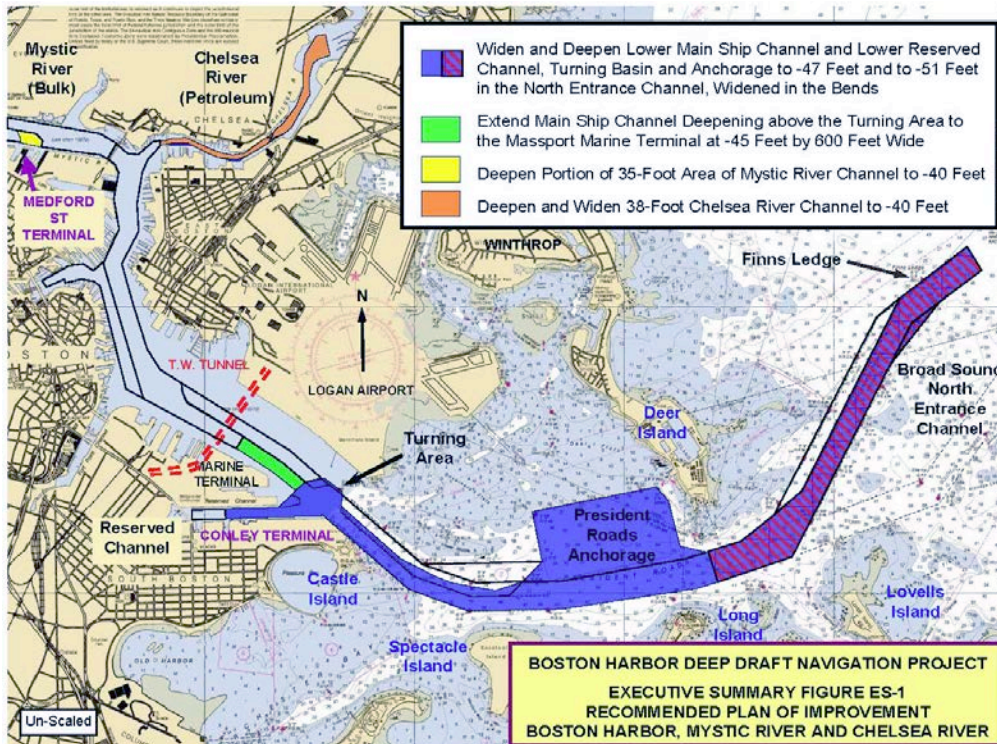


BOSTON HARBOR, MASSACHUSETTS DEEP DRAFT NAVIGATION IMPROVEMENT PROJECT

Civil Works Review Board Re-Presentation - 26 April 2013



ABSTRACT: The Boston Harbor Deep Draft Navigation Improvement Project consists of widening and deepening several segments of the harbor navigation channels to facilitate the calling of deeper draft containerships and bulk cargo carriers at the port's principal public and private terminals. The Massachusetts Port Authority (Massport) is the non-Federal sponsor.

The existing project consists of three entrance channels connecting Massachusetts Bay to the harbor, deep water anchorages in the harbor, a main ship channel through the harbor connecting the entrances to the three principal deep-draft tributaries, and turning basins. The entrance, main anchorage, main ship channel and turning basins have a maximum depth of -40 feet at mean lower low water (MLLW). The major tributary channels have depths of 40 feet (the lower Reserved Channel and portions of the Mystic River) and 38 feet (Chelsea River).

The study focused on providing a more effective and efficient waterway by reducing or eliminating the problems such as insufficient depth, insufficient width in the lower main ship channel, and lack of additional depth in the principal entrance channel for increased vessel motion in exposed seas. The study evaluated project benefits based on reduction in transportation costs generated from the introduction of larger vessels, retention of carrier services as other ports are deepened, shifting of overland transport of containers to waterborne transport, reduction in vessel delays, and more efficient loading of larger vessels. The project consists of deepening and selective widening of the existing channel segments. The Recommended Plan will generate significant economic benefits for the nation, and is the National Economic Development (NED) Plan.

Based on the economic, engineering, and environmental factors considered, the Recommended Plan includes the following:

- (1) Main Channels Improvement Plan – Deepening the Broad Sound North Entrance Channel, main ship channel, President Roads Anchorage, lower Reserved Channel, and Reserved Channel Turning Area, which are all now -40 feet MLLW, to -47 feet MLLW, except for the entrance channel which would be deepened to -51 feet MLLW. These improvements would allow increased vessel access to Massport's Conley Container Terminal on the Reserved Channel.
- (2) Main Ship Channel Deepening Extension to the Massport Marine Terminal – This plan would deepen the existing 40-foot by 600-foot wide segment of the Main Ship Channel above the Reserved Channel and below the I-90 Ted Williams Tunnel to -45 feet MLLW to allow deeper draft dry bulk carriers to access the Massport Marine Terminal in support of Massport's planned redevelopment of that terminal. A limited re-evaluation report to confirm terminal uses, project justification and depth optimization of this segment would be prepared during the design phase.
- (3) Mystic River Channel Deepening to Access Massport's Medford Street Terminal – This plan would deepen a portion of the existing 35-foot south lane of the Mystic River Channel to connect the 40-foot channel lane with the 40-foot berth at Massport's Medford Street Terminal to allow deeper draft dry bulk carriers to access the terminal which Massport has redeveloped. A limited re-evaluation report to confirm terminal uses, project justification and depth optimization of this segment would be prepared during the design phase.
- (4) Chelsea River Channel Deepening – This Plan would deepen the existing 38-foot Chelsea River Channel to -40 feet MLLW, with minor channel widening in two locations along the East Boston shore. Deepening would allow use of larger dry and liquid bulk carriers, mainly petroleum products, to access the five principal private terminals on this waterway.

It is estimated that the approximately 10.9 million cubic yards of ordinary material and 1.1 million cubic yards of rock would be removed for the project. Disposal of the material would be at the existing Massachusetts Bay Disposal Site. Alternative beneficial uses to be further refined in the design phase include use of the ordinary material to cap the former Industrial Waste Site in Massachusetts Bay, and use of the rock for habitat enhancement in the Bay or for various upland and shore protection projects by the State. Construction sequencing plans, air quality restrictions, and environmental monitoring plans will be developed during the design phase with the assistance of Federal and State resource agencies once subsurface explorations determine the final quantities of rock removal required. There are no other mitigation measures required for the project. The work is estimated to begin in 2015 and be complete by 2017.

The Recommended Plan reasonably maximizes net annual benefits. The estimated total cost for the Recommended Plan, including associated costs, is \$308,374,000 (July 2011 price levels escalated to October 2012). For the purpose of calculating the Section 902 limit, the total estimated first cost of the project, not including associated costs, is \$304.7 million including an estimated Federal share of \$ 212.1 million and an estimated non-Federal share of \$92.6 million. Average annual navigation benefits are estimated at \$103,496,000 with total annual costs of \$14,305,000, producing an overall benefit-to-cost ratio of 7.2 at 3.75 percent discount rate, and net annual benefits of \$89,191,000.

REPORT DOCUMENTATION: Pertinent documentation on the project, the results of the CWRB, and subsequent Washington-Level Review Actions, are linked below:

- CWRB #3 Agenda
- [Project Summary](#)
- [CWRB #3 Briefing Slides](#)
- [CWRB #3 Lessons Learned](#)
- CWRB #3 Meeting Record
- State & Agency Review Comment Letters
- Documentation of Review Findings
- [Signed Chief of Engineers Report](#)
- Advance Copy to Congressional Committees
- ASA(CW) Memo to OMB
- OMB Response
- ASA(CW) Transmittal to Congress
- Signed Record of Decision
- Authorization

ADDITIONAL INFORMATION:

[North Atlantic Division](#)

[New England District](#)