**VIMS Shoreline Permit Application Report # 03-1656**

**APPLICANT:**
- **Locality:** GORDON L. SMITH, JR.
- **Immediate Waterway:** MIDDLESEX COUNTY
- **Watershed:** Rappahannock River
- **Purpose:** Erosion Control
- **Application Type:** Wetlands
- **Site Inspection:** 8/19/03
- **Report Date:** 10/2/03

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Proposed Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulkhead Toe Protection (ft)</td>
<td>150</td>
</tr>
<tr>
<td>Impact Sand Flat Community (Type XIV) (ft2)</td>
<td>1800</td>
</tr>
<tr>
<td>Fill Sand Flat Community (Type XIV) (ft2)</td>
<td>900</td>
</tr>
<tr>
<td>Total Impacts (ft2)</td>
<td>1800</td>
</tr>
<tr>
<td>Total Impacts (Wetlands)</td>
<td>1800</td>
</tr>
<tr>
<td>Total Impacts (Subaqueous)</td>
<td>0</td>
</tr>
<tr>
<td>Total Impacts (Beach/Dune)</td>
<td>0</td>
</tr>
<tr>
<td>Total Fill (ft2)</td>
<td>900</td>
</tr>
</tbody>
</table>

**Project Location**

![Middlesex County Map](image)
NOTE
The Virginia Institute of Marine Science (VIMS) recognizes that the regulatory process considers all aspects of a particular project, including socioeconomic factors. This report, however, only addresses marine environmental concerns.

Findings & Recommendations:

We have reviewed this proposal from a marine environmental perspective and it is our opinion that the individual and cumulative adverse impacts resulting from this activity can be reduced by constructing the revetment with a 1.5:1 side slope (base width:height). In addition, given the large fetch to the northeast we recommend utilizing a minimum of Class II armor stone (150-500 lb., 50%>300 lb.) to help prevent failure of the structure and secondary impacts to marine resources.

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

Rappahannock River
Middlesex County

Project site

Locality boundaries

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 0.25 0.5 Miles
To Wetlands Board / VMRC: Please indicate Wetlands Board / VMRC action on this sheet and return to VIMS

Application Number: 03-1656
Name: Gordon L. Smith, Jr.
Locality: Middlesex County
Waterway: Rappahannock River

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>
<tbody>
<tr>
<td>Bulkhead Toe Protection (ft)</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Impact Sand Flat Community (Type XIV) (ft²)</td>
<td>1800</td>
<td></td>
</tr>
<tr>
<td>Fill Sand Flat Community (Type XIV) (ft²)</td>
<td>900</td>
<td></td>
</tr>
</tbody>
</table>

Please specify required modifications: __________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Thomas A. Barnard, Director