



NORTH TOPSAIL BEACH SHORELINE PROTECTION: OVERVIEW OF PROJECTS BY PHASE

PHASE	PROJECT NAME	PROJECT DESCRIPTION	STATUS (1/12/22)
1	New River Inlet Management Master Plan a.k.a. Terminal Groin (2017-present)	Environmental Impact Study (EIS) for US Army Corps of Engineers. Consultant/Engineer: Dial-Cordy/ATM. Cost est. \$500,000; Permit expected: 2023. Background: Possible construction of a terminal groin and a dredge project to backfill beach side of groin with up to 300,000 cu yd of inlet sand, if the evaluation by the Corps supports groin construction over other alternatives. Engineer: ATM. Cost est: \$10 million. Funding source: Beach Fund 30 (no state or local finance dollars allowed)	The Plan of Study for the New River Inlet Management Master Plan EIS has been submitted to the US Army Corps of Engineers. The engineer's report in the EIS package lists five alternative actions one of which is a terminal groin. The Corps has been working through several required steps in this process including hosting two interagency scoping meetings, the second on December 7, 2021, where comments from others agencies and the public will result in publication of the Preliminary Draft of the Environmental Impact Statement (PDEIS) sometime in 2022. Once the PDEIS is released, reviewed, and revised the next step is review and revision of the Draft Environmental Impact Statement (DEIS). Once the DEIS is released, reviewed, and revised a Final Environment Impact Statement will be released, reviewed and commented on by all the interagencies and the public before a final version is released by the Corps South Atlantic Division Commander.
	FEMA Hurricane Dorian (2020-present)	FEMA approved approx. 14,000 cubic yards of sand to be truck-hauled and placed in the beach profile oceanfront of the sandbags at the Topsail Reef Condominiums.	Engineer is waiting on CAMA Permit to place this fill and also to coordinate with the contractor on timing of placement which will be either winter 2022 or fall/winter 2022-2023.
	Army Corps Dredge Project (2020-2021)	Beach nourishment with Federal dollars for approx. 250,000 cu yd of sand as part of ICW crossing and Channel to Jacksonville federal dredge project. Engineer: USACE. Cost ~\$3.5 million.	Completed. The US Army Corps of Engineers, in conjunction with Town efforts, dredged the ICW crossing at New River Inlet, plus the channel to Jacksonville and placed the sand on the beach oceanside of the sandbag revetment. It is important to note that the Corps managed this project. The Town assisted with Rights of Entry and other logistical matters. However, the project was wholly funded and managed by the Corps. The project was completed in April 2021, before the start of turtle season.
	Inlet Sandbag Revetment (2015)	The extreme erosion rate described below resulted in the need to construct a sandbag revetment to prevent loss of infrastructure at the extreme North end of New River Inlet Rd and the Beach Club development. Oceanfront homeowners were accessed to help defray cost of the \$2.5 million dollar revetment, although a group of homeowners refused to pay their assessments and instead sued the Town over construction design of the revetment. The lawsuit was settled out of court with the plaintiffs contributing funds for the restoration of the revetment in satisfaction of the above-described assessment.	In 2017, a Revetment Committee was formed following the settlement that consisted of members of the plaintiffs group and members comprising Town staff, Town board and a citizen. The committee has met several times over the past 4 years, but issues with restoration design and contract terms with the project engineer have delayed restoration work substantially. Note: Even though there has been movement of some of the placed bags, the revetment has protected infrastructure behind it through Hurricane Florence, Hurricane Dorian, and numerous King Tides and Nor'easters.
	Inlet Realignment (2012-2013)	Background: The north end of the Town adjacent to the New River Inlet experienced several years of rapid erosion that continued to increase over time. This rapid erosion threatened both the structures/homes in that area as well as Town infrastructure and utilities in that area. In an effort to arrest this rapid erosion, the Town engaged in inlet realignment project in 2013. The project: Entailed dredging of the inlet channel across the ocean bar to a CAMA permitted 15 ft depth by 500 ft wide with 600,000 cy of that sand deposited into a dune and beach template. Engineer: CPE. Source: Town of N. Topsail Beach. Cost was \$5,600,000 funded through a bank loan that was amortized in 2017.	Completed. Although the realignment project initially slowed the erosion at the north end and the sand placement associated with the project provided much needed protection, the rapid erosion rate returned at the north end within the next 12-15 months. This erosion continued such that in 2015 the Town constructed a sandbag revetment as described above to protect Town infrastructure, utilities, and the threatened homes in that area.
2-4	FEMA Hurricane Florence/Dorian Dune Restoration (2020-2021)	FEMA approved placement of approx. 144, 000 cubic yards of sand to be truck-hauled and placed in the dune line to restore the dune to the condition prior to the two hurricanes. Engineer: ATM. Note: This is FEMA Cat B project where natural (dune) infrastructure was lost due to a named storm.	Project was paused on December 9, 2021, as FEMA volume limit reached. Additional sources of funding are being sought to finish out this dune restoration work.
	Dune Restoration (2019/2020)	Sand truck haul of ~70,000 cu yds to portions of dunes not receiving Hurricane Matthew sand (see below). Engineer: ATM. Cost \$1.6 million. Source: State funded.	Completed. A \$1.6 million grant to each of the three Topsail Island towns from the state was used to extend the dune restoration project, resulting in the complete restoration of all dunes from the Surf City line (Phase 5) to the 4300 block of Island Dr. (Phase 4).
5	FEMA Hurricane Florence/ Dorian Beach Restoration (2022/2023)	Hurricane Florence/Dorian FEMA Category G project. Sand truck haul project to bring ~636,000 cu yd for beach restoration. Engineer: ATM. Cost: ~\$18 million. Source: FEMA dollars.	The first season contract has been let. Note: Due to the large volume of sand to be placed and the short work window in the winter of 2021/2022, this beach nourishment project was divided over two years with the truck-haul to begin in Feb/Mar 2022 and last until turtle egg laying starts April 1st. The second season's truck haul will be bid and sand placed Nov/Apr 2022-2023.
	FEMA Hurricane Matthew Dune Restoration (2019/2020)	Hurricane Matthew sand truck haul. ~ 170,000 cu yds. Engineer: TI Coastal. Cost: \$5.4 million. Source: FEMA dollars.	Completed. The Hurricane Matthew dune restoration project, which occurred in North Topsail Beach's Phase 5, was completed on April 1, 2020. The \$5.4 million project was funded through FEMA for damages sustained during Hurricane Matthew.
	Surf City/North Topsail Beach Federal Project a.k.a. Coastal Storm Damage Mitigation Project (2010-2021)	This 50-yr project would start with a placement 14.3 million cubic yards of sand along the project that includes all of the Surf City oceanfront and the first 4 miles north into N. Topsail Beach (i.e. Phase 5). Cost Est. \$237 million dollars (initial construction). Source: Federal Disaster Relief Funds (65%) State and Local Governments (35%). Caveat: Includes option for a 30-yr loan for local partner's obligation.	Declined Participation. After extensive discussion among the Board of Alderman and with advice from a financial consultant familiar with municipal government loan borrowing, the Board voted to decline signing the USACE Project Partnership Agreement (PPA) which would have committed N. Topsail Beach to the project. One of the biggest obstacles to participation was the 260% cost increase from the original project approval in 2010. With the project plan calling for renourishment cycles every 6 years over the life of the project the required increases in the property tax rate for initial construction and the renourishment cycles would have been prohibitive. Note: Surf City did sign the Project Partnership Agreement, so the USACE is in the process of 're-scoping' the project to determine if it is still economically viable for Surf City.
Beach Nourishment (2014-2015)	The second major beach nourishment project completed by the Town in the past 10 years was the placement in 2014/2015 of 1,300,000 cubic yards of sand on the Phase 5 beach at a cost of \$16.8 million. Engineer: CPE. Source: This Town-financed project was possible through a 30-year USDA Rural Development loan and a pre-payment agreement with Local Government Commission (LGC) to pay off the loan within 11 years (i.e. by 2026).	Completed. Note: Loan payments to the USDA are an issue as the loan balance after 6 years of principal and interest payments is still \$14+ million dollars. The yearly principal and interest payment is \$900+ thousand dollars. Loan restrictions by the USDA require the Town to hold aside monies for the final payment (\$5 million dollars) and a reserve of \$90 thousand dollars each year. In addition, any excess balance in the Fund 30 Beach Fund after the restrictions are met requires a payment of that balance (LGC requirement) in addition to the \$900+ thousand dollar yearly payment. Recently, the town's financial advisor has recommended payoff of the USDA loan where we can include the held aside USDA monies. This would reduce the amount of a new loan to \$7+ million dollars through a private lending institution and allow a much faster payoff of the loan, plus allow a set aside of fund balance each year for future Town projects. The Board advised our financial advisor to pursue this approach at the January, 2022, Board Meeting.	