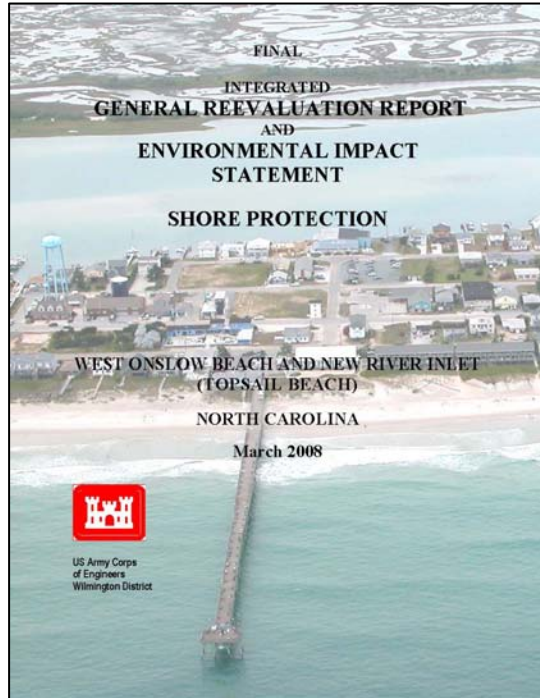


West Onslow Beach and New River Inlet (Topsail Beach), North Carolina

17 April 2008



Abstract: Topsail Beach lies along the southwestern end of Topsail Island, a sandy barrier island about two miles off the Pender County mainland of southeastern North Carolina. Due to its location on the Atlantic Coast, hurricanes and other storms cause damage to structures and the shoreline. Notable recent hurricanes damaging the town were Bertha and Fran in 1996 and Floyd in 1999. Expected average annual damages are estimated at \$9,200,000.

The proposed project for coastal storm damage reduction is a traditional beach-fill. The plan includes a 26,200-foot long dune and berm system to be constructed to a dune elevation of 12 feet NGVD fronted by a 7-foot NGVD (50-foot wide) beach berm with a main fill length of 23,200 feet, and having 2,000-foot transition length on the north end and a 1,000-foot transition on the south end. The project also includes re-nourishment at 4-year intervals. Other incidental items are dune vegetation and pedestrian dune walkovers. Sand for the project would be dredged from borrow sites identified offshore from Topsail Beach.

The project will reduce average annual damages 84% from \$9,200,000 to \$1,500,000. It will also provide a wider, more sustainable beach for both recreation and as a sea turtle

nesting habitat. The project has a 99.3% chance of having a positive net economic benefit. Benefits derive from reduction of damages from storm waves and storm-induced erosion. However, it will not prevent damage from sound-side flooding, winds, or wind-blown debris. The project will also produce an incidental, yet significant, recreation benefit. There are not expected to be any significant adverse impacts to the environment. Loss of life would be avoided by evacuation prior to storms, as presently conducted, not by the project.

The recommended plan is the Locally Preferred Plan (LPP). At October 2007 price levels the estimated costs are \$32,131,000 for initial construction and \$9,202,000 for re-nourishment at 4-year intervals. The local sponsor, the Town of Topsail Beach, would provide 1) public access, 2) construction easements, 3) 100% of the incremental cost for the LPP, 4) 35% of the remaining project construction costs, including credit for easements, 5) 50% of periodic re-nourishment costs, and 6) all costs of Operation, Maintenance, Repair, Replacements, and Rehabilitation. The average annual benefits are \$13,590,000 resulting in average annual net benefits of \$9,471,000 and a benefit to cost ratio of 3.3 to 1.

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](#)
- Comment Letters
- Documentation of Review Findings
- [Signed Chief of Engineers Report – 28 Sept 2009](#)
- ASA (CW) Review

- Transmittal to OMB
- OMB Clearance
- Congressional Notification
- Signed Record of Decision
- Authorization

Additional Information Contacts are:

[South Atlantic Division](#)

[Wilmington District](#)

[Project Information](#)