VIMS Shoreline Permit Application Report # 03-1327

APPLICANT: LORILEE C. PENN, ET AL
Locality: CITY OF VIRGINIA BEACH
Immediate Waterway: Little Neck Creek
Watershed: SOUTHERN BAYSHORE
Purpose: Shoreline Stabilization, Improve Navigation
Application Type: Wetlands, Subaqueous
Site Inspection: 7/10/03
Report Date: 7/18/03

Type of Activity Proposed Extent
Bulkhead Replacement (ft) 609
  Impact Saltbush Community (Type IV) (ft2) 531
  Fill Saltbush Community (Type IV) (ft2) 531
  Fill Saltmeadow Community (Type II) (ft2) 3500
  Impact Saltmeadow Community (Type II) (ft2) 3500
  Impact Sand/Mud Mixed Flat Community (Type XV) (ft2) 700
  Fill Sand/Mud Mixed Flat Community (Type XV) (ft2) 700
Maintenance dredging (yd3) 450
  Impact Subaqueous Bottom (ft2) 5870
Riprap (ft) 55
  Fill Saltbush Community (Type IV) (ft2) 165
  Impact Saltbush Community (Type IV) (ft2) 165
  Impact Mud Flat Community (Type XVI) (ft2) 275
  Fill Mud Flat Community (Type XVI) (ft2) 188
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Total Impacts (ft²)</td>
<td>11041</td>
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<tr>
<td>Total Impacts (Wetlands)</td>
<td>5171</td>
</tr>
<tr>
<td>Total Impacts (Subaqueous)</td>
<td>5870</td>
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<tr>
<td>Total Impacts (Beach/Dune)</td>
<td>0</td>
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<tr>
<td>Total Fill (ft²)</td>
<td>5084</td>
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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:

There is a considerable amount of wetlands impacts associated with the bulkhead replacement, specifically the large area of saltmeadow community that will be backfilled. This marsh is the result of an increased tide range, subsidence of the original dredged material and sea level rise. There do not appear to be any viable, less damaging alternatives that would provide for an effective replacement structure. The fact that the bulkhead is being replaced in place instead of the two feet channelward normally allowed, will do much to offset the loss of the meadow landward of the new bulkhead.

Consideration should be given to converting the proposed riprap revetment between points R and T into a marsh toe structure without backfill. This would avoid filling approximately 200 SF of saltbush community.

From a marine environmental viewpoint we have no objection to the project with the above considerations.

Walter I. Priest, III
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.
City of Virginia Beach
SOUTHERN BAYSHORE
Little Neck Creek

Permit Site Study Area

- Arrow Arum-Pickerelweed
- Big Cordgrass
- Black Needlerush
- Brackish Water Mixed
- Cattail
- Freshwater Mixed
- Reed Grass
- Saltbush
- Saltmeadow
- Saltmarsh Cordgrass
- Yellow Pond Lily
- Open water
VIMS Shoreline Permit Application Report # 03-1327

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

Application Number: 03-1327
Name: Lorilee C. Penn, et al
Locality: City of Virginia Beach
Waterway: Little Neck 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>
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<th>PERMITTED</th>
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Please specify required modifications:

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Thomas A. Barnard, Director