

Town of Sunset Beach
Dredging Feasibility Study
Frequently Asked Questions (FAQ's) and Clarifications

The following information is provided to help clarify and address recent emails and questions received regarding the dredging of Jinks Creek and surrounding water bodies. Additional questions or concerns will also be addressed at an October 8th public meeting scheduled to discuss the project. Attendance is encouraged at the October 8th meeting; however, a summary of the meeting and the presentation will be provided to the Town for posting on the Town's webpage. *(Please note, the Town of Sunset Beach has not approved any portion of the design, dredge alignments or depths. Nor has the regulatory / permitting agencies. For this reason, any reference to the design should be noted as 'proposed' only.)*

What is the Project Purpose? To provide a long-term management template for maintaining navigation access throughout approx. 3.5 miles of waterways within the Town of Sunset Beach. The waterways include Jinks Creek, the Bay Area, the Feeder Channel and the finger canals (A, B, C, & D) along 6th, Marlin, Dolphin, Sailfish, and Cobia Streets.

The channel template is also intended to assist the Town establish a pier head alignment along the referenced waterways to help manage future development. The proposed locations of future docks, piers, or other structures may be checked against the template location to verify the structures will not hinder or block navigation access. This would mostly apply to new development along Riverside Drive and North Shore Drive, but may also be applicable along any other developable shoreline in the project area.

Why is Jinks Creek included in the project? Jinks Creek is included to provide a navigable connection from the Bay Area and Feeder Canal to the AIWW. The design assumes the Tubbs Inlet complex does not provide a reliable or safe passage for connecting with the Atlantic Ocean or the AIWW. Therefore, Jinks Creek was included to provide vessels within the Bay Area or Feeder Canal navigable access to the AIWW.

Proposed Design Depths? The design depths range across the project area, but are intended to provide adequate navigation access based on each channels 'perceived' current and future users. The design depths also consider the following: (1) sediment shoaling will continue for each waterway and (2) efforts to extend the maintenance cycles. The list below shows the proposed design depths (and widths*) for the individual waterways. The design depths, or elevations, reference mean low water (MLW) as follows:

- Jinks Creek: -6 MLW to -7 MLW (80 ~ 100 ft wide)
- Bay Area: -4 MLW to -7 MLW (80 ~ 20 ft wide)
- Feeder Channel: -5 MLW to -7 MLW (40 ~ 70 ft wide)
- Finger Canals: -4 MLW (40 ft wide)
- Mary's & Turtle Creek: -4 MLW (40 ~ 60 ft wide)**

** The channel widths proposed indicate the bottom width and do not consider side slope dimensions.*

***The design of Mary's and Turtle Creek is based on the 2001 / 2002 DCM permit. Since these creeks are located in a Primary Nursery Area (PNA) as designated by the State, any change in the design template would be considered new dredging in a PNA and strongly discouraged by the permitting agencies.*

The proposed depths are based on designs of similar channels located along the North Carolina coast. For Jinks Creek this includes the following waterways:

- Eastern Channel (Oak Island): Depth -12 MLW (40 ~ 100 ft wide)
- Mason Inlet (New Hanover County): Depth -8 MLW (80 ft wide)

The design attempts to balance the environmental effects and future cost of maintenance dredging. It is hopeful that maintenance activities will be spaced over a 7 ~ 10 year timeframe, however this estimate is completely hypothetical. **No investigations have been made to determine the shoaling rates for any of the waterways. Also, the condition or status of Tubbs Inlet has not been reviewed. In this regard, the proposed design depths do include some ‘theoretical’ storage space for sediment shoaling. However, the actual timeframe of the maintenance cycle has not been analyzed.**

What is the Proposed Dredging Depth? Please note the dredge depth does not equal the design depth. The design depth is the line or grade where all material higher (shallower) *must* be removed for the work

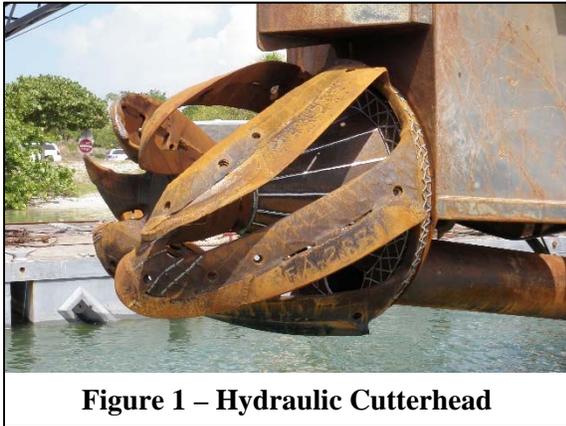


Figure 1 – Hydraulic Cutterhead

to be considered complete. The dredge depth is the maximum (deepest) elevation where material *may* be removed or disturbed. Both the design and maximum dredge depth are shown on a construction template. Typically the template includes the design depth and an “Overdepth” area, which may equal 1 ~ 2 additional feet vertically below the design depth. The ‘overdepth’ template provides the contractor a tolerance in which to maneuver the dredge equipment so the channel can be cleared to the design depth. The dredging will most likely occur via a hydraulic cutterhead. (Example shown in Figure 1.) Since the work is conducted over water with wave and tidal action, it is not cost effective

to expect the dredge equipment to only remove material down to the design elevation. However, if a minimum clearance elevation or design depth is not provided the Town cannot be certain the dredging will meet the design intent.

Will State regulations allow the dredging of Jinks Creek? Yes, as long as the dredging is not anticipated to create adverse environmental impacts. For Jinks Creek this means the following:

1. The dredging will not create any increased tidal velocities that may scour (erode) PNA adjacent to Jinks Creek.
2. The dredging will not create increased tidal velocities that may scour (erode) the ‘S’ curve in Jinks Creek in a manner that would straighten out the curve.
3. The dredging will not increase sediment shoaling in Tubbs Inlet.

A primary concern for the dredging study included first meeting with state and federal regulators to answer the question if Jinks Creek could be dredged. The Town requested and met with the USACE, USFWS, NCDEQ (DCM, DWR, NCWRC) and, NOAA-NMF on March 24th. The agencies confirmed the project could be permitted, although they also stressed the design would be reviewed and subject to their approval.

Should any environmental surveys (submerged aquatic vegetation, oyster surveys, etc...) be conducted for Jinks Creek? At the March 24th agency coordination meeting the permitting and environmental agencies had an opportunity to review the project and provide any concern they may have in regards to the dredging of Jinks Creek. Agency coordination meetings are typical and encouraged by the environmental agencies as an opportunity to clarify what will be required as part of the state and federal permitting process.

The agencies stated oyster surveys and possible relocation of any resources identified within the dredge footprint of Turtle and Mary's Creek would be required. However, they did not raise any concern regarding potential environmental resource within Jinks Creek or other areas of the project.

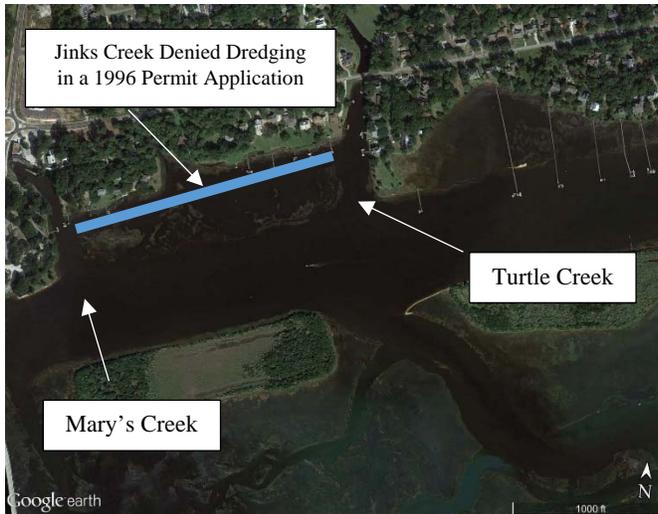


Figure 2 - Portion of Jinks Creek in a PNA

Why was the dredging of Jinks Creek denied in 1996? The 1996 project referenced a portion of Jinks Creek extending between Mary's and Turtle Creek on the north side of the AIWW. This portion of Jinks Creek is designated as a PNA. Therefore, the permitting agencies strongly discouraged the dredging. The current project does not include the same area of Jinks Creek. Figure 2 shows the section of Jinks Creek included in the 1996 project.

The consultant has used the term “deep water” in describing a project goal. What is deep water?

Understandably, the term “deep water” can conjure some excitable emotions when describing dredging operations in environmentally sensitive areas. In this instance, the term was meant to distinguish between the current shoaled areas of the project and a navigable passageway for recreational boats. All future references to the project goals will replace the term “deep water” with “navigable passageway”.

What is the current depth of Jinks Creek? The current depth of Jinks Creek ranges from approximately -2 MLW to - 14 MLW. Engineering drawings will be provided to the Town for additional review and clarification prior to the October 8th public meeting. The drawings will show the proposed and existing depth for all of the work areas in reference to MLW.

Should the dredging be limited to times when larvae and juveniles of various fisheries are not believed to be present in high concentrations? The dredging will take place during the winter months between November 16th and March 31st. The State of North Carolina strongly encourages all dredging activities to stay within this approved environmental window to help limit potential impacts to fish larvae and juveniles as well as other environmental resources.

Should precautions be taken to protect any potential Atlantic & Short-nose Sturgeons (which are listed as endangered species) that may be present in the work area? As part of the permitting process, a study is required to assess the potential impact to any and all listed endangered species. The study will be provided to the federal and state environmental agencies for review and acceptance. In order for the project to move forward, the environmental agencies must provide a finding of no significant impact (FONSI). The FONSI is expected to be granted for this project along with reasonable and prudent measure to help protect against potential impacts to endangered species.

Should the sediment composition of the dredge material be determined prior to the proposed work?

Efforts are currently on-going to determine the sediment composition across the complete work area. Chemical and physical analyzes are being conducted to determine if and where the dredge material may be

placed after removal. The analyzes are being conducted in accordance with state and federal guidelines and will help determine how much material can be beneficially re-used for habitat enhancement or dune and beach restoration. Otherwise, if material is found to be non-compatible it may have to be placed in an upland disposal site such as a USACE material management island or county landfill.

Did the Consultant miss-represent the project as “maintenance” to the State in order to obtain grant funding? No miss-representation was ever intended.

The appearance of a miss-representation stems from the State's definition of “new” and “maintenance” dredging. Under the state's definition the term “maintenance” refers to dredge areas that have been permitted previously; whereas “new” indicates the initial dredging. The opening sentence of the project description on the grant application states the “*The Town of Sunset Beach intends to maintenance dredge...*” and does not specifically reference “new” work. However, as referenced in State Statute 143-215.73F, the grant provided for this project is eligible for shallow draft (<16 ft deep) navigation projects. Regardless if the work is “new” or “maintenance”.

The term “maintenance dredge” was used in the project description as a general simplification widely accepted to infer channel dredging work. It is understandable how the appearance of a miss-representation could be perceived under the concept that new work in Jinks Creek would not be allowed. However, no indication has been provided by either the state or federal regulatory agencies that this project is impermissible. The term “new dredging” will be included in all future documentation for the description of the Jinks Creek work to help alleviate this discrepancy.

What is the path forward for completing the project? The project is currently in the design phase where the physical characteristics of the project are determined. This includes the proposed channel depth, width and alignment for each work area. A plan will also be developed to handle the material after removal from the respective water body. This may include beneficially re-using the material for habitat restoration or dune / beach restoration, or placing the material in a USACE sediment management island. In addition the plan will address if and how much material must be placed in a USACE material management island or county landfill. The design of Jinks Creek will also be evaluated to determine if any adverse impact is likely based on the proposed channel dimensions. After these details are determined a more appropriate construction cost will be estimated for the Town's and resident's consideration. Based on these results the updated project plan will then be provided to the permitting agencies for review and comment.

If the residents of Sunset Beach, the Town council, and the permitting agencies agree to the design is acceptable and to continue moving forward, the next phase will entail permitting the project. During this phase the environmental work will be conducted such as the study to evaluate potential impacts to endangered species. After the Town obtains the permits, construction of the project can commence. Construction is currently scheduled to begin as early as November 2017, pending the above referenced approvals to continue the project.