



**DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, DC 20310-2600**

DAEN

22 June 2023

SUBJECT: Baltimore Harbor Anchorages and Channels Modification of Seagirt Loop Channel, City of Baltimore, MD, Deep Draft Navigation

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on deep draft navigation recommendations for the Baltimore Harbor Anchorages and Channels (BHAC) Modification of Seagirt Loop Channel, City of Baltimore, MD. It is accompanied by the report of the Baltimore District and North Atlantic Division Engineers. The study was conducted under the authority of Section 216 of River and Harbor Act of 1970 (33 U.S.C. § 549a). Section 216 authorizes the Secretary of the Army, acting through the Chief of Engineers, to review the operation of projects for which construction has been completed and which were constructed by the U.S. Army Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes when found advisable due to significantly changed physical or economic conditions, and to recommend to Congress on the advisability of modifying the structures or their operations and for improving the quality of the environment in the overall public interest. The existing navigation project was authorized by Section 101(a)(22) of the Water Resources Development Act (WRDA) of 1999 for construction of channels and anchorages. Pre-construction engineering and design (PED) activities will continue under the study authority cited above.

2. The reporting officers recommend authorizing a plan that will modify the West Seagirt Branch Channel (WSBC) segment of the federally authorized BHAC Project to an authorized depth of -50 feet mean lower low water (MLLW) and authorized dimension of 760 feet in average width with additional widening at bends necessary for the safe handling of vessels. The Recommended Plan is the National Economic Development (NED) Plan. The Recommended Plan includes the following features:

- a. Widening of the WSBC to an authorized dimension of 760 feet in average width with additional widening at bends necessary for the safe handling of vessels.
- b. Deepening of the WSBC to an authorized depth of -50 feet MLLW with allowable overdepth of 2 feet.
- c. The proposed channel geometry for the WSBC includes side slopes of 1 vertical: 5 horizontal (1V:5H) to ensure channel stability.
- d. Placement of an estimated 1.94 million cubic yards of dredged material at an approved upland placement site.

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3. The Maryland Department of Transportation Maryland Port Administration (MDOT MPA) is the non-federal cost sharing sponsor for all features of the project. Based on October 2022 price levels, the estimated project first cost is \$63,942,000 which includes the value of lands, easements, rights-of-way, and relocations (LERRs), including the real property interests required for dredged material containment facilities (DMCF). Total LERR costs are estimated to be \$0.

a. The federal share of the project first cost for initial construction is estimated at \$47,956,500 and the non-federal share is estimated at \$15,985,500 in accordance with Section 101(a) of WRDA 1986, as amended (33 U.S.C. § 2211(a)).

b. The non-federal sponsor shall pay an additional 10 percent of construction costs for General Navigation Features (GNF) of the project, estimated at \$6,394,200, less any credit for the value of LERR required for the project, over a period not to exceed 30 years, in accordance with Section 101(a)(2) of WRDA 1986, as amended (33 U.S.C. § 2211(a)(2)).

c. The annual cost of operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) for the Recommended Plan is a federal cost and is estimated to be \$25,000. OMRR&R activities of the WSBC include routine dredging from the channel of approximately 3,148 cy/year or a 928 cy/year increase (42 percent) from the existing channel condition, estimated at 2,200 cy/year, and disposal of the dredged material at an approved upland disposal site in accordance with the Baltimore District's Dredged Material Management Plan Update (October 2017).

d. Estimated associated costs include \$27,331,000 in non-federal costs for development of local service facilities including berth dredging and wharf improvements. Associated costs are not included as part of the total project first cost for authorization.

e. Relocation of existing aids to navigation are expected with improvements to the WSBC. U.S. Coast Guard 5th District stated that relocations for the proposed dredging would be considered general maintenance/movement and would not result in additional costs being incurred by the federal government.

4. Based on a 2.5 percent discount rate and a 50-year period of analysis, the equivalent average annual benefits are estimated at \$13,869,000 and equivalent average annual costs are estimated at \$3,292,000, with equivalent average annual net benefits of \$10,577,000 and a benefit-to-cost ratio of 4.2 to 1.

5. The Recommended Plan aligns with the administration's priorities to modernize transportation infrastructure at the Nation's Ports.

6. All compliance with required applicable environmental laws and regulations has been completed. To satisfy the requirements under Section 106 of the National Historic Preservation Act (33 U.S.C. § 306108), USACE has executed a Programmatic Agreement (PA) with the Maryland Historical Trust, the State Historic Preservation

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Office pursuant to 36 C.F.R. § 800.14(b)(1)(ii). The PA allowed the Final Feasibility Report/EA to be completed while stipulating the Phase I Archaeological Investigation requirements during the PED phase when funding can be obtained for this effort.

7. In accordance with USACE policy on the review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and rigorous review process. The comprehensive review process included District Quality Control Review, Agency Technical Review, and Headquarters Policy and Legal Compliance review to confirm the planning analyses, alternative design and safety, and the quality of decisions. Washington-level review indicates that the plan recommended by the reporting officers complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies, as well as other administrative and legislative policies and guidelines. The views of interested parties, including federal, state, and local agencies, were considered and all comments from public reviews have been addressed and incorporated into the final report documents where appropriate.

8. Estimated total project first cost for the Recommended Plan is \$63,942,000 at a level of technical information and design reflecting a 35% level of project definition. The total project first cost includes a contingency value of \$12,789,000, approximately 25 percent of the estimated base project cost of \$51,153,000. The cost contingencies reflect an 80 percent confidence level in estimated total project first cost and are intended to cover cost and schedule increases due to the identified project risks and their probability of occurrence. An 80 percent confidence level carries uncertainty. For the Recommended Plan project first costs, the currently known uncertainty drivers are the following: 1) inaccurate or risky design assumptions resulting from potential capacity challenges developing at the Cox Creek DMCF inhibiting our ability to place the material at Cox Creek and requiring placement at Masonville Cove DMCF at a higher overall cost; 2) market conditions and bidding competition due to a saturated market for dredging contracts; 3) differing site conditions during construction; 4) the incomplete nature of the feasibility-level design and estimate; and 5) the potential to encounter significant archaeological resources during archaeological investigations being completed during the PED phase. As the project moves into the next phases, USACE will focus risk management and mitigation on primary cost risk drivers to the extent within USACE control. However, there still exists the potential for other unanticipated and uncontrollable changes in environmental or economic conditions that could further increase the total project first cost beyond the current estimate and/or necessitate changes in the project's design.

9. In full consideration of the risks as documented in the preceding paragraphs in this report, I concur in the findings, conclusions, and recommendation of the reporting officers. Accordingly, I recommend the Baltimore Harbor Anchorages and Channels (BHAC) Modification of Seagirt Loop Channel be authorized in accordance with the reporting officers' Recommended Plan at an estimated cost of \$63,942,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. Federal

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implementation of the project for deep draft navigation includes, but is not limited to, the following items of local cooperation to be undertaken by the non-federal sponsor in accordance with applicable federal laws, regulations, and policies:

a. Provide the non-federal share of construction costs, as further specified below:

(1) Provide, during design, 25 percent of the costs of design for the general navigation features of the project in accordance with the terms of the design agreement for the project;

(2) Provide, during construction, 25 percent of the costs of the general navigation facilities allocated to that portion of the project with a channel depth in excess of 20 feet but not in excess of 50 feet;

b. Provide all lands, easements, and rights-of-way, including those required for relocations and dredged material placement facilities, acquire or compel the removal of obstructions, and perform or ensure the performance of all relocations, including utility relocations, as determined by the federal government to be necessary for the construction, operation, and maintenance of the general navigation features;

c. For each relocation of a utility, or portion thereof, located in or under navigable waters of the United States that is required to accommodate a channel depth over 45 feet, pay to the owner of the utility at least one half of the owner's relocation costs, unless the owner voluntarily agrees to waive all or a portion of the non-federal sponsor's contribution;

d. Pay, with interest over a period not to exceed 30 years following completion of construction of the general navigation features, an additional amount equal to 10 percent of the construction costs of the general navigation features less the amount of credit afforded by the federal government for the value of the real property interests and relocations, including utility relocations, provided by the non-federal sponsor for the general navigation features, except for the value of the real property interests and relocations provided for mitigation, which is included in the construction costs of the general navigation features;

e. Ensure that the local service facilities are constructed, operated, and maintained at no cost to the federal government, and that all applicable licenses and permits necessary for construction, operation, and maintenance of such work are obtained;

f. Give the federal government a right to enter, at reasonable times and in a reasonable manner, upon the real property interests that the non-federal sponsor owns or controls for the purpose of operating and maintaining the project;

g. Hold and save the federal government free from all damages arising from design, construction, operation and maintenance of the project, except for damages due to the fault or negligence of the federal government or its contractors;

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h. Perform, or ensure performance of, any investigations for hazardous, toxic, and radioactive wastes (HTRW) that are determined necessary to identify the existence and extent of any HTRW regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. §§ 9601-9675), and any other applicable law, that may exist in, on, or under real property interests that the Federal Government determines to be necessary for construction, operation and maintenance of the general navigation features;

i. Agree, as between the federal government and the non-federal sponsor, to be solely responsible for the performance and costs of cleanup and response of any HTRW regulated under applicable law located in, on, or under real property interests required for construction, operation, and maintenance of the project, including the costs of any studies and investigations necessary to determine an appropriate response to the contamination, without reimbursement or credit by the federal government;

j. Perform the non-federal sponsor's responsibilities in a manner that will not cause HTRW liability to arise under applicable law to the maximum extent practicable; and

k. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (42 U.S.C. 4630 and 4655) and the Uniform Regulations contained in 49 C.F.R Part 24, in acquiring real property interests necessary for construction, operation, and maintenance of the project including those necessary for relocations, and placement area improvements; and inform affected persons of applicable benefits, policies, and procedures in connection with said act.

10. 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 Congress, 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.



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