



US Army Corps
of Engineers
Wilmington District

Projects Requiring Construction Authorization

WEST ONSLOW BEACH AND NEW RIVER INLET TOPSAIL BEACH, NC:

- Sponsor: Town of Topsail Beach
- Chief's Report transmitted to Congress in April 2010
- Project is ready for construction authorization



SURF CITY AND NORTH TOPSAIL BEACH, NC:

- Sponsor: Towns of Surf City and North Topsail Beach
- Chief's Report transmitted to Congress in April 2011
- Project is ready for construction authorization



NEUSE RIVER BASIN, NC:

- Sponsor: North Carolina Department of Environment and Natural Resources
- Chief's Report approved in April 2013 and currently at OMB



CONGRESSIONAL DISTRICT: NC 1, 3, 4, 6, 7, 11 and 13

DATE: 6 March 2014

1. **CURRENT AUTHORIZATION:**

West Onslow Beach and New River Inlet: Water Resources Development Act of 1992 (for project of different dimensions)

Surf City and North Topsail Beach: Study Resolution adopted 16 February 2000 by House Committee on Transportation and Infrastructure for Surf City and resolution adopted 11 April 2000 for North Topsail Beach.

PROJECT INFORMATION - Projects Requiring Construction Authorization - Continued

Neuse River Basin, Ecosystem Restoration: Resolution adopted by the Committee on Transportation and infrastructure of the United States House of Representatives dated 23 July 1997.

2. ISSUES AND OTHER INFORMATION:

The West Onslow Beach and New River Inlet along with Surf City and North Topsail projects have signed Chief's Reports that have been subsequently transmitted to Congress. These projects are now ready for new construction authorization. Below is information regarding each of these projects.

WEST ONSLOW BEACH AND NEW RIVER INLET

The project focus is on coastal storm damage reduction for the 6-mile long ocean shoreline of the town of Topsail Beach. Topsail Beach is located at the southern end of Topsail Island adjacent to New Topsail Inlet in Pender County on the central North Carolina coast. Topsail Island is a 22-mile long and 0.5 mile wide barrier Island located approximately 40 miles north- east of Wilmington, NC. Due to the northeast-southwest orientation of the coastline, the island faces the Atlantic Ocean on the southeast. Topsail Beach is a developed shoreline. The peak seasonal population is estimated at 7,000.

The purpose and need for action includes reduction of potential future damages from hurricanes and storms to residential and commercial properties and public infrastructure, and potential emergency response costs associated with significant storms. The Topsail Beach shoreline also provides environmental habitat benefits to sensitive species, protects inland properties and facilities, and constitutes a significant recreational resource in and of itself.

The town of Topsail Beach has experienced severe beach erosion and heavy property damage as a result of storm surges from hurricanes in 1996 and 1999 and northeasters over the recent years. In addition to property damage, these storms have severely damaged or destroyed the primary dune system which provides a degree of natural protection for shoreline facilities. The average annual erosion rate is 4.5 feet per year within the project area. Losses to structures and related damages would result in a tremendous loss to the town's tax base. The recommended improvements are essential to the economic welfare of the town of Topsail Beach. Average annual benefits include \$9,516,000 for coastal storm damage reduction, \$5,500,000 in recreation benefits, and \$87,000 in reduced emergency costs.

The total cost estimate for the initial construction is \$39,400,000 (\$25,600,000 Federal and \$13,800,000 non-Federal) and the cost estimate for the future periodic nourishments is \$265,600,000 (\$132,800,000 Federal and \$132,800,000 non-Federal).

SURF CITY AND NORTH TOPSAIL BEACH

The Surf City/North Topsail Beach project would provide coastal storm damage reduction to the towns of Surf City and North Topsail Beach, which are also located on Topsail Island in NC. Topsail Island is a frequent target for hurricanes and tropical storms tracking along the Mid-Atlantic coast. Major storms in the 1990s caused significant erosion and decimated the island's natural dunes, resulting in major property damage. The project area is approximately 10 miles in length with 6 miles within the jurisdiction of the town of Surf City and the remaining 4 miles in the jurisdiction of the town of North Topsail Beach. The focus of the project is to reduce storm damages for the shoreline extending from the town limits of Topsail Beach/Surf City to the northern end of the island. The recommended plan provides for a project including a 50 ft wide berm at an elevation of 7 feet, backed by a 15 ft high protective dune along 10 miles of shoreline. The project area is uniformly developed with few lots without a habitable structure. Vulnerable facilities include mostly single-family dwellings, some multi-unit apartments/condominium buildings, commercial buildings, and a few hotels.

The purpose and need for coastal storm damage reduction along the Surf City and North Topsail Beach shorelines is to reduce damages resulting from beach erosion and waves from significant hurricanes and northeasters. Storm damage reduction measures would also provide incidental environmental and recreational benefits as well.

The total cost estimate for initial construction is \$127,973,000 (\$83,182,000 Federal and \$44,791,000 non-Federal) and the cost estimate for the future periodic nourishments is \$208,497,212 (\$104,248,606 Federal and \$104,248,606 non-Federal).

3. OTHER AUTHORIZATION ISSUES:

NEUSE RIVER BASIN, NC, ECOSYSTEM RESTORATION

The Neuse River Basin Ecosystem Restoration Chief's Report was approved in April 2013. To date, this report is awaiting transmittal to Congress.

The study area is located in the eastern part of North Carolina. The Neuse River basin covers about 11 percent of the entire state of North Carolina and consists of all or portions of 16 counties. The Neuse River basin is the third largest basin in the state, approximately 180 miles long, with a maximum width of about 46 miles. The Neuse River is formed by the confluence of the Eno and Flat Rivers, about 8 miles north of the city of Durham, and has a drainage area of approximately 5,710 square miles. The basin is primarily an agricultural

PROJECT INFORMATION - Projects Requiring Construction Authorization - Continued

region, but contains many small towns and several cities which are important commercial centers, including Raleigh, Smithfield, Durham, Goldsboro, Wilson, Kinston, and New Bern.

The Neuse River basin is a significant ecological resource, home to 17 species of freshwater mussels, a state protected salamander, and a rare snail species. Fish species that inhabit the basin include striped bass, hickory shad, American shad, alewife, blueback herring, shortnose sturgeon, and Atlantic sturgeon. In addition to the dwarf wedgemussel, tar spiny mussel, shortnose sturgeon and Atlantic sturgeon, there are 7 other federally listed endangered species in the basin, 7 essential fish habitats, and 12 significant natural heritage areas.

The Neuse River feeds the Albemarle-Pamlico Sound, which is one of the nation's largest and most productive estuaries, representing 90% of the commercial seafood species caught in North Carolina. The watershed is designated as a priority watershed by U.S. Environmental Protection Agency (EPA) and identified as one of the most threatened rivers in the country by American Rivers. The basin provides a municipal and industrial water supply source for roughly one-sixth of North Carolina's total population.

The estimated project first cost is \$35,774,000. In accordance with the cost sharing provisions of Section 103(c) of the Water Resources Development Act of 1986 (WRDA 1986), as amended (33 U.S.C. 2213(c)), ecosystem restoration features are cost-shared at a rate of 65 percent Federal and 35 percent non-Federal. Thus the Federal share of the project first cost is estimated to be \$23,253,100 and the non-Federal share is estimated at \$12,520,900. The costs of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas are estimated at \$254,000, all of which is eligible for credit toward the sponsor's share of the total project cost. The North Carolina Department of Environment and Natural Resources (NCDENR) Division of Water Resources (NCDWR) is the non-Federal cost-sharing sponsor for the recommended plan. The state of North Carolina would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction, a cost currently estimated at \$540,000 over a 50-year period.

Based on a 3.75 percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$1,671,000, including monitoring and OMRR&R. All project costs are allocated to the authorized purpose of ecosystem restoration and are justified by the restoration of 241 average annual functional units in the basin. The plan would restore the habitats in the most cost-effective manner. The restoration would include increasing oyster and wetland habitat, and the restoration of hydrological connectivity in the Little River for anadromous fish migration.