

# THE RAFT

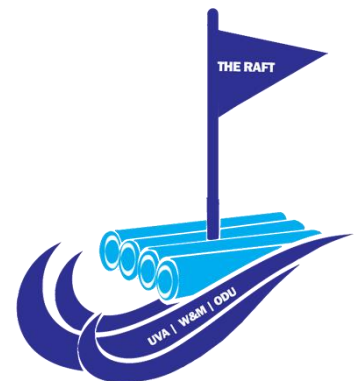
Resilience Adaptation Feasibility Tool

## Westmoreland County

### Scorecard Opportunity List

#### The RAFT Goal

To help Virginia's coastal localities improve resilience to flooding and other coastal storm hazards while remaining economically and socially viable.



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For more information visit The RAFT website: [raft.ienvirginia.edu](http://raft.ienvirginia.edu)

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## Introduction

The RAFT is a “full-service tool” and collaborative, community-driven process designed to assist coastal localities in increasing their resilience. It has three key components:

- **The RAFT Scorecard** provides a comprehensive assessment of the locality’s resilience.
- **A Resilience Action Workshop** where participants review the assessment findings, identify achievable action items and create a one-year Resilience Action Checklist.
- **Implementation** in which the RAFT Core Team works with a Locality Implementation Team to achieve items identified on the Resilience Action Checklist.

The RAFT Scorecard Opportunity List is designed to be used alongside the RAFT Scorecard to identify opportunities for strengthening resilience. These opportunities can then be more easily identified for inclusion in the Colonial Beach Resilience Action Checklist. This Opportunity List compiles potential action items identified from three sources:

- **HMP** actions are from the Hazard Mitigation Project List from the Northern Neck Regional Hazard Mitigation Plan
- **Sector Calls** actions are from input collected during calls held between the RAFT Core Team and sector leaders from across the Northern Neck
- **RAFT** actions are from the Colonial Beach RAFT Scorecard

In this way, the Opportunity List incorporates actions for resilience which have previously been locally identified as priorities, in addition to outcomes from the RAFT Scorecard results. However, the Opportunity List is not an exhaustive inventory of all possible actions for resilience. Localities may choose to include items on their Resilience Action Checklist that do not appear in this document.

**This document is intended to serve as a personal resource. It will not be collected, nor shared by the RAFT Core Team.** The columns “Ease” and “Impact” are left blank for your use in ranking and prioritizing opportunities, which can occur during or prior to the Resilience Action Workshop. When conducting these rankings, we encourage you to consider these questions: “How difficult will it be to accomplish this action?” and “What level of impact will completing this action create for reducing my community’s vulnerability?” Actions ranked highly for “Ease” and/or “Impact” may indicate their suitability for inclusion on your locality’s Resilience Action Checklist.

*If you have questions regarding the content of this document, please contact Angela King, Assistant Director of the Virginia Coastal Policy Center at William & Mary at [amking02@wm.edu](mailto:amking02@wm.edu).*

## CROSS-CUTTING OPPORTUNITIES

SOURCE	ACTION ITEMS	TIME PERIOD	EASE Rank 0-10	IMPACT Rank 0-10
HMP	<b>High priority.</b> Support mitigation projects that will result in the protection of public or private property from natural hazards. Eligible projects include but are not limited to 1. Acquisition of flood prone property 2. Elevation of flood prone structure 3. Minor structural flood control projects 4. Relocation of structures from hazard-prone areas 5. Retrofitting of the existing buildings, facilities, and infrastructure 6. Retrofitting of existing buildings and facilities for shelters 7. Critical infrastructure protection measures 8. Stormwater management improvements 9. Advanced warning systems and gauging systems (weather radios, reverse-911, stream gauges, I-flows) 10. Targeted hazard education 11. Wastewater and water supply system hardening and mitigation	Ongoing		
Sector Calls	Improve communication and information distribution systems regarding social service provision to the general public, especially vulnerable communities: (1) coordinate between department of social services (DSS) and community organizations, including churches, (2) actively update DSS websites and improve their connectivity with county websites, (3) explore a revamp of Northern Neck Connect or another centralized online portal model (4) use radio, newspapers, Facebook page, sheriff's website to share info, (5) establish an information line (i.e. 211/511) line to connect individuals calling to the appropriate agency or service provider.			
Sector Calls	Learn and disseminate useful lessons from communities that are identified as having higher resilience to flooding and storm events (for example, Little Florida in Richmond County).			
Sector Calls	Improve government service provision to vulnerable populations (senior citizens, children) during and after emergencies. Improvements should be based on a discussion around community needs. Build on some successful/ongoing models like septic pump-out program; Lancaster Co. PD check-ins with seniors; Meals on Wheels; Richmond Resource Council – Bay Aging; The Orchard; Schools; Lancaster Co. LINK.			

## 1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE Rank 0-10	IMPACT Rank 0-10
1.1	HMP	<b>High priority.</b> Identify training opportunities for staff to enhance the ability to use GIS for emergency management needs.	1-3 years		

1.1	Sector Calls	Consider increasing funds for police department staff and resources in order to meet increased work demands during summer population increases, and to allow for capacity to conduct more proactive/mitigation efforts.			
1.1	Sector Calls	Test new outreach methods to recruit public safety volunteers and create a plan for retaining existing volunteers: (1) convey the variety of roles available to support public safety efforts, and (2) increase partnership with public schools (creating a Firefighter 1 class).			
1.1	Sector Calls	Improve communication and planning between county staff, school staff, emergency managers, service providers and local DSS representatives for responding to and planning for emergencies. Work with the NNPDC to formalize tools, including (1) an emergency plan that outlines tasks and communication steps for the various organizations; (2) a roles and responsibilities map for emergencies that covers the county, DSS, community organizations, and households; and (3) a communication structure to facilitate coordination amongst the various entities.			
1.1	RAFT	Hold resiliency trainings events for elected officials and community leaders with resiliency experts as guest speakers.	1-3 years		
1.3	Sector calls	Build on existing partnership between All Points Broadband, Dominion Energy, Northern Neck Electric Cooperative and the Counties of King George, Northumberland, Richmond, and Westmoreland to advance a regional broadband partnership to deliver fiber-optic broadband service to unserved households and businesses in the region.			
1.3	RAFT	Work with resiliency-focused community groups serving vulnerable populations.	1-3 years		
1.3	RAFT	Require at least one elected official to participate on every local resilience commission as a delegate.	1-3 years		
1.4	HMP	<b>Medium priority.</b> Review and revise, if required, existing Subdivision Ordinances to include hazard mitigation-related development criteria in the order in order to regulate the location and construction of buildings and other infrastructure in a known hazard area.	Ongoing		
1.4	HMP	<b>Medium priority.</b> Share with FEMA any new technical or scientific data that may result in map revisions within six months of creation or identification of new data.	Ongoing		
1.4	RAFT	Use data collected from Virginia university system in local floodplain, zoning, ordinance planning as well as in the comprehensive plan.	1-3 to >3 years		
1.5	HMP	<b>High priority.</b> Maintain a voluntary agreement with FEMA to participate in the NFIP.	Ongoing		

1.5	HMP RAFT	<b>High priority.</b> Consider participating in FEMA's Community Rating System (CRS).	1-3 years		
1.5	HMP	<b>Low priority.</b> Consider adoption of activities that extend beyond the minimum requirements, including those identified for participation in the Community Rating System, freeboard, the prohibition of production or storage of chemicals in SFHA, prohibition or certain types of structures such as hospitals, nursing homes, jails, the prohibition of certain types of structures such as hospitals, nursing homes, jails, the prohibition of certain types of residential housing such as manufactured homes, and finally Floodplain ordinances, that prohibit any new residential or non-residential structures in the SFHA.	Ongoing		
All	Sector Calls	Conduct a regional analysis of emergency management capacity, including geographic distribution of stations, EMS staff availability, travel routes and response times. Building on the shared resources model used between Lancaster County and lower Northumberland County, identify opportunities to improve response through mutual aid.			
All	Sector Calls	Invest in additional staff and trucks for emergency management.			

## 2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE Rank 0-10	IMPACT Rank 0-10
2.1	HMP	<b>High priority.</b> Identify means to coordinate, collect and store damage assessment data in GIS format for each natural hazard event that causes death, injury, and/or property damage.	1-3 years		
2.1	HMP	<b>Medium priority.</b> Identify existing flood-prone structures that may benefit from mitigation measures such as elevation.	Ongoing		
2.1	HMP	<b>Medium priority.</b> Evaluate built-upon areas within the floodplain or along the high erosion risk shoreline for possible relocation and/or buy-out. In particular, target FEMA's Repetitive Loss Properties throughout the Northern Neck for possible relocation and/or buy-out.	Ongoing		
2.1	HMP	<b>Low priority.</b> Maintain a publicly available copy of the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS), Support local requests for map updates when available.	1-3 years		
2.1	HMP	<b>Low priority.</b> Assist with local floodplain determinations and maintain a record of approved changes to the local Floodplain.	Ongoing		

2.3	RAFT	Invite chamber of commerce to send representatives to mitigation and planning meetings.	1-3 years		
2.5	HMP	<b>Medium priority.</b> Inform community property owners about changes to the DFIRM/FIRM that may impact their insurance rates.	Ongoing		
2.5	HMP	<b>Medium priority.</b> Encourage the purchase of flood and/or sewer back-up insurance.	Ongoing		
2.5	HMP	<b>Medium priority.</b> Educate residents about flood insurance and ICC (Increased Cost of Compliance) Coverage.	Ongoing		
2.5	HMP	<b>Medium priority.</b> Educate community members about the availability and value of Flood Insurance.	Ongoing		
2.5	Sector Calls	Extend regional public radio coverage, perhaps via coordinated expansion/improvement effort.			
2.5	Sector Calls	Improve public outreach and education around evacuation, with the goal of influencing more residents to evacuate in hazardous situations. Circulate more broadly maps such as the FEMA Flood Zone and Hurricane Evacuation Maps which allow residents to search their address and identify their flood risk and evacuation zones.			
2.5	RAFT	Task staff with contacting community leaders and community organizations about emergency preparedness, ensuring residents know emergency numbers and shelters (i.e. emergency magnets or flyer).	1-3 to >3 years		

### 3) INFRASTRUCTURE RESILIENCE

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE Rank 0-10	IMPACT Rank 0-10
3.1	RAFT	Provide incentives for private property activities that manage stormwater such as tax deductions or flag program (i.e. River Star Homes).	<1 year to 1-3 years		
3.1	RAFT	Provide demonstrational BMPs on public property for stormwater education.	1-3 years		
3.1	RAFT	Identify minimum state requirements and compare to local requirements.	1-3 to >3 years		
3.2	HMP	<b>High priority.</b> Work with VDOT and the Town of Colonial Beach to seek ingress and egress access issue solutions.	Ongoing		

3.2	HMP, Sector Calls, RAFT	<b>Medium priority.</b> Work with VDOT to Identify and evaluate vulnerable transportation infrastructure and conduct an analysis of road washouts – working in coordination with counties throughout region where applicable – and implement mitigation measures (e.g., elevation, redesign).	<1 year		
3.3	Sector calls	Understand and work to reduce the vulnerability of septic systems by creating an inventory and map, coordinating with the plans being developed by VDH and VIMS, which plan to launch a pilot project with ODU staff.			
3.3	RAFT	Update water supply plan to address coastal hazards and dangers they pose to portable water.	1-3 years		
3.3	RAFT	Hold public educational events and disseminate educational materials about safe drinking water and what to do in case a storm impacts their water supply.	<1 year		
3.4	HMP	<b>High priority.</b> Incorporate hazard mitigation techniques into new community facilities to minimize damages.	Ongoing		
3.4	HMP	<b>Low priority.</b> Initiate discussion with private utility companies to incorporate mitigation measures into new and existing development and any infrastructure repairs.	Ongoing		
3.5	RAFT	Begin implementing green strategies such as living shorelines, wetland restoration, and watershed management.	1-3 to >3 years		

## 4) PLANNING FOR RESILIENCE

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE Rank 0-10	IMPACT Rank 0-10
4.1	HMP	<b>High priority.</b> Evaluate mitigation funding programs to seek a solution to and funding sources to address Stratford Hall area erosion and cliff failure issues.	Ongoing		
4.1	HMP	<b>Medium priority.</b> Identify funding opportunities to replace vulnerable or undersized culvert stream crossing with bridges or larger culverts to reduce flood hazards.	Ongoing		
4.1 4.2	HMP	<b>Medium priority.</b> Integrate mitigation plan requirements and actions into other appropriate planning mechanisms such as comprehensive and capital improvement plans.	Ongoing		



4.1 4.4	Sector calls	Support homeowners to elevate their homes, building on the Northern Neck Hazard Mitigation Grant Home Elevation Program, in places with flood risk that are not projected to be uninhabitable based on sea-level rise projects.			
4.1	RAFT	Allocate specific funds for coastal resilience into Capital Improvement Plan.	<1 year to 1-3 years		
4.1	RAFT	Identify key economic impacts and monetary losses that significant storm events could cause.	1-3 years		
4.1	RAFT	Identify funding to meet needs of vulnerable populations in case of emergencies.	<1 year to 1-3 years		
4.3	HMP	<b>Medium priority.</b> Continue to enforce zoning and building codes to prevent construction within the floodplain.	1-3 years		
4.3	HMP	<b>Medium priority.</b> Consider using fee simple and/or permanent easements to prevent development in the highest priority undeveloped Floodplain (and/or wetlands) areas. Use these areas as open public spaces for passive recreational uses including water access	Ongoing		
4.3	HMP	<b>Low priority.</b> Evaluate the potential costs versus benefits of continuing the freeboard requirement for all new structures within the 100-year floodplain.	Ongoing		
4.3	HMP	<b>Medium priority.</b> Adopt or maintain a floodplain management ordinance that at a minimum regulates the following: Issue permits for All proposed developments in the SFHA, Obtain review, and utilize any base flood elevation and Floodway data, and require BFE data for subdivisions proposals and other development proposals larger than 50 lots or 5 acres; Identify measures to keep all new and substantially improved construction reasonably safe from Flood to or above the Base Flood Elevation (BFE), including anchoring, using Flood resistant materials, designing or locating utilities, and service facilities to prevent water damage; Document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures.	Ongoing		
4.3	HMP	<b>Medium priority.</b> Enforce the ordinance by monitoring compliance and taking remedial action to correct violations.	Ongoing		
4.2	RAFT	Ensure comprehensive plan includes potential impacts on critical infrastructure and services, especially regarding vulnerable populations.	<1 year		
4.4	RAFT	Work with local organizations to create a pro-resiliency marker for homeowners increasing their resilience (i.e. River Star Home flag program).	1-3 years		
4.4	RAFT	Make permits in flood zones difficult to obtain and enforce setback laws.	1-3 to >3 years		

4.4	RAFT	Work with local environmental groups to identify natural resources and ecoservices in need of protections.	1-3 to >3 years		
4.4	RAFT	Identify high risk areas and implement green infrastructure projects in those areas.	1-3 to >3 years		
4.5	RAFT	Hold community meeting open to residents, civic organizations, and NGOs to educate community about natural resource preservation plan.	1-3 to >3 years		
4.5	RAFT	Offer fund-matching or grant funds for natural resource preservation projects.	<1 year to 1-3 years		

## 5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE Rank 0-10	IMPACT Rank 0-10
5.1	RAFT	Adopt a written policy statement regarding the roles of residents, commercial enterprises, and other stakeholders in coastal resilience.	1-3 to >3 years		
5.1	RAFT	Create a coastal resilience committee and assign staff roles.	<1 year to 1-3 years		
5.1	RAFT	Schedule a coastal resilience public meeting and make sure it is accessible to vulnerable populations.	1-3 to >3 years		
5.1	RAFT	Create informational coastal resilience materials to disseminate via social media, government websites, and traditional media and ask for public input.	<1 year		
5.2	HMP	<b>Low priority.</b> Prepare an advisory pamphlet and distribute to occupants of housing units or businesses known to be in the floodplain advising them of the potential hazards in the area and of evacuation plans in the event of an emergency	Ongoing		
5.2	HMP	<b>Low priority.</b> Maintain a publicly available copy of the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS), Support local requests for map updates when available.	1-3 years		
5.2	RAFT	Create audience-appropriate information guides, signs, brochures, social media posts informing the public about coastal resilience and economic risks associated with storm events.	<1 year		
5.3	RAFT	Encourage and provide funding for community resilience projects and advertise these incentives to the public.	<1 year to		

			1-3 years		
5.3	RAFT	Hold community training sessions to educate public on resiliency strategies.	<1 year to 1-3 years		
5.3	RAFT	Provide local leaders and volunteers with educational materials and speakers for local events.	1-3 years		
5.3	RAFT	Highlight community efforts on website or social media or with awards.	<1 year		
5.4	Sector Calls	Explore alternatives to traditional health provision models, including community paramedicine and telemedicine. Telemedicine efforts must go hand-in-hand with connectivity infrastructure expansion. There is an opportunity to build on an existing pilot project out of VCU in Westmoreland, Essex, and Richmond Counties.			
5.4	RAFT	Develop public-private partnerships to address needs and plan how to provide healthcare to vulnerable populations during storm events.	<1 year to 1-3 years		
5.5	RAFT	Gather data on physical and mental well-being of population.	>3 years		
5.5	RAFT	Identify trusted communication messengers for vulnerable populations.	<1 year		
5.5	RAFT	Partner with NGOs and community groups to identify needs of vulnerable populations.	<1 year		
5.5	RAFT	Make plans to best help vulnerable populations during emergencies in conjunction with community groups.	<1 year to 1-3 years		