THE RAFT

Resilience Adaptation Feasibility Tool

Scorecard Opportunity List King and Queen County

The RAFT Goal

To help Virginia's coastal localities improve resilience to flooding and other coastal storm hazards while striving to thrive both economically and socially.



raft.ien.virginia.edu



INSTITUTE for ENGAGEMENT & NEGOTIATION Shaping Our World Together







Acknowledgment of Funders

This RAFT product was created with funding from:

Virginia Coastal Zone Management Program*

We are grateful to these funders for supporting various phases of The RAFT from 2015-Present.

Anonymous

Environmental Resilience Institute at the University of Virginia
Jessie Ball DuPont Fund
National Fish and Wildlife Foundation
National Oceanic and Atmospheric Administration*
School of Architecture at the University of Virginia
Virginia Coastal Zone Management Program*
Virginia Environmental Endowment
Virginia Sea Grant Climate Adaptation and Resilience Program

For more information, visit The RAFT website: raft.ien.virginia.edu

The views expressed in The RAFT's various products are those of the authors and do not necessarily reflect the views of any of the funders mentioned above.





^{*} This project, Task #92.02, was funded by the Virginia Coastal Zone Management Program led by the Virginia Department of Environmental Quality through Grant FY21 #NA20NOS4190207 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE:				3 / 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Hold resiliency trainings events for elected officials and community leaders with resiliency experts as guest speakers.	Mid-Term: 1-3 years			

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY:			3	4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Include stakeholders who will need emergency response and lower income, vulnerable populations in resiliency community meetings.	Mid-Term: 1-3 years			

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs:				2 / 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Work with resiliency-focused community groups serving vulnerable populations.	Mid-Term: 1-3 years			
Create a task force to identify resiliency funding opportunities regionally and state-wide.	Short to Mid-Term: <1 year to 1-3 years			

1.4 ADAPTIVE MANAGEMENT:			3	4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Incorporate new data, scientific analyses, and approaches to resilience in updates to the Site and Subdivision Ordinances.	Mid to Long-Term: 1-3 to >3 years			

1.5 The NFIP's COMMUNITY RATING SYSTEM:			C	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Research and participate in CRS Program.	Mid-Term: 1-3 years			

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT:			3	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Identify additional potential vulnerabilities related to cultural, historic, and economic assets.	Short to Mid-Term: <1 year to 1-3 years			

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS:			3	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Identify and assist community groups and agencies that work with vulnerable populations before, during, and after storms.	Short-Term: <1 year			

2.3 BUSINESS AND ECONOMIC RISK ASSESSMENT:			3	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Provide programs for small businesses for emergency preparation and business continuity post-event.	Mid to Long-Term: 1-3 to >3 years			

2.4 HAZARD MITIGATION: 4 / 4 Points 2.5 RESIDENT EMERGENCY PREPAREDNESS: 4 / 4 Points

3) INFRASTRUCTURE RESILIENCE*

3.1 STORMWATER INFRASTRUCTURE:

0 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Provide incentives for private property activities that manage stormwater such as tax deductions or flag program (i.e. River Star Homes).	Short to Mid-Term: <1 year to 1-3 years	(Citatin)	((11011111111111111111111111111111111111
Identify funding sources for stormwater management projects such as stormwater utility fees, user fees, grants, or other funding mechanisms.	Mid to Long-Term: 1-3 to >3 years			
Provide demonstrational BMPs on public property for stormwater education.	Mid-Term: 1-3 years			
Identify minimum state requirements and compare to local requirements with the goal of developing stormwater policies that surpass minimum state requirements.	Mid to Long-Term: 1-3 to >3 years			

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE:

1 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Work with VDOT to identify and evaluate vulnerable transportation infrastructure and conduct an analysis of road erosion, flooding, and inundation – working in coordination with counties throughout region where applicable – and implement mitigation measures (e.g., elevation, redesign).	Short-Term: <1 year			
Identify backup infrastructure in case emergency infrastructure fails or is damaged in storm event.	Short-Term: <1 year			

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES:

0 / 4 Point

Action Items	Time Period	Support	Ease	Impact
		(Check)	(Rank 0-10)	(Rank 0-10)
Identify vulnerabilities to coastal storm hazards by	Mid-Term: 1-3 years			
conducting an assessment of drinking water supply and				
wastewater management (from both public sources as well				
as private well owners).				
Update water supply plan to address coastal hazards and	Mid-Term: 1-3 years			
dangers they pose to portable water.				

^{*}The Fight the Flood program is a program established by the MPPDC to provide support for and leverage funding for action items in this section. Localities are required to submit assistance and funding needs to MPPDC by completing a brief survey for each action item at www.FightTheFloodVA.com.

Hold public educational events and disseminate educational materials about safe drinking water and what to do in case a storm impacts their water supply.	Mid-Term: 1-3 years		
Establish line of communication with municipal water and wastewater utility to manage challenges to safe water, including during and after storms.	Short to Mid-Term: <1 year to 1-3 years		
Establish methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	Short to Mid-Term: <1 year to 1-3 years		

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES:

3 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Hold public educational events and disseminate educational materials about which critical infrastructure citizens should use during coastal storm hazards.	Short to Mid-Term: <1 year to 1-3 years			

3.5 NATURAL AND NATURE-BASED FEATURES:

2 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Begin implementing green strategies such as living shorelines, wetland restoration, and watershed management.	Mid to Long-Term: 1-3 to >3 years			
Offer fund-matching or tax incentive programs for homeowners to participate in nature-based landscaping projects.	Mid to Long-Term: 1-3 to >3 years			

4) PLANNING FOR RESILIENCE

4.1 BUDGET, FUNDING AND STATE & FEDERAL ASSISTANCE: 1 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Allocate specific funds for coastal resilience into Capital Improvement Plan.	Mid-Term: 1-3 years			
Identify key economic impacts and monetary losses that significant storm events could cause.	Mid-Term: 1-3 years			
Identify funding to meet needs of vulnerable populations in case of emergencies.	Short to Mid-Term: <1 year to 1-3 years			

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN:

2 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Ensure updates to comprehensive plan include community input on coastal resilience.	Short-Term: <1 year			
Ensure comprehensive plan includes potential impacts on critical infrastructure and services, especially regarding vulnerable populations.	Short-Term: <1 year			

4.3 LAND USE ORDINANCES:

2 / 4 Points

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Modify flood zone designations to include areas outside FEMA designations that are still known to flood regularly.	Mid to Long-Term: 1-3 to >3 years			
Establish setback laws in flood-prone areas.	Mid-Term: 1-3 years			

4.4 INCENTIVES FOR COASTAL RESILIENCE:			2	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Develop two or more incentives for coastal resilience goals (such as discouraging development in areas prone to flooding, protecting critical ecosystems, encouraging sustainable development, and identifying and protecting natural resources and ecoservices) in consultation with local environmental group and organizations working with socially vulnerable populations.	Mid to Long-Term: 1-3 to >3 years			

4.5 **NATURAL RESOURCE PRESERVATION:** 2 / 4 Points **Action Items Time Period** Support Ease Impact (Check) (Rank 0-10) (Rank 0-10) Mid to Long-Term: Hold community meeting open to residents, civic organizations, and NGOs to educate community about 1-3 to >3 years natural resource preservation plan; provide opportunities for community engagement in implementation of the plan. Mid to Long-Term: Offer fund-matching or grant funds for natural resource preservation projects. 1-3 to >3 years

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING:			C	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Adopt a written policy statement regarding the roles of residents, commercial enterprises, and other stakeholders in coastal resilience.	Mid to Long-Term: 1-3 to >3 years			
Create a coastal resilience committee and assign staff roles.	Short to Mid-Term: <1 year to 1-3 years			
Hold at least one public meeting per year, including one in vulnerable resident areas, to address coastal resilience issues and posts the results of said meetings.	Short-Term: <1 year			
Create informational coastal resilience materials to disseminate via social media, government websites, and traditional media and ask for public input.	Short-Term: <1 year			

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC:			3	/ 4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Create audience-appropriate information guides, signs, brochures, social media posts informing the public about coastal resilience and economic risks associated with storm events.	Short-Term: <1 year			

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE:			0/	4 Points
Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Encourage and provide funding for community resilience projects and advertise these incentives to public.	Short to Mid-Term: <1 year to 1-3 years			
Hold community training sessions to educate public on resiliency strategies	Short to Mid-Term: <1 year to 1-3 years			
Provide local leaders and volunteers with educational materials and speakers for local events.	Mid-Term: 1-3 years			
Acknowledge the work of resident leaders or volunteers in supporting and advancing coast resilience by highlighting their work on government websites, social media, awards, etc.	Short-Term: <1 year			

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE:

4 / 4 Points

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE:

0 / 4 Point

Action Items	Time Period	Support (Check)	Ease (Rank 0-10)	Impact (Rank 0-10)
Gather data on community physical and mental wellbeing and challenges through specific metrics, such as "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	Long-Term: >3 years			
Identify trusted communication messengers for vulnerable populations.	Short-Term: <1 year			
Partner with NGOs and community groups to identify needs of vulnerable populations.	Short-Term: <1 year			
Make plans to best help vulnerable populations during emergencies in conjunction with community groups.	Short to Mid-Term: <1 year to 1-3 years			