

Virginia CZM Program Sea Level Rise Adaptation Projects

Hampton Roads Planning District Commission (HRPDC)

The HRPDC Coastal Resiliency Initiative has included work to document the projected impacts of climate change and develop a partnership to respond to this issue. Efforts have focused on:

1. mapping various levels of sea level rise and storm surge and the public infrastructure, neighborhoods and coastal resources that would be affected,
2. public outreach and education, including presentations, handouts and website materials,
3. options for incorporating sea level rise adaptation into local plans, including descriptions of policies which local governments can adopt to improve their resiliency to coastal hazards,
4. a climate change adaptive management plan for Hampton Roads, including policies and steps to begin addressing climate change adaptation based on various levels of sea level rise,
5. adaptation planning and technical assistance to localities in the region.

Northern Virginia Regional Commission (NVRC)

The NVRC Sustainable Shorelines and Community Management Project was a collaborative planning effort between the localities, major landholders, and universities in Northern Virginia that border the tidal Potomac River. The project regionalized planning efforts for relative sea level rise and storm surge, along Northern Virginia's approximate 100 miles of tidal shoreline.

This three-phase project included:

1. an inventory of existing data resources and policies for natural and man-made resources to identify data needs, and to understand current local shoreline management plans and regulations
2. maps identifying shoreline vulnerability, and
3. strategies for adaptation and communication of project outcomes.

A workgroup to guide and inform the project was formed consisting of representatives from local, state, and federal government agencies, colleges and universities, and other regional stakeholders.

Middle Peninsula Planning District Commission (MPPDC)

The MPPDC initiative has focused on:

1. identifying potential impacts of climate change and sea level rise and assessing the associated economic and ecologic losses,
2. understanding the social perceptions on the topic within the region,
3. outreach efforts geared toward the general public and elected officials
4. developing a START (Start Adaptation and Response Today) kit which organized information that localities can consider when addressing potential climate change and sea level rise impacts. The START kit includes local scientific data, a natural hazard vulnerability assessment tool, local, state, national, and international case studies, as well as sample adaptation ordinances from other communities.
5. evaluating local government planning options to address the impacts of flooding and sea level rise in coastal communities (starts fall 2015)

Accomack-Norhampton Planning District Commission (A-NPDC)

A-NPDC has used its annual CZM Technical Assistance grants to support the Eastern Shore's "Climate Adaptation Work Group," consisting of local officials and environmental advocacy groups. The group

has worked with The Nature Conservancy and the NOAA Coastal Services Center to help secure LiDAR coverage for the Eastern Shore to create new elevation models and sea level rise scenarios and is now in the process of conveying the results to the public. The PDC is also collecting stories from “old-timers” relating where sea level used to be, creating an innovative “Coastal Change Archive” that engages residents using pGIS tools to compile their stories and observations to serve as a historical resource for current and future generations to better understand how seascapes, landscapes, and organisms are responding to changes in the natural environment. The PDC also conducted an Eastern Shore Transportation Infrastructure Inundation Vulnerability Assessment to evaluate road flooding issues.

Virginia Institute of Marine Science (VIMS)

VIMS has received Virginia CZM Program support to improve shoreline management practices and encourage the use of living shorelines. These practices not only provide important water quality and habitat functions, but help build coastal resiliency in the face of climate change and rising sea levels. VIMS has used CZM funds to:

1. Help support a "Living Shoreline Summit" with peer reviewed proceedings, to advance the use of this management technique
2. Draft revisions to the "Wetlands Guidelines" to be used by the Virginia Marine Resources Commission, the Virginia Institute of Marine Science, local wetlands boards and others to guide decisions about shoreline and tidal wetlands management.
3. Improve data on shoreline conditions to support more informed shoreline management decisions (shoreline inventories, evolution reports and plans)
4. Research to document the habitat value and viability of living shorelines and to improve their design.
5. Develop guidance for local governments to use in shoreline management planning.
6. Develop outreach materials for land use decision-makers, landowners and contractors on living shoreline advantages and design principles.
7. Conduct a training program for contractors and local government staff on living shoreline practices.
8. Promote changes to the Coastal Primary Sand Dunes and Beaches Act by the Virginia General Assembly (Adopted 2008 – expanded Act from 9 localities to the entire coastal zone)
9. Draft revisions to the Coastal Primary Sand Dunes and Beaches Guidelines.

To see final products from all completed projects, visit the climate change and shoreline management pages of the Virginia CZM website.

<http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/ClimateChange.aspx>

<http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/LivingShorelines.aspx>