



## Semi-Annual Success Story ("Section C") October 2024

### *Increasing Resilience in Virginia's Coastal Zone through dedicated funding*

#### THE PROBLEM:

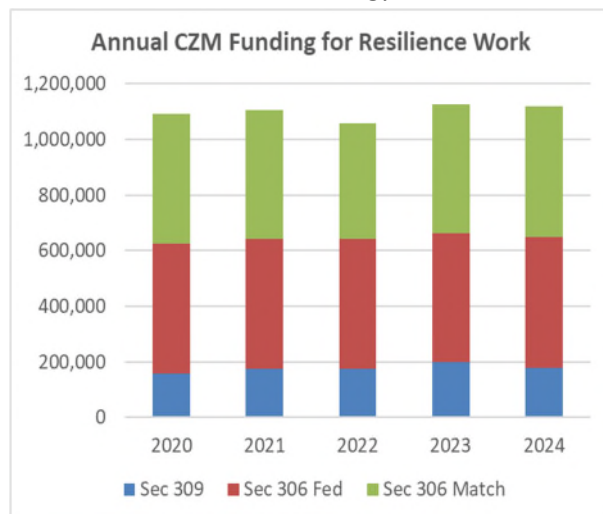
Climate change is accelerating and intensifying the risks that coastal communities experience, such as sea level rise, more intense coastal storms, and associated impacts like flooding, shoreline erosion, and saltwater intrusion. These impacts require careful and urgent actions and thus place a need for planning and policy development on capacity strapped governmental programs.



**Figure 1** Neighborhood flooding. A major threat from climate change impacts. (Credit: Mary-Carson Stiff, Wetlands Watch)

#### THE FIX:

The Virginia Coastal Zone Management Program (Virginia CZM) under the advisement of the Coastal Policy Team (CPT) has elected to focus significant portions of annual program funding towards resilience planning efforts in order to address the pressing issues and provide capacity for under resourced programs. Specifically, this includes selecting Coastal Hazards as one of the Section 309 enhancement areas for the 2021-2025 Strategy, which continues the work from the previous Coastal Hazards 2016-



**Figure 2** Annual CZM Funding for Resilience Work over 2020-2024

2020 Strategy. Additionally, a large portion of Section 306 funds were dedicated towards a 2020-2022 resilience focal area, which was then followed by the CPT's election to continue the resilience focal area for Section 306 funds throughout 2023-2025. This means over \$5.5 million dollars going towards resilience work in Virginia's Coastal zone throughout 2020-2024. While 2025 grants have not been developed yet, it is expected that another \$1.1 million will be allocated for continuing this work then.

Dedicating this funding is the first step in tackling the resilience needs. However, doing the work is where the rubber meets the road. The sections below, describe some of the projects funded during this period.

#### *Resilience projects under Virginia CZM's 2021-2025 Coastal Hazards Strategy*

One of the annual projects is the Resilience Adaptation Feasibility Tool (RAFT) undertaken by the University of Virginia, Virginia Tech, and Old Dominion University. This project allows localities to score their resilience and guides them through a year of implementation to enact the resilience actions they

have prioritized. Through this roughly 2-year process, localities build sustainable implementation teams to continue work into the future.

Another annual project under the Coastal Hazards Strategy builds capacity and support for local government participation in the National Flood Insurance Program's Community Rating System (NFIP-CRS). This grant to Wetlands Watch helps governments who participate in NFIP-CRS receive credits based on their resilience actions and programs. These credits then reduce flood insurance premiums for their residents. The project also provides NFIP-CRS training for up to two local governments each year where a discussion of the costs and benefits of joining the NFIP-CRS in combination with the potential cost savings for each community is provided.

Additional projects under the Coastal Hazards Strategy include conducting resilience assessments for working waterfronts, incorporating sea level rise into living shorelines, and developing a technical resource to aid in dredge material beneficial reuse.

### *Three-year Resilience Focal Areas*

Every year, the eight coastal PDCs receive funding from Virginia CZM to provide technical assistance for localities and other stakeholders in their regions. With the establishment of the focal area, each coastal PDC received an additional \$30,000 annually to coordinate regional resilience efforts, develop regional resilience priorities, and support statewide efforts related to the Coastal Resilience Master Plan (CRMP) development and implementation. Given the unique geographies of each region, the PDCs began this focal area from different starting points. Some regions already had established programs and stakeholder groups, while others were earlier in the process.

Other coastal partners also benefited from the Coastal Resilience Focal Area funding. One of the projects, led by the Virginia Institute of Marine Science (VIMS), involves targeting high priority areas for conservation. Sea level rise poses a substantial threat to coastal habitats and the species living there. Considering this, VIMS partnered with the Department of Conservation and Recreation's Natural Heritage Program to develop a targeting process that prioritizes areas resilient to sea level rise that also contain species of conservation interest.

Another project by rural planning district commissions was aimed at promoting ecotourism in rural coastal Virginia as a resilience tool. This was accomplished through a variety of efforts including business resiliency training and assessments of public access site resilience to sea level rise.

Other projects focused on shoreline planning. These projects worked to develop a community of practice for nearshore restoration projects, guidance for restoration site selection and design, and shoreline plans for three locations. Two of the integrated shoreline plans, developed by Middle Peninsula PDC, were for moderate and high energy shorelines to explore how advancements in modeling, alternative materials, and other innovative measures can advance the practices used in these more challenging environments.

Newer Resilience Focal Area projects under the 2023-2025 Focal Area include work that continues the Department of Conservation and Recreation's work to identify resilient land parcels for protection of rare, threatened, and endangered species, updates to the shoreline inventory and management model in tandem with marsh migration modeling, and an assessment of local aggregate material availability for resilience work (e.g., raising road elevation).

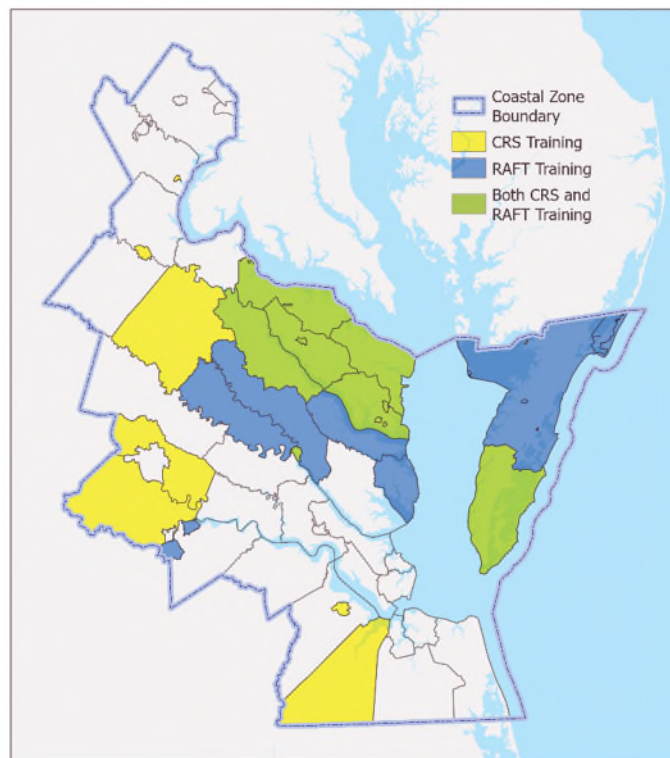
## **THE IMPACT:**

Resilience can be defined in several ways, but the truth of the matter is that you can only increase resilience but never completely achieve it. This is why it is so important that dedicated efforts continue

to advance resilience in the variety of ways that it can be framed. Through Virginia CZM's dedicated efforts, it is safe to say that Virginia's coastal zone has increased community, ecological, shoreline, and broader resilience. Some more specific outcomes are discussed in the sections below.

#### *Resilience projects under Virginia CZM's 2021-2025 Coastal Hazards Strategy*

To get a sense for Virginia CZM's impact with the CRS and RAFT projects, see the map on the right of local governments that have gone through the RAFT process or received CRS evaluation and training. Over 30 communities have benefited from this work and both the RAFT process and the CRS funded work continue to invest in program improvements to adaptively implement their programs. Still, local governments often struggle is to continue the work after these programs leave. Accordingly, these two programs work to revisit communities and offer continued engagement and support. Examples of this include the Regional Resilience Equity Workgroup that the RAFT Team supports and the Virginia CRS work group that offers critically important continuing education credits for Certified Flood Plain Managers within local government CRS programs. While locality capacity remains a hurdle to resilience implementation, these efforts work hard to fill that gap as much as possible and to adapt their programs to meet the needs of these local governments and community partners.



**Figure 3** Communities that participated in CRS and RAFT trainings and evaluations

At the time of writing this report, the working waterfront resilience assessments are currently ongoing. However, it is the goal of that work to set up these sites for state resilience funding via incorporation into resilience plans that enable Community Flood Preparedness Fund eligibility. Similarly, the work on the technical resource for developing adaptable living shorelines (FY23 Project of Special Merit) and the technical resource for beneficial reuse of dredged material are in the final stages of development. However, in both cases prior to the issuance of the actual products, major benefits have been realized including identification of project partners for beneficial reuse projects and a better understanding of the issues underpinning both projects that will inform future work in both areas.

#### *Three-year Resilience Focal Areas*

Dedicated and continued funding to the Coastal PDCs built capacity for resilience by establishing a baseline of planning throughout coastal Virginia. It began conversations in the less resourced regions that lacked the capacity to invest in this level of planning before, while continuing and focusing conversations in those regions already engaged in this space. Having PDCs meet regularly with their local governments to discuss and identify resilience priorities not only identified resilience projects that were included in the CRMP database, but also highlighted nuances that the PDCs were able to represent in the development of the Phase I and Phase II CRMP. Absent this funding, many regions and localities would not have been represented in that plan development and project database.

Other resilience focal area projects have enhanced resilience in a number of areas. For example, the Department of Conservation and Recreation now has a better sense of the rare, threatened, and endangered species in areas that they deem resilient to climate change and can use that information to plan conservation efforts. Similarly, marsh migration corridors and future land use impacts have been identified to allow conservation planners, PDCs, and local governments to better plan for marsh persistence and future land use needs. The resilience of the ecotourism industry has been enhanced through investments in resilient business trainings, marketing products, and resilience assessments. Furthermore, by increasing the resilience of the industry, regional economies are bolstered and interest in and value for the ecological resources experienced on these ecotours builds public support for their protection. Finally, investments in shoreline management planning have improved our understanding of our shorelines, what the impacts of different shoreline practices are, and provided portable shoreline management plans for more complex medium and high energy environments.

#### *Looking Forward*

As Virginia CZM begins work on the 2026-2030 Section 309 Assessment and Strategies, the outcomes of all this resilience work are playing a significant role in identifying Coastal Hazards as a likely high priority enhancement area. Similarly, when that process is complete, the CPT will be tasked with identifying the next Section 306 Focal Area for Virginia CZM. While it is important to consider how we should equitably focus our funds, the lessons learned under the past two focal areas will certainly inform how Virginia CZM will continue to support resilience efforts into the future.

#### **THE PARTNERS:**

Project partners include University of Virginia's Institute for Engagement and Negotiation, Virginia Coastal Policy Center at the College of William & Mary, the University of Virginia's Institute of Engagement and Negotiation, Old Dominion University, Virginia Tech, Wetlands Watch, Middle Peninsula Planning District Commission, Virginia Marine Resources Commission, Accomack Northampton Planning District Commission, Crater Planning District Commission, George Washington Regional Commission, Hampton Roads Planning District Commission, Northern Virginia Regional Commission, Northern Neck Planning District Commission, PlanRVA (Richmond Regional Planning District Commission), Virginia Institute of Marine Science, Virginia Department of Conservation & Recreation Natural Heritage Program, and Virginia Department of Energy.

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