Virginia Institute of Marine Science
School of Marine Science
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VIMS Shoreline Permit Application Report # 01-1031

APPLICANT: WARDEN, STEVEN & MARGARITA
Immediate Waterway: Crystal Lake
Locality: CITY OF VIRGINIA BEACH
Purpose: Shoreline Stabilization
Application Type: Subaqueous
Site Inspection: 8/1/01
Report Date: 2/5/02

WARDEN, STEVEN & MARGARITA
Crystal Lake
CITY OF VIRGINIA BEACH

Type of Activity

<table>
<thead>
<tr>
<th>Proposed Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulkhead Toe Protection (ft)</td>
</tr>
<tr>
<td>Impact Subaqueous Bottom (ft2)</td>
</tr>
<tr>
<td>Fill Subaqueous Bottom (ft2)</td>
</tr>
<tr>
<td>Total Impacts (ft2)</td>
</tr>
<tr>
<td>Total Impacts (Wetlands)</td>
</tr>
<tr>
<td>Total Impacts (Subaqueous)</td>
</tr>
<tr>
<td>Total Impacts (Beach/Dune)</td>
</tr>
<tr>
<td>Total Fill (ft2)</td>
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</tbody>
</table>

Project Location

City of Virginia Beach
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:

We have reviewed this proposal from a marine environmental viewpoint and it is our opinion that the individual and cumulative adverse impacts resulting from this activity will be relatively minimal.

[Signature]
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.
Permit Site Study Area

City of Virginia Beach
SOUTHERN BAYSHORE
Crystal Lake

Project site
Southern Bayshore watershed
Shoreline
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
Open water

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

Application Number: 01-1031
Name: Warden, Steven & Margarita
Locality: City of Virginia Beach
Waterway: Crystal Lake

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

ACTIVITIES

PROPOSED PERMITTED

Bulkhead Toe Protection (ft) 476  ____
Impact Subaqueous Bottom (ft2) 1904  ____
Fill Subaqueous Bottom (ft2) 952  ____

Comments:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Certified by: __________________________________________