October, 2017

Virginia Coastal Zone Management Program
Semiannual Section B.1 Report on Section 312 Evaluation and Metrics
For the Period from April 1, 2017 – September 30, 2017

B.1.A. SECTION 312 EVALUATION PROGRESS

Virginia's most recent evaluation began in the fall of 2014 with the Virginia CZM Program responding to 36 evaluation questions regarding administration of the program, protection of coastal habitat, coastal hazards and sea level rise, coastal water quality, coastal-dependent uses, public access, governmental coordination, and descriptions of major achievements and challenges. NOAA then conducted an online survey of Virginia CZM stakeholders and partners, and in May 2015 conducted interviews of key partners on identified target areas. A public meeting was held on May 12, 2015.

Stakeholders interviewed by the NOAA team described the program as *partner-oriented* and *having effective partnerships with local communities and regional and non-profit groups.* "Flexible to meet the needs of locals" and "inclusionary" were some of the ways stakeholders expressed partnership demonstrated by Virginia CZM.

The three target areas identified by the NOAA team to evaluate the Virginia CZM Program were: 1) Restoring and Protecting Coastal Habitats and increasing Public Access, 2) Ocean Planning, and 3) Coastal Resilience. Preliminary accomplishments and recommendations identified by NOAA in each target area are as follows:

<u>Restoring and Protecting Coastal Habitats and Increasing Public Access</u>
Accomplishment: The Public Access Authorities are providing a new tool for public access acquisition and management through a local policy framework enabled by state legislation.

Accomplishment: The Virginia Coastal Zone Management Program's place-based restoration efforts have been highly successful, leveraging significant funding from partners and resulting in "on the ground" coastal habitat improvements.

Progress This Period (April – October 2017): VA CZMP has initiated a new three-year focal area (FY 2017-19) to be implemented by state agencies and Planning District Commissions - Promoting Sustainable Coastal Industries: Shellfish Aquaculture and Ecotourism. Working with two of coastal Virginia's economic strengths, aquaculture and tourism, the VA CZMP plans to support projects that will help boost the shellfish aquaculture and ecotourism industries through research, planning and visual tool development. Working with a variety of stakeholders, grantees will look at current industry conditions throughout the coastal zone as well as within specific areas to determine ways to improve, expand and create industry as well as public access opportunities. Program visibility is also included since this is a critical time for Congress and the general public to understand the value of CZM funds. Ensuring that acknowledgement signs for projects that VA CZMP has funded over the years are still in place, and updated as needed, is critical to program visibility and will be the subject of the new focal area. The FY17 grant will update the five Eastern Shore Seaside Heritage Program kiosks with new panels that emphasize public access and ecotourism along the coast and seaward toward the offshore canyons which are important areas for marine mammals and seabirds. Two additional kiosks will also be constructed on the seaside of the Eastern Shore and signage will also be installed along the resort strip of Virginia Beach.

The Virginia CZM Program is also working on a land acquisition project on the Eastern Shore of Virginia in Northampton County. This site would both protect migratory songbird habitat and provide public access for bird and other wildlife viewing.

The Northern Neck Chesapeake Bay Public Access Authority received its first waterfront land donation. The 2.1acre property overlooks Oyster and Little Oyster Creeks in Lancaster County.

Ocean Planning

Accomplishment: The VA CZMP's leadership in regional ocean planning has brought together diverse stakeholders to plan for the location of future offshore facilities while minimizing user conflicts and impacts to coastal resources.

Recommendation: The NOAA Office for Coastal Management encourages the VA CZMP to continue its leadership role in regional ocean planning and to plan for how the work will move forward over the next five years, including continued emphasis on ways to diversify and leverage funding.

Progress This Period (April - October 2017): The CZM Program Manager has continued her leadership role as the State Co-lead for the Mid-Atlantic RPB as of Jan 1 2017 along with NOAA as the temporary federal lead and a Tribal lead. These duties involve steering the direction of the RPB, planning and conducting monthly co-leads' calls as well as monthly calls with the full RPB and in-person full RPB and public meetings. An in-person RPB public meeting was held June 19-20, 2017 in Silver Spring, MD. In advance of that meeting, the Virginia CZM Manager organized preparation and compiled a semi-annual report of progress on all actions in the OAP as well as work plans for the July – December period. At the meeting, the Virginia CZM Manager presented progress on several actions and led the discussion on identifying Ecologically Rich Areas which has proven to be a difficult and controversial action in the plan. She leads or co-leads 5 of the 7 work groups that have been created to implement the OAP. These include: Ecologically Rich Areas, Mapping Species Shifts, Ocean Acidification, Marine Debris and the Ocean Mapping Data Team which guides development of the Mid-Atlantic Ocean Data Portal. The CZM Manager created a new semi-annual progress report template for reporting on all actions in the OAP that includes fields for reporting on best practices and science/research/data needs.

Virginia CZM staff has been serving on the Marine Debris Work Group; helped create the ocean acidification monitoring map now on the portal; and has been serving on the Non-consumptive Recreation Work group.

She has been working with the NY State Energy Research & Development Authority to secure a donation for the portal. NYSERDA used the portal heavily in working on siting of their offshore wind energy area. She and the MARCO Director worked closely with the Moore Foundation to secure funding for MARCO for the 2018-2019 period. It appears that funding will be continued albeit at a lesser amount than previous years as Moore intends to wind down its ocean planning efforts. Federal agencies so far have been unable apparently to contribute financially. However, work is underway to develop a "Chinese menu" of fundable portions of the Mid-Atlantic Data

Portal in hopes that federal agencies could fund portions of the maintenance costs. DoD specifically requested this at the June RPB meeting.

Various federal grant funding opportunities are being sought including inclusion of ERA work in the FY17 Virginia CZM grant application and expansion of Virginia's balloon release social marketing campaign through the NOAA Marine Debris Program.

The VA CZM Manager continued her two-year term as Chairman of MARCO and completed that service in June 2017. Multiple workshops were planned, staffed and funded by the Virginia CZM Manager and MARCO during this period: Changing Ocean Conditions on April 4; ERA Workshops on May 19 and another planned for Nov 2, Marine Debris on June 7, Ocean Health Indicators on July 19-20 and plans for a Non-consumptive Recreation Workshop on Nov 8. Summaries of these workshops have been and will be posted on the MARCO website at http://midatlanticocean.org/resources/ and the Mid-Atlantic RPB website at: https://www.boem.gov/MidA-RPB-Meetings/

Coastal Resilience

Accomplishment: The VA CZMP's leadership in coastal resilience has enhanced the capacity of local partners for adaptation planning and promoted the use of living shoreline approaches to enhance community and ecological resilience.

Recommendation: The NOAA Office for Coastal Management recommends that the VA CZMP further define the program's "niche" as it relates to coastal resilience.

Progress This Period (April, 2017 to September, 2017): The Virginia CZM Program addressed this recommendation by focusing its efforts to build coastal resilience into two key areas identified in the Section 309 Coastal Hazards Strategy. The Strategy, which was developed with significant stakeholder input, targets community resiliency (the built environment) and shoreline resiliency (natural and nature-based features). Projects funded through the Strategy should ultimately lead to new enforceable policies that advance coastal resiliency in these two areas.

The first year of the Strategy has focused on acquiring the data necessary to develop local shoreline management plans, and on providing training for shoreline contractors and local government officials responsible for shoreline management decisions. These projects are nearing completion. Two regional projects designed to improve community resilience in Northern Virginia and Hampton Roads are also nearing completion.

The second year projects (starting October, 2017) include more work to promote better shoreline management and the use of living shorelines, but also two community resilience projects. The first is designed to promote local adoption or expansion of the community rating system under the national flood insurance program, while the second will provide coastal communities with a tool to comprehensively evaluate their current resiliency efforts.

B.1.B. SECTION 312 METRICS

The Five-Year Reporting Period for these Metrics is October 1, 2012 – September 30, 2017.

Progress from October 2016 – September 2017 is reported below.

Section 312 Metrics - Seaside Habitat Restoration

Goal: Sustain and enhance healthy habitats (on the seaside of Virginia's Eastern Shore) that are resilient and support thriving coastal resources.

Objective 1: By October 2017, **seed scallops** that are hatchery reared and released on the seaside of Virginia's Eastern Shore will increase.

Strategy 1: Historically, the bay scallop was a commercially harvested species on the seaside of Virginia's Eastern Shore. Following dramatic declines in eelgrass on the seaside during the 1930's, bay scallops, which depend upon the grass beds as habitat for juveniles, went locally extinct. The Virginia Coastal Zone Management program has provided funding to increase eelgrass habitat on the seaside of Virginia's Eastern Shore since 1999. Seagrass acreage is now at a level that could support a viable bay scallop population.

Therefore, to re-establish a self-sustaining bay scallop population, the Virginia Coastal Zone Management program provides funding for a restoration program that involves the hatchery production of bay scallops that will be deployed in cages within the eelgrass beds, where they will serve as spawning stock to re-populate the grass beds. The Seaside Habitat Restoration grants are designed to meet Executive Order 18 goals and ultimately establish not only a viable population of bay scallops but also a recreational fishery that will help support a vibrant ecotourism industry on Virginia's Eastern Shore.

At level funding from the 2013 budget, together with additional funds from the US ACOE Estuarine Habitat Restoration Fund (Award #W912DR-14-2-0004), an average of 120,000 adult scallops can be produced and held in spawning cages in the grass beds. Additional, scallops produced over the 120,000 will be released directly into the grass beds. Reaching this target number is dependent upon environmental conditions (especially water temperature), primarily as they relate to rearing early juvenile scallops through the nursery phase.

Performance Measure 1: By October 2017, the number of seed scallops that are hatchery reared and released on the seaside of Virginia's Eastern Shore using CZM Federal and match funds.

Target 1: By October 2017, 200,000 seed scallops will be hatchery reared and released on the seaside of Virginia's Eastern Shore using CZM Federal and match funds.

Annual Data:
Between October 1, 2016 and September 2017, approximately 188,000 scallops produced from spawns in 2016 and spring 2017 were maintained in cages in the grassbed. Spring spawning in

2017 resulted in 13,713,000 ready to set eyed larvae that were released 16 May 2017. 11,300,000 of these larvae came from a synergistic effort with Cherrystone Aquafarms as part of a NOAA SK partnership grant with VIMS ESL to work on scallop aquaculture techniques. Larvae grown in the VIMS ESL nursery resulted in 72,367 < 3mm scallops and 163,053 > 3 mm seed scallops released on the 28 June 2017. Adult scallops (56,000 ~1 yr olds) were released from cage stock on 25 July 2017. Broodstock and juveniles held for grow out to adult size prior to release are being retained in cages in South Bay (~188,000. Most of these are Spring 2017 spawned juvenile scallops (180,000)).

Cumulative Data: To date, approximately 222,000 scallops have been reared to adult spawning age and released in the grassbeds. Seed scallops (juveniles) released in the current year alone totaled 235,000 combined with 362,000 juveniles released the prior year for **a total of 587,000 seed scallops released to the grassbeds.** Another 180,000 juvenile scallops are currently being held in cages in the grassbed. These caged scallops will be retained to spawning age within the cages, and numbers in excess of future broodstock needs, and post-spawn broodstock will be released as adults. Assuming 50% mortality would represent another 90,000 adult scallops to be released.

Documentation:

- A map is provided showing where bay scallops were released during this time period.
- This project (both bay scallop and eelgrass restoration) is being funded under cooperative agreement NA15NOS4190164 Task 10 (open from January 2016 through September 2017), and NA16NOS4190171 Task 10 (open from January 2017 through March 2018).

Narrative: The Virginia CZM Program provided $321,249 in CZMA funding ($161,000 in FY2015 and $160,249 in FY2016) and the state contributed $291,510 ($134,258 in FY2015 and $157,252 in FY2016) towards the seaside restoration project. Major funding partners who assisted during this timeframe were the Virginia Marine Resources Commission's Recreational Fishing License Fund, the Army Corps of Engineers and the Keith Campbell Foundation for the Environment. The Nature Conservancy provided in-kind support for facilities and volunteer support.

Scallop Release Transect Lines

Figure 1. Scallop releases in South Bay 2017. On the 16th of May, 13,713,000 eyed larvae ready to set were released along the yellow transect. 11,300,000 of these larvae came from Cherrystone aquafarms as part of a NOAA SK partnership grant with VIMS ESL to work on scallop aquaculture techniques. On the 28 June, 72,367 < 3mm scallops and 163,053 > 3 mm scallops were released from the ESL nursery along the blue transect. On 25 July, 56,000 adult scallops (~1 yr olds) were released along the pink transect line. The cages in South Bay contain ~188,000 scallops of various ages being retained for brood stock and grow out to adult size. Most of these are Spring 2017 spawned scallops (180,000), but recent inspection suggests a 50% mortality (likely flatworm predation related) to this year class.

Objective 2: By October 2017, the acreage of **eelgrass** on the seaside of Virginia's Eastern Shore will increase.

Strategy 2: Eelgrass is one of the most productive habitats in the Chesapeake Bay and seaside bays of Virginia's Eastern Shore. During the early 1930s, eelgrass declined in the seaside bays due to a wasting disease and was completely eliminated by 1933. In 1997, several small natural patches were observed in South Bay on the seaside of Virginia's Eastern Shore. Since 1999, through VA CZM grants to the Virginia Institute of Marine Science, eelgrass seeds have been broadcast into 456 acres in four seaside bays, which have now spread naturally to over 6,195 acres in these same bays.

The Virginia Coastal Zone Management program continues to provide funds to increase eelgrass acreage on the seaside of Virginia's Eastern Shore through seeding areas in these bays. This ensures that this important habitat is restored and continues to thrive to support the many species that depend on it. With an increase in healthy eelgrass beds, habitat and resources for bay scallops, finfish, sea turtles, and avian species can be supported. Reaching the proposed target in this metric is dependent upon favorable environmental conditions. If certain unfavorable conditions occur, especially storm events, the amount of seeds recovered from the eelgrass beds and thus broadcast out into the seaside bays could be negatively impacted.

Performance Measure 2: By October 2017, the total number of acres seeded/planted with eelgrass on the seaside of Virginia's Eastern Shore using CZM Federal and match funds.

Target 2: By October 2017, 150 acres of eelgrass seeded/planted on the seaside of Virginia's Eastern Shore using CZM Federal and match funds.

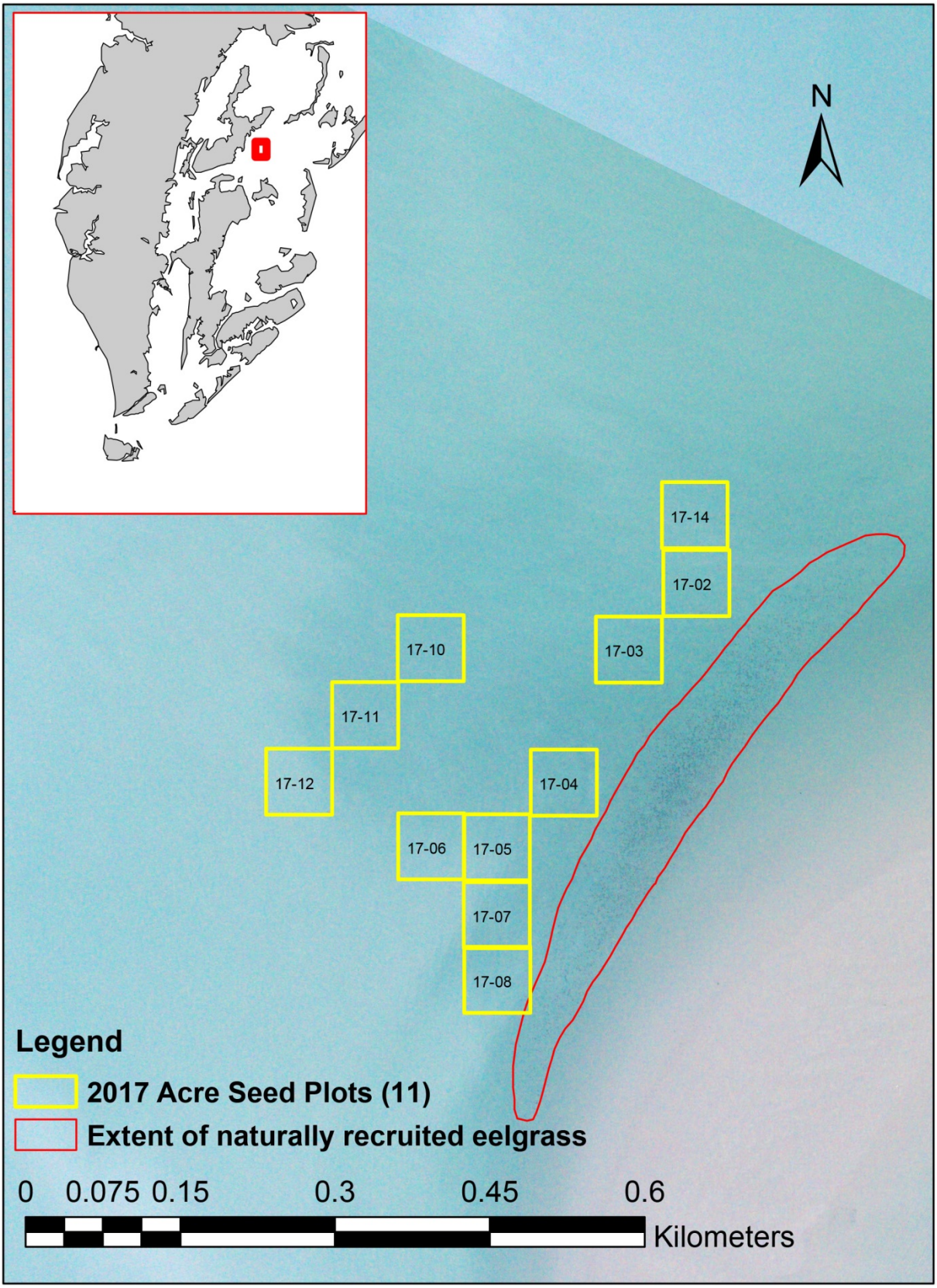
Annual Data: Between October 1, 2016 and September 30, 2017, 11 acres were planted with eelgrass seeds in Spider Crab Bay.

Cumulative Data: The cumulative **total of eelgrass planted = 149 acres**. Total seagrass cover mapped from aerial imagery now shows 7,149 acres of seagrass.

Documentation:

- A map is provided showing the plots that were seeded during this time period.
- This project (both bay scallop and eelgrass restoration) is being funded under cooperative agreement NA15NOS4190164 Task 10 (open from January 2016 through September 2017), and NA16NOS4190171 Task 10 (open from January 2017 through March 2018).

Narrative: The Virginia CZM Program provided $321,249 in CZMA funding ($161,000 in FY2015 and $160,249 in FY2016) and the state contributed $291,510 ($134,258 in FY2015 and $157,252 in FY2016) towards the seaside restoration project. Major funding partners who assisted during this timeframe were the Virginia Marine Resources Commission's Recreational Fishing License Fund, the Army Corps of Engineers and the Keith Campbell Foundation for the Environment. The Nature Conservancy provided in-kind support for facilities and volunteer support.


N
17-14
17-02
17-10
17-03
17-11
17-12
17-04
17-06
17-05
17-07
17-08
Legend
2017 Acre Seed Plots (11)
Extent of naturally recruited eelgrass
0 0.075 0.15 0.3 0.45 0.6
Kilometers

Section 312 Metrics - Shoreline Management

Goal: Living Shoreline practices are adopted where feasible in all shoreline erosion control and related development projects, expanding and enhancing viable natural shoreline habitats for coastal species, and affording protection to shorefront landowners and businesses.

Objective: Virginia's coastal counties and cities will develop new local shoreline management plans as a result of assistance from the Virginia CZM Program.

Strategy: Some shoreline erosion control practices currently used can negatively affect the habitat and water quality protection functions of natural shorelines. "Living Shoreline" techniques are appropriate in many of these cases, and can maintain or increase these natural shoreline functions. Recent state legislation requires coastal localities to adopt shoreline management plans as a component of their comprehensive plan. The shoreline plan must recognize living shorelines as the preferred erosion control alternative and map areas suitable for their use. The Virginia CZMP provides funding to the Virginia Institute of Marine Science to help develop draft local plans to help meet this requirement. The plans are designed to protect shoreline habitats; minimize nutrient runoff from uplands; protect properties from coastal erosion and help encourage appropriate shoreline management techniques. Once the draft plans are developed by VIMS, they are submitted to the local planning commission for consideration under the locality's required 5-year comprehensive plan update. If approved by the planning commission (a process which Virginia CZM Program cannot control), the comprehensive plan is then submitted to the local county board of supervisors (or city council) for final consideration and eventual adoption (again, a political action that the CZM Program cannot undertake or control).

Performance Measure: By October 2017, the number of local shoreline management plans developed and submitted to local planning commissions for consideration.

Target: By 2017, 7 local shoreline management plans developed and submitted to local planning commissions for consideration.

Annual Data: Between October 1, 2016 and September 30, 2017, two shoreline management plans were developed and submitted to localities for consideration.

Cumulative Data: To date, **ten shoreline management plans have been developed** and submitted to localities for consideration.

Documentation:

- Westmoreland County Shoreline Management Plan, February2013
- Virginia Beach (Lynnhaven) Shoreline Management Plan, April 2013
- York County Shoreline Management Plan, January 2014
- City of Suffolk Shoreline Management Plan, April 2014
- Charles City County Shoreline Management Plan, February 2015
- Fairfax County Shoreline Management Plan, March 2015
- James City County Shoreline Management Plan, October 2015
- Stafford County Shoreline Management Plan, November 2015

- Gloucester County Shoreline Management Plan, October 2016
- Prince George County Shoreline Management Plan, November 2016

Narrative: Shoreline Management Plans are available on the Shoreline Studies Program website at VIMS (link below). Shoreline management options recommended for these localities range from planting marsh grasses, performing upland modifications, to construction of sizeable offshore breakwater systems. The Shoreline Management Plans reflect a desire to use the minimal amount of erosion control required based on the setting and the conditions observed.

(http://www.vims.edu/research/departments/physical/programs/ssp/shoreline_management/planning/shore_plan_reports/index.php

In addition to the detailed shoreline plans listed above, the Virginia CZM Program has provided support to VIMS for developing the shoreline inventories necessary for creating Comprehensive Coastal Resource Management Portals (link below) for many Virginia localities. In addition to site-specific data and shoreline management recommendations, the portals contain language that can be modified for use in individual local comprehensive plans in order to meet state requirements.

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