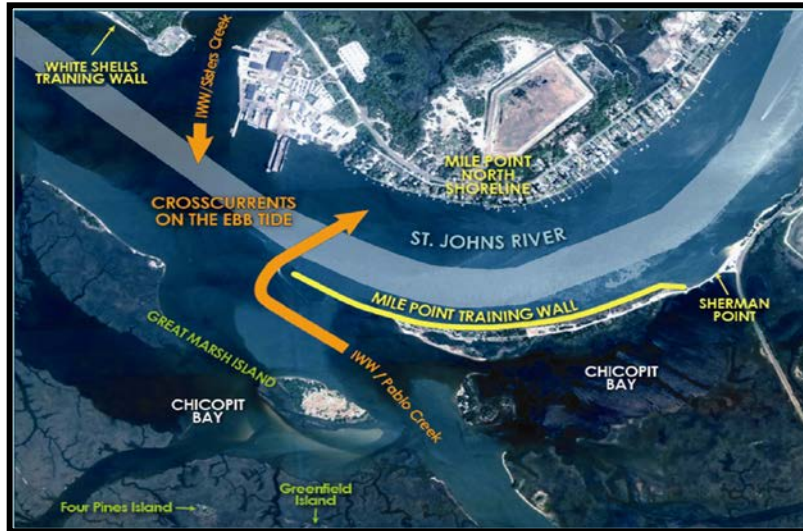


JACKSONVILLE HARBOR (MILE POINT) NAVIGATION STUDY DUVAL COUNTY, FLORIDA

13 December 2011



ABSTRACT: Mile Point consists of 5000 feet of shoreline located along the north shore of the St. Johns River and east of the Intracoastal Waterway (IWW). Great Marsh Island and the Mile Point Training Wall divide Chicopit Bay, which is located to the south of the Mile Point erosion area. The non-Federal sponsor is the Jacksonville Port Authority.

The confluence of the St. Johns River with the IWW is known as Mile Point, an area that experiences difficult crosscurrents on the ebb tide. Due to these crosscurrents there is a navigational restriction on the ebb tide that affects all vessels that have a transit draft greater than 33 feet inbound and 36 feet outbound, inhibiting the free movement of vessel traffic. The crosscurrents at Mile Point are also of concern for erosion on the Mile Point shoreline. The purpose of this study is to develop and evaluate alternate plans to reduce effects of the crosscurrents on the Mile Point shoreline and recommend alternatives that would allow the St. Johns Bar Pilots to remove the restrictions to navigation for vessels transiting Jacksonville Harbor.

Alternatives were evaluated using hydrodynamic modeling to test their ability to reduce the crosscurrents on the ebb tide at Mile Point. The results of the hydrodynamic modeling of the alternatives showed that only the Relocation/Reconfiguration of the Mile Point training wall alternative demonstrated significant change in the distribution and direction of the currents within the navigation channel, and it is the only alternative that met all of the study objectives. It is anticipated that the new realignment of the Mile Point training wall would produce flows coming out of the IWW from the south that are more aligned with the Federal channel. Relocation/reconfiguration of the Mile Point training wall is the only alternative that provides for a redirection and reduction of the ebb flow currents from the Mile Point shoreline and allows for the St. Johns Bar Pilots to lift the restrictions to navigation.

The recommended plan combines relocation/reconfiguration of the existing training wall, restoration of Great Marsh Island which is the least cost disposal option, and the creation of a flow improvement channel in Chicopit Bay. The plan consists of removal

of the western approximately 3110 feet of existing training wall, construction of a new relocated 2050-foot eastern leg and a new 4250-foot western leg at Great Marsh Island, and creation of salt marsh mitigation area as beneficial use of dredged material to restore wetlands (incidental environmental benefits) up to 53 acres of restoration, and construction of a Flow Improvement Channel (FIC) in Chicopit Bay to offset any adverse effects of closing off Great Marsh Island and restore the historic channel through Chicopit Bay.

The Recommended Plan provides NED benefits from alleviating the navigation restrictions, incidental environmental benefits from restoring Great Marsh Island, and incidental erosion benefits from reducing the effects of the crosscurrents on the adjacent shoreline. The estimated total cost for the Recommended Plan, including associated costs, is \$36,429,400, (Oct 2011 price level) which are shared \$23,848,000 Federal and \$12,581,400 non-Federal. The total estimated first cost of the project, not including associated costs, is \$25.9 million including an estimated Federal share of \$26.9 million and an estimated non-Federal share of \$9 million. Average annual navigation benefits are estimated at \$2,440,000 with total annual costs of \$1,737,000, producing an overall benefit-to-cost ratio of 1.4.

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

- [CWRB Agenda](#)
- [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 – 30 April 2012](#)
- [Advance Copy to Congressional Committees](#)
- [ASA\(CW\) Memo to OMB](#)
- [OMB Response](#)
- [ASA\(CW\) Transmittal to Congress](#)
- [Signed Finding of No Significant Impact \(FONSI\)](#)
- Authorization

ADDITIONAL INFORMATION:

[South Atlantic Division](#)

[Jacksonville District](#)