

Town of North Topsail Beach



North Topsail Beach Shoreline Protection Project - Second Event

A Plan to Balance the Economic Viability and Safety of North Topsail Beach with Sound Fiscal Stewardship over the Next 30 Years

*“Today the abundance and beauty found in scenic terrain, **shoreline, and seascape** continue to define Onslow County, attracting industry, tourism, and families to our distinctive community.”*

--Onslow County Website

June 27, 2013

Town of North Topsail Beach

Daniel Tuman, Mayor
Suzanne Gray, Mayor Pro Tem
Aldermen:
Don Harte
Tom Leonard
Richard Macartney
Michael Yawn



Stuart Turille
Town Manager
Carin Z. Faulkner, MPA
Town Clerk

June 24, 2013

North Carolina Local Government Commission
325 North Salisbury Street
Raleigh, NC 27603-1388

RE: North Topsail Beach Phase 2-5 Beach Project Overview

Dear Sirs,

North Topsail Beach (NTB) has developed a plan to construct the Town's Phase 2-5 Beach Project later this year. The project length is 9.6 miles and requires 2.6 million cubic yards of sand. The estimated construction cost is \$30 million dollars.

The Phase 2-5 Project is vital to the preservation of the Town's economic base and to the protection and survival of the Town's residences, rental properties, and public infrastructure. The State of North Carolina has estimated that the \$850 million dollar overall property valuation of the Town is responsible for more \$60 million dollars of annual tourist related economic activity important to Onslow County and the creation of 950 local jobs. Eighty five percent (85%) of the 2500 residential properties in NTB are beach rental properties owned by non-residents. The Town has a relatively small resident population of 750 people. The beach is the principal recreational amenity for Onslow County. The Town and County maintain numerous parking lots. Overall there are nearly 1000 parking spaces, 49 public beach accesses and 12.1 miles of beach to accommodate visitors to NTB. As many as 15,000 to 20,000 people have been estimated to visit the town and its beaches. All of the above is threatened and at risk unless the Town takes necessary action.

The Town recently completed the New River Inlet Channel Realignment and North-End Shoreline Protection (Phase 1) Project. This project rebuilt 1.5 miles of the beach on the north-end of Topsail Island. The following pictures illustrate what can be accomplished with a shoreline protection project.



Our Town is at risk today and recent experience in New York and New Jersey with Super Storm Sandy has shown that shoreline protection projects such as ours are essential. On Topsail Island, both Surf City and NTB could not accomplish full restoration of their shoreline protection dune line after Hurricane Sandy because there was not enough sand on the beach to push. Therefore, the need for our town-wide shoreline protection project is immediate.

Finding a method to fund and finance a town-wide shoreline protection effort for our Town has been difficult. The Town has but one solution that fits its needs of affordability and compliance with the N.C. General Statutes and the Policies of the Local Government Commission. That solution includes 30 year USDA financing with the issuance of special obligation bonds, a substantial reduction in project costs, and adequate funding contributions from all beach stakeholder interests. In our new plan we have \$2.2M of new annual revenue to fund our project, County participation in pledge support for our Special Obligation Bonds requirements, and have removed an estimated \$7.5M or 20% from the costs of our project.

Those funding our beach projects are: the tourists who rent and pay a 3% occupancy tax; the property owners who are a mix of 15% residents and 85% non-resident owners* who now pay a dedicated 15 cent ad valorem tax rate for beach protection (that is an increase of 14 cents adopted in the 2013-2014 budget); and Onslow County who recently increased their contributions to the Town by \$960K per year. This County contribution represents their share for the many local Onslow County residents who are day visitors to the beach. This overall funding plan is commensurate with the recommendations made by an outside consultant, PARC, whom the Town hired. During the past year, PARC worked with beach stakeholders such as Town residents, non-resident property owners, and the Onslow County Administration and

*February 2010 Eastern Coastal Council Build Out Report.

**2010 U.S. Census reflects 13% residents and 87% non-residents

Board of Commissioners. Their mission was to work with the above beach stakeholders and to make independent recommendations to the Board of Aldermen on what actions NTB should take with the beach. PARC conducted numerous workshops, webinars, outreach events and public meetings. The final report and recommendations are available at: www.ntbnc.org/Pages/Reports.aspx.

The funding actions taken have resulted in \$2.2M of additional revenue for the beach fund. The beach fund will have sufficient revenue to pay the debt service on the Phase 1 and Phase 2-5 projects, the periodic 5 year costs required to maintain the beach in its restored condition and for other beach related incidental costs.

In addition, by abandoning the phased construction approach to our plan of record shoreline protection program and by completing the remaining 9.6 miles of beach restoration as one construction project saves \$7.5M savings in project costs. These cost savings are achieved by eliminating three of the four planned construction phases which avoids the estimated \$2.5M fixed costs required to mobilize the necessary equipment each and every time there is preparation to do a construction phase.

When the Phase 2-5 project is completed, the entire Town will have a FEMA qualified beach that would be eligible for federally funded sand replacement for any storm emergency per their published instruction (DAP9580.8). Eastern North Carolina and Topsail Island have a history of hurricane events that have caused significant sand losses to its beaches. Our recently completed Phase 1 project already qualifies as a FEMA beach and for federal funding support.

In addition, the Town has an engineering plan developed by CP&E (Coastal Planning and Engineering) to maintain its new shoreline beyond the 30 year term of our proposed USDA financing. NCDCM reports that the overall erosion rate for Topsail Island is low (0-2.5 feet per year) and CP&E has estimated that the proposed new beach can be maintained using future sand resources from the New River Inlet. Future town beach fund reserves would fund future beach maintenance. This routine beach maintenance activity would occur every five years and would be cost shared with the State, County, and the Town.

The Town is pursuing 30 year USDA financing. USDA is the only source of long term financing that the Town has been able to identify. Long term 30 year financing is necessary because of the limited availability of Town funds and the need to protect the entire Town now. We believe that as long as the Town maintains its newly constructed asset to FEMA guidelines as proposed, this new asset qualifies under present LGC long term financing guidelines.

The Town prefers to issue Special Obligation Bonds as opposed to General Obligation Bonds. During June 2013, the Town passed resolutions creating four (4) new Municipal Service Districts. The Town will meet the pledge requirements for Special Obligation Bonds with Onslow County participation and guarantee. The Board of Aldermen chose Special Obligation Bonds because they wish to implement the consensus findings of the PARC Report while representing all stakeholders of our beach town. The Town, which has a small resident population (750 people), elected a Board and Mayor who are strongly in support of shoreline protection. Four of the five members of this Board, unlike its prior Board, have taken the

shoreline protection needs of this Town seriously. The Board has worked to find the right project plan, solved revenue issues, raised taxes, searched for the necessary financing and got those who have a vital interest in North Topsail Beach involved. Some individuals who don't like the findings of the PARC Report have requested that a local referendum decide whether or not the town should proceed with its shoreline protection program. The Town Board has decided that this suggestion is not appropriate because the much larger number of interested stakeholders, who are paying for this project, could not participate in that process.

In summary, NTB has developed a long term plan to build, maintain, fund, and finance an affordable shoreline protection program necessary for the preservation of its economic base and the protection of its Town residences, rental properties, and public infrastructure. We are submitting this information for your review and support.

Respectfully,

Daniel Tuman, Mayor
Town of North Topsail Beach

Town of North Topsail Beach

Daniel Tuman, Mayor
Suzanne Gray, Mayor Pro Tem
Aldermen:
Don Harte
Tom Leonard
Richard Macartney
Michael Yawn



Carin Z. Faulkner, MPA
Interim Town Manager

Terrie Woodle
Deputy Town Clerk

FOR IMMEDIATE RELEASE

February 7, 2013

Contact: Carin Faulkner, Interim Town Manager/PIO
carinf@north-topsail-beach.org
910-328-1349 ext. 25

NEW RIVER INLET CHANNEL REALIGNMENT PROJECT SUCCESSFULLY RESTORES NORTH END OF TOPSAIL ISLAND

NORTH TOPSAIL BEACH – The Town of North Topsail Beach has successfully completed its New River Inlet Channel Realignment Project. This effort benefits commercial and recreational boaters and the residents of the Town who reside at its north end. Approximately 566,244 cubic yards of sand was dredged from the channel increasing its depth to 17 feet and its width to 500 feet. The sand removed from the channel was used to rebuild 1.5 miles of the beach on the north end of Topsail Island. Prior to the project, shoaling of the narrow and shallow draft inlet was a constant problem for boat navigation and the location of the inlet channel resulted in serious erosion problems for the adjacent beach and oceanfront properties. The attached photos illustrate the problem and the improvement that has been made with the completion of work.

According to Robert Neal of Coastal Planning and Engineering (CP&E), the firm which designed the project, the intent of the project design is to provide wave and current protection to the north end of North Topsail Beach and the sand placed on the beach will provide erosion mitigation. “The initial realignment was a successful venture that came not a moment too soon. The erosion protection is evident for the structures severely threatened prior to construction. I’m also confident future performance will show additional recreational and erosion mitigation benefits created by realigning the channel, said Neal.”

“Curbing the loss of our beach is critical to our future,” said Mayor Daniel Tuman. “Wide sandy beaches are our best asset. Not only do they afford our residents and visitors with recreation and access to the ocean, they also protect our properties from storm damage. Economically, they attract visitors from all over the country and globe. They spend money here and help our local and state economy.”

“The experience of Hurricane Sandy is well documented,” Tuman added. “Beaches that are nourished save money for the Federal and State government and avoid the stress and misery associated with the destruction of private property and public infrastructure. A State shoreline protection program is wise public policy and is needed in North Carolina.”

The New River Inlet Channel Realignment project was the first phase of a five phase plan proposed by CP&E that will bring the Town into compliance with FEMA’s requirements for an engineered beach. The Town will now be eligible for federally funded beach restoration caused by major storm events. The work was completed by Marinex Construction. Theirs was the lowest bid at \$5.6 million, which is below the \$6.5 million estimated cost for the project.

(more)

The project was financed from the Town’s existing beach fund and the rest from special obligation bonds. The Town is currently working on a plan to complete the remainder of the project phases and is considering the recommendations made by Peter A. Ravella Consulting, a beach financing consulting firm. The Town will continue to pursue financial support from the State and Onslow County to complete the remaining work, both whom directly benefit from this activity. The Town received no outside funding for the completion of this project.

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Topsail Reef Condominium Complex Before
New River Channel Inlet Realignment Project



Topsail Reef Condominium Complex After
New River Channel Inlet Realignment Project

More project photos available at:
<http://www.ntbnc.org/Pages/PhotoGallery.aspx>

Town of North Topsail Beach
New River Inlet Channel Realignment
Pre & Post Project Photos

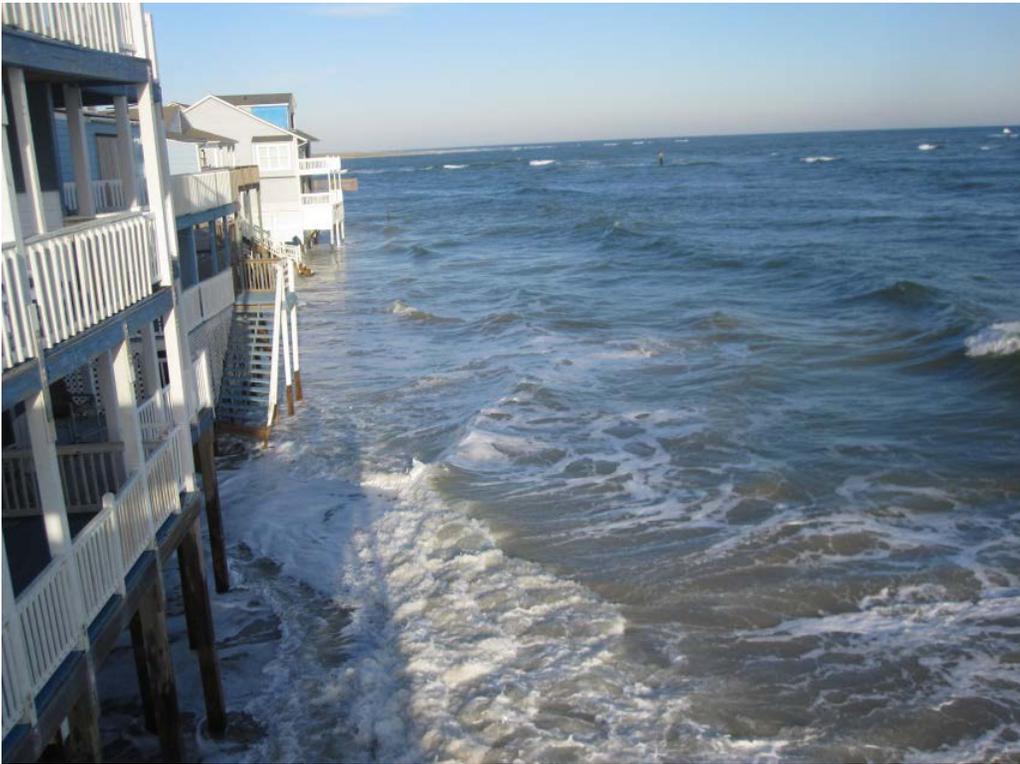


Pre 11/23/2012



Post 1/30/2013

Town of North Topsail Beach
New River Inlet Channel Realignment
Pre & Post Project Photos



Pre 11/23/2012



Post 1/30/2013

Town of North Topsail Beach
New River Inlet Channel Realignment
Pre & Post Project Photos



Pre 1/22/2012



Post 6/10/2013

**Town of North Topsail Beach
North Topsail Beach Shoreline Protection Project
Project Narrative**

Purpose - The North Topsail Beach Shoreline Protection Project is designed to reduce the impact of long-term erosion and coastal storms on existing oceanfront properties within the incorporated limits of North Topsail Beach. This shoreline restoration and inlet management project will help to preserve the tax base, protect the infrastructure, and maintain the tourist oriented economy of North Topsail Beach.

Location – The project includes all of the 11.1 miles of oceanfront shoreline within the Town’s jurisdictional limits. This entails coastline stretching from New River Inlet on the north end of Topsail Island, to the southern town limits which adjoin with the Town of Surf City. The project has been divided into phases by the town to assist in identifying lengths and locations of specific features. Table 1 below shows the phase limits, designated by street names or other land marks, along with the shoreline lengths.

Table 1. Phase Description for the North Topsail Beach Shoreline Protection Project

Phase	Phase Limits	Shoreline Length (ft)
Phase 1	New River Inlet to Shipwatch Villas Townhomes	7,700 ft
Phase 2	Shipwatch Villas Townhomes to Villa Capriani	12,000 ft
Phase 3	Villa Capriani to Jefferies Lot	7,000 ft
Phase 4	Jefferies Lot to 3825 Island Drive	10,500 ft
Phase 5	3825 Island Drive to North Topsail Beach Town Limits	21,300 ft
Total		58,120 ft (11.1 miles)

Expected Accomplishments – The shoreline project has two (2) main tasks to accomplish the established purpose. The first task consists of realigning the New River Inlet ocean bar channel and the second task is restoring the shoreline with beach material. Realigning the deep water path will cause the inlet’s ebb shoal to reposition closer to North Topsail Beach. The shoal will create a buffer between the offshore wave energy and the project shoreline. As the shoal reforms closer to the shoreline the sediment accumulation will force the flood tide currents to diverge away from the beach. The combined effect of buffering the shoreline and redirecting current velocities will relieve a large portion of the island’s north end erosion stress.

Restoration of the shoreline will help to shield the upland structures and properties from erosion stresses and reduce the potential for storm damage. Similar to the expected ebb shoal performance from the channel realignment, the engineered beach will absorb wave and current forces directed at the shoreline. This will lower the potential for storm damage by reducing the amount of wave energy capable of impacting the upland properties. The placed sand will also help to manage long-term erosion trends by advancing the shoreline seaward to mitigate against the historic landward recession.

The first task was accomplished in January 2013 and included restoration of the Phase 1 shoreline. Approximately 592,000 cubic yards of beach material were removed from New River Inlet and placed along the Phase 1 shoreline. Restoration of the remaining beach is anticipated to begin in 2014 and is expected to require an additional 2.6 million cubic yards of sand. An offshore borrow site is available to provide the necessary material and the Town is currently working on modifying the permit to allow for the use of an upland area to provide supplemental material.

In order to maintain a beach nourishment project, regular maintenance or re-nourishment is required. Based on existing erosion rates measured between 2005 and 2013, the project will require approximately 100,000 cy of material annually. Given the nature of the channel relocation project at New River, which provides protection to the north end of the Island, the channel should be dredged approximately every 4 – 5 years. Based on estimates of maintenance requirements, the periodic maintenance of the channel can provide sufficient sand to maintain the entire North Topsail Beach project as currently designed.

Construction and maintenance of the engineered project also enables the Town of North Topsail Beach to seek federal aid for hurricane or other natural disaster damages. If a presidential declaration is issued for an event that impacts the project, the Town would be eligible for a federal grant for the repair work. In accordance with 44CFR 206.226(j)(2), the grant would be provided through FEMA to replace the sand material that was lost as a result of the natural disaster.

Construction Costs – The design of the remaining project features are currently being finalized. Construction of the remaining project features are anticipated to begin in 2014. The Phase 2 through Phase 5 shoreline will be restored to provide the additional beach width required for the engineered beach. Currently, we estimate that the construction of the designed project to construct Phases 2 through 5 will cost approximately \$30,000,000.

Maintenance costs have been estimated based on an annual need of approximately 100,000 cy of sand and a need to maintain the New River Channel approximately every 4 – 5 years. Based on a 5 year maintenance interval, the static cost of each maintenance event is \$8,073,000.

Permit Class
NEW

Permit Number
79-10

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

Major Development in an Area of Environmental Concern
pursuant to NCGS 113A-118

Excavation and/or filling pursuant to NCGS 113-229

Issued to Town of North Topsail Beach, 2008 Loggerhead Court, North Topsail Beach, NC 28460

Authorizing development in Onslow Counties at New River Inlet and Ocean Beach, within

Town limits _____, _____ as requested in the permittee's application dated 9/29/09, AEC Hazard Notice dtd. 8/27/08, mitigation/monitoring plan dtd. 9/09, & workplan drawings 1-19 dtd. rcd. 9/30/09 & PV-1, DE-1 & XS-1 all dtd. 11/24/09

This permit, issued on July 21, 2010, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

- 1) In order to protect threatened and endangered species and to minimize adverse impacts to offshore, nearshore, intertidal and beach resources no excavation or beach nourishment activities shall occur from April 1 to November 15 of any year without prior approval from the Division of Coastal Management in consultation with the Division of Marine Fisheries and the Wildlife Resources Commission.

Excavation

- 2) Unless specifically altered herein, all excavation activities shall take place entirely within the areas indicated on attached workplan drawings.
- 3) No excavation shall take place within 400' of any identified hard bottom resource area.
(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

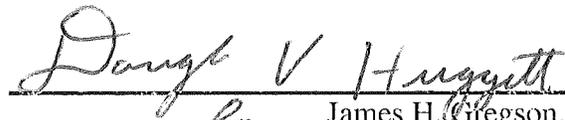
Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

June 12, 2014

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.


for James H. Gregson, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.


TOWN MANAGER Signature of Permittee

ADDITIONAL CONDITIONS

- 4) Excavation shall not exceed the following limits;
 - a. Bar Channel -17' average (NGVD-29)
 - b. Offshore Borrow Area(s) -47' average (NGVD-29)

Overdredging is specifically prohibited.

- 5) In order to minimize impacts to aquatic resources, and in accordance with commitments made by the permittee, maintenance excavation of the new inlet channel shall not take place more frequently than once every four years.
- 6) Excavation shall be accomplished by cutter suction hydraulic dredge. Use of any other method of excavation shall require modification of this permit.

Beach Nourishment

- 7) This permit authorizes beach nourishment activities to be carried out one (1) time along the entire reach of the requested project area. Any request to carry out additional activities within an area where nourishment activities have been completed under this permit shall require a modification of this permit.
- 8) Prior to the initiation of beach nourishment activity along each section of beach, the existing mean high water line shall be surveyed and a copy provided to the Division of Coastal Management.

NOTE: The permittee is advised that the State of North Carolina claims title to all currently submerged lands and any future lands that are raised above the Mean High Water level as a result of this project.

- 9) Prior to the initiation of any beach nourishment activity above the normal high water contour (NHW) within the limits of the permittee's jurisdiction, easements or similar legal instruments shall be obtained from all impacted property owners.
- 10) Prior to the initiation of any beach nourishment activity, the permittee shall coordinate with the Division of Coastal Management to determine the static vegetation line that shall be used as the reference point for measuring future oceanfront setbacks. The static vegetation line, which is defined as the vegetation line that existed within one year prior to the onset of initial project construction, shall be established using on-ground observation and survey or aerial imagery. This static vegetation line shall then be marked and a survey depicting this static vegetation line shall be submitted to the Division of Coastal Management prior to any beach nourishment activities.
- 11) The seaward nourishment limit shall be conducted in accordance with the approved work plats labeled Figures 15-17 (Typical Construction Profiles) dated received 9/30/09.
- 12) Temporary dikes shall be used to retain and direct flow of material parallel to the shoreline to minimize surf zone turbidities. The temporary dikes shall be removed and the beach graded in accordance with approved profiles upon completion of pumping activities in that particular section of beach.

ADDITIONAL CONDITIONS

- 13) Should the dredging operations encounter sand deemed non-compatible with 15A NCAC 07H .0312 (Technical Standards for Beach Fill Projects), the dredge operator shall immediately cease operation and contact the NCDCM. Dredge operations shall resume only after resolution of the issue of sand compatibility.
- 14) In order to prevent leakage, dredge pipes shall be routinely inspected. If leakage is found and repairs cannot be made immediately, pumping of material shall stop until such leaks are fixed.
- 15) Once a section is complete, piping and heavy equipment shall be removed or shifted to a new section and the area graded and dressed to final approved slopes.
- 16) Land-based equipment necessary for beach nourishment work shall be brought to the site through existing accesses. Should the work result in any damage to existing accesses, the accesses shall be restored to pre-project conditions immediately upon project completion in that specific area.

NOTE: The permittee is advised that any new access site would require a modification of this permit.

- 17) Where oceanfront development exists at elevations nearly equal to that of the native beach, a low protective dune shall be pushed up along the backbeach to prevent slurry from draining towards the development.
- 18) Dune disturbance shall be kept to a minimum. Any alteration of existing dunes shall be coordinated with the Division of Coastal Management as well as the appropriate property owner(s). All disturbed areas shall be restored to original contours and configuration with reference to the surveyed normal high water line and shall be revegetated immediately following project completion in that specific area.

Upland Disposal of Non-beach Compatible Materials

- 19) All excavated materials shall be confined above the normal high water line and landward of regularly or irregularly flooded wetlands behind adequate dikes or other retaining structures to prevent spillover of solids into any marsh or surrounding waters.
- 20) The disposal area effluent shall be contained by pipe or similar device to a point at or beyond the normal low water level, and beyond areas containing significant shellfish resources or areas of submerged aquatic vegetation.
- 21) The terminal end of the pipeline shall be positioned at or greater than 50 feet from any part of the dike and a maximum distance from spillways to allow settlement of suspended sediments.
- 22) A water control structure shall be installed at the intake end of the effluent pipe to assure compliance with water quality standards.
- 23) The diked disposal area shall be constructed a sufficient distance from the normal high water level or any marsh to eliminate the possibility of dike erosion into surrounding wetlands or waters.

ADDITIONAL CONDITIONS

- 24) The disposal area shall be properly graded and provided a ground cover sufficient to restrain erosion within 30 working days of completion of each phase of the project.
- 25) The spoil disposal area shall be inspected and approved by a representative of the Division of Coastal Management prior to the commencement of any dredging activities.

Mitigation and Monitoring

- 26) Unless specifically altered herein, the permittee shall fully implement the attached North Topsail Beach Shoreline Protection Project Mitigation and Monitoring Plan, including all reporting requirements. All monitoring reports referenced in this plan shall be submitted to the Division of Coastal Management and the Division of Marine Fisheries.
- 27) Immediately after completion of each phase of the beach nourishment project, and prior to the next three sea turtle nesting seasons, beach compaction shall be monitored and tilling shall be conducted as deemed necessary by the Division of Coastal Management in coordination with appropriate review agencies.
- 28) Immediately after completion of any phase of the beach nourishment project, and prior to the next three nesting seasons, monitoring shall be conducted to determine if escarpments are present that would affect nesting sea turtles or public access. If such escarpments are present, the permittee shall coordinate with the Division of Coastal Management for necessary remediation.
- 29) Unless specifically modified herein, all mitigative commitments and/or biological monitoring commitments made during the environmental review process as found in the Final Environmental Impact Statement shall be adhered to.

Cultural Resource Protection

- 30) There exists the possibility that the authorized activities may unearth a beached shipwreck. Should such a finding occur, the permittee shall immediately move to another area. The NCDCCR Underwater Archaeology Branch shall be contacted at (910) 458-9042 to determine appropriate response procedures.

General

- 31) This permit shall not be assigned, transferred, sold, or otherwise disposed of to a third party without the written approval of the Division of Coastal Management.
- 32) The permittee and/or his contractor shall schedule a pre-construction conference with the Division of Coastal Management prior to the initiation of any dredging activities.

ADDITIONAL CONDITIONS

- 33) The permittee shall obtain any necessary authorizations or approvals from the US Army Corps of Engineers prior to initiation of any permitted activity. All conditions of this Federal approval shall be adhered to.
- 34) The permittee and/or his contractor shall provide for proper storage and handling of all oils, chemicals, hydraulic fluids, etc., necessary to carry out the project.
- 35) The N.C. Division of Water Quality has authorized the proposed project under General Water Quality Certification No. 3642 (DWQ Project No. 081764V2), which was issued on 6/4/10. Any violation of the Water Quality Certification shall also be considered a violation of this CAMA Permit.
- 36) No sand shall be placed on any sand bags that have been determined by the Division of Coastal Management to be subject to removal under 15A NCAC 07H .0308(a)(2). In order to ensure compliance with this condition, the Division of Coastal Management shall be contacted at (910) 796-7215 prior to project initiation so that Division staff may meet on site with the permittee and/or contractor.

NOTE: The permittee is advised that the Division of Coastal Management shall regulate the removal of existing sandbags and the placement of new sandbags in accordance with 15A NCAC 07H .0308(a)(2)(F), or in accordance with any variances granted by the N.C. Coastal Resources Commission.

NOTE: This permit does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.

NOTE: Future nourishment activities may require a modification of this permit. The permittee shall contact a representative of the Division at (910) 796-7215 prior to the commencement of any such activity for this determination.

Permit Class
MODIFICATION/MINOR

Permit Number
79-10

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

X Major Development in an Area of Environmental Concern
pursuant to NCGS 113A-118

X Excavation and/or filling pursuant to NCGS 113-229

Issued to Town of North Topsail Beach, 2008 Loggerhead Court, North Topsail Beach, NC 28460

Authorizing development in Onslow Counties at New River Inlet and Ocean Beach, within
Town limits _____, _____ as requested in the permittee's application letter dated 9/4/12, Figures 1-3, 4a and
4b, all dated received 9/26/12

This permit, issued on October 12, 2012, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

- 1) Unless specifically altered herein, this Minor Modification authorizes the following modifications to the active permit, all as described in the attached letter dated 9/14/12 and the attached workplan drawings dated 9/26/12:
 - a. An increase in the volume of beach quality material from within the authorized ocean bar channel borrow area. This Minor Modification does not authorize an increase in the previously authorized depth of excavation in this area.
 - b. An alteration in authorized beach fill densities.
 - c. The discontinuation of the use of the previously approved upland spoil disposal area.
 - d. Modifications of the scope of the previously approved *Donax* aquaculture and reseeding study.

- 2) This Minor Modification shall be attached to the original of Permit No. 79-10, which was issued on 7/21/10, and copies of both documents shall be readily available on site when a Division representative inspects the project for compliance. All conditions and stipulations of the original permit remain in force under this Minor Modification unless specifically altered herein.

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

June 12, 2014

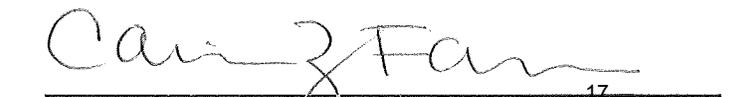
In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.



Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.



Interim Town Manager Signature of Permittee

Town of North Topsail Beach, N.C.
New River Inlet Channel Realignment and Beach Restoration
Maintenance Cost Projection
20-Jun-13

Base Bid

Item #	Description	Quantity	Unit of Measure	Unit Price	Total Cost
1	Mobilization & Demobilization	1	Job	\$2,480,000.00	\$2,480,000.00
3	Channel Realignment and Hydraulic Beachfill	500,000	Cubic Yards (cy)	\$9.08	\$4,540,000.00
Subtotal					\$7,020,000.00
Contingency					15%
Year 0 Total					\$8,073,000.00
Inflation Rate					1.3%
Maintenance Interval					5 years

Maintenance Year	5	10	15	20	25	30	0	5	10
Cost	\$8,611,567	\$9,186,063	\$9,798,884	\$10,452,589	\$11,149,903	\$11,893,737			

30 Yr. Total \$61,092,742

Annual Allocation \$2,036,425

Schedule of Costs

Year (Based On Initial Const. of Phases 2 - 5)			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Years 0-15	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30
Initial Construction Phase 1	x																	
Initial Construction Phases 2, 3, 4, and 5			x															
Maintenance						x					x					x		

Year (Based On Initial Const. of Phases 2 - 5)	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Years 16-30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43	43/44	44/45
Initial Construction Phase 1															
Initial Construction Phases 2, 3, 4, and 5															
Maintenance			x					x					x		

Construction Events	Estimated Cost (Static)	Estimated Cost (1.3% Annual Inflation)
Initial Construction of Phase 2, 3, 4, and 5	\$30,000,000	\$30,390,000.000
Maintenance #1 (2017/2018)	\$8,073,000	\$8,612,000
Maintenance #2 (2022/2023)	\$8,073,000	\$9,186,000
Maintenance #3 (2027/2028)	\$8,073,000	\$9,799,000
Maintenance #4 (2032/2033)	\$8,073,000	\$10,453,000
Maintenance #5 (2037/2038)	\$8,073,000	\$11,149,903
Maintenance #6 (2042/2043)	\$8,073,000	\$11,893,737

N. Topsail Beach Fund Balance for Ongoing Beach Maintenance



Revenues	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25	FY25-26	FY26-27
Occupancy Tax	\$850,000	\$913,750	\$982,281	\$1,055,952	\$1,135,149	\$1,191,906	\$1,251,502	\$1,314,077	\$1,379,780	\$1,448,769	\$1,521,208	\$1,597,268	\$1,677,132	\$1,760,988
15 Cents dedicated AV	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280	\$1,244,280
Sales Tax	<u>\$345,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>	<u>\$960,000</u>
Total	\$2,439,280	\$3,118,030	\$3,186,561	\$3,260,232	\$3,339,429	\$3,396,186	\$3,455,782	\$3,518,357	\$3,584,060	\$3,653,049	\$3,725,488	\$3,801,548	\$3,881,412	\$3,965,268
Expenses														
Phase 1 Debt	\$617,416	\$607,533	\$597,650	\$587,766	\$577,883	..	..	..	..	..	..	..	..	..
Phase 2-5 Debt	..	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106	\$1,671,106
Annual Operating	<u>\$200,000</u>	<u>\$210,000</u>	<u>\$220,500</u>	<u>\$231,525</u>	<u>\$243,101</u>	<u>\$255,256</u>	<u>\$268,019</u>	<u>\$281,420</u>	<u>\$295,491</u>	<u>\$310,266</u>	<u>\$325,779</u>	<u>\$342,068</u>	<u>\$359,171</u>	<u>\$377,130</u>
Total	\$817,416	\$2,488,639	\$2,489,256	\$2,490,397	\$2,492,090	\$1,926,362	\$1,939,125	\$1,952,526	\$1,966,597	\$1,981,372	\$1,996,885	\$2,013,174	\$2,030,277	\$2,048,236
Balance	\$1,621,864	\$629,391	\$697,305	\$769,835	\$847,339	\$1,469,824	\$1,516,656	\$1,565,831	\$1,617,463	\$1,671,678	\$1,728,603	\$1,788,374	\$1,851,134	\$1,917,032
Fund Balance End of FY12-13:	1,786,690													
Fund Balance For Beach Maintenance	\$3,442,640	\$4,112,751	\$4,858,157	\$5,684,272	\$6,596,927	\$3,798,358	\$5,368,164	\$7,003,335	\$8,707,006	\$10,482,471	\$7,635,329	\$9,517,940	\$11,482,765	\$13,533,796
Five Year Beach Maintenance Cost	..	..	..	..	\$4,306,000	..	..	..	..	\$4,593,031	..	..	..	..

Notes:

Occupancy Tax-- Last 10 years = 15% average annual increase; since the last 3 years is 8% increase annually, assume 7.5% for 4 years, then 5% thereafter

Ad Valorem-- Even though a revaluation in 2014, assume will be revenue neutral, and again in 2018

Sales Tax-- Assume some years will be lower, some higher, but that 2014 is a reasonable base amount for forecasting

Phase 2-5 interest -- 3.75%

FB Interest Rate-- 1.00%

Annual Operating-- Assumes a 5% increase annually
Expense

Beach Maintenance Cost-- All indications are that SB58, Shallow Draft Inlet dredging, will result in 50-50 cost share with the State and perhaps a 50-25-25 share between State, County and Town

Town of North Topsail Beach, NC
Special Obligation Bond for Beach Nourishment

June 26, 2013

Estimates of Phases 2-5 - Full \$30M 30 years USDA



Uses:

Project	\$30,000,000
Cost of Issuance	\$70,000
Total:	\$30,070,000

Sources:

USDA Borrowed Funds	\$30,070,000
Town Contributed	
Total:	\$30,070,000

1¢ = \$82,952

PLEGDED FUNDS

REPAYMENT FUNDS

15 cents starting in FY14

	Cable Franchise*	Utilities Franchise*	Sales Tax**	County Interlocal	Total
2013 \$	60,013	\$ 127,922	\$ 672,100		\$ 860,035
2014 \$	60,013	\$ 127,922	\$ 1,017,100		\$ 1,205,035
2015 \$	60,013	\$ 127,922	\$ 1,641,000	\$ 450,000	\$ 2,278,935
2016 \$	60,013	\$ 127,922	\$ 1,641,000	\$ 450,000	\$ 2,278,935
2017 \$	60,013	\$ 127,922	\$ 1,641,000	\$ 450,000	\$ 2,278,935
2018 \$	60,013	\$ 127,922	\$ 1,641,000	\$ 450,000	\$ 2,278,935
2019 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2020 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2021 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2022 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2023 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2024 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2025 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2026 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2027 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2028 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2029 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2030 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2031 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2032 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2033 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2034 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2035 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2036 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2037 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2038 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2039 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2040 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2041 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2042 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2043 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935
2044 \$	60,013	\$ 127,922	\$ 1,641,000		\$ 1,828,935

	Occupancy Tax***	Beach Fund Tax****	Sales Tax**	Total
2013 \$	850,000	\$ 82,000		\$ 932,000
2014 \$	850,000	\$ 1,244,280	\$ 345,000	\$ 2,439,280
2015 \$	913,750	\$ 1,244,280	\$ 960,000	\$ 3,118,030
2016 \$	982,281	\$ 1,244,280	\$ 960,000	\$ 3,186,561
2017 \$	1,055,952	\$ 1,244,280	\$ 960,000	\$ 3,260,232
2018 \$	1,135,149	\$ 1,244,280	\$ 960,000	\$ 3,339,429
2019 \$	1,191,906	\$ 1,244,280	\$ 960,000	\$ 3,396,186
2020 \$	1,251,502	\$ 1,244,280	\$ 960,000	\$ 3,455,782
2021 \$	1,314,077	\$ 1,244,280	\$ 960,000	\$ 3,518,357
2022 \$	1,379,780	\$ 1,244,280	\$ 960,000	\$ 3,584,060
2023 \$	1,448,769	\$ 1,244,280	\$ 960,000	\$ 3,653,049
2024 \$	1,521,208	\$ 1,244,280	\$ 960,000	\$ 3,725,488
2025 \$	1,597,268	\$ 1,244,280	\$ 960,000	\$ 3,801,548
2026 \$	1,677,132	\$ 1,244,280	\$ 960,000	\$ 3,881,412
2027 \$	1,760,988	\$ 1,244,280	\$ 960,000	\$ 3,965,268
2028 \$	1,849,038	\$ 1,244,280	\$ 960,000	\$ 4,053,318
2029 \$	1,941,490	\$ 1,244,280	\$ 960,000	\$ 4,145,770
2030 \$	2,038,564	\$ 1,244,280	\$ 960,000	\$ 4,242,844
2031 \$	2,140,492	\$ 1,244,280	\$ 960,000	\$ 4,344,772
2032 \$	2,247,517	\$ 1,244,280	\$ 960,000	\$ 4,451,797
2033 \$	2,359,893	\$ 1,244,280	\$ 960,000	\$ 4,564,173
2034 \$	2,477,887	\$ 1,244,280	\$ 960,000	\$ 4,682,167
2035 \$	2,601,782	\$ 1,244,280	\$ 960,000	\$ 4,806,062
2036 \$	2,731,871	\$ 1,244,280	\$ 960,000	\$ 4,936,151
2037 \$	2,868,464	\$ 1,244,280	\$ 960,000	\$ 5,072,744
2038 \$	3,011,888	\$ 1,244,280	\$ 960,000	\$ 5,216,168
2039 \$	3,162,482	\$ 1,244,280	\$ 960,000	\$ 5,366,762
2040 \$	3,320,606	\$ 1,244,280	\$ 960,000	\$ 5,524,886
2041 \$	3,486,636	\$ 1,244,280	\$ 960,000	\$ 5,690,916
2042 \$	3,660,968	\$ 1,244,280	\$ 960,000	\$ 5,865,248
2043 \$	3,844,017	\$ 1,244,280	\$ 960,000	\$ 6,048,297
2044 \$	4,036,217	\$ 1,244,280	\$ 960,000	\$ 6,240,497

* Based on 5yr average of revenues collected /w no growth
** Based on changes from blended to straight Ad Valorem

*** 2013 Budgeted Amount /w 7.5% growth in 2015-2018 and 5% growth thereafter
**** 1c in 2013, Increased in 2014 and thereafter

Fiscal Year	\$5.74M Phase 1 Financing (5yr)	\$30M Phase 2-5 Financing** (30yr)	Total D/S	Operating & Misc Expenses	Pay-go Used	Beach Fund Balance before Beach Maintenance Expense	Beach, Maintencel	FY Ending Beach Fund Balance*	1.25 Minimum		1.00 Minimum	
									Repayment Coverage	Repayment Coverage (w/FB)	Pledged Coverage	Pledged Coverage
2012						\$ 4,021,309		\$ 4,021,309				
2013					\$ 2,841,660	\$ 1,786,690		\$ 1,786,690				
2014	\$ 617,416		\$ 617,416	\$ 200,000		\$ 3,442,640		\$ 3,442,640	3.95	9.53	1.95	
2015	\$ 607,533	\$ 1,671,106	\$ 2,278,639	\$ 210,000		\$ 4,112,751		\$ 4,112,751	1.37	3.17	1.00	
2016	\$ 597,650	\$ 1,671,106	\$ 2,268,756	\$ 220,500		\$ 4,858,156		\$ 4,858,156	1.40	3.55	1.00	
2017	\$ 587,766	\$ 1,671,106	\$ 2,258,872	\$ 231,525		\$ 5,684,271		\$ 5,684,271	1.44	3.96	1.01	
2018	\$ 577,883	\$ 1,671,106	\$ 2,248,989	\$ 243,101		\$ 6,596,925	\$ 4,306,000	\$ 2,290,925	1.48	2.50	1.01	
2019		\$ 1,671,106	\$ 1,671,106	\$ 255,256		\$ 3,798,356		\$ 3,798,356	2.03	4.31	1.09	
2020		\$ 1,671,106	\$ 1,671,106	\$ 268,019		\$ 5,368,163		\$ 5,368,163	2.07	5.28	1.09	
2021		\$ 1,671,106	\$ 1,671,106	\$ 281,420		\$ 7,003,333		\$ 7,003,333	2.11	6.30	1.09	
2022		\$ 1,671,106	\$ 1,671,106	\$ 295,491		\$ 8,707,004		\$ 8,707,004	2.14	7.36	1.09	
2023		\$ 1,671,106	\$ 1,671,106	\$ 310,266		\$ 10,482,468	\$ 4,593,031	\$ 5,889,437	2.19	5.71	1.09	
2024		\$ 1,671,106	\$ 1,671,106	\$ 325,779		\$ 7,694,220		\$ 7,694,220	2.23	6.83	1.09	
2025		\$ 1,671,106	\$ 1,671,106	\$ 342,068		\$ 9,577,420		\$ 9,577,420	2.27	8.01	1.09	
2026		\$ 1,671,106	\$ 1,671,106	\$ 359,171		\$ 11,542,840		\$ 11,542,840	2.32	9.23	1.09	
2027		\$ 1,671,106	\$ 1,671,106	\$ 377,130		\$ 13,594,471		\$ 13,594,471	2.37	10.51	1.09	
2028		\$ 1,671,106	\$ 1,671,106	\$ 395,986		\$ 15,736,503	\$ 4,899,500	\$ 10,837,003	2.43	8.91	1.09	
2029		\$ 1,671,106	\$ 1,671,106	\$ 415,786		\$ 13,024,839		\$ 13,024,839	2.48	10.27	1.09	
2030		\$ 1,671,106	\$ 1,671,106	\$ 436,575		\$ 15,311,602		\$ 15,311,602	2.54	11.70	1.09	
2031		\$ 1,671,106	\$ 1,671,106	\$ 458,404		\$ 17,702,133		\$ 17,702,133	2.60	13.19	1.09	
2032		\$ 1,671,106	\$ 1,671,106	\$ 481,324		\$ 20,201,515		\$ 20,201,515	2.66	14.75	1.09	
2033		\$ 1,671,106	\$ 1,671,106	\$ 505,390		\$ 22,815,083	\$ 5,226,500	\$ 17,588,583	2.73	13.26	1.09	
2034		\$ 1,671,106	\$ 1,671,106	\$ 530,660		\$ 20,269,675		\$ 20,269,675	2.80	14.93	1.09	
2035		\$ 1,671,106	\$ 1,671,106	\$ 557,193		\$ 23,075,912		\$ 23,075,912	2.88	16.68	1.09	
2036		\$ 1,671,106	\$ 1,671,106	\$ 585,052		\$ 26,013,464		\$ 26,013,464	2.95	18.52	1.09	
2037		\$ 1,671,106	\$ 1,671,106	\$ 614,305		\$ 29,088,805		\$ 29,088,805	3.04	20.44	1.09	
2038		\$ 1,671,106	\$ 1,671,106	\$ 645,020		\$ 32,308,735	\$ 5,574,952	\$ 26,733,783	3.12	19.12	1.09	
2039		\$ 1,671,106	\$ 1,671,106	\$ 677,271		\$ 30,049,690		\$ 30,049,690	3.21	21.19	1.09	
2040		\$ 1,671,106	\$ 1,671,106	\$ 711,135		\$ 33,524,258		\$ 33,524,258	3.31	23.37	1.09	
2041		\$ 1,671,106	\$ 1,671,106	\$ 746,691		\$ 37,165,351		\$ 37,165,351	3.41	25.65	1.09	
2042		\$ 1,671,106	\$ 1,671,106	\$ 784,026		\$ 40,981,222		\$ 40,981,222	3.51	28.03	1.09	
2043		\$ 1,671,106	\$ 1,671,106	\$ 823,227		\$ 44,980,537	\$ 5,946,869	\$ 39,033,668	3.62	26.98	1.09	
2044		\$ 1,671,106	\$ 1,671,106	\$ 864,388		\$ 43,166,058		\$ 43,166,058	3.73	29.57	1.09	

* FY2013 Beach Fund balance = \$1,786,690

** Interest Rate of 3.75%

Town of North Topsail Beach, NC

Special Obligation Bond for Beach Nourishment

June 7, 2013 **Estimates of Phases 2-5 - Full \$30M (No Wrapping) 30 years USDA**



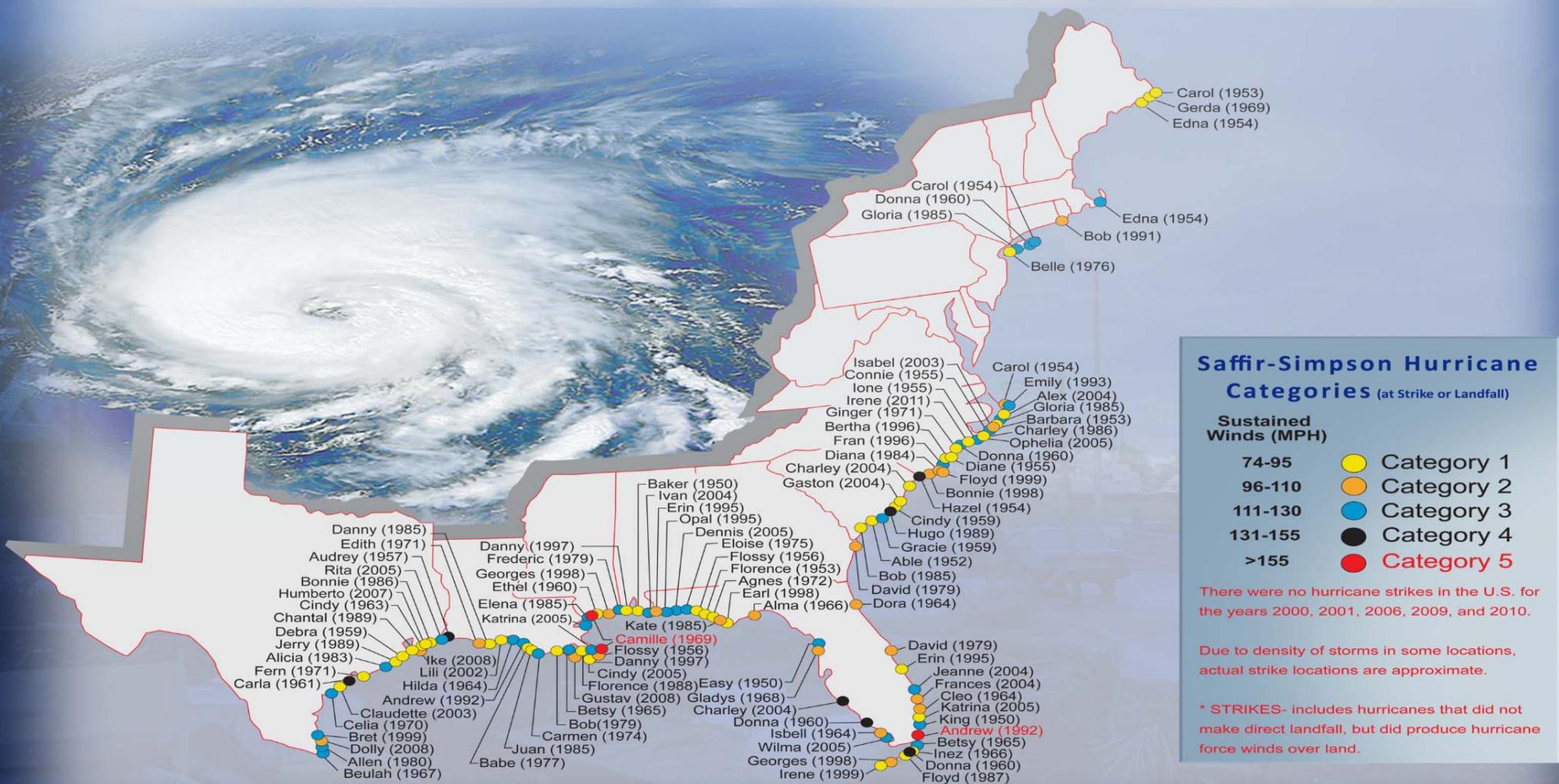
Amortization: 30 Years No Wrapping Equal Payments
 Par Amount: \$30,070,000

Interest Rate: 3.75%

<u>FY</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>
2015	\$552,920	\$1,118,186	\$ 1,671,106
2016	\$574,015	\$1,097,091	\$ 1,671,106
2017	\$595,914	\$1,075,192	\$ 1,671,106
2018	\$618,649	\$1,052,457	\$ 1,671,106
2019	\$642,252	\$1,028,855	\$ 1,671,106
2020	\$666,754	\$1,004,352	\$ 1,671,106
2021	\$692,192	\$978,914	\$ 1,671,106
2022	\$718,600	\$952,506	\$ 1,671,106
2023	\$746,015	\$925,091	\$ 1,671,106
2024	\$774,477	\$896,629	\$ 1,671,106
2025	\$804,024	\$867,082	\$ 1,671,106
2026	\$834,699	\$836,408	\$ 1,671,106
2027	\$866,544	\$804,563	\$ 1,671,106
2028	\$899,603	\$771,503	\$ 1,671,106
2029	\$933,924	\$737,182	\$ 1,671,106
2030	\$969,555	\$701,552	\$ 1,671,106
2031	\$1,006,545	\$664,562	\$ 1,671,106
2032	\$1,044,945	\$626,161	\$ 1,671,106
2033	\$1,084,811	\$586,295	\$ 1,671,106
2034	\$1,126,198	\$544,908	\$ 1,671,106
2035	\$1,169,164	\$501,942	\$ 1,671,106
2036	\$1,213,770	\$457,337	\$ 1,671,106
2037	\$1,260,076	\$411,030	\$ 1,671,106
2038	\$1,308,150	\$362,956	\$ 1,671,106
2039	\$1,358,058	\$313,049	\$ 1,671,106
2040	\$1,409,869	\$261,237	\$ 1,671,106
2041	\$1,463,658	\$207,449	\$ 1,671,106
2042	\$1,519,498	\$151,608	\$ 1,671,106
2043	\$1,577,469	\$93,638	\$ 1,671,106
2044	\$1,637,651	\$33,455	\$ 1,671,106

Totals: \$ 30,070,000 \$ 20,063,189 \$ 50,133,189

CONTINENTAL UNITED STATES HURRICANE STRIKES 1950-2011*

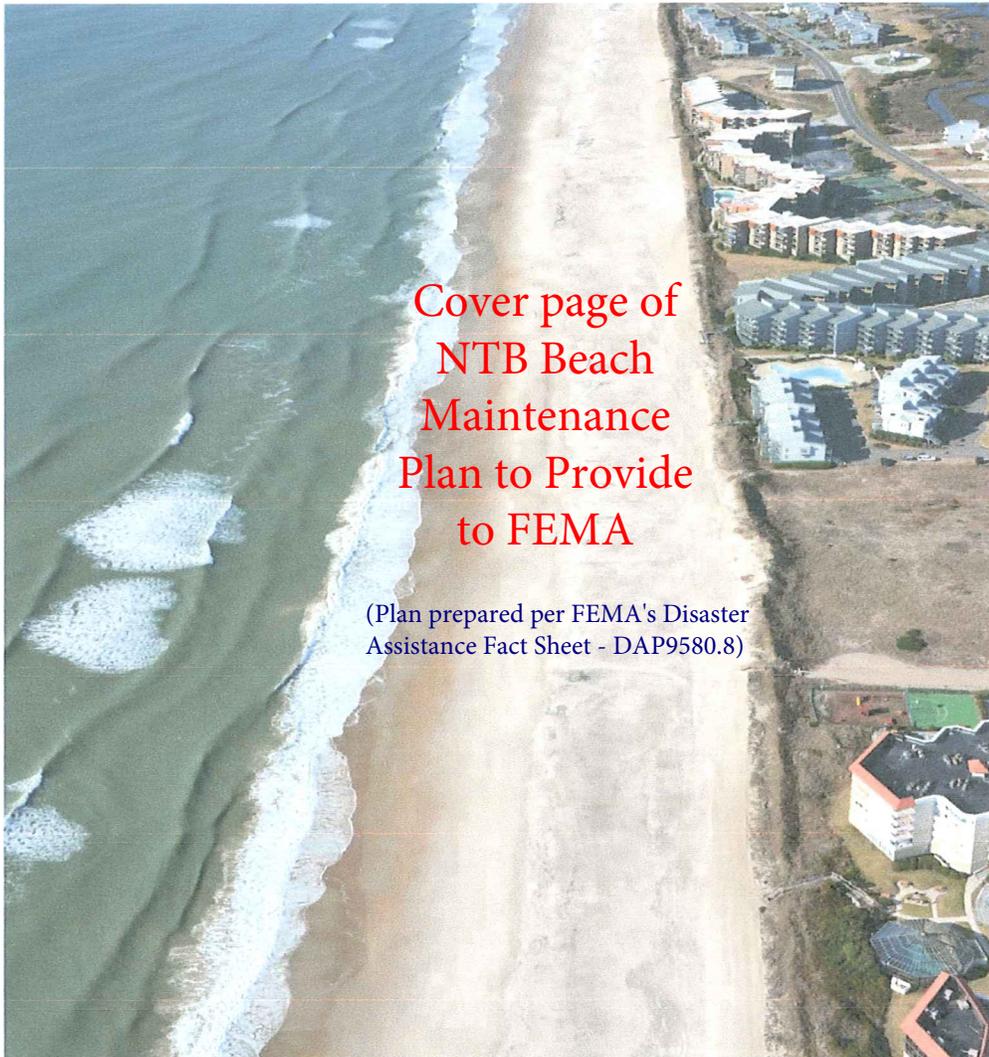




Town of North Topsail Beach

North Carolina

North Topsail Beach Shoreline Protection Project



Photograph provided by Aerophoto (Feb. 20, 2013).

Beach Maintenance Plan

April 2013

Prepared By:

Coastal Planning & Engineering of North Carolina, Inc.
4038 Masonboro Loop Road
Wilmington, NC 28409



FEMA

OCT 01 2009

MEMORANDUM FOR: Regional Administrators
Acting Regions Administrators
Regions I - X

ATTENTION: Disaster Assistance Division Directors

FROM: Elizabeth A. Zimmerman 
Assistant Administrator
Disaster Assistance Directorate

SUBJECT: Disaster Assistance Fact Sheet DAP9580.8
Eligible Sand Replacement on Public Beaches

The purpose of this memorandum is to announce the issuance of the attached final Disaster Assistance Fact Sheet DAP9580.8, *Eligible Sand Replacement on Public Beaches*. This fact sheet is applicable to all major disasters and emergencies declared on or after the date of publication.

If you have any questions about this Fact Sheet, please contact Byron Mason, Public Assistance Division, via email at Byron.Mason@dhs.gov, facsimile (202) 646-3304, or phone (202) 646-4368.

Attachment



FEMA

DISASTER ASSISTANCE

FACT SHEET

9580.8

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

Overview

A beach is an area of unprotected, unconfined sand along a body of water subject to winds, tides, currents, and/or waves. When conducting evaluations of sand losses due to storm-induced erosion, the entire beach profile must be considered. The beach profile includes a dune or elevated back beach, a backshore consisting of a relatively flat berm(s) above high tide or high water and a sloped foreshore that is subject to variations in water levels, and a sub-aqueous nearshore zone that is influenced by the tides, currents, and wave action (USACE, 2003). The beach profile is very dynamic, constantly changing with changes in the tides, currents, and wave action that affect it. Sand moves from the dune and/or berm to the foreshore and sub-aqueous nearshore zone, and back again. This movement or redistribution of sand within the beach profile is a natural process that does not constitute beach damage.

Occasionally a storm causes such dramatic changes in the tides, currents, and wave actions that affect a beach, that sand is moved outside of the beach profile. It is moved too far on-shore, off-shore, or along-shore such that it is not recoverable by natural processes. In these cases, the beach is considered damaged by the storm.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5121-5206, as amended, Sections 403 and 406; and 44 Code of Federal Regulations (CFR) §§ 206.225, **Emergency work**, and 206.226, **Restoration of damaged facilities**, authorize FEMA's Public Assistance (PA) Program to fund replacement of sand on damaged public beaches under certain conditions.

Eligibility is divided into two areas: emergency work and permanent work (restoration of damaged facilities). This Fact Sheet addresses eligibility requirements for each area.

FEMA will review proposed sand replacement projects for compliance with the Endangered Species Act, Coastal Barrier Resources Act, and the National Historic Preservation Act. In addition, the applicant is responsible for obtaining all permits as required by applicable Federal, State, Tribal, or local regulatory agencies including, but not limited to, permits under Section 404 of the Clean Water Act and Coastal Zone Management Act.

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

Emergency Work

- Emergency work, in accordance with 44 CFR §206.225(a)(3), is eligible for PA funding when it is necessary to:
 - Eliminate or lessen immediate threats to life, public health, or safety; or
 - Eliminate or lessen immediate threats of significant additional damage to improved property.
 - Immediate threat means the threat of additional damage or destruction from an event which can reasonably be expected to occur within five years (see 44 CFR §206.221(c)); and
 - Emergency work to eliminate or lessen immediate threats of additional damage to improved property must be cost effective (see 44 CFR §206.225(a)(3)(ii)).
- If a beach has eroded to a point where a five-year storm or flood event will damage improved property, cost-effective emergency work on the beach may be eligible. Improved property is defined as a “structure, facility or item of equipment which was built, constructed or manufactured” according to 44 CFR §206.221(d), **Definitions**.
- Emergency work on beaches typically includes the construction of a temporary sand berm to protect against additional damage from a five-year storm. These sand berms are not intended to be permanent, only to provide protection from immediate threats.
- FEMA determined the five-year flood protection criterion for emergency work from a frequency versus average dune erosion relationship that the National Flood Insurance Program developed for application on a nationwide basis (FEMA, 1988). For a five-year event, the average expected erosion above the five-year stillwater elevation (the maximum storm-induced water-surface elevation, primarily a combination of the normal tide and the storm surge) is 6 cubic yards per linear foot (CY/LF) of shoreline.
- Emergency berms can be constructed with sand recovered from the low-tide beach (foreshore and nearshore zone) and/or over-wash areas. If insufficient quantities are available to be recovered, and/or if state and/or local regulations prohibit these actions, sand can be imported to construct the emergency berms, if the applicant demonstrates that it is cost-effective. The source of imported sand must meet all applicable environmental protection regulations in order to be eligible for FEMA funding. These berms should have no more than 6 CY/LF of sand above the five-year stillwater elevation. In some cases it may be necessary to place sand below the five-year elevation to provide a base for the berm. The placement of that sand is also eligible as part of the emergency protection. If 6 CY/LF of sand did not exist above stillwater elevation before the event, the emergency berm and total amount of sand replaced is limited to the amount of sand eroded by the disaster event.

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

- The following items are NOT eligible emergency protective measures:
 - Sand placement in isolated areas of severe erosion as it does not protect improved property;
 - Protection of improved property that will not be damaged by an event with a 20 percent chance of occurrence each year; or
 - Protection of unimproved property.

Permanent Work

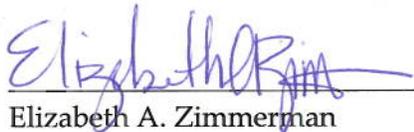
- FEMA provides grants for the repair, restoration, reconstruction, or replacement of public facilities on the basis of their design as they existed immediately prior to the disaster (see 44 CFR §206.226). In accordance with 44 CFR §206.226(j)(2), a beach may be considered an eligible facility when:
 - The beach was constructed by the placement of imported sand (of proper grain size) to a designed elevation, width, and slope;
 - A maintenance program involving periodic renourishment with imported sand has been established and adhered to by the applicant; and
 - The maintenance program preserves the original design.
- To document eligibility of the beach as a designed and maintained facility, the applicant should provide the following information to FEMA:
 - All design studies, plans, construction documents, and as-builts for the original nourishment;
 - All studies, plans, construction documents, and as-builts for every renourishment;
 - Documentation and details of the maintenance plan, including how the need for renourishment is determined and funded; and
 - Pre-and post-storm profiles that extend at least to the seaward edge of the sub-aqueous nearshore zone (closure depth, usually -15 to -20 feet).
- The amount of sand eligible for replacement with permanent work funding is limited to the amount lost as a result of the disaster event. The pre- and post-storm profiles are used to determine the eligible volume of sand. If pre-storm profiles are not available, the estimated erosion from the design study and renourishment history can be used to determine a pre-storm condition.
- The cost to replace sand that eroded prior to the disaster is **not** eligible for FEMA funding. However, the applicant is encouraged to renourish the project to the design.

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

- Not all beach nourishments are eligible for PA funding as a designed and maintained facility. The following are typically **not** eligible:
 - Emergency or “one-time” nourishments, even if to a design, are **not** eligible projects because they do not have an established and adhered to maintenance program.
 - Emergency or “as-needed” renourishments when the beach has eroded to a critical condition (all of the original nourishment gone), are **not** eligible maintenance programs. A portion of the improved beach must be maintained through scheduled renourishments.
 - Renourishments must be to the project design; partial renourishments or “hot-spot” nourishments are **not** considered maintenance of the improved project.
 - Sand placed on a beach from a channel maintenance project is **not** an eligible beach nourishment project. The sand placed on the beach (dredge spoils) is not selected to meet compatibility design criteria, and the amount placed is dependent on the amount dredged, not a design. If removal of sand from the maintained channel is eligible for PA funding, disposal of the sand spoils on the beach may be eligible as part of that project.
- Work to restore or replace sand on an unimproved natural beach is **not** eligible for FEMA assistance as natural beaches are not constructed and maintained to a design (see 44 CFR §206.226(j)).

References

- Federal Emergency Management Agency, *Basis of Erosion Assessment Procedures for Coastal Flood Insurance Studies*, Washington, DC, November 1988.
- U.S. Army Corps of Engineers, *Coastal Engineering Manual*, EM 1110-2-1100, Change 1, Washington, DC, July 2003.


Elizabeth A. Zimmerman

Assistant Administrator
Disaster Assistance Directorate

10.1.09
Date

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Surf City's dune line nearly restored *

By TRISTA TALTON - *Wilmington StarNews*
Published: Wednesday, March 6, 2013 at 18:44 PM.

Surf City's dune line is almost fully restored despite the lack of cooperation from Mother Nature.

"There just has not been a whole lot of sand to push," Town Manager Michael Moore said during the town council's Tuesday night meeting. "If we get any kind of little nor'easter it'll take the sand away. It has been a battle the whole time."

Bulldozers have been busy pushing sand since Jan. 7 to restore the town's dune line, more than 31,000 linear feet of which was damaged late last fall by the storm surge from a powerful nor'easter.

The storm washed away upwards of 15 feet of sand from some areas of the town's dune line, pulling vegetation planted to protect the dunes onto the beach and exposing sandbags placed between the ocean and N.C. 50 on Topsail Island.

Plans are to begin planting vegetation on the repaired dunes in June or July, Moore said.

Surf City resident Jack Solak thanked town officials for the work that has taken place on the beach.

"I wish we had more sand," he said.

Moore said it would be a tight timeline, but there is a possibility the town can do another push to protect the dunes. The town would have to complete another project before the start of sea turtle nesting season, which begins in mid-May.

The current project cost \$104,000. The last time the town had to pay to restore the dune structure was in 2010.

*Surf City is the town
directly south of
North Topsail Beach

Town of North Topsail Beach

Daniel Tuman, Mayor
Suzanne Gray, Mayor Pro Tem
Aldermen:
Don Harte
Tom Leonard
Richard Macartney
Michael Yawn



Stuart Turille
Town Manager
Carin Z. Faulkner, MPA
Town Clerk

RESOLUTION NO. 2013-11

**RESOLUTION ESTABLISHING AND CREATING THE TOWN OF NORTH TOPSAIL BEACH
NORTH TOPSAIL BEACH SHORELINE PROTECTION PROJECT - PHASE TWO
MUNICIPAL SERVICE DISTRICT**

WHEREAS, Chapter 160A, Article 23 of the North Carolina General Statutes authorizes towns within North Carolina to define service districts to finance, provide, or maintain for such districts one or more services, facilities, or functions in addition to or to a greater extent than those financed, provided or maintained for the entire city; and

WHEREAS, said statutes further provide that the town may define a service district for the purpose of beach erosion control and flood and hurricane protection works; and

WHEREAS, acting in response to a need for action in order to protect structures, maintain tax and economic base, protect town infrastructure including facilities for public recreational access the Board of Aldermen for the Town of North Topsail Beach has determined that the creation of a municipal service district for erosion control and hurricane protection works will be for the benefit of those properties located within the service district boundaries; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach further finds that the proposed district is in need of projects and programs to the standards of G.S. 160A-537(a) to a demonstrably greater extent than the remainder of the town to meet the needs and goals set forth above; and

WHEREAS, pursuant to such determinations and in accordance with applicable provision of the General Statutes, the Board of Aldermen for the Town of North Topsail Beach has defined such a district, and does determine, as a fact, that the proposed district is in need of one or more of the services, facilities, or functions listed in G.S. 160A-536(a) to a demonstrably greater extent than the remainder of the town; and

WHEREAS, a map of the proposed district showing its proposed boundaries, a copy of which is attached hereto and incorporated by reference, a statement showing that the proposed district meets the standards set out in G.S.160A-357(a), and a plan for providing in the district one or more of the services listed in G.S. 160A-536 has been created; all of which has been incorporated into a report which has been available for public inspection in the office of the Town Clerk for four (4) weeks prior to the public hearing on the matter of the establishment of the service district; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach has caused a notice of such hearing to be duly published in the Jacksonville Daily News, a newspaper having general circulation in the Town of North Topsail Beach and Onslow County, said hearing having been conducted on June 17, 2013 and the Town Clerk has certified to the Board of Aldermen that the mailing of notice of hearing has been completed, all in conformity to G.S.160A-537(c).

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN FOR THE TOWN OF NORTH TOPSAIL BEACH, NORTH CAROLINA that:

1. The Town of North Topsail Beach has fully complied with each and every requirement of Chapter 160A, Article 23 of the North Carolina General statutes and determines and finds same as a fact.

2. The Town of North Topsail Beach Shoreline Protection Project Phase Two Municipal Service District for erosion control and flood and hurricane works is hereby established and created in accordance with the following description:

Contained within the Atlantic Ocean to the east, the Intracoastal Waterway to the west, and beginning at 1763 New River Inlet Road (Map Number 799-11.2 - Soundside) and 1758 New River Inlet Road (Map Number 775-1.8 - Oceanside) to the north and the Villa Capriani (Map Number 775A-1 - Soundside and 775-1.8 - Oceanside) to the south and being the same property as shown within the boundaries set forth on that certain map attached hereto as "Exhibit A" and incorporated herein by reference, to which reference is made for a more complete and accurate description of the boundaries of North Topsail Beach Shoreline Protection Project Phase Two Municipal Service District.

3. The Town of North Topsail Beach may levy property taxes within the service district in addition to those throughout the town in order to finance, provide or maintain for the district, services provided therein, in addition to or to a greater extent than those financed, provided or maintained for the entire town. The Town of North Topsail Beach anticipates that special obligation bonds will be authorized for this initial project and per G.S. 160A-537(d) no ad valorem tax may be levied for a partial fiscal year.

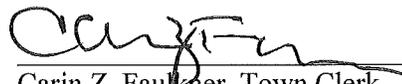
4. This resolution shall take effect upon adoption.

Adopted this, the 17th day of June, 2013.



Daniel Tuman, Mayor

ATTEST:



Carin Z. Faulkner, Town Clerk

(Seal)

Town of North Topsail Beach

Daniel Tuman, Mayor
Suzanne Gray, Mayor Pro Tem
Aldermen:
Don Harte
Tom Leonard
Richard Macartney
Michael Yawn



Stuart Turille
Town Manager

Carin Z. Faulkner, MPA
Town Clerk

RESOLUTION NO. 2013-12

**RESOLUTION ESTABLISHING AND CREATING THE TOWN OF NORTH TOPSAIL BEACH
NORTH TOPSAIL BEACH SHORELINE PROTECTION PROJECT - PHASE THREE
MUNICIPAL SERVICE DISTRICT**

WHEREAS, Chapter 160A, Article 23 of the North Carolina General Statutes authorizes towns within North Carolina to define service districts to finance, provide, or maintain for such districts one or more services, facilities, or functions in addition to or to a greater extent than those financed, provided or maintained for the entire city; and

WHEREAS, said statutes further provide that the town may define a service district for the purpose of beach erosion control and flood and hurricane protection works; and

WHEREAS, acting in response to a need for action in order to protect structures, maintain tax and economic base, protect town infrastructure including facilities for public recreational access the Board of Aldermen for the Town of North Topsail Beach has determined that the creation of a municipal service district for erosion control and hurricane protection works will be for the benefit of those properties located within the service district boundaries; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach further finds that the proposed district is in need of projects and programs to the standards of G.S. 160A-537(a) to a demonstrably greater extent than the remainder of the town to meet the needs and goals set forth above; and

WHEREAS, pursuant to such determinations and in accordance with applicable provision of the General Statutes, the Board of Aldermen for the Town of North Topsail Beach has defined such a district, and does determine, as a fact, that the proposed district is in need of one or more of the services, facilities, or functions listed in G.S. 160A-536(a) to a demonstrably greater extent than the remainder of the town; and

WHEREAS, a map of the proposed district showing its proposed boundaries, a copy of which is attached hereto and incorporated by reference, a statement showing that the proposed district meets the standards set out in G.S.160A-357(a), and a plan for providing in the district one or more of the services listed in G.S. 160A-536 has been created; all of which has been incorporated into a report which has been available for public inspection in the office of the Town Clerk for four (4) weeks prior to the public hearing on the matter of the establishment of the service district; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach has caused a notice of such hearing to be duly published in the Jacksonville Daily News, a newspaper having general circulation in the Town of North Topsail Beach and Onslow County, said hearing having been conducted on June 17, 2013 and the Town Clerk has certified to the Board of Aldermen that the mailing of notice of hearing has been completed, all in conformity to G.S.160A-537(c).

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN FOR THE TOWN OF NORTH TOPSAIL BEACH, NORTH CAROLINA that:

1. The Town of North Topsail Beach has fully complied with each and every requirement of Chapter 160A, Article 23 of the North Carolina General statutes and determines and finds same as a fact.

2. The Town of North Topsail Beach Shoreline Protection Project Phase Three Municipal Service District for erosion control and flood and hurricane works is hereby established and created in accordance with the following description:

Contained within the Atlantic Ocean to the east, the Intracoastal Waterway to the west, and beginning at two lots north of 764 New River Inlet Road (Map Number 775-1.2 - Soundside and Map Number Map Number 775C-10 - Oceanside) to the north and the Jeffries Lot on New River Inlet Road (Map Number 768-7) to the south and being the same property as shown within the boundaries set forth on that certain map attached hereto as "Exhibit A" and incorporated herein by reference, to which reference is made for a more complete and accurate description of the boundaries of North Topsail Beach Shoreline Protection Project Phase Three Municipal Service District.

3. The Town of North Topsail Beach may levy property taxes within the service district in addition to those throughout the town in order to finance, provide or maintain for the district, services provided therein, in addition to or to a greater extent than those financed, provided or maintained for the entire town. The Town of North Topsail Beach anticipates that special obligation bonds will be authorized for this initial project and per G.S. 160A-537(d) no ad valorem tax may be levied for a partial fiscal year.

4. This resolution shall take effect upon adoption.

Adopted this, the 17th day of June, 2013.



Daniel Tuman, Mayor

ATTEST:



Carin Z. Faulkner, Town Clerk

(Seal)

Town of North Topsail Beach

Daniel Tuman, Mayor
Suzanne Gray, Mayor Pro Tem
Aldermen:
Don Harte
Tom Leonard
Richard Macartney
Michael Yawn



Stuart Turille
Town Manager
Carin Z. Faulkner, MPA
Town Clerk

RESOLUTION NO. 2013-13

**RESOLUTION ESTABLISHING AND CREATING THE TOWN OF NORTH TOPSAIL BEACH
NORTH TOPSAIL BEACH SHORELINE PROTECTION PROJECT - PHASE FOUR
MUNICIPAL SERVICE DISTRICT**

WHEREAS, Chapter 160A, Article 23 of the North Carolina General Statutes authorizes towns within North Carolina to define service districts to finance, provide, or maintain for such districts one or more services, facilities, or functions in addition to or to a greater extent than those financed, provided or maintained for the entire city; and

WHEREAS, said statutes further provide that the town may define a service district for the purpose of beach erosion control and flood and hurricane protection works; and

WHEREAS, acting in response to a need for action in order to protect structures, maintain tax and economic base, protect town infrastructure including facilities for public recreational access the Board of Aldermen for the Town of North Topsail Beach has determined that the creation of a municipal service district for erosion control and hurricane protection works will be for the benefit of those properties located within the service district boundaries; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach further finds that the proposed district is in need of projects and programs to the standards of G.S. 160A-537(a) to a demonstrably greater extent than the remainder of the town to meet the needs and goals set forth above; and

WHEREAS, pursuant to such determinations and in accordance with applicable provision of the General Statutes, the Board of Aldermen for the Town of North Topsail Beach has defined such a district, and does determine, as a fact, that the proposed district is in need of one or more of the services, facilities, or functions listed in G.S. 160A-536(a) to a demonstrably greater extent than the remainder of the town; and

WHEREAS, a map of the proposed district showing its proposed boundaries, a copy of which is attached hereto and incorporated by reference, a statement showing that the proposed district meets the standards set out in G.S.160A-357(a), and a plan for providing in the district one or more of the services listed in G.S. 160A-536 has been created; all of which has been incorporated into a report which has been available for public inspection in the office of the Town Clerk for four (4) weeks prior to the public hearing on the matter of the establishment of the service district; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach has caused a notice of such hearing to be duly published in the Jacksonville Daily News, a newspaper having general circulation in the Town of North Topsail Beach and Onslow County, said hearing having been conducted on June 17, 2013 and the Town Clerk has certified to the Board of Aldermen that the mailing of notice of hearing has been completed, all in conformity to G.S.160A-537(c).

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN FOR THE TOWN OF NORTH TOPSAIL BEACH, NORTH CAROLINA that:

1. The Town of North Topsail Beach has fully complied with each and every requirement of Chapter 160A, Article 23 of the North Carolina General statutes and determines and finds same as a fact.

2. The Town of North Topsail Beach Shoreline Protection Project Phase Four Municipal Service District for erosion control and flood and hurricane works is hereby established and created in accordance with the following description:

Contained within the Atlantic Ocean to the east, the Intracoastal Waterway to the west, and beginning at 100 Oceanview Lane (Map Number 768B-1) to the north and 3829 Island Drive (Map Number 815-12.1 – Soundside) and 3825 Island Drive (Map Number 815-12 Oceanside) to the south and being the same property as shown within the boundaries set forth on that certain map attached hereto as "Exhibit A" and incorporated herein by reference, to which reference is made for a more complete and accurate description of the boundaries of North Topsail Beach Shoreline Protection Project Phase Four Municipal Service District.

3. The Town of North Topsail Beach may levy property taxes within the service district in addition to those throughout the town in order to finance, provide or maintain for the district, services provided therein, in addition to or to a greater extent than those financed, provided or maintained for the entire town. The Town of North Topsail Beach anticipates that special obligation bonds will be authorized for this initial project and per G.S. 160A-537(d) no ad valorem tax may be levied for a partial fiscal year.

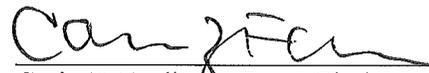
4. This resolution shall take effect upon adoption.

Adopted this, the 17th day of June, 2013.



Daniel Tuman, Mayor

ATTEST:



Carin Z. Faulkner, Town Clerk

(Seal)

Town of North Topsail Beach

Daniel Tuman, Mayor
Suzanne Gray, Mayor Pro Tem
Aldermen:
Don Harte
Tom Leonard
Richard Macartney
Michael Yawn



Stuart Turille
Town Manager

Carin Z. Faulkner, MPA
Town Clerk

RESOLUTION NO. 2013-14

**RESOLUTION ESTABLISHING AND CREATING THE TOWN OF NORTH TOPSAIL BEACH
NORTH TOPSAIL BEACH SHORELINE PROTECTION PROJECT - PHASE FIVE
MUNICIPAL SERVICE DISTRICT**

WHEREAS, Chapter 160A, Article 23 of the North Carolina General Statutes authorizes towns within North Carolina to define service districts to finance, provide, or maintain for such districts one or more services, facilities, or functions in addition to or to a greater extent than those financed, provided or maintained for the entire city; and

WHEREAS, said statutes further provide that the town may define a service district for the purpose of beach erosion control and flood and hurricane protection works; and

WHEREAS, acting in response to a need for action in order to protect structures, maintain tax and economic base, protect town infrastructure including facilities for public recreational access the Board of Aldermen for the Town of North Topsail Beach has determined that the creation of a municipal service district for erosion control and hurricane protection works will be for the benefit of those properties located within the service district boundaries; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach further finds that the proposed district is in need of projects and programs to the standards of G.S. 160A-537(a) to a demonstrably greater extent than the remainder of the town to meet the needs and goals set forth above; and

WHEREAS, pursuant to such determinations and in accordance with applicable provision of the General Statutes, the Board of Aldermen for the Town of North Topsail Beach has defined such a district, and does determine, as a fact, that the proposed district is in need of one or more of the services, facilities, or functions listed in G.S. 160A-536(a) to a demonstrably greater extent than the remainder of the town; and

WHEREAS, a map of the proposed district showing its proposed boundaries, a copy of which is attached hereto and incorporated by reference, a statement showing that the proposed district meets the standards set out in G.S.160A-357(a), and a plan for providing in the district one or more of the services listed in G.S. 160A-536 has been created; all of which has been incorporated into a report which has been available for public inspection in the office of the Town Clerk for four (4) weeks prior to the public hearing on the matter of the establishment of the service district; and

WHEREAS, the Board of Aldermen for the Town of North Topsail Beach has caused a notice of such hearing to be duly published in the Jacksonville Daily News, a newspaper having general circulation in the Town of North Topsail Beach and Onslow County, said hearing having been conducted on June 17, 2013 and the Town Clerk has certified to the Board of Aldermen that the mailing of notice of hearing has been completed, all in conformity to G.S.160A-537(c).

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN FOR THE TOWN OF NORTH TOPSAIL BEACH, NORTH CAROLINA that:

1. The Town of North Topsail Beach has fully complied with each and every requirement of Chapter 160A, Article 23 of the North Carolina General statutes and determines and finds same as a fact.

2. The Town of North Topsail Beach Shoreline Protection Project Phase Four Municipal Service District for erosion control and flood and hurricane works is hereby established and created in accordance with the following description:

Contained within the Atlantic Ocean to the east, the Intracoastal Waterway to the west, and beginning at 3825 Island Drive (Map Number 815.11 - Soundside) and 3826 Island Drive (Map Number 815-3 - Oceanside) to the north and the North Topsail Beach Town Line to the south and being the same property as shown within the boundaries set forth on that certain map attached hereto as "Exhibit A" and incorporated herein by reference, to which reference is made for a more complete and accurate description of the boundaries of North Topsail Beach Shoreline Protection Project Phase Five Municipal Service District.

3. The Town of North Topsail Beach may levy property taxes within the service district in addition to those throughout the town in order to finance, provide or maintain for the district, services provided therein, in addition to or to a greater extent than those financed, provided or maintained for the entire town. The Town of North Topsail Beach anticipates that special obligation bonds will be authorized for this initial project and per G.S. 160A-537(d) no ad valorem tax may be levied for a partial fiscal year.

4. This resolution shall take effect upon adoption.

Adopted this, the 17th day of June, 2013.


Daniel Tuman, Mayor

ATTEST:


Carin Z. Faulkner, Town Clerk

(Seal)