

TOWN OF SUNSET BEACH
2016 SHORELINE MANAGEMENT AND PRE-DREDGE ANALYSIS
PHASE 2 - DESIGN

PROGRESS REPORT DATE
AUGUST 05, 2016

Report Period: July 01 thru July 31, 2016

The items below provide a description of key elements related to the current progress, including outstanding items and anticipated resolutions, for completing the work known as Town of Sunset Beach, 2016 Shoreline Management and Pre-Dredge Analysis, Phase 2 - Design.

Acronyms: M&N – Moffatt & Nichol
NCDEQ – North Carolina Department of Environmental Quality
NOAA – National Oceanic & Atmospheric Administration
USACE – US Army Corps of Engineers (Wilmington District)
USFWS – U.S. Fish & Wildlife Service.

Phase 1 – Feasibility Analysis (100% complete)

Items Previously Completed: (100%)

The Town of Sunset Beach and M&N initiated a contract on February 19th to study the feasibility of conducting approximately 3.5 miles of navigation dredging within the Town limits. The work areas include Mary's Creek, Turtle Creek, Jinks Creek, the North Shore Drive feeder and adjoining finger canals and the Canal Drive bay area. The results of the analysis were positive and the Town elected to move forward with the design and modeling of the proposed work on June 7th. The work was authorized to begin July 1, 2016.

Phase 2 –Design (3.73 % complete)

Items Previously Completed (0%)

1.0 Project Coordination

- The Town of Sunset Beach authorized M&N to begin the design work on July 1, 2016.

Progress this Period: (3.73 % of total task)

1.0 Project Coordination

- The Town and M&N worked with the NCDEQ to secure a Water Resource Development grant through the Shallow Draft Navigation Fund for $\frac{2}{3}$'s of the project cost. The grant provides up to \$2,779,327 towards the project cost. (The Town secured the grant on August 1st.)

2.0 Refined Design

- M&N began work on identifying an acceptable design alignment for Jinks Creek to provide adequate vessel access while avoiding impacts to the adjacent environmentally sensitive lands. A modeling analysis will be conducted to investigate the potential of the proposed alignment to negatively impact the existing ecosystem. The analysis will evaluate if the proposed alignment will allow increased tidal velocities through Jinks Creek. If the modeling finds that tidal velocities are likely to increase, analysis will evaluate the increased potential for scour along the channel banks and additional shoaling within the AIWW. The potential impacts to Tubbs Inlet will also be evaluated.

Outstanding Items and Anticipated Completion Dates:

1.0 Project Coordination

- A public meeting is scheduled for Saturday, October 8th to present the proposed dredge alignments and anticipated project schedule through construction. The project goals and potential impacts will also be discussed.

2.0 Refined Design

- M&N will provide a preliminary alignment for the proposed work areas for the Town's review prior September 2016. The proposed dredge volume for each work area will also be provided with the submittal. After review by the Town M&N will conduct a modeling analysis for Jinks Creek to evaluate potential scouring impacts to the channel banks in addition to potential shoaling impacts in the AIWW and Tubbs Inlet. The proposed alignment will be revised if needed based on the modeling results.
- As part of the modeling analysis, Geodynamics will collect additional hydrographic survey data within and around Tubbs Inlet. The data is necessary to replicate the existing conditions for the modeling analysis. Geodynamics will conduct the survey in August with final deliverables anticipated in September.

3.0 Sediment Testing

- Catlin Engineers will be collecting sediment samples throughout the work area during the week of August 8th. The samples will be tested to determine if the dredge material is compatible for beneficial reuse or if the material should be placed in an upland confinement area (such as a USACE disposal island located along the AIWW). Results of the sediment tests are anticipated in mid-September.

4.0 USACE Disposal Locations

- M&N will conduct an inspection of the available USACE material confinement islands located along the AIWW to determine the least cost option for placing any necessary dredge material. The inspection results will be provided to the Town prior to October 2016.

5.0 Oyster Survey

- M&N will conduct a survey within Mary's and Turtle Creek to identify any oyster beds that must be relocated prior to the dredging of these systems. M&N will also coordinate with the appropriate resource agencies to identify acceptable mitigation options that may be required for disturbing or impacting the oyster resources. The survey will be conducted during the week of October 3rd. The survey results and potential migration options will be provided for the Town's consideration prior to December 2016.

6.0 Agency Coordination Meeting

- M&N will request a second Agency Coordination Meeting to present and discuss the dredge alignments, modeling results, and any potential mitigation requirements with the state and federal agencies responsible for permitting the project. M&N will work with the Town and the agencies to provide an acceptable dredge alignment for the project. The Agency coordination meeting is anticipated prior to December 2016.

7.0 Conceptual Cost Estimate

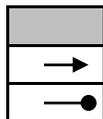
- M&N will provide an updated construction cost estimate for the proposed dredging based on the accepted design of the project. The cost estimate will be provided as the final task for the design phase and is anticipated in December 2016.

**TOWN OF SUNSET BEACH
2016 SHORELINE MANAGEMENT & PRE-DREDGE ANALYSIS - DESIGN PHASE**

**PROGRESS REPORT
August 5, 2016**

Progress Schedule

Tasks	2016																								2017												2018											
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept																					
Pre-Dredge Analysis Design Phase	→																																															
Project Coordination																																																
Public Meeting																																																
Refined Design	→																																															
Modeling Analysis																																																
Sediment Testing																																																
Hydrographic Survey																																																
USACE Disposal Locations																																																
Oyster Survey																																																
Agency Coordination Meeting																																																
Conceptual Cost Estimate																																																



Indicates anticipated timeframe to complete respective task.
 Indicates actual timeframe to complete respective task.
 Indicates the timeframe to complete the respective task.



Primary Task
 Sub-Task