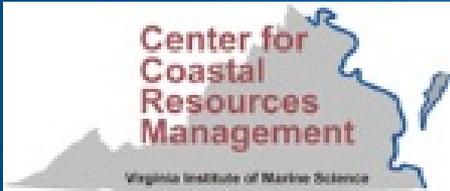


Implementation of Shoreline Policy through Guidance, Modeling, and Maps

Marcia Berman
Center for Coastal Resources Management
Virginia Institute of Marine Science
College of William & Mary



Center for
Coastal
Resources
Management

Virginia Institute of Marine Science



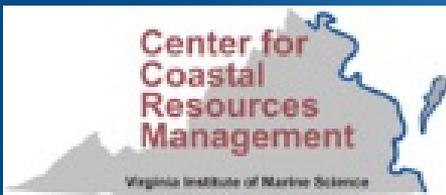
VIMS | WILLIAM
& MARY
VIRGINIA INSTITUTE OF MARINE SCIENCE

Amendments to Code of Virginia

Living Shoreline legislation approved April 29, 2011

Be it enacted by the General Assembly of Virginia:

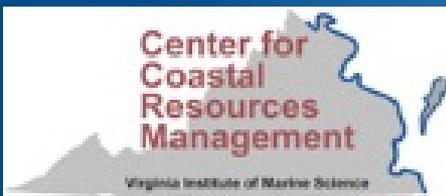
1. That §28.2-1100 of the Code of Virginia is amended and reenacted and that the Code of Virginia is amended by adding sections numbered 15.2-2223.2 and 28.2-104.1 as follows:



Amendments

§ 15.2-2223.2 Comprehensive plan to include coastal resource management guidance

Beginning in 2013, any locality in Tidewater Virginia ... shall incorporate guidance developed by the Virginia Institute of Marine Science ... into the next scheduled review of its comprehensive plan....



Amendments

§ 28.2-104.1 Living Shorelines; development of general permit; guidance

1. Communicate to stakeholders and regulatory authorities that it is the policy of the Commonwealth to support living shorelines as the preferred alternative for stabilizing tidal shorelines;
2. Identify preferred shoreline management approaches ...;
3. Explain the risks and benefits of protection provided by various shoreline system elements associated with each management option; and
4. Recommend procedures to achieve efficiency and effectiveness by regulatory entities

Amendments

§ 28.2-1100 Virginia Institute of Marine Science continued duties ...

9. Develop comprehensive coastal resource management guidance for local governments to foster the sustainability of shoreline resources by December 30, 2012. The guidance shall identify preferred options for shoreline management and taking into consideration the resource condition, priority planning, and forecasting of the condition of the Commonwealth's shoreline with respect to projected sea-level rise.

Center for
Coastal
Resources
Management

Virginia Institute of Marine Science

VIMS | WILLIAM
& MARY

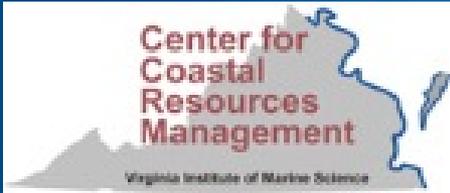
VIRGINIA INSTITUTE OF MARINE SCIENCE

Significance of the Legislation

First piece of environmental legislation that advocates for the eco-system based management practice of living shorelines for tidal shoreline erosion control;

First piece of environmental legislation that dictates planning for the protection of the Commonwealth's shoreline should consider the impacts of sea-level on shoreline resources

Wetlands and living shorelines are an important adaptation strategy to promote coastal resiliency in low-lying Tidewater communities



Center for
Coastal
Resources
Management

Virginia Institute of Marine Science

VIMS | WILLIAM
& MARY

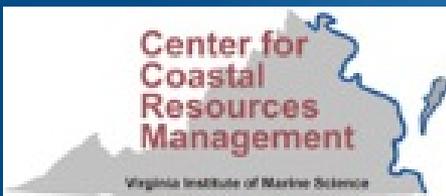
VIRGINIA INSTITUTE OF MARINE SCIENCE

Comprehensive Coastal Resource Management Portal

Guidance: documents, model language

Data: shoreline conditions, tidal marshes

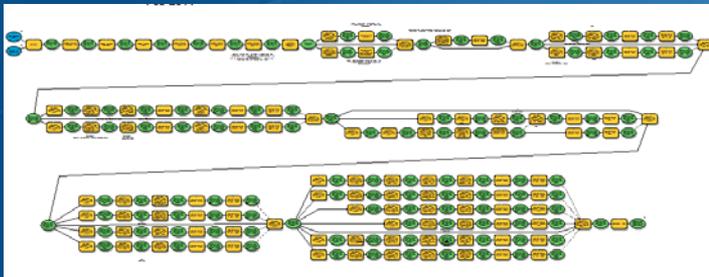
Tools: shoreline BMPs, decision trees, forecasts for sea level rise



Tools

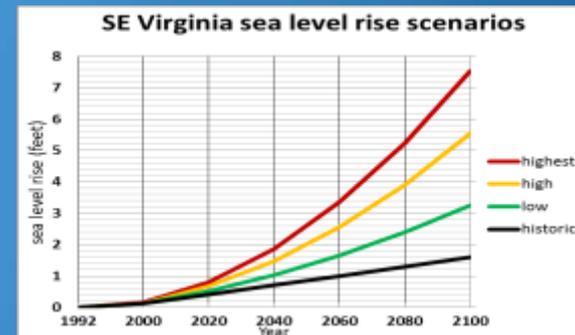
Shoreline BMPs

- Based on decision tree logic models;
- High resolution GIS-based model;
- Delivers recommended strategy for erosion control



Sea Level Rise Forecast

- Uses best available LIDAR
- Assumes constant water level across the inundated surface
- Based on National Climate Change Assessment



Comprehensive Coastal Resource Management Portal

<http://ccrm.vims.edu/ccrmp/index.html>



Center for
Coastal
Resources
Management

Virginia Institute of Marine Science

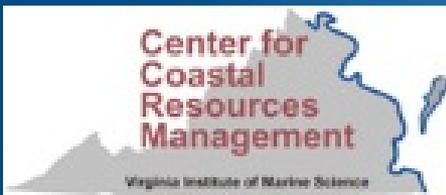
VIMS | WILLIAM
& MARY

VIRGINIA INSTITUTE OF MARINE SCIENCE

Summary to Date on CCRMPs

Completed 12 locality specific CCRMPs to date
5 more to be released this year

Training and Outreach:
Planning Staff
Local Wetlands Boards



General Observations

- 1) Local governments are pro-active regarding the integration of guidance into Comprehensive Plans;
- 2) Local wetland board members despite the training, continue with a business as usual approach in their decision making;
- 3) The current policy is not enforceable;
- 4) Guidance provided through the tools is currently the best available resource to influence their decision-making

Staff Support

Project	Function	Approximate FTE
CCRMP & SLR	Field work	1.25
	GIS and technical	5.05
	Policy, Research & Coordination	1.30
	Outreach & Training	0.75

Total FTE effort ~ 8.35

Timeline



CCRMPs development to date: 5.5/year

No change of funding: 8 years to completion

Completion date: December, 2021

Center for
Coastal
Resources
Management

Virginia Institute of Marine Science

VIMS | WILLIAM
& MARY

VIRGINIA INSTITUTE OF MARINE SCIENCE

Impacts of Current Schedule

Localities move ahead without state-supported guidance and tools

Shoreline management in VA continues to hedge best management practices

Potential to reduce adaptation options available to local governments

Center for
Coastal
Resources
Management

Virginia Institute of Marine Science