



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

REPLY TO  
ATTENTION OF

JUL 22 2011

CEMP-SWD (1105-2-10-a)

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on navigation improvements for the Sabine-Neches Waterway (SNWW) in Southeast Texas and Southwest Louisiana. It is accompanied by the report of the Galveston District Engineer and the Southwestern Division Engineer. These reports are in response to a Congressional resolution adopted on 5 June 1997 by the Senate Committee on Environment and Public Works. The committee requested a review of the reports on the SNWW and other pertinent reports to determine the feasibility of modifying the channels serving the ports of Beaumont, Port Arthur, and Orange, Texas in the interest of commercial navigation. Pre-construction engineering and design activities for this proposed project, if funded, would be continued under this authority. The existing SNWW 40-Foot Navigation Project was authorized by the River and Harbor Act of 1962 and construction of the 40-foot project was completed in 1968.

2. The report recommends a project that will contribute to the economic efficiency of commercial navigation. The SNWW is a system of navigation channels that have been superimposed upon the Sabine-Neches estuary in Texas and Louisiana. The study evaluated navigation and environmental problems and opportunities for the entire estuarine system, which is defined as the study area. The study area encompasses a 2,000-square-mile area, which contains the smaller project area that includes those areas that would be directly affected by construction of the project (i.e. the dredging footprint, existing and proposed placement areas, and mitigation areas). The study area includes the following water bodies and adjacent coastal wetlands: Sabine Lake and adjacent marshes in Texas and Louisiana, the Neches River channel up to the new Neches River Saltwater Barrier, the Sabine River channel to the Sabine Island Wildlife Management Area, the GIWW west to Star Bayou, the GIWW east to Gum Cove Ridge, the Gulf shoreline extending to 10 miles either side of Sabine Pass, and 35 miles offshore into the Gulf of Mexico.

3. The reporting officers recommend the Locally Preferred Plan (LPP) to modify the existing SNWW. The LPP consists of the following improvements:

a. Deepen the SNWW from 40 to 48 feet and the offshore channel from 42 to 50 feet in depth from offshore to the Port of Beaumont Turning Basin;

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

- b. Extend the 50-foot deep offshore channel by 13.2 miles to deep water in the Gulf, increasing the total length of channel from 64 to 77 miles;
- c. Taper and mark the Sabine Bank Channel from 800 feet wide to 700 feet wide;
- d. Deepen and widen Taylor Bayou channels and turning basins;
- e. Ease selected bends on the Sabine-Neches Canal and Neches River Channel;
- f. Construct new and enlarge/deepen existing turning and anchorage basins on the Neches River Channel.

Dredged material placement for this project would be provided in accordance with the Dredged Material Management Plan (DMMP) developed during the study. Deepening of the SNWW would generate approximately 98 million cubic yards of new work material and 650 million cubic yards of maintenance material over the 50-year period of economic evaluation. Material from the extension channel, Sabine Bank Channel, Sabine Pass Outer Bar Channel, and Sabine Pass Jetty Channel would be placed offshore, either in existing placement areas or newly designated sites. Material from the inland reaches would be placed in existing confined, upland placement sites adjacent to each reach. Expansion of some existing upland sites would also be required. Some dredged material from the inland reaches would be used beneficially to restore large degraded marsh areas on the Neches River and nourish the Gulf shoreline at Texas and Louisiana Points.

4. As discussed further in the report of the Galveston District Engineer and the Southwestern Division Engineer, the recommended plan includes preliminary conclusions that 41 pipelines located within the SNWW Channel must be relocated and are classified as utility relocations for which the non-Federal sponsor must perform or assure performance. In accordance with Section 101(a)(4) of the Water Resources Development Act (WRDA) of 1986, as amended, one-half of the cost of each such relocation will be borne by the owner of the facility being relocated and one-half of the cost of each such relocation will be borne by the non-Federal sponsor. All relocations, including utility relocations, are to be accomplished at no cost to the Federal Government. The recommended plan also includes preliminary conclusions that there are an additional 5 pipelines that must be removed but not replaced. The Government, in coordination with the non-Federal sponsor, will conduct further analysis and finalize its conclusions during the period of pre-construction engineering and design.

5. Environmental benefits of the Neches River beneficial use (BU) features would offset all environmental impacts in the state of Texas and on all Federal lands, by restoring 2,853 acres of emergent marsh, improving 871 acres of shallow water habitat, and nourishing 1,234 acres of existing marsh in Texas. After consideration of project impacts in Texas and on Federal lands in the project area, the Neches River BU features will provide a net increase of 316 Average

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

Annual Habitat Units (AAHUs). The Gulf Shore BU features would offset minor erosion impacts to Gulf shorelines in Texas and Louisiana by periodically nourishing three miles of shoreline in each state. Unavoidable environmental impacts on non-Federal lands in Louisiana would be fully compensated by restoring 2,783 acres of emergent marsh, improving 957 acres of shallow water habitat, and stabilizing and nourishing 4,355 acres of existing marsh. These actions will provide 1,181 AAHUs to compensate for a loss of 1,159 AAHUs in Louisiana. Post-construction monitoring and adaptive management plans for the BU features and mitigation areas will be required until such time that the following performance criteria are met, as determined by the Division Commander: (1) each mitigation site and the Neches River BU features have an aerial coverage of 60 to 80 percent native, typical, emergent marsh vegetation; and invasive noxious and/or exotic plant species comprise less than 4 percent of mitigation site marsh coverage; (2) Texas Point BU feature shows a decreased erosion rate averaging less than 44 ft/yr after two disposal events; and (3) Louisiana Point BU feature shows an accretion rate averaging more than 1.2 ft/yr after two disposal events.

6. The recommended navigation project is not the National Economic Development (NED) plan. The recommended SNWW improvement is shallower and will be less costly than the NED plan and is the LPP supported by the non-Federal sponsor. The Sabine-Neches Navigation District is the non-Federal cost sharing sponsor.

7. Project Cost Breakdown Based on October 2010 Prices.

a. Total First Cost of Constructing Project. The estimated total first cost of constructing the project is \$1,053,000,000 which includes the cost of constructing the general navigation features and the value of lands, easements, rights-of-way and relocations estimated as follows: \$894,500,000 for channel modification and dredged material placement; \$79,000,000 for environmental mitigation; \$52,800,000 for bridge fender modifications; \$1,270,000 Federal cost for cultural resources; \$774,000 for additional Corps administrative costs; \$3,690,000 for the value of lands, easements, rights-of-way, and relocations (except utility relocations) provided by the non-Federal sponsor; and \$21,300,000 for the one-half of the cost of utility relocations borne by the non-Federal sponsor pursuant to Section 101(a)(4) of WRDA 1986, as amended.

b. Estimated Federal and non-Federal Shares. The estimated Federal and non-Federal shares of the total first cost of constructing the project are \$707,000,000 and \$345,990,000, respectively, as apportioned in accordance with the cost sharing provisions of Section 101 of WRDA 1986, as amended, as follows:

(1) The costs for the deepening of the channel from 40 to 45 feet will be shared at the rate of 75 percent by the Government and 25 percent by the non-Federal sponsor. Accordingly, the Federal and non-Federal shares of the estimated \$772,000,000 cost in this zone will be approximately \$579,000,000 and \$193,000,000, respectively, with the difference of \$1,270,000 being the Federal cost for cultural resources.

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

(2) The costs for the deepening of the channel from 45 to 48 feet will be shared at the rate of 50 percent by the Government and 50 percent by the non-Federal sponsor. Accordingly, the Federal and non-Federal shares of the estimated \$256,000,000 cost in this zone will be approximately \$128,000,000 each.

(3) In addition to payment by the non-Federal sponsor of its share of costs as estimated and addressed in sub-paragraphs (1) and (2) above, the estimated non-Federal share of \$345,990,000 includes \$3,690,000 for the estimated value of lands, easements, rights-of-way, and relocations (except utility relocations) that it must provide pursuant to Section 101(a)(3) of WRDA 1986, as amended, and \$21,300,000 for one-half of the estimated costs of utility relocations borne by the non-Federal sponsor pursuant to Section 101(a)(4) of WRDA 1986, as amended.

c. Additional 10 Percent Payment. In addition to the non-Federal sponsor's estimated share of the total first cost of constructing the project in the amount of \$345,990,000, pursuant to Section 101(a)(2) of WRDA 1986, as amended, the non-Federal sponsor must pay an additional 10 percent of the cost of the general navigation features of the project in cash over a period not to exceed 30 years, with interest. The value of lands, easements, rights-of-way, and relocations provided by the non-Federal sponsor under Section 101(a)(3) of WRDA 1986, as amended, and the costs of utility relocations borne by the non-Federal sponsor under Section 101(a)(4) of WRDA 1986, as amended, will be credited toward this payment.

d. Operations and Maintenance Costs. The additional annual cost of operation and maintenance for this recommended plan is estimated at \$32,800,000. In accordance with Section 101(b) of WRDA 1986, the non-Federal sponsor will be responsible for an amount equal to 50 percent of the excess of the cost of the operation and maintenance of the project over the cost which would be incurred for operation and maintenance of the project if the project had a depth of 45 feet. The excess annual cost attributable to operation and maintenance for the depth in excess of 45 feet is \$12,300,000 with the non-Federal sponsor responsible for \$6,150,000.

e. Associated Costs. Estimated total project associated costs of \$43,500,000 include \$20,700,000 in non-Federal costs associated with dredging of berthing areas and development of other local service facilities; \$1,500,000 for navigation aids (a U.S. Coast Guard expense); and \$21,300,000 for the one-half of the cost of utility relocations to be borne by the facility owners in accordance with Section 101(a) (4) of WRDA of 1986, as amended.

f. Authorized Project Cost and Section 902 Calculation. The total estimated first cost of the project for the purposes of authorization and calculating the maximum cost of the project pursuant to Section 902 of WRDA 1986, as amended, should include the estimates for general navigation features (GNF) construction costs, the value of lands, easements, and rights-of-way,

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

the value of relocations provided under Section 101(a)(3) of WRDA 1986, as amended, and the one-half of the costs of utility relocations borne by the non-Federal sponsor for utility relocations under Section 101(a)(4) of WRDA 1986, as amended. Accordingly, as set forth in paragraph 7.a. above, based on October 2010 prices, the estimated total first cost of the project for these purposes is \$1,053,000,000 with a Federal share of \$707,000,000 and a non-Federal share of \$345,990,000.

8. Based on October 2010 price levels, a discount rate of 4 1/8 percent, and a 50-year period of economic analysis, the project average annual benefits and costs for the SNWW improvements are estimated at \$115,400,000 and \$90,600,000, respectively, with a resulting net benefit of \$24,800,000 and a benefit-to-cost ratio of 1.3 to 1.

9. In accordance with the Corps Engineering Circular on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and vigorous review process to ensure technical quality. This included an Agency Technical Review (ATR), an Independent External Peer Review (IEPR), and a Corps Headquarters policy and legal review. All concerns of the ATR have been addressed and incorporated into the final report. The IEPR was completed by Battelle Memorial Institute. A total of 18 comments were documented. The comments were related to plan formulation, vessel fleet analysis, benefits, dredging and sedimentation, risk and uncertainty, and impact of salinity changes. In response, sections in the main report and EIS were expanded to include additional information. The final IEPR Report was completed in June 2010 with all comments addressed sufficiently.

10. Washington level review indicates that the plan recommended by the reporting officers is technically sound, environmentally and socially acceptable, and on the basis of congressional directives, economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies, except for the measurement of the National Economic Benefits which was modified by Section 6009 of the ESAA of 2005. Further, the recommended plan complies with other administration and legislative policies and guidelines. The views of interested parties, including Federal, State and local agencies, have been considered.

11. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that navigation improvements for the Sabine-Neches Waterway be authorized in accordance with the reporting officer's recommended plan at an estimated cost of \$1,053,000,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 101 of WRDA 1986, as amended. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies including that the non-Federal sponsor must agree with the following requirements prior to project implementation.

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

a. Provide 10 percent of the total cost of construction of the GNFs attributable to dredging to a depth not in excess of 20 feet; plus 25 percent of the total cost of construction of the GNFs attributable to dredging to a depth in excess of 20 feet but not in excess of 45 feet; plus 50 percent of the total cost of construction of the GNFs attributable to dredging to a depth in excess of 45 feet as further specified below:

(1) Provide 25 percent of design costs allocated by the Government to commercial navigation in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

(2) Provide, during the first year of construction, any additional funds necessary to pay the full non-Federal share of design costs allocated by the Government to commercial navigation;

(3) Provide, during construction, any additional funds necessary to make its total contribution for commercial navigation equal to 10 percent of the total cost of construction of the GNFs attributable to dredging to a depth not in excess of 20 feet; plus 25 percent of the total cost of construction of the GNFs attributable to dredging to a depth in excess of 20 feet but not in excess of 45 feet; plus 50 percent of the total cost of construction of the GNFs attributable to dredging to a depth in excess of 45 feet;

b. Provide all lands, easements, and rights-of way (LER), including those necessary for the borrowing of material and the disposal of dredged or excavated material, and perform or assure the performance of all relocations, including utility relocations, all as determined by the Federal Government to be necessary for the construction or operation and maintenance of the GNFs;

c. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the GNFs, an additional amount equal to 10 percent of the total cost of construction of the GNFs less the amount of credit afforded by the Government for the value of the LER and relocations, including utility relocations, provided by the Sponsor for the GNFs. If the amount of credit afforded by the Government for the value of LER, and relocations, including utility relocations, provided by the Sponsor equals or exceeds 10 percent of the total cost of construction of the GNFs, the Sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of LER and relocations, including utility relocations, in excess of 10 percent of the total cost of construction of the GNFs;

d. Provide, operate, and maintain, at no cost to the Government, the local service facilities 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;

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

e. Provide 50 percent of the excess cost of operation and maintenance of the project over that cost which the Federal Government determines would be incurred for operation and maintenance if the project had a depth of 45 feet;

f. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Sponsor owns or controls for access to the project for the purpose of completing, inspecting, operating and maintaining the GNFs;

g. Hold and save the United States free from all damages arising from the construction or operation and maintenance 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;

h. 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 are required, to the extent and in such detail as will properly reflect total cost of the project, 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;

i. Perform, or ensure performance of, any investigations for hazardous substances that 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 USC 9601-9675, that may exist in, on, or under LER that the Federal Government determines to be necessary for the construction or operation and maintenance of the GNFs. However, for lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the Federal Government provides the Sponsor with prior specific written direction, in which case the Sponsor shall perform such investigations in accordance with such written direction;

j. Assume complete financial responsibility, as between the Federal Government and the Sponsor, for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under LER that the Federal Government determines to be necessary for the construction or operation and maintenance of the project;

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

l. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, (42 U.S.C. 1962d-5b) and Section 101(e) of the WRDA 86, Public Law 99-662, as amended,

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

(33 U.S.C. 2211(e)) which provide that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the Sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

m. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, (42 U.S.C. 4601-4655) and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way necessary for construction, operation, and maintenance of the project including those necessary for relocations, the borrowing of material, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

n. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 et seq.), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c);

o. Provide the non-Federal share of that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project; and

p. Not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefor, to meet any of the Sponsor's obligations for the project unless the Federal agency providing the Federal portion of such funds verifies in writing that such funds are authorized to be used to carry out the project.

12. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to the

CEMP-SWD

SUBJECT: Sabine-Neches Waterway Channel Improvement Project, Southeast Texas and Southwest Louisiana

Congress, the States of Louisiana and Texas, the Sabine Neches Navigation District (the non-Federal sponsor), interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.



MERDITH W.B. TEMPLE  
Major General, USA  
Acting Commander