THE RAFT

Resilience Adaptation Feasibility Tool

Essex County

Scorecard Report

March 2021

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

Virginia Coastal Zone Management Program

University of Virginia Institute for Engagement & Negotiation Shaping Our World Together

William & Mary Law School Virginia Coastal Policy Center

Old Dominion University Resilience Collaborative

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

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Background

What is The RAFT?

- "Full-service tool" and collaborative, community-driven process designed to assist coastal localities in increasing their resilience.
- Conceived and developed by an academic interdisciplinary collaborative called the "Core Team"
    - Institute for Engagement & Negotiation (IEN) at the University of Virginia
    - Virginia Coastal Policy Center (VCPC) at William & Mary Law School
    - Old Dominion University (ODU)/Virginia Sea Grant Climate Adaptation and Resilience Program.

The RAFT has three key components:

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

How does The RAFT help a locality?

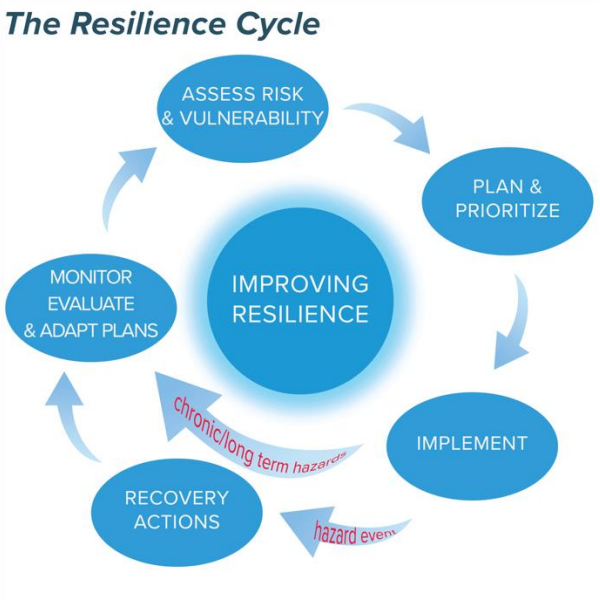
1. Open a community conversation about community resilience, including gaps, and needs.
2. Support the community in identifying priority actions for the largest impact in increasing resilience.
3. Improve communication and coordination within the community and with regional and state agencies.
4. Help the community become better positioned to find and apply for relevant funding opportunities.
5. Earn a better Community Rating System (CRS) score, which saves residents money on their flood insurance premiums.

What is resilience?

The RAFT focuses on coastal community resilience, improving the ability of a community to bounce back from hazardous events such as hurricanes and extreme weather and deal with chronic issues such as flooding.

The RAFT takes a comprehensive approach by including environmental, economic, and social resilience. All three are vital for a community to thrive.

To build resilience, localities need capacities in areas of emergency management, infrastructure, planning, policy, and community well-being.



Adapted from: NOAA Coastal Community Resilience Indicators and Rating Systems, 2015.

Locality Total Score

Category	Score Received	Possible Score
1) **POLICY, LEADERSHIP, AND COLLABORATION** *Measures policy and legislation in place for coastal resilience and includes coordination and collaboration between various levels of government, and how accessible and open government data is to the public.*	8	20
2) **RISK ASSESSMENT AND EMERGENCY MANAGEMENT** *Examines how well a locality has conducted risk assessments to prepare for coastal storm hazards, identified vulnerable populations and their needs during or after a coastal storm hazard, and developed plans for disaster preparedness, including a Hazard Mitigation Plan.*	14	20
3) **INFRASTRUCTURE RESILIENCE** *Assesses how well the locality has identified methods and plans for storm water and protecting critical infrastructure including using natural and nature-based features (NNBF).*	13	20
4) **PLANNING FOR RESILIENCE** *Assesses the comprehensive plan and zoning code for resilience, how a locality is using incentives to promote resilience in building and development, how policies protect ecosystems, how they use green infrastructure to improve resilience, and how much resilience has been incorporated into planning.*	10	20
5) **COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING** *Assesses how the community engages with residents in planning for coastal storm hazard including social equity considerations and examines the locality's attention to issues of health and wellness during and after coastal events.*	5	20
Total Score:	**50%**	

Interpreting the Score

Low Resilience: Less than 50%- There are plenty of opportunities for improvement. The locality should decide whether it will be more beneficial to achieve the least difficult improvements first, or to tackle more challenging problems. The key is to decide which of these approaches makes the most sense, as the locality develops their Resilience Action Checklist.

Moderate Resilience: 50% - 74% – The locality is actively involved in coastal resilience planning and has achieved some successes. There are still opportunities for strengthening resilience. The Resilience Action Checklist should focus on weak categories and anticipate moderate to difficult improvements.

High Resilience: 75% or More- Locality is well prepared! There may still be room for resilience and the Resilience Action Checklist may focus on ways to improve resilience and further engage residents. Examples of locality policies, plans, and activities may assist other localities in the region and beyond.

If you see **CRS** next to an item, action to improve that metric can result in CRS credit.

If you see **$$$** next to an item, action to improve that metric supports economic resilience.

If you see next to an item, action to improve that metric supports environmental resilience.

If you see next to an item, action to improve that metric supports engagement with vulnerable

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE: 3 / 4 Points

Collaboration among local government decision makers, officials, departments, academia, and NGOs is important in planning for coastal resilience. Effective collaboration requires identifying local leaders and organizations, establishing the roles of such leaders and organizations, and providing leadership training and educational resources.

Points		Scoring Metric	Notes
1		a. Leadership roles are identified for staff and/or elected officials important for planning for resilience. If staff is limited or nonexistent, the locality has tasked someone with handling resilience efforts for the community.	Hazard Mitigation Plan (link) at 368-69 identifies staff for mitigation activities: County Administrator and Chief of Emergency Services.
0		b. Training and education events are held for elected officials specifically on resilience issues.	Per MPPDC contact, PDC conducts training and education on resilience issues. Per locality contact, no additional training.
1		c. Training and education events are held for locality staff, or if staff is limited or nonexistent, training of whomever has been tasked with handling resilience efforts for the community.	Per MPPDC contact, PDC conducts training and education on resilience issues.
1		d. Locality staff and/or elected officials, or whomever has been tasked with handling resilience efforts for the community, are meeting at least once per quarter to coordinate planning specifically on resilience issues.	Per MPPDC contact, the PDC meets regularly with leadership in the locality through a 25-member commission, as well as committees of local government administrators and local government planners. Resilience efforts are discussed throughout.

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY: 3 / 4 Points

Collaboration among local officials and relevant stakeholders is equally important in responding to a coastal hazard. An organized, coordinated response to a coastal hazard requires identifying stakeholders, establishing roles, creating plans, and publicizing information.

Points		Scoring Metric	Notes
1		a. Locality has identified stakeholders who will require emergency response including socially vulnerable populations.	General identification in EOP at 1-4. MP Hazard Mitigation plan (link) at page 2, 13-14.
1		b. Locality has established internal emergency response roles (e.g., standing committees, staff titles), and these staff and partners participate in at least one training each year.	Internal emergency response roles are forth in EOP, pages 10-12, 19-20; and general discussion of trainings are set forth on pages 24, annex 5-2. Per MPPDC contact, PDC assists with some emergency trainings.
0		c. Locality collaborates on resilience planning with the stakeholders who will need emergency response and has provided the public with opportunity to give input from lower income vulnerable populations.	Per locality contact, no.
1		d. Locality has a means of communicating these plans to the public during a coastal storm hazard event.	Emergency communications center in EOP, pages annex 2-1 through 2-4. County website discusses local radio stations, an emergency blog and Facebook page. (link) Facebook. CodeRed (link).

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs: 2 / 4 Points

Coastal resilience issues go beyond political boundaries; therefore, localities benefit from regional collaboration. Regular communication between local, multi-jurisdictional, and state officials encourages sharing of information and ideas. Collaboration should include working with agencies that serve socially vulnerable communities. Localities are part of a Planning District Commission (PDC), which coordinates many activities.

Points		Scoring Metric	Notes
1		a. Locality staff and/or officials engage with regional and state agencies on resilience-oriented issues.	General coordination in MP Hazard Mitigation Plan (link); Comprehensive Plan notes coordination with MPPDC, page 9 (link).
0		b. Locality participation in local and regional resilience-oriented committees and initiatives to serve socially vulnerable populations.	Per locality contact, no additional programs other than PDC's.
1		c. Locality elected officials participate on relevant local and regional resilience-oriented commissions.	Per MPPDC contact, localities participate in Fight the Flood (link), as well as a septic repair revolving loan fund, and a living shoreline revolving loan fund.
0	$$$	d. Locality staff work to identify funding opportunities and priorities to address resilience issues at the regional and state level.	2020 MP Comprehensive Economic Development Strategy. MPCEDS page 78, 97. Participation in MP Fight the flood, link. Per locality contact, to their knowledge, staff does not direct inquiries to MPPDC resources. Locality has not engaged in proactive outreach or education programs to bring awareness to PDC funding resources.

1.4 ADAPTIVE MANAGEMENT: 0 / 4 Points

Adaptive management involves updating ordinances and plans for coastal resilience based on new findings and emerging strategies. Use of data, scientific analyses, and new information is important to inform local policies to prepare. Adaptive management means incorporating lessons learned from research that informs best methods for addressing the needs of socially vulnerable populations.

Points		Scoring Metric	Notes
0		a. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into the Floodplain Management Ordinance.	Chapter 18. Floodplain Management (last updated 2015) link. Per locality contact, Essex is in the process of updating.
0		b. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Zoning Ordinance.	Appendix B. Zoning. No information on most recent update (link). Per locality contact, not updated in the last 5 years.
0		c. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Site and Subdivision Ordinances.	Appendix A. Subdivision. Last updated 1998 (link).
0		d. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Comprehensive Plan.	Comprehensive plan (link) approved 2015. See e.g., pages 17 and 26.

1.5 The NFIP's COMMUNITY RATING SYSTEM: 0 / 4 Points

Communities wishing to go above and beyond the minimums of the National Flood Insurance Program can choose to participate in the Community Rating System (CRS). Participating communities implement higher standards of floodplain management, and, in return, residents are eligible for flood insurance premium reductions. Localities can do many things to improve their scores. For more information, see FEMA's CRS website or the Wetlands Watch website on the subject.

Points		Scoring Metric	Notes
0	CRS	a. Locality has achieved a CRS Score of 9 or higher.	Locality not listed on the 2020 CRS communities list. link.
0	CRS	b. Locality has achieved a CRS Score of 8.	See above.
0	CRS	c. Locality has achieved a CRS Score of 7.	See above.
0	CRS	d. Locality has achieved a CRS Score of 6 or lower.	See above.

TOTAL SCORE FOR SECTION 1: 8 / 20 POINTS

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT: 4 / 4 Points

Localities should conduct and use an assessment of their flood exposure and vulnerability in developing policies and programs. Localities should be knowledgeable of their flooding risks, raise awareness in the community about vulnerable areas, help target action to assist the most threatened areas and reduce possible damage, and save costs by being preemptive not reactive.

Points		Scoring Metric	Notes
1	CRS	a. An exposure and/or vulnerability assessment is completed, mapped and updated within the last 5-7 years, available at the locality level, and (as evidence of being used) referenced in locality policy making.	Middle Peninsula Hazard Mitigation Plan at 113.
1	CRS	b. Sources of flooding for both tidally-driven and precipitation-driven events are identified and updated within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 65-67 (Rivervine flooding); 75 (Ditch flooding); 80-82 (Coastal flooding)
1	CRS	c. Flooding for different return period storm events is identified and mapped.	Middle Peninsula Hazard Mitigation Plan at 115-24.
1	$$$ CRS	d. Additional vulnerabilities (see above), including cultural, historic and economic assets, are identified and updated within the last 5 years.	Middle Peninsula Hazard Mitigation Plan at 13-14 (community profile section) Comprehensive Plan at 13-16 includes community characteristics, but does not assess their vulnerability. The Comprehensive plan was approved in 2015. Per locality staff, the county has evaluated other vulnerabilities, for example fracking. There has also been an evaluation of two historic districts.

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS: 1/ 4 Points

Localities should conduct risk assessments of their socially vulnerable populations. These populations include those in areas of high poverty, elderly, caregivers, veterans, homeless, transient or nomadic communities, children and youth, physically or mentally disabled people, medically fragile people and non-English speakers. Because these populations may not have resources to change their level of vulnerability, it is vital for localities to identify these populations, ways to reduce their risk, and create plans for assistance during and after coastal hazard events. Localities need to conduct outreach to vulnerable populations.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified vulnerable populations that are subject to flooding and coastal storm hazards.	Essex County Emergency Operations Plan identifies special needs populations such as elderly and disabled populations as being particularly vulnerable in times of emergency.
0		b. Locality has engaged vulnerable populations and provided them with meaningful information (e.g., in their own language, relevant to their circumstances) relating to their vulnerability to coastal storm hazards.	No information provided or available.
0		c. Locality has worked with vulnerable populations to increase their emergency preparedness and evacuation plans so they know their risk and know what steps should be taken during and after an event.	No information provided or available.
0		d. Locality partners with organizations that provide assistance to vulnerable populations before, during and after coastal storm hazards, including food banks or pantries with refrigeration units and backup generators.	No information provided or available.

2.3 BUSINESS AND ECONOMIC RISK ASSESSMENT: 2 / 4 Points

Localities need to identify local business and economic vulnerabilities to coastal storm hazards. Businesses are differentially affected by these hazards and attention should be paid to making sure that businesses that serve vulnerable populations are considered. Including business and economic vulnerability in a risk assessment and emergency management is important for resilience and recovery after a storm event.

Points		Scoring Metric	Notes
1	$$$	a. Locality has included the business sector in its assessment and mapping of coastal hazard vulnerability	See 2020 MP Comprehensive Economic Development Strategy at page 97 (link). MP Hazard Mitigation plan, page 22 (link). Per MPPDC contact, appropriate business sector initiatives include Fight the Flood, and a Future Ecotourism initiative with MPPDC.
0	$$$	b. Locality has engaged economic development department and/or independent chamber of commerce in locality hazards mitigation and/or resilience planning.	Per locality contact, no.
0	$$$	c. Locality and/or business associations have programs for small businesses, particularly businesses that serve socially vulnerable populations, to encourage each business to be prepared for an emergency and plan for business continuity.	Per locality contact, no.
1	$$$	d. Locality emergency management communicates with business sector in the event of severe weather emergency or evacuation.	Per locality contact, emergency communication is handled the same as with the general public. See generally, Emergency communications center in EOP, pages annex 2-1 through 2-4. County website discusses CodeRed (link), local radio stations, an emergency blog and Facebook page. (link) Facebook.

2.4 HAZARD MITIGATION: 4 / 4 Points

The Hazard Mitigation Plan (HMP) is required by state code as a condition of emergency assistance. In the coastal region, it is important for the HMP to specifically address coastal storm hazards by identifying what locality resources and areas are at risk, to enable the locality to take actions to reduce future risks. Furthermore, having an HMP is essential to be eligible for certain grants and funding related to coastal storm hazards.

Points		Scoring Metric	Notes
1		a. The locality's HMP specifically addresses coastal resilience.	See generally Middle Peninsula Hazard Mitigation Plan
1		b. The locality is engaging in regional coordination for Hazard Mitigation through a regional plan.	See generally Middle Peninsula Hazard Mitigation Plan
1		c. The locality's HMP details how the locality collaborates with VDEM, DCR Floodplain Management or SHMO.	Middle Peninsula Hazard Mitigation Plan at 1-3
1		d. The locality's HMP is approved by FEMA, was developed with meaningful public engagement with socially vulnerable communities and is formally adopted by locality governing body.	FEMA Hazard Mitigation Plan Status

2.5 RESIDENT EMERGENCY PREPAREDNESS: 3 / 4 Points

Well-organized emergency preparedness plans save lives and property and help ensure that localities can act in sufficient time. They contribute to faster and more efficient post-hazard recovery. Preparedness for vulnerable populations includes ensuring that residents have the opportunity to learn swimming and water safety skills. Communities should consider participating in regional, national, or state-wide outreach events such as Hurricane Preparedness Week.

Points		Scoring Metric	Notes
1	CRS	a. Locality has a current resident emergency preparedness plan, updated within the last five years, which identifies resident emergency preparedness risks and needs, including knowledge of water safety.	Essex County Emergency Operations Plan (2016)
0	CRS	b. Locality conducts community outreach at least once a year to inform residents about community emergency preparedness.	No information found or provided.
1	CRS	c. Locality engages resident groups, including schools, hospitals, and other groups, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	Per locality staff the Fire Department works with hospitals and nursing homes in the area. The county works with the schools and the schools have their own drills that are required by the school board.
1	CRS	d. Locality has implemented early warning signals/systems/emergency warning tools for its residents, particularly those most vulnerable.	Uses CodeRED as an emergency alert system and communicates through the Essex Emergency Management Facebook Page and the Essex Emergency Management Blog.

TOTAL SCORE FOR SECTION 2: 14 / 20 POINTS

3) INFRASTRUCTURE RESILIENCE

3.1 STORMWATER INFRASTRUCTURE: 1 / 4 Points

Stormwater management is regulated by state law, which requires localities either create and operate a stormwater management program or request the state to operate its stormwater management program. Local ordinances must comply with the Virginia Stormwater Management Act and regulations, as well as the Virginia Erosion and Sediment Control Law. Additional stormwater management and flood risks are typically handled at the local level through environmental regulation, site plan approval, and subdivision approval. Localities that go beyond the minimum state requirements are better able to manage stormwater and increase their resilience to coastal storm hazards. Stormwater infrastructure may include use of bioswales, dry ponds, retention basins, rainwater management systems, low impact development, rainwater collection and management systems, green infrastructure, rooftop gardens, and green and open spaces.

Points		Scoring Metric	Notes
0	$$$	a. Locality offers at least one official incentive for private property activities that manage stormwater.	Per locality staff, there are not currently any incentives.
1		b. Locality funds stormwater management projects through stormwater utility fees, user fees, grants, or other creative funding mechanisms.	Per locality staff, the county does participate in grants, but sparingly. According to the Hazard Mitigation Plan at 273, the county does not have a storm water utility fee
0		c. Locality implements one or more stormwater BMPs on public property for educational demonstration, as shown by signage, tours, or other information.	Per locality staff, Essex does not currently have educational demonstration tools.
0		d. Locality stormwater policy goes above and beyond the minimum state requirements.	Storm water is generally state managed. See also Comprehensive Plan at 11 Erosion and Sediment Control Per locality staff, Essex is right at state requirements.

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE: 3 / 4 Points

An evaluation of critical transportation infrastructure allows a locality to understand its capacity and preparedness for coastal storm hazards. Although most localities do not manage their own roads, as this is handled at the state level, they nevertheless do have the ability to identify their transportation needs and priorities.

Points		Scoring Metric	Notes
1		a. Locality has identified critical transportation infrastructure and assessed its vulnerability within last 5 years.	Hazard Mitigation Plan at 112-13. Per locality staff, County staff knows which roads are critical. The Comprehensive Plan contains a transportation section. It was approved in 2015. It also does not address coastal hazard vulnerability.
0		b. Locality has developed a plan to protect critical transportation infrastructure within last 5 years.	Per locality staff, there are no current plans.
1		c. Locality has a plan available and has informed residents which critical transportation infrastructure to utilize in the case of coastal storm hazards.	Hazard Mitigation Plan at 302 (Main Evacuation Routes) County has an emergency message log
1		d. Locality has a contingency plan for critical transportation infrastructure. This plan has been created and/or updated in the past 5 years.	Emergency Operations Plan at 1-3 includes a plan to identify viable transportation routes during coastal storm hazards.

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES: 3 / 4 Points

Communication and coordination between a locality and its municipal water utility and wastewater utility enable a coordinated, cohesive, and synchronized response to a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality conducts an assessment of its drinking water supply and wastewater management, both public sources and private well owners, to identify vulnerabilities to coastal storm hazards.	Hazard Mitigation Plan at 125 (Tappahanock), 112 (county solid waste facilities are located outside of the 500 year flood plain). Per locality staff, the county is aware of its vulnerabilities Comprehensive Plan at 18-12, describes the aquifers that serve as water sources. It also discusses surface water quality, but neither sections mention coastal storm hazards.
0		b. Locality water supply plan addresses coastal flooding and hazard events to assure safe drinking water supply and water conservation.	The Middle Peninsula Regional Water Supply Plan was created in 2011 and has been updated in accordance with the 5 year update schedule. It does not specifically address coastal flooding and hazard events but does point out saltwater intrusion as a factor in their groundwater management in Section 11.
1		c. Locality conducts a resident education program on safe drinking water to assure post-event public health and safety.	According to the Hazard Mitigation Plan at 274, the county provides educational programs on water use, household preparedness, and environmental education.
1		d. Locality communications with municipal water and wastewater utility, to manage ongoing challenges to safe water, including during and after a storm, Alternatively or additionally, the locality has established methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	The Emergency Operations Plan at 11-12 assigns inspection of potable water to the County's Health Department during emergency situations. Per locality staff, the county does communicate with water and wastewater utilities. Moreover, Tappahannock is not a part of HRSD; it has its own system that it operates. But the county remains in contact with them in the face of coastal storm hazards.

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES: 3 / 4 Points

An evaluation of critical infrastructure for emergency services including shelters, emergency facilities, medical, electrical, and other essential services that allows a locality to understand its capacity and preparedness for coastal storm hazards. Critical infrastructure ensures that socially vulnerable populations, not just those who can afford it, will have access to quality drinking water, electricity, food, and shelter.

Points		Scoring Metric	Notes
1		a. Locality identifies critical infrastructure for emergency services and assessed its vulnerability within last 5 years.	Hazard Mitigation Plan at 112.
0		b. Locality has a plan to protect critical infrastructure from storms within last 5 years.	Per locality staff, there are no current plans.
1		c. Locality informs residents which critical infrastructure they should use during coastal storm hazards.	County has an emergency message log Essex also uses CodeRed
1		d. Locality has a contingency plan for continuing services. This plan has been developed or updated in last 5 years.	See generally Emergency Operations Plan at 3-1 – 3-4.

3.5 NATURAL AND NATURE-BASED FEATURES: 3 / 4 Points

Natural and nature-based features (NNBF) are features that define natural coastal landscapes and are either naturally occurring or have been engineered to mimic natural conditions. Examples include beaches and dunes; vegetated forest buffers, salt marshes, freshwater wetlands, and submerged aquatic vegetation; oyster reefs; and barrier islands. Green infrastructure (GI) is similar and complementary, and uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. Both NNBF and GI may be undertaken by a community in a variety of ways.

Points		Scoring Metric	Notes
1		a. Locality has identified natural and nature-based features that are protective and can assist with coastal resilience.	Comprehensive Plan at 26-38 (marshes, wetlands, forests, permeable soils, bulkheads)
1		b. Locality has developed plans and policies that use natural and nature-based features to enhance coastal resilience.	Comprehensive Plan at 46-48. Shoreline Inventory Report conducted by VIMS in 2018.
0		c. Locality is implementing projects that are in accordance with the plans and policies developed to utilize natural and nature-based features to increase coastal resilience.	Per locality staff, there are no current plans.
1	$$$	d. Locality offers incentives for the use of natural and nature-based features to increase coastal resilience.	Middle Peninsula Living Shoreline Incentive Program. Per locality staff, staff members are trained to direct citizens with relevant problems to the fund.

TOTAL SCORE FOR SECTION 3: 13 / 20 POINTS

4) PLANNING FOR RESILIENCE

4.1 BUDGET, FUNDING AND STATE & FEDERAL ASSISTANCE: 2 / 4 Points

Coastal hazard mitigation efforts, when properly funded, can reduce or prevent damage and decrease costs from storm damage. To ensure proper funding a locality can budget for mitigation efforts, assess the potential economic impact from a coastal storm hazard, and identify sources of funding for mitigation projects.

Points		Scoring Metric	Notes
0		a. Locality has incorporated into its Capital Improvement Plan (CIP) funding for coastal resilience. Projects could include upgrading critical infrastructure, water and wastewater systems, and/or food and health systems, with priority for needs of vulnerable populations.	No information provided or available.
0	$$$	b. Locality has conducted an economic impacts assessment of coastal storm hazards.	No information provided or available.
1		c. Locality has identified specific actions for coastal resilience (pre/post-flooding mitigation) in Hazard Mitigation Plan.	Middle Peninsula Hazard Mitigation Plan The County implemented rapid notification system for flood waters and evacuation routes.
1	$$$	d. Locality has identified funding for non-CIP coastal resilience projects, including priority needs of vulnerable populations impacted by coastal storm hazards.	Per locality staff, the County has identified funding provided by the state to raise houses impacted by coastal storms. Although the state provides funding, the county oversees putting the funding to use.

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN: 2 / 4 Points

A comprehensive plan is a locality's vision for future land use, development, adaptation, and resilience. Coastal resilience can be addressed in comprehensive plans by incorporating elements such as green infrastructure, open space preservation, infill development, the National Flood Insurance Program (NFIP), the Community Rating System (CRS), and stormwater management. The ideal comprehensive plan identifies equity and the need to identify and support socially vulnerable populations as a priority for resilience, as well as a priority preference for restoration, green infrastructure and connectivity.

Points		Scoring Metric	Notes
0		a. The comprehensive plan discusses how community engagement around coastal resilience informed the plan.	Per locality staff, the community did not help inform the plan about coastal resilience.
1		b. The comprehensive plan includes clear discussion of coastal resilience and coastal storm hazards and incorporates assessments to inform the development of policies to reduce vulnerability to coastal storm hazards.	Essex County Comprehensive Plan discusses shorelines and wetlands that act as flood control devices and how the importance of these natural resources were used to inform County policies.
1		c. The comprehensive plan includes goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	Essex County Comprehensive Plan discusses the goals to preserve and protect natural resources.
0		d. The comprehensive plan addresses impacts on critical infrastructure and essential services from coastal storm hazards, particularly for impacts affecting socially vulnerable populations.	No information provided or available.

4.3 LAND USE ORDINANCES: 2 / 4 Points

A locality's land use ordinances (such as zoning, subdivision, and floodplain) should enact the locality's vision and policies laid out in its comprehensive plan. Land use ordinances can be used to conserve and protect natural resources, ecosystems, agricultural lands, and areas vulnerable to flooding. Localities are required to enact Chesapeake Bay Preservation Act ordinances and going beyond these ordinances provides greater resilience.

Points		Scoring Metric	Notes
1	CRS	a. Locality land use regulations protect areas vulnerable to flooding by limiting development inside the floodplain or encouraging development outside the floodplain.	Existing Structures in Floodplain Ordinance limits development and building of structures in the floodplain.
1	CRS	b. Locality land use regulations protect areas vulnerable to flooding by setting higher standards in existing flood zones or by designating additional flood zones beyond those designated by FEMA.	Flood Overlay District Ordinance discusses the creation of additional flood districts.
0	CRS	c. Locality land use regulations protect areas vulnerable to flooding by setting buffers, including open space.	Per locality staff, buffer requirements are not specifically designated to combat flooding.
0	CRS	d. Locality land use regulations protect areas vulnerable to flooding by using setbacks to protect flood-prone areas.	Per locality staff, the county does not have setback requirements beyond those required by the Chesapeake Bay Preservation Act.

4.4 INCENTIVES FOR COASTAL RESILIENCE: 2 / 4 Points

Incentive programs encourage infill development and protect open spaces, while protecting flood-prone areas and critical ecosystems. Incentives should be developed with community input, with particular attention to consulting agencies and organizations working with or providing services to lower income and vulnerable populations as well as agencies and organizations working to build community resilience.

Points		Scoring Metric	Notes
1	$$$	a. Locality offers an incentive for achieving coastal resilience goals: discourage development in areas prone to flooding; protect critical ecosystems; encourage sustainable development; improve resilience in high-risk areas; and preserve natural assets.	Wetlands & Coastal Areas Ordinance regulates the use and development of wetlands and coastal areas to preserve and protect natural resources.
1	$$$	b. Locality offers a second incentive for achieving the goals listed above.	Local Erosion Program Ordinance implemented to protect natural resources in areas prone to erosion caused by storms.
0	$$$	c. Locality offers a three or more incentives for achieving the goals listed above.	No information provided or available.
0	$$$	d. Locality develops incentives in consultation with agencies and organizations working with socially vulnerable populations.	No information provided or available.

4.5 NATURAL RESOURCE PRESERVATION: 2 / 4 Points

Natural resources are important to the locality's economy, environment, and quality of life. Natural resources also can help protect against coastal storm hazards and minimize damage from coastal storm events. The preservation of these critical natural resources is paramount to providing resilience for a coastal locality during these events. These actions should go beyond the required Chesapeake Bay Preservation Act Ordinance.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified and mapped natural resources that are important for broad ecosystem health and which are at risk of being lost due to flooding and coastal storm hazards.	Essex County Comprehensive Plan discusses natural resources at risk of being lost due to flooding and coastal storms. Map 3-6 depicts theses resources.
1	CRS	b. Locality has developed plans and policies that preserve and restore natural resources to increase coastal resilience.	Essex County Comprehensive Plan
0		c. Locality has programs with residents, civic organizations, and nonprofit organizations to educate community about the natural resource preservation plan and engage them in helping to implement the plan.	No information provided or available.
0		d. Locality is funding actions that implement the natural resource preservation plan.	No information provided or available.

TOTAL SCORE FOR SECTION 4: 10 / 20 POINTS

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING: 0 / 4 Points

For community resilience, it is important to use meaningful engagement strategies where residents are able to provide feedback and suggestions through meetings, workshops, and surveys. To reach people of color and the elderly, media and social media that serves these populations is effective. Public engagement enables residents and other stakeholders to provide input to the locality. Better informed residents are better able to ensure their locality remains resilient to coastal storm hazards.

Points		Scoring Metric	Notes
0		a. Locality has a written policy regarding the role of residents and businesses, schools and educators, institutional, nonprofit, faith-based communities veterans, and other stakeholders in coastal resilience.	No information found or provided.
0	CRS	b. Locality has staff dedicated to public engagement on coastal resilience, including a standing committee that addresses coastal resilience as part of its work.	No information found or provided.
0	CRS	c. Locality holds at least one public meeting per year, including one in vulnerable resident areas to address coastal resilience issues and posts the results of the public meetings. For 75-150,000, at least two such public meetings per year; for 150,000+ at least three per year.	No information found or provided.
0	CRS	d. Locality informs and engages vulnerable population about coastal resilience by using website, social media, media serving people of color and minorities, and faith-based organizations to enable them to provide suggestions about issues and strategies.	Locality hosted the Coastal Flood Risk Open House in 2015 but there haven't been any similar events since.

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC: 1 / 4 Points

The public needs free and open access to information related to coastal resilience and planning. Information sharing allows residents to understand their risks and the importance of resilience. Information should be shared easily and presented in a manner which is clear and easy to understand, and easy to access in ways that reach different populations in the community.

Points		Scoring Metric	Notes
0	CRS	a. Locality provides to the public localized user-friendly information on coastal resilience, in digital and non-digital formats and in multiple languages where appropriate based on demographics.	Per locality staff multiple languages are not provided but they are working to add information in Spanish as it would be helpful to some residents. See below for some information provided.
1	CRS	b. Locality provides to the public localized user-friendly information on coastal resilience, on a website (e.g., interactive maps).	Provides flood plain maps on the county website (link).
0	CRS	c. Locality provides localized user-friendly information on coastal resilience in public spaces (e.g., public offices or library).	No information found or provided.
0	$$$	d. Locality provides the public with localized, user-friendly information about economic costs and risks associated with coastal storm hazards.	No information found or provided.

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE: 0 / 4 Points

Developing resident leaders and strong volunteer networks are important aspects of building a locality's health and wellness resilience. Leaders can be responsible for informing residents, expressing resident concerns, and assisting with local preparedness. Leaders can be called on during emergencies to assist residents in need and to assist with post-hazard recovery. Communities can build this capacity by offering volunteer opportunities to cultivate experienced, local responders.

Points		Scoring Metric	Notes
0		a. Locality supports and invests in community-led initiatives on coastal resilience.	No information found or provided.
0		b. Locality offers training opportunities and education opportunities for resident leaders or volunteers to educate residents on what they can do to increase their resilience on individual properties or in neighborhoods.	No information found or provided.
0		c. Locality supports resident leaders or volunteers in community education and outreach efforts about coastal resilience by providing them with materials, speakers for gatherings, or support for resident action projects.	No information found or provided.
0		d. Locality highlights the work of resident leaders or volunteers in supporting and advancing coastal resilience, on its website, through social media, Facebook, awards, or other means.	No information found or provided.

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE: 4 / 4 Points

If a community's food, health, and medicine systems are not resilient before a storm, then the community may face a substantially longer recovery. Food, health, and medicine systems must be sustained before, during and after storm events, and are dependent on critical systems, including transportation and utilities. Lower-income and minority populations often already struggle to access food, health, and medicine, and are among the vulnerable populations during a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality has emergency plans for provision of food, health, and medicines to residents, through its comprehensive, hazard mitigation, or other plans.	Emergency Support Function #6 – Mass Care, Housing, Human Resources and Emergency Support Function #8 – Public Health & Medical Services under the **Essex County Emergency Operations Plan**
1		b. Locality has plans for providing food to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access food during emergencies and coastal storm events.	Emergency Support Function #6 – Mass Care, Housing, Human Resources under the **Essex County Emergency Operations Plan**
1		c. Locality has plans for providing healthcare to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access healthcare during emergencies and coastal storm hazards.	Emergency Support Function #8 – Public Health & Medical Services under the **Essex County Emergency Operations Plan**
1		d. Locality has plans for providing medicine to vulnerable populations, areas for improvement, has developed partnerships to address these needs, and has provided information to the public on how to access medicine during emergencies and coastal storm hazards.	Emergency Support Function #8 – Public Health & Medical Services under the **Essex County Emergency Operations Plan**

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE: 0 / 4 Points

To ensure that socially vulnerable and underserved populations do not experience disproportionate impacts from flooding and coastal hazards, a locality needs to be able to predict how its residents may fare during a coastal storm hazard event, and then help those who are most vulnerable. One key measure that can be useful to localities in this effort is the metric for "deaths of despair"— or the prevalence of suicide, cirrhosis of the liver, and overdoses – which can serve as a proxy for the locality's physical and mental health, as persons who are suffering from depression and addictions are less likely to be able to respond effectively during flooding events. A locality with good physical and mental health will be better able to respond effectively to new or changing conditions as well as to recover from stressful events.

Points		Scoring Metric	Notes
0		a. Locality maintains data on community physical and mental wellbeing and challenges through specific metrics, such as the metrics for "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	No information found or provided.
0		b. Locality has met at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	Per locality staff this is done through the Community Service Board (MPNNCSB) and Social Services.
0		c. Locality has identified, or maps its vulnerable neighborhoods, and has done this in partnership with NGOs, faith- based organizations, and its health and community services board.	No information found or provided.
0		d. Locality has a plan with these NGOs, faith-based organizations, and health and community services board that helps its physically and mentally challenged vulnerable populations prepare for coastal flooding events, and that provides assistance to them during and after these events.	No information found or provided.

TOTAL SCORE FOR SECTION 5: 5 / 20 POINTS

Opportunities

Example of an Opportunity Action Item Checklist showing possible actions to improve scores in each scorecard category. Opportunity items for your locality will be determined by your implementation team and The RAFT core team.

Locality Action Category	Score	Opportunity Actions for Score Improvement	Potential Time Commitment Short-Term: < 1year; Mid-Term: 1-3 years; Long-Term: > 3 years
1.1 Locality Leadership and Planning for Resilience	≤ 2	Identify and task resiliency staff and leaders.	ST – MT
		Hold resiliency training and education events for elected officials.	MT
		Hold resiliency training and education events for locality staff or community member in charge of handling efforts.	MT
		Locality staff and/or elected officials meet at least once per quarter to coordinate resiliency planning.	LT
2.5 Resident Emergency Preparedness	≤ 2	Develop a resident emergency preparedness plan that identifies risks and needs, including knowledge of water safety.	ST
		Conduct community outreach at least once a year to inform residents about community emergency preparedness.	MT – LT
		Engage resident groups, including schools and hospitals, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	ST
		Implement early warning signals/systems/emergency warning tools for residents (especially vulnerable populations).	ST
4.2 Coastal Resiliency in Comprehensive Plan	≤ 2	Incorporate discussion into Comprehensive Plan about how community engagement regarding coastal resilience informed the plan.	ST
		Incorporate discussion into Comprehensive Plan about coastal resilience and coastal storm hazards and assessments designed to reduce vulnerability through the development of resiliency policies.	ST
		Incorporate discussion into Comprehensive Plan about the goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	ST
		Incorporate discussion into Comprehensive Plan about impacts on critical infrastructure and essential services from coastal storm hazards, especially for vulnerable populations.	ST

Next Steps

Resilience Action Workshop

1) Community leaders work together to create a one-year **Resilience Action Checklist.**

2) The RAFT Core team helps to **identify achievable action items** for improving resilience.

3) Localities break into focused discussion groups to **identify 3 to 5 top opportunities** for the next year to increase resilience.

4) Large group discussion on **regional sharing**, followed by breakout into locality discussion groups to:
    a. **Identify a Locality Implementation Team;**
    b. **Create a timeline for actions;**
    c. **Coordinate logistics;**
    d. **Determine next steps for implementation team.**

Implementation

- **Identify a Locality Implementation Team** made up of local officials and residents that will work with the Core Team to accomplish checklist actions and projects.

- **Work with one of the Core Team members** who will set up periodic check-in meetings or calls to track progress and provide support.

- Assistance from RAFT partners could take the form of:
    - **Communications product development;**
    - **Hazard and critical infrastructure mapping;**
    - **Policy and legal analysis;**
    - **Model ordinance and comprehensive plan language;**
    - **Green infrastructure projects;**
    - **Workshop or meeting facilitation;**
    - **Community engagement recommendations;**
    - **Specific research or data collection projects.**

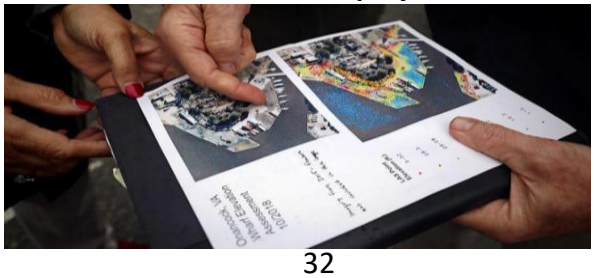


Photo by Aileen Devlin, Virginia Sea Grant

Data Sources Used to Complete Scoring

Data Sources	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Business Association Website								X																	
Calls to the locality	X	X	X	X		X	X	X	X	X		X	X	X					X			X			X
Calls to the PDC	X	X	X			X	X		X				X												
Capital Improvement Plan																X		X							X
Community Services Board																									X
County Health Rankings and Roadmaps																									X
Dam Management Plan											X														
DCR Floodplain Management Program					X	X															X				
Department of Conservation and Recreation			X		X																	X			
Department of Emergency Management																						X			
Department of Environmental Quality													X												
Department of Health							X						X												
Department of Transportation Road and Bridge Standards												X													
Emergency Management Plans				X																					
Emergency Operations Plan	X	X					X				X										X			X	X

FEMA's CRS website					X																				
Fire Department website		X																							
Flood exposure and vulnerability assessment publications (VIMS, FEMA, and DCR)						X															X				
Hazard Mitigation Plan	X	X				X		X	X	X	X	X	X	X		X			X			X		X	X
Local Assessments of Ecological Assets															X										
Local Boards to advise elected officials																					X				
Local Budget																X									
Data Sources	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**5.1**	**5.2**	**5.3**	**5.4**	**5.5**
Local Chamber Website								X								X									
Local Economic Impact Assessments																X									
Local Ordinances and Comprehensive Plan				X			X						X	X	X		X	X	X	X	X			X	X
Local Public Works Design & Construction Standards												X													
Local Transportation Plan												X													
Local Utility Website													X												
Local Water Supply Plan													X												
Locality Resilience Plan or Strategy	X			X																					

Locality Social Media																				X	X		X		
Locality Website	X	X	X				X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
School Curriculum																					X				
Social Services							X																		
Planning District Commission (PDC) website	X	X	X			X	X		X																
Public Libraries																						X			
Wetlands Watch					X																				
Zoning Codes																			X						

ESSEX COUNTY

DRAFT Resilience Action Checklist

The RAFT | Resilience Adaptation Feasibility Tool

TOP PRIORITIES TO ADDRESS IN THE NEXT YEAR WITH SUPPORT FROM THE RAFT

- ❑ **ENHANCE COMMUNITY-ENGAGED DISASTER PREPAREDNESS**
  This effort will include increasing community emergency preparedness and awareness of available services and programs, especially for vulnerable populations, through information sessions and education activities held in partnership with community organizations. Activities may include training programs for community members and volunteers prior to emergencies and events that leverage existing groups' capacities and networks to reach a broader audience. This effort will also include identifying projects that can be supported by the Middle Peninsula Planning District Commission's "Fight the Flood" program and collaborating with nonprofits working with historically excluded and underserved populations to identify how this program may serve non-homeowners in the community.

- ❑ **INCREASE AFFORDABLE HOUSING AND SHELTERING OPTIONS**
  Create a strategy to establish an emergency shelter and homeless shelter in Essex County, while considering longer term solutions to addressing the lack of affordable housing options to both own and to rent in the area. Included in this task will be an effort to increase home repair services.

- ❑ **EXPAND FOOD ACCESS AND SECURITY THROUGH COMMUNITY GARDENS ON PUBLIC & PRIVATE LAND**
  Work in coordination with food banks, farmers markets, community gardens and churches to increase food access across Essex County and develop a neighborhood-scale food system. This will be pursued by planning a series of community gardens to be established on public and private lands (i.e., churches, community organizations).

- ❑ **PROTECT THE AVAILABILITY OF CLEAN WATER DURING STORM EVENTS AND IN THE LONG-TERM**
  This effort will consider the potential impacts of both acute water quality issues occurring during and after storm events, including flooded wells and septic systems, as well as long-term water quality challenges due to sea level rise and saltwater intrusion. Opportunities for investigating and addressing chronic surface water contaminants, including pesticides and coliform/septic contaminants will be pursued.

- ❑ **IMPROVE ACCESS TO VULNERABLE RESIDENTS BEFORE, DURING, AND AFTER STORMS THROUGH INVESTMENTS IN EMERGENCY EQUIPMENT AND INFRASTRUCTURE**
  Improve access to vulnerable residents' homes before, during, and after a storm hits as a part of long-term planning. This effort may include increasing the county's access to boats, investing in other water rescue resources, and developing other emergency infrastructure necessary for community storm response. Opportunities to collaborate directly with community groups will also be explored.

University of Virginia Institute for Engagement & Negotiation — Shaping Our World Together
William & Mary Law School Virginia Coastal Policy Center
Old Dominion University
Institute for Coastal Adaptation & Resilience

OTHER ATTENDEE-SUGGESTED ACTIONS FOR FUTURE RESILIENCE EFFORTS

- Conduct on-site field investigation and analysis of shoreline erosion concerns for property owners. Provide a written advisory report with recommended solutions and connections to available financial incentive programs.
- Stormwater incentives for private property owners.
- Expand youth and childcare services.
- Improve transportation.
- Work with SWCD to reinstitute the VCAP Program and install a pilot SE-2 shoreline stabilization project.
- Identify and install high priority riparian buffer projects on public and private lands.

This checklist was developed by community participants in the online Resilience Action Workshop, conducted and facilitated by The RAFT three-university Collaborative Team on January 28th, 2022. This document is intended to be static and record the outcomes of that workshop. However, the checklist items and their details may evolve over the course of the year-long implementation of The RAFT in response to the changing circumstances and needs of the community.

**RAFT team recommends the creation of a Resilience Committee as a way to create and sustain momentum to build resilience in the long term. We recognize, based on our experience with coastal communities in Virginia, and consistent with best practices in resilience planning and implementation, that communities benefit from more comprehensive and coordinated approach to building resilience. Establishing a Resilience Committee is key to establishing a foundation for sustained efforts in building resilience. The RAFT team has developed a worksheet to assist communities in establishing a Resilience Committee structure and framework, and if you decide this would benefit your community we can facilitate your discussion.

Acknowledgment of Funders

This RAFT product was created with funding from:

Jessie Ball duPont Fund

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

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

* This RAFT product, Task # 92.03 was funded, in part, by the Virginia Coastal Zone Management Program led by the Virginia Department of Environmental Quality through Grant FY19 # NA19NOS4190163 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

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.

University of Virginia
Institute for Engagement & Negotiation
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William & Mary Law School
Virginia Coastal Policy Center

Old Dominion University

Institute for Coastal Adaptation & Resilience

THE RAFT

Resilience Adaptation Feasibility Tool

King & Queen County

Scorecard Report

July 2021

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

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* The RAFT implementation on the Eastern Shore, Task #92.03 was funded, in part, by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA17NOS4190152 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its sub agencies.

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Background

What is The RAFT?

- "Full-service tool" and collaborative, community-driven process designed to assist coastal localities in increasing their resilience.
- Conceived and developed by an academic interdisciplinary collaborative called the "Core Team"
    - Institute for Engagement & Negotiation (IEN) at the University of Virginia
    - Virginia Coastal Policy Center (VCPC) at William & Mary Law School
    - Old Dominion University (ODU)/Virginia Sea Grant Climate Adaptation and Resilience Program.

The RAFT has three key components:

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

How does The RAFT help a locality?

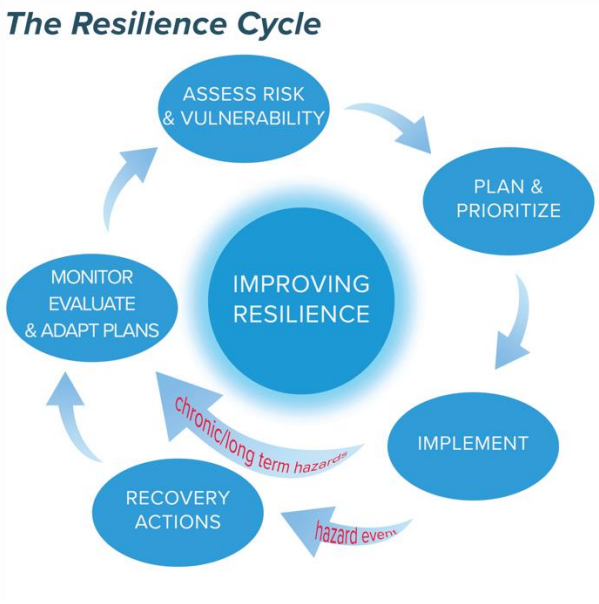
1. Open a community conversation about community resilience, including gaps, and needs.
2. Support the community in identifying priority actions for the largest impact in increasing resilience.
3. Improve communication and coordination within the community and with regional and state agencies.
4. Help the community become better positioned to find and apply for relevant funding opportunities.
5. Earn a better Community Rating System (CRS) score, which saves residents money on their flood insurance premiums.

What is resilience?

The RAFT focuses on coastal community resilience, improving the ability of a community to bounce back from hazardous events such as hurricanes and extreme weather and deal with chronic issues such as flooding.

The RAFT takes a comprehensive approach by including environmental, economic, and social resilience. All three are vital for a community to thrive.

To build resilience, localities need capacities in areas of emergency management, infrastructure, planning, policy, and community well-being.



Adapted from: NOAA Coastal Community Resilience Indicators and Rating Systems, 2015.

Locality Total Score

Category	Score Received	Possible Score
1) **POLICY, LEADERSHIP, AND COLLABORATION** *Measures policy and legislation in place for coastal resilience and includes coordination and collaboration between various levels of government, and how accessible and open government data is to the public.*	11	20
2) **RISK ASSESSMENT AND EMERGENCY MANAGEMENT** *Examines how well a locality has conducted risk assessments to prepare for coastal storm hazards, identified vulnerable populations and their needs during or after a coastal storm hazard, and developed plans for disaster preparedness, including a Hazard Mitigation Plan.*	18	20
3) **INFRASTRUCTURE RESILIENCE** *Assesses how well the locality has identified methods and plans for storm water and protecting critical infrastructure including using natural and nature-based features (NNBF).*	6	20
4) **PLANNING FOR RESILIENCE** *Assesses the comprehensive plan and zoning code for resilience, how a locality is using incentives to promote resilience in building and development, how policies protect ecosystems, how they use green infrastructure to improve resilience, and how much resilience has been incorporated into planning.*	9	20
5) **COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING** *Assesses how the community engages with residents in planning for coastal storm hazard including social equity considerations and examines the locality's attention to issues of health and wellness during and after coastal events.*	7	20
Total Score:	**51%**	

Interpreting the Score

Low Resilience: Less than 50%- There are plenty of opportunities for improvement. The locality should decide whether it will be more beneficial to achieve the least difficult improvements first, or to tackle more challenging problems. The key is to decide which of these approaches makes the most sense, as the locality develops their Resilience Action Checklist.

Moderate Resilience: 50% - 74% – The locality is actively involved in coastal resilience planning and has achieved some successes. There are still opportunities for strengthening resilience. The Resilience Action Checklist should focus on weak categories and anticipate moderate to difficult improvements.

High Resilience: 75% or More- Locality is well prepared! There may still be room for resilience and the Resilience Action Checklist may focus on ways to improve resilience and further engage residents. Examples of locality policies, plans, and activities may assist other localities in the region and beyond.

If you see **CRS** next to an item, action to improve that metric can result in CRS credit.

If you see **$$$** next to an item, action to improve that metric supports economic resilience.

If you see next to an item, action to improve that metric supports environmental resilience.

If you see next to an item, action to improve that metric supports engagement with vulnerable populations.

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE: 3 / 4 Points

Collaboration among local government decision makers, officials, departments, academia, and NGOs is important in planning for coastal resilience. Effective collaboration requires identifying local leaders and organizations, establishing the roles of such leaders and organizations, and providing leadership training and educational resources.

Points		Scoring Metric	Notes
1		a. Leadership roles are identified for staff and/or elected officials important for planning for resilience. If staff is limited or nonexistent, the locality has tasked someone with handling resilience efforts for the community.	Hazard Mitigation Plan (link) at 368-69 identifies staff for mitigation activities: County administrator and Emergency Services Coordinator. Comprehensive plan notes Wetlands Board and its responsibilities on page 56, 62-63.
0		b. Training and education events are held for elected officials specifically on resilience issues.	Per MPPDC contact, PDC conducts training and education on resilience issues. No other information available or provided.
1		c. Training and education events are held for locality staff, or if staff is limited or nonexistent, training of whomever has been tasked with handling resilience efforts for the community.	Per MPPDC contact, PDC conducts training and education on resilience issues. Per locality contact, FEMA region 3 webinars.
1		d. Locality staff and/or elected officials, or whomever has been tasked with handling resilience efforts for the community, are meeting at least once per quarter to coordinate planning specifically on resilience issues.	Per MPPDC contact, the PDC meets regularly with leadership in the locality through a 25-member commission, as well as committees of local government administrators and local government planners. Resilience efforts are discussed throughout.

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY: 3 / 4 Points

Collaboration among local officials and relevant stakeholders is equally important in responding to a coastal hazard. An organized, coordinated response to a coastal hazard requires identifying stakeholders, establishing roles, creating plans, and publicizing information.

Points		Scoring Metric	Notes
1		a. Locality has identified stakeholders who will require emergency response including socially vulnerable populations.	General ID in Comprehensive plan at 99. County DES site has planning advice for elderly and special needs individuals (link). See generally MP Hazard mitigation plan (link) at page 2, 15.
1		b. Locality has established internal emergency response roles (e.g., standing committees, staff titles), and these staff and partners participate in at least one training each year.	Internal emergency response roles are set forth on county site noting staff (link). Per MPPDC contact, PDC assists with some emergency trainings. Per locality contact, EOP outlines roles and trainings are conducted at least once a year.
0		c. Locality collaborates on resilience planning with the stakeholders who will need emergency response and has provided the public with opportunity to give input from lower income vulnerable populations.	On DES site "Emergency management staff members are available to give presentations on emergency preparedness to your homeowner's association, civic group, business or faith community." (link) Per locality contact, no.
1		d. Locality has a means of communicating these plans to the public during a coastal storm hazard event.	Ready Virginia links, opt in (link). Facebook

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs: 2 / 4 Points

Coastal resilience issues go beyond political boundaries; therefore, localities benefit from regional collaboration. Regular communication between local, multi-jurisdictional, and state officials encourages sharing of information and ideas. Collaboration should include working with agencies that serve socially vulnerable communities. Localities are part of a Planning District Commission (PDC), which coordinates many activities.

Points		Scoring Metric	Notes
1		a. Locality staff and/or officials engage with regional and state agencies on resilience-oriented issues.	General coordination in Hazard Mitigation Plan (link).
0		b. Locality participation in local and regional resilience-oriented committees and initiatives to serve socially vulnerable populations.	Per locality contact, the King & Queen Resource Council is an internal committee for supporting the socially vulnerable, but does not specifically address resilience (link).
1		c. Locality elected officials participate on relevant local and regional resilience-oriented commissions.	Per MPPDC contact, localities participate in Fight the Flood (link), as well as a septic repair revolving loan fund, and a living shoreline revolving loan fund.
0	$$$	d. Locality staff work to identify funding opportunities and priorities to address resilience issues at the regional and state level.	2020 MP Comprehensive Economic Development Strategy. MPCEDS page 78, 97. Participation in Fight the Flood link. Per locality contact, to their knowledge staff has not directed inquiries to MPPDC resources and locality has not engaged in proactive outreach or education programs to bring awareness to PDC funding resources.

1.4 ADAPTIVE MANAGEMENT: 3 / 4 Points

Adaptive management involves updating ordinances and plans for coastal resilience based on new findings and emerging strategies. Use of data, scientific analyses, and new information is important to inform local policies to prepare. Adaptive management means incorporating lessons learned from research that informs best methods for addressing the needs of socially vulnerable populations.

Points		Scoring Metric	Notes
1		a. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into the Floodplain Management Ordinance.	Chapter 3, Art. 10. Updated 2018, link.
1		b. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Zoning Ordinance.	Chapter 3. Zoning. Includes the floodplain overlay district. Updated in 2018 and 2020 link.
0		c. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Site and Subdivision Ordinances.	Chapter 4. Land Subdivision and Development. Last updated 2009, 2013. link.
1		d. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Comprehensive Plan.	See Comprehensive plan , e. g. page 53, Coastal Resource Management Guidance. Last updated, 2019.

1.5 The NFIP's COMMUNITY RATING SYSTEM: 0 / 4 Points

Communities wishing to go above and beyond the minimums of the National Flood Insurance Program can choose to participate in the Community Rating System (CRS). Participating communities implement higher standards of floodplain management, and, in return, residents are eligible for flood insurance premium reductions. Localities can do many things to improve their scores. For more information, see FEMA's CRS website or the Wetlands Watch website on the subject.

Points		Scoring Metric	Notes
0	CRS	a. Locality has achieved a CRS Score of 9 or higher.	Not listed on the 2020 CRS communities list. link.
0	CRS	b. Locality has achieved a CRS Score of 8.	See above.
0	CRS	c. Locality has achieved a CRS Score of 7.	See above.
0	CRS	d. Locality has achieved a CRS Score of 6 or lower.	See above.

TOTAL SCORE FOR SECTION 1: 11 / 20 POINTS

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT: 4 / 4 Points

Localities should conduct and use an assessment of their flood exposure and vulnerability in developing policies and programs. Localities should be knowledgeable of their flooding risks, raise awareness in the community about vulnerable areas, help target action to assist the most threatened areas and reduce possible damage, and save costs by being preemptive not reactive.

Points		Scoring Metric	Notes
1	CRS	a. An exposure and/or vulnerability assessment is completed, mapped and updated within the last 5-7 years, available at the locality level, and (as evidence of being used) referenced in locality policy making.	Middle Peninsula Hazard Mitigation Plan at 104.
1	CRS	b. Sources of flooding for both tidally-driven and precipitation-driven events are identified and updated within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 65-67 (Rivervine flooding); 75 (Ditch flooding); 80-82 (Coastal flooding)
1	CRS	c. Flooding for different return period storm events is identified and mapped.	Middle Peninsula Hazard Mitigation Plan at 107-110.
0	$$$ CRS	d. Additional vulnerabilities (see above), including cultural, historic and economic assets, are identified and updated within the last 5 years.	Middle Peninsula Hazard Mitigation Plan at 15 (Community Profile Section) The Comprehensive Plan identifies important historic structures, but not in the context of vulnerabilities. Appendix A also includes a detailed community profile, but does not evaluate vulnerabilities. Per locality staff, no additional vulnerabilities have been identified or updated within last 5 years.

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS: 3 / 4 Points

Localities should conduct risk assessments of their socially vulnerable populations. These populations include those in areas of high poverty, elderly, caregivers, veterans, homeless, transient or nomadic communities, children and youth, physically or mentally disabled people, medically fragile people and non-English speakers. Because these populations may not have resources to change their level of vulnerability, it is vital for localities to identify these populations, ways to reduce their risk, and create plans for assistance during and after coastal hazard events. Localities need to conduct outreach to vulnerable populations.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified vulnerable populations that are subject to flooding and coastal storm hazards.	Emergency Planning for the Elderly & Special Needs Individuals
1		b. Locality has engaged vulnerable populations and provided them with meaningful information (e.g., in their own language, relevant to their circumstances) relating to their vulnerability to coastal storm hazards.	Emergency Planning for the Elderly & Special Needs Individuals discusses considerations relevant to elderly and special needs populations' circumstances.
1		c. Locality has worked with vulnerable populations to increase their emergency preparedness and evacuation plans so they know their risk and know what steps should be taken during and after an event.	Emergency Planning for the Elderly & Special Needs Individuals discusses the steps elderly and special needs populations should take to prepare for emergencies.
0		d. Locality partners with organizations that provide assistance to vulnerable populations before, during and after coastal storm hazards, including food banks or pantries with refrigeration units and backup generators.	No information provided or available.

2.3 BUSINESS AND ECONOMIC RISK ASSESSMENT: 3 / 4 Points

Localities need to identify local business and economic vulnerabilities to coastal storm hazards. Businesses are differentially affected by these hazards and attention should be paid to making sure that businesses that serve vulnerable populations are considered. Including business and economic vulnerability in a risk assessment and emergency management is important for resilience and recovery after a storm event.

Points		Scoring Metric	Notes
1	$$$	a. Locality has included the business sector in its assessment and mapping of coastal hazard vulnerability	See 2020 MP Comprehensive Economic Development Strategy at page 97 (link). MPHMP page 22 (link). See Comprehensive plan at 30-31 for discussion of "smart growth" plan. Per MPPDC contact, appropriate business sector initiatives include Fight the Flood, and a Future Ecotourism initiative with PDC.
1	$$$	b. Locality has engaged economic development department and/or independent chamber of commerce in locality hazards mitigation and/or resilience planning.	See Comprehensive plan at 30-31 for discussion of "smart growth" plan.
0	$$$	c. Locality and/or business associations have programs for small businesses, particularly businesses that serve socially vulnerable populations, to encourage each business to be prepared for an emergency and plan for business continuity.	General info on county website for Emergency Services (link) – "Emergency Management also provides emergency planning in such areas as special needs, continuity of operations and emergency operations. Emergency management staff members are available to give presentations on emergency preparedness to your homeowner's association, civic group, business or faith community." However, no information is available or provided for small businesses that serve socially vulnerable populations. Confirmed by locality staff.
1	$$$	d. Locality emergency management communicates with business sector in the event of severe weather emergency or evacuation.	Per locality contact, emergency communication is handled the same as with the general public. Ready Virginia links, opt in (link). Facebook.

2.4 HAZARD MITIGATION: 4 / 4 Points

The Hazard Mitigation Plan (HMP) is required by state code as a condition of emergency assistance. In the coastal region, it is important for the HMP to specifically address coastal storm hazards by identifying what locality resources and areas are at risk, to enable the locality to take actions to reduce future risks. Furthermore, having an HMP is essential to be eligible for certain grants and funding related to coastal storm hazards.

Points		Scoring Metric	Notes
1		a. The locality's HMP specifically addresses coastal resilience.	See generally Middle Peninsula Hazard Mitigation Plan
1		b. The locality is engaging in regional coordination for Hazard Mitigation through a regional plan.	See generally Middle Peninsula Hazard Mitigation Plan
1		c. The locality's HMP details how the locality collaborates with VDEM, DCR Floodplain Management or SHMO.	Middle Peninsula Hazard Mitigation Plan at 1-3
1		d. The locality's HMP is approved by FEMA, was developed with meaningful public engagement with socially vulnerable communities and is formally adopted by locality governing body.	FEMA Hazard Mitigation Plan Status

2.5 RESIDENT EMERGENCY PREPAREDNESS: 4/ 4 Points

Well-organized emergency preparedness plans save lives and property and help ensure that localities can act in sufficient time. They contribute to faster and more efficient post-hazard recovery. Preparedness for vulnerable populations includes ensuring that residents have the opportunity to learn swimming and water safety skills. Communities should consider participating in regional, national, or state-wide outreach events such as Hurricane Preparedness Week.

Points		Scoring Metric	Notes
1	CRS	a. Locality has a current resident emergency preparedness plan, updated within the last five years, which identifies resident emergency preparedness risks and needs, including knowledge of water safety.	The Emergency Operations Plan was updated in 2016 and provided by locality staff as it was not available online.
1	CRS	b. Locality conducts community outreach at least once a year to inform residents about community emergency preparedness.	The Comprehensive Plan (page 99) states that "Emergency management staff members are available to give presentations on emergency preparedness to your homeowner's association, civic group, business or faith community." Per locality staff outreach is also conducted on the King and Queen Emergency Services Facebook.
1	CRS	c. Locality engages resident groups, including schools, hospitals, and other groups, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	Per locality staff engagement in testing preparedness occurs through the Fire Department, EMS. Schools, and the Sheriff Department.
1	CRS	d. Locality has implemented early warning signals/systems/emergency warning tools for its residents, particularly those most vulnerable.	Notifications through ReadyVa and the King and Queen Emergency Services Facebook

TOTAL SCORE FOR SECTION 2: 18 / 20 POINTS

3) INFRASTRUCTURE RESILIENCE

3.1 STORMWATER INFRASTRUCTURE: 0 / 4 Points

Stormwater management is regulated by state law, which requires localities either create and operate a stormwater management program or request the state to operate its stormwater management program. Local ordinances must comply with the Virginia Stormwater Management Act and regulations, as well as the Virginia Erosion and Sediment Control Law. Additional stormwater management and flood risks are typically handled at the local level through environmental regulation, site plan approval, and subdivision approval. Localities that go beyond the minimum state requirements are better able to manage stormwater and increase their resilience to coastal storm hazards. Stormwater infrastructure may include use of bioswales, dry ponds, retention basins, rainwater management systems, low impact development, rainwater collection and management systems, green infrastructure, rooftop gardens, and green and open spaces.

Points		Scoring Metric	Notes
0	$$$	a. Locality offers at least one official incentive for private property activities that manage stormwater.	Per locality staff, there are no incentives.
0		b. Locality funds stormwater management projects through stormwater utility fees, user fees, grants, or other creative funding mechanisms.	Per locality staff, the county does not engage in funding mechanisms
0		c. Locality implements one or more stormwater BMPs on public property for educational demonstration, as shown by signage, tours, or other information.	Per locality staff, no.
0		d. Locality stormwater policy goes above and beyond the minimum state requirements.	Storm water is state managed. Erosion and Sediment Control

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE: 1 / 4 Points

An evaluation of critical transportation infrastructure allows a locality to understand its capacity and preparedness for coastal storm hazards. Although most localities do not manage their own roads, as this is handled at the state level, they nevertheless do have the ability to identify their transportation needs and priorities.

Points		Scoring Metric	Notes
0		a. Locality has identified critical transportation infrastructure and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 102-03 (VDOT flood prone roads). Comprehensive Plan at 18-22 (identifying "corridors" and "gateways," but not identifying vulnerabilities) Per locality staff, no.
0		b. Locality has developed a plan to protect critical transportation infrastructure within last 5 years.	Appendix B of the Comprehensive Plan contains the MPPDC Long Range Transportation Plan. However, this plan does not specifically discuss improving critical infrastructure because of coastal hazards.
1		c. Locality has a plan available and has informed residents which critical transportation infrastructure to utilize in the case of coastal storm hazards.	Per locality staff, there is no emergency alter system. The county uses its Facebook.
0		d. Locality has a contingency plan for critical transportation infrastructure. This plan has been created and/or updated in the past 5 years.	Per locality staff, no.

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES: 0 / 4 Points

Communication and coordination between a locality and its municipal water utility and wastewater utility enable a coordinated, cohesive, and synchronized response to a coastal storm hazard.

Points		Scoring Metric	Notes
0		a. Locality conducts an assessment of its drinking water supply and wastewater management, both public sources and private well owners, to identify vulnerabilities to coastal storm hazards.	Comprehensive Plan at 62-63 (water quality protection plan) discusses that water comes from individuals, not public, wells. Per locality staff, there is not an assessment of vulnerabilities.
0		b. Locality water supply plan addresses coastal flooding and hazard events to assure safe drinking water supply and water conservation.	The Middle Peninsula Regional Water Supply Plan was created in 2011 and has been update in accordance with the 5 year update schedule. It does not specifically address coastal flooding and hazard events but does point out saltwater intrusion as a factor in their groundwater management in Section 11.
0		c. Locality conducts a resident education program on safe drinking water to assure post-event public health and safety.	Per locality staff, no.
0		d. Locality communications with municipal water and wastewater utility, to manage ongoing challenges to safe water, including during and after a storm, Alternatively or additionally, the locality has established methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	Per locality staff, no.

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES: 3 / 4 Points

An evaluation of critical infrastructure for emergency services including shelters, emergency facilities, medical, electrical, and other essential services that allows a locality to understand its capacity and preparedness for coastal storm hazards. Critical infrastructure ensures that socially vulnerable populations, not just those who can afford it, will have access to quality drinking water, electricity, food, and shelter.

Points		Scoring Metric	Notes
1		a. Locality identifies critical infrastructure for emergency services and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 101-02. Comprehensive Plan at 99-101 (identifies important infrastructure, but not in the context of vulnerabilities) On its website, the locality identifies local shelters for storm hazards, but does not assess their vulnerability.
1		b. Locality has a plan to protect critical infrastructure from storms within last 5 years.	Per locality staff, the county has developed a plan to protect the emergency services infrastructure within the last 5 years.
0		c. Locality informs residents which critical infrastructure they should use during coastal storm hazards.	Per locality staff, the county does not have an emergency alert system.
1		d. Locality has a contingency plan for continuing services. This plan has been developed or updated in last 5 years.	Per locality staff, there is a contingency plans updated within the last 5 years.

3.5 NATURAL AND NATURE-BASED FEATURES: 2 / 4 Points

Natural and nature-based features (NNBF) are features that define natural coastal landscapes and are either naturally occurring or have been engineered to mimic natural conditions. Examples include beaches and dunes; vegetated forest buffers, salt marshes, freshwater wetlands, and submerged aquatic vegetation; oyster reefs; and barrier islands. Green infrastructure (GI) is similar and complementary, and uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. Both NNBF and GI may be undertaken by a community in a variety of ways.

Points		Scoring Metric	Notes
1		a. Locality has identified natural and nature-based features that are protective and can assist with coastal resilience.	Comprehensive Plan at 53-61.
1		b. Locality has developed plans and policies that use natural and nature-based features to enhance coastal resilience.	Comprehensive Plan at 64.
0		c. Locality is implementing projects that are in accordance with the plans and policies developed to utilize natural and nature-based features to increase coastal resilience.	Per locality staff, the county is involved with the requirements under the Chesapeake Bay act, but otherwise, no information located or provided.
0	$$$	d. Locality offers incentives for the use of natural and nature-based features to increase coastal resilience.	Per locality staff, the county is involved with the requirements under the Chesapeake Bay act, but otherwise, no information located or provided.

TOTAL SCORE FOR SECTION 3: 6 / 20 POINTS

4) PLANNING FOR RESILIENCE

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

Coastal hazard mitigation efforts, when properly funded, can reduce or prevent damage and decrease costs from storm damage. To ensure proper funding a locality can budget for mitigation efforts, assess the potential economic impact from a coastal storm hazard, and identify sources of funding for mitigation projects.

Points		Scoring Metric	Notes
0		a. Locality has incorporated into its Capital Improvement Plan (CIP) funding for coastal resilience. Projects could include upgrading critical infrastructure, water and wastewater systems, and/or food and health systems, with priority for needs of vulnerable populations.	No information provided or available.
0	$$$	b. Locality has conducted an economic impacts assessment of coastal storm hazards.	No information provided or available.
1		c. Locality has identified specific actions for coastal resilience (pre/post-flooding mitigation) in Hazard Mitigation Plan.	Middle Peninsula Hazard Mitigation Plan The County implemented rapid notification systems and evacuation routes strategies.
0	$$$	d. Locality has identified funding for non-CIP coastal resilience projects, including priority needs of vulnerable populations impacted by coastal storm hazards.	No information provided or available.

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN: 2 / 4 Points

A comprehensive plan is a locality's vision for future land use, development, adaptation, and resilience. Coastal resilience can be addressed in comprehensive plans by incorporating elements such as green infrastructure, open space preservation, infill development, the National Flood Insurance Program (NFIP), the Community Rating System (CRS), and stormwater management. The ideal comprehensive plan identifies equity and the need to identify and support socially vulnerable populations as a priority for resilience, as well as a priority preference for restoration, green infrastructure and connectivity.

Points		Scoring Metric	Notes
0		a. The comprehensive plan discusses how community engagement around coastal resilience informed the plan.	No information provided or available.
1		b. The comprehensive plan includes clear discussion of coastal resilience and coastal storm hazards and incorporates assessments to inform the development of policies to reduce vulnerability to coastal storm hazards.	King & Queen Comprehensive Plan discusses the need to protect coastal resources and the ecosystem from rising seas and using this information to further guide the development of land near water.
1		c. The comprehensive plan includes goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	King & Queen Comprehensive Plan discusses the goals of protection and preserving environmental resources "through the establishment of environmental design guidelines." Additionally, the Comprehensive Plan discusses the importance of protecting wetlands that act as a flood barrier.
0		d. The comprehensive plan addresses impacts on critical infrastructure and essential services from coastal storm hazards, particularly for impacts affecting socially vulnerable populations.	No information provided or available.

4.3 LAND USE ORDINANCES: 2 / 4 Points

A locality's land use ordinances (such as zoning, subdivision, and floodplain) should enact the locality's vision and policies laid out in its comprehensive plan. Land use ordinances can be used to conserve and protect natural resources, ecosystems, agricultural lands, and areas vulnerable to flooding. Localities are required to enact Chesapeake Bay Preservation Act ordinances and going beyond these ordinances provides greater resilience.

Points		Scoring Metric	Notes
1	CRS	a. Locality land use regulations protect areas vulnerable to flooding by limiting development inside the floodplain or encouraging development outside the floodplain.	Compliance & Liability Floodplain District Ordinance prohibits land development unless in full compliance with the locality regulations for the floodplain.
0	CRS	b. Locality land use regulations protect areas vulnerable to flooding by setting higher standards in existing flood zones or by designating additional flood zones beyond those designated by FEMA.	No information provided or available.
1	CRS	c. Locality land use regulations protect areas vulnerable to flooding by setting buffers, including open space.	Site Development Regulations Ordinance discusses businesses near water need a minimum amount of open space between the business and the tidal water.
0	CRS	d. Locality land use regulations protect areas vulnerable to flooding by using setbacks to protect flood-prone areas.	No information provided or available.

4.4 INCENTIVES FOR COASTAL RESILIENCE: 2 / 4 Points

Incentive programs encourage infill development and protect open spaces, while protecting flood-prone areas and critical ecosystems. Incentives should be developed with community input, with particular attention to consulting agencies and organizations working with or providing services to lower income and vulnerable populations as well as agencies and organizations working to build community resilience.

Points		Scoring Metric	Notes
1	$$$	a. Locality offers an incentive for achieving coastal resilience goals: discourage development in areas prone to flooding; protect critical ecosystems; encourage sustainable development; improve resilience in high-risk areas; and preserve natural assets.	Site Development Regulations Ordinance discusses the minimum open space that is required in residential areas and business areas to preserve open spaces.
1	$$$	b. Locality offers a second incentive for achieving the goals listed above.	Required Open Space Ordinance discusses the requirement of open space for planned unit developments.
0	$$$	c. Locality offers a three or more incentives for achieving the goals listed above.	No information provided or available.
0	$$$	d. Locality develops incentives in consultation with agencies and organizations working with socially vulnerable populations.	No information provided or available.

4.5 NATURAL RESOURCE PRESERVATION: 2 / 4 Points

Natural resources are important to the locality's economy, environment, and quality of life. Natural resources also can help protect against coastal storm hazards and minimize damage from coastal storm events. The preservation of these critical natural resources is paramount to providing resilience for a coastal locality during these events. These actions should go beyond the required Chesapeake Bay Preservation Act Ordinance.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified and mapped natural resources that are important for broad ecosystem health and which are at risk of being lost due to flooding and coastal storm hazards.	King & Queen Comprehensive Plan identifies natural resources and their importance to the ecosystem and the potential to lose these resources. Additionally, the Comprehensive Plan has maps of natural resource areas.
1	CRS	b. Locality has developed plans and policies that preserve and restore natural resources to increase coastal resilience.	King & Queen Comprehensive Plan discusses protecting natural resources, such as wetlands, that act as flood control devices.
0		c. Locality has programs with residents, civic organizations, and nonprofit organizations to educate community about the natural resource preservation plan and engage them in helping to implement the plan.	No information provided or available.
0		d. Locality is funding actions that implement the natural resource preservation plan.	No information provided or available.

TOTAL SCORE FOR SECTION 4: 9 / 20 POINTS

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING: 0 / 4 Points

For community resilience, it is important to use meaningful engagement strategies where residents are able to provide feedback and suggestions through meetings, workshops, and surveys. To reach people of color and the elderly, media and social media that serves these populations is effective. Public engagement enables residents and other stakeholders to provide input to the locality. Better informed residents are better able to ensure their locality remains resilient to coastal storm hazards.

Points		Scoring Metric	Notes
0		a. Locality has a written policy regarding the role of residents and businesses, schools and educators, institutional, nonprofit, faith-based communities veterans, and other stakeholders in coastal resilience.	No information found or provided.
0	CRS	b. Locality has staff dedicated to public engagement on coastal resilience, including a standing committee that addresses coastal resilience as part of its work.	No information found or provided.
0	CRS	c. Locality holds at least one public meeting per year, including one in vulnerable resident areas to address coastal resilience issues and posts the results of the public meetings. For 75-150,000, at least two such public meetings per year; for 150,000+ at least three per year.	No information found or provided.
0	CRS	d. Locality informs and engages vulnerable population about coastal resilience by using website, social media, media serving people of color and minorities, and faith-based organizations to enable them to provide suggestions about issues and strategies.	No information found or provided.

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC: 3 / 4 Points

The public needs free and open access to information related to coastal resilience and planning. Information sharing allows residents to understand their risks and the importance of resilience. Information should be shared easily and presented in a manner which is clear and easy to understand, and easy to access in ways that reach different populations in the community.

Points		Scoring Metric	Notes
0	CRS	a. Locality provides to the public localized user-friendly information on coastal resilience, in digital and non-digital formats and in multiple languages where appropriate based on demographics.	Per locality staff only English is available.
1	CRS	b. Locality provides to the public localized user-friendly information on coastal resilience, on a website (e.g., interactive maps).	Provides brief information on wetlands as flooding control (link) and GIS mapping online (link).
1	CRS	c. Locality provides localized user-friendly information on coastal resilience in public spaces (e.g., public offices or library).	Per locality staff FEMA Handouts are available in Co Admin Office and Zoning Department.
1	$$$	d. Locality provides the public with localized, user-friendly information about economic costs and risks associated with coastal storm hazards.	Per locality staff FEMA Handouts are available in Co Admin Office and Zoning Department.

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE: 0 / 4 Points

Developing resident leaders and strong volunteer networks are important aspects of building a locality's health and wellness resilience. Leaders can be responsible for informing residents, expressing resident concerns, and assisting with local preparedness. Leaders can be called on during emergencies to assist residents in need and to assist with post-hazard recovery. Communities can build this capacity by offering volunteer opportunities to cultivate experienced, local responders.

Points		Scoring Metric	Notes
0		a. Locality supports and invests in community-led initiatives on coastal resilience.	No information found or provided.
0		b. Locality offers training opportunities and education opportunities for resident leaders or volunteers to educate residents on what they can do to increase their resilience on individual properties or in neighborhoods.	No information found or provided.
0		c. Locality supports resident leaders or volunteers in community education and outreach efforts about coastal resilience by providing them with materials, speakers for gatherings, or support for resident action projects.	No information found or provided.
0		d. Locality highlights the work of resident leaders or volunteers in supporting and advancing coastal resilience, on its website, through social media, Facebook, awards, or other means.	No information found or provided.

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE: 4/ 4 Points

If a community's food, health, and medicine systems are not resilient before a storm, then the community may face a substantially longer recovery. Food, health, and medicine systems must be sustained before, during and after storm events, and are dependent on critical systems, including transportation and utilities. Lower-income and minority populations often already struggle to access food, health, and medicine, and are among the vulnerable populations during a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality has emergency plans for provision of food, health, and medicines to residents, through its comprehensive, hazard mitigation, or other plans.	Emergency Support Function #6: Mass Care and Emergency Support Function #8: Health and Medical Services under the King and Queen Emergency Operations Plan (2016).
1		b. Locality has plans for providing food to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access food during emergencies and coastal storm events.	Emergency Support Function #6: Mass Care under the King and Queen Emergency Operations Plan (2016).
1		c. Locality has plans for providing healthcare to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access healthcare during emergencies and coastal storm hazards.	Emergency Support Function #8: Health and Medical Services under the King and Queen Emergency Operations Plan (2016).
1		d. Locality has plans for providing medicine to vulnerable populations, areas for improvement, has developed partnerships to address these needs, and has provided information to the public on how to access medicine during emergencies and coastal storm hazards.	Emergency Support Function #8: Health and Medical Services under the King and Queen Emergency Operations Plan (2016).

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE: 0 / 4 Points

To ensure that socially vulnerable and underserved populations do not experience disproportionate impacts from flooding and coastal hazards, a locality needs to be able to predict how its residents may fare during a coastal storm hazard event, and then help those who are most vulnerable. One key measure that can be useful to localities in this effort is the metric for "deaths of despair"— or the prevalence of suicide, cirrhosis of the liver, and overdoses – which can serve as a proxy for the locality's physical and mental health, as persons who are suffering from depression and addictions are less likely to be able to respond effectively during flooding events. A locality with good physical and mental health will be better able to respond effectively to new or changing conditions as well as to recover from stressful events.

Points		Scoring Metric	Notes
0		a. Locality maintains data on community physical and mental wellbeing and challenges through specific metrics, such as the metrics for "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	No information found or provided.
0		b. Locality has met at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	No information found or provided.
0		c. Locality has identified, or maps its vulnerable neighborhoods, and has done this in partnership with NGOs, faith- based organizations, and its health and community services board.	No information found or provided.
0		d. Locality has a plan with these NGOs, faith-based organizations, and health and community services board that helps its physically and mentally challenged vulnerable populations prepare for coastal flooding events, and that provides assistance to them during and after these events.	No information found or provided.

TOTAL SCORE FOR SECTION 5: 7 / 20 POINTS

Opportunities

Example of an Opportunity Action Item Checklist showing possible actions to improve scores in each scorecard category. Opportunity items for your locality will be determined by your implementation team and The RAFT core team.

Locality Action Category	Score	Opportunity Actions for Score Improvement	Potential Time Commitment Short-Term: < 1 year; Mid-Term: 1-3 years; Long-Term: > 3 years
1.1 Locality Leadership and Planning for Resilience	≤ 2	Identify and task resiliency staff and leaders.	ST – MT
		Hold resiliency training and education events for elected officials.	MT
		Hold resiliency training and education events for locality staff or community member in charge of handling efforts.	MT
		Locality staff and/or elected officials meet at least once per quarter to coordinate resiliency planning.	LT
2.5 Resident Emergency Preparedness	≤ 2	Develop a resident emergency preparedness plan that identifies risks and needs, including knowledge of water safety.	ST
		Conduct community outreach at least once a year to inform residents about community emergency preparedness.	MT – LT
		Engage resident groups, including schools and hospitals, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	ST
		Implement early warning signals/systems/emergency warning tools for residents (especially vulnerable populations).	ST
4.2 Coastal Resiliency in Comprehensive Plan	≤ 2	Incorporate discussion into Comprehensive Plan about how community engagement regarding coastal resilience informed the plan.	ST
		Incorporate discussion into Comprehensive Plan about coastal resilience and coastal storm hazards and assessments designed to reduce vulnerability through the development of resiliency policies.	ST
		Incorporate discussion into Comprehensive Plan about the goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	ST
		Incorporate discussion into Comprehensive Plan about impacts on critical infrastructure and essential services from coastal storm hazards, especially for vulnerable populations.	ST

Next Steps

Resilience Action Workshop

1) Community leaders work together to create a one-year **Resilience Action Checklist.**
2) The RAFT Core team helps to **identify achievable action items** for improving resilience.
3) Localities break into focused discussion groups to **identify 3 to 5 top opportunities** for the next year to increase resilience.
4) Large group discussion on **regional sharing**, followed by breakout into locality discussion groups to:
    a. **Identify a Locality Implementation Team;**
    b. **Create a timeline for actions;**
    c. **Coordinate logistics;**
    d. **Determine next steps for implementation team.**

Implementation

- **Identify a Locality Implementation Team** made up of local officials and residents that will work with the Core Team to accomplish checklist actions and projects.

- **Work with one of the Core Team members** who will set up periodic check-in meetings or calls to track progress and provide support.

- Assistance from RAFT partners could take the form of:
    - **Communications product development;**
    - **Hazard and critical infrastructure mapping;**
    - **Policy and legal analysis;**
    - **Model ordinance and comprehensive plan language;**
    - **Green infrastructure projects;**
    - **Workshop or meeting facilitation;**
    - **Community engagement recommendations;**
    - **Specific research or data collection projects.**

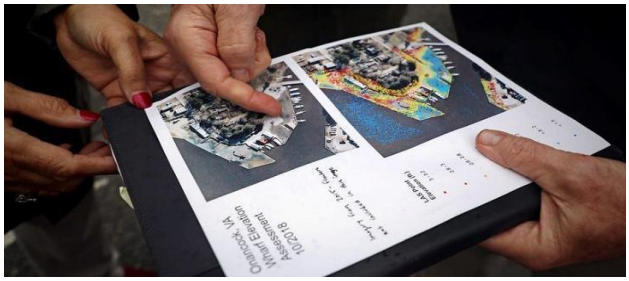


Photo by Aileen Devlin, Virginia Sea Grant

Data Sources Used to Complete Scoring

Data Sources	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Business Association Website								X																	
Calls to the locality	X	X	X	X		X	X	X	X	X		X	X	X					X			X			X
Calls to the PDC	X	X	X			X	X		X				X												
Capital Improvement Plan																X		X							X
Community Services Board																									X
County Health Rankings and Roadmaps																									X
Dam Management Plan											X														
DCR Floodplain Management Program					X	X															X				
Department of Conservation and Recreation			X		X																	X			
Department of Emergency Management																						X			
Department of Environmental Quality													X												
Department of Health							X						X												
Department of Transportation Road and Bridge Standards												X													
Emergency Management Plans				X																					
Emergency Operations Plan	X	X					X				X										X			X	X

FEMA's CRS website					X																				
Fire Department website		X																							
Flood exposure and vulnerability assessment publications (VIMS, FEMA, and DCR)						X															X				
Hazard Mitigation Plan	X	X				X		X	X	X	X	X	X	X		X			X			X		X	X
Local Assessments of Ecological Assets															X										
Local Boards to advise elected officials																					X				
Local Budget																X									
Data Sources	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**5.1**	**5.2**	**5.3**	**5.4**	**5.5**
Local Chamber Website								X								X									
Local Economic Impact Assessments																X									
Local Ordinances and Comprehensive Plan				X			X						X	X	X		X	X	X	X	X			X	X
Local Public Works Design & Construction Standards												X													
Local Transportation Plan												X													
Local Utility Website													X												
Local Water Supply Plan													X												
Locality Resilience Plan or Strategy	X			X																					

Locality Social Media																				X	X		X		
Locality Website	X	X	X				X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
School Curriculum																					X				
Social Services							X																		
Planning District Commission (PDC) website	X	X	X			X	X		X																
Public Libraries																						X			
Wetlands Watch					X																				
Zoning Codes																			X						

KING AND QUEEN COUNTY

DRAFT Resilience Action Checklist

The RAFT | Resilience Adaptation Feasibility Tool

TOP PRIORITIES TO ADDRESS IN THE NEXT YEAR WITH SUPPORT FROM THE RAFT

Community Checklist Items (Draft, still being refined and prioritized)

The priorities included on this checklist were developed by community participants and do not necessarily represent items endorsed or proposed by local government and other decision-making bodies.

❑ **EDUCATE SHORELINE OWNERS AND LOCAL RESIDENTS ON THE FIGHT THE FLOOD PROGRAM**

Through presentations and other outlets, such as existing weekly newsletters, educate shoreline owners and other locals on the Fight the Flood program and its opportunities for grants and funding. Conduct separate outreach specifically to the Tribal communities to help them participate in this program.

❑ **INCREASE EDUCATION ABOUT AND CONNECTIONS TO THE WATERSHED AND RESILIENCY**

Increase education on environmental literacy and resiliency, while establishing a physical connection to the watershed, targeting historically excluded and underserved People of Color and school students. Include African American, Tribal, and other community members and students of color in water-related programs and activities. Conduct on-the-water boat tours of shorelines so people can better understand the problem areas firsthand.

❑ **EXPAND AVAILIBILITY OF FRESH FOOD**

Identify ways to expand the availability of and access to fresh food sources, such as community gardens and local grocery stores. Work with the Rappahannock Indian Tribe to extend their food sovereignty plan to other areas in the county.

❑ **DEVELOP A TRANSPORTATION PLAN TO TRANSPORT FRESH FOODS AND MEDICINES TO PEOPLE**

For aging and low-income residents, access to fresh foods, medicines, and other essentials may be determined by access to transportation. Where transportation access is limited or non-existent in more rural parts of the county, residents may lack access. Rather than expanding the network to transport residents to sources of these essentials, this action proposes to develop a transportation plan for bringing fresh food, medicine, and other necessities to people where they live, by connecting existing food delivery services to sources of fresh foods, medicines, and other essentials. Work with organizations such as Meals on Wheels, Thrive VA, and the Unite Us Platform.

This checklist was developed by community participants in the online Resilience Action Workshop, conducted and facilitated by The RAFT three-university Collaborative Team on January 28th, 2022. This document is intended to be static and record the outcomes of that workshop. However, the checklist items and their details may evolve over the course of the year-long implementation of The RAFT in response to the changing circumstances and needs of the community.

**The RAFT team recommends the creation of a Resilience Committee as a way to create and sustain momentum to build resilience in the long term. We recognize, based on our experience with coastal communities in Virginia, and consistent with best practices in resilience planning and implementation, that communities benefit from more comprehensive and coordinated approach to building resilience. Establishing a Resilience Committee is key to establishing a foundation for sustained efforts in building resilience. The RAFT team has developed a worksheet to assist communities in establishing a Resilience Committee structure and framework, and if you decide this would benefit your community we can facilitate your discussion.

Acknowledgment of Funders

This RAFT product was created with funding from:

Jessie Ball duPont Fund

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

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

* This RAFT product, Task # 92.03 was funded, in part, by the Virginia Coastal Zone Management Program led by the Virginia Department of Environmental Quality through Grant FY19 # NA19NOS4190163 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

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.

THE RAFT

Resilience Adaptation Feasibility Tool

King William County

Scorecard Report July 2021

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

University of Virginia
Institute for Engagement & Negotiation
Shaping Our World Together

William & Mary Law School
Virginia Coastal Policy Center

Old Dominion University
Resilience Collaborative

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* The RAFT implementation on the Eastern Shore, Task #92.03 was funded, in part, by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA17NOS4190152 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its sub agencies.

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Background

What is The RAFT?

- "Full-service tool" and collaborative, community-driven process designed to assist coastal localities in increasing their resilience.
- Conceived and developed by an academic interdisciplinary collaborative called the "Core Team"
    - Institute for Engagement & Negotiation (IEN) at the University of Virginia
    - Virginia Coastal Policy Center (VCPC) at William & Mary Law School
    - Old Dominion University (ODU)/Virginia Sea Grant Climate Adaptation and Resilience Program.

The RAFT has three key components:

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

How does The RAFT help a locality?

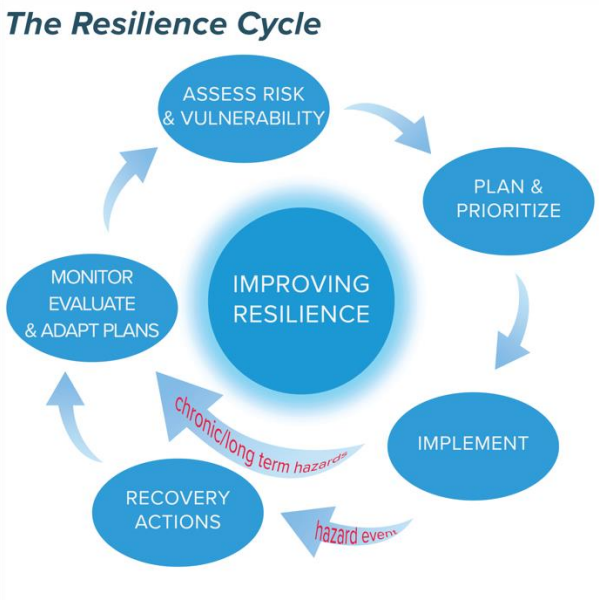
1. Open a community conversation about community resilience, including gaps, and needs.
2. Support the community in identifying priority actions for the largest impact in increasing resilience.
3. Improve communication and coordination within the community and with regional and state agencies.
4. Help the community become better positioned to find and apply for relevant funding opportunities.
5. Earn a better Community Rating System (CRS) score, which saves residents money on their flood insurance premiums.

What is resilience?

The RAFT focuses on coastal community resilience, improving the ability of a community to bounce back from hazardous events such as hurricanes and extreme weather and deal with chronic issues such as flooding.

The RAFT takes a comprehensive approach by including environmental, economic, and social resilience. All three are vital for a community to thrive.

To build resilience, localities need capacities in areas of emergency management, infrastructure, planning, policy, and community well-being.



Adapted from: NOAA Coastal Community Resilience Indicators and Rating Systems, 2015.

Locality Total Score

Category	Score Received	Possible Score
1) **POLICY, LEADERSHIP, AND COLLABORATION** *Measures policy and legislation in place for coastal resilience and includes coordination and collaboration between various levels of government, and how accessible and open government data is to the public.*	10	20
2) **RISK ASSESSMENT AND EMERGENCY MANAGEMENT** *Examines how well a locality has conducted risk assessments to prepare for coastal storm hazards, identified vulnerable populations and their needs during or after a coastal storm hazard, and developed plans for disaster preparedness, including a Hazard Mitigation Plan.*	15	20
3) **INFRASTRUCTURE RESILIENCE** *Assesses how well the locality has identified methods and plans for storm water and protecting critical infrastructure including using natural and nature-based features (NNBF).*	10	20
4) **PLANNING FOR RESILIENCE** *Assesses the comprehensive plan and zoning code for resilience, how a locality is using incentives to promote resilience in building and development, how policies protect ecosystems, how they use green infrastructure to improve resilience, and how much resilience has been incorporated into planning.*	13	20
5) **COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING** *Assesses how the community engages with residents in planning for coastal storm hazard including social equity considerations and examines the locality's attention to issues of health and wellness during and after coastal events.*	9	20
Total Score:	**57%**	

Interpreting the Score

Low Resilience: Less than 50%- There are plenty of opportunities for improvement. The locality should decide whether it will be more beneficial to achieve the least difficult improvements first, or to tackle more challenging problems. The key is to decide which of these approaches makes the most sense, as the locality develops their Resilience Action Checklist.

Moderate Resilience: 50% - 74% – The locality is actively involved in coastal resilience planning and has achieved some successes. There are still opportunities for strengthening resilience. The Resilience Action Checklist should focus on weak categories and anticipate moderate to difficult improvements.

High Resilience: 75% or More- Locality is well prepared! There may still be room for resilience and the Resilience Action Checklist may focus on ways to improve resilience and further engage residents. Examples of locality policies, plans, and activities may assist other localities in the region and beyond.

If you see **CRS** next to an item, action to improve that metric can result in CRS credit.

If you see **$$$** next to an item, action to improve that metric supports economic resilience.

If you see next to an item, action to improve that metric supports environmental resilience.

If you see next to an item, action to improve that metric supports engagement with vulnerable populations.

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE: 3/ 4 Points

Collaboration among local government decision makers, officials, departments, academia, and NGOs is important in planning for coastal resilience. Effective collaboration requires identifying local leaders and organizations, establishing the roles of such leaders and organizations, and providing leadership training and educational resources.

Points		Scoring Metric	Notes
1		a. Leadership roles are identified for staff and/or elected officials important for planning for resilience. If staff is limited or nonexistent, the locality has tasked someone with handling resilience efforts for the community.	Hazard Mitigation Plan (link) at 368 identifies staff for mitigation activities: County administrator and Emergency Management Coordinator. General leadership roles ID in Comprehensive plan (link) and 2016 Emergency Operation Plan (EOP) (link).
0		b. Training and education events are held for elected officials specifically on resilience issues.	Per MPPDC contact, PDC conducts training and education on resilience issues. Per locality contact, no other training or education events are held
1		c. Training and education events are held for locality staff, or if staff is limited or nonexistent, training of whomever has been tasked with handling resilience efforts for the community.	No training in Comp Plan, but general training in EOP, page 7. Per MPPDC contact, PDC conducts training and education on resilience issues.
1		d. Locality staff and/or elected officials, or whomever has been tasked with handling resilience efforts for the community, are meeting at least once per quarter to coordinate planning specifically on resilience issues.	Per MPPDC contact, the PDC meets regularly with leadership in the locality through a 25-member commission, as well as committees of local government administrators and local government planners. Resilience efforts are discussed throughout.

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY: 3 / 4 Points

Collaboration among local officials and relevant stakeholders is equally important in responding to a coastal hazard. An organized, coordinated response to a coastal hazard requires identifying stakeholders, establishing roles, creating plans, and publicizing information.

Points		Scoring Metric	Notes
1		a. Locality has identified stakeholders who will require emergency response including socially vulnerable populations.	Basic ID in EOP 1-2. Hazard mitigation plan (link) at page 2, 15.
1		b. Locality has established internal emergency response roles (e.g., standing committees, staff titles), and these staff and partners participate in at least one training each year.	Internal emergency response roles and annual trainings are set forth in EOP, page 7, 9, and 11. Per MPPDC contact, PDC assists with some emergency trainings.
0		c. Locality collaborates on resilience planning with the stakeholders who will need emergency response and has provided the public with opportunity to give input from lower income vulnerable populations.	Demographics noted to be in figures on Comprehensive plan – page 15. (link). Per locality staff, no.
1		d. Locality has a means of communicating these plans to the public during a coastal storm hazard event.	Emergency communications center in EOP, pages 27-31. King William country citizen alert system (link).

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs: 3 / 4 Points

Coastal resilience issues go beyond political boundaries; therefore, localities benefit from regional collaboration. Regular communication between local, multi-jurisdictional, and state officials encourages sharing of information and ideas. Collaboration should include working with agencies that serve socially vulnerable communities. Localities are part of a Planning District Commission (PDC), which coordinates many activities.

Points		Scoring Metric	Notes
1		a. Locality staff and/or officials engage with regional and state agencies on resilience-oriented issues.	General coordination in Hazard Mitigation Plan (link).
0		b. Locality participation in local and regional resilience-oriented committees and initiatives to serve socially vulnerable populations.	No information available or provided.
1		c. Locality elected officials participate on relevant local and regional resilience-oriented commissions.	Per MPPDC contact, localities participate in Fight the Flood (link), as well as a septic repair revolving loan fund, and a living shoreline revolving loan fund.
1	$$$	d. Locality staff work to identify funding opportunities and priorities to address resilience issues at the regional and state level.	2020 MP Comprehensive Economic Development Strategy. MPCEDS page 78, 97. Participation in Fight the Flood link. Per locality contact, town staff directs proper inquires to those MPPDC resources, specifically the septic repair revolving loan fund.

1.4 ADAPTIVE MANAGEMENT: 1 / 4 Points

Adaptive management involves updating ordinances and plans for coastal resilience based on new findings and emerging strategies. Use of data, scientific analyses, and new information is important to inform local policies to prepare. Adaptive management means incorporating lessons learned from research that informs best methods for addressing the needs of socially vulnerable populations.

Points		Scoring Metric	Notes
0		a. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into the Floodplain Management Ordinance.	Sec. 86-90. Floods. Last updated 2015. link. But see, Submitting technical data (link).
0		b. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Zoning Ordinance.	Chapter 86. Zoning. Last updated 1995. link. 86-136. Periodic updating, every 5 years with reports to board of supervisors. link.
0		c. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Site and Subdivision Ordinances.	Chapter 66. Subdivisions. Last updated 2004. link.
1		d. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Comprehensive Plan.	See Comprehensive plan, page 20, last updated 2016. link.

1.5 The NFIP's COMMUNITY RATING SYSTEM: 0 / 4 Points

Communities wishing to go above and beyond the minimums of the National Flood Insurance Program can choose to participate in the Community Rating System (CRS). Participating communities implement higher standards of floodplain management, and, in return, residents are eligible for flood insurance premium reductions. Localities can do many things to improve their scores. For more information, see FEMA's CRS website or the Wetlands Watch website on the subject.

Points		Scoring Metric	Notes
0	CRS	a. Locality has achieved a CRS Score of 9 or higher.	Locality is not listed on the 2020 CRS communities list. link.
0	CRS	b. Locality has achieved a CRS Score of 8.	See above.
0	CRS	c. Locality has achieved a CRS Score of 7.	See above.
0	CRS	d. Locality has achieved a CRS Score of 6 or lower.	See above.

TOTAL SCORE FOR SECTION 1: 10 / 20 POINTS

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT: 3 / 4 Points

Localities should conduct and use an assessment of their flood exposure and vulnerability in developing policies and programs. Localities should be knowledgeable of their flooding risks, raise awareness in the community about vulnerable areas, help target action to assist the most threatened areas and reduce possible damage, and save costs by being preemptive not reactive.

Points		Scoring Metric	Notes
1	CRS	a. An exposure and/or vulnerability assessment is completed, mapped and updated within the last 5-7 years, available at the locality level, and (as evidence of being used) referenced in locality policy making.	Middle Peninsula Hazard Mitigation Plan at 28, 96, 125-27, 189
1	CRS	b. Sources of flooding for both tidally-driven and precipitation-driven events are identified and updated within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 65-67 (Rivervine flooding); 75 (Ditch flooding); 80-82 (Coastal flooding)
1	CRS	c. Flooding for different return period storm events is identified and mapped.	Middle Peninsula Hazard Mitigation Plan at 126-36
0	$$$ CRS	d. Additional vulnerabilities (see above), including cultural, historic and economic assets, are identified and updated within the last 5 years.	Middle Peninsula Hazard Mitigation Plan at 15-16 (Community Profile Section) Per locality staff, there is currently no assessment of additional vulnerabilities.

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS: 3 / 4 Points

Localities should conduct risk assessments of their socially vulnerable populations. These populations include those in areas of high poverty, elderly, caregivers, veterans, homeless, transient or nomadic communities, children and youth, physically or mentally disabled people, medically fragile people and non-English speakers. Because these populations may not have resources to change their level of vulnerability, it is vital for localities to identify these populations, ways to reduce their risk, and create plans for assistance during and after coastal hazard events. Localities need to conduct outreach to vulnerable populations.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified vulnerable populations that are subject to flooding and coastal storm hazards.	King William County Emergency Operations Plan discusses those who are disabled and have special needs as being at risk.
1		b. Locality has engaged vulnerable populations and provided them with meaningful information (e.g., in their own language, relevant to their circumstances) relating to their vulnerability to coastal storm hazards.	King William County Emergency Operations Plan discusses vulnerable populations' specific needs in times of emergency.
0		c. Locality has worked with vulnerable populations to increase their emergency preparedness and evacuation plans so they know their risk and know what steps should be taken during and after an event.	Per locality staff, the county sheriff and fire department have lists of special needs, disabled, and elderly people, who are in need during emergencies. However, the County has not actively worked with these vulnerable populations.
1		d. Locality partners with organizations that provide assistance to vulnerable populations before, during and after coastal storm hazards, including food banks or pantries with refrigeration units and backup generators.	Per locality staff, the county has various food banks and pantries to mitigate the effects of coastal hazards.

2.3 BUSINESS AND ECONOMIC RISK ASSESSMENT: 2 / 4 Points

Localities need to identify local business and economic vulnerabilities to coastal storm hazards. Businesses are differentially affected by these hazards and attention should be paid to making sure that businesses that serve vulnerable populations are considered. Including business and economic vulnerability in a risk assessment and emergency management is important for resilience and recovery after a storm event.

Points		Scoring Metric	Notes
1	$$$	a. Locality has included the business sector in its assessment and mapping of coastal hazard vulnerability	See 2020 MP Comprehensive Economic Development Strategy at page 97 (link). MPHMP page 22 (link). Per MPPDC contact, appropriate business sector initiatives include Fight the Flood and a Future Ecotourism initiative with PDC
0	$$$	b. Locality has engaged economic development department and/or independent chamber of commerce in locality hazards mitigation and/or resilience planning.	Per locality contact, no.
0	$$$	c. Locality and/or business associations have programs for small businesses, particularly businesses that serve socially vulnerable populations, to encourage each business to be prepared for an emergency and plan for business continuity.	General info on county website for Emergency Preparedness (link) and in King William Emergency Operations Plan (link), however there is nothing specifically geared to small businesses.
1	$$$	d. Locality emergency management communicates with business sector in the event of severe weather emergency or evacuation.	Per locality contact, emergency communications are handled the same as with the general public. See generally, King William Emergency Operations Plan link (through County's Public Information Officer via radio and TV) page 3, 42. Emergency alert system on county website link. King William Citizen Alert System (opt-in) link. Facebook link.

2.4 HAZARD MITIGATION: 4 / 4 Points

The Hazard Mitigation Plan (HMP) is required by state code as a condition of emergency assistance. In the coastal region, it is important for the HMP to specifically address coastal storm hazards by identifying what locality resources and areas are at risk, to enable the locality to take actions to reduce future risks. Furthermore, having an HMP is essential to be eligible for certain grants and funding related to coastal storm hazards.

Points		Scoring Metric	Notes
1		a. The locality's HMP specifically addresses coastal resilience.	See generally Middle Peninsula Hazard Mitigation Plan
1		b. The locality is engaging in regional coordination for Hazard Mitigation through a regional plan.	See generally Middle Peninsula Hazard Mitigation Plan
1		c. The locality's HMP details how the locality collaborates with VDEM, DCR Floodplain Management or SHMO.	Middle Peninsula Hazard Mitigation Plan at 1-3
1		d. The locality's HMP is approved by FEMA, was developed with meaningful public engagement with socially vulnerable communities and is formally adopted by locality governing body.	FEMA Hazard Mitigation Plan Status

2.5 RESIDENT EMERGENCY PREPAREDNESS: 3 / 4 Points

Well-organized emergency preparedness plans save lives and property and help ensure that localities can act in sufficient time. They contribute to faster and more efficient post-hazard recovery. Preparedness for vulnerable populations includes ensuring that residents have the opportunity to learn swimming and water safety skills. Communities should consider participating in regional, national, or state-wide outreach events such as Hurricane Preparedness Week.

Points		Scoring Metric	Notes
1	CRS	a. Locality has a current resident emergency preparedness plan, updated within the last five years, which identifies resident emergency preparedness risks and needs, including knowledge of water safety.	Emergency Operations Plan
1	CRS	b. Locality conducts community outreach at least once a year to inform residents about community emergency preparedness.	Per locality staff, prior to emergencies, information on emergency preparedness is communicated on local television channels.
0	CRS	c. Locality engages resident groups, including schools, hospitals, and other groups, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	No information available or provided.
1	CRS	d. Locality has implemented early warning signals/systems/emergency warning tools for its residents, particularly those most vulnerable.	Locality uses CodeRED for its citizen alert system as well as E-notifications for emergency conditions and road closures.

TOTAL SCORE FOR SECTION 2: 15 / 20 POINTS

3) INFRASTRUCTURE RESILIENCE

3.1 STORMWATER INFRASTRUCTURE: 0 / 4 Points

Stormwater management is regulated by state law, which requires localities either create and operate a stormwater management program or request the state to operate its stormwater management program. Local ordinances must comply with the Virginia Stormwater Management Act and regulations, as well as the Virginia Erosion and Sediment Control Law. Additional stormwater management and flood risks are typically handled at the local level through environmental regulation, site plan approval, and subdivision approval. Localities that go beyond the minimum state requirements are better able to manage stormwater and increase their resilience to coastal storm hazards. Stormwater infrastructure may include use of bioswales, dry ponds, retention basins, rainwater management systems, low impact development, rainwater collection and management systems, green infrastructure, rooftop gardens, and green and open spaces.

Points		Scoring Metric	Notes
0	$$$	a. Locality offers at least one official incentive for private property activities that manage stormwater.	Per locality staff, there are currently no incentives for private storm water management.
0		b. Locality funds stormwater management projects through stormwater utility fees, user fees, grants, or other creative funding mechanisms.	Per locality staff, the locality currently does not fund management projects.
0		c. Locality implements one or more stormwater BMPs on public property for educational demonstration, as shown by signage, tours, or other information.	Per locality staff, there is currently no educational signage
0		d. Locality stormwater policy goes above and beyond the minimum state requirements.	County is an “opt-out” locality and has a DEQ administered program according to the Hazard Mitigation Plan at 281-82. Erosion & Sediment Control Ordinance Per locality staff, the county’s policies mirror state requirements.

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE: 3 / 4 Points

An evaluation of critical transportation infrastructure allows a locality to understand its capacity and preparedness for coastal storm hazards. Although most localities do not manage their own roads, as this is handled at the state level, they nevertheless do have the ability to identify their transportation needs and priorities.

Points		Scoring Metric	Notes
1		a. Locality has identified critical transportation infrastructure and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 126. Last Updated 2016. Update to begin in 2021. Per locality staff, the county relies on the VDOT list provided in the Hazard Mitigation Plan.
0		b. Locality has developed a plan to protect critical transportation infrastructure within last 5 years.	King William County Comprehensive Plan at 71. identifies individual roads and their specific problems, but only includes flooding as an issue for one of the identified roads. Per locality staff, there are currently no plans.
1		c. Locality has a plan available and has informed residents which critical transportation infrastructure to utilize in the case of coastal storm hazards.	See generally King William County Emergency Operations Plan Middle Peninsula Hazard Mitigation Plan at 302. Emergency Alert System
1		d. Locality has a contingency plan for critical transportation infrastructure. This plan has been created and/or updated in the past 5 years.	See generally King William County Emergency Operations Plan

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES: 2 / 4 Points

Communication and coordination between a locality and its municipal water utility and wastewater utility enable a coordinated, cohesive, and synchronized response to a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality conducts an assessment of its drinking water supply and wastewater management, both public sources and private well owners, to identify vulnerabilities to coastal storm hazards.	The Comprehensive Plan at 26-29 discusses potable water and septic systems in the context of contamination, but not directly related to storm hazards. Middle Peninsula Hazard Mitigation Plan at 125 (Waste Management Facility not adversely impacted by flood water) (public water system does not sustain damage from flooding events)
0		b. Locality water supply plan addresses coastal flooding and hazard events to assure safe drinking water supply and water conservation.	The Middle Peninsula Regional Water Supply Plan was created in 2011 and has been updated in accordance with the 5 year update schedule. It does not specifically address coastal flooding and hazard events but does point out saltwater intrusion as a factor in their groundwater management in Section 11.
0		c. Locality conducts a resident education program on safe drinking water to assure post-event public health and safety.	According to the Hazard Mitigation Plan at 274, the county does not have any hazard-related educational programs. Per locality staff, the county only addresses this issue after storm hazards.
1		d. Locality communications with municipal water and wastewater utility, to manage ongoing challenges to safe water, including during and after a storm, Alternatively or additionally, the locality has established methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	Per locality staff, the county works closely with the Hampton Roads Sanitation District, but does not currently work with private well owners.

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES: 3 / 4 Points

An evaluation of critical infrastructure for emergency services including shelters, emergency facilities, medical, electrical, and other essential services that allows a locality to understand its capacity and preparedness for coastal storm hazards. Critical infrastructure ensures that socially vulnerable populations, not just those who can afford it, will have access to quality drinking water, electricity, food, and shelter.

Points		Scoring Metric	Notes
1		a. Locality identifies critical infrastructure for emergency services and assessed its vulnerability within last 5 years.	Comprehensive Plan at 38, 45, 47, 49 The county's Comprehensive Plan is set to be update in 2021. The update will include evaluations of existing infrastructure and potential improvements.
0		b. Locality has a plan to protect critical infrastructure from storms within last 5 years.	Comprehensive Plan at 32. The county's Comprehensive Plan is set to be update in 2021. The update will include evaluations of existing infrastructure and potential improvements.
1		c. Locality informs residents which critical infrastructure they should use during coastal storm hazards.	King William County Emergency Management Facebook
1		d. Locality has a contingency plan for continuing services. This plan has been developed or updated in last 5 years.	See generally Emergency Operations Plan at 17-18.

3.5 NATURAL AND NATURE-BASED FEATURES: 2 / 4 Points

Natural and nature-based features (NNBF) are features that define natural coastal landscapes and are either naturally occurring or have been engineered to mimic natural conditions. Examples include beaches and dunes; vegetated forest buffers, salt marshes, freshwater wetlands, and submerged aquatic vegetation; oyster reefs; and barrier islands. Green infrastructure (GI) is similar and complementary, and uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. Both NNBF and GI may be undertaken by a community in a variety of ways.

Points		Scoring Metric	Notes
1		a. Locality has identified natural and nature-based features that are protective and can assist with coastal resilience.	King William County Comprehensive Plan at 21-24
1		b. Locality has developed plans and policies that use natural and nature-based features to enhance coastal resilience.	King William County Comprehensive Plan at 31-33
0		c. Locality is implementing projects that are in accordance with the plans and policies developed to utilize natural and nature-based features to increase coastal resilience.	Per locality staff, there are currently no plans or projects.
0	$$$	d. Locality offers incentives for the use of natural and nature-based features to increase coastal resilience.	Per locality staff, there are currently no incentives.

TOTAL SCORE FOR SECTION 3: 10 / 20 POINTS

4) PLANNING FOR RESILIENCE

4.1 BUDGET, FUNDING AND STATE & FEDERAL ASSISTANCE: 2 / 4 Points

Coastal hazard mitigation efforts, when properly funded, can reduce or prevent damage and decrease costs from storm damage. To ensure proper funding a locality can budget for mitigation efforts, assess the potential economic impact from a coastal storm hazard, and identify sources of funding for mitigation projects.

Points		Scoring Metric	Notes
1		a. Locality has incorporated into its Capital Improvement Plan (CIP) funding for coastal resilience. Projects could include upgrading critical infrastructure, water and wastewater systems, and/or food and health systems, with priority for needs of vulnerable populations.	Per locality staff, the CIP includes a project for a new water tower and water lines.
0	$$$	b. Locality has conducted an economic impacts assessment of coastal storm hazards.	No information provided or available.
1		c. Locality has identified specific actions for coastal resilience (pre/post-flooding mitigation) in Hazard Mitigation Plan.	Middle Peninsula Hazard Mitigation Plan The County implemented rapid notification systems, flood gauges, stormwater management plans, and evacuation routes.
0	$$$	d. Locality has identified funding for non-CIP coastal resilience projects, including priority needs of vulnerable populations impacted by coastal storm hazards.	No information provided or available.

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN: 2 / 4 Points

A comprehensive plan is a locality's vision for future land use, development, adaptation, and resilience. Coastal resilience can be addressed in comprehensive plans by incorporating elements such as green infrastructure, open space preservation, infill development, the National Flood Insurance Program (NFIP), the Community Rating System (CRS), and stormwater management. The ideal comprehensive plan identifies equity and the need to identify and support socially vulnerable populations as a priority for resilience, as well as a priority preference for restoration, green infrastructure and connectivity.

Points		Scoring Metric	Notes
0		a. The comprehensive plan discusses how community engagement around coastal resilience informed the plan.	Per locality staff, the community did not inform the Comprehensive Plan about coastal resilience.
1		b. The comprehensive plan includes clear discussion of coastal resilience and coastal storm hazards and incorporates assessments to inform the development of policies to reduce vulnerability to coastal storm hazards.	King William Comprehensive Plan discusses flood-prone areas and the impact of coastal storms and how these hazards have impacted regulation.
1		c. The comprehensive plan includes goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	King William Comprehensive Plan discusses the goals to preserve and protect natural resources by developing shoreline, protecting natural habitats, and developing natural riparian vegetation.
0		d. The comprehensive plan addresses impacts on critical infrastructure and essential services from coastal storm hazards, particularly for impacts affecting socially vulnerable populations.	No information provided or available.

4.3 LAND USE ORDINANCES: 3 / 4 Points

A locality's land use ordinances (such as zoning, subdivision, and floodplain) should enact the locality's vision and policies laid out in its comprehensive plan. Land use ordinances can be used to conserve and protect natural resources, ecosystems, agricultural lands, and areas vulnerable to flooding. Localities are required to enact Chesapeake Bay Preservation Act ordinances and going beyond these ordinances provides greater resilience.

Points		Scoring Metric	Notes
1	CRS	a. Locality land use regulations protect areas vulnerable to flooding by limiting development inside the floodplain or encouraging development outside the floodplain.	Structures in Floodplain Areas Ordinance limits development and building of existing structures in the floodplain.
1	CRS	b. Locality land use regulations protect areas vulnerable to flooding by setting higher standards in existing flood zones or by designating additional flood zones beyond those designated by FEMA.	Per locality staff, the county has higher standards for existing flood zones by requiring buffers, flood vents, and increased freeboard, for plans to development within the designated flood zones.
1	CRS	c. Locality land use regulations protect areas vulnerable to flooding by setting buffers, including open space.	Density Ordinance discusses the development and density standards for all zones.
0	CRS	d. Locality land use regulations protect areas vulnerable to flooding by using setbacks to protect flood-prone areas.	The county has setbacks by way of the Chesapeake Bay Preservation Act. However, the county does not have county mandated setbacks.

4.4 INCENTIVES FOR COASTAL RESILIENCE: 4 / 4 Points

Incentive programs encourage infill development and protect open spaces, while protecting flood-prone areas and critical ecosystems. Incentives should be developed with community input, with particular attention to consulting agencies and organizations working with or providing services to lower income and vulnerable populations as well as agencies and organizations working to build community resilience.

Points		Scoring Metric	Notes
1	$$$	a. Locality offers an incentive for achieving coastal resilience goals: discourage development in areas prone to flooding; protect critical ecosystems; encourage sustainable development; improve resilience in high-risk areas; and preserve natural assets.	Development Standards for Businesses Ordinance mandates that any part of a lot not used for a building must be maintained with grass, trees, shrubs, or sidewalks.
1	$$$	b. Locality offers a second incentive for achieving the goals listed above.	Yards and Open Space Ordinance requires open space in all areas and lots of required yards unless "vegetation" is planted in that space.
1	$$$	c. Locality offers a three or more incentives for achieving the goals listed above.	Land Suitability Ordinance does not allow flood prone land or wetlands to be subdivided if it will aggravate flood hazards.
1	$$$	d. Locality develops incentives in consultation with agencies and organizations working with socially vulnerable populations.	Per locality staff, the county works with the PDC to incentivize the advancement of flood protection projects and the restoration of ecosystems.

4.5 NATURAL RESOURCE PRESERVATION: 2 / 4 Points

Natural resources are important to the locality's economy, environment, and quality of life. Natural resources also can help protect against coastal storm hazards and minimize damage from coastal storm events. The preservation of these critical natural resources is paramount to providing resilience for a coastal locality during these events. These actions should go beyond the required Chesapeake Bay Preservation Act Ordinance.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified and mapped natural resources that are important for broad ecosystem health and which are at risk of being lost due to flooding and coastal storm hazards.	King William Comprehensive Plan discusses the importance of the Mattiponi and Pamunkey Rivers and their risks of flooding.
1	CRS	b. Locality has developed plans and policies that preserve and restore natural resources to increase coastal resilience.	King William Comprehensive Plan discusses county regulations designed to prevent increased flooding and protect flood prone areas.
0		c. Locality has programs with residents, civic organizations, and nonprofit organizations to educate community about the natural resource preservation plan and engage them in helping to implement the plan.	No information provided or available.
0		d. Locality is funding actions that implement the natural resource preservation plan.	No information provided or available.

TOTAL SCORE FOR SECTION 4: 13 / 20 POINTS

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING: 1 / 4 Points

For community resilience, it is important to use meaningful engagement strategies where residents are able to provide feedback and suggestions through meetings, workshops, and surveys. To reach people of color and the elderly, media and social media that serves these populations is effective. Public engagement enables residents and other stakeholders to provide input to the locality. Better informed residents are better able to ensure their locality remains resilient to coastal storm hazards.

Points		Scoring Metric	Notes
0		a. Locality has a written policy regarding the role of residents and businesses, schools and educators, institutional, nonprofit, faith-based communities veterans, and other stakeholders in coastal resilience.	No information available or provided.
0	CRS	b. Locality has staff dedicated to public engagement on coastal resilience, including a standing committee that addresses coastal resilience as part of its work.	No information available or provided.
0	CRS	c. Locality holds at least one public meeting per year, including one in vulnerable resident areas to address coastal resilience issues and posts the results of the public meetings. For 75-150,000, at least two such public meetings per year; for 150,000+ at least three per year.	No information available or provided.
1	CRS	d. Locality informs and engages vulnerable population about coastal resilience by using website, social media, media serving people of color and minorities, and faith-based organizations to enable them to provide suggestions about issues and strategies.	Per locality staff, the county webpage, facebook, and emergency alerts have been effective at reaching vulnerable populations in addition to the general public.

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC: 3 / 4 Points

The public needs free and open access to information related to coastal resilience and planning. Information sharing allows residents to understand their risks and the importance of resilience. Information should be shared easily and presented in a manner which is clear and easy to understand, and easy to access in ways that reach different populations in the community.

Points		Scoring Metric	Notes
1	CRS	a. Locality provides to the public localized user-friendly information on coastal resilience, in digital and non-digital formats and in multiple languages where appropriate based on demographics.	County website has links to FEMA and ready.gov resources as well as their EmergencyOperations Plan. Per locality staff, multiple languages are not needed.
1	CRS	b. Locality provides to the public localized user-friendly information on coastal resilience, on a website (e.g., interactive maps).	In addition to the resources listed above, the county website has maps for land use changes.
1	CRS	c. Locality provides localized user-friendly information on coastal resilience in public spaces (e.g., public offices or library).	Per locality staff, this information is available at the planning offices and the libraries
0	$$$	d. Locality provides the public with localized, user-friendly information about economic costs and risks associated with coastal storm hazards.	Per locality staff, the planning offices can provide information to the public about the risks associated with these hazards but not on the economic costs.

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE: 1 / 4 Points

Developing resident leaders and strong volunteer networks are important aspects of building a locality's health and wellness resilience. Leaders can be responsible for informing residents, expressing resident concerns, and assisting with local preparedness. Leaders can be called on during emergencies to assist residents in need and to assist with post-hazard recovery. Communities can build this capacity by offering volunteer opportunities to cultivate experienced, local responders.

Points		Scoring Metric	Notes
1		a. Locality supports and invests in community-led initiatives on coastal resilience.	Per locality staff, this is being done.
0		b. Locality offers training opportunities and education opportunities for resident leaders or volunteers to educate residents on what they can do to increase their resilience on individual properties or in neighborhoods.	No information available or provided.
0		c. Locality supports resident leaders or volunteers in community education and outreach efforts about coastal resilience by providing them with materials, speakers for gatherings, or support for resident action projects.	No information available or provided.
0		d. Locality highlights the work of resident leaders or volunteers in supporting and advancing coastal resilience, on its website, through social media, Facebook, awards, or other means.	No information available or provided.

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE: 4 / 4 Points

If a community's food, health, and medicine systems are not resilient before a storm, then the community may face a substantially longer recovery. Food, health, and medicine systems must be sustained before, during and after storm events, and are dependent on critical systems, including transportation and utilities. Lower-income and minority populations often already struggle to access food, health, and medicine, and are among the vulnerable populations during a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality has emergency plans for provision of food, health, and medicines to residents, through its comprehensive, hazard mitigation, or other plans.	Under the Emergency Operations Plan (2020) this is addressed in the Basic Plan and in the Emergency Coordination Guide-Health & Medical Services Branch.
1		b. Locality has plans for providing food to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access food during emergencies and coastal storm events.	See above.
1		c. Locality has plans for providing healthcare to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access healthcare during emergencies and coastal storm hazards.	See above.
1		d. Locality has plans for providing medicine to vulnerable populations, areas for improvement, has developed partnerships to address these needs, and has provided information to the public on how to access medicine during emergencies and coastal storm hazards.	See above.

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE: 0 / 4 Points

To ensure that socially vulnerable and underserved populations do not experience disproportionate impacts from flooding and coastal hazards, a locality needs to be able to predict how its residents may fare during a coastal storm hazard event, and then help those who are most vulnerable. One key measure that can be useful to localities in this effort is the metric for "deaths of despair"— or the prevalence of suicide, cirrhosis of the liver, and overdoses – which can serve as a proxy for the locality's physical and mental health, as persons who are suffering from depression and addictions are less likely to be able to respond effectively during flooding events. A locality with good physical and mental health will be better able to respond effectively to new or changing conditions as well as to recover from stressful events.

Points		Scoring Metric	Notes
0		a. Locality maintains data on community physical and mental wellbeing and challenges through specific metrics, such as the metrics for "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	No information available or provided.
0		b. Locality has met at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	No information available or provided.
0		c. Locality has identified, or maps its vulnerable neighborhoods, and has done this in partnership with NGOs, faith- based organizations, and its health and community services board.	No information available or provided.
0		d. Locality has a plan with these NGOs, faith-based organizations, and health and community services board that helps its physically and mentally challenged vulnerable populations prepare for coastal flooding events, and that provides assistance to them during and after these events.	Per locality staff, the fire department and sheriff office have a list of people with special needs and disabilities who might need extra help during emergencies but there is not a plan with NGOs and such.

TOTAL SCORE FOR SECTION 5: 9 / 20 POINTS

Opportunities

Example of an Opportunity Action Item Checklist showing possible actions to improve scores in each scorecard category. Opportunity items for your locality will be determined by your implementation team and The RAFT core team.

Locality Action Category	Score	Opportunity Actions for Score Improvement	Potential Time Commitment Short-Term: < 1 year; Mid-Term: 1-3 years; Long-Term: > 3 years
1.1 Locality Leadership and Planning for Resilience	≤ 2	Identify and task resiliency staff and leaders.	ST – MT
		Hold resiliency training and education events for elected officials.	MT
		Hold resiliency training and education events for locality staff or community member in charge of handling efforts.	MT
		Locality staff and/or elected officials meet at least once per quarter to coordinate resiliency planning.	LT
2.5 Resident Emergency Preparedness	≤ 2	Develop a resident emergency preparedness plan that identifies risks and needs, including knowledge of water safety.	ST
		Conduct community outreach at least once a year to inform residents about community emergency preparedness.	MT – LT
		Engage resident groups, including schools and hospitals, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	ST
		Implement early warning signals/systems/emergency warning tools for residents (especially vulnerable populations).	ST
4.2 Coastal Resiliency in Comprehensive Plan	≤ 2	Incorporate discussion into Comprehensive Plan about how community engagement regarding coastal resilience informed the plan.	ST
		Incorporate discussion into Comprehensive Plan about coastal resilience and coastal storm hazards and assessments designed to reduce vulnerability through the development of resiliency policies.	ST
		Incorporate discussion into Comprehensive Plan about the goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	ST
		Incorporate discussion into Comprehensive Plan about impacts on critical infrastructure and essential services from coastal storm hazards, especially for vulnerable populations.	ST

Next Steps

Resilience Action Workshop

1) Community leaders work together to create a one-year **Resilience Action Checklist.**

2) The RAFT Core team helps to **identify achievable action items** for improving resilience.

3) Localities break into focused discussion groups to **identify 3 to 5 top opportunities** for the next year to increase resilience.

4) Large group discussion on **regional sharing**, followed by breakout into locality discussion groups to:
    a. **Identify a Locality Implementation Team;**
    b. **Create a timeline for actions;**
    c. **Coordinate logistics;**
    d. **Determine next steps for implementation team.**

Implementation

- **Identify a Locality Implementation Team** made up of local officials and residents that will work with the Core Team to accomplish checklist actions and projects.

- **Work with one of the Core Team members** who will set up periodic check-in meetings or calls to track progress and provide support.

- Assistance from RAFT partners could take the form of:
    - **Communications product development;**
    - **Hazard and critical infrastructure mapping;**
    - **Policy and legal analysis;**
    - **Model ordinance and comprehensive plan language;**
    - **Green infrastructure projects;**
    - **Workshop or meeting facilitation;**
    - **Community engagement recommendations;**
    - **Specific research or data collection projects.**

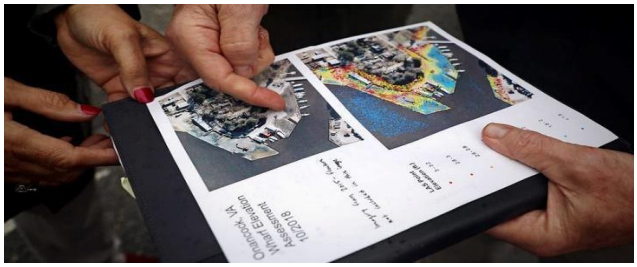


Photo by Aileen Devlin, Virginia Sea Grant

Data Sources Used to Complete Scoring

Data Sources	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Business Association Website								X																	
Calls to the locality	X	X	X	X		X	X	X	X	X		X	X	X					X			X			X
Calls to the PDC	X	X	X			X	X		X				X												
Capital Improvement Plan																X		X							X
Community Services Board																									X
County Health Rankings and Roadmaps																									X
Dam Management Plan											X														
DCR Floodplain Management Program					X	X															X				
Department of Conservation and Recreation			X		X																	X			
Department of Emergency Management																						X			
Department of Environmental Quality													X												
Department of Health							X						X												
Department of Transportation Road and Bridge Standards												X													
Emergency Management Plans				X																					
Emergency Operations Plan	X	X					X				X										X			X	X

FEMA's CRS website					X																				
Fire Department website		X																							
Flood exposure and vulnerability assessment publications (VIMS, FEMA, and DCR)						X															X				
Hazard Mitigation Plan	X	X				X		X	X	X	X	X	X	X		X			X			X		X	X
Local Assessments of Ecological Assets															X										
Local Boards to advise elected officials																					X				
Local Budget																X									
Data Sources	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**5.1**	**5.2**	**5.3**	**5.4**	**5.5**
Local Chamber Website								X								X									
Local Economic Impact Assessments																X									
Local Ordinances and Comprehensive Plan				X			X						X	X	X		X	X	X	X	X			X	X
Local Public Works Design & Construction Standards												X													
Local Transportation Plan												X													
Local Utility Website													X												
Local Water Supply Plan													X												
Locality Resilience Plan or Strategy	X			X																					

Locality Social Media																				X	X		X		
Locality Website	X	X	X				X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
School Curriculum																					X				
Social Services							X																		
Planning District Commission (PDC) website	X	X	X			X	X		X																
Public Libraries																						X			
Wetlands Watch					X																				
Zoning Codes																			X						

KING WILLIAM COUNTY
DRAFT Resilience Action Checklist

The RAFT | Resilience Adaptation Feasibility Tool

TOP PRIORITIES TO ADDRESS IN THE NEXT YEAR WITH SUPPORT FROM THE RAFT

- ❑ **PLAN AND HOST REGIONAL COMMUNITY WORKSHOP ON RESILIENCE**
  Host a Regional Community Workshop for the public, to include West Point and Tribal communities, to provide community education concerning flood risks and resiliency and to discuss transportation vulnerabilities, potential grants and other funding sources, the Middle Peninsula Planning District Commission's "Fight the Flood" program, and services offered for shoreline property owners.

- ❑ **CREATE A PLAN TO PROMOTE AFFORDABLE HOUSING**
  Collaborate with partners to develop a plan to address affordable housing issues, to include preservation of existing affordable housing stock and development of new affordable rental units where residents can move in quickly, with corresponding outreach to landlords.

- ❑ **IDENTIFY AND DEVELOP PLAN TO ADDRESS VULNERABLE TRANSPORTATION INFRASTRUCTURE**
  Work to identify vulnerable transportation corridors that may be impassable for emergency vehicles due to flooding, such as the road to the Middle Peninsula Airport and the road to access the Pamunkey Reservation, and then engage with potential agency, funding, and community partners to develop a plan to address the identified needs.

- ❑ **TAKE STEPS TO ENABLE PROACTIVE RESILIENCE PLANNING**
  Support development and potential creation of an entity to proactively plan for flooding, natural disasters, and other coastal hazards to increase community resilience, including assisting the County with incorporating resilience into the comprehensive plan that is currently under review. This entity can also work to create, engage with, and support community organizations to train citizens about disaster preparedness and response (e.g., Community Emergency Response Team (CERT)).

- ❑ **ADDRESS NEEDS OF THE ELDERLY AND PHYSICALLY DISABLED RESIDENTS**
  Evaluate the community's capacity for addressing the needs of elderly and physically disabled residents (e.g., Meals on Wheels), and develop resources to enable communication with this particular group during emergencies.

This checklist was developed by community participants in the online Resilience Action Workshop, conducted and facilitated by The RAFT three-university Collaborative Team on January 28th, 2022. This document is intended to be static and record the outcomes of that workshop. However, the checklist items and their details may evolve over the course of the year-long implementation of The RAFT in response to the changing circumstances and needs of the community.

University of Virginia
Institute for Engagement & Negotiation
Shaping Our World Together
William & Mary Law School
Virginia Coastal Policy Center
Old Dominion University
Institute for Coastal Adaptation & Resilience

**The RAFT team recommends the creation of a Resilience Committee as a way to create and sustain momentum to build resilience in the long term. We recognize, based on our experience with coastal communities in Virginia, and consistent with best practices in resilience planning and implementation, that communities benefit from a more comprehensive and coordinated approach to building resilience. Establishing a Resilience Committee is key to establishing a foundation for sustained efforts in building resilience. The RAFT team has developed a worksheet to assist communities in establishing a Resilience Committee structure and framework, and if you decide this would benefit your community we can facilitate your discussion.

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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

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

* This RAFT product, Task # 92.03 was funded, in part, by the Virginia Coastal Zone Management Program led by the Virginia Department of Environmental Quality through Grant FY19 # NA19NOS4190163 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

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.

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THE RAFT

Resilience Adaptation Feasibility Tool

Mathews County

Scorecard Report

July 2021

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.

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Background

What is The RAFT?

- "Full-service tool" and collaborative, community-driven process designed to assist coastal localities in increasing their resilience.
- Conceived and developed by an academic interdisciplinary collaborative called the "Core Team"
    - Institute for Engagement & Negotiation (IEN) at the University of Virginia
    - Virginia Coastal Policy Center (VCPC) at William & Mary Law School
    - Old Dominion University (ODU)/Virginia Sea Grant Climate Adaptation and Resilience Program.

The RAFT has three key components:

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

How does The RAFT help a locality?

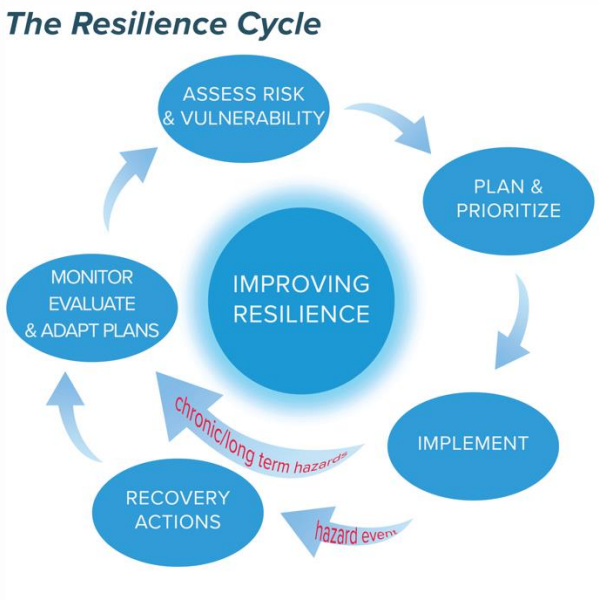
1. Open a community conversation about community resilience, including gaps, and needs.
2. Support the community in identifying priority actions for the largest impact in increasing resilience.
3. Improve communication and coordination within the community and with regional and state agencies.
4. Help the community become better positioned to find and apply for relevant funding opportunities.
5. Earn a better Community Rating System (CRS) score, which saves residents money on their flood insurance premiums.

What is resilience?

The RAFT focuses on coastal community resilience, improving the ability of a community to bounce back from hazardous events such as hurricanes and extreme weather and deal with chronic issues such as flooding.

The RAFT takes a comprehensive approach by including environmental, economic, and social resilience. All three are vital for a community to thrive.

To build resilience, localities need capacities in areas of emergency management, infrastructure, planning, policy, and community well-being.



Adapted from: NOAA Coastal Community Resilience Indicators and Rating Systems, 2015.

Locality Total Score

Category	Score Received	Possible Score
1) **POLICY, LEADERSHIP, AND COLLABORATION** *Measures policy and legislation in place for coastal resilience and includes coordination and collaboration between various levels of government, and how accessible and open government data is to the public.*	11	20
2) **RISK ASSESSMENT AND EMERGENCY MANAGEMENT** *Examines how well a locality has conducted risk assessments to prepare for coastal storm hazards, identified vulnerable populations and their needs during or after a coastal storm hazard, and developed plans for disaster preparedness, including a Hazard Mitigation Plan.*	12	20
3) **INFRASTRUCTURE RESILIENCE** *Assesses how well the locality has identified methods and plans for storm water and protecting critical infrastructure including using natural and nature-based features (NNBF).*	12	20
4) **PLANNING FOR RESILIENCE** *Assesses the comprehensive plan and zoning code for resilience, how a locality is using incentives to promote resilience in building and development, how policies protect ecosystems, how they use green infrastructure to improve resilience, and how much resilience has been incorporated into planning.*	12	20
5) **COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING** *Assesses how the community engages with residents in planning for coastal storm hazard including social equity considerations and examines the locality's attention to issues of health and wellness during and after coastal events.*	8	20
Total Score:	55%	

Interpreting the Score

Low Resilience: Less than 50%- There are plenty of opportunities for improvement. The locality should decide whether it will be more beneficial to achieve the least difficult improvements first, or to tackle more challenging problems. The key is to decide which of these approaches makes the most sense, as the locality develops their Resilience Action Checklist.

Moderate Resilience: 50% - 74% – The locality is actively involved in coastal resilience planning and has achieved some successes. There are still opportunities for strengthening resilience. The Resilience Action Checklist should focus on weak categories and anticipate moderate to difficult improvements.

High Resilience: 75% or More- Locality is well prepared! There may still be room for resilience and the Resilience Action Checklist may focus on ways to improve resilience and further engage residents. Examples of locality policies, plans, and activities may assist other localities in the region and beyond.

If you see **CRS** next to an item, action to improve that metric can result in CRS credit.

If you see **$$$** next to an item, action to improve that metric supports economic resilience.

If you see next to an item, action to improve that metric supports environmental resilience.

If you see next to an item, action to improve that metric supports engagement with vulnerable populations.

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE: 4 / 4 Points

Collaboration among local government decision makers, officials, departments, academia, and NGOs is important in planning for coastal resilience. Effective collaboration requires identifying local leaders and organizations, establishing the roles of such leaders and organizations, and providing leadership training and educational resources.

Points		Scoring Metric	Notes
1		a. Leadership roles are identified for staff and/or elected officials important for planning for resilience. If staff is limited or nonexistent, the locality has tasked someone with handling resilience efforts for the community.	Hazard Mitigation Plan (link) at 368-69 identifies staff for mitigation activities: County Administrator and Emergency Services Coordinator. General leadership roles identified in Comprehensive plan (link) – notably the Wetlands Board.
1		b. Training and education events are held for elected officials specifically on resilience issues.	Training in Comprehensive plan (link) – notably the Wetlands Board, page 164. Per MPPDC contact, PDC conducts training and education on resilience issues.
1		c. Training and education events are held for locality staff, or if staff is limited or nonexistent, training of whomever has been tasked with handling resilience efforts for the community.	Training is mentioned in Comprehensive Plan (link), see Coastal Resource Management training on page 118. General training throughout Emergency Operations Plan (EOP). Per MPPDC contact, PDC conducts training and education on resilience issues.
1		d. Locality staff and/or elected officials, or whomever has been tasked with handling resilience efforts for the community, are meeting at least once per quarter to coordinate planning specifically on resilience issues.	Per MPPDC contact, the PDC meets regularly with leadership in the locality through a 25-member commission, as well as committees of local government administrators and local government planners. Resilience efforts are discussed throughout.

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY: 3 / 4 Points

Collaboration among local officials and relevant stakeholders is equally important in responding to a coastal hazard. An organized, coordinated response to a coastal hazard requires identifying stakeholders, establishing roles, creating plans, and publicizing information.

Points		Scoring Metric	Notes
1		a. Locality has identified stakeholders who will require emergency response including socially vulnerable populations.	General identification in EOP. MP Hazard Mitigation plan (link) at page 2, 16.
1		b. Locality has established internal emergency response roles (e.g., standing committees, staff titles), and these staff and partners participate in at least one training each year.	Internal emergency response roles and general discussion of trainings are set forth in EOP, pages 4-5; 8. Per MPPDC contact, PDC assists with some emergency trainings.
0		c. Locality collaborates on resilience planning with the stakeholders who will need emergency response and has provided the public with opportunity to give input from lower income vulnerable populations.	Per locality contact, the EOP only notes general planning with private sector, page 5.
1		d. Locality has a means of communicating these plans to the public during a coastal storm hazard event.	Emergency communications center in EOP, page 26-28. Smart911, opt in (link) replaced CodeRED in 2020. Facebook.

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs: 3 / 4 Points

Coastal resilience issues go beyond political boundaries; therefore, localities benefit from regional collaboration. Regular communication between local, multi-jurisdictional, and state officials encourages sharing of information and ideas. Collaboration should include working with agencies that serve socially vulnerable communities. Localities are part of a Planning District Commission (PDC), which coordinates many activities.

Points		Scoring Metric	Notes
1		a. Locality staff and/or officials engage with regional and state agencies on resilience-oriented issues.	General coordination in MP Hazard Mitigation Plan (link); Comprehensive Plan notes coordination with MPPDC as well as other agencies and initiatives (link).
0		b. Locality participation in local and regional resilience-oriented committees and initiatives to serve socially vulnerable populations.	No information available or provided.
1		c. Locality elected officials participate on relevant local and regional resilience-oriented commissions.	Per MPPDC contact, localities participate in Fight the Flood (link), as well as a septic repair revolving loan fund, and a living shoreline revolving loan fund.
1	$$$	d. Locality staff work to identify funding opportunities and priorities to address resilience issues at the regional and state level.	2020 MP Comprehensive Economic Development Strategy. MPCEDS page 78, 97. Participation in MP Fight the flood, link. Per locality contact, town staff directs proper inquires to those MPPDC resources. Locality has also utilized Hazard Mitigation grant funding.

1.4 ADAPTIVE MANAGEMENT: 1 / 4 Points

Adaptive management involves updating ordinances and plans for coastal resilience based on new findings and emerging strategies. Use of data, scientific analyses, and new information is important to inform local policies to prepare. Adaptive management means incorporating lessons learned from research that informs best methods for addressing the needs of socially vulnerable populations.

Points		Scoring Metric	Notes
0		a. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into the Floodplain Management Ordinance.	Chapter 63. Floodplain Management (adopted 2014) link. Per locality contact, they are in the process of updating this ordinance.
0		b. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Zoning Ordinance.	Chapter 175. Zoning. Amended through 2013. link.
0		c. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Site and Subdivision Ordinances.	Chapter 140. Subdivisions. Amended through 2012. link
1		d. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Comprehensive Plan.	Comprehensive plan (link) revised 2018. See e.g., pages 4, 117-119, 123.

1.5 The NFIP's COMMUNITY RATING SYSTEM: 0 / 4 Points

Communities wishing to go above and beyond the minimums of the National Flood Insurance Program can choose to participate in the Community Rating System (CRS). Participating communities implement higher standards of floodplain management, and, in return, residents are eligible for flood insurance premium reductions. Localities can do many things to improve their scores. For more information, see FEMA's CRS website or the Wetlands Watch website on the subject.

Points		Scoring Metric	Notes
0	CRS	a. Locality has achieved a CRS Score of 9 or higher.	Locality is not listed on the 2020 CRS communities list. link.
0	CRS	b. Locality has achieved a CRS Score of 8.	See above.
0	CRS	c. Locality has achieved a CRS Score of 7.	See above.
0	CRS	d. Locality has achieved a CRS Score of 6 or lower.	See above.

TOTAL SCORE FOR SECTION 1: 11 / 20 POINTS

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT: 4 / 4 Points

Localities should conduct and use an assessment of their flood exposure and vulnerability in developing policies and programs. Localities should be knowledgeable of their flooding risks, raise awareness in the community about vulnerable areas, help target action to assist the most threatened areas and reduce possible damage, and save costs by being preemptive not reactive.

Points		Scoring Metric	Notes
1	CRS	a. An exposure and/or vulnerability assessment is completed, mapped and updated within the last 5-7 years, available at the locality level, and (as evidence of being used) referenced in locality policy making.	Middle Peninsula Hazard Mitigation Plan at 164. Per PDC Staff, the county has also participated in a dredging assessment, and a shoreline assessment with VIMS
1	CRS	b. Sources of flooding for both tidally-driven and precipitation-driven events are identified and updated within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 65-67 (Rivervine flooding); 75 (Ditch flooding); 80-82 (Coastal flooding)
1	CRS	c. Flooding for different return period storm events is identified and mapped.	Middle Peninsula Hazard Mitigation Plan at 164-69.
1	$$$ CRS	d. Additional vulnerabilities (see above), including cultural, historic and economic assets, are identified and updated within the last 5 years.	Middle Peninsula Hazard Mitigation Plan at 16-17 (Community Profile) The Comprehensive Plan at 48 discusses environmental impacts on the county's aquaculture and fisheries

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS: 0 / 4 Points

Localities should conduct risk assessments of their socially vulnerable populations. These populations include those in areas of high poverty, elderly, caregivers, veterans, homeless, transient or nomadic communities, children and youth, physically or mentally disabled people, medically fragile people and non-English speakers. Because these populations may not have resources to change their level of vulnerability, it is vital for localities to identify these populations, ways to reduce their risk, and create plans for assistance during and after coastal hazard events. Localities need to conduct outreach to vulnerable populations.

Points		Scoring Metric	Notes
0	CRS	a. Locality has identified vulnerable populations that are subject to flooding and coastal storm hazards.	No information provided or available.
0		b. Locality has engaged vulnerable populations and provided them with meaningful information (e.g., in their own language, relevant to their circumstances) relating to their vulnerability to coastal storm hazards.	No information provided or available.
0		c. Locality has worked with vulnerable populations to increase their emergency preparedness and evacuation plans so they know their risk and know what steps should be taken during and after an event.	No information provided or available.
0		d. Locality partners with organizations that provide assistance to vulnerable populations before, during and after coastal storm hazards, including food banks or pantries with refrigeration units and backup generators.	No information provided or available.

BUSINESS AND ECONOMIC RISK ASSESSMENT: 3 / 4 Points

Localities need to identify local business and economic vulnerabilities to coastal storm hazards. Businesses are differentially affected by these hazards and attention should be paid to making sure that businesses that serve vulnerable populations are considered. Including business and economic vulnerability in a risk assessment and emergency management is important for resilience and recovery after a storm event.

Points		Scoring Metric	Notes
1	$$$	a. Locality has included the business sector in its assessment and mapping of coastal hazard vulnerability	See 2020 MP Comprehensive Economic Development Strategy at page 97 (link). MP Hazard Mitigation plan, page 22 (link).
1	$$$	b. Locality has engaged economic development department and/or independent chamber of commerce in locality hazards mitigation and/or resilience planning.	VA Working Waterfront Master plan (Link) beginning at 64. Comprehensive plan (link) on 123-24.
0	$$$	c. Locality and/or business associations have programs for small businesses, particularly businesses that serve socially vulnerable populations, to encourage each business to be prepared for an emergency and plan for business continuity.	Emergency Operations Plan (EOP) link, pages 4-5, notes general support and coordination with private sector. However, it does not mention small businesses or socially vulnerable populations. Confirmed by locality contact.
1	$$$	d. Locality emergency management communicates with business sector in the event of severe weather emergency or evacuation.	Per locality contact, emergency communication is handled the same as with general public. See generally, EOP - Support and coordination with private sector to share info etc on page 5. Emergency communications center in EOP page 26-28. Smart911, opt in (link) replaced CodeRED in 2020. Facebook.

HAZARD MITIGATION: 4 / 4 Points

The Hazard Mitigation Plan (HMP) is required by state code as a condition of emergency assistance. In the coastal region, it is important for the HMP to specifically address coastal storm hazards by identifying what locality resources and areas are at risk, to enable the locality to take actions to reduce future risks. Furthermore, having an HMP is essential to be eligible for certain grants and funding related to coastal storm hazards.

Points		Scoring Metric	Notes
1		a. The locality's HMP specifically addresses coastal resilience.	See generally Middle Peninsula Hazard Mitigation Plan
1		b. The locality is engaging in regional coordination for Hazard Mitigation through a regional plan.	See generally Middle Peninsula Hazard Mitigation Plan
1		c. The locality's HMP details how the locality collaborates with VDEM, DCR Floodplain Management or SHMO.	Middle Peninsula Hazard Mitigation Plan at 1-3
1		d. The locality's HMP is approved by FEMA, was developed with meaningful public engagement with socially vulnerable communities and is formally adopted by locality governing body.	FEMA Hazard Mitigation Plan Status

2.5 RESIDENT EMERGENCY PREPAREDNESS: 1 / 4 Points

Well-organized emergency preparedness plans save lives and property and help ensure that localities can act in sufficient time. They contribute to faster and more efficient post-hazard recovery. Preparedness for vulnerable populations includes ensuring that residents have the opportunity to learn swimming and water safety skills. Communities should consider participating in regional, national, or state-wide outreach events such as Hurricane Preparedness Week.

Points		Scoring Metric	Notes
?	CRS	a. Locality has a current resident emergency preparedness plan, updated within the last five years, which identifies resident emergency preparedness risks and needs, including knowledge of water safety.	Emergency Operations Plan listed as 2007 version; check with locality staff this is the most updated version
?	CRS	b. Locality conducts community outreach at least once a year to inform residents about community emergency preparedness.	Don't see any events on community calendar; ask locality staff
?	CRS	c. Locality engages resident groups, including schools, hospitals, and other groups, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	Ask locality staff
1	CRS	d. Locality has implemented early warning signals/systems/emergency warning tools for its residents, particularly those most vulnerable.	Uses "SMART 911" Alerts and the County Public Schools and County Government offices relay this information to the media as early in the morning as possible.

TOTAL SCORE FOR SECTION 2: 12 / 20 POINTS

3) INFRASTRUCTURE RESILIENCE

3.1 STORMWATER INFRASTRUCTURE: 1 / 4 Points

Stormwater management is regulated by state law, which requires localities either create and operate a stormwater management program or request the state to operate its stormwater management program. Local ordinances must comply with the Virginia Stormwater Management Act and regulations, as well as the Virginia Erosion and Sediment Control Law. Additional stormwater management and flood risks are typically handled at the local level through environmental regulation, site plan approval, and subdivision approval. Localities that go beyond the minimum state requirements are better able to manage stormwater and increase their resilience to coastal storm hazards. Stormwater infrastructure may include use of bioswales, dry ponds, retention basins, rainwater management systems, low impact development, rainwater collection and management systems, green infrastructure, rooftop gardens, and green and open spaces.

Points		Scoring Metric	Notes
0	$$$	a. Locality offers at least one official incentive for private property activities that manage stormwater.	Per locality staff, there are currently no specific incentives for storm water management.
1		b. Locality funds stormwater management projects through stormwater utility fees, user fees, grants, or other creative funding mechanisms.	According to the MP Hazard Mitigation Plan at 273, the county does not have a storm water utility fee Per locality staff, the county applied for funding from the Outfall Ditch Program run by VDOT.
0		c. Locality implements one or more stormwater BMPs on public property for educational demonstration, as shown by signage, tours, or other information.	Per locality staff, there is currently no educational signage.
0		d. Locality stormwater policy goes above and beyond the minimum state requirements.	Per locality staff, the county is an “opt-out” county, so their storm water management is basically entirely state run. The county’s policy mirrors state requirements.

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE: 2 / 4 Points

An evaluation of critical transportation infrastructure allows a locality to understand its capacity and preparedness for coastal storm hazards. Although most localities do not manage their own roads, as this is handled at the state level, they nevertheless do have the ability to identify their transportation needs and priorities.

Points		Scoring Metric	Notes
0		a. Locality has identified critical transportation infrastructure and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 163. Comprehensive Plan at 77-80, 103 Per PDC, the county has participated in dredging assessments. Per locality staff, they do not maintain a list of strictly "critical" infrastructure.
1		b. Locality has developed a plan to protect critical transportation infrastructure within last 5 years.	The Comprehensive Plan at 106-07, mentions using stream buffers, reducing pavement, and implement stormwater BMPs to protect infrastructure. Per locality staff, the county worked with VDOT to identify drainage problems with the roads around the courthouse. Implementation of the plan to improve these roads began within the last three years.
1		c. Locality has a plan available and has informed residents which critical transportation infrastructure to utilize in the case of coastal storm hazards.	County uses an Emergency Alert System Hazard Mitigation Plan at 302 (Main Evacuation routes)
0		d. Locality has a contingency plan for critical transportation infrastructure. This plan has been created and/or updated in the past 5 years.	Per locality staff, there is currently no specific contingency plan.

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES: 2 / 4 Points

Communication and coordination between a locality and its municipal water utility and wastewater utility enable a coordinated, cohesive, and synchronized response to a coastal storm hazard.

Points		Scoring Metric	Notes
0		a. Locality conducts an assessment of its drinking water supply and wastewater management, both public sources and private well owners, to identify vulnerabilities to coastal storm hazards.	The Comprehensive Plan at 68-72 discusses the county's dependence on an aquifer and ground water and acknowledges that the supply of safe drinking water is a continuous challenge. Per locality staff, there has not been an assessment of vulnerabilities for potable water demand in light of coastal storm hazards.
0		b. Locality water supply plan addresses coastal flooding and hazard events to assure safe drinking water supply and water conservation.	The Middle Peninsula Regional Water Supply Plan was created in 2011 and has been updated in accordance with the 5 year update schedule. It does not specifically address coastal flooding and hazard events but does point out saltwater intrusion as a factor in their groundwater management in Section 11.
1		c. Locality conducts a resident education program on safe drinking water to assure post-event public health and safety.	According the MP Hazard Mitigation Plan at 274, county has a public education program about "responsible water use, fire safety, household preparedness, environmental education."
1		d. Locality communications with municipal water and wastewater utility, to manage ongoing challenges to safe water, including during and after a storm, Alternatively or additionally, the locality has established methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	The Comprehensive Plan at 72 mentions that 30 private wells were monitor by the Va. Health Department, and the county is thinking about implementing a wellhead protection program. Comprehensive Plan at 102.

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES: 3 / 4 Points

An evaluation of critical infrastructure for emergency services including shelters, emergency facilities, medical, electrical, and other essential services that allows a locality to understand its capacity and preparedness for coastal storm hazards. Critical infrastructure ensures that socially vulnerable populations, not just those who can afford it, will have access to quality drinking water, electricity, food, and shelter.

Points		Scoring Metric	Notes
1		a. Locality identifies critical infrastructure for emergency services and assessed its vulnerability within last 5 years.	Comprehensive Plan at 94-96 (identifying rescue squad and public safety stations throughout the county) Emergency Operations Plan adopted in 2007.
1		b. Locality has a plan to protect critical infrastructure from storms within last 5 years.	Comprehensive Plan at 103. Per locality staff, the county is renovating fire stations in vulnerable areas. Moreover, the county is evaluating a new site for a rescue station.
1		c. Locality informs residents which critical infrastructure they should use during coastal storm hazards.	County uses an Emergency Alert System
0		d. Locality has a contingency plan for continuing services. This plan has been developed or updated in last 5 years.	Per locality staff, there is not currently a contingency plan.

3.5 NATURAL AND NATURE-BASED FEATURES: 4 / 4 Points

Natural and nature-based features (NNBF) are features that define natural coastal landscapes and are either naturally occurring or have been engineered to mimic natural conditions. Examples include beaches and dunes; vegetated forest buffers, salt marshes, freshwater wetlands, and submerged aquatic vegetation; oyster reefs; and barrier islands. Green infrastructure (GI) is similar and complementary, and uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. Both NNBF and GI may be undertaken by a community in a variety of ways.

Points		Scoring Metric	Notes
1		a. Locality has identified natural and nature-based features that are protective and can assist with coastal resilience.	Comprehensive Plan at 125, 138, 144-46
1		b. Locality has developed plans and policies that use natural and nature-based features to enhance coastal resilience.	The Zoning Code contains requirements for landscaping, including information about vegetative and natural buffers
1		c. Locality is implementing projects that are in accordance with the plans and policies developed to utilize natural and nature-based features to increase coastal resilience.	Mathews County Shoreline Management Plan (Brochure from 2010) Per PDC staff, there is a dredging and beneficial reuse project, which includes projects specifically in Mathews. There is also a grant to construct a living shoreline on the East River.
1	$$$	d. Locality offers incentives for the use of natural and nature-based features to increase coastal resilience.	Middle Peninsula Living Shoreline Incentive Program. Per Locality staff, the county guides residents to the program. The county is also participating in a beach renourishment project. Per PDC Staff, citizens have access to, and localities are encouraged to give citizens information about, Fight the Flood.

TOTAL SCORE FOR SECTION 3: 12 / 20 POINTS

4) PLANNING FOR RESILIENCE

4.1 BUDGET, FUNDING AND STATE & FEDERAL ASSISTANCE: 3 / 4 Points

Coastal hazard mitigation efforts, when properly funded, can reduce or prevent damage and decrease costs from storm damage. To ensure proper funding a locality can budget for mitigation efforts, assess the potential economic impact from a coastal storm hazard, and identify sources of funding for mitigation projects.

Points		Scoring Metric	Notes
1		a. Locality has incorporated into its Capital Improvement Plan (CIP) funding for coastal resilience. Projects could include upgrading critical infrastructure, water and wastewater systems, and/or food and health systems, with priority for needs of vulnerable populations.	Per locality staff, Dredging and Beach Renourishment projects are included in the Capital Improvement Plan.
1	$$$	b. Locality has conducted an economic impacts assessment of coastal storm hazards.	Middle Peninsula Hazard Mitigation Plan discusses how 61% of business establishments would be impacted by hurricane storm surges which would reduce quarterly revenues by 54%, following a study by the Bureau of Labor Statistics.
1		c. Locality has identified specific actions for coastal resilience (pre/post-flooding mitigation) in Hazard Mitigation Plan.	Middle Peninsula Hazard Mitigation Plan The County implemented rapid notification systems, strategies to mitigate flooding, and implemented evacuation routes.
0	$$$	d. Locality has identified funding for non-CIP coastal resilience projects, including priority needs of vulnerable populations impacted by coastal storm hazards.	No information provided or available.

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN: 2 / 4 Points

A comprehensive plan is a locality's vision for future land use, development, adaptation, and resilience. Coastal resilience can be addressed in comprehensive plans by incorporating elements such as green infrastructure, open space preservation, infill development, the National Flood Insurance Program (NFIP), the Community Rating System (CRS), and stormwater management. The ideal comprehensive plan identifies equity and the need to identify and support socially vulnerable populations as a priority for resilience, as well as a priority preference for restoration, green infrastructure and connectivity.

Points		Scoring Metric	Notes
0		a. The comprehensive plan discusses how community engagement around coastal resilience informed the plan.	No information provided or available.
1		b. The comprehensive plan includes clear discussion of coastal resilience and coastal storm hazards and incorporates assessments to inform the development of policies to reduce vulnerability to coastal storm hazards.	Comprehensive Plan discusses coastal storms and hurricanes that cause damage and the percentage of damage to the county based on the severity of the storm. Additionally, the Comprehensive Plan discusses how these hazards informed the county's plan to regulate and limit construction.
1		c. The comprehensive plan includes goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	Comprehensive Plan discusses the goal of protecting natural resources which are "fundamental to the community's quality of life and prosperity." Comprehensive Plan discusses environmental opportunities to regulate land to account for rising sea levels.
0		d. The comprehensive plan addresses impacts on critical infrastructure and essential services from coastal storm hazards, particularly for impacts affecting socially vulnerable populations.	No information provided or available.

4.3 LAND USE ORDINANCES: 2 / 4 Points

A locality's land use ordinances (such as zoning, subdivision, and floodplain) should enact the locality's vision and policies laid out in its comprehensive plan. Land use ordinances can be used to conserve and protect natural resources, ecosystems, agricultural lands, and areas vulnerable to flooding. Localities are required to enact Chesapeake Bay Preservation Act ordinances and going beyond these ordinances provides greater resilience.

Points		Scoring Metric	Notes
1	CRS	a. Locality land use regulations protect areas vulnerable to flooding by limiting development inside the floodplain or encouraging development outside the floodplain.	§63-1 regulates uses and development within districts subject to flooding.
0	CRS	b. Locality land use regulations protect areas vulnerable to flooding by setting higher standards in existing flood zones or by designating additional flood zones beyond those designated by FEMA.	No information provided or available.
1	CRS	c. Locality land use regulations protect areas vulnerable to flooding by setting buffers, including open space.	Per locality staff, county has regulations devoted to setting buffers and mandating open space across the county. Although the buffer regulations are not specifically targeting areas vulnerable to flooding, locality staff indicated that setting buffers assists in promoting coastal resilience.
0	CRS	d. Locality land use regulations protect areas vulnerable to flooding by using setbacks to protect flood-prone areas.	No information provided or available.

4.4 INCENTIVES FOR COASTAL RESILIENCE: 2 / 4 Points

Incentive programs encourage infill development and protect open spaces, while protecting flood-prone areas and critical ecosystems. Incentives should be developed with community input, with particular attention to consulting agencies and organizations working with or providing services to lower income and vulnerable populations as well as agencies and organizations working to build community resilience.

Points		Scoring Metric	Notes
1	$$$	a. Locality offers an incentive for achieving coastal resilience goals: discourage development in areas prone to flooding; protect critical ecosystems; encourage sustainable development; improve resilience in high-risk areas; and preserve natural assets.	Per locality staff, county provides reductions to setback requirements for cluster developments.
1	$$$	b. Locality offers a second incentive for achieving the goals listed above.	Per locality staff, the County informs the community about the “Living Shoreline” Program.
0	$$$	c. Locality offers a three or more incentives for achieving the goals listed above.	No information provided or available.
0	$$$	d. Locality develops incentives in consultation with agencies and organizations working with socially vulnerable populations.	No information provided or available.

4.5 NATURAL RESOURCE PRESERVATION: 3 / 4 Points

Natural resources are important to the locality's economy, environment, and quality of life. Natural resources also can help protect against coastal storm hazards and minimize damage from coastal storm events. The preservation of these critical natural resources is paramount to providing resilience for a coastal locality during these events. These actions should go beyond the required Chesapeake Bay Preservation Act Ordinance.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified and mapped natural resources that are important for broad ecosystem health and which are at risk of being lost due to flooding and coastal storm hazards.	Comprehensive Plan discusses natural resources that are essential to water quality and mitigating the floodplains. Comprehensive Plan has maps depicting protected areas, elevated areas, and the floodplains.
1	CRS	b. Locality has developed plans and policies that preserve and restore natural resources to increase coastal resilience.	Per locality staff, the county has dredging and beach renourishment projects meant to preserve and restore natural resources to protect the county from coastal storm hazards.
1		c. Locality has programs with residents, civic organizations, and nonprofit organizations to educate community about the natural resource preservation plan and engage them in helping to implement the plan.	Per locality staff, county officials engage local schools to discuss the importance of the Chesapeake Bay and attend Rotary Club meetings to conduct presentations about natural resources within the County.
0		d. Locality is funding actions that implement the natural resource preservation plan.	No information provided or available.

TOTAL SCORE FOR SECTION 4: 12 / 20 POINTS

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING: 0 /4 Points

For community resilience, it is important to use meaningful engagement strategies where residents are able to provide feedback and suggestions through meetings, workshops, and surveys. To reach people of color and the elderly, media and social media that serves these populations is effective. Public engagement enables residents and other stakeholders to provide input to the locality. Better informed residents are better able to ensure their locality remains resilient to coastal storm hazards.

Points		Scoring Metric	Notes
0		a. Locality has a written policy regarding the role of residents and businesses, schools and educators, institutional, nonprofit, faith-based communities veterans, and other stakeholders in coastal resilience.	No information available or provided.
0	CRS	b. Locality has staff dedicated to public engagement on coastal resilience, including a standing committee that addresses coastal resilience as part of its work.	Per locality staff there is no staff or committee specifically dedicated to public engagement on coastal resilience but existing staff act on public engagement work when required.
0	CRS	c. Locality holds at least one public meeting per year, including one in vulnerable resident areas to address coastal resilience issues and posts the results of the public meetings. For 75-150,000, at least two such public meetings per year; for 150,000+ at least three per year.	No information available or provided.
0	CRS	d. Locality informs and engages vulnerable population about coastal resilience by using website, social media, media serving people of color and minorities, and faith-based organizations to enable them to provide suggestions about issues and strategies.	Per locality staff there is no communication specific to vulnerable populations.

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC: 3/4 Points

The public needs free and open access to information related to coastal resilience and planning. Information sharing allows residents to understand their risks and the importance of resilience. Information should be shared easily and presented in a manner which is clear and easy to understand, and easy to access in ways that reach different populations in the community.

Points		Scoring Metric	Notes
1	CRS	a. Locality provides to the public localized user-friendly information on coastal resilience, in digital and non-digital formats and in multiple languages where appropriate based on demographics.	The information is not provided in languages besides English but per locality staff this is not necessary based on demographics. See B for some of the information provided in digital format.
1	CRS	b. Locality provides to the public localized user-friendly information on coastal resilience, on a website (e.g., interactive maps).	Provides maps of flood zones and storm surge inundation and has general facts about flood zones on the county website (link).
1	CRS	c. Locality provides localized user-friendly information on coastal resilience in public spaces (e.g., public offices or library).	Per locality staff, this is being done.
0	$$$	d. Locality provides the public with localized, user-friendly information about economic costs and risks associated with coastal storm hazards.	Per locality staff, this is not being done on a widespread basis but if that they do inform people looking to build new homes about FEMA flood insurance when they come into the office.

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE: 1 / 4 Points

Developing resident leaders and strong volunteer networks are important aspects of building a locality's health and wellness resilience. Leaders can be responsible for informing residents, expressing resident concerns, and assisting with local preparedness. Leaders can be called on during emergencies to assist residents in need and to assist with post-hazard recovery. Communities can build this capacity by offering volunteer opportunities to cultivate experienced, local responders.

Points		Scoring Metric	Notes
0		a. Locality supports and invests in community-led initiatives on coastal resilience.	Per locality staff, there are no community-led initiatives specific to coastal resilience.
1		b. Locality offers training opportunities and education opportunities for resident leaders or volunteers to educate residents on what they can do to increase their resilience on individual properties or in neighborhoods.	Per Comprehensive Plan (page 4) "Increased training for County Wetlands Board members, contractors, and citizens in 'living shoreline' stabilization methods and development of a model certification program that can be used by other communities."
0		c. Locality supports resident leaders or volunteers in community education and outreach efforts about coastal resilience by providing them with materials, speakers for gatherings, or support for resident action projects.	Per locality staff, there are no volunteer efforts but they would support them if any existed.
0		d. Locality highlights the work of resident leaders or volunteers in supporting and advancing coastal resilience, on its website, through social media, Facebook, awards, or other means.	Per locality staff, if there were resident leaders or volunteers working to advance coastal resilience, they would be highlighted in the community paper.

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE: 4 / 4 Points

If a community's food, health, and medicine systems are not resilient before a storm, then the community may face a substantially longer recovery. Food, health, and medicine systems must be sustained before, during and after storm events, and are dependent on critical systems, including transportation and utilities. Lower-income and minority populations often already struggle to access food, health, and medicine, and are among the vulnerable populations during a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality has emergency plans for provision of food, health, and medicines to residents, through its comprehensive, hazard mitigation, or other plans.	Emergency Operations Plan (2007)
1		b. Locality has plans for providing food to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access food during emergencies and coastal storm events.	Emergency Support Function #6 Mass Care, Housing and Human Resources and Emergency Support Function #7 Resources Support under Emergency Operations Plan (2007)
1		c. Locality has plans for providing healthcare to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access healthcare during emergencies and coastal storm hazards.	Emergency Support Function #8 Public Health Services under Emergency Operations Plan (2007)
1		d. Locality has plans for providing medicine to vulnerable populations, areas for improvement, has developed partnerships to address these needs, and has provided information to the public on how to access medicine during emergencies and coastal storm hazards.	Emergency Support Function #8 Public Health Services under Emergency Operations Plan (2007)

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE: 0 / 4 Points

To ensure that socially vulnerable and underserved populations do not experience disproportionate impacts from flooding and coastal hazards, a locality needs to be able to predict how its residents may fare during a coastal storm hazard event, and then help those who are most vulnerable. One key measure that can be useful to localities in this effort is the metric for "deaths of despair"— or the prevalence of suicide, cirrhosis of the liver, and overdoses – which can serve as a proxy for the locality's physical and mental health, as persons who are suffering from depression and addictions are less likely to be able to respond effectively during flooding events. A locality with good physical and mental health will be better able to respond effectively to new or changing conditions as well as to recover from stressful events.

Points		Scoring Metric	Notes
0		a. Locality maintains data on community physical and mental wellbeing and challenges through specific metrics, such as the metrics for "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	Per locality staff, this data is maintained by VDH.
0		b. Locality has met at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	Per locality staff, on some occasions "trusted messengers" have been identified but not under the context of flooding and coastal hazards.
0		c. Locality has identified, or maps its vulnerable neighborhoods, and has done this in partnership with NGOs, faith- based organizations, and its health and community services board.	No information available or provided.
0		d. Locality has a plan with these NGOs, faith-based organizations, and health and community services board that helps its physically and mentally challenged vulnerable populations prepare for coastal flooding events, and that provides assistance to them during and after these events.	No information available or provided.

TOTAL SCORE FOR SECTION 5: 8 / 20 POINTS

Opportunities

Example of an Opportunity Action Item Checklist showing possible actions to improve scores in each scorecard category. Opportunity items for your locality will be determined by your implementation team and The RAFT core team.

Locality Action Category	Score	Opportunity Actions for Score Improvement	Potential Time Commitment Short-Term: < 1 year; Mid-Term: 1-3 years; Long-Term: > 3 years
1.1 Locality Leadership and Planning for Resilience	≤ 2	Identify and task resiliency staff and leaders.	ST – MT
		Hold resiliency training and education events for elected officials.	MT
		Hold resiliency training and education events for locality staff or community member in charge of handling efforts.	MT
		Locality staff and/or elected officials meet at least once per quarter to coordinate resiliency planning.	LT
2.5 Resident Emergency Preparedness	≤ 2	Develop a resident emergency preparedness plan that identifies risks and needs, including knowledge of water safety.	ST
		Conduct community outreach at least once a year to inform residents about community emergency preparedness.	MT – LT
		Engage resident groups, including schools and hospitals, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	ST
		Implement early warning signals/systems/emergency warning tools for residents (especially vulnerable populations).	ST
4.2 Coastal Resiliency in Comprehensive Plan	≤ 2	Incorporate discussion into Comprehensive Plan about how community engagement regarding coastal resilience informed the plan.	ST
		Incorporate discussion into Comprehensive Plan about coastal resilience and coastal storm hazards and assessments designed to reduce vulnerability through the development of resiliency policies.	ST
		Incorporate discussion into Comprehensive Plan about the goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	ST
		Incorporate discussion into Comprehensive Plan about impacts on critical infrastructure and essential services from coastal storm hazards, especially for vulnerable populations.	ST

Next Steps

Resilience Action Workshop

1) Community leaders work together to create a one-year **Resilience Action Checklist.**

2) The RAFT Core team helps to **identify achievable action items** for improving resilience.

3) Localities break into focused discussion groups to **identify 3 to 5 top opportunities** for the next year to increase resilience.

4) Large group discussion on **regional sharing**, followed by breakout into locality discussion groups to:
    a. **Identify a Locality Implementation Team;**
    b. **Create a timeline for actions;**
    c. **Coordinate logistics;**
    d. **Determine next steps for implementation team.**

Implementation

- **Identify a Locality Implementation Team** made up of local officials and residents that will work with the Core Team to accomplish checklist actions and projects.

- **Work with one of the Core Team members** who will set up periodic check-in meetings or calls to track progress and provide support.

- Assistance from RAFT partners could take the form of:
    - **Communications product development;**
    - **Hazard and critical infrastructure mapping;**
    - **Policy and legal analysis;**
    - **Model ordinance and comprehensive plan language;**
    - **Green infrastructure projects;**
    - **Workshop or meeting facilitation;**
    - **Community engagement recommendations;**
    - **Specific research or data collection projects.**

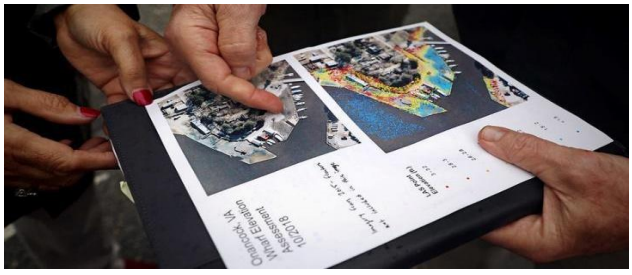


Photo by Aileen Devlin, Virginia Sea Grant

Data Sources Used to Complete Scoring

Data Sources	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Business Association Website								X																	
Calls to the locality	X	X	X	X		X	X	X	X	X		X	X	X					X			X			X
Calls to the PDC	X	X	X			X	X		X				X												
Capital Improvement Plan																X		X							X
Community Services Board																									X
County Health Rankings and Roadmaps																									X
Dam Management Plan											X														
DCR Floodplain Management Program					X	X															X				
Department of Conservation and Recreation			X		X																	X			
Department of Emergency Management																						X			
Department of Environmental Quality													X												
Department of Health							X						X												
Department of Transportation Road and Bridge Standards												X													
Emergency Management Plans				X																					
Emergency Operations Plan	X	X					X				X										X			X	X

FEMA's CRS website					X																				
Fire Department website		X																							
Flood exposure and vulnerability assessment publications (VIMS, FEMA, and DCR)						X															X				
Hazard Mitigation Plan	X	X				X		X	X	X	X	X	X	X		X			X			X		X	X
Local Assessments of Ecological Assets															X										
Local Boards to advise elected officials																					X				
Local Budget																X									
Data Sources	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**5.1**	**5.2**	**5.3**	**5.4**	**5.5**
Local Chamber Website								X								X									
Local Economic Impact Assessments																X									
Local Ordinances and Comprehensive Plan				X			X						X	X	X		X	X	X	X	X			X	X
Local Public Works Design & Construction Standards												X													
Local Transportation Plan												X													
Local Utility Website													X												
Local Water Supply Plan													X												
Locality Resilience Plan or Strategy	X			X																					

Locality Social Media																				X	X		X		
Locality Website	X	X	X				X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
School Curriculum																					X				
Social Services							X																		
Planning District Commission (PDC) website	X	X	X			X	X		X																
Public Libraries																						X			
Wetlands Watch					X																				
Zoning Codes																			X						

MATHEWS COUNTY
DRAFT Resilience Action Checklist

The RAFT | Resilience Adaptation Feasibility Tool

TOP PRIORITIES TO ADDRESS IN THE NEXT YEAR WITH SUPPORT FROM THE RAFT

- ❑ **DEVELOP A COMPREHENSIVE APPROACH TO ENHANCE COMMUNICATION AND OUTREACH**
  Expand accessibility of information and resources (such as about assistance programs, grants, through a more comprehensive approach to outreach and distribution of information. This will involve using non-traditional communication methods and outreach venues that are more accessible or informal, and relying on a wide range of trusted messengers to deliver and disseminate information.

- ❑ **ADDRESS VULNERABILITY OF PRIVATE WELL AND SEPTIC SYSTEMS**
  Develop an approach for (1) identifying private owners of well and septic systems that are vulnerable to sea level rise, (2) communicating this vulnerability and potential impacts, and (3) connecting property owners to assistant programs to address well and septic vulnerability, such as the VDH program that can provide direct funding to contractors for septic and well repairs for seniors and low-income residents.

- ❑ **COMPREHENSIVELY PLAN FOR PRESERVING AND SUPPORTING THE WORKING WATERFRONT**
  Develop a plan for preserving and supporting the working waterfront by (1) supporting watermen and businesses by making addressing, (2) prioritizing water access and public docks, and (3) increasing investment to secure, retrofit, rebuild, and update of public access areas.

- ❑ **ADDRESS VULNERABILITY OF SHORELINE PROPERTY**
  Develop an approach for (1) assessing vulnerability of private property in terms of shoreline erosion, (2) providing recommended solutions, and (3) connecting property owners to available assistance programs. This can take the form of existing written advisory reports from SEAS, and historically-excluded and underserved populations should be prioritized and targeted for assistance.

- ❑ **INCREASE RESILIENCE OF BUSINESSES**
  Support businesses address vulnerability and improve resilience. This could include targeting businesses located along the water and physically vulnerable, ensuring affordable housing for the workforce, addressing barriers of entry into specific industries (e.g. licensing, start-up costs, etc.), and developing land to support business and industry.

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OTHER ATTENDEE-SUGGESTED ACTIONS FOR FUTURE RESILIENCE EFFORTS

- Ensure water access and dockage for commercial entities.
- Develop resident emergency plans that identify preparedness actions such as places to go during an event and things to do.
- Offer resiliency-focused community training and dialogues on topics (on topics such as BMPs, sea level rise, septic, etc.) with a focus on moving beyond one-way knowledge transfer.
- Analysis of areas where managed retreat may be a better option than adapting in place.
- Community science opportunities through MyCoast (https://mycoast.org/) to document flooding and sea level rise, encourage community participation. The information collected can be used for documentation to support grant applications or project, communicate vulnerability, or advocate for projects or solutions.

This checklist was developed by community participants in the online Resilience Action Workshop, conducted and facilitated by The RAFT three-university Collaborative Team on January 28th, 2022. This document is intended to be static and record the outcomes of that workshop. However, the checklist items and their details may evolve over the course of the year-long implementation of The RAFT in response to the changing circumstances and needs of the community.

**RAFT team recommends the creation of a Resilience Committee as a way to create and sustain momentum to build resilience in the long term. We recognize, based on our experience with coastal communities in Virginia, and consistent with best practices in resilience planning and implementation, that communities benefit from more comprehensive and coordinated approach to building resilience. Establishing a Resilience Committee is key to establishing a foundation for sustained efforts in building resilience. The RAFT team has developed a worksheet to assist communities in establishing a Resilience Committee structure and framework, and if you decide this would benefit your community we can facilitate your discussion.

Acknowledgment of Funders

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Jessie Ball duPont Fund

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

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

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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.

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THE RAFT

Resilience Adaptation Feasibility Tool

Middlesex County

Scorecard Report

July 2021

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.

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* The RAFT implementation on the Eastern Shore, Task #92.03 was funded, in part, by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA17NOS4190152 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its sub agencies.

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Background

What is The RAFT?

- "Full-service tool" and collaborative, community-driven process designed to assist coastal localities in increasing their resilience.
- Conceived and developed by an academic interdisciplinary collaborative called the "Core Team"
    - Institute for Engagement & Negotiation (IEN) at the University of Virginia
    - Virginia Coastal Policy Center (VCPC) at William & Mary Law School
    - Old Dominion University (ODU)/Virginia Sea Grant Climate Adaptation and Resilience Program.

The RAFT has three key components:

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

How does The RAFT help a locality?

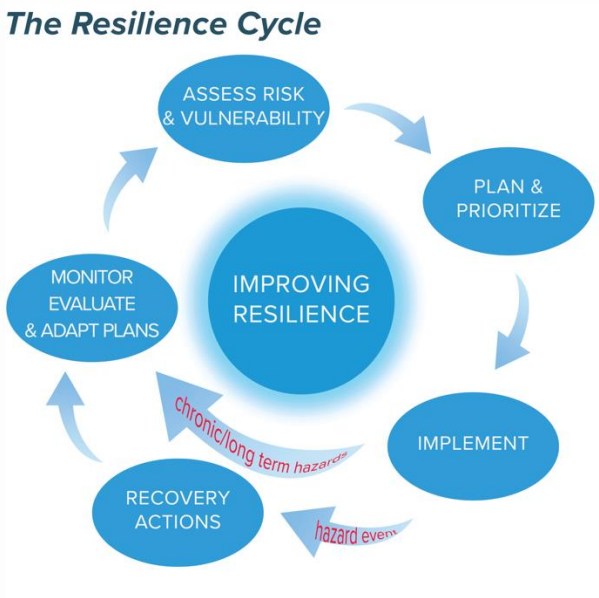
1. Open a community conversation about community resilience, including gaps, and needs.
2. Support the community in identifying priority actions for the largest impact in increasing resilience.
3. Improve communication and coordination within the community and with regional and state agencies.
4. Help the community become better positioned to find and apply for relevant funding opportunities.
5. Earn a better Community Rating System (CRS) score, which saves residents money on their flood insurance premiums.

What is resilience?

The RAFT focuses on coastal community resilience, improving the ability of a community to bounce back from hazardous events such as hurricanes and extreme weather and deal with chronic issues such as flooding.

The RAFT takes a comprehensive approach by including environmental, economic, and social resilience. All three are vital for a community to thrive.

To build resilience, localities need capacities in areas of emergency management, infrastructure, planning, policy, and community well-being.



Adapted from: NOAA Coastal Community Resilience Indicators and Rating Systems, 2015.

Locality Total Score

Category	Score Received	Possible Score
1) **POLICY, LEADERSHIP, AND COLLABORATION** *Measures policy and legislation in place for coastal resilience and includes coordination and collaboration between various levels of government, and how accessible and open government data is to the public.*	11	20
2) **RISK ASSESSMENT AND EMERGENCY MANAGEMENT** *Examines how well a locality has conducted risk assessments to prepare for coastal storm hazards, identified vulnerable populations and their needs during or after a coastal storm hazard, and developed plans for disaster preparedness, including a Hazard Mitigation Plan.*	17	20
3) **INFRASTRUCTURE RESILIENCE** *Assesses how well the locality has identified methods and plans for storm water and protecting critical infrastructure including using natural and nature-based features (NNBF).*	11	20
4) **PLANNING FOR RESILIENCE** *Assesses the comprehensive plan and zoning code for resilience, how a locality is using incentives to promote resilience in building and development, how policies protect ecosystems, how they use green infrastructure to improve resilience, and how much resilience has been incorporated into planning.*	12	20
5) **COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING** *Assesses how the community engages with residents in planning for coastal storm hazard including social equity considerations and examines the locality's attention to issues of health and wellness during and after coastal events.*	5	20
Total Score:	56%	

Interpreting the Score

Low Resilience: Less than 50%- There are plenty of opportunities for improvement. The locality should decide whether it will be more beneficial to achieve the least difficult improvements first, or to tackle more challenging problems. The key is to decide which of these approaches makes the most sense, as the locality develops their Resilience Action Checklist.

Moderate Resilience: 50% - 74% – The locality is actively involved in coastal resilience planning and has achieved some successes. There are still opportunities for strengthening resilience. The Resilience Action Checklist should focus on weak categories and anticipate moderate to difficult improvements.

High Resilience: 75% or More- Locality is well prepared! There may still be room for resilience and the Resilience Action Checklist may focus on ways to improve resilience and further engage residents. Examples of locality policies, plans, and activities may assist other localities in the region and beyond.

If you see **CRS** next to an item, action to improve that metric can result in CRS credit.

If you see **$$$** next to an item, action to improve that metric supports economic resilience.

If you see next to an item, action to improve that metric supports environmental resilience.

If you see next to an item, action to improve that metric supports engagement with vulnerable populations.

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE: 3 / 4 Points

Collaboration among local government decision makers, officials, departments, academia, and NGOs is important in planning for coastal resilience. Effective collaboration requires identifying local leaders and organizations, establishing the roles of such leaders and organizations, and providing leadership training and educational resources.

Points		Scoring Metric	Notes
1		a. Leadership roles are identified for staff and/or elected officials important for planning for resilience. If staff is limited or nonexistent, the locality has tasked someone with handling resilience efforts for the community.	Hazard Mitigation Plan (link) at 368-69 identifies staff for mitigation activities: County administrator, Director of Planning and Community Development, and Emergency Services Coordinator. General leadership roles ID in Comprehensive plan (link) page 3 (resilience in CH 2) and Emergency Operation Plan (EOP) (link) at 30-34.
0		b. Training and education events are held for elected officials specifically on resilience issues.	General training in EOP. Per MPPDC contact, PDC conducts training and education on resilience issues.
1		c. Training and education events are held for locality staff, or if staff is limited or nonexistent, training of whomever has been tasked with handling resilience efforts for the community.	No training in Comp Plan, general training in EOP. Per MPPDC contact, PDC conducts training and education on resilience issues. Per locality contact, wetlands staff undergo training with VIMS.
1		d. Locality staff and/or elected officials, or whomever has been tasked with handling resilience efforts for the community, are meeting at least once per quarter to coordinate planning specifically on resilience issues.	Per MPPDC contact, the PDC meets regularly with leadership in the locality through a 25-member commission, as well as committees of local government administrators and local government planners. Resilience efforts are discussed throughout.

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY: 3 / 4 Points

Collaboration among local officials and relevant stakeholders is equally important in responding to a coastal hazard. An organized, coordinated response to a coastal hazard requires identifying stakeholders, establishing roles, creating plans, and publicizing information.

Points		Scoring Metric	Notes
1		a. Locality has identified stakeholders who will require emergency response including socially vulnerable populations.	General Identification in EOP at 305. MP Hazard Mitigation plan (link) at 2, 16-17.
1		b. Locality has established internal emergency response roles (e.g., standing committees, staff titles), and these staff and partners participate in at least one training each year.	Internal emergency response roles are set forth in Emergency Operation Plan EOP, at 30-34. Trainings are set forth in EOP, at 29-30. Per MPPDC contact, PDC assists with some emergency trainings.
0		c. Locality collaborates on resilience planning with the stakeholders who will need emergency response and has provided the public with opportunity to give input from lower income vulnerable populations.	Per locality contact, no. General info based on population density, EOP at 305.
1		d. Locality has a means of communicating these plans to the public during a coastal storm hazard event.	Emergency communications center in EOP at 60-64. Middlesex Country Virginia Emergency Notification system, opt in (link). Facebook.

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs: 2 / 4 Points

Coastal resilience issues go beyond political boundaries; therefore, localities benefit from regional collaboration. Regular communication between local, multi-jurisdictional, and state officials encourages sharing of information and ideas. Collaboration should include working with agencies that serve socially vulnerable communities. Localities are part of a Planning District Commission (PDC), which coordinates many activities.

Points		Scoring Metric	Notes
1		a. Locality staff and/or officials engage with regional and state agencies on resilience-oriented issues.	General coordination in MP Hazard Mitigation Plan (link).
0		b. Locality participation in local and regional resilience-oriented committees and initiatives to serve socially vulnerable populations.	Per locality contact, no additional programs other than PDC's.
1		c. Locality elected officials participate on relevant local and regional resilience-oriented commissions.	Per MPPDC contact, localities participate in Fight the Flood (link), as well as a septic repair revolving loan fund, and a living shoreline revolving loan fund.
0	$$$	d. Locality staff work to identify funding opportunities and priorities to address resilience issues at the regional and state level.	2020 MP Comprehensive Economic Development Strategy. MPCEDS page 78, 97. Participation in Fight the flood (link). Per locality contact, staff has not directed inquiries to MPPDC resources. Locality has not engaged in proactive outreach or education programs to bring awareness to PDC funding resources.

1.4 ADAPTIVE MANAGEMENT: 3 / 4 Points

Adaptive management involves updating ordinances and plans for coastal resilience based on new findings and emerging strategies. Use of data, scientific analyses, and new information is important to inform local policies to prepare. Adaptive management means incorporating lessons learned from research that informs best methods for addressing the needs of socially vulnerable populations.

Points		Scoring Metric	Notes
0		a. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into the Floodplain Management Ordinance.	Ordinance 23. Last updated March 3, 2015. link.
1		b. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Zoning Ordinance.	Ordinance 71. Zoning. Last updated December 3, 2019. link.
1		c. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Site and Subdivision Ordinances.	Ordinance 64. Subdivisions. Last updated November 8, 2017. link.
1		d. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Comprehensive Plan.	See Comprehensive plan, e. g. page 36-37, shoreline erosion. Last updated, 2020. link. Per locality contact, the comp plan is in the process of being revised to reflect mapping and zoning changes.

1.5 The NFIP's COMMUNITY RATING SYSTEM: 0 / 4 Points

Communities wishing to go above and beyond the minimums of the National Flood Insurance Program can choose to participate in the Community Rating System (CRS). Participating communities implement higher standards of floodplain management, and, in return, residents are eligible for flood insurance premium reductions. Localities can do many things to improve their scores. For more information, see FEMA's CRS website or the Wetlands Watch website on the subject.

Points		Scoring Metric	Notes
0	CRS	a. Locality has achieved a CRS Score of 9 or higher.	Locality is not listed on the 2020 CRS communities list. link.
0	CRS	b. Locality has achieved a CRS Score of 8.	See above.
0	CRS	c. Locality has achieved a CRS Score of 7.	See above.
0	CRS	d. Locality has achieved a CRS Score of 6 or lower.	See above.

ORE FOR SECTION 1: 11 / 20 POINTS

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT: 3 / 4 Points

Localities should conduct and use an assessment of their flood exposure and vulnerability in developing policies and programs. Localities should be knowledgeable of their flooding risks, raise awareness in the community about vulnerable areas, help target action to assist the most threatened areas and reduce possible damage, and save costs by being preemptive not reactive.

Points		Scoring Metric	Notes
1	CRS	a. An exposure and/or vulnerability assessment is completed, mapped and updated within the last 5-7 years, available at the locality level, and (as evidence of being used) referenced in locality policy making.	Middle Peninsula Hazard Mitigation Plan at 172 Comprehensive Plan at 31-33 discusses floodplains and the FEMA map
1	CRS	b. Sources of flooding for both tidally-driven and precipitation-driven events are identified and updated within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 65-67 (Rivervine flooding); 75 (Ditch flooding); 80-82 (Coastal flooding)
1	CRS	c. Flooding for different return period storm events is identified and mapped.	Middle Peninsula Hazard Mitigation Plan at 171-84
0	$$$ CRS	d. Additional vulnerabilities (see above), including cultural, historic and economic assets, are identified and updated within the last 5 years.	Comprehensive Plan last updated in 2015. Notes other important features of the community, including shellfish resources (38-39), wildlife (e.g., endangered species) (55-58) Middle Peninsula Hazard Mitigation Plan at 16-17 (Community Profile Section)

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS: 4 / 4 Points

Localities should conduct risk assessments of their socially vulnerable populations. These populations include those in areas of high poverty, elderly, caregivers, veterans, homeless, transient or nomadic communities, children and youth, physically or mentally disabled people, medically fragile people and non-English speakers. Because these populations may not have resources to change their level of vulnerability, it is vital for localities to identify these populations, ways to reduce their risk, and create plans for assistance during and after coastal hazard events. Localities need to conduct outreach to vulnerable populations.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified vulnerable populations that are subject to flooding and coastal storm hazards.	Middlesex Emergency Operations Plan discusses deaf and blind populations that are in need of special assistance.
1		b. Locality has engaged vulnerable populations and provided them with meaningful information (e.g., in their own language, relevant to their circumstances) relating to their vulnerability to coastal storm hazards.	Middlesex Emergency Operations Plan discusses multi-language requirements for disseminating an announcement quickly.
1		c. Locality has worked with vulnerable populations to increase their emergency preparedness and evacuation plans so they know their risk and know what steps should be taken during and after an event.	Middlesex Emergency Operations Plan
1		d. Locality partners with organizations that provide assistance to vulnerable populations before, during and after coastal storm hazards, including food banks or pantries with refrigeration units and backup generators.	Per locality staff, Bay Aging assists the County in transporting elderly populations in times of emergency. Additionally, the Cryer Center has a food bank.

2.3 BUSINESS AND ECONOMIC RISK ASSESSMENT: 2 / 4 Points

Localities need to identify local business and economic vulnerabilities to coastal storm hazards. Businesses are differentially affected by these hazards and attention should be paid to making sure that businesses that serve vulnerable populations are considered. Including business and economic vulnerability in a risk assessment and emergency management is important for resilience and recovery after a storm event.

Points		Scoring Metric	Notes
1	$$$	a. Locality has included the business sector in its assessment and mapping of coastal hazard vulnerability	See 2020 MP Comprehensive Economic Development Strategy at page 97 (link); MP Hazard Mitigation plan at page 22 (link). See generally Middlesex County Tourism Plan (link) (note: link no longer active after website update). Per MPPDC contact, appropriate business sector initiatives include Fight the Flood, and a Future Ecotourism initiative with MPPDC.
0	$$$	b. Locality has engaged economic development department and/or independent chamber of commerce in locality hazards mitigation and/or resilience planning.	Per locality contact, economic devilment authority assists with upstarting businesses but does not specifically address resilience planning.
0	$$$	c. Locality and/or business associations have programs for small businesses, particularly businesses that serve socially vulnerable populations, to encourage each business to be prepared for an emergency and plan for business continuity.	General info on county website for Emergency Services and Emergency Preparedness (link) and in Emergency Operations Plan (link). However, no information on vulnerable populations or small business. Confirmed by locality contact.
1	$$$	d. Locality emergency management communicates with business sector in the event of severe weather emergency or evacuation.	Per locality contact, emergency communication is handled the same as with the general public. Emergency communications center in EOP at 60-64. Middlesex Country Virginia Everbridge Emergency Notification system, opt in (link). Facebook.

2.4 HAZARD MITIGATION: 4 / 4 Points

The Hazard Mitigation Plan (HMP) is required by state code as a condition of emergency assistance. In the coastal region, it is important for the HMP to specifically address coastal storm hazards by identifying what locality resources and areas are at risk, to enable the locality to take actions to reduce future risks. Furthermore, having an HMP is essential to be eligible for certain grants and funding related to coastal storm hazards.

Points		Scoring Metric	Notes
1		a. The locality's HMP specifically addresses coastal resilience.	See generally Middle Peninsula Hazard Mitigation Plan
1		b. The locality is engaging in regional coordination for Hazard Mitigation through a regional plan.	See generally Middle Peninsula Hazard Mitigation Plan
1		c. The locality's HMP details how the locality collaborates with VDEM, DCR Floodplain Management or SHMO.	Middle Peninsula Hazard Mitigation Plan at 1-3
1		d. The locality's HMP is approved by FEMA, was developed with meaningful public engagement with socially vulnerable communities and is formally adopted by locality governing body.	FEMA Hazard Mitigation Plan Status

2.5 RESIDENT EMERGENCY PREPAREDNESS: 4/ 4 Points

Well-organized emergency preparedness plans save lives and property and help ensure that localities can act in sufficient time. They contribute to faster and more efficient post-hazard recovery. Preparedness for vulnerable populations includes ensuring that residents have the opportunity to learn swimming and water safety skills. Communities should consider participating in regional, national, or state-wide outreach events such as Hurricane Preparedness Week.

Points		Scoring Metric	Notes
1	CRS	a. Locality has a current resident emergency preparedness plan, updated within the last five years, which identifies resident emergency preparedness risks and needs, including knowledge of water safety.	The Emergency Operations Plan was updated Nov 2018 and adopted by the BOS in January 2019 and provided by locality staff as the 2015 version of the Emergency Operations Plan was the only copy online
1	CRS	b. Locality conducts community outreach at least once a year to inform residents about community emergency preparedness.	Per locality staff the county provides outreach upon request to different organizations and utilizes social media, handouts, etc. to get the information to the public.
1	CRS	c. Locality engages resident groups, including schools, hospitals, and other groups, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	Per locality staff this is done with the schools, Rappahannock Community College, nursing homes, etc. The different volunteer organizations also participate in public education and outreach in their respective response districts.
1	CRS	d. Locality has implemented early warning signals/systems/emergency warning tools for its residents, particularly those most vulnerable.	The Emergency Notification System through Everbridge provides information on potential severe weather, evacuation instructions, unexpected road closures, missing persons and evacuations of buildings or neighborhoods.

TOTAL SCORE FOR SECTION 2: 17 / 20 POINTS

3) INFRASTRUCTURE RESILIENCE

3.1 STORMWATER INFRASTRUCTURE: 0 / 4 Points

Stormwater management is regulated by state law, which requires localities either create and operate a stormwater management program or request the state to operate its stormwater management program. Local ordinances must comply with the Virginia Stormwater Management Act and regulations, as well as the Virginia Erosion and Sediment Control Law. Additional stormwater management and flood risks are typically handled at the local level through environmental regulation, site plan approval, and subdivision approval. Localities that go beyond the minimum state requirements are better able to manage stormwater and increase their resilience to coastal storm hazards. Stormwater infrastructure may include use of bioswales, dry ponds, retention basins, rainwater management systems, low impact development, rainwater collection and management systems, green infrastructure, rooftop gardens, and green and open spaces.

Points		Scoring Metric	Notes
0	$$$	a. Locality offers at least one official incentive for private property activities that manage stormwater.	Per locality staff, there are not currently any incentives
0		b. Locality funds stormwater management projects through stormwater utility fees, user fees, grants, or other creative funding mechanisms.	According to the Middle Peninsula Hazard Mitigation Plan at 273, the County does not have a stormwater utility fee. Per locality staff, the county does not currently engage in funding mechanisms.
0		c. Locality implements one or more stormwater BMPs on public property for educational demonstration, as shown by signage, tours, or other information.	Per locality staff, there are not any educational demonstrations.
0		d. Locality stormwater policy goes above and beyond the minimum state requirements.	Comprehensive Plan at 47-48 Per locality staff, the county is right at state requirements. Erosion and Sediment Control Ordinance

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE: 3 / 4 Points

An evaluation of critical transportation infrastructure allows a locality to understand its capacity and preparedness for coastal storm hazards. Although most localities do not manage their own roads, as this is handled at the state level, they nevertheless do have the ability to identify their transportation needs and priorities.

Points		Scoring Metric	Notes
1		a. Locality has identified critical transportation infrastructure and assessed its vulnerability within last 5 years.	Comprehensive Plan was last updated in 2015. Pages 97-114 discuss transportation infrastructure, but not in the context of coastal storm hazard vulnerability. Middle Peninsula Hazard Mitigation Plan at 171. Per locality staff, the county follows VDOT's list.
0		b. Locality has developed a plan to protect critical transportation infrastructure within last 5 years.	Per locality staff, there are currently no plans at the county level.
1		c. Locality has a plan available and has informed residents which critical transportation infrastructure to utilize in the case of coastal storm hazards.	The county maintains an emergency alert system that provides residents with critical information regarding severe weather, evacuation instructions, and unexpected road closures.
1		d. Locality has a contingency plan for critical transportation infrastructure. This plan has been created and/or updated in the past 5 years.	Per locality staff, the county coordinates with VDOT in accordance with their EOP, which was last updated in 2018.

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES: 3 / 4 Points

Communication and coordination between a locality and its municipal water utility and wastewater utility enable a coordinated, cohesive, and synchronized response to a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality conducts an assessment of its drinking water supply and wastewater management, both public sources and private well owners, to identify vulnerabilities to coastal storm hazards.	The Comprehensive Plan at 21-28 notes that groundwater is the source of all water supply in the county and acknowledges both sea level rise and contamination as problems. It also contains detailed notes about the aquifers under the county and their water yield. Member of the Hampton Roads Sanitation District. Comprehensive Plan at 82-83.
0		b. Locality water supply plan addresses coastal flooding and hazard events to assure safe drinking water supply and water conservation.	The Middle Peninsula Regional Water Supply Plan was created in 2011 and is updated in accordance with the 5 year schedule. It does not specifically address coastal flooding and hazard events, but does point out saltwater intrusion as a factor in their groundwater management in Section 11.
1		c. Locality conducts a resident education program on safe drinking water to assure post-event public health and safety.	According to the Middle Peninsula Hazard Mitigation Plan at 274, the county runs educational programs about natural disasters and safety and safe water-usage, emergency preparedness
1		d. Locality communications with municipal water and wastewater utility, to manage ongoing challenges to safe water, including during and after a storm, Alternatively or additionally, the locality has established methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	Emergency Operations Plan at 202-03, discusses maintaining liaisons between local agencies and private utility companies to prevent water contamination. Per locality staff, they do remain in contact with HRSD. The infrastructure in the area is small, but expanding

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES: 3 / 4 Points

An evaluation of critical infrastructure for emergency services including shelters, emergency facilities, medical, electrical, and other essential services that allows a locality to understand its capacity and preparedness for coastal storm hazards. Critical infrastructure ensures that socially vulnerable populations, not just those who can afford it, will have access to quality drinking water, electricity, food, and shelter.

Points		Scoring Metric	Notes
1		a. Locality identifies critical infrastructure for emergency services and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 171 Emergency Operations Plan last updated in 2018.
0		b. Locality has a plan to protect critical infrastructure from storms within last 5 years.	Per locality staff, the county relies on the MP HMP.
1		c. Locality informs residents which critical infrastructure they should use during coastal storm hazards.	The county maintains an emergency alert system that provides residents with critical information regarding severe weather, evacuation instructions, and unexpected road closures.
1		d. Locality has a contingency plan for continuing services. This plan has been developed or updated in last 5 years.	See generally Emergency Operations Plan.

3.5 NATURAL AND NATURE-BASED FEATURES: 2 / 4 Points

Natural and nature-based features (NNBF) are features that define natural coastal landscapes and are either naturally occurring or have been engineered to mimic natural conditions. Examples include beaches and dunes; vegetated forest buffers, salt marshes, freshwater wetlands, and submerged aquatic vegetation; oyster reefs; and barrier islands. Green infrastructure (GI) is similar and complementary, and uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. Both NNBF and GI may be undertaken by a community in a variety of ways.

Points		Scoring Metric	Notes
1		a. Locality has identified natural and nature-based features that are protective and can assist with coastal resilience.	VIMS conducted a Shoreline Inventory Report in 2015. Comprehensive Plan Update at V37-42
1		b. Locality has developed plans and policies that use natural and nature-based features to enhance coastal resilience.	The Comprehensive Plan Update at V-38 discusses using SSR mapping to work with other agencies to develop shoreline planning recommendations.
0		c. Locality is implementing projects that are in accordance with the plans and policies developed to utilize natural and nature-based features to increase coastal resilience.	Per locality staff, there are not currently any plans.
0	$$$	d. Locality offers incentives for the use of natural and nature-based features to increase coastal resilience.	Per locality staff, there are not currently any incentives.

TOTAL SCORE FOR SECTION 3: 11 / 20 POINTS

4) PLANNING FOR RESILIENCE

4.1 BUDGET, FUNDING AND STATE & FEDERAL ASSISTANCE: 3 / 4 Points

Coastal hazard mitigation efforts, when properly funded, can reduce or prevent damage and decrease costs from storm damage. To ensure proper funding a locality can budget for mitigation efforts, assess the potential economic impact from a coastal storm hazard, and identify sources of funding for mitigation projects.

Points		Scoring Metric	Notes
1		a. Locality has incorporated into its Capital Improvement Plan (CIP) funding for coastal resilience. Projects could include upgrading critical infrastructure, water and wastewater systems, and/or food and health systems, with priority for needs of vulnerable populations.	Middlesex Capital Improvement Plan discusses the wastewater collection system for the community. CIP labeled this as "Urgent/Necessary."
1	$$$	b. Locality has conducted an economic impacts assessment of coastal storm hazards.	Middle Peninsula Hazard Mitigation Plan states that 7.8% of all Middlesex businesses would be impacted by a hurricane storm surge, which would reduce quarterly revenues by at least 6%.
1		c. Locality has identified specific actions for coastal resilience (pre/post-flooding mitigation) in Hazard Mitigation Plan.	Middle Peninsula Hazard Mitigation Plan The County implemented rapid notification systems; included strategies and goals to reduce or eliminate flood damage to residential/business structures; included strategies to flood proof private and public buildings; and included evacuation routes strategies.
0	$$$	d. Locality has identified funding for non-CIP coastal resilience projects, including priority needs of vulnerable populations impacted by coastal storm hazards.	No information provided or available.

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN: 2 / 4 Points

A comprehensive plan is a locality's vision for future land use, development, adaptation, and resilience. Coastal resilience can be addressed in comprehensive plans by incorporating elements such as green infrastructure, open space preservation, infill development, the National Flood Insurance Program (NFIP), the Community Rating System (CRS), and stormwater management. The ideal comprehensive plan identifies equity and the need to identify and support socially vulnerable populations as a priority for resilience, as well as a priority preference for restoration, green infrastructure and connectivity.

Points		Scoring Metric	Notes
0		a. The comprehensive plan discusses how community engagement around coastal resilience informed the plan.	No information provided or available.
1		b. The comprehensive plan includes clear discussion of coastal resilience and coastal storm hazards and incorporates assessments to inform the development of policies to reduce vulnerability to coastal storm hazards.	Middlesex Comprehensive Plan discusses the impact of coastal storms such as northeasters and hurricanes wreaking havoc on shorelines, wetlands, and damaging aquatic vegetation. These hazards informed the County's plan to regulate and limit construction to prevent further aggravation of natural resources.
1		c. The comprehensive plan includes goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	Middlesex Comprehensive Plan discusses having goals of protecting rivers, wetlands, and other natural resources.
0		d. The comprehensive plan addresses impacts on critical infrastructure and essential services from coastal storm hazards, particularly for impacts affecting socially vulnerable populations.	Per locality staff, the Comprehensive Plan does not address the impacts of coastal storm hazards on critical infrastructure. However, the County has identified vulnerable areas and corresponding actions to help citizens in these areas.

4.3 LAND USE ORDINANCES: 3 / 4 Points

A locality's land use ordinances (such as zoning, subdivision, and floodplain) should enact the locality's vision and policies laid out in its comprehensive plan. Land use ordinances can be used to conserve and protect natural resources, ecosystems, agricultural lands, and areas vulnerable to flooding. Localities are required to enact Chesapeake Bay Preservation Act ordinances and going beyond these ordinances provides greater resilience.

Points		Scoring Metric	Notes
1	CRS	a. Locality land use regulations protect areas vulnerable to flooding by limiting development inside the floodplain or encouraging development outside the floodplain.	Floodplain Ordinance regulates uses and restricts development in flood hazard areas.
1	CRS	b. Locality land use regulations protect areas vulnerable to flooding by setting higher standards in existing flood zones or by designating additional flood zones beyond those designated by FEMA.	Floodplain Ordinance creates "freeboard zones" which are zones beyond those created by FEMA.
0	CRS	c. Locality land use regulations protect areas vulnerable to flooding by setting buffers, including open space.	Per locality staff, the County does not require buffers outside of those required by the Chesapeake Bay Preservation Act.
1	CRS	d. Locality land use regulations protect areas vulnerable to flooding by using setbacks to protect flood-prone areas.	Zoning Ordinance regulates all waterfront property by requiring setbacks.

4.4 INCENTIVES FOR COASTAL RESILIENCE: 2 / 4 Points

Incentive programs encourage infill development and protect open spaces, while protecting flood-prone areas and critical ecosystems. Incentives should be developed with community input, with particular attention to consulting agencies and organizations working with or providing services to lower income and vulnerable populations as well as agencies and organizations working to build community resilience.

Points		Scoring Metric	Notes
1	$$$	a. Locality offers an incentive for achieving coastal resilience goals: discourage development in areas prone to flooding; protect critical ecosystems; encourage sustainable development; improve resilience in high-risk areas; and preserve natural assets.	Incentive Zoning includes density bonuses.
1	$$$	b. Locality offers a second incentive for achieving the goals listed above.	Zoning Ordinance limits development within the created Conservation Districts to "protect and conserve fragile natural resource areas."
0	$$$	c. Locality offers a three or more incentives for achieving the goals listed above.	Per locality staff, other density incentives exist but not specifically for flood prone areas.
0	$$$	d. Locality develops incentives in consultation with agencies and organizations working with socially vulnerable populations.	No information provided or available.

4.5 NATURAL RESOURCE PRESERVATION: 2 / 4 Points

Natural resources are important to the locality's economy, environment, and quality of life. Natural resources also can help protect against coastal storm hazards and minimize damage from coastal storm events. The preservation of these critical natural resources is paramount to providing resilience for a coastal locality during these events. These actions should go beyond the required Chesapeake Bay Preservation Act Ordinance.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified and mapped natural resources that are important for broad ecosystem health and which are at risk of being lost due to flooding and coastal storm hazards.	Middlesex Comprehensive Plan discusses natural resources and provides maps of critical natural resources necessary for the health of the ecosystem that are at risk of being lost due to flooding.
0	CRS	b. Locality has developed plans and policies that preserve and restore natural resources to increase coastal resilience.	No information provided or available.
0		c. Locality has programs with residents, civic organizations, and nonprofit organizations to educate community about the natural resource preservation plan and engage them in helping to implement the plan.	No information provided or available.
1		d. Locality is funding actions that implement the natural resource preservation plan.	Per locality staff, the county is funding a project to create a nature trail at Cooks Corner.

TOTAL SCORE FOR SECTION 4: 12 / 20 POINTS

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING: 0 / 4 Points

For community resilience, it is important to use meaningful engagement strategies where residents are able to provide feedback and suggestions through meetings, workshops, and surveys. To reach people of color and the elderly, media and social media that serves these populations is effective. Public engagement enables residents and other stakeholders to provide input to the locality. Better informed residents are better able to ensure their locality remains resilient to coastal storm hazards.

Points		Scoring Metric	Notes
0		a. Locality has a written policy regarding the role of residents and businesses, schools and educators, institutional, nonprofit, faith-based communities veterans, and other stakeholders in coastal resilience.	No information found or provided.
0	CRS	b. Locality has staff dedicated to public engagement on coastal resilience, including a standing committee that addresses coastal resilience as part of its work.	Per locality staff, there is no dedicated staff on public engagement but the planning staff works with the community.
0	CRS	c. Locality holds at least one public meeting per year, including one in vulnerable resident areas to address coastal resilience issues and posts the results of the public meetings. For 75-150,000, at least two such public meetings per year; for 150,000+ at least three per year.	No information found or provided.
0	CRS	d. Locality informs and engages vulnerable population about coastal resilience by using website, social media, media serving people of color and minorities, and faith-based organizations to enable them to provide suggestions about issues and strategies.	Posts on Facebook but not specific to vulnerable populations or coastal resilience. No further information found or provided.

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC: 1 / 4 Points

The public needs free and open access to information related to coastal resilience and planning. Information sharing allows residents to understand their risks and the importance of resilience. Information should be shared easily and presented in a manner which is clear and easy to understand, and easy to access in ways that reach different populations in the community.

Points		Scoring Metric	Notes
0	CRS	a. Locality provides to the public localized user-friendly information on coastal resilience, in digital and non-digital formats and in multiple languages where appropriate based on demographics.	See below for some of the digital information provided. Only English provided.
1	CRS	b. Locality provides to the public localized user-friendly information on coastal resilience, on a website (e.g., interactive maps).	Provides FEMA flood maps on website
0	CRS	c. Locality provides localized user-friendly information on coastal resilience in public spaces (e.g., public offices or library).	No information found or provided.
0	$$$	d. Locality provides the public with localized, user-friendly information about economic costs and risks associated with coastal storm hazards.	No information found or provided.

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE: 0 / 4 Points

Developing resident leaders and strong volunteer networks are important aspects of building a locality's health and wellness resilience. Leaders can be responsible for informing residents, expressing resident concerns, and assisting with local preparedness. Leaders can be called on during emergencies to assist residents in need and to assist with post-hazard recovery. Communities can build this capacity by offering volunteer opportunities to cultivate experienced, local responders.

Points		Scoring Metric	Notes
0		a. Locality supports and invests in community-led initiatives on coastal resilience.	No information found or provided.
0		b. Locality offers training opportunities and education opportunities for resident leaders or volunteers to educate residents on what they can do to increase their resilience on individual properties or in neighborhoods.	No information found or provided.
0		c. Locality supports resident leaders or volunteers in community education and outreach efforts about coastal resilience by providing them with materials, speakers for gatherings, or support for resident action projects.	No information found or provided.
0		d. Locality highlights the work of resident leaders or volunteers in supporting and advancing coastal resilience, on its website, through social media, Facebook, awards, or other means.	No information found or provided.

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE: 4 / 4 Points

If a community's food, health, and medicine systems are not resilient before a storm, then the community may face a substantially longer recovery. Food, health, and medicine systems must be sustained before, during and after storm events, and are dependent on critical systems, including transportation and utilities. Lower-income and minority populations often already struggle to access food, health, and medicine, and are among the vulnerable populations during a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality has emergency plans for provision of food, health, and medicines to residents, through its comprehensive, hazard mitigation, or other plans.	Emergency Support Function 12: Shelter and Care Operations (page 124), Emergency Support Function 7: Medical and Health (page 99), and Emergency Support Function 7: Emergency Medical Services (page 111) under Emergency Operations Plan (2015)
1		b. Locality has plans for providing food to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access food during emergencies and coastal storm events.	Emergency Support Function 12: Shelter and Care Operations (page 124) under Emergency Operations Plan (2015)
1		c. Locality has plans for providing healthcare to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access healthcare during emergencies and coastal storm hazards.	Emergency Support Function 7: Medical and Health (page 99) and Emergency Support Function 7: Emergency Medical Services (page 111) under Emergency Operations Plan (2015)
1		d. Locality has plans for providing medicine to vulnerable populations, areas for improvement, has developed partnerships to address these needs, and has provided information to the public on how to access medicine during emergencies and coastal storm hazards.	Emergency Support Function 7: Medical and Health (page 99) and Emergency Support Function 7: Emergency Medical Services (page 111) under Emergency Operations Plan (2015)

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE: 0 / 4 Points

To ensure that socially vulnerable and underserved populations do not experience disproportionate impacts from flooding and coastal hazards, a locality needs to be able to predict how its residents may fare during a coastal storm hazard event, and then help those who are most vulnerable. One key measure that can be useful to localities in this effort is the metric for "deaths of despair"— or the prevalence of suicide, cirrhosis of the liver, and overdoses – which can serve as a proxy for the locality's physical and mental health, as persons who are suffering from depression and addictions are less likely to be able to respond effectively during flooding events. A locality with good physical and mental health will be better able to respond effectively to new or changing conditions as well as to recover from stressful events.

Points		Scoring Metric	Notes
0		a. Locality maintains data on community physical and mental wellbeing and challenges through specific metrics, such as the metrics for "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	No information found or provided.
0		b. Locality has met at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	No information found or provided.
0		c. Locality has identified, or maps its vulnerable neighborhoods, and has done this in partnership with NGOs, faith- based organizations, and its health and community services board.	No information found or provided.
0		d. Locality has a plan with these NGOs, faith-based organizations, and health and community services board that helps its physically and mentally challenged vulnerable populations prepare for coastal flooding events, and that provides assistance to them during and after these events.	Per locality staff there are not plans with these groups but the county provide warnings to general populations

TOTAL SCORE FOR SECTION 5: 5 / 20 POINTS

Opportunities

Example of an Opportunity Action Item Checklist showing possible actions to improve scores in each scorecard category. Opportunity items for your locality will be determined by your implementation team and The RAFT core team.

Locality Action Category	Score	Opportunity Actions for Score Improvement	Potential Time Commitment Short-Term: < 1 year; Mid-Term: 1-3 years; Long-Term: > 3 years
1.1 Locality Leadership and Planning for Resilience	≤ 2	Identify and task resiliency staff and leaders.	ST – MT
		Hold resiliency training and education events for elected officials.	MT
		Hold resiliency training and education events for locality staff or community member in charge of handling efforts.	MT
		Locality staff and/or elected officials meet at least once per quarter to coordinate resiliency planning.	LT
2.5 Resident Emergency Preparedness	≤ 2	Develop a resident emergency preparedness plan that identifies risks and needs, including knowledge of water safety.	ST
		Conduct community outreach at least once a year to inform residents about community emergency preparedness.	MT – LT
		Engage resident groups, including schools and hospitals, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	ST
		Implement early warning signals/systems/emergency warning tools for residents (especially vulnerable populations).	ST
4.2 Coastal Resiliency in Comprehensive Plan	≤ 2	Incorporate discussion into Comprehensive Plan about how community engagement regarding coastal resilience informed the plan.	ST
		Incorporate discussion into Comprehensive Plan about coastal resilience and coastal storm hazards and assessments designed to reduce vulnerability through the development of resiliency policies.	ST
		Incorporate discussion into Comprehensive Plan about the goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	ST
		Incorporate discussion into Comprehensive Plan about impacts on critical infrastructure and essential services from coastal storm hazards, especially for vulnerable populations.	ST

Next Steps

Resilience Action Workshop

1) Community leaders work together to create a one-year **Resilience Action Checklist.**

2) The RAFT Core team helps to **identify achievable action items** for improving resilience.

3) Localities break into focused discussion groups to **identify 3 to 5 top opportunities** for the next year to increase resilience.

4) Large group discussion on **regional sharing**, followed by breakout into locality discussion groups to:
    a. **Identify a Locality Implementation Team;**
    b. **Create a timeline for actions;**
    c. **Coordinate logistics;**
    d. **Determine next steps for implementation team.**

Implementation

- **Identify a Locality Implementation Team** made up of local officials and residents that will work with the Core Team to accomplish checklist actions and projects.

- **Work with one of the Core Team members** who will set up periodic check-in meetings or calls to track progress and provide support.

- Assistance from RAFT partners could take the form of:
    - **Communications product development;**
    - **Hazard and critical infrastructure mapping;**
    - **Policy and legal analysis;**
    - **Model ordinance and comprehensive plan language;**
    - **Green infrastructure projects;**
    - **Workshop or meeting facilitation;**
    - **Community engagement recommendations;**
    - **Specific research or data collection projects.**

Photo by Aileen Devlin, Virginia Sea Grant

Data Sources Used to Complete Scoring

Data Sources	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Business Association Website								X																	
Calls to the locality	X	X	X	X		X	X	X	X	X		X	X	X					X			X			X
Calls to the PDC	X	X	X			X	X		X				X												
Capital Improvement Plan																X		X							X
Community Services Board																									X
County Health Rankings and Roadmaps																									X
Dam Management Plan											X														
DCR Floodplain Management Program					X	X															X				
Department of Conservation and Recreation			X		X																	X			
Department of Emergency Management																						X			
Department of Environmental Quality													X												
Department of Health							X						X												
Department of Transportation Road and Bridge Standards												X													
Emergency Management Plans				X																					
Emergency Operations Plan	X	X					X				X										X			X	X

FEMA's CRS website					X																				
Fire Department website		X																							
Flood exposure and vulnerability assessment publications (VIMS, FEMA, and DCR)						X															X				
Hazard Mitigation Plan	X	X				X		X	X	X	X	X	X	X		X			X			X		X	X
Local Assessments of Ecological Assets															X										
Local Boards to advise elected officials																					X				
Local Budget																X									
Data Sources	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**5.1**	**5.2**	**5.3**	**5.4**	**5.5**
Local Chamber Website								X								X									
Local Economic Impact Assessments																X									
Local Ordinances and Comprehensive Plan				X			X						X	X	X		X	X	X	X	X			X	X
Local Public Works Design & Construction Standards												X													
Local Transportation Plan												X													
Local Utility Website													X												
Local Water Supply Plan													X												
Locality Resilience Plan or Strategy	X			X																					

Locality Social Media																				X	X		X		
Locality Website	X	X	X				X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
School Curriculum																					X				
Social Services							X																		
Planning District Commission (PDC) website	X	X	X			X	X		X																
Public Libraries																						X			
Wetlands Watch					X																				
Zoning Codes																			X						

MIDDLESEX COUNTY

DRAFT Resilience Action Checklist

The RAFT | Resilience Adaptation Feasibility Tool

TOP PRIORITIES TO ADDRESS IN THE NEXT YEAR WITH SUPPORT FROM THE RAFT

- ❑ **ENHANCE COMMUNITY-ENGAGED RESILIENCE PLANNING**
  This effort will include increasing community education and resilience funding information sessions for vulnerable populations, increasing community awareness around available services and programs, training community members and volunteers prior to emergencies, and leveraging existing groups and organizations capacities and networks for support in emergency preparedness and in reaching a broader audience. This effort will also include identifying, creating and feeding projects into the Middle Peninsula Planning District Commission's "Fight the Flood" program and collaborating with nonprofit community partners such as the Middlesex Foundation.

- ❑ **INCREASE SUPPORT FOR BEHAVIORAL HEALTH IN THE COMMUNITY**
  Create a strategy to evaluate, locate, and engage individuals with behavioral health needs (such as substance abuse) and work to lower barriers to access for community services, particularly among vulnerable populations. Engage with community service providers and nonprofits to collaborate on these efforts and make the community as a whole more resilient.

- ❑ **UPDATE WATER SUPPLY PLAN TO ADDRESS COASTAL HAZARDS**
  Update and review the County water supply plan to consider coastal hazards, particularly impacts to drinking water.

- ❑ **IMPROVE EMERGENCY PLANNING FOR VULNERABLE TRANSPORTATION INFRASTRUCTURE**
  Work with area partners, including county leadership, nonprofits, and state agencies such as VDEM and VDOT to identify and improve the resilience of vulnerable transportation infrastructure, map post-emergency recovery networks and hub locations for essential services, and develop training resources for post-emergency community support networks.

- ❑ **PLAN FOR FUTURE WASTEWATER INFRASTRUCTURE NEEDS**
  Identify and engage with the scale of the potential wastewater infrastructure issue by tapping existing area networks (realtors, septic service companies, VDH) to map septic systems, work with agency partners (DCR, VDH, DEQ) to clearly define jurisdictional responsibilities for septic systems and wastewater, and provide resources to community members to improve county-wide septic system repair and maintenance.

University of Virginia Institute for Engagement & Negotiation Shaping Our World Together
William & Mary Law School Virginia Coastal Policy Center
Old Dominion University
Institute for Coastal Adaptation & Resilience

This checklist was developed by community participants in the online Resilience Action Workshop, conducted and facilitated by The RAFT three-university Collaborative Team on January 28th, 2022. This document is intended to be static and record the outcomes of that workshop. However, the checklist items and their details may evolve over the course of the year-long implementation of The RAFT in response to the changing circumstances and needs of the community.

**RAFT team recommends the creation of a Resilience Committee as a way to create and sustain momentum to build resilience in the long term. We recognize, based on our experience with coastal communities in Virginia, and consistent with best practices in resilience planning and implementation, that communities benefit from more comprehensive and coordinated approach to building resilience. Establishing a Resilience Committee is key to establishing a foundation for sustained efforts in building resilience. The RAFT team has developed a worksheet to assist communities in establishing a Resilience Committee structure and framework, and if you decide this would benefit your community we can facilitate your discussion.

Acknowledgment of Funders

This RAFT product was created with funding from:

Jessie Ball duPont Fund

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

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

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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.

University of Virginia
Institute for Engagement & Negotiation
Shaping Our World Together

William & Mary Law School
Virginia Coastal Policy Center

Old Dominion University

Institute for Coastal Adaptation & Resilience

THE RAFT

Resilience Adaptation Feasibility Tool

West Point

Scorecard Report

July 2021

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

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* The RAFT implementation on the Eastern Shore, Task #92.03 was funded, in part, by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA17NOS4190152 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its sub agencies.

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Background

What is The RAFT?

- "Full-service tool" and collaborative, community-driven process designed to assist coastal localities in increasing their resilience.
- Conceived and developed by an academic interdisciplinary collaborative called the "Core Team"
    - Institute for Engagement & Negotiation (IEN) at the University of Virginia
    - Virginia Coastal Policy Center (VCPC) at William & Mary Law School
    - Old Dominion University (ODU)/Virginia Sea Grant Climate Adaptation and Resilience Program.

The RAFT has three key components:

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

How does The RAFT help a locality?

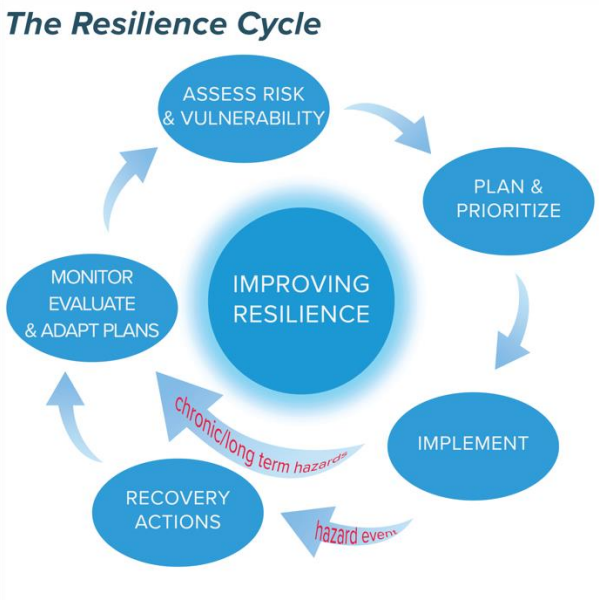
1. Open a community conversation about community resilience, including gaps, and needs.
2. Support the community in identifying priority actions for the largest impact in increasing resilience.
3. Improve communication and coordination within the community and with regional and state agencies.
4. Help the community become better positioned to find and apply for relevant funding opportunities.
5. Earn a better Community Rating System (CRS) score, which saves residents money on their flood insurance premiums.

What is resilience?

The RAFT focuses on coastal community resilience, improving the ability of a community to bounce back from hazardous events such as hurricanes and extreme weather and deal with chronic issues such as flooding.

The RAFT takes a comprehensive approach by including environmental, economic, and social resilience. All three are vital for a community to thrive.

To build resilience, localities need capacities in areas of emergency management, infrastructure, planning, policy, and community well-being.



Adapted from: NOAA Coastal Community Resilience Indicators and Rating Systems, 2015.

Locality Total Score

Category	Score Received	Possible Score
1) **POLICY, LEADERSHIP, AND COLLABORATION** *Measures policy and legislation in place for coastal resilience and includes coordination and collaboration between various levels of government, and how accessible and open government data is to the public.*	10	20
2) **RISK ASSESSMENT AND EMERGENCY MANAGEMENT** *Examines how well a locality has conducted risk assessments to prepare for coastal storm hazards, identified vulnerable populations and their needs during or after a coastal storm hazard, and developed plans for disaster preparedness, including a Hazard Mitigation Plan.*	15	20
3) **INFRASTRUCTURE RESILIENCE** *Assesses how well the locality has identified methods and plans for storm water and protecting critical infrastructure including using natural and nature-based features (NNBF).*	9	20
4) **PLANNING FOR RESILIENCE** *Assesses the comprehensive plan and zoning code for resilience, how a locality is using incentives to promote resilience in building and development, how policies protect ecosystems, how they use green infrastructure to improve resilience, and how much resilience has been incorporated into planning.*	10	20
5) **COMMUNITY ENGAGEMENT, HEALTH, AND WELL BEING** *Assesses how the community engages with residents in planning for coastal storm hazard including social equity considerations and examines the locality's attention to issues of health and wellness during and after coastal events.*	7	20
Total Score:	**51%**	

Interpreting the Score

Low Resilience: Less than 50%- There are plenty of opportunities for improvement. The locality should decide whether it will be more beneficial to achieve the least difficult improvements first, or to tackle more challenging problems. The key is to decide which of these approaches makes the most sense, as the locality develops their Resilience Action Checklist.

Moderate Resilience: 50% - 74% – The locality is actively involved in coastal resilience planning and has achieved some successes. There are still opportunities for strengthening resilience. The Resilience Action Checklist should focus on weak categories and anticipate moderate to difficult improvements.

High Resilience: 75% or More- Locality is well prepared! There may still be room for resilience and the Resilience Action Checklist may focus on ways to improve resilience and further engage residents. Examples of locality policies, plans, and activities may assist other localities in the region and beyond.

If you see **CRS** next to an item, action to improve that metric can result in CRS credit.

If you see **$$$** next to an item, action to improve that metric supports economic resilience.

If you see next to an item, action to improve that metric supports environmental resilience.

If you see next to an item, action to improve that metric supports engagement with vulnerable populations.

1) LOCALITY LEADERSHIP, POLICY, AND COLLABORATION

1.1 LOCALITY LEADERSHIP AND PLANNING FOR RESILIENCE: 3 / 4 Points

Collaboration among local government decision makers, officials, departments, academia, and NGOs is important in planning for coastal resilience. Effective collaboration requires identifying local leaders and organizations, establishing the roles of such leaders and organizations, and providing leadership training and educational resources.

Points		Scoring Metric	Notes
1		a. Leadership roles are identified for staff and/or elected officials important for planning for resilience. If staff is limited or nonexistent, the locality has tasked someone with handling resilience efforts for the community.	Hazard Mitigation Plan (link) at 368-69 identifies staff for mitigation activities: Town Manager, Director of Community Development, and Chief of Police.
0		b. Training and education events are held for elected officials specifically on resilience issues.	Per MPPDC contact, PDC conducts training and education on resilience issues. Per locality contact, no additional training at the moment.
1		c. Training and education events are held for locality staff, or if staff is limited or nonexistent, training of whomever has been tasked with handling resilience efforts for the community.	Per MPPDC contact, PDC conducts training and education on resilience issues. Per locality contact, nothing additional to PDC training.
1		d. Locality staff and/or elected officials, or whomever has been tasked with handling resilience efforts for the community, are meeting at least once per quarter to coordinate planning specifically on resilience issues.	Per MPPDC contact, the PDC meets regularly with leadership in the locality through a 25-member commission, as well as committees of local government administrators and local government planners. Resilience efforts are discussed throughout.

1.2 LOCALITY LEADERSHIP AND RESPONDING TO EMERGENCY: 3 / 4 Points

Collaboration among local officials and relevant stakeholders is equally important in responding to a coastal hazard. An organized, coordinated response to a coastal hazard requires identifying stakeholders, establishing roles, creating plans, and publicizing information.

Points		Scoring Metric	Notes
1		a. Locality has identified stakeholders who will require emergency response including socially vulnerable populations.	MP Hazard mitigation plan (link) general at page 2, 15-16. Comprehensive Plan (link) at 23-24.
1		b. Locality has established internal emergency response roles (e.g., standing committees, staff titles), and these staff and partners participate in at least one training each year.	Per MPPDC contact, PDC assists with some emergency trainings. Updated EOP establishes roles, not yet published online.
0		c. Locality collaborates on resilience planning with the stakeholders who will need emergency response and has provided the public with opportunity to give input from lower income vulnerable populations.	Per locality contact, no specific outreach or collaboration with lower income vulnerable populations but locality has worked with PDC on Hazard Mitigation plan update through community outreach surveys. Additionally, flooding tends to be limited to more affluent communities.
1		d. Locality has a means of communicating these plans to the public during a coastal storm hazard event.	Code RED (link). Facebook (link).

1.3 LOCAL COLLABORATION WITH STATE AGENCIES AND REGIONAL PDCs: 3 / 4 Points

Coastal resilience issues go beyond political boundaries; therefore, localities benefit from regional collaboration. Regular communication between local, multi-jurisdictional, and state officials encourages sharing of information and ideas. Collaboration should include working with agencies that serve socially vulnerable communities. Localities are part of a Planning District Commission (PDC), which coordinates many activities.

Points		Scoring Metric	Notes
1		a. Locality staff and/or officials engage with regional and state agencies on resilience-oriented issues.	General coordination in Hazard Mitigation Plan (link).
0		b. Locality participation in local and regional resilience-oriented committees and initiatives to serve socially vulnerable populations.	Per locality contact, no additional programs other than PDC's.
1		c. Locality elected officials participate on relevant local and regional resilience-oriented commissions.	Per MPPDC contact, localities participate in Fight the Flood (link), as well as a septic repair revolving loan fund, and a living shoreline revolving loan fund.
1	$$$	d. Locality staff work to identify funding opportunities and priorities to address resilience issues at the regional and state level.	2020 MP Comprehensive Economic Development Strategy. MPCEDS page 78, 97. Participation in Fight the Flood, link. Per locality contact, town staff directs proper inquires to those MPPDC resources, but have not had any sent to Fight the Flood. Town has not engaged in proactive outreach or education programs to bring awareness to PDC funding resources.

1.4 ADAPTIVE MANAGEMENT: 1 / 4 Points

Adaptive management involves updating ordinances and plans for coastal resilience based on new findings and emerging strategies. Use of data, scientific analyses, and new information is important to inform local policies to prepare. Adaptive management means incorporating lessons learned from research that informs best methods for addressing the needs of socially vulnerable populations.

Points		Scoring Metric	Notes
0		a. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into the Floodplain Management Ordinance.	See e.g., Sec. 29. Amended 2015. Link.
0		b. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Zoning Ordinance.	Sec. 70. Zoning. Last updated 1989. link.
0		c. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Site and Subdivision Ordinances.	Sec. 54. Subdivisions. Last updated 2003. link.
1		d. Locality incorporated new data, scientific analyses, and approaches to resilience, within the last five years into Comprehensive Plan.	See Comprehensive plan, updated 2019, link.

1.5 The NFIP's COMMUNITY RATING SYSTEM: 0 / 4 Points

Communities wishing to go above and beyond the minimums of the National Flood Insurance Program can choose to participate in the Community Rating System (CRS). Participating communities implement higher standards of floodplain management, and, in return, residents are eligible for flood insurance premium reductions. Localities can do many things to improve their scores. For more information, see FEMA's CRS website or the Wetlands Watch website on the subject.

Points		Scoring Metric	Notes
0	CRS	a. Locality has achieved a CRS Score of 9 or higher.	Locality is not listed on the 2020 CRS communities list. link.
0	CRS	b. Locality has achieved a CRS Score of 8.	See above. Per locality contact, preliminary scoring through Wetlands Watch would have been an 8.
0	CRS	c. Locality has achieved a CRS Score of 7.	See above.
0	CRS	d. Locality has achieved a CRS Score of 6 or lower.	See above.

TOTAL SCORE FOR SECTION 1: 10 / 20 POINTS

2) RISK ASSESSMENT AND EMERGENCY MANAGEMENT

2.1 FLOOD EXPOSURE AND VULNERABILITY ASSESSMENT: 4 / 4 Points

Localities should conduct and use an assessment of their flood exposure and vulnerability in developing policies and programs. Localities should be knowledgeable of their flooding risks, raise awareness in the community about vulnerable areas, help target action to assist the most threatened areas and reduce possible damage, and save costs by being preemptive not reactive.

Points		Scoring Metric	Notes
1	CRS	a. An exposure and/or vulnerability assessment is completed, mapped and updated within the last 5-7 years, available at the locality level, and (as evidence of being used) referenced in locality policy making.	Middle Peninsula Hazard Mitigation Plan at 15-16, 70 (West Point Participates with the other counties and the PDC in developing the Hazard Mitigation plan)
1	CRS	b. Sources of flooding for both tidally-driven and precipitation-driven events are identified and updated within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 65-67 (Rivervine flooding); 75 (Ditch flooding); 80-82 (Coastal flooding)
1	CRS	c. Flooding for different return period storm events is identified and mapped.	Middle Peninsula Hazard Mitigation Plan at 135-136
1	$$$ CRS	d. Additional vulnerabilities (see above), including cultural, historic and economic assets, are identified and updated within the last 5 years.	Middle Peninsula Hazard Mitigation Plan at 138-39 (identifying businesses that have been subject to flooding, and mentioning the town's shelter, but saying that it is not subject to flooding) The Draft Comprehensive Plan at 20, 52-59 also discusses protecting local businesses from flooding, it also discusses vulnerable populations, like the elderly, in outling plans and recommendations for future land use.

2.2 RISK ASSESSMENT FOR VULNERABLE POPULATIONS: 0 / 4 Points

Localities should conduct risk assessments of their socially vulnerable populations. These populations include those in areas of high poverty, elderly, caregivers, veterans, homeless, transient or nomadic communities, children and youth, physically or mentally disabled people, medically fragile people and non-English speakers. Because these populations may not have resources to change their level of vulnerability, it is vital for localities to identify these populations, ways to reduce their risk, and create plans for assistance during and after coastal hazard events. Localities need to conduct outreach to vulnerable populations.

Points		Scoring Metric	Notes
0	CRS	a. Locality has identified vulnerable populations that are subject to flooding and coastal storm hazards.	No information provided or available.
0		b. Locality has engaged vulnerable populations and provided them with meaningful information (e.g., in their own language, relevant to their circumstances) relating to their vulnerability to coastal storm hazards.	No information provided or available.
0		c. Locality has worked with vulnerable populations to increase their emergency preparedness and evacuation plans so they know their risk and know what steps should be taken during and after an event.	No information provided or available.
0		d. Locality partners with organizations that provide assistance to vulnerable populations before, during and after coastal storm hazards, including food banks or pantries with refrigeration units and backup generators.	No information provided or available.

2.3 BUSINESS AND ECONOMIC RISK ASSESSMENT: 3 / 4 Points

Localities need to identify local business and economic vulnerabilities to coastal storm hazards. Businesses are differentially affected by these hazards and attention should be paid to making sure that businesses that serve vulnerable populations are considered. Including business and economic vulnerability in a risk assessment and emergency management is important for resilience and recovery after a storm event.

Points		Scoring Metric	Notes
1	$$$	a. Locality has included the business sector in its assessment and mapping of coastal hazard vulnerability	See 2020 MP Comprehensive Economic Development Strategy at page 97 (link). MP Hazard Mitigation plan, page 22 (link). Per MPPDC contact, appropriate business sector initiatives include Fight the Flood, and a Future Ecotourism initiative with PDC.
1	$$$	b. Locality has engaged economic development department and/or independent chamber of commerce in locality hazards mitigation and/or resilience planning.	See, e.g., West Point Waterfront Master Plan link.
0	$$$	c. Locality and/or business associations have programs for small businesses, particularly businesses that serve socially vulnerable populations, to encourage each business to be prepared for an emergency and plan for business continuity.	Per locality contact, no.
1	$$$	d. Locality emergency management communicates with business sector in the event of severe weather emergency or evacuation.	Per locality contact, emergency communication is handled the same as with the general public. See generally, Code RED (link). Facebook (link).

2.4 HAZARD MITIGATION: 4 / 4 Points

The Hazard Mitigation Plan (HMP) is required by state code as a condition of emergency assistance. In the coastal region, it is important for the HMP to specifically address coastal storm hazards by identifying what locality resources and areas are at risk, to enable the locality to take actions to reduce future risks. Furthermore, having an HMP is essential to be eligible for certain grants and funding related to coastal storm hazards.

Points		Scoring Metric	Notes
1		a. The locality's HMP specifically addresses coastal resilience.	See generally Middle Peninsula Hazard Mitigation Plan
1		b. The locality is engaging in regional coordination for Hazard Mitigation through a regional plan.	See generally Middle Peninsula Hazard Mitigation Plan
1		c. The locality's HMP details how the locality collaborates with VDEM, DCR Floodplain Management or SHMO.	Middle Peninsula Hazard Mitigation Plan at 1-3
1		d. The locality's HMP is approved by FEMA, was developed with meaningful public engagement with socially vulnerable communities and is formally adopted by locality governing body.	FEMA Hazard Mitigation Plan Status

2.5 RESIDENT EMERGENCY PREPAREDNESS: 4 / 4 Points

Well-organized emergency preparedness plans save lives and property and help ensure that localities can act in sufficient time. They contribute to faster and more efficient post-hazard recovery. Preparedness for vulnerable populations includes ensuring that residents have the opportunity to learn swimming and water safety skills. Communities should consider participating in regional, national, or state-wide outreach events such as Hurricane Preparedness Week.

Points		Scoring Metric	Notes
1	CRS	a. Locality has a current resident emergency preparedness plan, updated within the last five years, which identifies resident emergency preparedness risks and needs, including knowledge of water safety.	Per locality staff, there is an EOP updated in March 2021 that is not online yet.
1	CRS	b. Locality conducts community outreach at least once a year to inform residents about community emergency preparedness.	The Public Safety Committee meets on the 3rd Thursday of each month.
1	CRS	c. Locality engages resident groups, including schools, hospitals, and other groups, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	Per locality staff the schools run drills.
1	CRS	d. Locality has implemented early warning signals/systems/emergency warning tools for its residents, particularly those most vulnerable.	CodeRED is used for an emergency alert system.

TOTAL SCORE FOR SECTION 2: 15 / 20 POINTS

3) INFRASTRUCTURE RESILIENCE

3.1 STORMWATER INFRASTRUCTURE: 0 / 4 Points

Stormwater management is regulated by state law, which requires localities either create and operate a stormwater management program or request the state to operate its stormwater management program. Local ordinances must comply with the Virginia Stormwater Management Act and regulations, as well as the Virginia Erosion and Sediment Control Law. Additional stormwater management and flood risks are typically handled at the local level through environmental regulation, site plan approval, and subdivision approval. Localities that go beyond the minimum state requirements are better able to manage stormwater and increase their resilience to coastal storm hazards. Stormwater infrastructure may include use of bioswales, dry ponds, retention basins, rainwater management systems, low impact development, rainwater collection and management systems, green infrastructure, rooftop gardens, and green and open spaces.

Points		Scoring Metric	Notes
0	$$$	a. Locality offers at least one official incentive for private property activities that manage stormwater.	Per locality staff, there are currently no incentives.
0		b. Locality funds stormwater management projects through stormwater utility fees, user fees, grants, or other creative funding mechanisms.	Per locality staff, West Point does not engage in these funding mechanisms.
0		c. Locality implements one or more stormwater BMPs on public property for educational demonstration, as shown by signage, tours, or other information.	Per locality staff, they are in the process of completing a project in a park with sensitive development and has discussed adding educational signage, but nothing has been conclusively decided.
0		d. Locality stormwater policy goes above and beyond the minimum state requirements.	County is an “opt-out” locality (Middle Peninsula Hazard Mitigation Plan at 281-82) Erosion & Sediment Control Per locality staff, West Point is right at state requirements.

3.2 CRITICAL TRANSPORTATION INFRASTRUCTURE: 3 / 4 Points

An evaluation of critical transportation infrastructure allows a locality to understand its capacity and preparedness for coastal storm hazards. Although most localities do not manage their own roads, as this is handled at the state level, they nevertheless do have the ability to identify their transportation needs and priorities.

Points		Scoring Metric	Notes
1		a. Locality has identified critical transportation infrastructure and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 125-26. Per locality staff, West Point does know which roads are critical and vulernable
0		b. Locality has developed a plan to protect critical transportation infrastructure within last 5 years.	The Comprehensive Plan at 65-67 includes improvement plans for critical infrastructure, but does not reference improvements in the context of coastal hazards. Per locality staff, there are no current plans.
1		c. Locality has a plan available and has informed residents which critical transportation infrastructure to utilize in the case of coastal storm hazards.	Middle Peninsula Hazard Mitigation Plan at 302.
1		d. Locality has a contingency plan for critical transportation infrastructure. This plan has been created and/or updated in the past 5 years.	Per locality staff, the newly adopted Emergency Operations Plan discusses prioritizing clearing roads in the face of coastal storm hazards.

3.3 WATER SUPPLY AND WASTEWATER MANAGEMENT SERVICES: 1 / 4 Points

Communication and coordination between a locality and its municipal water utility and wastewater utility enable a coordinated, cohesive, and synchronized response to a coastal storm hazard.

Points		Scoring Metric	Notes
0		a. Locality conducts an assessment of its drinking water supply and wastewater management, both public sources and private well owners, to identify vulnerabilities to coastal storm hazards.	The comprehensive Plan at 39 , 65 mentioned working with various actors to ensure potable water quality, but does not mention an assessment of the water. The Comprehensive Plan at 31 contains details about the town's water demands Per locality staff, there is no assessment of vulnerabilities in the context of coastal stormhazards.
0		b. Locality water supply plan addresses coastal flooding and hazard events to assure safe drinking water supply and water conservation.	The Middle Peninsula Regional Water Supply Plan was last created in 2011 and is updated according to a 5 year schedule. It does not specifically address coastal flooding and hazard events, but does point out saltwater intrusion as a factor in their groundwater management in Section 11.
0		c. Locality conducts a resident education program on safe drinking water to assure post-event public health and safety.	According to the Hazard Mitigation Plan at 274, West Point does not currently have any hazard-related educational programs. Per locality staff, they send out information post-event if appropriate.
1		d. Locality communications with municipal water and wastewater utility, to manage ongoing challenges to safe water, including during and after a storm, Alternatively or additionally, the locality has established methods of communication with private well and water system owners, to ensure all are informed about how they can increase their water system resiliency.	According to the Comprehensive Plan at 65, the town owns and operates the water utility, which is entirely self-sufficient. For waste, the Town is a part of the Hampton Roads Sanitation District. Per locality staff, West Point maintains constant contact with HRS in the face of coastal storm hazards.

3.4 CRITICAL INFRASTRUCTURE FOR EMERGENCY SERVICES: 3 / 4 Points

An evaluation of critical infrastructure for emergency services including shelters, emergency facilities, medical, electrical, and other essential services that allows a locality to understand its capacity and preparedness for coastal storm hazards. Critical infrastructure ensures that socially vulnerable populations, not just those who can afford it, will have access to quality drinking water, electricity, food, and shelter.

Points		Scoring Metric	Notes
1		a. Locality identifies critical infrastructure for emergency services and assessed its vulnerability within last 5 years.	Middle Peninsula Hazard Mitigation Plan at 138-39.
0		b. Locality has a plan to protect critical infrastructure from storms within last 5 years.	Per locality staff, the infrastructure they do have is not within flood prone areas so there are no plans.
1		c. Locality informs residents which critical infrastructure they should use during coastal storm hazards.	Locality uses CodeRed for emergency alerts.
1		d. Locality has a contingency plan for continuing services. This plan has been developed or updated in last 5 years.	See generally Emergency Operations Plan

3.5 NATURAL AND NATURE-BASED FEATURES: 2 / 4 Points

Natural and nature-based features (NNBF) are features that define natural coastal landscapes and are either naturally occurring or have been engineered to mimic natural conditions. Examples include beaches and dunes; vegetated forest buffers, salt marshes, freshwater wetlands, and submerged aquatic vegetation; oyster reefs; and barrier islands. Green infrastructure (GI) is similar and complementary, and uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. Both NNBF and GI may be undertaken by a community in a variety of ways.

Points		Scoring Metric	Notes
1		a. Locality has identified natural and nature-based features that are protective and can assist with coastal resilience.	The Comprehensive Plan at 37-38, the locality discusses natural features like forest buffers. The 2000 Comprehensive Plan identifies wetlands and vegetated buffers as viable solutions to coastal erosion.
1		b. Locality has developed plans and policies that use natural and nature-based features to enhance coastal resilience.	In the Comprehensive Plan at 37-38, 41-42, the locality discusses using natural vegetation and trees to prevent erosion and using them for stream buffers. The 2000 Comprehensive Plan at 40 outlines the town's redevelopment policy as including the use of native plant species to create buffers. West Point Municipal Code § 70-256
0		c. Locality is implementing projects that are in accordance with the plans and policies developed to utilize natural and nature-based features to increase coastal resilience.	Per locality staff, West Point does not have any current plans.
0	$$$	d. Locality offers incentives for the use of natural and nature-based features to increase coastal resilience.	Per locality staff, there are currently no incentives.

TOTAL SCORE FOR SECTION 3: 9 / 20 POINTS

4) PLANNING FOR RESILIENCE

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

Coastal hazard mitigation efforts, when properly funded, can reduce or prevent damage and decrease costs from storm damage. To ensure proper funding a locality can budget for mitigation efforts, assess the potential economic impact from a coastal storm hazard, and identify sources of funding for mitigation projects.

Points		Scoring Metric	Notes
0		a. Locality has incorporated into its Capital Improvement Plan (CIP) funding for coastal resilience. Projects could include upgrading critical infrastructure, water and wastewater systems, and/or food and health systems, with priority for needs of vulnerable populations.	No information provided or available
0	$$$	b. Locality has conducted an economic impacts assessment of coastal storm hazards.	Middle Peninsula Hazard Mitigation Plan discusses impact to particular areas of West Point but does not discuss the impact to the Town as a whole.
1		c. Locality has identified specific actions for coastal resilience (pre/post-flooding mitigation) in Hazard Mitigation Plan.	Middle Peninsula Hazard Mitigation Plan The Town implemented rapid notification systems; included goals and strategies to flood proof private and public buildings; and included evacuation routes strategies.
0	$$$	d. Locality has identified funding for non-CIP coastal resilience projects, including priority needs of vulnerable populations impacted	No information provided or available.

4.2 COASTAL RESILIENCY IN COMPREHENSIVE PLAN: 2 / 4 Points

A comprehensive plan is a locality's vision for future land use, development, adaptation, and resilience. Coastal resilience can be addressed in comprehensive plans by incorporating elements such as green infrastructure, open space preservation, infill development, the National Flood Insurance Program (NFIP), the Community Rating System (CRS), and stormwater management. The ideal comprehensive plan identifies equity and the need to identify and support socially vulnerable populations as a priority for resilience, as well as a priority preference for restoration, green infrastructure and connectivity.

Points		Scoring Metric	Notes
0		a. The comprehensive plan discusses how community engagement around coastal resilience informed the plan.	No information provided or available
1		b. The comprehensive plan includes clear discussion of coastal resilience and coastal storm hazards and incorporates assessments to inform the development of policies to reduce vulnerability to coastal storm hazards.	Town of West Point Comprehensive Plan provides a list of coastal storm hazards and states that there is an effort to combat these hazards. Per locality staff, the threat of coastal storm hazards informed policies.
1		c. The comprehensive plan includes goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	Town of West Point Comprehensive Plan discusses the goals of planting vegetation, protecting shoreline, and protecting natural resources.
0		d. The comprehensive plan addresses impacts on critical infrastructure and essential services from coastal storm hazards, particularly for impacts affecting socially vulnerable populations.	No information provided or available.

4.3 LAND USE ORDINANCES: 2 / 4 Points

A locality's land use ordinances (such as zoning, subdivision, and floodplain) should enact the locality's vision and policies laid out in its comprehensive plan. Land use ordinances can be used to conserve and protect natural resources, ecosystems, agricultural lands, and areas vulnerable to flooding. Localities are required to enact Chesapeake Bay Preservation Act ordinances and going beyond these ordinances provides greater resilience.

Points		Scoring Metric	Notes
1	CRS	a. Locality land use regulations protect areas vulnerable to flooding by limiting development inside the floodplain or encouraging development outside the floodplain.	Existing Structures in Floodplain Areas Ordinance discusses regulations for limiting expansion for existing structures within the floodplain.
0	CRS	b. Locality land use regulations protect areas vulnerable to flooding by setting higher standards in existing flood zones or by designating additional flood zones beyond those designated by FEMA.	No information provided or available.
1	CRS	c. Locality land use regulations protect areas vulnerable to flooding by setting buffers, including open space.	Buffering and Screening Requirements Ordinance discusses restoring tree canopies and protecting natural vegetation by way of buffers.
0	CRS	d. Locality land use regulations protect areas vulnerable to flooding by using setbacks to protect flood-prone areas.	Per locality staff, setbacks were not established specifically to protect areas vulnerable to flooding.

4.4 INCENTIVES FOR COASTAL RESILIENCE: 3 / 4 Points

Incentive programs encourage infill development and protect open spaces, while protecting flood-prone areas and critical ecosystems. Incentives should be developed with community input, with particular attention to consulting agencies and organizations working with or providing services to lower income and vulnerable populations as well as agencies and organizations working to build community resilience.

Points		Scoring Metric	Notes
1	$$$	a. Locality offers an incentive for achieving coastal resilience goals: discourage development in areas prone to flooding; protect critical ecosystems; encourage sustainable development; improve resilience in high-risk areas; and preserve natural assets.	Buffering and Screening Requirements Ordinance discusses restoring tree canopies and protecting natural vegetation by way of buffers.
1	$$$	b. Locality offers a second incentive for achieving the goals listed above.	Compliance and Liability for Floodplain Ordinance discourages development and construction in the floodplain by setting regulatory limits and penalties.
1	$$$	c. Locality offers a three or more incentives for achieving the goals listed above.	Performance Standards Waterfront Ordinance encourages sustainable development and discourages development in the floodplain by establishing “open space standards” along the waterfront of the town.
0	$$$	d. Locality develops incentives in consultation with agencies and organizations working with socially vulnerable populations.	No information provided or available.

4.5 NATURAL RESOURCE PRESERVATION: 2 / 4 Points

Natural resources are important to the locality's economy, environment, and quality of life. Natural resources also can help protect against coastal storm hazards and minimize damage from coastal storm events. The preservation of these critical natural resources is paramount to providing resilience for a coastal locality during these events. These actions should go beyond the required Chesapeake Bay Preservation Act Ordinance.

Points		Scoring Metric	Notes
1	CRS	a. Locality has identified and mapped natural resources that are important for broad ecosystem health and which are at risk of being lost due to flooding and coastal storm hazards.	Town of West Point Comprehensive Plan identifies policies about protecting "wetlands and shellfish grounds."
1	CRS	b. Locality has developed plans and policies that preserve and restore natural resources to increase coastal resilience.	Town of West Point Comprehensive Plan discusses county policies designed to prevent and restore natural plants and vegetation.
0		c. Locality has programs with residents, civic organizations, and nonprofit organizations to educate community about the natural resource preservation plan and engage them in helping to implement the plan.	No information provided or available.
0		d. Locality is funding actions that implement the natural resource preservation plan.	No information provided or available.

TOTAL SCORE FOR SECTION 4: 10 / 20 POINTS

5) COMMUNITY ENGAGEMENT, HEALTH, AND WELL-BEING

5.1 PUBLIC INVOLVEMENT IN RESILIENCE PLANNING: 1 / 4 Points

For community resilience, it is important to use meaningful engagement strategies where residents are able to provide feedback and suggestions through meetings, workshops, and surveys. To reach people of color and the elderly, media and social media that serves these populations is effective. Public engagement enables residents and other stakeholders to provide input to the locality. Better informed residents are better able to ensure their locality remains resilient to coastal storm hazards.

Points		Scoring Metric	Notes
0		a. Locality has a written policy regarding the role of residents and businesses, schools and educators, institutional, nonprofit, faith-based communities veterans, and other stakeholders in coastal resilience.	No information found or provided.
0	CRS	b. Locality has staff dedicated to public engagement on coastal resilience, including a standing committee that addresses coastal resilience as part of its work.	No information found or provided.
1	CRS	c. Locality holds at least one public meeting per year, including one in vulnerable resident areas to address coastal resilience issues and posts the results of the public meetings. For 75-150,000, at least two such public meetings per year; for 150,000+ at least three per year.	Per locality staff flooding issues are talked about at town council meetings.
0	CRS	d. Locality informs and engages vulnerable population about coastal resilience by using website, social media, media serving people of color and minorities, and faith-based organizations to enable them to provide suggestions about issues and strategies.	Posts on Facebook but not specific to vulnerable populations or coastal resilience. No further information found or provided.

5.2 PROVIDING COASTAL RESILIENCE INFORMATION TO THE PUBLIC: 2 / 4 Points

The public needs free and open access to information related to coastal resilience and planning. Information sharing allows residents to understand their risks and the importance of resilience. Information should be shared easily and presented in a manner which is clear and easy to understand, and easy to access in ways that reach different populations in the community.

Points		Scoring Metric	Notes
1	CRS	a. Locality provides to the public localized user-friendly information on coastal resilience, in digital and non-digital formats and in multiple languages where appropriate based on demographics.	See below for some of the information provided. Per locality staff only English is needed.
1	CRS	b. Locality provides to the public localized user-friendly information on coastal resilience, on a website (e.g., interactive maps).	There are links to the floodplain maps (link).
0	CRS	c. Locality provides localized user-friendly information on coastal resilience in public spaces (e.g., public offices or library).	Under the Comprehensive Plan (2019) in Chapter 2 VII Land Use and Natural Resources it is stated that the locality will "Establish an educational program to increase the public's awareness of all natural resources available in the Town through brochures, public forums, etc." Per locality staff this has not yet been implemented.
0	$$$	d. Locality provides the public with localized, user-friendly information about economic costs and risks associated with coastal storm hazards.	No information found or provided.

5.3 CITIZEN LEADERSHIP & VOLUNTEER NETWORKS FOR COASTAL RESILIENCE: 0 / 4 Points

Developing resident leaders and strong volunteer networks are important aspects of building a locality's health and wellness resilience. Leaders can be responsible for informing residents, expressing resident concerns, and assisting with local preparedness. Leaders can be called on during emergencies to assist residents in need and to assist with post-hazard recovery. Communities can build this capacity by offering volunteer opportunities to cultivate experienced, local responders.

Points		Scoring Metric	Notes
0		a. Locality supports and invests in community-led initiatives on coastal resilience.	Per locality staff if there were community-led initiatives they would be supported but currently there are none.
0		b. Locality offers training opportunities and education opportunities for resident leaders or volunteers to educate residents on what they can do to increase their resilience on individual properties or in neighborhoods.	No information found or provided.
0		c. Locality supports resident leaders or volunteers in community education and outreach efforts about coastal resilience by providing them with materials, speakers for gatherings, or support for resident action projects.	No information found or provided.
0		d. Locality highlights the work of resident leaders or volunteers in supporting and advancing coastal resilience, on its website, through social media, Facebook, awards, or other means.	No information found or provided.

5.4 RESILIENT SYSTEMS TO PROVIDE FOOD, HEALTH, AND MEDICINE: 4 / 4 Points

If a community's food, health, and medicine systems are not resilient before a storm, then the community may face a substantially longer recovery. Food, health, and medicine systems must be sustained before, during and after storm events, and are dependent on critical systems, including transportation and utilities. Lower-income and minority populations often already struggle to access food, health, and medicine, and are among the vulnerable populations during a coastal storm hazard.

Points		Scoring Metric	Notes
1		a. Locality has emergency plans for provision of food, health, and medicines to residents, through its comprehensive, hazard mitigation, or other plans.	West Point Emergency Operations Plan (2021 and) King William County Emergency Operations Plan (2020). See below for more detail.
1		b. Locality has plans for providing food to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access food during emergencies and coastal storm events.	As per the King William County Emergency Operations Plan this is addressed under the Basic Plan and under the Emergency Coordination Guide-Health & Medical Services Branch. West Point Emergency Operations Plan (2021) includes population factors that could impact plan implementation (page 2).
1		c. Locality has plans for providing healthcare to vulnerable populations, has areas for improvement, has developed partnerships to address these needs, and has provided information to residents on how to access healthcare during emergencies and coastal storm hazards.	As per the King William County Emergency Operations Plan this is addressed under the Basic Plan and under the Emergency Coordination Guide-Health & Medical Services Branch.
1		d. Locality has plans for providing medicine to vulnerable populations, areas for improvement, has developed partnerships to address these needs, and has provided information to the public on how to access medicine during emergencies and coastal storm hazards.	See above.

5.5 PHYSICAL AND MENTAL HEALTH FOR SOCIAL EQUITY IN COMMUNITY RESILIENCE: 0 / 4 Points

To ensure that socially vulnerable and underserved populations do not experience disproportionate impacts from flooding and coastal hazards, a locality needs to be able to predict how its residents may fare during a coastal storm hazard event, and then help those who are most vulnerable. One key measure that can be useful to localities in this effort is the metric for "deaths of despair"— or the prevalence of suicide, cirrhosis of the liver, and overdoses – which can serve as a proxy for the locality's physical and mental health, as persons who are suffering from depression and addictions are less likely to be able to respond effectively during flooding events. A locality with good physical and mental health will be better able to respond effectively to new or changing conditions as well as to recover from stressful events.

Points		Scoring Metric	Notes
0		a. Locality maintains data on community physical and mental wellbeing and challenges through specific metrics, such as the metrics for "deaths of despair" (suicide, cirrhosis of the liver, overdoses).	No information found or provided.
0		b. Locality has met at least once with community partners to identify "trusted messengers" for communicating with vulnerable populations.	No information found or provided.
0		c. Locality has identified, or maps its vulnerable neighborhoods, and has done this in partnership with NGOs, faith- based organizations, and its health and community services board.	No information found or provided.
0		d. Locality has a plan with these NGOs, faith-based organizations, and health and community services board that helps its physically and mentally challenged vulnerable populations prepare for coastal flooding events, and that provides assistance to them during and after these events.	No information found or provided.

TOTAL SCORE FOR SECTION 5: 7 / 20 POINTS

Opportunities

Example of an Opportunity Action Item Checklist showing possible actions to improve scores in each scorecard category. Opportunity items for your locality will be determined by your implementation team and The RAFT core team.

Locality Action Category	Score	Opportunity Actions for Score Improvement	Potential Time Commitment Short-Term: < 1 year; Mid-Term: 1-3 years; Long-Term: > 3 years
1.1 Locality Leadership and Planning for Resilience	≤ 2	Identify and task resiliency staff and leaders.	ST – MT
		Hold resiliency training and education events for elected officials.	MT
		Hold resiliency training and education events for locality staff or community member in charge of handling efforts.	MT
		Locality staff and/or elected officials meet at least once per quarter to coordinate resiliency planning.	LT
2.5 Resident Emergency Preparedness	≤ 2	Develop a resident emergency preparedness plan that identifies risks and needs, including knowledge of water safety.	ST
		Conduct community outreach at least once a year to inform residents about community emergency preparedness.	MT – LT
		Engage resident groups, including schools and hospitals, in testing preparedness through emergency drills, disaster simulations, and planning workshops.	ST
		Implement early warning signals/systems/emergency warning tools for residents (especially vulnerable populations).	ST
4.2 Coastal Resiliency in Comprehensive Plan	≤ 2	Incorporate discussion into Comprehensive Plan about how community engagement regarding coastal resilience informed the plan.	ST
		Incorporate discussion into Comprehensive Plan about coastal resilience and coastal storm hazards and assessments designed to reduce vulnerability through the development of resiliency policies.	ST
		Incorporate discussion into Comprehensive Plan about the goals and objectives for preserving and protecting natural resources that mitigate coastal storm hazards.	ST
		Incorporate discussion into Comprehensive Plan about impacts on critical infrastructure and essential services from coastal storm hazards, especially for vulnerable populations.	ST

Next Steps

Resilience Action Workshop

1) Community leaders work together to create a one-year **Resilience Action Checklist.**

2) The RAFT Core team helps to **identify achievable action items** for improving resilience.

3) Localities break into focused discussion groups to **identify 3 to 5 top opportunities** for the next year to increase resilience.

4) Large group discussion on **regional sharing**, followed by breakout into locality discussion groups to:
    a. **Identify a Locality Implementation Team;**
    b. **Create a timeline for actions;**
    c. **Coordinate logistics;**
    d. **Determine next steps for implementation team.**

Implementation

- **Identify a Locality Implementation Team** made up of local officials and residents that will work with the Core Team to accomplish checklist actions and projects.

- **Work with one of the Core Team members** who will set up periodic check-in meetings or calls to track progress and provide support.

- Assistance from RAFT partners could take the form of:
    - **Communications product development;**
    - **Hazard and critical infrastructure mapping;**
    - **Policy and legal analysis;**
    - **Model ordinance and comprehensive plan language;**
    - **Green infrastructure projects;**
    - **Workshop or meeting facilitation;**
    - **Community engagement recommendations;**
    - **Specific research or data collection projects.**

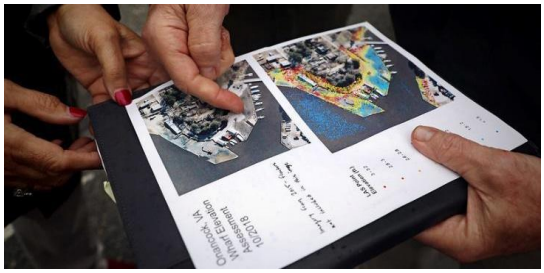


Photo by Aileen Devlin, Virginia Sea Grant

Data Sources Used to Complete Scoring

Data Sources	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Business Association Website								X																	
Calls to the locality	X	X	X	X		X	X	X	X	X		X	X	X					X			X			X
Calls to the PDC	X	X	X			X	X		X				X												
Capital Improvement Plan																X		X							X
Community Services Board																									X
County Health Rankings and Roadmaps																									X
Dam Management Plan											X														
DCR Floodplain Management Program					X	X															X				
Department of Conservation and Recreation			X		X																	X			
Department of Emergency Management																						X			
Department of Environmental Quality													X												
Department of Health							X						X												
Department of Transportation Road and Bridge Standards												X													
Emergency Management Plans				X																					
Emergency Operations Plan	X	X					X				X										X			X	X

FEMA's CRS website					X																				
Fire Department website		X																							
Flood exposure and vulnerability assessment publications (VIMS, FEMA, and DCR)						X															X				
Hazard Mitigation Plan	X	X				X		X	X	X	X	X	X	X		X			X			X		X	X
Local Assessments of Ecological Assets															X										
Local Boards to advise elected officials																					X				
Local Budget																X									
Data Sources	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**	**4.2**	**4.3**	**4.4**	**4.5**	**5.1**	**5.2**	**5.3**	**5.4**	**5.5**
Local Chamber Website								X								X									
Local Economic Impact Assessments																X									
Local Ordinances and Comprehensive Plan				X			X						X	X	X		X	X	X	X	X			X	X
Local Public Works Design & Construction Standards												X													
Local Transportation Plan												X													
Local Utility Website													X												
Local Water Supply Plan													X												
Locality Resilience Plan or Strategy	X			X																					

Locality Social Media																				X	X		X		
Locality Website	X	X	X				X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
School Curriculum																					X				
Social Services							X																		
Planning District Commission (PDC) website	X	X	X			X	X		X																
Public Libraries																						X			
Wetlands Watch					X																				
Zoning Codes																			X						

TOWN OF WEST POINT

DRAFT Resilience Action Checklist

The RAFT | Resilience Adaptation Feasibility Tool

TOP PRIORITIES TO ADDRESS IN THE NEXT YEAR WITH SUPPORT FROM THE RAFT

- ❑ **HOST AN EVENT TO EDUCATE THE COMMUNITY ON THE FIGHT THE FLOOD PROGRAM**
  A local Fight the Flood event can educate shoreline owners on the Fight the Flood program and its opportunities for grants and funding. An engagement plan for these events should recruit participants who can help identify the locations and needs of vulnerable populations. This event could be held in collaboration with King William County.

- ❑ **DEVELOP A PROCESS TO FOCUS ON FLOODING IN THE KIRBY STREET CORRIDOR**
  Kirby Street has been a challenge for the Town for a long time, with flooding from marshy areas along the riverfront common during tropical systems and nor'easters. A Kirby Street resilience design plan focused on this area will generate ideas for projects that both Commonwealth and federal programs could fund.

- ❑ **ASSESS CRITICAL INFRASTRUCTURE WEAKNESSES AND DEVELOP A PLAN TO FIX THEM**
  A joint effort from the RAFT team, the Middle Peninsula PDC, and the Town of West Point would gather information about critical infrastructure and essential services impacts and lead to a plan for addressing these weaknesses. This includes understanding vulnerabilities and response plans for major employers, like the WestRock Paper Mill, whose operations are critical to the Town's recovery after a disaster.

- ❑ **PLAN TO DEVELOP A HOLISTIC RESLIENCE PLAN FOR WEST POINT**
  A holistic design process can identify long term opportunities for and feasibility of projects that work together to protect the entire town of West Point, like constructing breakwaters or levees, and developing recreation opportunities that link flood protection with green infrastructure. Such a plan would take more than a year to complete, but the first steps to initiate, plan, and fund the project can be accomplished.

- ❑ **EDUCATE THE PUBLIC ON RESILIENCE TO IMPROVE PUBLIC AWARENESS**
  Meeting people in the community where they are to educate on resilience and preparedness will take more than a single event. In addition to the Fight the Flood program above, West Point can plan to reach more who live and work in town by tabling at existing events, like the Crab Festival, and other public engagement opportunities.

This checklist was developed by community participants in the online Resilience Action Workshop, conducted and facilitated by The RAFT three-university Collaborative Team on January 28th, 2022. This document is intended to be static and record the outcomes of that workshop. However, the checklist items and their details may evolve over the course of the year-long implementation of The RAFT in response to the changing circumstances and needs of the community.

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Institute for Engagement & Negotiation
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William & Mary Law School
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Old Dominion University
Institute for Coastal Adaptation & Resilience

**The RAFT team recommends the creation of a Resilience Committee as a way to create and sustain momentum to build resilience in the long term. We recognize, based on our experience with coastal communities in Virginia, and consistent with best practices in resilience planning and implementation, that communities benefit from more comprehensive and coordinated approach to building resilience. Establishing a Resilience Committee is key to establishing a foundation for sustained efforts in building resilience. The RAFT team has developed a worksheet to assist communities in establishing a Resilience Committee structure and framework, and if you decide this would benefit your community we can facilitate your discussion.

Acknowledgment of Funders

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Jessie Ball duPont Fund

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Anonymous

Environmental Resilience Institute at the University of Virginia

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

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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.

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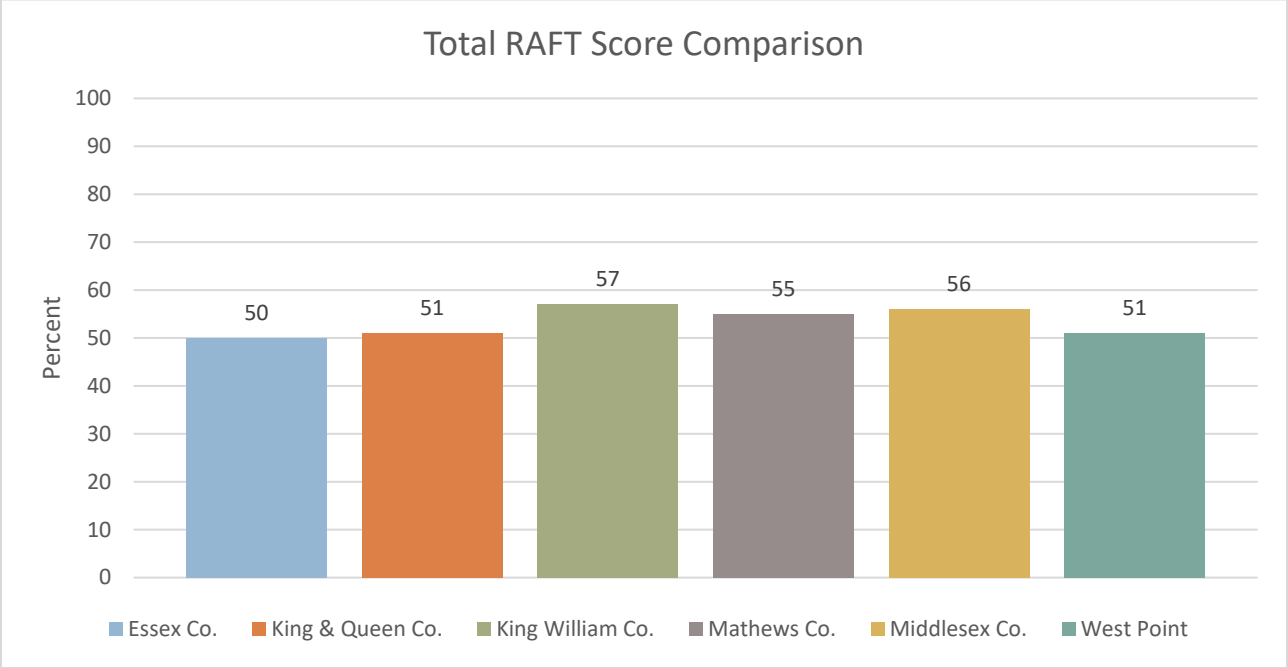
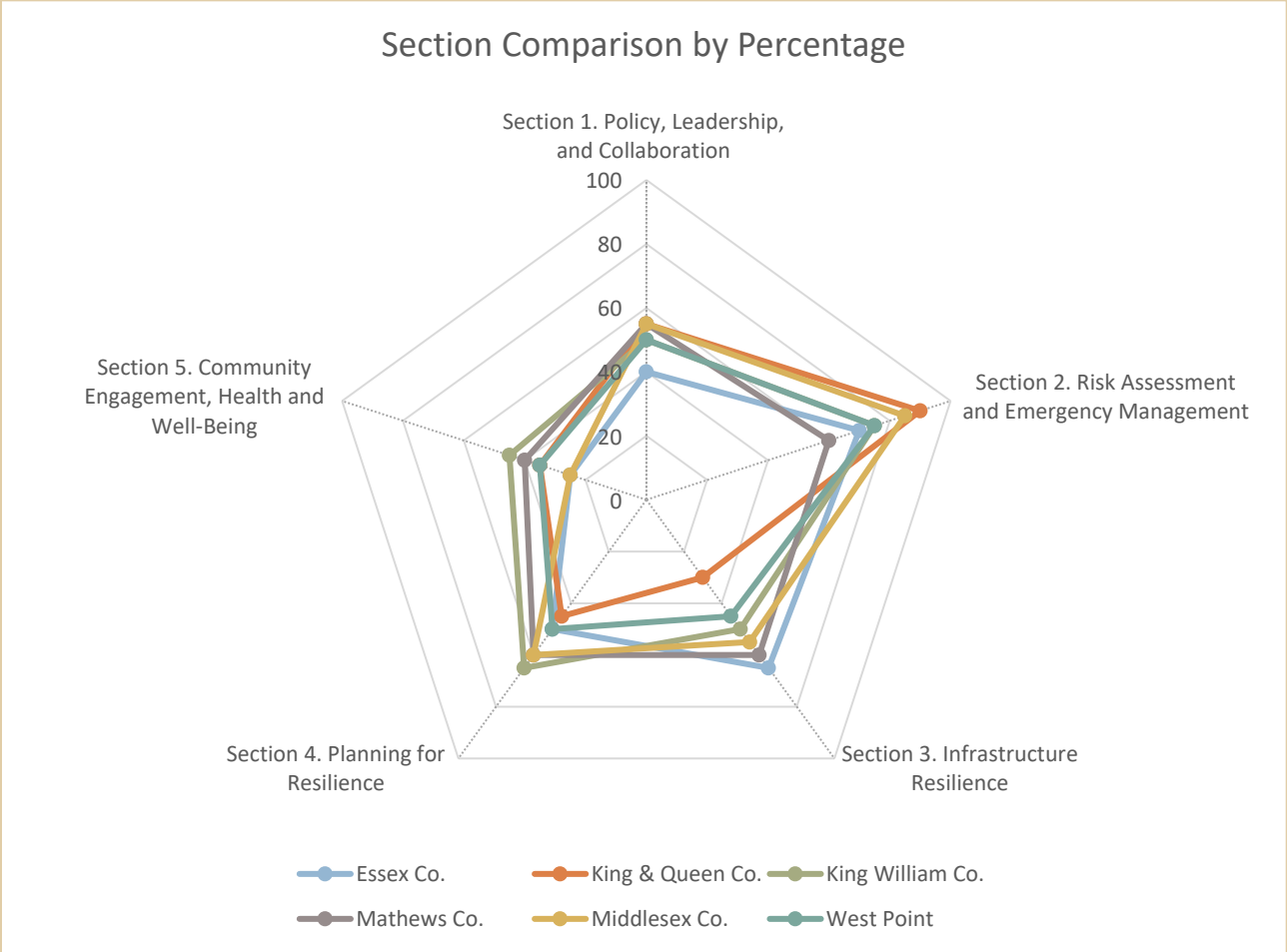
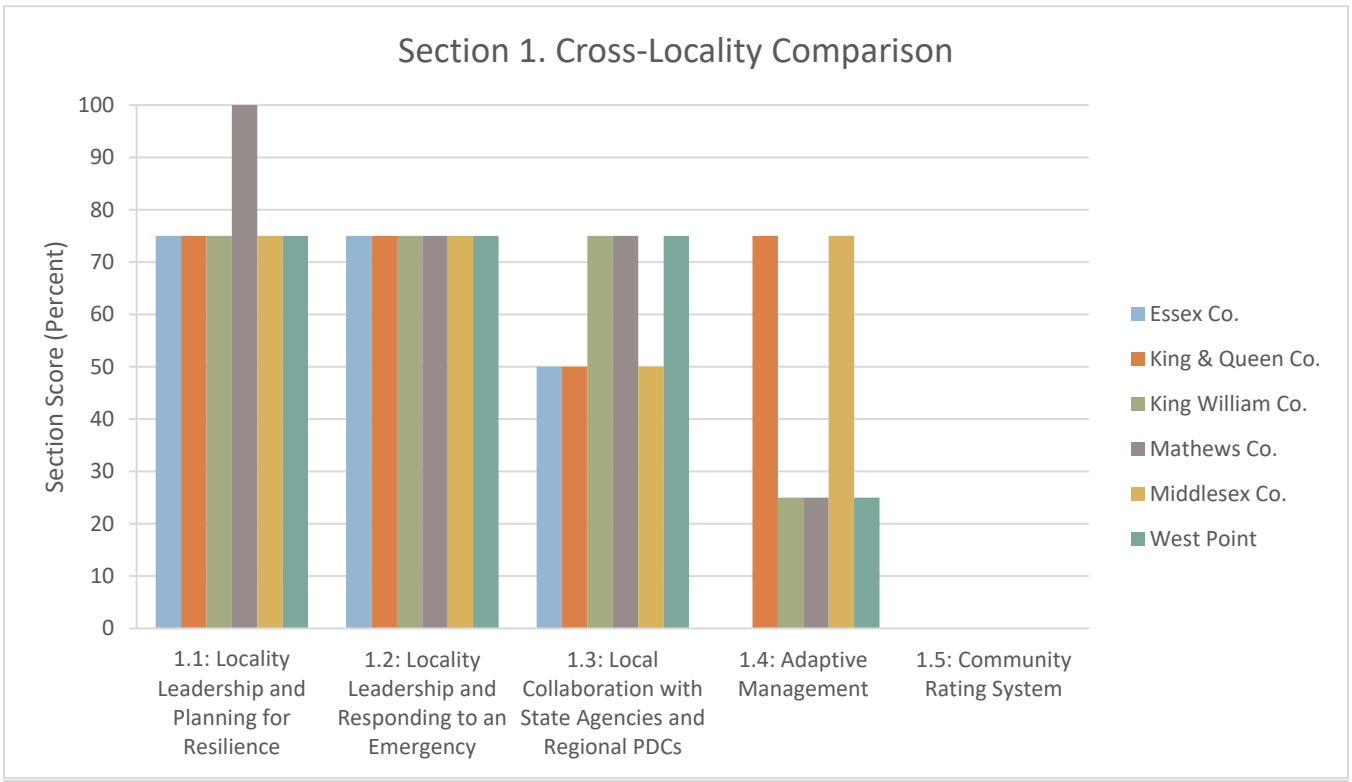
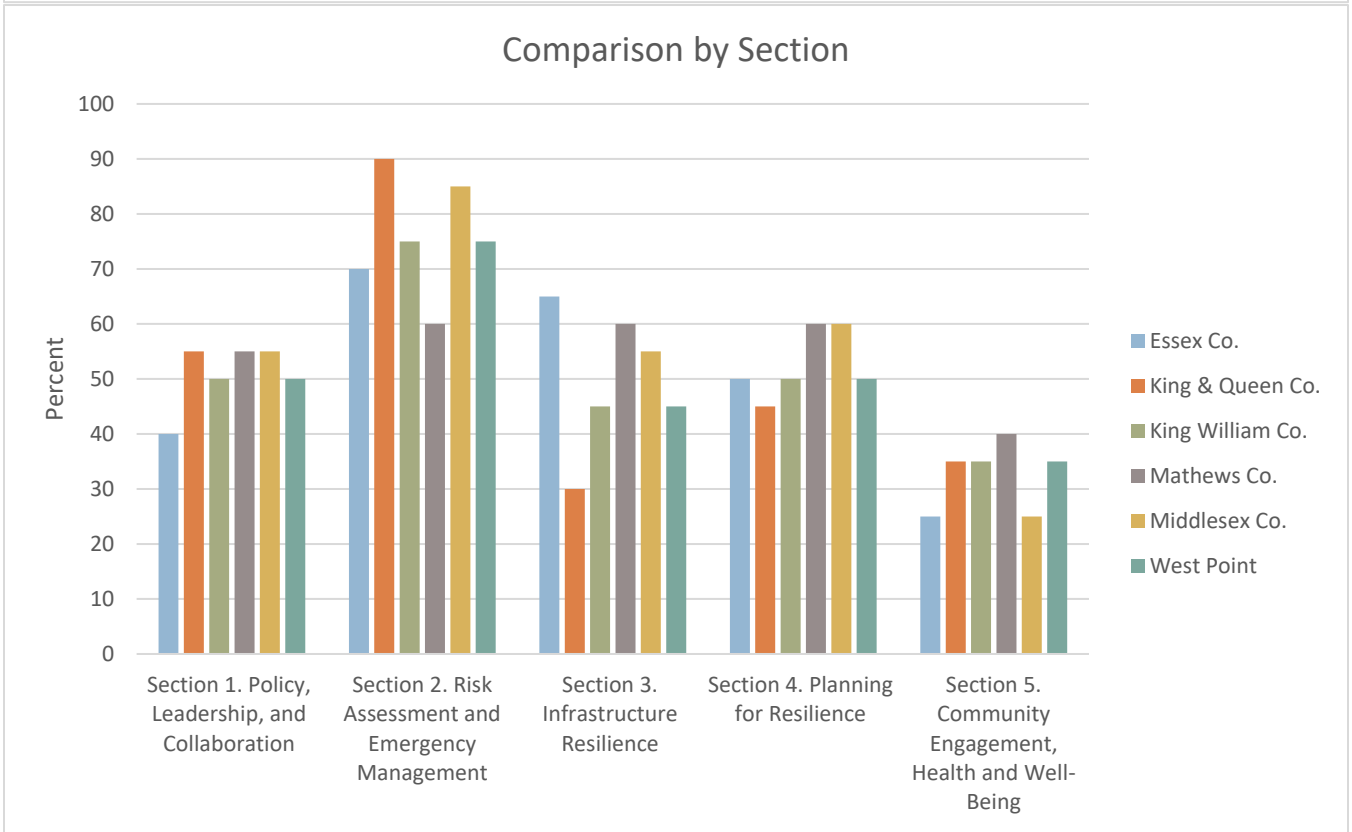
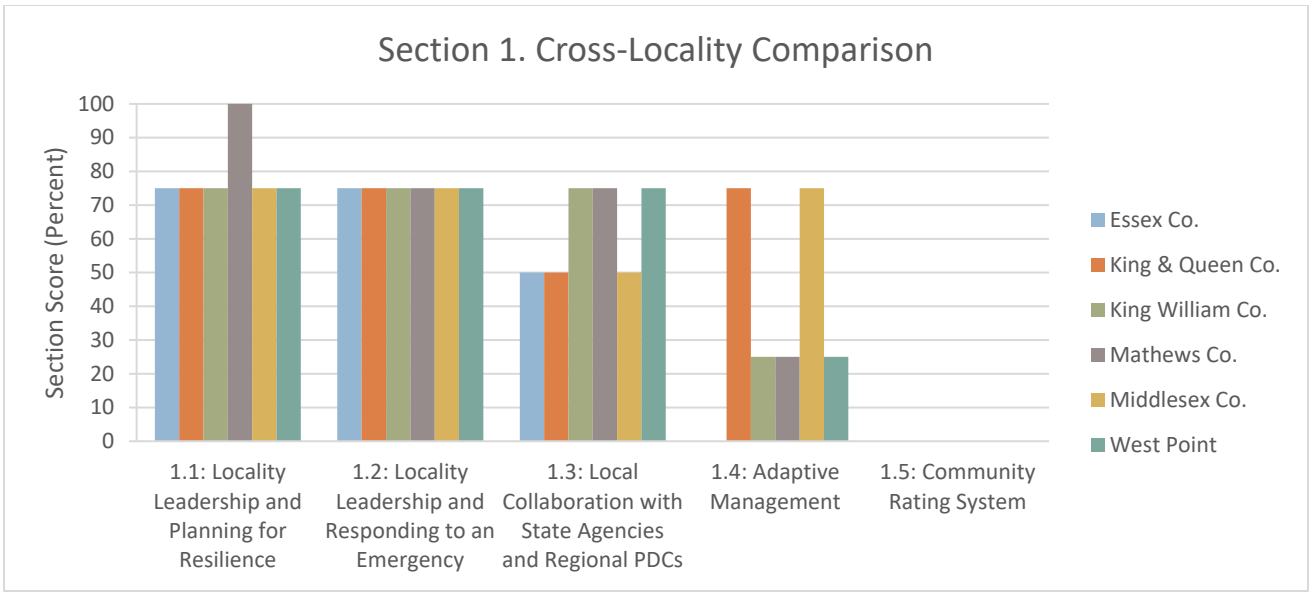
Comparing Scores Across Localities

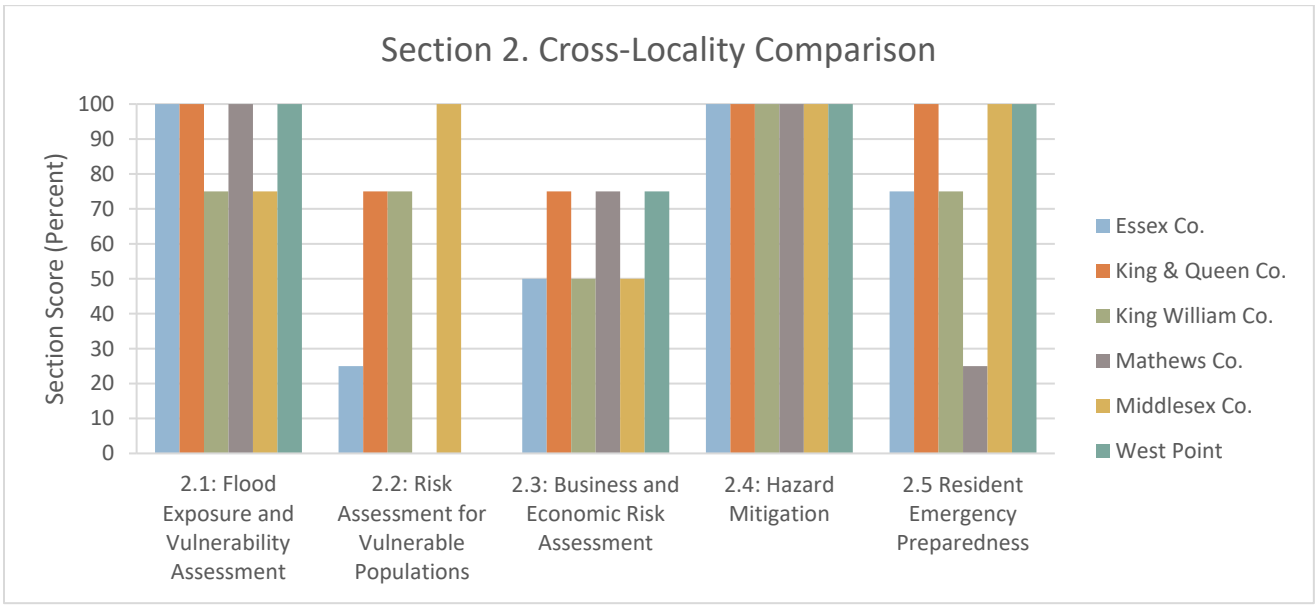


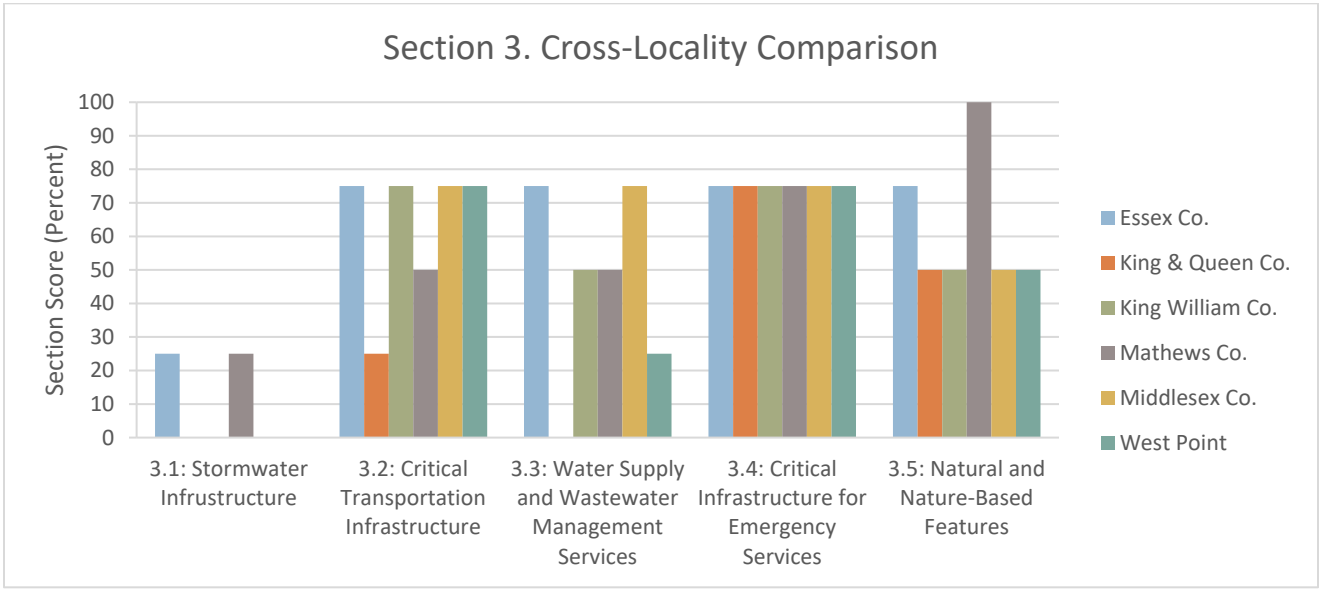


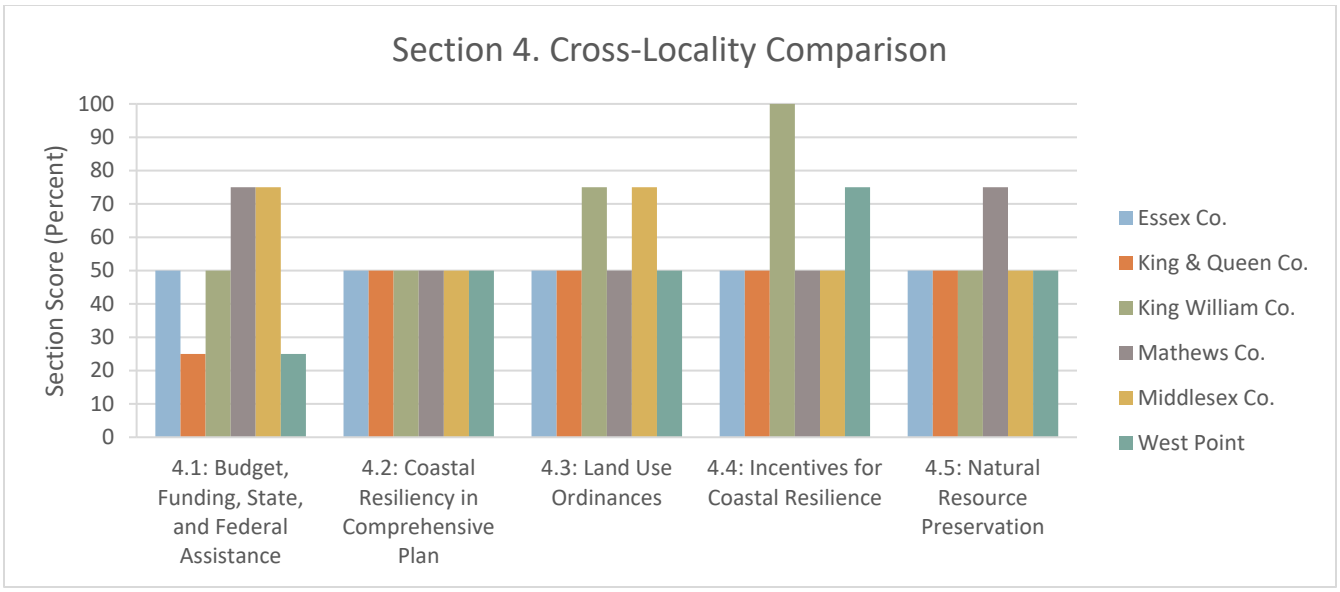

Section 1. Cross-Locality Comparison
Section Score (Percent)
100
90
80
70
60
50
40
30
20
10
0
1.1: Locality Leadership and Planning for Resilience
1.2: Locality Leadership and Responding to an Emergency
1.3: Local Collaboration with State Agencies and Regional PDCs
1.4: Adaptive Management
1.5: Community Rating System
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point

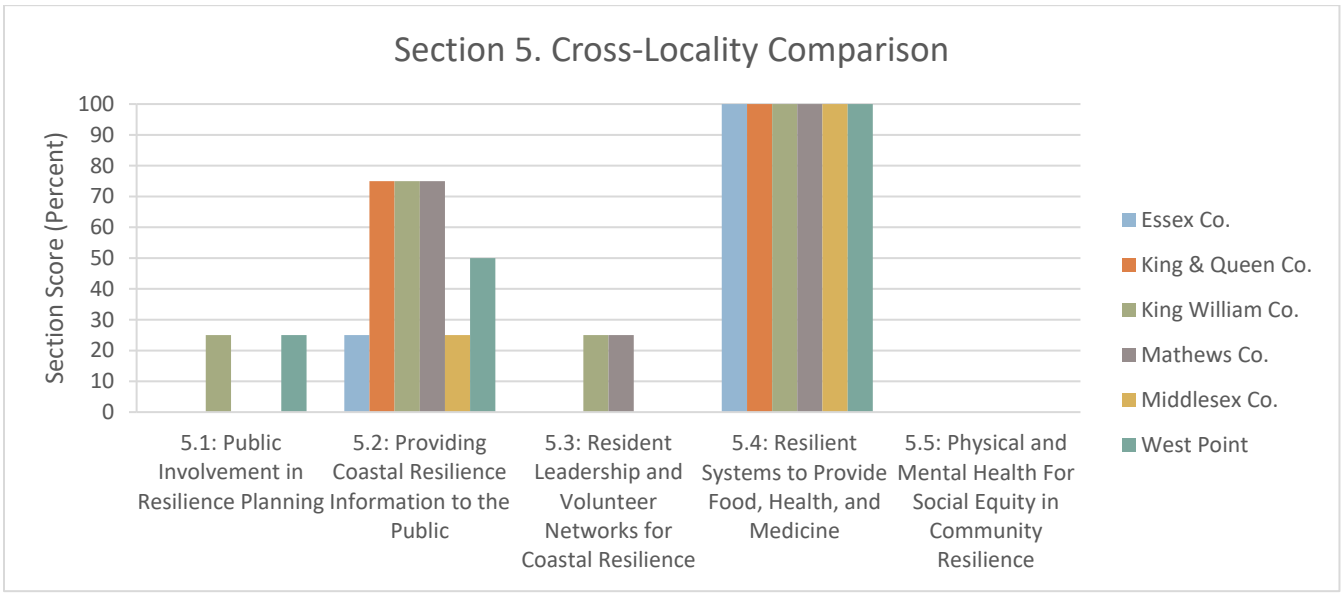

Comparison by Section
Percent
100
90
80
70
60
50
40
30
20
10
0
Section 1. Policy, Leadership, and Collaboration
Section 2. Risk Assessment and Emergency Management
Section 3. Infrastructure Resilience
Section 4. Planning for Resilience
Section 5. Community Engagement, Health and Well-Being
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point


Section 1. Cross-Locality Comparison
Section Score (Percent)
100
90
80
70
60
50
40
30
20
10
0
1.1: Locality Leadership and Planning for Resilience
1.2: Locality Leadership and Responding to an Emergency
1.3: Local Collaboration with State Agencies and Regional PDCs
1.4: Adaptive Management
1.5: Community Rating System
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point


Section 2. Cross-Locality Comparison
Section Score (Percent)
100
90
80
70
60
50
40
30
20
10
0
2.1: Flood Exposure and Vulnerability Assessment
2.2: Risk Assessment for Vulnerable Populations
2.3: Business and Economic Risk Assessment
2.4: Hazard Mitigation
2.5 Resident Emergency Preparedness
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point


Section 3. Cross-Locality Comparison
Section Score (Percent)
100
90
80
70
60
50
40
30
20
10
0
3.1: Stormwater Infrustructure
3.2: Critical Transportation Infrastructure
3.3: Water Supply and Wastewater Management Services
3.4: Critical Infrastructure for Emergency Services
3.5: Natural and Nature-Based Features
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point


Section 4. Cross-Locality Comparison
Section Score (Percent)
100
90
80
70
60
50
40
30
20
10
0
4.1: Budget, Funding, State, and Federal Assistance
4.2: Coastal Resiliency in Comprehensive Plan
4.3: Land Use Ordinances
4.4: Incentives for Coastal Resilience
4.5: Natural Resource Preservation
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point


Section 5. Cross-Locality Comparison
Section Score (Percent)
100
90
80
70
60
50
40
30
20
10
0
5.1: Public Involvement in Resilience Planning
5.2: Providing Coastal Resilience Information to the Public
5.3: Resident Leadership and Volunteer Networks for Coastal Resilience
5.4: Resilient Systems to Provide Food, Health, and Medicine
5.5: Physical and Mental Health For Social Equity in Community Resilience
Essex Co.
King & Queen Co.
King William Co.
Mathews Co.
Middlesex Co.
West Point

	Essex Co.	King & Queen Co.	King William Co.	Mathews Co.	Middlesex Co.	West Point
1. Policy, Leadership, and Regulation						
1.1: Locality Leadership and Planning for Resilience	75	75	75	100	75	75
1.2: Locality Leadership and Responding to an Emergency	75	75	75	75	75	75
1.3: Local Collaboration with State Agencies and PDCs	50	50	75	75	50	75
1.4: Adaptive Management	0	75	25	25	75	25
1.5: Community Rating System	0	0	0	0	0	0
Section 1. Total Percentage	40	55	50	55	55	50
2. Risk Assessment, Vulnerability, and Emergency						
2.1: Flood Exposure and Vulnerability Assessment	100	100	75	100	75	100
2.2: Risk Assessment for Vulnerable Populations	25	75	75	0	100	0
2.3: Business and Economic Risk Assessment	50	75	50	75	50	75
2.4: Hazard Mitigation	100	100	100	100	100	100
2.5 Resident Emergency Preparedness	75	100	75	25	100	100
Section 2. Total Percentage	70	90	75	60	85	75
3. Future Risk and Current Infrastructure Assessment						
3.1: Stormwater Infrustructure	25	0	0	25	0	0
3.2: Critical Transportation Infrastructure	75	25	75	50	75	75
3.3: Water Supply and Wastewater Management Services	75	0	50	50	75	25
3.4: Critical Infrastructure for Emergency Services	75	75	75	75	75	75
3.5: Natural and Nature-Based Features	75	50	50	100	50	50
Section 3. Total Percentage	65	30	50	60	55	45
4. Planning for Resilience						
4.1: Budget, Funding, State, and Federal Assistance	50	25	50	75	75	25
4.2: Coastal Resiliency in Comprehensive Plan	50	50	50	50	50	50
4.3: Land Use Regulations	50	50	75	50	75	50
4.4: Incentives for Coastal Resilience	50	50	100	50	50	75
4.5: Natural Resource Preservation	50	50	50	75	50	50
Section 4. Total Percentage	50	45	65	60	60	50
5. Community Engagement for Resilience						
5.1: Public Involvement in Resilience Planning	0	0	25	0	0	25
5.2: Providing Coastal Resilience Information to the Public	25	75	75	75	25	50
5.3: Citizen Leadership and Volunteer Networks for Coastal Resilience	0	0	25	25	0	0
5.4: Resilient Systems to Provide Food, Health, and Medicine	100	100	100	100	100	100
5.5: Physical and Mental Health For Social Equity in Community Resilience	0	0	0	0	0	0
Section 5. Total Percentage	25	35	45	40	25	35
Total RAFT Score (Percentage)	**50**	**51**	**57**	**55**	**56**	**51**