VIMS Shoreline Permit Application Report #03-2165

**APPLICANT:** DENNIS BUTLER
Locality: NORTHUMBERLAND COUNTY
Immediate Waterway: Potomac River
Watershed: LOWER POTOMAC RIVER
Purpose: Erosion Control
Application Type: Beach/Dune
Site Inspection: 10/28/03
Report Date: 10/31/03

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Proposed Extent</th>
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<tbody>
<tr>
<td>Bulkhead (ft)</td>
<td>40</td>
</tr>
<tr>
<td>Impact Beach/Dune (ft²)</td>
<td>80</td>
</tr>
<tr>
<td>Fill Beach/Dune (ft²)</td>
<td>80</td>
</tr>
<tr>
<td>Total Impacts (ft²)</td>
<td>80</td>
</tr>
<tr>
<td>Total Impacts (Wetlands)</td>
<td>0</td>
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<tr>
<td>Total Impacts (Subaqueous)</td>
<td>0</td>
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<tr>
<td>Total Impacts (Beach/Dune)</td>
<td>80</td>
</tr>
<tr>
<td>Total Fill (ft²)</td>
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Project Location

Northumberland County

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Center for Coastal Resources Management
P.O. Box 1346
Gloucester Point, VA 23062-1346
(804)684-7380, fax: (804)684-7179, e-mail: http://ccrm.vims.edu/
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:

A bulkhead is proposed to stabilize erosion of a Potomac River beach shoreline as part of a joint project with the adjacent property owner (APO Marshall #03-1314). Increased erosion of the applicant's shoreline was predicted as a result of the proposed groins included with this project. However, sloped rock revetments are advised instead of bulkheads along high energy beach shorelines such as this for long-term stabilization. Erosion of the sandy beach adjacent to the bulkhead may increase as a result of reflected wave energy. If a bulkhead is determined to be the preferred alternative, then the potential for adverse environmental impacts will be minimized if it is constructed as proposed within 2 feet of the existing upland bank.

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

Potomac River
Northumberland County

Project site

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

Application Number: 03-2165
Name: Dennis Butler
Locality: Northumberland County
Waterway: Potomac 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>
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<th>PERMITTED</th>
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Please specify required modifications: ________________________________________________________
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Thomas A. Barnard, Director