



NORTH CAROLINA  
Environmental Quality

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Governor

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Secretary

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Director

CRC-20-25

November 2, 2020

## MEMORANDUM

**TO:** Coastal Resources Commission

**FROM:** Ken Richardson

**SUBJECT:** Static Line Exception Reauthorization for Towns of Emerald Isle, Indian Beach, Salter Path, Pine Knoll Shores and Atlantic Beach (Bogue Banks)

On the behalf of the Towns of Emerald Isle, Indian Beach, Salter Path, Pine Knoll Shores and Atlantic Beach on Bogue Banks, the Carteret County Shore Protection Office has submitted Static Vegetation Line Exception (SVLE) reauthorization reports to the Division of Coastal Management (DCM) for the Coastal Resources Commission (CRC) to review and consider for each Town in accordance with 15A NCAC 07J .1200.

Rule 15A NCAC 07J.1204(b) requires that the Commission “shall review a static line exception authorized under 15A NCAC 07J.1203 at intervals no greater than every five years from the initial authorization in order to renew its findings for the conditions defined in 15A NCAC 07J.1201(d)(1) through (d)(4).” Specifically, these four criteria require:

- 1) A summary of all beach fill projects in the area proposed for the exception;
- 2) Plans and related materials showing the design of the initial fill projects, and any past or planned maintenance work (project performance);
- 3) Documentation showing the location and volume of compatible sediment necessary to construct and maintain the project over its design life; and
- 4) Identification of the financial resources or funding sources necessary to fund the project over its design life.

15A NCAC 07J.1204(b) also states that the Commission shall consider design changes to the initial large-scale beach fill project, as well as changes to the location and volume of compatible sediment, and the financial resources or funding sources necessary to fund the large-scale beach fill project.



## **SVLE Reauthorization Criteria 1: Summary of Beach Fill Projects**

### Emerald Isle:

Petitioner, the Town of Emerald Isle (“Town”) is requesting that its static line exception be reauthorized by the Coastal Resources Commission, based on the information found within the attached 5-year progress report (see Attachment A). The granting of such a request by the Commission would result in the continued application of 15A NCAC 07H.0306(a)(12) to proposed development projects along the affected area of the town, instead of the static (pre-project) vegetation line as defined in 07H.0305(a)(6).

The Town initially applied for and received an exception from the static line, which covers Eastern Emerald Isle (site of the 2003 Bogue Banks Restoration Project Phase II), in accordance with procedures outlined in 15A NCAC 07J.1200 on March 24, 2010. The exception was reauthorized five years later April 29, 2015.

A static vegetation line was established along the eastern 5.9 miles of the Town’s approximate 11 mile oceanfront shoreline because in conjunction with a large scale beach nourishment project constructed in 2003. Since then, the Phase II portion of this has received four subsequent maintenance projects (2004, 2007, 2013 and 2019). In February through April 2020, a portion of the *Post-Florence* Renourishment Project – Phase II (Reach 2) was constructed in Western Emerald Isle, triggering a new static line section approximately 1.76 miles in length – bringing the total length of Emerald Isle’s static line to approximately 7.7 miles (see Attachment A, Section 1, page 1 & Section 2.1.4, page 15).

### Salter Path & Indian Beach:

Petitioner, The Town of Indian Beach (Town) and the unincorporated area known as Salter Path (which is under the jurisdiction of Carteret County) is requesting that its static line exception be reauthorized by the Coastal Resources Commission, based on the information found within the attached 5-year progress report (see Attachment B). The granting of such a request by the Commission would result in the continued application of 15A NCAC 07H.0306(a)(12) to proposed development projects along the affected area of the Town, instead of the static (pre-project) vegetation line as defined in 07H.0305(a)(6).

The Town of Indian Beach and the unincorporated area known as Salter Path initially applied for and received an exception from the static line in accordance with procedures outlined in 15A NCAC 07J.1201 on March 24, 2010. The exception was reauthorized five years later April 29, 2015.

A static vegetation line was established along 2.4 miles of shoreline fronting the Town of Indian Beach and Village of Salter Path in conjunction with a large scale beach nourishment project constructed in 2001-2002 as part of Phase I of the island-wide project. Since the initial construction, the Indian Beach/Salter Path portion of the Phase I Bogue Banks Restoration Project has been renourished on four occasions. These included Phase I of the USACE Section 933 project (2004), the post *Ophelia* restoration (2007), and Phases I and II of the *Post-Florence* restoration project (2019 & 2020) (see Attachment B, Section 1, page 1 & Section 2.2, page 9).

### Pine Knoll Shores:

Petitioner, The Town of Pine Knoll Shores (Town) requests that its static line exception be reauthorized by the Coastal Resources Commission, based on the information found within the attached 5-year progress report (Attachment C). The granting of such a request by the Commission would result in the continued application of 15A NCAC 07H.0306(a)(12) to proposed development projects along the affected area of the Town, instead of the static (pre-project) vegetation line as defined in 07H.0305(a)(6).

The Town of Pine Knoll Shores initially applied for and received an exception from the static line in accordance with procedures outlined in 15A NCAC 07J.1201 on March 24, 2010. The exception was reauthorized five years later April 29, 2015. A static vegetation line was established along 4.5 miles of shoreline fronting the Town of Pine Knoll Shores in conjunction with a large scale beach nourishment project constructed in 2001-2002 as part of Phase I of the Bogue Banks Restoration Project.

The Pine Knoll Shores portion of the Phase I Bogue Banks Restoration Project has been renourished on five occasions since initial construction. The first renourishment was a small portion of the USACE Section 933 Phase I project in 2004, of which most of the nourishment was in Indian Beach/Salter Path. The second and third renourishments occurred concurrently as part of the USACE Section 933 Phase II project and the FEMA post- Hurricane *Ophelia* project in 2007. The fourth project occurred in 2013 as part of the post- Hurricane *Irene* Restoration project. The fifth project was recently completed in 2020 as part of the post-Hurricane *Florence* Renourishment Project – Phase II (see Attachment C, Section 1, page 1 & Section 2.2, page 13).

### Atlantic Beach:

Petitioner, The Town of Atlantic Beach (Town) requests that its static line exception be reauthorized by the Coastal Resources Commission, based on the information found within the attached 5-year progress report (see Attachment D). The granting of such a request by the Commission would result in the continued application of 15A NCAC 07H.0306(a)(12) to proposed development projects along the affected area of the Town, instead of the static (pre-project) vegetation line as defined in 07H.0305(a)(6).

The Town of Atlantic Beach initially applied for and received an exception from the static line in accordance with procedures outlined in 15A NCAC 07J.1201 on March 24, 2010. The exception was reauthorized five years later April 29, 2015.

A static vegetation line was established along most of the ocean shoreline of Atlantic Beach in conjunction with two beach disposal operations associated with the maintenance of the Morehead City Harbor federal navigation project (MCH). The first disposal operation occurred in 1986 and covered approximately the eastern half of the town's 4.5-mile shoreline extending west from the Atlantic Beach/Fort Macon State Park boundary (AB/FM). The second disposal operation occurred in 1994 and covered most of the remaining portion of the town's shoreline, ending approximately 2,500 feet east of the town's west boundary with Pine Knoll Shores (AB/PKS).

From February through April 2020, a portion of the Post-*Florence* Renourishment Project – Phase II (Reach 10) was constructed in Atlantic Beach, covering the entire western half of the shoreline from the AB/PKS town boundary to just east of The Circle. Therefore, the 2,500 ft of shoreline

located in the westernmost portion of Atlantic Beach was not originally included in the static line exception process, since it had not been previously nourished. The Post-*Florence* Renourishment Project – Phase II (Reach 10) has now triggered the current static line criteria with a project over 300,000 cy (see Attachment D, Section 1, page 1, Section 2, page 1 & Section 2.2.2, page 16).

## **SVLE Reauthorization Criteria 2: Project Plans & Performance – Summary of Initial Project and Subsequent Maintenance**

### Emerald Isle:

The Bogue Banks Restoration Phase II (Eastern Emerald Isle) Project was divided into an Eastern, Middle, and Western Zone with different design volumes in each zone based on the volume from the toe of the dune out to -12 ft NAVD88 needed to reach the design volume of 175 cy/ft and an advanced nourishment volume equal to expected volume losses in that zone over the next 10 years. The design profile volume for the Bogue Banks Restoration Project was subsequently increased to 225 cy/ft to account for the volume of material from the landward toe of the dune up to the peak of the dune. The Phase II (Eastern Emerald Isle) portion of the project included a dune with a 10-foot-wide crest at elevation +14 feet NAVD along the easternmost 2.2 miles of Emerald Isle within the eastern zone. The new dune was only constructed in areas where the existing dune was deemed inadequate to provide the desired level of protection (see Attachment A, Section 2.0, starting on page 2).

The Post-*Florence* Renourishment Project – Phase II was divided into four reaches of which Reach 2 was in Western Emerald Isle. The project was designed to replace material that was lost during hurricane *Florence*, restoring the beach back to pre-*Florence* conditions which had been established in Phase III of the Bogue Banks Restoration Project in 2005 and maintained with post-storm restoration in 2007 (*Ophelia*) and 2013 (*Irene*).

The Bogue Banks Beach and Nearshore Mapping Program, established in 2004, monitors the entire island on an annual basis. Each year, profiles are analyzed to determine gains and losses in material to the system as well as assessment of current beach conditions as compared to nourishment triggers. With the recent development of the Bogue Banks Master Beach Nourishment Plan, of which the engineering analysis was completed in 2014 and the permit obtained in fall 2018, nourishment triggers have been revised and nourishment operations and timing reformulated from the original methodology which included nourishment triggers of 50% of the initial fill volume and 225 cy/ft above -12 ft NAVD88. The Town of Emerald Isle will initiate nourishment actions in the Phase II Project area (and Eastern Emerald Isle static line exception extents) and newly added area in Western Emerald Isle (spanning a portion of the Bogue Inlet and Emerald Isle - West monitoring reaches), as the following triggers are approached (see Attachment A, Section 2.1.3, starting on page 15):

Reach (Transects)	Above -12 ft Trigger
Bogue Inlet (1-11)	235
Emerald Isle – West (12-25)	266
Emerald Isle – Central (26-36)	211
Emerald Isle – East (37-48)	221

Following completion of the engineering report in 2014, which was developed to provide insight into the future sand needs and availability for the programmatic EIS upon which the USACE 50-yr permit was based, the Bogue Banks Beach and Nearshore Mapping Program shifted to the new methodology for tracking project performance. In 2015, beach conditions will solely use 25-year Level of Protection nourishment triggers (as noted in the Master Beach Nourishment Plan) to determine the need for nourishment. The average profile volume calculated above -12 ft NAVD88 for the Emerald Isle - Central and Emerald Isle – East monitoring reaches during each year of monitoring from 2015 – 2020, show profile volumes have been maintained above the Master Beach Nourishment Plan triggers of 211 cy/ft for Emerald isle – Central and 221 cy/ft for Emerald Isle – East. The 2020 annual survey, performed after the Post- *Florence* Phase II nourishment was completed, currently indicates that the average profile volume above -12 ft NAVD88 is 347 cy/ft in the Bogue Inlet monitoring reach and 288 cy/ft in the Emerald Isle - West monitoring reach. This is well above the Master Beach Nourishment Plan Triggers of 235 cy/ft in Bogue Inlet and 266 cy/ft in Emerald Isle – West.

It should also be noted that since 2004, North Carolina’s erosion rate calculations (2004, 2013, 2020) have resulted in a long-term average annual rate of 2 feet per year, or less in the area adjacent to the static vegetation line.

Salter Path & Indian Beach:

Material to construct Phase I of the Bogue Banks Restoration Project was obtained primarily from the offshore borrow areas designated as B1 and B2. Construction of Phase I of the Bogue Banks Restoration Project was halted prior to the April 30 permit deadline due to turtle takes, resulting in a reduction in the volume of material placed along both Indian Beach/Salter Path and Pine Knoll Shores. Based on after construction profile surveys, the amount surveyed in place along the Indian Beach/Salter Path shorelines totaled 456,994 cubic yards or about 41% less than the contract amount. The Town of Pine Knoll Shores received 1,276,586 cubic yards or about 9% less than the original contract amount. The work stoppage resulted in two areas or “gaps” along the Indian Beach/Salter Path shoreline that did not receive any substantial fill volume. One gap was located approximately between County Transects 48 and 50 on the west end of Indian Beach and the other approximately between County Transects 51 and 53 in Salter Path. Part of the gap located between County Transects 51 and 53 lies within the Roosevelt State Park. Even though fill material was not placed directly in these areas, the two gaps soon equilibrated with material moving into the gaps from the adjacent beach fill areas.

The Bogue Banks Beach and Nearshore Mapping Program, established in 2004, monitors the entire island on an annual basis. Each year, profiles are analyzed to determine gains and losses in material to the system as well as assessment of current beach conditions as compared to nourishment triggers. With the recent development of the Bogue Banks Master Beach Nourishment Plan, of which the engineering analysis was completed in 2014 and the permit obtained in fall 2018,

nourishment triggers have been revised and nourishment operations and timing reformulated from the original methodology which included nourishment triggers of 50% of the initial fill volume and 225 cy/ft above -12 ft NAVD88. The profile volume trigger for the Indian Beach/Salter Path portion of the original Bogue Banks Restoration Project Phase I project area (and static line exception extents) was determined to be 224 cy/ft (see Attachment B, Section 2.3, page 15).

The new triggers developed for the Master Beach Nourishment Plan have replaced the previous methods of determining the need for nourishment. Therefore, the Indian Beach/Salter Path section of the Bogue Banks shoreline will initiate nourishment actions in the Phase I Project area (and static line exception extents) as this trigger is approached.

It should also be noted that since 2004, North Carolina's erosion rate calculations (2004, 2013, 2020) have resulted in a long-term average annual rate of 2 feet per year, or less in the area adjacent to the static vegetation line.

#### Pine Knoll Shores:

Phase I of the Bogue Banks Restoration Project was constructed between 2001 and 2002 and covered the 2.4 miles of ocean shoreline fronting the Town of Indian Beach and the Village of Salter Path and 4.5 miles along the shoreline segment that includes the Town of Pine Knoll Shores. This stretch of beach encompasses County monitoring transects 49 through 76 of the Bogue Banks Beach and Nearshore Mapping Program (BBBNMP) which essentially cover the Indian Beach/Salter Path and Pine Knoll Shores monitoring reaches. Material to construct Phase I was obtained primarily from the offshore borrow areas designated as B1 and B2. Construction of Phase I was halted prior to the April 30 permit deadline due to turtle takes, resulting in a reduction in the volume of material placed along both Indian Beach/Salter Path and Pine Knoll Shores. Based on after construction profile surveys, the amount surveyed in place along the Indian Beach/Salter Path shorelines totaled 456,994 cubic yards or about 41% less than the contract amount. The Town of Pine Knoll Shores received 1,276,586 cubic yards or about 9% less than the original contract amount.

The Bogue Banks Beach and Nearshore Mapping Program, established in 2004, monitors the entire island on an annual basis. Each year, profiles are analyzed to determine gains and losses in material to the system as well as assessment of current beach conditions as compared to nourishment triggers. With the recent development of the Bogue Banks Master Beach Nourishment Plan, of which the engineering analysis was completed in 2014 and the permit obtained in fall 2018, nourishment triggers have been revised and nourishment operations and timing reformulated from the original methodology which included nourishment triggers of 50% of the initial fill volume and 225 cy/ft above -12 ft NAVD88. The profile volume trigger for the Pine Knoll Shores portion of the original Bogue Banks Restoration Project Phase I project area (and static line exception extents) was determined to be 211 cy/ft (see Attachment C, Section, 2.3, page 20).

The new triggers developed for the Master Beach Nourishment Plan have replaced the previous methods of determining the need for nourishment. Therefore, the Town of Pine Knoll Shores will initiate nourishment actions in the Phase I Project area (and static line exception extents) as this trigger is approached.

It is worth adding that since 2004, North Carolina's erosion rate calculations (2004, 2013, 2020) have resulted in a long-term average annual rate of 2 feet per year, or less in the area adjacent to the static vegetation line.

#### Atlantic Beach:

Up until 2020, beach fill projects for the Town of Atlantic Beach were totally dependent on material deposited along its shoreline during construction and maintenance of the MCH federal navigation project (1978-2017). The USACE is congressionally mandated to maintain the Nation's navigational thoroughfares and conduct disposal practices "... in the least costly manner, at the least costly and most practicable location, and consistent with engineering and environmental requirements.", as specified in 33 C.F.R. § 335.4. This is often referred to as the "least-cost option" or the "Federal Standard", and has resulted in the partitioning of the MCH project into several reaches - Range A, the Cutoff, Range B, Range C, and the Turning Basin. Historically, the Cutoff and Range A (collectively known as the Outer Harbor) has been maintained by hopper dredging that collects sediment from the base of the channel and travels to one of two disposal areas located 1 to approximately 6.0 miles offshore to dispose the dredged material. More recently, the material has been placed onto Atlantic Beach and Fort Macon in some instances. Maintenance and construction of Range B, C and the Turning Basin (known as the Inner Harbor) has been conducted utilizing a pipeline dredge that carries sediment from these areas to the confined upland disposal site of Brandt Island, located north of Ft. Macon State Park. This material has also historically been pumped onto Atlantic Beach from Brandt Island in some instances.

Due to Federal funding limits and historical patterns of placement being limited to the eastern half of the shoreline in Atlantic Beach, the Town has elected to develop an engineered beach along the western portion of the shoreline, and therefore, partially participate in the Bogue Banks Master Beach Nourishment Plan with the neighboring towns of Emerald Isle, Indian Beach/Salter Path and Pine Knoll Shores. The Bogue Banks Master Beach Nourishment Plan was developed to provide long-term shoreline stabilization and equivalent level of protection along Bogue Banks 25-mile oceanfront. Development of a 50-year programmatic EIS was completed and a 50-year USACE permit was issued on November 8, 2018, which covers Phases I, II, and III of the Post-*Florence* Renourishment Project and will apply to nourishment operations through 2068 (50 years). As part of the EIS, an engineering report was completed in 2014 to provide insight into the future sand needs and availability. The profile volume trigger for the Atlantic Beach project area was determined to be 254 cy/ft. Therefore, the Town of Atlantic Beach will initiate nourishment actions along the western portion of shoreline, which is currently participating in the Master Beach Nourishment Plan once this trigger is met (see Attachment D, Section 2.4.2, page 19).

It should also be noted that since 2004, North Carolina's erosion rate calculations (2004, 2013, 2020) have resulted in a long-term average annual rate of 2 feet per year, or less in the area adjacent to the static vegetation line.

### SVLE Reauthorization Criteria 3: Identification of Sand Resources

The Bogue Banks Master Beach Nourishment Plan (includes all Towns) was developed to provide long-term shoreline stabilization and equivalent level of protection along Bogue Banks 25-mile oceanfront. Development of a 50-year programmatic EIS was completed and a 50-year USACE permit was issued on November 8, 2018, which covers Phases I, II, and III of the Post-*Florence* Renourishment Project and will apply to nourishment operations through 2068 (50 years). As part of the EIS, an engineering report was completed in 2014 to provide insight into the future sand needs and availability. A combination of analytical analysis and cross-shore and longshore modeling was used to determine historical loss rates (both background erosion and storm erosion), volumetric requirements to provide equal protection to all portions of the island, and future nourishment quantities and timing cycles.

Since erosion rates (in terms of sand volume) across the island differ drastically, an analytical analysis was performed to determine the expected quantity and timing of future nourishments to maintain the 25-year level of protection in each reach for the next 50 years. Based on the analytical analysis of historical profile volume change, it was determined that the overall annual loss along Bogue Banks was roughly 450,000 cy with a 50-year nourishment need of 22.6 Mcy just to keep up with historical erosion patterns. A separate analysis of individual storm impacts was performed to gage the amount of erosion that could occur from storm activity in addition to the historical background losses. Based on the results, it is expected that the losses for a given storm may range between 1.4 – 1.7 Mcy. Given that storms have occurred once every three years or so, the storm need over 50 years may range between 22.4 – 27.2 Mcy. Therefore, the overall background and storm sediment need over the 50-year planning horizon based on the analytical/empirical analysis is between 45.0 and 49.8 Mcy. Considering possible sea level change, SBEACH was used to determine the impact on beach profiles based on a rise in water level. The intermediate rate of sea level change determined by the USACE indicates a rise of 1.01 ft over the next 50 years. Based on this, SBEACH results showed an additional 1.8 Mcy of loss could be expected due to sea level rise. This brings the overall total 50 year need to 46.8 – 51.6 Mcy.

The material from borrow areas B2 and A used for initial construction of the Bogue Banks Restoration Project had a composite mean grain size of 0.44 mm which was much coarser than the native sand mean grain size of 0.30 mm. In that regard, the borrow material seemed ideal for beach nourishment purposes as material coarser than the native is known to provide a more stable beach fill. However, the coarseness of the material in these two borrow areas was primarily due to relatively high shell or CaCO<sub>3</sub> content which averaged 44% based on post-placement samples of the material. To avoid placing additional large amounts of shell or CaCO<sub>3</sub> along the town's shoreline, the Town of Emerald Isle opted to use the ODMDS for the subsequent FEMA nourishment events. The ODMDS is expected to have compatible material as most of the sediment in the disposal site was derived from maintenance of the Beaufort Inlet ocean bar channel; particularly the landward portions of the channel which is known to accumulate littoral material directly off the adjacent shorelines of Bogue and Shackleford Banks. Limited sampling was performed in accordance with post-*Isabel* and post-*Ophelia* restoration projects confirming the quality of the material, with an average grain size of approximately 0.31 mm.

As part of the Bogue Banks Master Beach Nourishment Plan, an extensive sediment sampling program was implemented in 2012, just prior to the 2013 post-*Irene* project, to verify the



compatibility and quantity of existing sediment sources in the ODMDS, which had been used previously during the post-*Isabel* and post-*Ophelia* restoration projects, as well as possibly locate some new sources for use in the 50 year plan. This was part of the permitting requirements to show the quantity and quality of potential sediment sources for the next 50 years. The 2014 engineering report identified and quantified the amount of material in upland sources (sand mines), AIWW disposal areas, offshore sources (ODMDS and Area Y), and inlets (Beaufort and Bogue). The findings indicate that possible upland sources exist in the amount of 1.4 Mcy while AIWW disposal areas possibly contain up to 1.3 Mcy. Offshore sources consist of the new and old ODMDS as well as some small pockets of material off Emerald Isle, known as Area Y. Together, they contain approximately 22.4Mcy of compatible material. In addition, both Beaufort Inlet and Bogue Inlet could provide a steady supply of nourishment material from dredging operations over the next fifty years. The periodic dredging of Morehead City Harbor by the USACE could provide approximately 20 Mcy over the next 50 years. The dredging/relocation of Bogue Inlet (approximately every 10 years) and dredging of the AIWW crossing could provide approximately 5.1 Mcy over the next 50 yrs. Therefore, approximately 50.2 Mcy of material has been identified which is considered enough material to meet the 50 year need of 46.8-51.6 Mcy determined in the Bogue Banks Master Beach Nourishment Plan. Figure 4-1 shows a summary of the potential sediment sources identified for use over the next 50 years.

(see Attachment A, Section 4.0, page 41; Attachment B, Section 4.0, page 23; Attachment C, Section 4.0, page 30, & Attachment D, Section 4.0, page 28)

#### **SVLE Reauthorization Criteria 4: Identification of Financial Resources**

Cost to construct and maintain beach nourishment projects for the Towns on Bogue Banks is generally funded by one or a combination of two sources: 1) Carteret County occupancy tax as it relates to the Bogue Banks municipalities, and 2) Local municipal taxes.

##### County Occupancy Tax:

The Shore Protection Office is funded 100% by the portion of the County's occupancy tax legislatively mandated for beach nourishment, which was instituted in 2001 via SL 2001-381 and after several changes related to a proposed convention center (SL 2005-120, SL 2007-112), is now codified as SL 2013-223. The remaining fund balance at the conclusion of each fiscal year is permitted to accrue in a reserve account, commonly referred as the "Beach Fund" to finance some of the large-scale shore protection projects and efforts. The County's occupancy tax rate was established at 5% overall rate via the enacting legislation (SL 2001-381) and the revenues were previously split 50-50 between beach nourishment and the Tourism Development Authority (TDA), representing a 2.5% overall collection rate for both the TDA and beach nourishment. Beginning in FY 2010-11 as stipulated in SL 2007-112, the TDA began receiving 3% of the 5% collection and the beach nourishment fund received 2%, which effectively changed the cost share from 50%-50% to 60%-40%. Several years later, new changes in the occupancy tax law were codified in SL 2013-223, which amended SL 2007-112 to allow the collection of an additional 1% (6% total) with the total proceeds being split 50-50 again between the TDA and beach nourishment (or 3% a piece). This law also raised the cap of the beach nourishment fund from \$15 M to \$30M. The effective date of this change was January 1, 2014.

The occupancy tax collection is reported in two predominant categories - hotel/motel stays and condo/cottage rentals. Condo/cottage rentals dominate the market on Bogue Banks, currently

generating almost \$5.0 million per year while the hotel/motel sector generates, on average, \$1.75 million per year.

Local Municipal Taxes for Beach Nourishment Projects:

While the Shore Protection Office generates 100% of its funds for beach nourishment from the County Occupancy Tax (“County”), the local municipalities generate revenue from which they contribute to beach nourishment through their local property taxes (“Local”). Property taxes are divided into two sectors; oceanfront and non-oceanfront properties with the non-oceanfront properties paying less tax. The table below illustrates estimated revenue for FY 2020-2021.

FY 2020-21				
Municipality	Oceanfront rate (per \$100 valuation)	Non-oceanfront rate (per \$100 valuation)	Transfers from General Fund/Other	Estimated total revenue
Atlantic Beach	\$0.0000	\$0.0000	\$0	\$0
Pine Knoll Shores	\$0.0550	\$0.0150	\$93,000	\$465,000
Indian Beach	\$0.0300	\$0.0100	\$0	\$87,870
Salter Path (county)	\$0.0550	NA	\$0	\$4,907
<u>Emerald Isle</u>	<u>\$0.0400</u>	<u>\$0.0000</u>	<u>\$400,000</u>	<u>\$674,922</u>
<i>Average or Total</i>	\$0.04	\$0.01	\$493,000	\$1,232,699

Utilizing the annualized volume needs estimated as part of the preferred option from the Master Beach Nourishment Plan and unit rates, an annualized estimate of funding need was developed. Two scenarios were analyzed for the Town/County cost share: 1) 25% Town and 75% County and 2) 33% Town and 67% County. Table 5-3 presents the results for both funding scenarios. Given the current annually generated local taxes for beach nourishment are equivalent to \$1,232,699 and the estimate annual County tax generated is \$3,750,000 (50% of total occupancy tax collections, see Figure 5-5), it seems as though the 25% Town and 75% County cost share would be most reasonable at this point in time to ensure the ability of Town contributions to remain sustainable long-term. It should be noted that the County currently has \$27M in reserve, putting them ahead of “schedule” in terms of revenue. It should also be noted that Atlantic Beach does not currently have a dedicated funding source. However, at this time, the eastern portion of Atlantic Beach will continue to be served by the USACE DMMP, leaving only the western portion (from The Circle to the AB/PKS town boundary) as a new addition to the engineered beach courtesy of the Post-Florence Phase II project (spring 2020). A dedicated funding source from Atlantic Beach would increase the total available annual revenue from the Towns. The interlocal agreement signed by all the Towns and County also requires them to meet the funding needs even if new taxes or one-time loans are required.

The above analyses do not include any State or Federal funding above that which is expected for the Morehead City Harbor Project. Any additional funds from these sources would extend the long-term sustainability of the project.

As mentioned, Atlantic Beach does not currently have a dedicated funding source. Up until Phase II of the Post-Florence Renourishment project, disposal of the Morehead City Harbor maintenance and construction material on the east end of Bogue Banks was accomplished at 100% federal cost,

i.e., local cost sharing for the disposal operation was not required. As a result, the Town of Atlantic Beach was totally dependent on federal funding for the MCH navigation project to maintain the beach and has not needed a separate funding source in the past. However, planning efforts were made to ensure that funding is available if cost sharing or “delta projects” become a possibility under the UASCE DMMP to place material west of The Circle.

The total contribution needed from the Town of Atlantic Beach to assure dredged material could be distributed along the entire length of its shoreline is estimated to be \$217,727 per year, equal to 33% of the total project cost to cover areas west of the Circle. This estimate does not include the Town and County likely being able to participate in “delta” projects where they would pay the delta costs to place sand west of the Circle in years 2 or 3 of the DMMP. Given that the DMMP is expected to cover areas up to the Circle, the “delta” projects would at worst need to cover 40% of the total Atlantic Beach need which would equal 65,978 cy/yr. Given this small volume, it is expected that a “delta” project may be required every 9 years. Assuming an additional mobilization cost of \$500,000 to cover an additional booster pump and additional \$2 per cy for lost production, the total delta cost per project is expected to be approximately \$1.7 million. Assuming a 33%/67% split between the Town and County, the Town cost would be approximately \$62,500 per year. If cost sharing or “delta projects” under the USACE DMMP are not a possibility to place material west of The Circle, western Atlantic Beach will be in a position to maintain an engineered beach which would be eligible for FEMA reimbursement for declared disaster events. The interlocal agreement signed by all the Towns and County would require them to meet the funding needs even if new taxes or one-time loans are required.

(see Attachment A, Section 5.0, page 57; Attachment B, Section 5.0, page 39; Attachment C, Section 5.0, page 46, & Attachment D, Section 5.0, page 44)

**DCM Staff Recommendations:**

Based on the 5-year progress reports from each Town, and additional exhibits attached, Staff recommends that the conditions in 15A NCAC 07J.1201(d)(1) through (d)(4) have been met, and there have been no changes in the last five years that would result in the static line exception being revoked. Staff recommends that the Commission renew the static line exception for another five years for the Towns of Emerald Isle, Indian Beach, Salter Path, Pine Knoll Shores and Atlantic Beach.

**ATTACHMENT A: Town of Emerald Isle, NC Static Line Exception 5 Year Review / Reauthorization Report**

**ATTACHMENT B: Town of Indian Beach/Salter Path, NC Static Line Exception 5 Year Review / Reauthorization Report**

**ATTACHMENT C: Town of Pine Knoll Shores, NC Static Line Exception 5 Year Review / Reauthorization Report**

**ATTACHMENT D: Town of Atlantic Beach, NC Static Line Exception 5 Year Review / Reauthorization Report**