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April 28, 2011

Colonel Jeffrey M. Hall
U. S. Army Corps of Engineers, Savannah District
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3640
Attention: William G. Bailey

Dear Colonel Hall:

The U. S. Fish and Wildlife Service (Service) has reviewed the U. S. Army Corps of Engineers (USACE) Savannah Harbor Expansion Project, General Reevaluation Report (GRR) and Draft Tier II Environmental Impact Statement (DEIS) of November 15, 2010, concerning Savannah Harbor Expansion Project (SHEP) on the Savannah River, Chatham County, Georgia and Jasper County, South Carolina. The Biological Assessment of Threatened and Endangered Species (BATES) is included as Appendix B. This report is submitted in accordance with provisions of the Endangered Species Act (ESA) of 1973, as amended; (16 U.S.C. 1531 et seq.).

The SHEP involves deepening the harbor from the current inner harbor depth of 42 feet by as much as 6 feet to a maximum authorized depth of 48 feet. Authorizing language in the Water Resources Development Act of 1999 stipulates that the project may proceed only after the Secretary of the Interior, Secretary of Commerce, and Administrator of the Environmental Protection Agency approve the selected plan and determine that the associated mitigation plan adequately addresses its potential environmental impacts. The subject documents describe various models that were developed to predict changes to the environment resulting from alternative channel depths and mitigation measures. Predicted changes to the environment include: salinity increases, loss of tidal freshwater marsh, reduced striped bass reproduction and recruitment, negative impacts to shortnose sturgeon habitat, reduced dissolved oxygen (DO), and potential exposure of wildlife to cadmium in dredged sediments.

The BATES examines the effects of the proposed action on all species that may be present in the project area and concludes that the piping plover (*Charadrius melodus*), wood stork (*Mycteria americana*), West Indian manatee (*Trichechus manatus*), right (*Eubaleana glacialis*) and humpback whales (*Megaptera novaeangliae*), sea turtles, and shortnose sturgeon (*Acipenser brevirostrum*) may be affected by the project. The right and humpback whales, and shortnose sturgeon are the responsibility of the National Marine Fisheries Service (NMFS). At this time, we understand that the USACE and NMFS are in consultation on the NMFS species. The sea turtles are NMFS responsibility while in the water and the Service's when nesting on

shore, including hatchlings leaving the nest. Within the Savannah project area primarily only one species of sea turtle, the loggerhead sea turtle (*Caretta caretta*) nests regularly on the adjacent beaches of Tybee and Daufuskie Islands.

Dredging operations, placement of sediment, and subsequent maintenance have the potential to adversely affect animals and plants in a variety of ways. These include actions of the dredging equipment; physical contact with dredging equipment and vessels; physical barriers imposed by the presence of dredging equipment; and placement of dredged sediment in various locations. Potential impacts vary according to the type of equipment used, the nature and location of sediment discharged, the time period in relation to life cycles of organisms that could be affected, and the nature of the interaction of a particular species with the dredging activities.

The Service designated the north end of Tybee Island, Georgia, adjacent to the project, as critical habitat for the wintering piping plover. Some dredge sediments are planned to be placed in nearshore areas to migrate on-shore for beach renourishment. The placement may have temporary adverse impacts on foraging habitat. Small portions of the habitat would be directly affected short-term at any point in time and adjacent habitat will be available. Because erosion of the Tybee shoreline would be reduced, the intertidal areas that provide foraging habitat to the piping plover would experience a long term benefit.

Wood storks feed and loaf in the confined disposal facilities (CDFs) for sediments from the Savannah River. Continued use of upland CDFs for sediment placement could be considered a minor enhancement of wood stork feeding habitat. Procedures for sediment placement should insure birds would not be exposed to cadmium-laden sediments.

The West Indian manatee has site fidelity to summer habitat in the Savannah River. Manatees feed in shallow water on saltmarsh cordgrass (*Spartina alterniflora*). As the dredging will occur in the deepest part of the channel, direct effects on manatees from the dredging operation and the placement of sediment should be minor. Additionally, the project would not adversely affect any conditions relating to habitat requirements such as the cordgrass. A large percentage of manatee mortality is due to collisions with watercrafts. The dredging operations will involve various vessels presenting the potential for collisions. The USACE will implement "Standard State and Federal Manatee Protection Conditions" to insure that the project does not affect manatees.

Of the five sea turtle species that may be found in the waters of the project, only the loggerhead turtle nests regularly on the adjacent beaches of Tybee and Daufuskie Islands. Sea turtles have site fidelity to their nesting beaches. The presence of artificial lighting on dredge equipment near nesting beaches is detrimental to critical behavioral aspects of the nesting process, including nesting female emergence, nest site selection, and the nocturnal sea-finding behavior of both hatchlings and nesting females. While still adhering to minimum luminance requirements, light emanating from equipment will be minimized to reduce the potential harmful effects. To minimize risk of sea turtle impacts due to dredges, environmental windows were established which restrict dredging to periods when turtles are least abundant or least likely to be affected by dredging. The environmental windows for turtle-safe dredging have targeted the winter months when sea turtle abundance is dramatically reduced and generally

outside of the nesting period. Turbidity is produced by nearshore sediment placement that can adversely affect sea turtles. The primary concern is disorientation of female turtles trying to reach the nesting beach. There are also concerns about potential impacts to hatchlings entering the ocean. Although ambient turbidities in the nearshore Tybee Island area are already high because of the Savannah River, to reduce potential impacts, the USACE would restrict sediment placement in this area to the period from 1 August to 30 April. The proposed nearshore placement of sediments is not expected to adversely impact the beach nesting activities of sea turtles.

Based on the information summarized above, the BATES concludes that the proposed action “may affect, but is not likely to adversely affect” piping plover, wood stork, West Indian manatee, right and humpback whales, sea turtles, and shortnose sturgeon that may be present within the area. The BATES includes conditions that would be followed to protect endangered species during construction and operation of the project. We concur with your determination for the piping plover, wood stork, West Indian manatee, and nesting sea turtles. We believe that the requirements of section 7 of the ESA have been satisfied for these species when they are under our responsibility. However, obligations under section 7 of the ESA must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner which was not previously considered in this assessment; or (3) a new species is listed or critical habitat determined that may be affected by the identified action.

We appreciate the opportunity to comment on this project. If you have any further questions, please contact our Coastal Georgia Sub Office biologist, Bill Wikoff, at 912-832-8739 extension 5.

Sincerely,



Sandra S. Tucker
Field Supervisor

cc: USFWS, Townsend, Georgia