigation Project.

The Corps is glad to have worked with your staff in our joint review of this important project. I appreciate the time and effort expended by your staff on this project over the years. Thank you for your acknowledgement that the Corps incorporated the changes in the reports that you requested in your previous correspondence. Questions concerning this response may be discussed with the review manager, Mr. Lee Ware at (202) 761-0523.

Sincerely,

Theodore A. Brown

Theodore A. Brown, P.E.
Chief, Planning and Policy Division
Directorate of Civil Works

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WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF

JUL 11 2012

Planning and Policy Division

Mr. Willie R. Taylor
Director, Office of Environmental Policy and Compliance
Department of the Interior
1849 C Street, N.W.
Washington D.C. 20240

Dear Mr. Taylor:

The U.S. Army Corps of Engineers appreciates your May 11, 2012 response, to the State and Agency Review for the Savannah Harbor Expansion Project. The Corps is pleased that the U.S. Fish and Wildlife Service concurs that the final proposed action is not likely to adversely affect listed or proposed species or their critical habitat.

The Corps appreciates the clarifications and corrections provided in regards to the way several Real Estate items were discussed or explained in the General Re-evaluation Report (GRR). The land exchange has been separated from the Special Use Permit (SUP) and in Appendix B the acreage for the SUP has been corrected to say "approximately 48 acres". The Corps has added language in Appendix B to show that the cost of exchange will be based on an approved real estate appraisal meeting Federal Appraisal Standards conducted at the time of the transfer. Also in Appendix B on page 7, lines 39-41, the Corps has added a statement that 7.2 acres of wetlands will be included in the land exchange and on page 21, lines 5-8, the words "and wetlands" have been added after "high ground", as requested. Lastly, the Corps has revised the Government Owned Property paragraph based on earlier comments and removed the referenced 6 acres in easements. Credit will not be afforded to the non-Federal Sponsor for any Government Owned Property needed for this project.

Several clarification and corrections were also provided for the Environmental Impact Statement (EIS). The table on Page 4-70 of the EIS has been revised to show the Savannah National Wildlife Refuge (SNWR) as "on site" and to include the Tybee National Wildlife Refuge. The reference to the Comprehensive Plan in Appendix C has been changed to the "2011 Final Comprehensive Conservation Plan". Also in Appendix C, the text has been revised to remove the references to direct impacts in the Refuge. In Appendix M, page 88, the paragraph on cadmium concentration thresholds in plant tissues has been revised and moved as requested.

The Corps understands the concerns expressed in regards to the two circled areas for potential acquisition on page 174 of Appendix C of the EIS, however specific tracts were not identified. Areas were circled on the map to identify general locations within the estuary for potential acquisition and preservation. As identified in the comment, the size of the tracts listed in the EIS does not match that of specific property ownerships. The circled areas are larger than

any one property ownership. The Corps included more detailed discussion in the FEIS of this potential acquisition at the specific request of the U.S. Environmental Protection Agency (USEPA) to ensure the EIS documents how the mitigation would comply with the Mitigation Rule. Identification of general areas within the estuary where acquisition and preservation could occur is a necessary component of that discussion.

In regards to the restrictive covenants and conservation easements, the Corps appreciates the information provided; however, to comply with the USEPA/USACE 2008 Mitigation Rule, lands proposed for any preservation requirements must, at a minimum, have a restrictive covenant. Greater value is given to lands that, in addition to a restrictive covenant, have a conservation easement. The greatest credit value is given for lands containing restrictive covenants, conservation easements, and placed under Government/Public Protection. Because the lands will be transferred to the Service (i.e. placed under Government Protection), the greatest control credit value was used in the Standard Operating Procedure (SOP) calculations. The Service, through the Wetlands Interagency Coordination Team, helped develop the appropriate values and approved the application of the SOP calculations for this project, as was stated in the Draft Fish and Wildlife Coordination Act Report. The Corps has recently coordinated with the SNWR and understands that the Service, although not preferred, can accept donated lands with easements and/or covenants. Through future coordination with the Service, the Corps will ensure that the restrictive covenant is written such that it is analogous to Department of Interior's internal land use practices and does not impede the Service's future ability to manage the lands for wildlife use in a similar manner as lands in other parts of the Refuge.

Regarding cadmium, since the primary potential movement of cadmium into birds is expected to occur through seed eaters (winter sparrows including the Song Sparrow) or insectivores (Marsh Wren) consuming insects feeding on plants, the Corps believes either the Song Sparrow or Marsh Wren are appropriate species to model. The values and calculations for determining the plant tissue threshold are the same as those used for the Savannah Harbor Expansion Project Phase II Risk Assessment and are based on using the cadmium washed/dried sediment composite and effluent scenario. For a total cadmium uptake dose to not exceed the No Observable Adverse Effect Level (NOAEL) benchmark of 1.47 mg/kg body wt/day (using the same assumptions regarding food, water, and incidental soil ingestion rates, cadmium bioavailability, and soil-to-plant bioaccumulation of cadmium), the cadmium concentration in plant material (e.g., seeds) for the Song Sparrow would have to be $\leq$5 mg/kg dry weight (assuming the same cadmium uptake from water at a concentration of 0.1517 mg/kg body wt/day based on the low cadmium composite effluent).

Using the Marsh Wren, a plant tissue concentration of 4 mg Cd/kg dry weight as a threshold for further action can be derived from comparing the predicted exposure to a Marsh Wren of 3.75 mg/kg body wt-day from a high cadmium sediment concentration of 10.2 mg/kg to the

NOAEL exposure of 1.47 mg/kg bw-day (a no effect level). To be conservative, we have chosen the Marsh Wren exposure to establish the plant tissue concentration threshold as 4 mg Cd/kg dry weight plant tissue.

The Corps appreciates all the time and effort given to this project by your staff. A copy of this letter will also be provided to Mr. Mark Musaus and Mr. Jack Arnold. Questions concerning this response may be discussed with the review manager, Mr. Lee Ware at (202) 761-0523.

Sincerely,

Theodore A. Brown

Theodore A. Brown, P.E.
Chief, Planning and Policy Division
Directorate of Civil Works

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U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
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REPLY TO ATTENTION OF

JUL 11 2012

Planning and Policy Division

Dr. Wenonah G. Haire
Tribal Historic Preservation Officer
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Dear Dr. Haire:

The U.S. Army Corps of Engineers appreciates your response to the State and Agency Review for the Savannah Harbor Expansion Project. The Corps concurs and will notify you if Native American artifacts and/or human remains are located during the ground disturbance phase of this project. If you have any questions concerning this response, please contact the review manager for this project, Mr. Lee Ware, at (202) 761-0523.

Sincerely,

Theodore A. Brown
Chief, Planning and Policy Division
Directorate of Civil Works

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REPLY TO
ATTENTION OF

JUL 11 2012

Planning and Policy Division

Dan Foster, Director
Georgia Department of Natural Resources
Wildlife Resources Division
2070 U.S. Highway 178 S.E.
Social Circle, Georgia 30025-4711

Dear Mr. Foster:

The U.S. Army Corps of Engineers appreciates your letter dated June 4, 2012, in response to the State and Agency Review for the Savannah Harbor Expansion Project. The Corps recognizes the valuable efforts of the Wildlife Resources Division over the years to manage and restore the striped bass fishery in the Savannah River.

The Corps has included a robust post-construction monitoring component in the project. One element of that effort will be to identify the impacts that actually occur as a result of implementation of harbor deepening. If impacts to striped bass habitats are found to exceed those that are presently expected, the adaptive management program will allow the Corps to provide mitigation for the additional losses. The Corps concurs with your suggestion to use the same procedures at that time to calculate habitat acreages as are included in the Final Environmental Impact Statement.

The Corps is glad to have worked with your staff in our joint review of this important project. I appreciate the time and effort expended by your staff on this project over the years and look forward to continuing our joint efforts with your staff in the next phase of the project. Questions concerning this response may be discussed with the review manager, Mr. Lee Ware, at (202) 761-0523.

Sincerely,

Theodore A. Brown
Chief, Planning and Policy Division
Directorate of Civil Works

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REPLY TO
ATTENTION OF

AUG 2 2012

Planning and Policy Division

Alvin A. Taylor
South Carolina Department of Natural Resources
P.O. Box 167
Columbia, SC 29202

Dear Mr. Taylor:

The U.S. Army Corps of Engineers appreciates your letter dated June 4, 2012, in response to the State and Agency Review for the Savannah Harbor Expansion Project. Below are our responses to the concerns expressed in the letter.

a. Selected Alternative. The Corps evaluated the economic benefits, the environmental effects and mitigation alternatives at several alternative depths, including 42-, 44-, 45-, 46-, 47-, and 48-feet. Throughout the process there has been extensive coordination with state and federal resource agencies. The agency and public review of the Final General Reevaluation Report (GRR) and Final Environmental Impact Statement (FEIS) did not result in any new information that would alter this analysis. The Corps continues to believe that the 47-foot depth alternative is the best overall alternative. In addition, letters of concurrence, regarding the recommended plan and the mitigation measures, were received from the Department of Commerce on July 5, 2012, the Department of Interior on July 9, 2012, and the Environmental Protection Agency on July 11, 2012.

The Corps recognizes that environmental impacts increase as the extent of deepening increases. Section 5 of the FEIS identifies the impacts expected with the various alternative depths, as well as the mitigation that would be performed to compensate for unavoidable impacts from each of the deepening alternatives. Significant coordination with state and federal resource agencies was involved in determining the extensive mitigation features. The mitigation features are included when evaluating all the alternatives, thus the alternatives are considered to be equal in environmental effects (i.e. similar net impacts). The Corps must also consider other factors, such as economic development, when it evaluates alternatives. Table 11-3 of the GRR lists those factors and summarizes them for each of the alternatives. When all the factors are considered, the 47-foot alternative remains the best solution to issues facing navigation in the Savannah Harbor.

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b. Shortnose Sturgeon Habitat and Mitigation. As identified in your letter, the Shortnose sturgeon habitat acreages in Tables 3-7 and 3-8 changed between the Draft EIS and Final EIS. As a result of comments received from the natural resource agencies and the public, the Corps reran the modeling for Shortnose sturgeon habitat. That resulted in a change to the With Project numbers, but no change to the Without Project numbers. The Corps also prefers "in-kind" mitigation, but neither the Corps, Federal or State natural resource agencies, nor the public could identify reasonable ways to restore, replace, improve or create Shortnose sturgeon foraging habitat in the estuary. The larger fish passage system described in the FEIS is the result of additional interagency coordination with fishery experts, including experts from SC DNR, after release of the DEIS. The selected larger design is required by NOAA Fisheries to adequately compensate for the expected loss of Shortnose sturgeon foraging habitat in the estuary.

c. Project Mitigation Features. The Corps acknowledges that some are skeptical that the proposed mitigation features will function as predicted. To address those concerns, the Corps has included an extensive monitoring and adaptive management plan to (1) identify whether those features function as intended and (2) modify the features, if necessary, to ensure they perform their intended purpose.

d. Jasper County Container Terminal. A comparative assessment of the relative environmental impacts of deepening the navigation channel only as far upriver as a potential new container terminal in Jasper County was performed early in the study process. That comparison is described in Appendix O of the FEIS.

e. Threatened and Endangered Species. NOAA's "likely to adversely affect" determination for Atlantic sturgeon in their Biological Opinion is primarily based on NOAA's estimated incidental take of four Atlantic sturgeon during hopper dredging operations necessary to construct the SHEP and adverse effects (increase in salinity) to important estuarine foraging habitat for juveniles and adults. The estimated incidental take of four Atlantic sturgeon during entrance channel construction would not decrease the overall population of this species in the South Atlantic DPS (Distinct Population Segment) as there are significant numbers of fish found in the rivers comprising the South Atlantic DPS range of Atlantic sturgeon. The effects of SHEP on foraging habitat and spawning success of Atlantic sturgeon are similar to those for the Shortnose sturgeon. Based on these determinations, the NMFS concluded that construction of the SHEP would not likely jeopardize the continued existence of the South Atlantic DPS of Atlantic sturgeon, and the project's overall effect on the species would be acceptable.

The Corps is pleased that your agency concurs in the Corps' recommendations to delete the construction of an underwater sill in Middle River and increase the Post-Construction Monitoring from five to ten years for several elements of the project. I appreciate the

participation of your staff in the interagency coordination teams that jointly identified the methodologies to evaluate this important project. Questions concerning this response may be discussed with the review manager, Mr. Lee Ware, at (202) 761-0523.

Sincerely,

Theodore A. Brown
Chief, Planning and Policy Division
Directorate of Civil Works

DEPARTMENT OF THE ARMY
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REPLY TO
ATTENTION OF

AUG 2 2012

Planning and Policy Division

William D. Moss
Chairperson
Savannah River Maritime Commission
C/O Dean Moss & Associates
1012 14th Street
Port Royal, South Carolina 29935

Dear Mr. Moss:

The U.S. Army Corps of Engineers appreciates your correspondence dated May 8, 2012 and your correspondence dated June 4, 2012, in response to the State and Agency Review for the Savannah Harbor Expansion Project. Below are our responses to the general concerns expressed in both letters. We have considered the detailed comments that you provided in your June 4, 2012 letter and have made some changes to the final document (e.g. updating the reference list and the table on air quality).

The Corps evaluated the economic benefits, the environmental effects and mitigation alternatives at several alternative depths, including 42-, 44-, 45-, 46-, 47-, and 48-feet. Throughout the process there has been extensive coordination with state and federal resource agencies. The agency and public review of the Final General Reevaluation Report (GRR) and Final Environmental Impact Statement (FEIS) did not result in any new information that would alter this analysis. The Corps continues to believe that the 47-foot depth alternative is the best overall alternative. In addition, letters of concurrence, regarding the recommended plan and the mitigation measures, were received from the Department of Commerce on July 5, 2012, the Department of Interior on July 9, 2012, and the Environmental Protection Agency on July 11, 2012.

The Corps recognizes that environmental impacts increase as the extent of deepening increases. Section 5 of the FEIS identifies the impacts expected with the various alternative depths, as well as the mitigation that would be performed to compensate for unavoidable impacts from each of the deepening alternatives. Significant coordination with state and federal resource agencies was involved in determining the extensive mitigation features. The mitigation features are included when evaluating all the alternatives, thus the alternatives are considered to be equal in environmental effects (i.e. similar net impacts). The Corps must also consider other factors, such as economic development, when it evaluates alternatives. Table 11-3 of the GRR lists those factors and summarizes them for each of the alternatives. When all the factors are considered, the 47-foot alternative remains the best solution to issues facing navigation in the Savannah

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Harbor. As stated in Table 11-3, the 47-foot depth alternative is "the most efficient in that it meets all planning objectives in the least costly manner and provides the greatest net benefit."

I appreciate the participation of the interagency coordination teams that jointly identified the methodologies to evaluate this important project. Questions concerning this response may be discussed with the review manager, Mr. Lee Ware, at (202) 761-0523.

Sincerely,

Theodore A. Brown
Chief, Planning and Policy Division
Directorate of Civil Works