

**Final Report
June 8, 2012**

**A Regional Guidebook for Applying the Hydrogeomorphic (HGM) Approach to
Flats in the Mid-Atlantic Coastal Plain**

Virginia Institute of Marine Science
Center for Coastal Resources Management

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The objective of this project was to develop a finalized HGM guidebook for coastal plain flats in the Mid-Atlantic using data from the Delaware and Virginia HGM flats efforts. The Mid-Atlantic flats guidebook provides guidance in determining functions associated with flats for use in the regional regulatory programs. The project task was to combine HGM guidance developed in Delaware and Virginia into a guidebook for the Mid-Atlantic. The final product is a Regional HGM Guidebook for Coastal Plain Flats. The project specifically addresses the three EPA national program priorities of 1) regulation (enhance wetlands protection) 2) improving the effectiveness of compensatory mitigation, and 3) refining the protection of vulnerable wetlands and aquatic resources.

Task 1: Develop a finalized HGM Guidebook for Coastal Plain flats in the Mid-Atlantic.

Summary of Activities

Review of extant state models was completed. First workshop with HGM experts was held in April of 2009 and was held at the Smithsonian Estuarine Research Center in Maryland. Workshop outcome determined a number of metrics that could potentially be combined between the various models. Preliminary review of potentially similar metrics was completed. Several statistical methods were utilized to test relationships across both VA and DE methods and variables. A second expert workshop was held May of 2010 in Annapolis, Maryland. Additional data collection and data transformation was conducted in 2010 and 2011.

Accomplishments/Problems

Additional field data collection was determined to be necessary at the May 2010 meeting. Additional data collection was conducted and additional statistical analysis was completed. The final draft of the guidebook has been reviewed by the principals and is submitted as an attachment to this final report. The draft guidebook has also been submitted to the Army Corps of Engineers Environmental Research and Development Center (ERDC).

