



# Virginia Wetlands Report



Volume 25, Issue 1

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Spring 2010

## Coastal Management Decision Tools

The Center for Coastal Resources Management is developing a new suite of tools intended to help regulators and property owners make decisions regarding coastal resources. Our next wetlands workshop will highlight the first component, a shoreline management decision tree that leads users through a series of questions about shoreline characteristics and results in a recommendation of the environmentally preferable treatment(s) for that shoreline.

Shoreline characteristics that feed into the decision tree include the existence and extent of bank erosion, existence of an environmentally valuable forested buffer on the shoreline, bank height, existence of improvements such as homes, existence and extent of marsh or beach, fetch (the distance over water over which wind blows and generates wave energy), and nearshore water depth.

The decision tree uses a tree-like graph of questions and answers. The outcome(s) identified at the end of the process are those environmentally preferred given the conditions on the shoreline. The preferred option is offered from an integrated shoreline management perspective. The tree is built to identify the outcome(s) making the greatest use of existing natural erosion protection capabilities, and enhances or creates those capabilities where they are limited or lacking.

The premise for this approach is founded on the science investigating the adverse effects of cumulative impacts associated with shoreline hardening structures. The displacement of natural resources and native land cover with vertical walls, non-native rock and manicured uplands has resulted in a loss of water quality and habitat services leading to changes in the number and diversity of the Bay's fish, shellfish, birds and other species which depend upon adequate water quality and habitat for survival.

The application of this first decision tool is limited to erosion control projects on currently undefended shorelines and those with failed shoreline structures, and does not address the full range of potential actions along the shoreline and nearshore waters such as dredging projects, wet slips, or commercial structures. Comparable tools are in development for the full suite of activities/actions affecting tidal shorelines and tidal waters.

### In this issue:

### WORKSHOP ANNOUNCEMENT



### Coastal Management Decision Tools

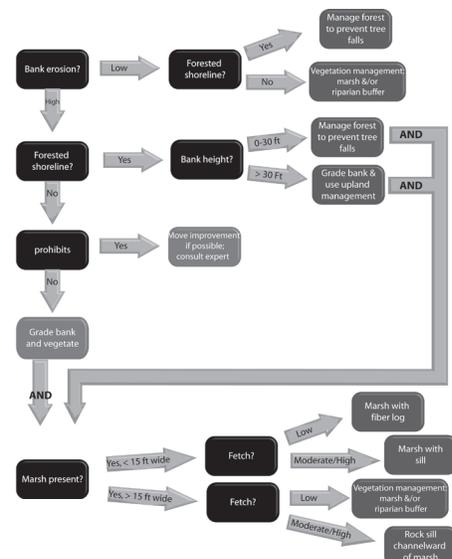
Thursday, April 22, 2010

at VIMS

See inside for information & registration!

Also

Tidal Wetlands News & Events





## The Comprehensive Coastal Resource Management Plan (CCRMP) and the Geospatial Shoreline Management Model

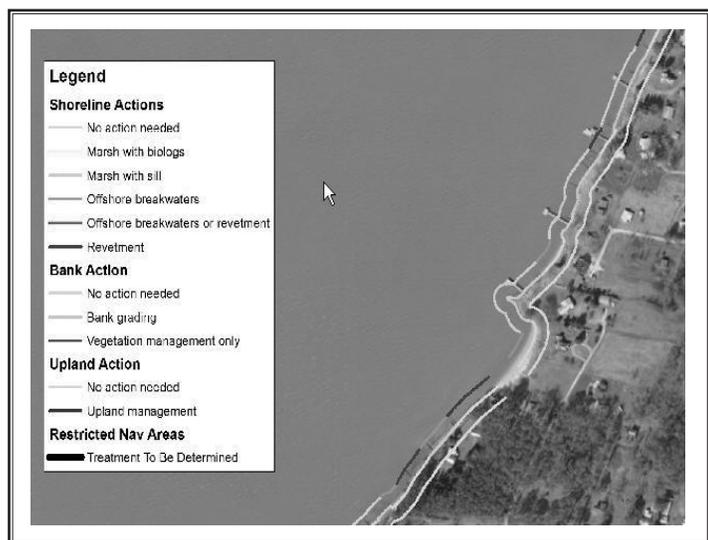
A Comprehensive Coastal Resource Management Plan (CCRMP) should integrate key elements paramount to land use management within a coastal community. The goal is to provide guidance and present issues for consideration when making coastal land use decisions at the local level. The obvious components must include: guidance for erosion control that enables citizens to protect property while insuring a sustainable natural resource system, guidance for targeting areas of concern for conservation, and the risks associated with sea level rise and the vulnerability of both community and natural resource infrastructure. A CCRMP should provide access to data, maps, and strategies to enable best practices to occur.

Guidance for erosion control has been a Center focus for several years. Among the major activities surrounding the development of guidance for erosion control has been the generation of a spatially explicit Geospatial Shoreline Management Model that uses GIS to map best management alternatives for addressing erosion control and shoreline instability. The principles behind the spatial model are rooted in the concepts that support integrated coastal zone management.

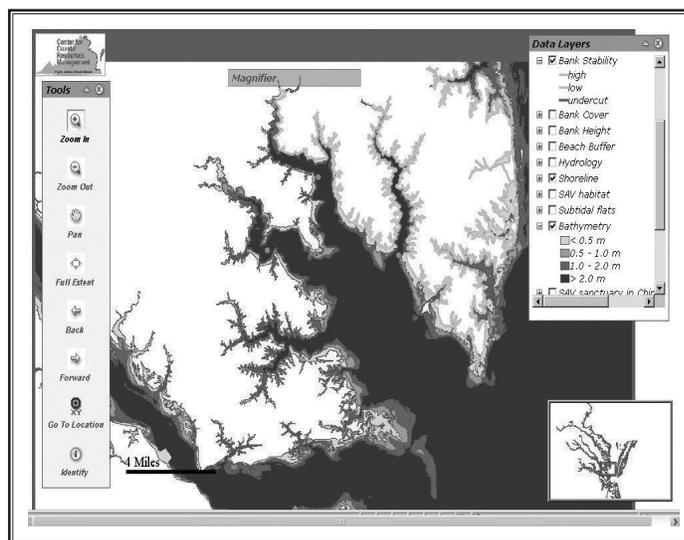
The workshop presentation will introduce the audience to the Geospatial Shoreline Management Model including data requirements, interpretation, uses, and development progress. Sample maps will be presented. The geospatial model will be discussed within the context of the larger CCRMP. As well, a brief discussion of other components to the conceptual plan will be offered.

### Shoreline Assessment Mapper (SAM)

A new interactive online GIS tool is being developed to help bring baseline shoreline data to the desktops of local planners and board members who make decisions pertaining to shoreline projects and other coastal activities. The GIS tool will provide multiple data layers for various upland, wetland and shallow water habitat resources and site conditions in one convenient location. The map interface is strictly a data resource and does not provide guidance. Those who remember the Shoreline Managers Assessment Kit (SMAK) tool will find the new map interface to be much more user-friendly and the data layers available to be much more comprehensive and useful in the decision-making process. The workshop presentation will introduce the audience to the GIS tool, the data content, and basic “how to.”



Example of CCRMP product



Example of SAM interface

# WORKSHOP ANNOUNCEMENT

## Coastal Management Decision Tools

Thursday, April 22, 2010

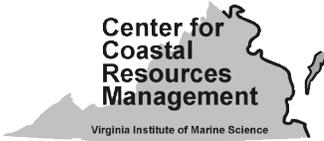
Watermen's Hall Lobby & Auditorium

Virginia Institute of Marine Science, Gloucester Point, VA

8:00 am - 9:00 am Registration

9:00 am - 3:30 pm Workshop

Workshop Web Site: [ccrm.vims.edu/Spring2010.html](http://ccrm.vims.edu/Spring2010.html)



A workshop will be held at VIMS for local government staff, advisory board members, marine contractors, permitting agents, environmental consultants, and anyone else interested in decision-making along tidal shorelines in the Commonwealth.

The planned sessions will provide information on the coastal management decision tools described in this newsletter, and should be useful both in understanding and in making decisions regarding these important resources. In addition to lecture presentations, a significant portion of the workshop will involve hands-on training in the use of decision tools.



### Planned Workshop Topics

- Coastal management decision tree for natural shorelines
- Comprehensive Coastal Resource Management Plan (CCRMP) and the Geospatial Shoreline Management Model
- Shoreline Assessment Mapper (SAM)

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_

Registration - \$25 (includes lunch).

Deadline for payment & registration: April 16, 2010

If paying by VISA/MasterCard please email ([dawnf@vims.edu](mailto:dawnf@vims.edu)) or fax (804-684-7179) registration form AND call Dawn at 804-684-7380 with credit card information.

Make checks payable to:  
Please mail:

VIMS Tidal Wetlands Workshop  
Tidal Wetlands Workshop/CCRM  
P.O. Box 1346  
Gloucester Point, VA 23062

# Tidal Wetlands News & Events

The Virginia Wetlands Report is a biannual publication of the Wetlands Program at the Virginia Institute of Marine Science of the College of William and Mary. To subscribe to this newsletter, please contact:

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## 21st Annual Environment Virginia, April 7-8, 2010, Lexington, VA.

Optimizing Stewardship in a Challenging Economy. Join over 500 environmental leaders from all sectors and across the Commonwealth for the 21st Annual Environment Virginia Symposium. The Environment Virginia Symposium brings together the public and private sectors to facilitate the exchange information and technologies to promote environmental stewardship, manage our natural resources for a sustainable and prosperous future.

<http://www.tinyurl.com/environmentva>

## 2010 Ecological Restoration UnConference, May 3, 2010, Raleigh, NC.

The unconference is focused upon new and emerging technologies related to ecological restoration.

<http://swampschool.org/mediawiki/index.php>.

## National Mitigation & Ecosystem Banking Conference, May 3-6, 2010, Austin, TX.

<http://www.mitigationbankingconference.com>.

## VIMS Marine Science Day, May 22, 2010.

VIMS' annual open house is a fun-filled event for the whole family. Join us in Gloucester Point for exhibits, children's activities, seining on the York River, lab tours, seafood cooking demonstrations, mini-lectures, and much more. All activities are free, as is parking. The event proceeds rain or shine.

<http://www.vims.edu/public/msd/index.php>

## Society of Wetland Scientists, June 27-July 3, 2010, Salt Lake City, UT.

Society of Wetland Scientists Annual Meeting. "Peaks to Playas."

[http://www.sws.org/2010\\_meeting](http://www.sws.org/2010_meeting)

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