

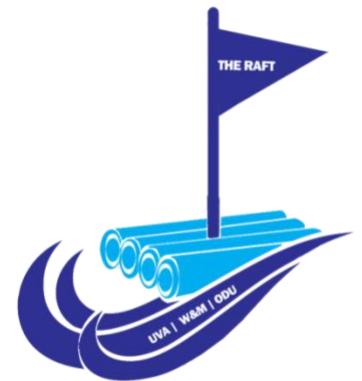
THE RAFT

Resilience Adaptation Feasibility Tool

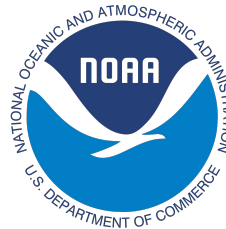
Scorecard Opportunity List Colonial Beach

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

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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 the 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.

CROSS-CUTTING OPPORTUNITIES

SOURCE	ACTION ITEMS	TIME PERIOD	EASE	IMPACT
			(Rank 0-10)	
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.			
HMP	High priority. 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		

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE	IMPACT
				(Rank 0-10)	
1.1	HMP	Low priority. Encourage the purchase and training on the use of NOAA radios. Provide NOAA radios to the public facilities.	5 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		
1.1	RAFT	Coordinate quarterly meetings for elected officials focusing on resiliency planning efforts.	> 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		
1.3	RAFT	Create a task force to identify resiliency funding opportunities regionally and state-wide.	< 1 year		
1.4	HMP	High priority. 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	High priority. Maintain a voluntary agreement with FEMA to participate in the NFIP.	Ongoing		
1.5	HMP	Low priority. 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	Ongoing		

		housing such as manufactured homes, and finally Floodplain ordinances, that prohibit any new residential or non-residential structures in the SFHA.			
1.5	RAFT	Research and participate in CRS Program.	1-3 years		
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	IMPACT
				(Rank 0-10)	
2.1	HMP	High priority. Adopt the most current DFIRM or FIRM and FIS as they become available.	Ongoing		
2.1	HMP	High priority. Assist with local floodplain determinations and maintain a record of approved changes to the local Floodplain.	Ongoing		
2.2	RAFT	Identify and make contact with community groups and agencies that work with vulnerable populations before, during, and after storms.	<1 year		
2.3	RAFT	Invite chamber of commerce to send representatives to mitigation and planning meetings.	1-3 years		
2.5	HMP	High priority. Increase enforcement and education regarding the tie-down of propane and other fuel tanks.	0-3 years		
2.5	HMP	Low priority. Publicize the location of local shelters and emergency phone numbers. Include a map of shelters in local phonebooks or on county websites.	Ongoing		
2.5	HMP / Sector Calls	Low priority. Investigate, develop, or enhance a regional public notification system such as low power FM or AM radio.	5 Years		
2.5	HMP	High priority. Educate community members about the availability and value of Flood Insurance.	Ongoing		
2.5	HMP	High priority. Inform community property owners about changes to the DFIRM/FIRM that may impact their insurance rates.	Ongoing		

2.5	HMP	Medium priority. Provide general assistance to community members relating to insurance issues.	Ongoing		
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	Develop a resident emergency plan that identifies risks and needs.	1-3 years		
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		
2.5	RAFT	Engage residents through community outreach and training/drills.	<1 year		

3) INFRASTRUCTURE RESILIENCE

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE	IMPACT
				(Rank 0-10)	
3.1	HMP	Medium priority. Evaluate the existing stormwater system to determine if it is adequate for existing (or future) flood hazards.	3-5 years		
3.1	HMP	Medium priority. Identify program of corrective actions to improve stormwater systems capacity to handle major rain events.	2-3 years		
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	Identify funding sources for stormwater management projects.	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 with the goal of developing stormwater policies that surpass minimum state requirements.	1-3 to >3 years		
3.2	HMP	High priority. Develop and implement a ditch maintenance program consisting of routine imperfections and subsequent debris removal.	Ongoing		
3.2	HMP	Low priority. Work with VDOT to establish flood level markers along bridges and other structures to indicate the rise of water levels along creeks and rivers in potential areas.	Ongoing		
3.2	Sector calls RAFT	Identify vulnerable transportation infrastructure, and conduct an analysis of road wash-outs, working both in coordination with counties throughout the region and VDOT, and address how to fix them.	<1 year		

3.2	RAFT	Identify backup infrastructure in case emergency infrastructure fails or is damaged in storm event.	<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	RAFT	Identify critical infrastructure for emergency services' weaknesses and address how to fix them.	<1 year		
3.4	RAFT	Develop a contingency plan for continuation of emergency services and identify the necessary parties.	1-3 years		
3.5	RAFT	Offer fund-matching or tax incentive programs for homeowners to participate in nature-based landscaping projects.	1-3 to >3 years		
All	HMP	High priority. Develop a detailed building inventory for all structures in the jurisdiction, which catalogs information such as the value of the structure, contents, age, location (latitude and longitude), etc.	Ongoing		

4) PLANNING FOR RESILIENCE

#	SOURCE	ACTION ITEMS	TIME PERIOD	EASE	IMPACT
				(Rank 0-10)	
4.1 4.2	HMP	High priority. 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	Identify key economic impacts and monetary losses that significant storm events could cause.	1-3 years		
4.2	HMP	Medium priority. Include an assessment and associated mapping of the jurisdiction's vulnerability to location-specific hazards, and make appropriate recommendations for the use of these hazard areas in the next comprehensive plan.	3 years		
4.2	RAFT	Ensure comprehensive plan includes potential impacts on critical infrastructure and services, especially regarding vulnerable populations.	<1 year		
4.3	HMP	High priority. Continue to enforce zoning and building codes to prevent construction within the floodplain.	Ongoing		

4.3	HMP	High priority. 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	High priority. Enforce the ordinance by monitoring compliance and taking remedial action to correct violations.	Ongoing		
4.3	HMP	Medium priority. Investigate using non-conforming or substantial damage provision to require hazard retrofitting of existing development	Ongoing		
4.3	RAFT	Modify the Chesapeake Bay Act buffer to go beyond minimum requirements.	<1 year		
4.3	RAFT	Establish or enforce setback laws in flood-prone areas.	1-3 to >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	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	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		
5.2	HMP	Low priority. Maintain a publicly available copy of the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS),	Ongoing		

		Support local requests for map updates when available.			
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	Hold community training sessions to educate the public on resiliency strategies.	<1 year to 1-3 years		
5.3	RAFT	Support resident leaders or volunteers in community outreach and education efforts about coastal resilience by providing them with educational materials and speakers for local events.	1-3 years		
5.3	RAFT	Highlight the work of resident leaders or volunteers in supporting and advancing coastal resilience on website or social media or with awards.	<1 year		
5.5	RAFT	Gather data on physical and mental well-being of population and challenges through specific metrics, such as "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	>3 years		
5.5	RAFT	Meet at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	<1 year		
5.5	RAFT	Identify and/or map vulnerable neighborhoods, completed in partnership with NGOs, faith-based organizations, and health community services board, to identify the needs of vulnerable populations.	<1 year		
5.5	RAFT	Develop plan(s) with NGOs, faith-based organizations, and health and community services boards that help physically and mentally challenged vulnerable populations prepare for coastal flooding events and that provides assistance to them during and after these events.	<1 year to 1-3 years		
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.			