

# **FREEPORT HARBOR, TEXAS CHANNEL IMPROVEMENT PROJECT**

**Follow-up Civil Works Review Board - 23 August 2012**



**ABSTRACT:** Freeport Harbor is a federally constructed deep-draft channel that serves the Port of Freeport, located along the Gulf coast in southeast Texas. Port Freeport is the non-Federal sponsor. The existing waterway consists of a jettied entrance channel, 47 to 45 feet deep and 400 feet wide from the Gulf of Mexico; a main channel 45 feet deep and 400 feet wide; a Brazos Harbor channel 36 feet deep and 200 feet wide; and a deauthorized Stauffer Channel 30 feet deep and 200 feet wide.

The study focused on providing a more effective and efficient waterway by reducing or eliminating the major problems contributing to inefficiencies on the waterway, such as insufficient depth and the requirement for one-way traffic in the channel. The study evaluated project benefits based on reduction in transportation costs generated from more efficient loading of the existing fleet, from reduction in vessel delays, and the introduction of larger vessels. The project consists of deepening and selective widening of the existing channel.

Since the completion of the existing 45-foot project, the size of ships using the waterway has steadily increased so that many vessels currently have to be light-loaded to traverse the waterway. The current channel depth requires that large crude carriers remain offshore and transfer their cargo into smaller crude tankers for the remainder of the voyage. This lightering operation takes place in the Gulf of Mexico where the two ships, the mother ship and the lightering ship, come together so that the cargo transfer can occur. Current projections suggest that crude imports will increase throughout the period of analysis. As these imports increase, the number of lightering vessels and product carriers will also increase, adding to the shipping delays and congestion. Deepening the channel will reduce the number of lightering operations while allowing deeper draft vessels direct access to port facilities. Deeper depths in other reaches will also allow container, service and seismic vessels improved access to the port. The Recommended Plan will generate significant economic benefits for the nation.

Based on the economic, engineering, and environmental factors considered, the Recommended Plan, which is the Locally Preferred Plan (LPP), includes deepening of the

Outer Bar Channel from the jetties into the Gulf of Mexico to –57 feet MLT (-58 feet MLLW); deepening from the end of the jetties in the Gulf of Mexico to the Lower Turning Basin to –55 feet MLT (-56 feet MLLW); deepening from the Lower Turning Basin to Sta. 132+66 (ConocoPhillips dock area, above 1,200-foot Brazosport Turning Basin) to –55 feet MLT (-56 feet MLLW); deepening of Freeport Harbor from Sta. 132+66 through the Upper Turning Basin to –50 feet MLT (-51 feet MLLW); deepening and widening the lower 3,700 feet of the Stauffer Channel at a depth of –50 feet MLT (-51 feet MLLW) and 300 feet wide; and dredging the remainder of the Stauffer Channel to a depth of -25 feet MLT (-26 feet MLLW), in lieu of restoring it to its previously authorized dimensions of 30 feet by 200 feet. Depths shown exclude advance maintenance and allowable over-depth. It is estimated that the approximately 17.3 million cubic yards of new work material (including advance maintenance and allowable over-depth) would require eight separate dredging contracts to complete. The work is estimated to begin in 2015 and be complete by 2021. Dredged material management will be performed in the least cost manner according to the Dredged Material Management Plan.

The LPP is recommended in lieu of the National Economic Development (NED) Plan. The NED Plan and the LPP were fully developed. The LPP is less costly than the NED Plan for the Entrance and Main channels and the net excess benefits are less.

The estimated total cost for the Recommended Plan (LPP), including associated costs, is \$290,652,000 (October 2011 price level). For the purpose of calculating the Section 902 limit, the total estimated first cost of the project, not including associated costs, is \$232.1 million including an estimated Federal share of \$113.7 million and an estimated non-Federal share of \$118.4 million. Average annual navigation benefits are estimated at \$47,646,000 with total annual costs of \$25,063,000, producing an overall benefit-to-cost ratio of 1.9 at 4.0 percent discount rate.

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

- [CWRB #2 Agenda](#)
- [Project Summary](#)
- [CWRB #2 Briefing Slides](#)
- [CWRB #2 Lessons Learned](#)
- [CWRB #2 Meeting Record](#)
- [State & Agency Review Comment Letters](#)
- [Documentation of Review Findings](#)
- [Signed Chief of Engineers Report](#) -- 7 January 2013
- [Advance Copy to Congressional Committees](#)
- ASA(CW) Memo to OMB
- OMB Response
- ASA(CW) Transmittal to Congress
- Signed Record of Decision
- Authorization

**ADDITIONAL INFORMATION:**

[Southwestern Division](#)

[Galveston District](#)