



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

DAEN

26-Sep-2025

SUBJECT: Columbia River Turning Basins Navigation Improvements, Washington & Oregon

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on deep draft navigation recommendations for the Columbia River Turning Basins Navigation Improvements, Washington & Oregon. It is accompanied by the report of the Portland District and Northwestern Division Engineer(s). This study is an interim response to the authorization in Section 201(a)(20), Title II, Division AA, Water Resources Development Act (WRDA) of 2020, Consolidated Appropriations Act, 2021, Public Law (P.L.) 116-260. The authorization provided that the Secretary of the Army conduct a feasibility study to investigate a project to improve and add turning basins for the project for navigation, Columbia River Channel, Oregon and Washington, authorized by section 101(b)(13) of the Water Resources Development Act of 1999 (113 Stat. 280). This reach of the system is impacted by heavy congestion, shoaling, and transportation delays waiting for available berths. This project will be incorporated into the Columbia and Lower Willamette Federal Navigation Channel project which is a 43 feet deep by 600 feet wide deep-draft navigation channel, originally authorized by the Rivers and Harbors Act of 18 June 1878, and modified by Rivers and Harbors Act of 13 July 1892; Rivers and Harbors Act of 25 July 1912; Rivers and Harbors Act of 3 July 1930; Rivers and Harbors Act of 23 October 1962; Section 101(b)(13) of the Water Resources Development Act of 17 August 1999, P.L. 106-53; and Section 123, Division H of the Consolidated Appropriations Act of 23 January 2004, P.L. 108-199. Preconstruction engineering and design activities will continue under P.L. 116-260.

2. The reporting officers recommend authorizing a plan that will deepen and widen the existing Longview Federal Turning Basin, establish a new turning basin at Lower Martin Bar, and install two Stern Anchor Buoys (SABs) in the Upper Longview and Kalama Anchorages. The components of the recommended plan are separable and could be constructed in sequence. The Recommended Plan is the National Economic Development (NED) Plan. The Recommended Plan includes the following features:

- a. Deepen and widen the existing Longview Turning Basin at River Mile (RM) 64 as necessary to accommodate the design vessels. The turning basin would be deepened to 43 ft Columbia River Datum (CRD) (-40.1 ft NAVD88) to match the current authorized depth of the deep-draft, federal navigation channel (FNC) and elongated to provide access to additional berths. The approximate dimensions are

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7,000 ft long by 1,200 - 1,250 ft wide, which may require adjustments during final design.

b. Establish a federal turning basin at Lower Martin Bar (RM 77) to accommodate the design vessels. The new turning basin would be deepened to 43 ft CRD to match the current authorized depth of the deep-draft FNC, and approximately 1,000 ft wide by 1,600 - 2,900 ft long, which may require adjustments during final design.

c. Install two additional SABs within existing Upper Longview and Kalama U.S. Coast Guard (USCG)-designated anchorage areas to alleviate congestion. The SAB at Upper Longview would be approximately 2,130 - 3,100 ft long with a minimum width of 780 ft which may require adjustments during final design. The SAB at Kalama would be approximately 1,700 - 2,500 ft long with a minimum width of 780 ft which may require adjustments during final design. To allow deep draft vessels to access the SAB's, USACE will maintain dredging in the area surrounding the SAB.

3. The Ports of Longview and Kalama are the non-federal cost sharing sponsors for all features of the project. Both sponsors understand and agree to joint and several responsibility for all local cooperation requirements for the project. Based on October 2024 price levels, the estimated project first cost is \$21,897,000. The Government will exercise navigational servitude to place all dredged and excavated material below the ordinary high-water mark. The Sponsors own previously-provided dredged material placement sites if additional capacity is required upland. The total cost for lands, easements, rights-of-way, and relocations (LERR), are estimated to be \$20,000 for development and execution of rights of entry. The current project plan requires no additional acquisition of lands, easements, or relocation costs.

a. The federal share of the project first cost for initial construction is estimated at \$16,408,000 (rounded) and the non-federal share is estimated at \$5,489,000 in accordance with the provision of 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 \$2,187,700, 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 estimated to be \$1,405,000 per year. OMRR&R activities include annual maintenance dredging needed to maintain the turning basins and SAB prisms at a minimum depth of 43 ft CRD. Maintenance volumes for the proposed turning basins are estimated based on an expected annual rate of sedimentation. USACE may conduct advance maintenance

dredging of the turning basins up to 5 ft below the authorized depth (to 48 ft CRD) and up to 100 ft outside of the authorized dimensions for a longer period of time between maintenance dredging events and SAB areas up to 2 ft below the authorized depth (to -45 ft CRD). This is needed to address sedimentation driven by Cowlitz River flow peaks which can result in significant shoaling that impedes navigation. The estimated frequency is every 6 years on average; however, because sedimentation is driven by Cowlitz River flow peaks and is not a steady deposition rate, there is some uncertainty in the future frequency. Minor maintenance of the SABs may be needed but would typically be limited to replacing batteries that operate lights mounted on each buoy.

4. Based on a 3 percent discount rate and a 50-year period of analysis, the equivalent average annual benefits are estimated at \$7,274,000 and equivalent average annual costs are estimated at \$2,258,000, with equivalent average annual net benefits of \$5,016,000 and a benefit-to-cost ratio (BCR) of 3.2 to 1.

5. All compliance with required applicable environmental laws and regulations has been completed.

6. 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.

7. USACE decision documents recognize cost risk and uncertainty surrounding implementation. All cost estimates will carry a degree of uncertainty. The estimated total project first cost for the Recommended Plan at the 80% confidence interval is estimated at \$21,897,000. This project carries a degree of uncertainty such that if the main drivers described below are realized, the first cost for the Recommended Plan could increase to approximately \$24,631,000 (100% confidence level). The recommended plan has various construction and non-construction components. These components range from 80 to 90 percent in project definition. The overall recommended plan is at 87 percent design. Based on the recommended project design of the construction components and scope definition of the non-construction components, the total project cost is designated as a Class 3 estimate. The total project first cost includes a contingency value of

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\$8,293,000, which is approximately 61 percent of the estimated base project cost of \$13,604,000. The cost contingencies are intended to cover cost and schedule increases due to the identified project risks and their probability of occurrence. Changes to assumptions or the basis of design can result in additional risks not currently identified. For the Recommended Plan project first costs, the currently known major uncertainty drivers are the following: 1) Possible costs of a second mobilization with contractor means and methods or from completing the dredging and SAB placement in separate seasons; 2) equipment cost and productivity variances for scow unloading; 3) unknown inflation or inflation higher than forecast; 4) variation in bid assumptions; 5) variation in material quantities from the time of planning to the time of construction; and 6) any changes to assumptions on productivity, construction sequencing due to funding allocations and future market conditions can affect overall project cost. As the project moves into the next phases, USACE will focus risk management and mitigation on the primary cost and other significant 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.

10. 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 that the Columbia River Turning Basins be authorized in accordance with the reporting officers' Recommended Plan at an estimated cost of \$21,897,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. Federal 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, and
- 2) Provide, during construction, 25 percent of construction costs allocated by the Government to that portion of the project with a channel depth in excess of 20 feet but not greater than 55 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. 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, which is included in the construction costs of the general navigation features;

d. 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.

e. 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;

f. 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;

g. 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;

h. 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 hazardous, toxic, and radioactive waste (HTRW) regulated under applicable law that are 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;

i. 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

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j. 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. §§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 all affected persons of applicable benefits, policies, and procedures in connection with said act.

11. 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 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.

A handwritten signature in black ink, appearing to read 'W. H. Graham', with a stylized flourish at the end.

WILLIAM H. GRAHAM
Lieutenant General, USA
Chief of Engineers