



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



The RAFT

Middle Peninsula Resilience Education Workshop

Wednesday, September 7, 2022

9:00 – 11:00 AM

Executive Summary

The RAFT (Resilience Adaptation Feasibility Tool) team hosted its virtual Middle Peninsula Resilience Education Workshop on Wednesday, September 7. A recording of the workshop is available on the [RAFT's Website](#) and [YouTube channel](#).

Professor Elizabeth Andrews, Director of the Virginia Coastal Policy Center and Professor of the Practice of Law at William & Mary Law School, began the workshop by welcoming attendees. Tanya Denckla Cobb, Director of the Institute for Engagement and Negotiation at the University of Virginia, then introduced the RAFT and its purpose, recapped recent workshops, and outlined future goals. Elizabeth spoke again to introduce the workshop's speakers.

Sea Level Rise and Important Climate Change Protection Tools - *Dr. Molly Mitchell, VIMS*

Dr. Molly Mitchell, Research Assistant Professor at the Virginia Institute of Marine Science (VIMS), began the morning's series of presentations by discussing the risks, created by sea level rise, to wells, septic systems, roads, buildings and shorelines in Virginia. Virginia is subject to one of the highest rates of sea level rise on the East Coast. As sea level rises on the relatively flat coasts of the state, out-of-date infrastructure will be affected by more frequent flooding. Accelerating sea level rise and more intense rains are creating more frequent flooding in coastal communities by overwhelming stormwater and sewer systems. Molly noted that many rural adaptation measures, such as elevating houses and re-digging wells, place the entire cost of adaptation on the property owner and direct available resources to short-term solutions.

After explaining several sea level rise projection maps, Molly demonstrated the website ADAPTVA's [multiple sea level rise projection tools](#). First was the Road Accessibility and Flooding Tool, which demonstrates the effect of sea level rise on roads in the Middle Peninsula area. The tool is able to distinguish between inaccessible and flooded roads, provide summaries of projected road status post-sea level rise, and overlay social vulnerability data, building footprints or parcels, and FEMA flood zones. For many areas, septic system failure may be one of the most immediate impacts of sea level rise due to rising groundwater levels. ADAPTVA provides a Virginia Wastewater Data Viewer, which shows "hot spots" where septic systems frequently fail or are at risk of failing. ADAPTVA also offers the Northern Neck Virginia Well



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



Record Data Viewer, which shows wells at risk to contamination or salination throughout the region. Molly emphasized the importance of testing well water, noted that the database does not include some older wells, and reminded listeners of Virginia Cooperative Extension's [Well Water Testing & Drinking Water Clinics](#). These tools will eventually be combined into a single Rural Coastal Vulnerability Index (RCVI) through an ongoing NOAA grant.

Molly also highlighted the Wetland Condition Assessment Tool (WETCAT), which assesses the vulnerability of tidal marshes throughout coastal Virginia to climate change. Finally, Molly explained a collaboration with the Virginia Department of Health (VDH) to identify areas vulnerable to sea level rise through a survey-styled mapping tool. Those interested in assisting this effort can email Molly at molly@vims.edu.

Fight the Flood Presentation – *Elizabeth Andrews, Virginia Coastal Policy Center*

Professor Elizabeth Andrews then introduced the Middle Peninsula Planning District Commission's [Fight the Flood program](#). Fight the Flood is a resource that connects property owners affected by rising flood waters to grant opportunities, experts, and programs to help them combat the effect of rising floodwaters on their property. A full presentation on Fight the Flood from the RAFT's kickoff presentation for the Middle Peninsula Region by Curt Smith of the MPPDC can be found [here](#).

State Funding Available for Flood Resilience - *Darryl Glover, DCR*

Darryl Glover, Deputy Agency Director of Dam Safety, Flood Preparedness, and Soil and Water Conservation (DSFPM/SWC) at the Virginia Department of Conservation and Recreation (DCR), presented on state funding options for flood resilience in Virginia. Darryl explained that Virginia is currently a member of the Regional Greenhouse Gas Initiative (RGGI), which generates funding for coastal resilience efforts through the sale of carbon allowances to electric utilities. RGGI funds are allocated between low-income energy efficiency programs facilitated by the Department of Housing and Community Development, DCR's Community Flood Preparedness Fund (CFPF), and administrative expenses. DCR uses RGGI funds to provide grants and future loans to localities, implement the Virginia Coastal Resilience Master Plan, fund required resilience planning across Virginia, and fund DCR staff that support these projects.

The CFPF, codified by the General Assembly (Virginia Code § 10.1-603.25) and currently funded via RGGI, is used solely to enhance flood prevention and resilience in communities that face recurrent or repetitive flooding across the state. Per statute, no less than 25 percent of the fund each year may be used for projects in low-income geographic areas. Priority is given to projects that implement community-scale hazard mitigation activities, not individual properties, that use nature-based solutions to reduce flood risk. CFPF funds have so far been used for capacity building and planning, planning studies, and flood prevention and protection projects.



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



OLD DOMINION
UNIVERSITY



INSTITUTE FOR COASTAL
ADAPTATION & RESILIENCE

To qualify for flood prevention project funding, localities must have an approved resilience plan. Only one of the fourteen localities that currently have an approved resilience plan is outside of eastern Virginia. Many western localities lack the data and capacity that coastal localities employ to combat increased flooding.

Darryl noted that the Virginia Air Pollution Control Board will pursue a regulation to withdraw from RGGI by December 2023. Funding from quarterly auctions will continue to contribute to the CFPF until then. DCR is approaching the CFPF award announcements for its third round, which featured 64 applications for \$91 million dollars after advertising only \$40 million. The DCR will host a fourth round of funding grants from the CFPF in the future, probably in early 2023. The amount of funding available in this round will be determined by future RGGI auctions. This fourth round will feature an updated grant manual to improve clarity about caps on funding, community scale, low-income populations, and impacts of previous floods. The manual will be posted for public comment and a review committee will be established to review fourth-round applications.

Darryl also explained the new Resilient Virginia Revolving Fund, which was established by the General Assembly in 2022 (Virginia Code § 10.1-603.28 et seq.) with \$25 million from the CFPF. The fund, managed by DCR in partnership with the Virginia Resource Authority (VRA), plans to offer low-interest loans and could potentially be extended indefinitely using loan interest. Grants from the Revolving Loan Fund can be used for projects by individual property owners. The Fund will present block loans to localities, which will then establish programs to give smaller loans to homeowners in the area for their own projects. DCR is exploring ways to ensure that one property's resilience project won't cause downstream impacts for other property owners in the area. DCR is also working with the VRA to develop guidelines for the program's loans. DCR will administer grants from the fund, and the first applications will likely be accepted in early CY2023. The new transparency measures that will be applied to the CFPF's fourth round of funding will also apply to the new revolving loan fund.

The Virginia Coastal Resilience Technical Advisory Committee was codified in 2022 (Virginia Code § 10.1-659) and is required to assist with developing, updating and implementing the Virginia Coastal Resilience Master Plan. It is now required to meet quarterly. A working group will soon meet to discuss the formation of a coastal resilience entity to coordinate resilience efforts and federal funding in Virginia. A community outreach and engagement plan for the Virginia Coastal Resilience Master Plan and for development and updates to the Virginia Flood Protection Master Plan will be prepared by the end of 2022.

When asked if the Revolving Fund would be limited to administration through local governments or would include planning district commissions (PDCs), Darryl said that the inclusion of PDCs was being discussed but was not concrete at the time of the workshop.



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



OLD DOMINION
UNIVERSITY



Shoreline Erosion Advisory Service (SEAS) - Aaron Wendt, DCR

Aaron Wendt, shoreline engineer at the Virginia Department of Conservation and Recreation (DCR), explained the Department's [Shoreline Erosion Advisory Service](#). SEAS, established in 1980, provides science-based technical assistance on environmentally sound shoreline management alternatives to private property owners and public land management agencies experiencing erosion. The program offers on-site field investigation of erosion issues as well as written advisory reports with recommended solutions and resources. SEAS also reviews building designs and plans and provides construction inspections. All SEAS services are provided at no cost to property owners. SEAS's onsite visits help landowners understand local restrictions on property use and important aspects of shoreline conservation, such as a living shoreline's potential to reduce flooding and improve water quality.

The 2021 Virginia Tidal Wetlands Guidelines, issued by the Virginia Marine Resources Commission (VMRC), dictate that only living shoreline approaches are permitted to combat erosion unless best available science shows that a living shoreline approach isn't suitable. After providing examples of living shoreline gradients, Aaron emphasized that when constructing a dynamic living shoreline, property owners should focus on minimizing wave energy, maximizing sediment accretion, and providing a wetlands retreat pathway on their shoreline properties while still preserving access for future projects.

SEAS also helps property owners understand the financial incentives available for property owners who design living shorelines. Incentives for such coastal projects include streamlined VMRC Group 1 and 2 permits, low-interest loans provided by the Middle Peninsula PDC through the Department of Environmental Quality Living Shoreline Loan Program, and low-interest loans on agricultural property via the Best Management Practices (BMP) loan program through the DEQ. Property owners can also benefit through cost-sharing programs organized by the Virginia Conservation Assistance Program (VCAP) and their local Soil and Water Conservation Districts, the James River Association, or the Elizabeth River Project cost-share program. Agricultural property owners can participate in cost-sharing programs via DCR's Virginia Agricultural Cost-Share Program (VACS) and may receive tax credits for living shoreline construction. Shoreline property owners may also benefit from potential local property tax exemptions for living shorelines.

The Chesapeake Bay TMDL Phase III Watershed Implementation Plan (WIP) will guide nutrient reduction actions taken to restore the Chesapeake Bay through 2025, with an additional 500,000 feet of shoreline stabilization planned. SEAS has reported more than 55 miles of new, verified shoreline practices put in since 2008, and its work with living shorelines has helped to remove pollutants.

SEAS recently received a three-year, \$1 million federal grant with a \$2 million match to help it accelerate the scale and rate of living shoreline implementation in rural coastal Virginia.



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



It plans to grow and enhance existing partnerships engaged in living shoreline implementation across rural coastal Virginia, develop a cache of living shoreline projects with completed engineering designs on socially vulnerable, agricultural, and other priority sites, and provide financial incentives to construct new living shorelines on socially vulnerable sites. It also plans to verify and report its shoreline projects that have already been implemented.

Three SEAS employees—two full-time employees and one part-time Geographic Information System (GIS) technician—currently work in this area of assistance, and the Department works closely with the MPPDC’s FTF program. The program is funded mostly by general revenue from the General Assembly.

Bay Aging and Bay Transit - Hunter LeClair and Ken Pollock

Bay Aging Assistant Director of Housing Services Hunter LeClair and Transit Director Ken Pollock explained their organization’s mission and recent growth. [Bay Aging](#) provides health, housing, and transit services to help people of all ages live independently in their communities. Individuals talk to counselors to determine which services they need to reach their independence goals. Bay Health provides Meals on Wheels deliveries by volunteers, senior centers, insurance counseling, adult day care, a fall prevention program, a veterans-directed home and community-based services program, and more. Bay Housing offers age and income-restricted service-enriched rental housing, emergency home repair, indoor plumbing rehabilitation, weatherization assistance, community development block grants, and other services. Bay Housing may be limited in grants but can provide loans and other programs to provide financial assistance.

Bay Transit is the only public transportation provider for the Middle Peninsula/Northern Neck, Charles City & New Kent areas with a total service area of more than three thousand square miles. The service provides public transportation for all people for all reasons. Riders request a ride from Bay Aging, are placed on the ride schedule, and are picked up. The service operates Monday to Friday from 6 a.m. to 6 p.m. at two dollars per ride and may expand to weekend hours with more funding. The average Bay Aging trip is 10 miles per passenger, and the organization expects to log more than 1.5 million miles this year. More than 40 percent of riders are headed to work, while others use Bay Aging for health or retail-related trips. On fixed-route services, which provide medical and retail opportunities and are more convenient for drivers and riders, fares are \$1. Bay Transit’s New Freedom Program helps seniors and people with disabilities to access services outside of Bay Transit’s coverage area by providing transportation to appointments for specialized medical needs. This program is limited to two rides per person per month.

Bay Transit faces several challenges, including funding limitations and regionalized employment and medical services. However, it is launching a pilot, smartphone-based rural



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



OLD DOMINION
UNIVERSITY



INSTITUTE FOR COASTAL
ADAPTATION & RESILIENCE

micro-transit project that would allow riders to schedule via an app and be picked up quickly. This service is currently available in Gloucester, but the team plans to expand it to other areas.

Bay Aging promotes community resilience by providing accessible information to its clients, such as tips on how to prepare for a storm or where to find COVID-19 vaccines.

Master Gardeners/Volunteers - Christina Ruszczyk-Murray

Christina Ruszczyk-Murray, extension agent for King William & King and Queen counties, concluded the workshop with a presentation on the Virginia Cooperative Extension's (VCE) community gardens program. VCE is a research-based, needs-driven extension of the land grant university system. Its mission is to improve the lives of Virginians through education, partnerships with volunteers, and collaboration with local, state and federal government entities.

VCE's Master Gardeners program works within local communities to encourage sustainable environmental management with classes, community service and annual continuing education credits. Master Gardeners are trained volunteer educators who work inside communities to promote environmentally sound horticulture practices through sustainable landscape management, education and training. They return at least 50 hours of community service a year and must complete continuing education credits. Master Gardener classes are held both online and in person, and Essex, Mathews, Gloucester, King William, and King & Queen counties have either established a Master Gardeners chapter or are in the process of establishing a chapter. For more information on Master Gardeners classes and other programs, contact the local VCE office.



INSTITUTE for
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



Meeting Attendees:

1. **Aaron Wendt**, Virginia Department of Conservation and Resources, Shoreline Erosion Advisory Service
2. **Alan Walker**, Bay Aging
3. **Amanda Adams**
4. **Anne Ducey-Ortiz**, Gloucester County
5. **Brenda Dixon**, Eastern State Hospital
6. **Brent Huntsinger**, Friends of the Rappahannock
7. **Carla Minor-Blake**, Virginia Department of Health, Three Rivers Health District
8. **Carmina Galvez**, Thrive Virginia
9. **Carol Steele**, Gloucester County
10. **Carolyn Fortune**, Rappahannock Tribe
11. **Chad Lewis**, The Haven
12. **Christina Ruszczyk-Murray**, Virginia Cooperative Extension
13. **Cindee Dickens**, American Red Cross
14. **Cirse Gonzalez**, Chesapeake Bay National Estuarine Research Reserve
15. **Claire Keener-Eck**, Thrive Virginia
16. **Danielle Simms**, Virginia Department of Environmental Quality
17. **Darryl Glover**, Department of Conservation and Recreation
18. **David Eagle**, Virginia Department of Emergency Management
19. **Dawn Shank**, Mattaponi and Pamunkey Rivers Association
20. **Debbie Messmer**, Virginia Department of Emergency Management
21. **George Bains**, Gloucester County
22. **Haley Moog**, Thrive Virginia
23. **Holly McGowan**, West Point Wetlands Board
24. **Hunter LeClair**, Bay Aging
25. **Janet Jeter**, Essex Churches Together
26. **Jay Grebe**, Just Harvest
27. **Jessica Gardner**, Bay Aging
28. **Jonathan Mathews**
29. **Ken Pollock**, Bay Aging
30. **Ken Sterner**, Virginia Department of Forestry
31. **Kirk Havens**, King and Queen County Wetlands Board
32. **Kristie Askew**, GUEST Shelter
33. **Kyle McLemore**, Upper Mattaponi Indian Tribe
34. **Laura Hahn**, Upper Mattaponi Indian Tribe
35. **Leonard Edloe**, Hartfield Academy
36. **Lisa Deaton**, Virginia Department of Forestry
37. **Lorraine Justice**, Rappahannock Community College
38. **Molly Mitchell**, Virginia Institute of Marine Science
39. **Rob Wright**, King & Queen County Public Schools
40. **Shaleigh Howells**, Pamunkey Indian Tribal Resource Office
41. **Sherry Graham**, King William County
42. **Stephanie Brown**, Department of Aging and Rehabilitative Services
43. **Tommy Hicks**, Essex County
44. **Will Isenberg**, Virginia Department of Environmental Quality
45. **William Morey**, King William Fire and EMS



INSTITUTE *for*
ENGAGEMENT & NEGOTIATION
Shaping Our World Together



WILLIAM & MARY
LAW SCHOOL
VIRGINIA COASTAL
POLICY CENTER



RAFT Facilitation Team:

1. **Elizabeth Andrews**, Director, Virginia Coastal Policy Center (VCPC), William & Mary Law School
2. **Elizabeth Cook**, Fiscal and Program Coordinator, Virginia Coastal Policy Center
3. **Gray Montrose**, Assistant Director, VCPC, William & Mary Law School
4. **Jessica Whitehead**, Executive Director, Old Dominion Institute for Coastal Adaptation & Resilience
5. **Jim Davidson**, Research Assistant, VCPC, William & Mary Law School
6. **Sierra Gladfelter**, Associate, IEN, UVA
7. **Sophie Delzell**, Graduate Research Assistant, IEN, UVA
8. **Tanya Denckla Cobb**, Director, Institute for Engagement & Negotiation (IEN), University of Virginia (UVA)
9. **Wie Yusuf**, Program Director, Old Dominion Institute for Coastal Adaptation & Resilience