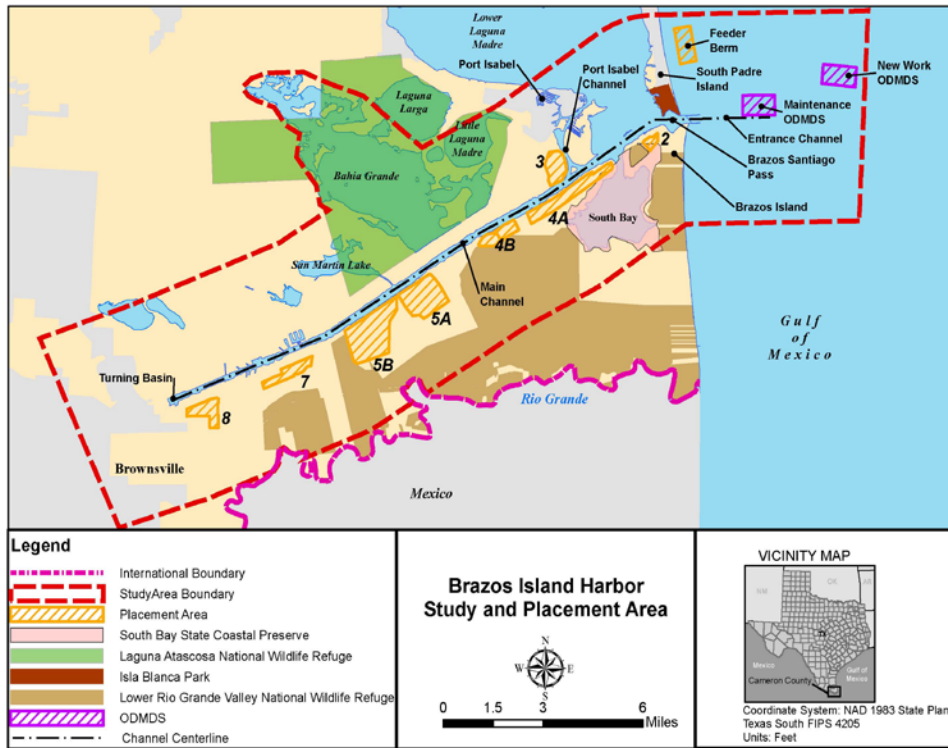


# Brazos Island Harbor, Texas Channel Improvement Project

25 June 2014



**ABSTRACT:** The deep-draft Brazos Island Harbor, Texas channel improvement project is located on the lower Texas coast and uses the natural Brazos-Santiago Pass to connect the Gulf with the inland portion of the Brownsville Ship Channel (BSC).

In addition to offshore oil rig repair and shipbreaking, Brownsville is a bulk commodity port accommodating both liquid and dry cargo handling. The Port of Brownsville (POB) is the only deep-draft port available to industry

along the U.S.–Mexico border. Recent increases in traffic are a direct result of North American Free Trade Agreement in that a majority of the increased commodity traffic meets industrial needs in Mexico. Opportunities for the POB include increasing navigational efficiency of deep-draft vessels using the channel and increasing the ability of the channel to accommodate offshore rigs for maintenance and repair as well as the fabrication of new rigs. The non-Federal sponsor is the Brownsville Navigation District (BND) acting as the financial representative for the POB.

The existing BSC navigation channel is 19.4 miles in length. The Entrance and Jetty Channels extend east to west for approximately 2.4 miles, from the open Gulf of Mexico through the jetties to the Laguna Madre. The flared North and South Jetties flank Brazos Santiago Pass, which connects the Gulf with the Lower Laguna Madre. The Main Channel extends 17 miles westward from the Laguna Madre to the Turning Basin, which is located on the eastern outskirts of the city of Brownsville. Multiple channel deepening and/or widening measures and construction of a new turning basin were combined into alternative plans.

The Recommended Plan includes deepening the channel to 52 feet without channel widening. This is the depth at which net excess benefits (benefits minus costs) are greatest. It is not known if this is the National Economic Development (NED) plan because the net excess benefits were still increasing with deeper channel dimensions; however, this was the deepest channel dimension that the BND would support. The non-Federal sponsor supports the Recommended Plan.

The Recommended Plan includes deepening the Federal channel to 54 feet Mean Lower Low Water (MLLW) from the Entrance Channel (Station -17+000) through the Jetty Channel (Station 0+000) and 52 feet from Station 0+000 to 84+200. From Station 84+200 to 86+000, the channel would not be deepened and would remain 42 feet deep. Additionally, the channel would be maintained at the existing depth of 36 feet MLLW from Station 86+000 to the end of the Turning

Basin. Based on October 2013 price levels, the estimated total first cost of the plan, including associated costs for berthing areas and navigation aids, is \$251,952,000 with \$116,118,000 Federal share and \$135,834,000 non-Federal share. Based on a 3.50 percent discount rate for FY14 and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$14,163,000. Using the traditional NED benefit calculations, the average annual equivalent benefits are estimated to be \$20,539,000, the average annual net benefits are \$6,376,000 and the BCR is 1.5 to 1. The benefits were also calculated using Section 6009 of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief, 2005 (Public Law 109-13) – Offshore Oil and Gas Fabrication Ports, which led to a BCR of 6.4 to 1.

The proposed project would generate approximately 14.1 million cubic yards (MCY) of new work material from initial construction and approximately 61.7 MCY of maintenance material over the 50-year period of analysis with the maintenance dredging quantities increasing approximately 14.0 percent over the existing project. None of the existing Ocean Dredged Material Disposal Sites (ODMDSs) and upland placement areas (PAs) would need to be expanded, and no new ODMDSs or upland PAs would be needed. The Recommended Plan would have only negligible environmental impacts, and no mitigation is required.

**REPORT DOCUMENTATION:** Pertinent documentation on the project, the results of the Civil Works Review Board, and subsequent Washington-level review actions, are linked below:

- CWRB Agenda
- Project Map/Placemat
- Project Summary
- CWRB Briefing Slides
- CWRB Lessons Learned
- CWRB 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:**     [Southwestern Division](#)     [Galveston District](#)