



MARSH SILL EVALUATION

Alternatives to vertical bulkheads are an important aspect to estuarine shoreline stabilization in the North Carolina coastal zone. One alternative, the rock sill with marsh plantings strategy, has been of interest to many stakeholders including the N.C. Division of Coastal Management, the Coastal Resources Commission, and the general public. Marsh sills are thought to provide shoreline protection similar to, or better than, vertical bulkheads while also retaining ecosystem services associated with a natural shoreline margin. Ongoing research efforts are still being conducted to verify that these assumptions are correct. Over 30 sills have been constructed in the state with more scheduled to be built over the next few years. Given the potential impact these structures may have and their 50 year lifespan, the CRC requested the DCM to assess the performance of existing marsh sills.

Evaluation Criteria

The marsh sill evaluation will include site visits to 28 marsh sills in North Carolina. Sills will be assessed based on two criteria:

1. Are the marsh sills performing their function as expected?
 - Has the marsh sill stabilized the shoreline of the property where it is installed?
 - Has the marsh sill caused unexpected erosion or other unanticipated problems or benefits?
 - Based on the performance of the existing marsh sills, are the specific conditions outlined in 15A NCAC 7H .2705 of the marsh sill general permit necessary?
2. What are the sill landowners' and adjacent property owners' perceptions of the marsh sill shoreline stabilization strategy?
 - What are the feelings and perceptions of landowners regarding the stabilization technique where the marsh sills are currently installed?
 - What are the feelings and perceptions of property owners regarding the stabilization technique adjacent to where the marsh sills currently are installed?

Timeline and Evaluation Results

The site visits and property owner surveys will be conducted from June – August 2010. Results of both efforts will be compiled and analyzed in the fall, with the final report prepared December 2010. The project results will be presented at CRC meetings, a meeting of the estuarine biological and physical processes workgroup, Coastal Habitat Protection Plan meetings, and other appropriate venues.



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