

North Carolina Department of Environment and Natural Resources

Division of Coastal Management

Michael F. Easley, Governor

Charles S. Jones, Director

William G. Ross Jr., Secretary

November 1, 2006

MEMORANDUM

I&S-06-30

TO: Implementation and Standards Committee

FROM: Bonnie Bendell

SUBJECT: Estuarine Shoreline Stabilization Subcommittee Update

At the November 2005 CRC meeting, staff asked the I&S committee to revisit the Commission's estuarine shoreline erosion control policy. As a result, Chairman Hackney appointed an Estuarine Shoreline Stabilization Subcommittee. The Subcommittee requested that the Estuarine Biological and Physical Processes Work Group be reassembled to provide scientific and technical support during the early stages of the process. In August 2006, the Estuarine Work Group provided the Subcommittee with a report detailing appropriate shoreline stabilization methods for the different North Carolina shoreline types.

The Estuarine Subcommittee met on September 20, 2006 to discuss the Work Group's report and asked that the Work Group address the topic of stabilization method (structure) location relative to the shoreline. The Work Group provided a memo to the Subcommittee detailing proper location for each of the stabilization methods described in the report. The memo is attached.

On October 16, 2006, the Subcommittee met to begin the development of rule concepts using the recommendations of the Work Group. It is the expectation of the Subcommittee to present these concepts along with draft rule language for consideration by the I&S Committee at the January 2007 meeting.

memo

Date: 10/16/2006

To: Estuarine Shoreline Stabilization Subcommittee

From: Estuarine Shoreline Biological and Physical Processes Work Group

RE: Structure Location

In a meeting on Thursday, October 12th, the Estuarine Shoreline Biological and Physical Processes Work Group discussed proper location for structures to be used for shoreline stabilization on the estuarine shoreline. The following are the preferred locations to minimize adverse impacts to habitats and public trust waters for the structures discussed.

<u>Vegetation Control</u> – Wetland vegetation should be planted between mid and high tide. An approximate minimum width of 20 feet will reduce wave energy on the shoreline.

<u>Sills</u> – A sill should be located 5 feet waterward of the wetland vegetation. A sill should be located so that at least 20 feet of wetland vegetation can be planted or regenerate.

<u>Groins</u> – A groin or groin series should be as short as possible to still be effective for the particular location. Actual groin length is specific to site and waterway conditions and should be designed specifically for each site.

<u>Breakwater</u> – Design needs to be completed by a professional who is experienced in breakwater design. The actual placement of the structure is part of the design and its intended purpose.

<u>Sloped Structures</u> – The waterward toe of the structure should be located no further waterward than normal high water. If a scarped sediment bank is present at the site, the sloped structure should be located on the sediment bank (even if it located landward of the normal high water line) to utilize the existing slope and minimize fill placement. If wetland vegetation is located on the site, the structure should be located a buffer distance from the vegetation to prevent damage during construction and to allow migration of the wetlands.

<u>Vertical Structures</u> – The structure should be located no further waterward than normal high water. If a scarped sediment bank is present at the site, the structure should be located at the toe of the sediment bank (even if it located landward of the normal high water line) and to minimize fill placement. If wetland vegetation is located on the site, the structure should be located a buffer distance from the vegetation to prevent damage during construction and to allow migration of the wetlands.