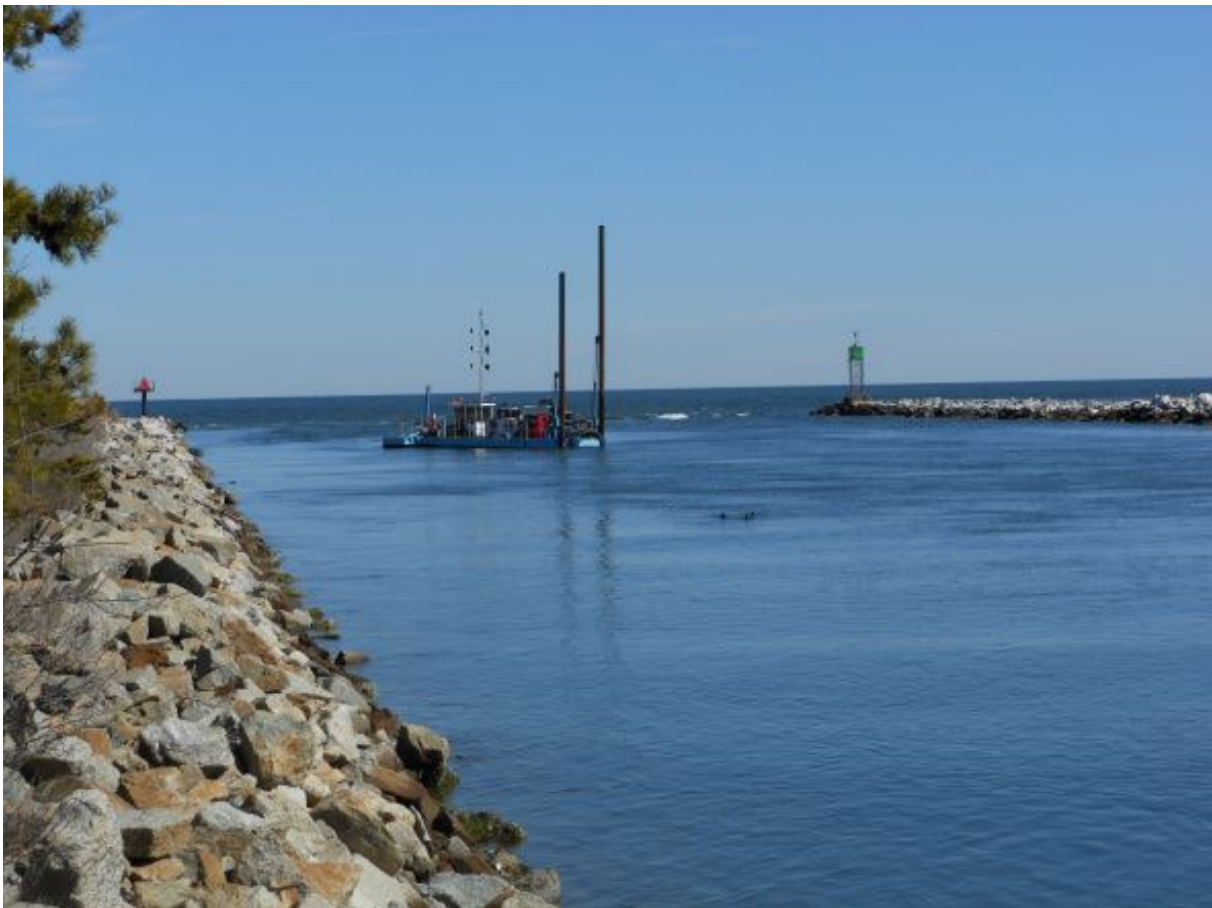


Northern Neck Shallow Draft Navigation and Sediment Management Implementation Plan

Dredging of federal projects in the Northern Neck of Virginia has historically been conducted by the U.S. Army Corps of Engineers (USACE) but due to the reduction in funding for shallow draft navigation projects and shifts to other higher priorities, the USACE has only completed five dredging projects within the region over the period 1990-2020 (Bonum Creek, Coan River, Cranes Creek, Greenvale Creek, and Little Wicomico River). In addition, local governments and non-governmental organizations have performed very limited dredging of water bodies in the region. Recent funding provided through the Virginia Port Authority's Waterways Maintenance Fund would only allow a very select few projects to be supported annually, nowhere near addressing the dredging needs throughout the region. It has become apparent that a different approach is needed to address:

- Physical Characteristics and Economic Usage of the Water Bodies (Dredging)
- Need for Dredge Material Placement Areas
- Funding Alternatives to Address the Above



Dredging of the Little Wicomico River Federal Navigation Channel in 2010. Photo courtesy of USACE, Baltimore District.

In order to address these needs, a plan is being developed to identify the physical characteristics and economic dredging needs based on the inputs of a number of stakeholders in the region. Phase I of the evaluation will provide assessments of the physical characteristics of the 142 shallow draft water bodies in the region. Generally, these water bodies can be grouped into three basic types: federally-defined, non-federal with ATONS (Aids to Navigation) and non-federal without ATONS. The evaluation will consist of 13 federal channels, 38 non-federal channels in water bodies with ATONS, and 91 in water bodies without defined channels or ATONS. Physical parameter data will be collected or created for each of these water bodies. This physical data will include creek mouth morphology, amount of shoaling in the creek mouth, tide range, number of coastal structures such as piers, marinas, boat ramps, and wharfs, the water surface area, mouth width, and any other parameters that become necessary as part of the categorization. Aerial photography, topographic maps, historic shore change maps, and existing economic use data will be utilized for Phase I.

Major groups of commercial and recreational economic entities which utilize these water bodies will also be identified. It is anticipated that these entities will include seafood facilities, marinas/boat building/repair facilities, grain processing facilities, ferry stop facilities, and publicly accessible recreational facilities to include cultural and natural resource sites and boat ramps. The information will be arrayed across the water bodies and compared with the physical usage information to identify a subset of water bodies for which more detailed information will be collected as part of Phase 2 efforts.

- Prioritization of Shallow Draft Navigation Dredging Projects
- Navigation Channel Assessments and Characterization of Dredged Material for Beneficial Use
- Development of Funding Alternatives for Dredging and Shoreline Management Projects

Phase 2 efforts will include 19 individual water body assessments which will be based on field data collection and GIS data creation. Bathymetric data will be collected as part of this Phase and designed to be used in the layout of potential channel alignments and associated dredge volumes and types of material. These data would not be used as a substitute for final design or detailed dredging estimate purposes. Potential funding sources will be developed based on case studies of potentially similar projects in other geographic areas. Potential dredge material disposal areas will be identified alongshore, however specific sites will not be planned and will have to be addressed in subsequent efforts outside of this evaluation.

In consideration of the above the next phase (Phase 3), while not a part of this funded work effort, would include design and cost estimates as well as Section 10/404/408 joint permit applications for individual projects.

Shore Consulting Group and the Virginia Institute of Marine Science are pleased to be working together to assist the Northern Neck Planning District Commission in developing innovative approaches to managing the important water resources in the region.