



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

August 22, 2005

**MEMORANDUM**

**TO:** I&S Committee  
**FROM:** Tancred Miller  
**SUBJECT:** Estuarine Shoreline Stabilization Policy

In 1998, the Coastal Resources Commission initiated an internal review of its rules governing use and protection of the state's estuarine shorelines. The following year, the CRC focused its attention upon establishing a development setback buffer. The result of that effort was the adoption of the 30-foot estuarine shoreline buffer provisions in 7H.0209(d)(10). The CRC subsequently established an Estuarine Shoreline Stabilization Subcommittee, which in November 2000 developed a set of principles and concepts to guide further discussion and policy/rule development. A copy of the concepts/principles is attached.

The CRC then convened an Estuarine Shoreline Biological and Physical Processes Work Group to develop science-based recommendations based upon the concepts/principles identified by the Stabilization Subcommittee. The Work Group produced a draft report in November 2002, based on the best available science, recommending specific stabilization standards for the estuarine shoreline.

In its CHPP implementation plan (Goal 3.4), the Commission committed to revising its estuarine and public trust shoreline stabilization rules, including "the development and promotion of incentives for use of alternatives to vertical shoreline stabilization measures." The earlier work done by the Estuarine Shoreline Stabilization Subcommittee and the Estuarine Shoreline Biological and Physical Processes Work Group provide a strong foundation for the I&S Committee to continue the discussion of specific measures. In addition, the I&S Committee has recently heard presentations on the physical and biological effects of shoreline stabilization structures (Dr. Carolyn Currin, April 2005; Christian Waters, June 2005). Staff feels that there is good momentum and justification to elevate the issue on the Commission's and Division's agendas. Staff is seeking discussion in Committee and subsequent direction as to how to proceed. Recommendation 3.4 is attached for discussion.

Attachments



## Coastal Resources Commission Concepts/Principles for Estuarine Shoreline Stabilization Policy Assessment and Development

- 1) The State of North Carolina has the authority under CAMA and the Dredge and Fill Act to regulate placement and installation of shoreline stabilization measures.
- 2) Only property owners with demonstrable erosion problems\* may be eligible to obtain a permit to stabilize the shoreline.
- 3) Stabilization techniques should be appropriate for site and erosion forces present.
- 4) Measures with the least adverse environmental effects are preferred (General preference for soft structures).
- 5) The goals of establishing standards for estuarine and public trust shorelines are:
  - a. To safeguard and perpetuate the natural productivity and biological, economic and esthetic values of natural ecological conditions of the estuarine system (Protection of Habitat and Water Quality).
  - b. To Insure that the development or preservation of the land and water resources of the coastal area proceed in a manner consistent with the capability of the eland and water for development, use, and preservation based on ecological considerations (Appropriate Development For Site).
  - c. To insure the orderly and balanced use and preservation of our coastal resources on behalf of the people of North Carolina and the nation (Protection of Public Trust and Private Property Rights).
- 6) \* CRC will define “erosion problem”.
- 7) CRC will create development standards for stabilization technique/measures.
  - a. Soft Measures
    - i. Grading and Planting
    - ii. Wetland Planting
  - b. Hard Measures
    - i. Bulkheads
    - ii. Groins and Jetties
    - iii. Breakwaters
    - iv. Sills
    - v. Revetments
    - vi. Wave-boards (wooden breakwaters)
  - c. Combinations
- 8) Stabilization measures shall be located as far landward as feasible.
- 9) CRC will set standards for existing stabilization projects:
  - a. Allowing for tying with existing stabilization projects and adjoining lots
  - b. Allowing for hardened structures on constructed canals and basins
  - c. Allowing in kind/in place repair
  - d. Allowing for in kind/in place replacement
- 10) Allow for larger footprint for riprap for achieved desired slope (1: 1 ½).
- 11) CRC will attempt to keep criteria and standards simple to understand and implement.
- 12) CRC will gather public input on the above principles and provide guidance on the concepts prior to DCM developing draft rule text.

# NORTH CAROLINA COASTAL HABITAT PROTECTION PLAN

## IMPLEMENTATION PLAN

**Recommendation 3.4: Protect fish habitat by revising estuarine and public trust shoreline stabilization rules using best available information, considering estuarine erosion rates, and the development and promotion of incentives for use of alternatives to vertical shoreline stabilization measures.**

- DMF to act in a supportive role to DCM
- EMC/DWQ to continue providing staff support for the Oyster Restoration and Protection Plan Steering Committee. Time frame: Ongoing (EMC/DWQ)
- Refine rule 15A NCAC 07H.2700GP for Marsh Sills. Time frame: Complete July 2007 (CRC/DCM)
- Establish a CRC/CRAC Estuarine Shoreline Stabilization Subcommittee. Time frame: Complete January 2006 (CRC/DCM)
- Encourage alternatives to vertical shoreline stabilization methods through permit requirements and fees. Time frame: Complete July 2007 (CRC/DCM)
- Continue participation as a Technical Advisory Committee member in NOAA's new research-sponsored program "Ecological Effects of Sea Level Rise" to develop information/tools to better forecast and manage landscape responses of critical natural resources relative to sea level rise. Time frame: Ongoing (CRC/DCM)
- Support/promote efforts to develop shoreline stabilization demonstration projects along non-ocean shorelines. Time frame: Complete July 2006 (CRC/DCM)
- Pursue and provide financial support for shoreline stabilization demonstration projects and studies. Time frame: Complete June 2007 (CRC/DCM)