VIMS Shoreline Permit Application Report # 01-1642

APPLICANT: JEAN SIEBERT AND U.T. BROWN
Immediate Waterway: Atlantic Ocean
Locality: CITY OF VIRGINIA BEACH
Purpose: Residential Construction
Application Type: Beach/Dune
Site Inspection: 9/11/01
Report Date: 9/14/01

Type of Activity

<table>
<thead>
<tr>
<th>Proposed Extent</th>
<th>Project Location</th>
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<tbody>
<tr>
<td>Residential Structure (ft2)</td>
<td>6434</td>
</tr>
<tr>
<td>Fill Beach/Dune (ft2)</td>
<td>2074</td>
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<td>Impact Beach/Dune (ft2)</td>
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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:

It is our opinion that the individual and cumulative adverse environmental impacts resulting from a portion of this project warrant careful consideration. The following report summarizes these impacts and, where appropriate, suggests alternatives to minimize environmental effects.

The project site is a very high section of beach that is backed by a vegetated dune along Sandbridge Road. Some of the sand in this dune may be derived from sand removed from the road. However, two things need to be remembered in this regard. One, the sand from the road had to be blown across the beach and dune to get to the road. Second, the sand on the seaward portion of the dune has been deposited there by normal wind-driven processes and stabilized by the existing vegetation. The location of the coastal primary sand dune is determined by the complex interaction of winds, waves and sediment supply. The existing vegetation on the dune and the pioneer vegetation growing seaward of the dune indicate that this is currently the natural location of the dune.

As proposed this project will have a significant adverse impact on the structure, form and function of the coastal primary dune located on site. The proposed grading of the dune to allow for the driveway will essentially eliminate the dune in this area and reduce its value as a barrier to flooding during future storm events. This will also destabilize the crest of the dune allowing increased wind erosion of this sand. Construction of the proposed parking area, house and deck will further impact the site by preventing future stabilization of the fore slope of the dune with vegetation as well as altering wind patterns that affect sand deposition.

From the viewpoint of the marine environment, it is undesirable to build on open ocean beaches seaward of the coastal primary sand dune. It is also contrary to the Coastal Primary Sand Dune Guidelines. If a permit is issued for this project, we would recommend that three rows of sand fence be established along the seaward property line to help stabilize the disturbed area.
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
CHOWAN RIVER
Atlantic Ocean

- Project site
- Chowan River 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: 01-1642
Name: Jean Siebert and U.T. Brown
Locality: City of Virginia Beach
Waterway: Atlantic Ocean

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

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Comments: __________________________________________________________________________________
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Certified by: __________________________________________