**VIMS Shoreline Permit Application Report # 03-0255**

**APPLICANT:** CATHERINE & R. GORDON SMITH
**Immediate Waterway:** Yopps Cove
**Locality:** LANCASTER COUNTY
**Purpose:** Shoreline Stabilization
**Application Type:** Wetlands, Subaqueous
**Site Inspection:** 3/4/03
**Report Date:** 3/5/03

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Proposed Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulkhead (ft)</td>
<td>78</td>
</tr>
<tr>
<td>Impact Sand Flat Community (Type XIV) (ft²)</td>
<td>87</td>
</tr>
<tr>
<td>Fill Sand Flat Community (Type XIV) (ft²)</td>
<td>78</td>
</tr>
<tr>
<td>Groins (ft)</td>
<td>10</td>
</tr>
<tr>
<td>Groins</td>
<td>1 Unit(s)</td>
</tr>
<tr>
<td>Impact Sand Flat Community (Type XIV) (ft²)</td>
<td>5</td>
</tr>
<tr>
<td>Fill Sand Flat Community (Type XIV) (ft²)</td>
<td>5</td>
</tr>
<tr>
<td>Impact Subaqueous Bottom (ft²)</td>
<td>5</td>
</tr>
<tr>
<td>Fill Subaqueous Bottom (ft²)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Impacts (ft²)</strong></td>
<td><strong>97</strong></td>
</tr>
<tr>
<td><strong>Total Impacts (Wetlands)</strong></td>
<td><strong>92</strong></td>
</tr>
<tr>
<td><strong>Total Impacts (Subaqueous)</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>Total Impacts (Beach/Dune)</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td><strong>Total Fill (ft²)</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>

**Project Location**

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

[Image of the proposed area]
NOTICE

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.**

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.

Comments:

We have reviewed this proposal from a marine environmental viewpoint. A low bulkhead and short groin are proposed to trap and retain sand at the entrance channel to a private boat basin. Although the overall environmental impact is expected to be minor, the long-term effectiveness of this approach should be considered. If the sand spit is migrating toward the entrance channel, then the low-profile design of these structures will only temporarily retain sand. Also, the life expectancy of timber structures is reduced if they are regularly subject to wave and tidal action in the marine environment. The bulkhead will be under water during every high tide if it is below the mean high water elevation, as proposed.

No water depths were provided with the application to evaluate the current status of navigation into and out of the basin. If the sand spit is not stable and a retaining structure is necessary to maintain navigation, then a jetty with a higher profile above mean high water may provide more effective, long-term channel stabilization. Allowing native shrubs and grasses to grow on the spit will also slow down sand movement toward the channel.

Karen A. Duhring
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

Lancaster County
RAPPANNOCK RIVER
Yopps Cove

Project site

Rappahannock River 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

Roads
- Primary
- Secondary
- Tertiary

Intertidal flat

Open water

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

Application Number: 03-0255
Name: Catherine & R. Gordon Smith
Locality: Lancaster County
Waterway: Yopps Cove

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>
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<tr>
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Comments: __________________________________________________________________________________
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____________________________________________________________________________________
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Certified by: ________________________________