**APPLICANT:** DOCTOR CREEK OWNERS ASSOCIATION  
**Immediate Waterway:** Doctors Creek  
**Locality:** MATHEWS COUNTY  
**Purpose:** Improve Navigation  
**Application Type:** Subaqueous  
**Site Inspection:** 4/18/01  
**Report Date:** 4/30/01

**Type of Activity** | **Proposed Extent** | **Project Location**  
--- | --- | ---  
New Dredging (yd³) | 3922 | Mathews County  
Impact Subaqueous Bottom (ft²) | 39000 |  
  
Total Impacts (ft²) | 39000 |  
Total Impacts (Wetlands) | 0 |  
Total Impacts (Subaqueous) | 39000 |  
Total Impacts (Beach/Dune) | 0 |  
Total Fill (ft²) | 0 |  

Certain assumptions were used in determining the marine environmental impacts potentially resulting from this proposal. These were necessitated by information voids resulting from application noncompliance with the Virginia Code 28.2-1302 and the Joint Permit Application.
ATTENTION

This assessment is based on biological, chemical, geological, and physical factors affecting the marine environment at and in the vicinity of the proposed activity. Parameters of the marine environment which may influence recreational, commercial, or industrial activities which are dependent on the marine environment are also considered where applicable.

The Virginia Institute of Marine Science (VIMS) is aware that regulatory or administrative bodies who weigh the overall potential public and private benefits and detriments in arriving at decisions must also consider other factors such as economics, aesthetics, zoning, or community desires. INFORMATION PROVIDED IN THIS REPORT IS, THEREFORE, ONLY THE ENVIRONMENTAL AND MARINE RESOURCES INPUT INTO THE DECISION MAKING PROCESS.

Comments:

It is our opinion that the individual and cumulative adverse environmental impacts resulting from a portion of this project warrant careful consideration. The following report summarizes these impacts and, where appropriate, suggests alternatives to minimize environmental effects.

The applicant proposes to dredge approximately 3,922 cubic yards of subtidal bottom of Doctors Creek, in Mathews County, Virginia for the purpose of improving navigation. The proposed activity will impact approximately 39,000 square feet of subtidal bottom along the proposed 1,400 feet long channel. The proposed dredging specifies a 25 foot channel width and two boat slips dredged to a depth of –4 feet at mean low water (MLW).

As outlined in the Wetlands Guidelines, dredging should be conducted to tie into the existing bottom controlling depth so as not to create artificially deep channels or holes that create a sink for pollutants or organic material that cannot be regularly flushed. The application drawings depict the controlling depth at the mouth of Doctors Creek as –3.5 feet MLW. To promote flushing, we recommend that the depth of the dredge cut be limited to –3 feet MLW with a 1 foot allowable overdredge.

The dredged material is likely to be a mixture of sand and silt with the sandy material being found closest to the mouth of Doctors Creek and an increasing percentage of silt found further upstream. Therefore, it is reasonable to assume that dragline dredging in the creek will adversely affect water quality by increasing turbidity levels in the water column. Although these impacts are generally temporary and localized, dredging can adversely affect nearby shellfish and SAV beds. A review of preliminary data collected by VIMS researchers (Orth et al., 2000) indicates healthy and persistent submerged aquatic vegetation exists immediately downstream of the project at the mouth of Doctors Creek. Although SAVs have not been confirmed within the proposed dredge area, we recommend limiting the dredging to the proposed project area in order to minimize adverse affects to this resource.

Although dredging will temporarily affect the benthic community within the dredged area, benthic organisms are anticipated to recolonize the dredged area within 6-18 months. Although a portion of Doctors Creek has been condemned, if significant shellfish resources exist along unrestricted portions of the creek within 500 yards of the proposed dredge site, we recommend dredging be avoided during July through September and December through February.

Care must be taken to insure that appropriate buffers between the dredge cut and adjacent vegetated
wetlands are maintained. This distance should be a minimum four times (4X) the depth of the dredge cut measured from the toe of the proposed channel. This is to allow for a sufficient area for the establishment of stable channel side slopes without impacting adjacent vegetated wetlands. This buffer will also help protect adjacent structures from failure. It is our opinion that the area in the vicinity of the Basinight pier may be too narrow (approximately 50 feet between vegetated wetlands along shorelines) to allow for the proposed channel width and depth. We recommend narrowing the channel and reducing the depth of dredge cut in this area so that the 4X buffer can be maintained. If the depth of the channel is reduced in this area, the same depth should be carried upstream to the project limit.

From the viewpoint of the marine environment, we are of an opinion that the impacts resulting from the dredging of Doctors Creek will be minimal provided efforts are made to minimize impacts to the vegetated wetlands by maintaining the 4X buffer and the limits of the dredging activity does not impact SAV.

[Signature]
David L. O’Brien
Marine Scientist
Hydrologic units represent smaller, isolated watersheds defined by topography and flow direction. These units can be thought of as insulated ecosystems or landscapes within which resources can be managed at a larger scale. The cumulative impact of a project to resources within a hydrologic unit may be significantly greater than the impact to the larger watershed above.
Permit Site Study Area

Mathews County
MIDDLE PENINSULA BAYSHORE
Doctors Creek

Project site

Locality boundaries

Middle Peninsula Bayshore watershed

Tidal Marsh Inventory - TMI
- Arrow Arum-Pickerelweed
- Big Cordgrass
- Black Needlerush
- Brackish Water Mixed
- Cattail
- Freshwater Mixed
- Reed Grass
- Saltbush
- Saltmeadow
- Saltmarsh Cordgrass
- Yellow Pond Lily

SAV - 1998
- less than 10%
- 10-40%
- 40-70%
- 70-100%

Roads
- Primary
- Secondary
- Tertiary
- Open water

N

0 0.5 1 Miles
To Wetlands Board: Please indicate Wetlands Board action on this sheet and return to VIMS

Application Number: 01-0221
Name: Doctor Creek Owners Association
Locality: Mathews County
Waterway: Doctors Creek

Please check here if this application was approved as proposed ____
Complete the form below if the application was modified.

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>PROPOSED</th>
<th>PERMITTED</th>
</tr>
</thead>
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Comments: __________________________________________________________________________________
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Certified by: ________________________________

Virginia Institute of Marine Science
School of Marine Science
P.O. Box 1346, Route 1208 Great Road
Gloucester Point, Virginia 23062-1346
phone: (804)684-7380, fax: (804)684-7179, e-mail: wetlands@vims.edu