



Virginia Wetlands Report



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The Big Picture: Managing Wetlands from a Shoreline Perspective

Erosion happens and the sea level is rising. Yet people continue to flock to the coast to occupy high - priced real estate. Erosion is a natural process that provides for important habitats and services. The common reaction to protect coastal property from erosion and flooding is to install shoreline stabilization structures. The challenge comes in identifying when erosion protection is absolutely necessary and which solutions balance the private interests of the property owner with the public interest in the Bay and its living resources.

The Tidal Wetlands Act (1972) was established to mandate the sustainable management of wetlands as a balance between their protection and use. The rationale for the law is based on the provision of water quality and habitat functions, among others. The Wetlands Guidelines established criteria for the review of projects impacting wetlands. Notably, the concept was introduced that shoreline structures are only justified to address active, detrimental erosion and marsh grasses are preferred to address mild or moderate erosion. These basic tenets of wetlands management remain unchanged, but are now being applied within the broader context of shoreline ecosystems. Shoreline ecosystems are comprised of riparian buffers, tidal wetlands and shallow waters.

A better understanding of the relationship between shoreline erosion, ecosystem ecology and the impacts of management choices supports holistic decision-making. For instance, impacts to wetlands vegetation are frequently avoided by “moving” the structure landward out of the jurisdiction of the Wetlands Board and into the riparian buffer. And while this action avoids direct loss of tidal wetlands, the wetlands are subject to continued erosion

“Erosion is a natural process that provides for important habitats and services.”

and sea level rise plus there is a loss or adverse change in the riparian community. Finally, this approach still results in adverse impacts on water quality and habitat services because the interactions between the wetlands and the riparian buffer are severed. Thus the question should not be where do we “move” the bulkhead, but rather, is any action necessary and is a bulkhead the best approach?

When erosion protection is necessary, the preference is placed on the use of natural systems such as marshes, beaches and dunes as shoreline erosion protection for minimizing adverse ecosystem impacts and possibly improving wildlife habitat and local water quality.

Workshop Announcement



Case Studies: Balancing Risks Associated with Shoreline Protection Strategies

Friday, October 19, 2007 at VIMS

See inside for information & registration

Center for
Coastal
Resources
Management

Virginia Institute of Marine Science



Balancing Ecosystem Services and Values

Shallow Water & Beach



Building a breakwater and backfilling it with sand results in impacts in the form of habitat conversion (conversion of sub-aqueous area to sandy beach or intertidal areas to upland). Breakwaters can provide a solution to avoid upland impacts while also creating a recreational amenity. The balance is the replacement of non-

vegetated wetlands or shallow waters with beach to avoid upland change or accommodate upland limitations.

Forested Beach & Bank

Where the bank is unstable, the condition may not be caused by tidal borne energy entirely, or at all. Addressing an unstable bank with the least adverse environmental impact is likely to require that the solution be positioned in the landscape to address the source of the problem; which may not be on the beach. The balance is between the beach and the potential impacts to the bank and trees.

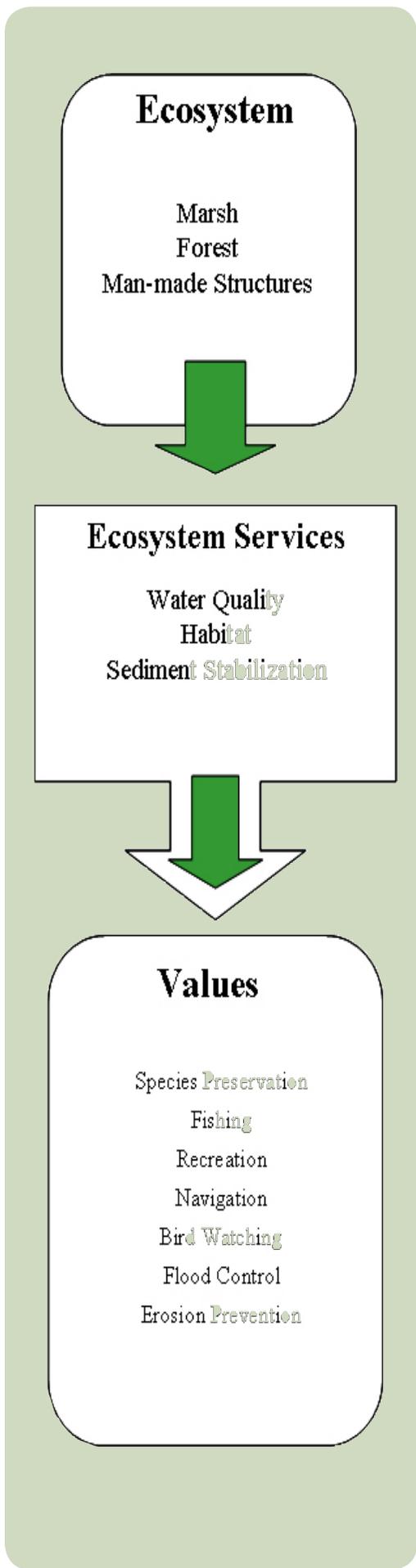


Lawn & Marsh



Sometimes the need for erosion protection is not evident and structural solutions would result in impacts to the wetlands. For shorelines experiencing mild to moderate erosion, the planting of marsh grasses and appropriate upland vegetation is a preferred means of stabilization. If the upland area is lawn, the

conversion should result in an increase in ecological services (such as habitat and water quality). The balance is the conversion of lawn to a natural landscape that provides erosion protection.





WORKSHOP ANNOUNCEMENT

Case Studies: Balancing Risks Associated with Shoreline Protection Strategies

Friday, October 19, 2007

8:00 am - 9:00 am Registration in Watermen's Hall Lobby
 9:00 am - 3:00 pm Workshop
 Virginia Institute of Marine Science, Gloucester Point, VA
 Workshop Web Site: ccrm.vims.edu/fall2007

Individual permit decisions typically focus on the effects of single structures on the immediate vicinity, yet the cumulative impacts of multiple projects on public trust resources can affect the entire ecosystem. The focus of this workshop is to raise awareness about the need to consider both risk and the need for protection as well as optimizing ecosystem services that have public benefits.

Actual case studies will describe the ramifications of management choices on ecosystem services in the backyard and beyond. We will be highlighting options that balance site-specific needs with watershed impacts or benefits

Morning Session

Afternoon Session

Background & Case Study Presentations

Guided Bus Tour of Colonial Parkway

- Current scientific understanding of the ecosystem services provided by riparian, wetland and shallow water habitats
- Real life case studies of shoreline protection projects with before & after comparisons, including bluffs with beaches, forests with and without tidal marshes, high and low banks
- Opportunities to recover beneficial ecosystem services by incorporating positive tradeoffs into the protection strategy, such as replacing failed bulkheads with other methods
- Workshop participants will be joined by VIMS staff on a guided bus tour of selected sites along the Colonial Parkway in York County
- Various shoreline types & management decisions will be included

Registration

Name _____

Affiliation _____

Address _____

Phone _____

Fax _____

Email _____

Registration - \$25 (includes lunch & bus tour).

Bus Tour of Colonial Parkway

Please make checks payable to: **VIMS Tidal Wetlands Workshop**

Yes No

Mail form & registration payment to: CCRM, P.O. Box 1346, Gloucester Point, VA 23062

If paying by VISA/Mastercard, please return the registration form by email (dawnf@vims.edu) or fax (804-684-7179) AND call Dawn at 804-684-7380 with credit card information.

Deadline for payment & registration: October 9, 2007

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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Tidal Wetlands News & Events

Submerged Lands Management Conference, Oct. 28 – Nov. 2, 2007. Woodlands Conference Center, Williamsburg, VA. The Commonwealth of Virginia is proud to host this international conference. Issues surrounding the administration of submerged lands and adjacent uplands will be the focus, including the Public Trust doctrine, mapping, shoreline protection strategies, waterfront privatization, aquaculture, energy infrastructure, and many others. For more information <http://www.submergedlands2007.com/index.html>

Virginia Coastal Zone Partners Workshop, Dec. 6 - 7, 2007. Portsmouth Renaissance Hotel & Conference Center, Portsmouth, VA. Conference themes are climate change & population growth, their impacts on our coastal resources and potential coastal zone management partner solutions. For more information <http://www.deq.state.va.us/coastal/workshopagenda.html>

Society of Wetland Scientists 2008 Conference, May 26 - 30, 2008. Wardman Park Hotel, Washington DC. The Mid-Atlantic Chapter of the Society of Wetland Scientists will be hosting this annual meeting. The theme is "Capitalizing on Wetlands" to highlight the need to integrate wetland science and management with economics, public policy and education in a national election year. For more information http://www.sws.org/2008_meeting/

Wetlands and Chesapeake Bay Preservation Act Forum. This on-line discussion forum is structured to allow Wetlands and Chesapeake Bay Preservation Act board members and staff from across coastal Virginia to exchange questions, ideas, or general comments regarding Tidal Wetlands and Chesapeake Bay Preservation Act issues. For more information http://ccrm.vims.edu/wetlands_forum/wetlands_forum.html

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