



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF ENGINEERS  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

21 OCT 1999

CECW-PE (10-1-7a)

SUBJECT: Savannah Harbor, Georgia and South Carolina

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the Savannah Harbor, Georgia and South Carolina navigation improvements. It is accompanied by the report prepared by the Georgia Ports Authority (GPA) under Section 203 of the Water Resources Development Act of 1986 (WRDA 1986), Public Law 99-662. The report was prepared by the GPA (non-Federal sponsor) under the authority of Section 203 of the Water Resources Development Act of 1986 to evaluate the advisability of increasing the depth and making other improvements to Savannah Harbor in the interest of navigation and related purposes.

2. Section 101 (b) (9) of the Water Resources Development Act of 1999 (WRDA 1999), Public Law 106-53, authorized construction of the Savannah Harbor Expansion, Georgia project for navigation subject to completion of a final report of the Chief of Engineers on or before 31 December 1999. This report constitutes the final report of the Corps of Engineers in response to this legislation. Section 101 (b) (9) specified that the project may only be carried out after (i) the Secretary in consultation with other agencies reviews and approves an environmental impact statement that includes:

- (I) an impact analysis of project depths ranging from 42 feet through 48 feet; and
- (II) a selected plan for navigation and an associated selected plan as required under Section 906(a) of the Water resources development Act of 1986:

and (ii) the Secretary of the Interior, the Secretary of Commerce, the Administrator of the Environmental Protection Agency, and the Secretary approve the selected plan and determine that the associated mitigation plan adequately addresses the potential environmental impacts of the project.

3. The non-Federal sponsor recommends a plan to modify the existing Federal navigation project for Savannah Harbor. The plan of improvement consists of the following:

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a. Deepening the existing entrance channel up to -50 feet Mean Low Water (MLW) from the ocean to Station -14B+000, up to -48 feet MLW from Station -14B+000 to Station 0+000 and, the inner harbor up to -48 feet MLW from Station 0+000 to Station 103+000;

b. Widening bends in the entrance channel at 2 locations and in the inner harbor channel at 10 locations;

c. Enlarging the Kings Island Turning Basin to a width of 1,676 feet.

d. Raising the dikes from 2.6 feet up to 5.5 feet in disposal areas 12A, 14B and Jones/Oysterbed Island; and

e. A mitigation plan which includes a cultural resource mitigation plan, a natural resources mitigation plan and an impact avoidance plan.

4. The proposed recommended plan of improvement would require dredging and subsequent placement of a maximum of up to 27 million cubic yards of sediments. Sediments excavated from the inner harbor would be deposited in confined disposal facilities (CDFs) presently used by the existing federal navigation project. Dike raising would be performed to accommodate the sediments deposited in those CDFs to regain lost disposal capacity. Sediments excavated from the entrance channel would be deposited in the approved ocean dredged material disposal site. Further consideration of nearshore and/or beach placement of excavated sediments would be made during the engineering and design phase of the project.

5. In the July 1998 GPA report, project costs are allocated to the commercial navigation purpose. Based on October 1997 prices from this report, the estimated cost of the general navigation features (GNF) of the recommended plan is \$127,000,000. The GNF costs include dredging of the channel, debris removal and disposal area improvements. Lands, easements and rights-of-way are estimated as \$2,200,000. Mitigation costs are estimated to be \$94,000,000. As identified in the report, total project costs are \$224,000,000 for the -48 foot project, which include \$800,000 for aids to navigation and \$454,000 dredging and disposal costs for private facilities. According to the July 1998 report the Federal and non-Federal share of the GNF are estimated to be \$141,500,000 and \$82,500,000 with all of the estimated mitigation costs assigned to the minus 45-foot depth. However, in response to comments in the July 1998 report GPA provided supplemental information with a revised total project first cost of \$229,527,000, of which \$144,302,184 is the estimated Federal share and \$85,225,101 is the estimated non-Federal share.

6. Included in the mitigation costs that are assigned to the minus 45-foot depth the minimum depth of a "deep draft" harbor is a chloride mitigation cost of \$46 million for relocation of a city of Savannah water intake pipe. It has not as yet been confirmed that this chloride mitigation will be required. Following completion of the Tier II EIS study, a determination will be made as to the appropriate amount and the allocation of mitigation costs for each

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alternative depth evaluated and a decision made as to whether the chloride mitigation is necessary and an appropriately cost shared item. If relocation of the city of Savannah water intake pipe or other chloride mitigation feature involving modifications of the city of Savannah water supply system remains a part of the project, the costs of operation, maintenance, repair, replacement, and rehabilitation of the modified city of Savannah water system will remain a city of Savannah responsibility and will not be operated and maintained as project GNF. Other project mitigation features to address the adverse impacts of the project will be operated and maintained in the same manner other GNF are operated and maintained.

7. The cost sharing for the mitigation features has been revised using the most current project costs of \$229,527,000 and allocating the mitigation costs to project depth zones in proportion to dredging zones. Based on the assignment of mitigation costs for non-depth related features to depth zones in the same proportion as dredging costs, the estimated Federal share of the project cost is \$135,249,000 or 59 percent of total project costs and the non-Federal share is \$94,278,000 or 41 percent of total project costs. The July 1998 GPA report estimates average annual benefits at a 7-1/8 percent discount rate and 50 year project life to be \$52,740,000 and average annual construction costs estimated to be \$17,580,000. Net benefits are \$35,160,000 and the benefit-to-cost ratio is 3.0 to 1. According to the revised estimates provided by GPA in June 1999, the annual benefits are \$52,743,000 and the annual costs including operation and maintenance are estimated as \$17,997,000. The net benefits are \$34,745,000 and the benefit-to-cost ratio is 2.93 to 1. According to the report prepared by GPA the recommended plan is both the national economic development plan and the locally preferred plan.

8. The mitigation and impact avoidance plan included in the GPA report Tier I EIS consists of five components: (1) Purchase of 3,000 acres of freshwater wetlands to compensate for salinity increases to 1,170 acres of tidal freshwater wetlands; (2) Creation of 81 acres of saltmarsh wetlands to compensate for loss of 40 acres of saltmarsh; (3) A 3-year behavioral study of endangered shortnose sturgeon in the Savannah River estuary, and deepening of the Port Wentworth Turning Basin by 8 feet to provide more suitable habitat for the sturgeon; (4) measures to eliminate the potential project impacts on dissolved oxygen and chloride levels in the estuary; and (5) for striped bass impact avoidance, closure of the mouth of the Middle River at the confluence with Savannah/Front River, closure of two channels from Steamboat Cut to Middle River and opening of a new channel near New Cut from Middle River to Back River. The mitigation plan in the Tier I EIS has been designed to address decreased dissolved oxygen levels in the upper harbor and increased chloride levels at the city of Savannah's industrial water supply intake, potential impacts to the Savannah National Wildlife Refuge, tidal freshwater wetlands, tidal saltmarsh, striped bass spawning and nursery area, endangered shortnose sturgeon habitat, water quality, contaminated sediments, and modifications to flow patterns in the estuary.

9. Cultural resource mitigation plans are included for the two sites listed on the National Register of Historic Places: Old Fort Jackson and the CSS Georgia. Old Fort Jackson is a brick fortification constructed for the War of 1812. A steel sheetpile wall would be constructed to

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protect the shoreline adjacent to the fort structure. The CSS Georgia is a confederate ironclad that rests on the bottom of the river adjacent to the navigation channel. In recognition of the project's impacts on the vessel, a plan was developed to recover, document, and curate the items of historic significance.

10. The Washington level review determined that the proposed project was not formulated in accordance with applicable U.S. Army Corps of Engineers planning procedures and regulations and that an acceptable mitigation plan has not been determined at this time. Analyses provided in the Tier I EIS only evaluated the potential impacts for a 50-foot project. Additional analyses must be performed to more completely identify and evaluate the potential impacts of alternative depths, develop an acceptable mitigation plan, and conclusively determine the NED plan and the cost sharing for the mitigation features. These include refinement of the hydrodynamic model and concurrence by the U.S. Army Corps of Engineers and the natural resource agencies in the model's ability to reasonably predict the impacts of the proposed project alternatives, including mitigation features. These additional studies will be performed during the engineering and design phase. The GPA plans to provide documentation, including a consensus mitigation plan developed through a Stakeholders Evaluation Group issue resolution process that could be used for the development of a Federal Tier II EIS. When the findings and conclusions of these additional evaluations are complete, a special report and Tier II environmental impact statement will be prepared and receive full public review. Review of the Tier II EIS and the GRR documents would serve as the basis for obtaining the required approvals, certifications, and permits, as appropriate, from the natural resource agencies for the channel improvement that would be implemented. As a requirement of WRDA 99 Authorization, the Secretary of the Interior, Secretary of Commerce and Administrator of the Environmental Protection Agency, with the Secretary of the Army, must approve the selected plan and determine that the associated mitigation plan adequately addresses the potential environmental impacts.

11. I understand that critics of the subject project could allege that the signing of a favorable Chief of Engineers' report for the project at this time would violate a number of environmental laws, including the Endangered Species Act (ESA), the Fish and Wildlife Co-ordination Act (FWCA), and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). In my opinion, such an allegation clearly would be incorrect, and would fail to recognize the highly conditional and limited nature of this project's statutory authorization. It is true that the signing of a favorable Chief of Engineers' report by 31 December 1999 would complete the congressional authorization process for the project. Consequently, it is possible that the project could eventually be constructed pursuant to that congressional authorization without another authorization action. However, the signing of a favorable Chief's report decidedly would not allow the project to be constructed. The project could only be constructed if and when a number of statutorily specified conditions were to occur, as described above. Among those conditions would be the successful completion of the NEPA process, including any necessary consultation under the ESA, the FWCA, and the MSFCMA, and the demonstration of compliance with those and other relevant environmental laws. Only if and when the

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Secretaries of the Army, Interior, and Commerce, and the Administrator of the EPA, have all concluded that all relevant environmental laws have been fully complied with and that all substantial environmental problems have been adequately addressed, could the subject project be approved for construction. In a sense, the signing of a favorable Chief of Engineers' report for this project only authorizes further planning and design work for the project, while all parties work to achieve eventual compliance with all of the relevant environmental laws.

12. I find that, although the project was not formulated in accordance with all applicable U.S. Army Corps of Engineers policies, procedures, and regulations, does not yet have the final EIS that would be necessary to initiate construction, and a fully developed, acceptable mitigation plan has not been identified, the conditions placed on the project by the Congress in Section 101 (b)(9) of Public Law 106-53 provide sufficient safeguards to ensure that implementation will not proceed until the Chief of Engineers determines it to be in accordance with all applicable U.S. Army Corps of Engineers policies, procedures, and regulations and that it includes an acceptable mitigation plan. Accordingly, in recognition of the conditional Congressional authorization, I recommend implementation of the authorized project in accordance with GPA's plan: (a) as modified by Section 101 (b)(9), including additional review by the Corps of Engineers and approval by the Chief of Engineers to ensure that construction of the project will comply with all applicable laws and policies, (b), according to the cost-sharing for mitigation features specified in paragraph 7 above, and (c) as modified by any modifications as in the discretion of the Chief of Engineers may be advisable.

13. Federal implementation of the authorized project would be subject to the non-Federal sponsor agreeing with applicable Federal laws and policies. The non-Federal sponsor would be responsible for the following items of local cooperation:

a. Provide, during construction, any additional funds needed to cover the non-Federal share of design costs;

b. Provide, during the period of construction, a cash contribution equal to the following percentages of the total cost of construction of the general navigation features (which include the construction or improvement of land-based and aquatic dredged material disposal facilities that are necessary for the disposal of dredged material required for project construction, operation, or maintenance and for which a contract for the Federal facility's construction or improvement was not awarded on or before October 12, 1996): 25 percent of the costs attributable to dredging to a depth in excess of 20 feet but not in excess of 45 feet, and 50 percent of the costs attributable to dredging to a depth over 45 feet;

c. In the case of project features greater than -45 feet below MLLW in depth, provide 50 percent of the excess cost of operation and maintenance of the project over that cost which the Secretary determines would be incurred for operation and maintenance if the project had a depth of -45 feet below MLLW.

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d. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the project, up to an additional 10 percent of the total cost of construction of general navigation features. The value of lands, easements, rights-of-way, and relocations provided by the non-Federal sponsor for the general navigation features, described below, may be credited toward this required payment. If the amount of credit exceeds 10 percent of the total cost of construction of the general navigation features, the non-Federal sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of lands, easements, rights-of-way, and relocations in excess of 10 percent of the total cost of construction of the general navigation features;

e. Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features (including all lands, easements, and rights-of-way, and relocations necessary for dredged material disposal facilities);

f. Provide, operate, maintain, repair, replace, and rehabilitate, at its own expense, the local service facilities, i.e., berthing areas, local access channels, etc., in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

g. Pay the proportional cost of construction of any dredged material disposal facilities and maintenance thereof, necessary to dispose of dredged or excavated material for the local service facilities during the initial construction of the local service facilities and the operation, maintenance, repair, replacement and rehabilitation of the local service facilities;

h. Accomplish all removals determined necessary by the Federal Government other than those removals specifically assigned to the Federal Government;

i. Grant the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the general navigation features for the purpose of inspection, and, if necessary, for the purpose of operating, maintaining, repairing, replacing, and rehabilitating the general navigation features;

j. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project, any betterments, and the local service facilities, except for damages due to the fault or negligence of the United States or its contractors;

k. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, and other evidence is required, to the

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extent and in such detail as will properly reflect total cost of construction of the general navigation features, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and local governments at 32 CFR, Section 33.20;

1. Perform, or cause to be performed, any investigations for hazardous substances as are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, or rehabilitation of the general navigation features. However, for lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigation unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

m. Assume complete financial responsibility, as between the Federal Government and the non-Federal sponsor, for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features;

n. To the maximum extent practicable, perform its obligations in a manner that will not cause liability to arise under CERCLA;

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

p. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army";

q. Provide a cash contribution equal to the non-Federal cost share of the project's total historic preservation mitigation and data recovery costs attributable to commercial navigation that are in excess of 1 percent of the total amount authorized to be appropriated for commercial navigation; and

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r. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized.



JOE N. BALLARD

Lieutenant General, U.S. Army

Chief of Engineers