

SECTION 8 – MITIGATION STRATEGY

Introduction

A mitigation strategy provides participating localities with the basis for action. Based on the findings of the Risk Assessment and the Capability Assessment, the mission statement, goals and actions that follow are intended to guide both the day-to-day operations and the long-term approach taken by localities to reduce the impacts of hazards. For the Plan update, this section was separated into the following components:

- Planning Process;
- Mitigation Goals;
- Identification and Analysis of Mitigation Measures;
- Mitigation Action Plan; and
- Status of Mitigation Actions



This photo provides an example of a mitigation technique for natural resource protection. This project along the Appomattox River is an attempt to revegetate the riparian buffer along the river. This not only provides habitat, but also can help reduce flooding. Photo courtesy of the Commonwealth Regional Council

This Hazard Mitigation Plan was designed to be both comprehensive and strategic in nature. That is, the Plan was created to provide a comprehensive review of hazards and identify far-reaching policies and projects intended to not only reduce the future impacts of hazards, but also to assist the region, counties and municipalities achieve compatible economic, environmental and social goals. In addition, the Plan is strategic, in that all policies and projects were linked to departments or individuals responsible for their implementation. When possible, funding sources were identified that could be used to assist in project implementation.

The crucial basis for action in this Hazard Mitigation Plan can be found in the Mitigation Action Plan (MAP). The actions from the original Plan were reviewed by the respective localities, and changes made depending on available resources and whether an action had been started or completed. For this update, the actions are listed in this section with a status. The full MAP for each locality is found in the Appendixes and lists specific actions, a general description, those responsible for implementation, potential funding sources that may be used, and an estimated target date for completion. Each action was listed with the accompanying information, so that those in charge of the Plan's overall implementation would have a clear roadmap that can serve as an important monitoring tool.

Planning Approach

In order to guide the actions of those charged with implementation, the Plan follows a traditional planning approach, beginning with a mission statement that provides the overall guiding principle. Goals are intended to meet the intent of the mission statement. Next, mitigation actions are identified. This information was included in the original Plan, and previous Update, and was reviewed and (as needed) revised by the Project Management Team and CRC staff as part of this update process.

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Each hierarchical step is intended to provide a clearly defined set of policies and projects based on a rational framework for action. The components of the planning framework are explained in greater detail below.

Mission Statement:	Provides guiding principles of the Hazard Mitigation Plan.
Goals:	Goals represent broad statements that provide the framework for achieving the intent of the mission statement.
Hazard Mitigation Policies:	Policies are defined as a course of action agreed to by members of the Planning Team.
Hazard Mitigation Projects:	Projects are defined as specific actions taken to address defined vulnerabilities to existing buildings or systems. Potential funding sources are listed for each project.
Mitigation Action Plan:	Prioritized listing of actions (policies and projects), including a categorization of mitigation technique, hazards addressed, individual or organization responsible for implementation, estimated timeline for completion, and potential funding source(s).

Mission Statement

Develop and maintain a comprehensive pre- and post-disaster hazard mitigation program, guided by the actions identified in this Plan, to reduce the impacts of future hazard events that will impact the region.

Mitigation Goals

The goals listed below are the result of an inclusive planning process described in Section 2. The goals were reviewed as part of the Plan update, and amended as deemed appropriate. Mitigation categories and goal statements are listed below:

Mitigation Categories

The categories were developed for the original Plan. Those categories were evaluated, commonalities were identified across counties, and goal statements were developed that encompass and address the concerns of the entire region. The categories were reviewed as part of the Plan update, and revised as necessary. These goal statements are:

Mitigation Goals

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| Goal #1 | Implement cost-effective structural projects that will reduce the impact of natural hazards in the region |
| Goal #2 | Increase public awareness through effective education and outreach programs |
| Goal #3 | Improve the data available to local government officials in order for emergency managers and planners to make better decisions in response to and in preparation for the next disaster |

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Goal #4 Implement sound planning techniques throughout the region that complement the benefits of hazard mitigation.

Identification and Analysis of Mitigation Measures

In formulating this Mitigation Strategy, a wide range of activities were considered in order to help achieve the goals of participating jurisdictions. All actions chosen by local government officials, both in the original Plan and the Plan update, fall into one of the broad categories of mitigation techniques listed below.

Mitigation Techniques

1. Prevention – activities intended to keep hazard problems from getting worse. They are particularly effective in reducing a community’s future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:
 - Planning and Zoning
 - Hazard Mapping
 - Open Space Preservation
 - Floodplain Regulations
 - Stormwater Management
 - Drainage System Maintenance
 - Capital Improvements Programming
 - Shoreline/ Riverine/ Fault Zone Setbacks

2. Property Protection – activities/measures that enable structures to better withstand hazard events, remove structures from hazardous locations, or provide insurance to cover potential losses. Examples include:
 - Acquisition
 - Relocation
 - Building Elevation
 - Critical Facilities Protection
 - Retrofitting (i.e., wind proofing, flood proofing, seismic design standards, etc.)
 - Insurance
 - Safe Room Construction

3. Natural Resource Protection – activities that reduce the impact of hazards by preserving or restoring the function of natural systems. Examples of natural systems that can be classified as high hazard areas include floodplains, wetlands and barrier islands. Thus, natural resource protection can serve the dual purpose of protecting lives and property while enhancing environmental goals such as improved water quality or recreational opportunities. Parks, recreation, or conservation agencies and organizations often implement these measures. Examples include:
 - Floodplain Protection
 - Beach and Dune Preservation

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- Riparian Buffers
 - Fire Resistant Landscaping
 - Erosion and Sediment Control
 - Wetland Restoration
 - Habitat Preservation
 - Slope Stabilization
4. Structural Projects – activities/measures that are intended to lessen the impact of hazards by modifying the environment or hardening structures. Structural projects are usually designed by engineers and managed or maintained by public works staff. Examples include:
- Reservoirs
 - Levees, Dikes, Floodwalls or Seawalls
 - Detention and Retention Basins
 - Channel Modification
 - Beach Nourishment
 - Storm Sewer Construction
5. Emergency Services – Although not typically considered a mitigation technique, emergency services minimize the impact of a hazard on people and property. Actions taken immediately prior to, during, or in response to a hazard event include:
- Warning Systems
 - Search and Rescue
 - Evacuation Planning and Management
 - Flood Fighting Techniques
6. Public Information and Awareness – activities are used to advise residents, business owners, potential property buyers and visitors about hazards and mitigation techniques they can use to protect themselves and their property. Examples of measures used to educate and inform the public include:
- Outreach and Education
 - Training
 - Speaker Series, Demonstration Events
 - Real Estate Disclosure
 - Hazard Expositions

Mitigation Techniques in This Region

Local officials reviewed the findings of the Capability Assessment and Risk Assessment in order to determine feasible and effective mitigation techniques. This was done during the development of the original Plan, and during the 2012 Plan Update and the current Update. The Disaster Mitigation Act of 2000 specifies that state and local governments should prioritize actions based on the level of risk a hazard poses to the lives and property of a given jurisdiction. The Mitigation Matrix (Figure 8.1) served as a general guide; assisting local governments to make sure that they addressed, at a minimum,

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those hazards posing the greatest threat. Mitigation techniques, including prevention, property protection, natural resource protection, structural projects, emergency services, and public information and awareness were noted in the matrix if adopted by a participating jurisdiction. It is important to note that local Mitigation Action Plans in this region included an array of actions, not just those addressing high and moderate risk hazards.

Figure 8.1
Mitigation Matrix (updated based on revised hazard rankings)

MITIGATION TECHNIQUE	HIGH RISK HAZARDS				MODERATE RISK HAZARDS	
	<i>Winter Storms</i>	<i>Drought</i>	<i>Hurricanes and Tropical Storms</i>	<i>Severe Thunderstorms and Tornadoes</i>	<i>Flood</i>	<i>Wildfire</i>
Prevention	✓	✓	✓	✓	✓	✓
Property Protection	✓	✓	✓		✓	✓
Natural Resource Protection				✓	✓	
Structural Projects	✓	✓	✓	✓	✓	✓
Emergency Services	✓	✓	✓	✓	✓	✓
Public Information and Awareness	✓	✓	✓	✓	✓	✓

Mitigation Action Plan

The mitigation actions developed and adopted by participating jurisdictions are listed in the Appendices. They are broken out by locality for this Plan update, and have been revised to indicate a status for each action. The end of this section lists each action with a status. **Table 8.1** represents the general format in which each mitigation action was recorded. Each action has been designed to achieve the goals identified in the Mitigation Strategy, and each jurisdiction's mitigation actions form the basis of their Mitigation Action Plan. By identifying specific projects and policies, the local Mitigation Action Plans help lay the framework for participating counties and municipalities to engage in distinct actions that will reduce their exposure to future hazard events and disasters.

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Table 8.1
Mitigation Action Worksheet (revised for Plan update)
Detailed information for each action can be found in the Appendixes.

Mitigation Action	
a. Community Name:	
b. Action Item (Describe):	
c. Hazard(s):	
d. Lead Agency/ Department Responsible:	
e. Estimated Cost:	
f. Funding Method: (General Revenue, Contingency/ Bonds, External Sources, etc.)	
g. Implementation Schedule:	
h. Priority:	
i. Status:	

- a. **Community Name:** Be sure to identify your community's name.
- b. **Action Item:** Identify specific actions that, if accomplished, will reduce vulnerability and risk in the impact area. Actions should match mitigation goals.
- c. **Hazard(s):** The hazard(s) the action attempts to mitigate.
- d. **Lead Agency/ Department Responsible:** Identify the local agency, department or organization that is best suited to accomplish this action.
- e. **Estimated Cost:** If applicable, indicate the cost to accomplish the mitigation action. This amount should be estimated until a final dollar amount can be determined.
- f. **Funding Method:** If applicable, indicate how the cost to complete the action will be funded. For example, funds may be provided from existing operating budgets (General Revenue), a previously established contingency fund (Contingency/ Bonds), or a federal or state grant (External Sources).
- g. **Implementation Schedule:** Indicate when the action will begin, and when the action is expected to be completed. Remember that some actions will require only a minimum amount of time, while others may require a long-term continuing effort.
- h. **Priority:** Indicate whether the action is a 1) High priority – short-term immediate – reducing overall risk to life and property; 2) Moderate priority – an action that should be implemented in the near future due to political or community support or ease of implementation; 3) Low priority – an action that should be implemented over the long term that may depend on the availability of funds. Prioritizing mitigation actions for each jurisdiction was based on the following five (5) factors: (1) effect on overall risk to life and property; (2); ease of implementation; (3) political and community support; (4) a general economic cost/benefit review; and (5) funding availability.

NOTE: Only a general economic cost/benefit review was considered through the process of selecting and prioritizing mitigation actions for each jurisdiction. Mitigation actions with "high" priority were determined to be the most cost effective and most compatible with each jurisdiction's unique needs. A more detailed cost/benefit analysis will be applied to particular projects prior to the application for or obligation of funding, as appropriate.
- i. **Status:** Has an action been taken or started? If so, how far along is it? If not, why not? Also, should an action be removed? If so, why?

Each jurisdiction was responsible for prioritizing the mitigation actions identified for their locality. The methodology for how the actions were prioritized is mentioned above (item h). The High, Moderate or Low priority ranking was determined, by each locality, for

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each action based on the five factors listed above. The priority for each local action can be found in the Appendixes.

Mitigation Actions Completed

A status of mitigation actions for each locality is on the pages that follow. Mitigation actions completed by localities (or that have started and are ongoing) since the completion of the original plan in 2005 are as follows:

Amelia County

- Relocate the Emergency Operations facility to the County Administration Building, to deal with the expected growth and expansion of County services and staffing resources, and install hurricane shutters or window clips to protect the new facility – **completed**
- Provide recommended methods of reducing risk and vulnerability on the County's website. Develop and distribute educational brochures to all school children to be taken home to parents – **completed**
- Contact civic organizations, church organizations, and business groups to develop a Safe Community Committee. The County will facilitate the committee, which will develop recommendations for improving safety in the community and providing recommendations to provide educational information on a County-wide basis – **completed**
- Review all permits for new development and substantial improvements for compliance with the County's ordinances as they relate to flood areas – *ongoing*
- Evaluate current staff levels to ensure the County has enough trained staff to manage mitigation strategies as well as emergencies on the local level – **completed**

Buckingham County

- Routinely inspect functioning of fire hydrants – *ongoing*
- Review all permits for new development and substantial improvements for compliance with the County's floodplain ordinance – *ongoing*
- Identify and strengthen facilities to function as public shelters – **completed**

Town of Dillwyn

- Develop or update water management/emergency response plan – *ongoing*
- Review all permits for new development and substantial improvements for compliance with the Town's ordinances as they relate to flood areas – *ongoing*

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Charlotte County

- Emergency generators/backup power for water, wastewater treatment plant facilities. This action applies to Charlotte County as well as the Town of Keysville & the Town of Drakes Branch – *ongoing*
- Backup wireless connectivity to internet (with power backup at source) – ***completed***
- Improve GIS data for tax parcels, public works, existing businesses – action applies to County and the towns of Keysville, Drakes Branch, Charlotte Court House, and Phenix – ***completed***

Town of Drakes Branch

- Review all permits for new development and substantial improvements with compliance with the Town's Floodplain Ordinance – *ongoing*
- Purchase emergency generators/backup power for critical facilities – ***completed***

Town of Keysville

- Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development – *ongoing*
- Address the storm water drainage problems in downtown Keysville, through the construction of a storm water drainage system or other methods as needed – ***completed***

Town of Phenix

- Review all permits for new development and substantial improvements with compliance with the Town's Floodplain Ordinance – *ongoing*

Lunenburg County

- Designate and prepare safety shelter in several locations in the county – *ongoing*
- Establish a "hazard awareness week" in coordination with the media to promote hazard awareness (seasonal) – *ongoing*
- Review all permits for new development and substantial improvements for compliance with the County's ordinances as they relate to flood areas – *ongoing*

Town of Kenbridge

- Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate

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agencies in determining appropriate actions including possible FIRM development – *ongoing*

Town of Victoria

- Purchase generators for critical facilities and shelter to provide emergency power during a blackout (i.e. medical centers) – **completed**
- Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development – *ongoing*
- Implement community early warning systems designed to notify the general public during weather related emergencies – **completed**

Nottoway County

- Prohibit or limit floodplain development through regulatory and/or incentive-based measures – *ongoing*

Town of Blackstone

- Update contact information for all Citizens in the Town of Blackstone, that require special attention and services when the electricity goes out – **completed**
- Establish a formal MOU between VUMAC, Heritage Hall, Clays Rest Home and the Town of Blackstone in regards to using the facility as a staging shelter during times of emergency. This action also applies to Nottoway County, and the Towns of Burkeville and Crewe – **completed**
- Review all permits for new development and substantial improvements for compliance with the Town's ordinances as they relate to flood areas – *ongoing*

Town of Crewe

- Develop plan to better control storm water drainage and inflow into sewer lines that constantly cause flooding problems to the wastewater treatment plant – *ongoing*
- Provide Public Education and Awareness to better inform citizens about natural hazards – **completed**

Prince Edward County

- Review all permits for new development and substantial improvements for compliance with the County's ordinances as they relate to flood areas – *ongoing*

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Town of Farmville

- Ask Virginia Power to cut trees over or near power lines during the summer to prevent loss of electricity during winter storms or heavy rain and wind events – *ongoing*
- Construction of pipeline to alternate water source to be used during drought conditions – *ongoing*
- Purchase and remove remaining homes in floodplain areas in North Virginia St./North Bridge St. area – *ongoing*
- Advertise and promote the availability of flood insurance – *ongoing*
- Routinely prune trees and clear tree limbs hanging in right-of-way – *ongoing*
- Encourage residents to keep storm drains clear of debris during storms (not to rely solely on Public Works) – *ongoing*
- Update Regional (Farmville/Prince Edward) Water Supply Plan and Town drought ordinance – *ongoing*
- Complete and maintain FEMA elevation certificates for all new/improved buildings in the floodplain – *ongoing*
- Require more trees to be preserved/planted in landscape designs to reduce the amount of storm water runoff – *ongoing*
- Routinely inspect the functioning of fire hydrants – *ongoing*
- Routinely clean and repair storm water drains – *ongoing*
- Routinely clean debris from support bracing underneath low-lying bridges – *ongoing*
- Install quick-connect emergency generator hook-ups for critical facilities, including raw water intake and booster station – **completed**
- Purchase of generator for Town's fueling system. This fueling system serves our Fire, EMS, Public Works and Police vehicles – **completed**
- Develop regional (Farmville/Prince Edward) water supply plan and Town drought ordinance – **completed**
- Update Flood Insurance Rate Maps – **completed**

Status of Mitigation Actions

As part of the update process, the participating localities reviewed their respective mitigation actions from the original Plan and prior update to see if changes were necessary. Localities were asked to classify each action as underway, completed, ongoing, pending, in process/development, or not started (no action taken). If no action was taken on an action, a locality was asked to state why. The reason could be as simple as lack of funding or staff resources. If a locality chose to remove an action from their list, then a reason was needed for that as well. The reason for this could be lack of staff, or no longer needed.

The status of mitigation actions for each locality starts on the following page. Detailed information on each action, per **Table 8.1**, can be found in the Appendices. Please note that this status update does NOT include new mitigation actions that were added as part of this Plan update. New actions can be found in the Appendix for each respective locality. It should also be noted that during the 2012 Plan Update, some localities chose to remove some of their mitigation actions that were included in the original Plan. Since the development of the original Plan, participating localities looked at priorities and

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available staff/financial resources, and decided some actions were not feasible at this time. Actions removed during the 2012 Update are NOT included in this Update.

Amelia County

Action	Status
1. Elevate and relocate homes or critical infrastructures out of flood zones.	No action taken – awaiting funds
2. Construct waterproof barriers at the wastewater treatment plant to prevent future flood damages if the future relocation plan does not eliminate the hazard soon enough.	No action taken – awaiting funds
3. Install window clips for mounting plywood or install hurricane shutters to protect windows of critical facilities.	No action taken – awaiting funds
4. Build redundant communications system components to back-up primary communications.	No action taken – awaiting funds
7. When new homes are constructed, provide information to encourage clearing trees, brush, and other flammable natural materials a safe distance from the home creating a “Green Zone” between the forest and the structures.	No action taken – need to coordinate with VDOF on this.
8. Relocate the Emergency Operations facility to the County Administration Building, to deal with the expected growth and expansion of County services and staffing resources, and install hurricane shutters or window clips to protect the new facility.	Completed
9. Information from this plan will be provided to residents and businesses through the local newspaper, inserted in tax bills or regular mailings to all addresses, and in public meetings.	No action taken – lack of staff resources
10. Provide recommended methods of reducing risk and vulnerability on the County’s website. Develop and distribute educational brochures to all school children to be taken home to parents.	Completed
11. Contact civic organizations, church organizations, and business groups to develop a Safe Community Committee. The County will facilitate the committee, which will develop recommendations for improving safety in the community and providing recommendations to provide educational information on a County-wide basis.	Completed – being done through other avenues
12. Review all permits for new development and substantial improvements for compliance with the County’s ordinances as they relate to flood areas.	Ongoing – enforced through County Zoning Ordinance (includes a Flood Plain District) and Subdivision Ordinance (restricts development in areas subject to flooding).
13. Install storm water drainage system to prevent flooding in buildings in flood prone areas.	No action taken, lack of funding

Mitigation actions removed per current Plan update

Secure mobile homes beyond standard tie-downs to reduce their vulnerability to high winds.	Remove – Cost prohibitive to complete this (funding req.)
Install safe rooms and develop severe weather shelters to provide safer locations for the public during rapidly developing weather events.	Remove – Cost prohibitive to complete this (funding req.), multiple areas of need would add to cost

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Mitigation actions previously completed per 2012 Plan update

Evaluate current staff levels to ensure the County has enough trained staff to manage mitigation strategies as well as emergencies on the local level.	Completed – County has hired a full-time emergency manager
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Buckingham County

Action	Status
1. Install quick-connect generators for hook-ups for critical facilities.	No action taken – awaiting funds
2. Purchase generators for critical facilities and shelters (for emergency power).	No action taken – awaiting funds
3. Routinely inspect functioning of fire hydrants.	Ongoing. The County does this on a yearly basis.
4. Review all permits for new development and substantial improvements for compliance with the County's floodplain ordinance.	Ongoing – enforced through the County's Floodplain Ordinance.

Mitigation actions previously completed per 2012 Plan update

Identify and strengthen facilities to function as public shelters.	Completed. The County's Middle School now serves as a shelter.
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Town of Dillwyn

Action	Status
1. Develop or update water management/emergency response plan.	Ongoing – Plan developed, needs to be updated periodically.
2. Develop a canned public awareness campaign for use in times of high fire danger.	No action taken – lack of staff resources
3. Routinely clean and repair storm water drains.	No action taken – lack of funding/staff resources
4. Encourage homeowners to install backflow valves to prevent reverse-flow floods.	No action taken – lack of staff resources
5. Establish emergency response procedures in coordination with operators of critical facilities.	No action taken – lack of staff resources
6. Install quick-connect emergency generator hook-ups for critical facilities.	No action taken – awaiting funds
7. Install storm water drainage system to prevent flooding in buildings on Main Street	Pending. Grant application previously submitted, but withdrawn due to lack of matching funds; Town to re-evaluate feasibility.
8. Review all permits for new development and substantial improvements for compliance with the Town's ordinances as they relate to flood areas.	Ongoing – Town ordinances restrict building/development within areas subject to flooding.

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Charlotte County

Action	Status
1. Identify most at-risk critical facilities in County and evaluate potential mitigation techniques.	FEMA flood evaluation complete, other evaluations incomplete due to lack of staff resources
2. Emergency generators/backup power for water, wastewater treatment plant facilities. This action applies to Charlotte County as well as the Town of Keyville & the Town of Drakes Branch.	Ongoing – A generator has been installed for the county's pump station and force main sewage line. Generators are still needed for facilities in the Town of Keyville and the Town of Drakes Branch.
3. Backup wireless connectivity to internet (with power backup at source).	Completed. Generator installed for county's force main line was set up to also provide backup power for IT equipment and internet service at the EOC.
4. Develop a backup emergency operations center as part of a continuity of operations plan.	No action taken – dependent upon availability of resources.
5. Advertise and promote the availability of flood insurance.	No action taken – dependent upon availability of resources to implement.

Mitigation action moved from Drakes Branch to Charlotte County

6. Develop/update water management/emergency response plan. This action applies to County and Towns of Charlotte C.H., Drakes Branch, Keyville, and Phenix	Ongoing. Initial meeting for plan update occurred in June 2016.
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Mitigation action previously completed per 2012 Plan update

Improve GIS data for tax parcels, public works, existing businesses – action applies to County and the towns of Keyville, Drakes Branch, Charlotte Court House, and Phenix.	Completed
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Town of Charlotte Court House

Action	Status
1. Emergency automatic startup generators/backup power for water treatment plant facilities.	No action taken – awaiting funding
2. Advertise and promote the availability of flood insurance.	No action taken – dependent upon availability of resources to implement.
3. Retrofit fire station and Town Hall to become hazard resistant.	No action taken – awaiting funding
4. Continue to track and identify impacts from severe weather events to determine if flooding occurs and, if so, assist appropriate agencies in determining appropriate actions – including possible FIRM development, the construction of a storm water drainage system, elevation/acquisition/relocation/flood proofing of vulnerable buildings or facilities, or other methods as needed.	No action taken at this time – will depend on actions necessary, availability of funding.

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Town of Drakes Branch

Action	Status
1. Ensure local firefighters are properly trained and exercised in brush/forest firefighting techniques.	No action taken – lack of staff resources
2. Install quick-connect emergency generator hook-ups for critical facilities.	No action taken – awaiting funding
3. Relocation of Town Municipal Building, which houses Town Office, Drakes Branch Fire Department, and Drakes Branch Police operations, out of flood plain through the construction of a new facility that is located outside of the flood hazard area. (This is an amendment. Action #3 for Drakes Branch previously read: Retrofit police station to become hazard resistant.)	No action taken – awaiting funding
4. Review all permits for new development and substantial improvements with compliance with the Town’s Floodplain Ordinance.	Ongoing – enforced through a Floodplain District Ordinance, which places restrictions and requirements on building in flood areas.

Mitigation action removed per current Plan update

Identify and recruit civic groups and volunteer agencies for community mitigation projects.	Remove – lack of staff resources
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Mitigation action previously completed per 2012 Plan update

Purchase emergency generators/backup power for critical facilities.	Completed
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Town of Keysville

Action	Status
1. Emergency automatic startup generators/backup power for water, wastewater treatment plant facilities.	In progress. Generator hookups have been installed. Additional funding is needed to purchase generators. Current plans are to rent generators when needed.
2. Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development.	Ongoing
3. Address the storm water drainage problems in downtown Keysville, through the construction of a storm water drainage system or other methods as needed.	Completed

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Town of Phenix

Action	Status
1. Emergency automatic startup generators/backup power for water treatment plant facilities.	No action taken – awaiting funding
2. Review all permits for new development and substantial improvements with compliance with the Town’s Floodplain Ordinance.	Ongoing – enforced through a Floodplain Ordinance, which places restrictions and requirements on building in flood areas.

Lunenburg County

Action	Status
1. Conduct a cumulative impact analysis/studies for flood-prone property and roads within the watershed.	No action taken – lack of staff resources
2. Designate and prepare safety shelter in several locations in the county.	Ongoing. One shelter ready in Kenbridge (Emergency Squad – generator installed with the help of a USDA grant). Meherrin Fire Department and Victoria Fire Department also designated as shelters. County is working on setting up Lunenburg Middle School and Kenbridge Fire Department as shelters.
3. Encourage or require burial of electrical, phone and cable lines.	No action taken – lack of staff resources. The County may investigate zoning or building code changes to address this.
4. Require construction of "safe rooms" in new schools, day care and rest homes.	No action taken – lack of staff resources. The County may investigate zoning or building code changes to address this.
5. Identify and clear fuel loads evented by downed trees.	No action taken – lack of staff resources. The County may investigate working with the Virginia Department of Forestry to address this.
6. Develop/update water management/emergency response plan.	Underway, as part of regional Plan (with help from CRC).
7. Establish a "hazard awareness week" in coordination with the media to promote hazard awareness (seasonal).	Ongoing. The County participates in Tornado Preparedness day each March.
8. Review all permits for new development and substantial improvements for compliance with the County’s ordinances as they relate to flood areas.	Ongoing – enforced through the County’s Zoning Ordinance (has a section on flood hazard areas).

Town of Kenbridge

Action	Status
1. Develop plan to better control storm water drainage and inflow into sewer lines that constantly cause flooding problems to our wastewater treatment plant.	No action taken – lack of staff resources

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2. Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development.	Ongoing
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Town of Victoria

Action	Status
1. Purchase generators for critical facilities and shelter to provide emergency power during a blackout (i.e. medical centers).	Completed. The Town has acquired a portable generator, which can be used for the water filtration plant, and pumping stations at Nottoway Falls and Modest Creek Reservoir.
2. Install/replace storm water drainage system to prevent flooding of houses/buildings	No action taken – awaiting funding
3. Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development.	Ongoing
4. Implement community early warning systems designed to notify the general public during weather related emergencies.	Completed. System installed by the Town in the Summer of 2016.

Nottoway County

Action	Status
1. Long-term plan for additional water supplies (to respond to drought/water emergency). This action also applies to the Towns of Burkeville, Crewe and Blackstone.	In development – staff in place, awaiting funding
2. Prohibit or limit floodplain development through regulatory and/or incentive-based measures.	Ongoing – enforced through County ordinances
3. Ensure that emergency shelters are well-equipped and readily available for all citizens of the county	No action taken yet, waiting for funding
4. Implement community early warning systems designed to notify the general public during weather related emergencies.	Pending – County has applied for grant funding through VDEM to acquire Code Red system for the County.
5. Provide public education and awareness to better inform citizens of Nottoway County about natural hazards and their role in prevention	No action taken – lack of funding/staff
6. Install storm water drainage system to prevent flooding in homes and buildings in flood prone areas – action applies to County and the towns of Blackstone, Burkeville, and Crewe.	No action taken, lack of funding

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<p>7. Protect repetitively flooded structures from flood damage. Actions could include flood proofing retrofits, elevation of structure and/or critical components, acquisition and demolition, relocation or repurposing of structure.</p>	<p>No action taken, will depend on available funding and the presence of affected buildings for which action is needed</p>
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Town of Blackstone

Action	Status
<p>1. Update contact information for all Citizens in the Town of Blackstone, that require special attention and services when the electricity goes out.</p>	<p>Completed. The Town has a Code Red system in place for this.</p>
<p>2. Establish a formal MOU between VUMAC, Heritage Hall, Clays Rest Home and the Town of Blackstone in regards to using the facility as a staging shelter during times of emergency. This action also applies to Nottoway County, and the Towns of Burkeville and Crewe.</p>	<p>Completed. The Town has an Emergency Operations Center up and running.</p>
<p>3. Inspect and replace fire hydrants that are outdated or not working throughout the town on a regular basis</p>	<p>Staffing is in place to complete.</p>
<p>4. Continue to work with Nottoway, Crewe, and Burkeville on the Water Supply for Nottoway County</p>	<p>Expect to begin as soon as agreements can be reached</p>
<p>5. Devise a Fair Fire Inspection program for all Downtown buildings and businesses between Irving Street and Tavern Street</p>	<p>Expect to begin as soon as possible</p>
<p>6. Review all permits for new development and substantial improvements for compliance with the Town's ordinances as they relate to flood areas.</p>	<p>Ongoing – enforced through the Town's Subdivision Ordinance.</p>

Town of Burkeville

Action	Status
<p>1. Replace and Upgrade Water Lines in the Town of Burkeville</p>	<p>In development stage – staff in place – awaiting funding</p>
<p>2. Amend the zoning/subdivision ordinances to include restrictions on building in areas subject to flooding.</p>	<p>No action taken – Would require a change to Town ordinances</p>
<p>3. Protect repetitively flooded structures from flood damage. Actions could include flood proofing retrofits, elevation of structure and/or critical components, acquisition and demolition, relocation or repurposing of structure.</p>	<p>No action taken, will depend on available funding and the presence of affected buildings for which action is needed</p>

Town of Crewe

Action	Status
<p>1. Encourage residents to keep storm drains clear of debris during storms.</p>	<p>No action taken – lack of staff resources</p>

MITIGATION STRATEGY

2. Ensure that adequate personnel/equipment are available to fight wildfires and structural fires.	No action taken – awaiting funding
3. Develop plan to better control storm water drainage and inflow into sewer lines that constantly cause flooding problems to the wastewater treatment plant.	Ongoing – awaiting funding
4. Provide Public Education and Awareness to better inform citizens about natural hazards.	Completed. The Town has a Code Red system in place for this.
5. Amend the zoning/subdivision ordinances to include restrictions on building in areas subject to flooding.	No action taken – Would require a change to Town ordinances
6. Protect repetitively flooded structures from flood damage. Actions could include flood proofing retrofits, elevation of structure and/or critical components, acquisition and demolition, relocation or repurposing of structure.	No action taken, will depend on available funding and the presence of affected buildings for which action is needed.

Prince Edward County

Action	Status
1. Update and improve GIS data for tax parcels, public works, existing businesses, and MSAG. <i>This action was amended to include more specifics.</i>	In process, dependent upon funding
2. Review all permits for new development and substantial improvements for compliance with the County's ordinances as they relate to flood areas.	Ongoing – enforced through County ordinances

Mitigation action removed per current Plan update

Purchase generator (30kw) for Prince Edward County Middle School which serves as an emergency shelter.	Remove – No records of this having been done, action being replaced with new action to address emergency shelters (see Appendix G)
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Town of Farmville

Action	Status
1. Ask Virginia Power to cut trees over or near power lines during the summer to prevent loss of electricity during winter storms or heavy rain and wind events.	Ongoing
2. Construction of salt bin for storing salt for winter storms.	Seeking funding
3. Construction of pipeline to alternate water source to be used during drought conditions.	Ongoing
4. Purchase and remove remaining homes in floodplain areas in North Virginia St./North Bridge St. area.	Ongoing
5. Advertise and promote the availability of flood insurance.	Ongoing
6. Routinely prune trees and clear tree limbs hanging in right-of-way.	Ongoing
7. Encourage residents to keep storm drains clear of debris during storms (not to rely solely on Public Works).	Ongoing

MITIGATION STRATEGY

8. Update Regional (Farmville/Prince Edward) Water Supply Plan and Town drought ordinance.	Ongoing (will be updated by 2018)
9. Complete and maintain FEMA elevation certificates for all new/improved buildings in the floodplain.	Ongoing, done as needed
10. Require more trees to be preserved/planted in landscape designs to reduce the amount of storm water runoff.	Ongoing, ordinance completed
11. Routinely inspect the functioning of fire hydrants.	Ongoing
12. Routinely clean and repair storm water drains.	Ongoing
13. Routinely clean debris from support bracing underneath low-lying bridges.	Ongoing
14. Install quick-connect emergency generator hook-ups for critical facilities, including raw water intake and booster station.	Completed. Hook-ups installed at Water Treatment Plan in 2015.

Mitigation action removed per current Plan update

Annually notify owners of repetitive loss properties of FMA funding.	Remove – deemed no longer necessary
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Mitigation actions previously completed per 2012 Plan update

Purchase of generator for Town's fueling system. This fueling system serves our Fire, EMS, Public Works and Police vehicles.	Completed.
Develop regional (Farmville/Prince Edward) water supply plan and Town drought ordinance.	Completed.
Update Flood Insurance Rate Maps.	Completed. Flood maps were recently updated by FEMA.

Regional

Action	Status
1. Design an early warning system for hazard events.	No action taken – lack of funding/staff resources
2. Conduct "Firewise" workshops throughout the region. (Suggested by Charlotte County)	No action taken – lack of funding/staff resources
3. Education/PR campaign for: NFIP (CRS?) Emergency Preparedness, Firewise.	No action taken – lack of funding/staff resources
4. Find a location for a NOAA Weather Radio transmitter (currently, localities in Planning District 14 are in a void area of weak to no radio coverage).	No action taken – lack of funding/staff resources
5. Backup wireless connectivity to internet (with power backup at source).	No action taken – lack of funding/staff resources

MITIGATION STRATEGY

Other Stakeholders Piedmont Geriatric Hospital

Action	Status
1. Conduct a detailed needs assessment for the county's emergency response services.	No action taken – lack of funding/staff resources
2. Require the burial of electrical, telephone and cable lines where appropriate.	No action taken – lack of funding/staff resources
3. Design/build water tanks or wells for use in times of water shortage/outage.	No action taken – lack of funding/staff resources

Dillwyn Correctional Center

Action	Status
1. Planning on evacuation needs to be better planned so no one is trapped on the road. This needs to be done by state management.	No action taken – would need approval from VDEM
2. Need more shelters in areas of business that operate 24 hours a day for the community and employees.	No action taken – would need approval from VDEM to start

The following localities either already have mitigation actions to address acquisition, relocation, elevation, or floodproofing in the Plan per the previous update, or added one for this update:

- Amelia County
- Town of Charlotte Court House
- Town of Drakes Branch
- Nottoway County
- Town of Burkeville
- Town of Crewe
- Prince Edward County
- Town of Farmville

The following localities have determined that acquisition, relocation, elevation, or floodproofing is not a priority for them, due to the lack of flooding issues in their locality. Consequently, they do not have a mitigation strategy addressing this:

- Buckingham County (added a mitigation action to address flooding in one subdivision, but it addresses access to the affected area)
- Town of Dillwyn
- Charlotte County
- Town of Keysville
- Town of Phenix
- Lunenburg County
- Town of Kenbridge
- Town of Victoria
- Town of Blackstone