



Virginia Department of
Emergency Management

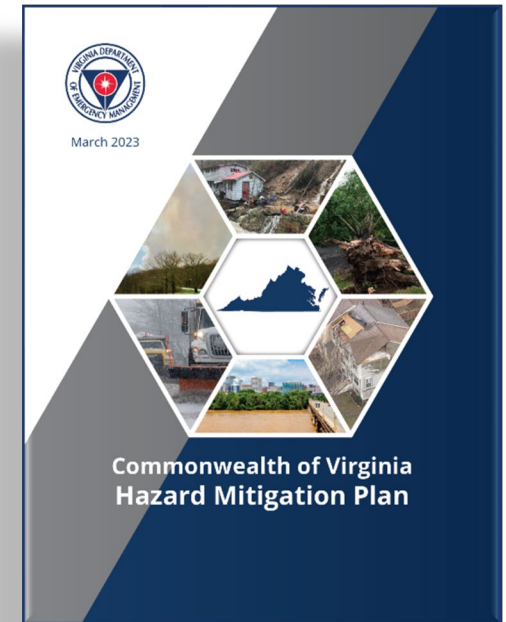
Commonwealth of Virginia 2023 Hazard Mitigation Plan

September 26, 2024

Introduction

The Commonwealth of Virginia (COV) Hazard Mitigation Plan (HMP) provides guidance for hazard mitigation activities within the Commonwealth.

The plan's vision is supported by goals, objectives and prioritized actions for Virginia that aim to reduce damages or injuries from natural hazards to residents, communities, state facilities, and critical facilities.



Authorities

- Disaster Mitigation Act of 2000 (DMA2K)
- Code of Virginia at §44-146.17
- Code of Virginia at §44-146.18
- Code of Virginia at §44-146.22



State Hazard Mitigation Plan (SHMP) Elements

- Description of the planning process
- Risk assessments
- Mitigation strategy
- Maintenance process
- Adoption process
- Assurances that the State will comply with all applicable Federal statutes and regulations in effect with respect to grant funding periods (44 CFR §13.11(c))

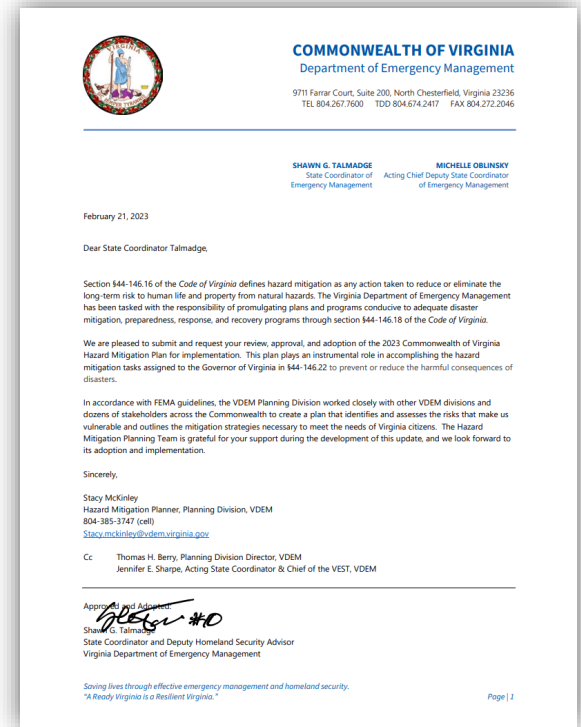


Adoption and Coordination

The 2023 COV HMP is formally adopted by the Governor of Virginia.

Coordination

- VDEM Hazard Mitigation Planner
- Old Dominion University (ODU) Virginia Modeling and Simulation Center (VMASC)
 - Salter's Creek Consulting, Inc.
 - ODU Institute of Coastal Adaptation & Resilience (ICAR)
 - University of Virginia's Center for Risk Management of Engineering Systems
 - Moffatt & Nichol
 - Dozens of State and local representatives



Planning Process

Phases	Steps
Phase I: Organize Resources	Step 1: Get Organized Step 2: Plan for Stakeholder Involvement Step 3: Coordinate with other Departments & Agencies
Phase II: Assess Risk	Step 4: Identify the Hazards Step 5: Assess the Risks
Phase III: Develop Mitigation Plan	Step 6: Review Mitigation Alternatives Step 7: Set Planning Goals Step 8: Draft an Action Plan
Phase IV: Adopt & Implement	Step 9: Adopt the Plan Step 10: Implement the Plan

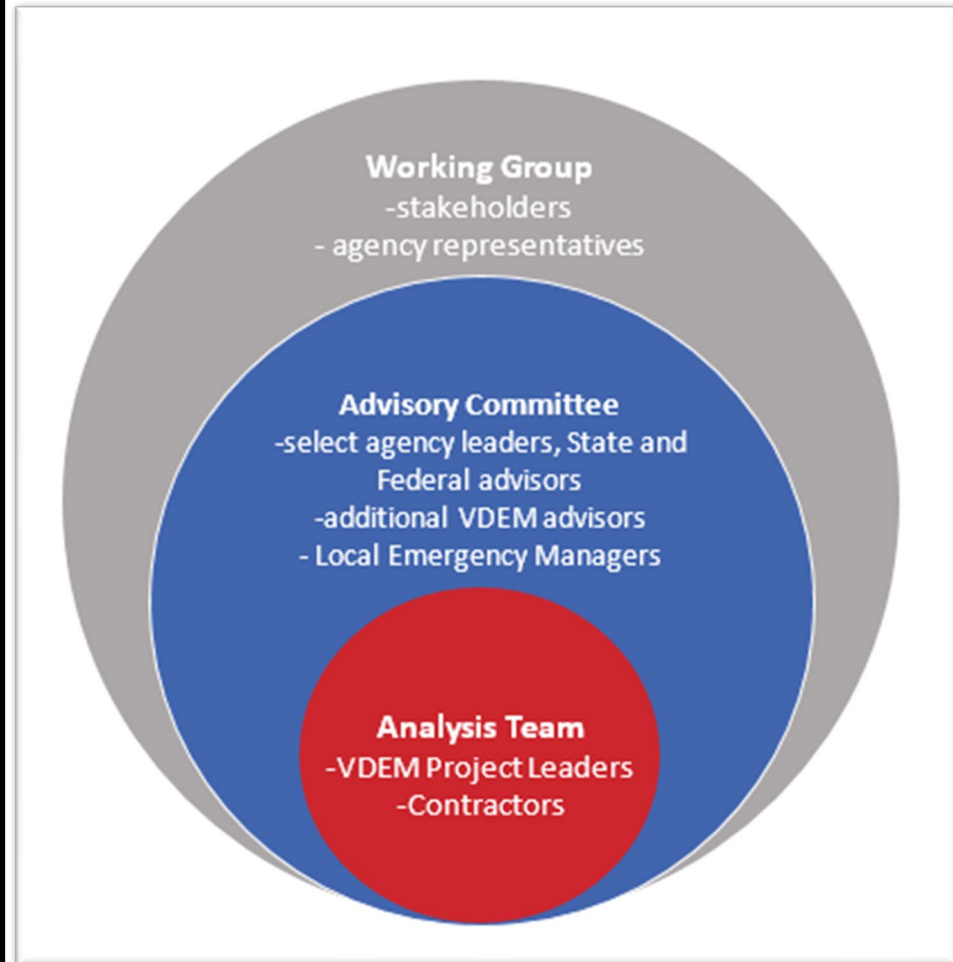


Stakeholders

The National Mitigation Framework emphasizes a cross section of state partners working together to identify and implement effective, long-term mitigation solutions and investments.

The framework emphasizes that mitigation should consider several systems or sectors:

- Emergency Management
- Economic development
- Land use and development
- Housing
- Health and social services
- Infrastructure
- Natural and cultural resources



Hazard Identification and Risk Assessment

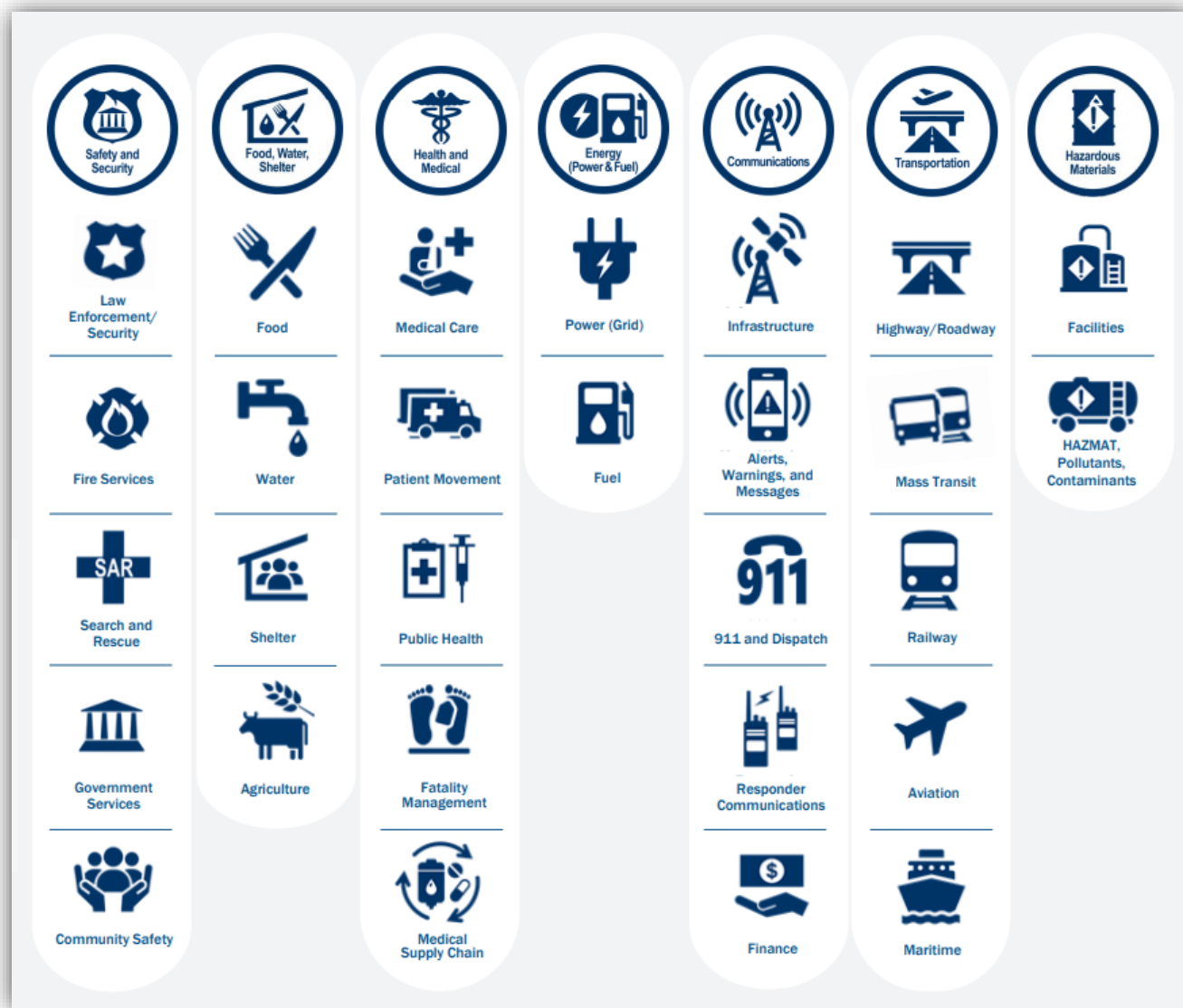
- The Hazard Identification and Risk Assessment (HIRA)
- VDEM’s methodology compared risks of 17 different hazard-types across jurisdictions to rank and prioritize them. The following parameters were considered:
 - History of Occurrence
 - Vulnerability of people in the hazard area
 - Probable geographic extent of the hazard area
 - Historical crop and property damage

Commonwealth of Virginia – 2023 Overall Hazard Ranking

High	Medium-High	Medium	Medium-Low	Low	Negligible
Flood	Extreme Heat	Drought	Earthquake	Erosion	Land Subsidence
Hurricane	Non-Tornadic Wind	Extreme Cold	Pandemic	Impoundment Failure	Space Weather
Winter Weather	Tornado		Wildfire	Karst (Sinkholes)	
				Landslide	



HIRA – Community Lifelines



Capability Assessment

Confirms that a state’s final mitigation strategy is based on the principles found in, or missing from, existing authorities, policies, programs, and resources, and based on the state’s ability to expand and improve these existing tools.

This chapter discusses the following:

<p>Local Capabilities in Virginia</p>	<p>Local Planning and Development Local Emergency Response and Recovery Effectiveness of Local Capabilities</p>
<p>State and Regional Capabilities</p>	<p>State Agencies Related State Plans and Documents</p>
<p>Federal Agencies and Programs</p>	<p>Federal Emergency Management Agency (FEMA) US Department of Housing and Urban Development (HUD) US Army Corps of Engineers (USACE) US Department of Agriculture, Natural Resources Conservation Service (NRCS) US Department of Agriculture US Small Business Administration (SBA) Other Funding Capabilities</p>



Mitigation Strategy & Actions

The Mitigation Strategy is a critical part of the planning process that outlines and prioritizes actions in order to reduce future risk from natural hazards.

The hazard mitigation plan begins with a mitigation vision supported by four major goals and related objectives.

VISION: Promote resiliency and reduce the long-term impacts of hazards on human, economic, and natural resources throughout the state.

There are **74** total mitigation actions in this plan, **28** are new, **41** are retained with modification, **3** in progress, and **2** ongoing.

Table 5.1 – Mitigation Categories Matrix

Mitigation Technique	Prevention of Future Risk	Protection of Built Environment	Natural Resource Protection	Hazard Modification Through Construction	Emergency Services	Public Education and Awareness
HIGH RISK HAZARDS	Flooding	✓	✓	✓	✓	✓
	Hurricane	✓	✓	✓	✓	✓
	Winter Weather	✓	✓		✓	✓
MEDIUM RISK HAZARDS	Tornado	✓	✓		✓	✓
	Non-Tornadoic Wind	✓	✓	✓	✓	✓
	Extreme Heat	✓	✓	✓	✓	✓
	Drought	✓		✓	✓	✓
	Extreme Cold	✓	✓		✓	✓
LOW RISK HAZARDS	Impoundment Failure	✓	✓	✓	✓	✓
	Wildfire	✓	✓	✓	✓	✓
	Erosion	✓	✓	✓		✓
	Earthquake	✓	✓		✓	✓
	Landslide	✓		✓	✓	✓
	Karst (Sinkholes)	✓				✓
	Pandemic	✓		✓	✓	✓
NEGLIGIBLE	Land Subsidence	✓				✓
	Space Weather	✓				✓



This is one example of the 74 mitigation actions.


Elevation of Flood Prone Properties	
Mitigation Action FL-8	
Implement elevation projects to raise flood-prone structures to or above the BFE, in accordance with State and local floodplain management requirements. Repetitive Loss and Severe Repetitive Loss properties are targeted and prioritized for this project type.	
BACKGROUND INFORMATION	
Cost Benefit:	Cost effectiveness is project dependent; however, multiple properties can be included together for an aggregate benefit cost ratio.
MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flooding; Impoundment Failure
Goal(s) Addressed:	Goal 1; Goal 4: Objective 4.1, 4.3
Category(s) Addressed:	2,3
Priority (High, Medium, Low):	High
Impact on Socially Vulnerable Populations:	High – target repetitive flood loss areas with high NRI rating for flood as identified in the HIRA
Estimated Cost:	Project Dependent; see examples with costs below
Potential Funding Sources:	DHS: BRIC, HMGP, FMA; USACE: Continuing Authorities, Planning Assistance to States, Flood Plain Management Services, and Silver Jackets; Virginia CFPF
Lead Agency/Responsible Department:	VDEM, DCR
Implementation Schedule:	Ongoing
Status:	Retained with modifications
ADDITIONAL COMMENTS	
Structure elevation may be achieved through a variety of methods, including elevating on continuous foundation walls; elevating on open foundations, such as piles, piers, posts, or columns; or elevating on fill. Foundations will require designs to properly address all loads, appropriate connections to the floor structure above, and elevation of utilities.	
Specific examples of elevation projects in Virginia include: <ul style="list-style-type: none"> • Project to elevate 4 homes in the Northern Neck and one in Essex County at cost of \$860,930 • Project to elevate additional 6 homes in the Northern Neck, with estimated cost of \$1.3 million 	




Local Plan Coordination

This chapter provides details on the following:

- History of Local Hazard Mitigation Plan Development in Virginia
- Prioritize and provide funding for Local Hazard Mitigation Plans
- VDEM Technical Assistance
 - Participation and presentations for local or tribal meetings/conferences
 - Consultations by phone
 - Facilitation of local training workshops for local or tribal plan steering committees, planning agency staff and DRU staff
 - Support of local, tribal, university, agency, and regional contacts in developing HMA applications
- Providing Support for Plan Revisions
- Local Hazard Mitigation Planning Workshops
- State Review of Local and Tribal Hazard Mitigation Plans
 - VDEM All-Hazard Planners will assist with regular updates and review of local, DRU and tribal HMP's before plan submittal to FEMA.



Success Story: FEMA Region 3 Approves Its First Tribal Hazard Mitigation Plan



Region 3 approved its first tribal-only Hazard Mitigation Plan (HMP). It took the nine-member Chickahominy Tribal Hazard Mitigation Committee more than a year of work. Chief Stephen Adkins adopted the tribe's plan on March 8. Adoption allows for final approval of the HMP. It also helps communities get some types of non-emergency disaster aid.

The Chickahominy Tribe had a strong planning process to develop the HMP. The tribe's citizens mostly live along the James River near Richmond and the tribe has land holdings in both Charles City County and New Kent County, Virginia. The hazard mitigation committee met in four working sessions and held interviews with neighboring communities. The committee also held two online public participation workshops and had an online survey. The survey got 60 replies—a remarkable response rate.

The Sandy Recovery Improvement Act of 2013 allowed federally recognized tribal governments to get their own major disaster declaration for the first time. The Act lets tribes apply directly to FEMA for disaster aid. The Chickahominy Tribe made use of this change. It addressed the impacts of flash floods, hurricanes, and tornadoes on tribal lands.

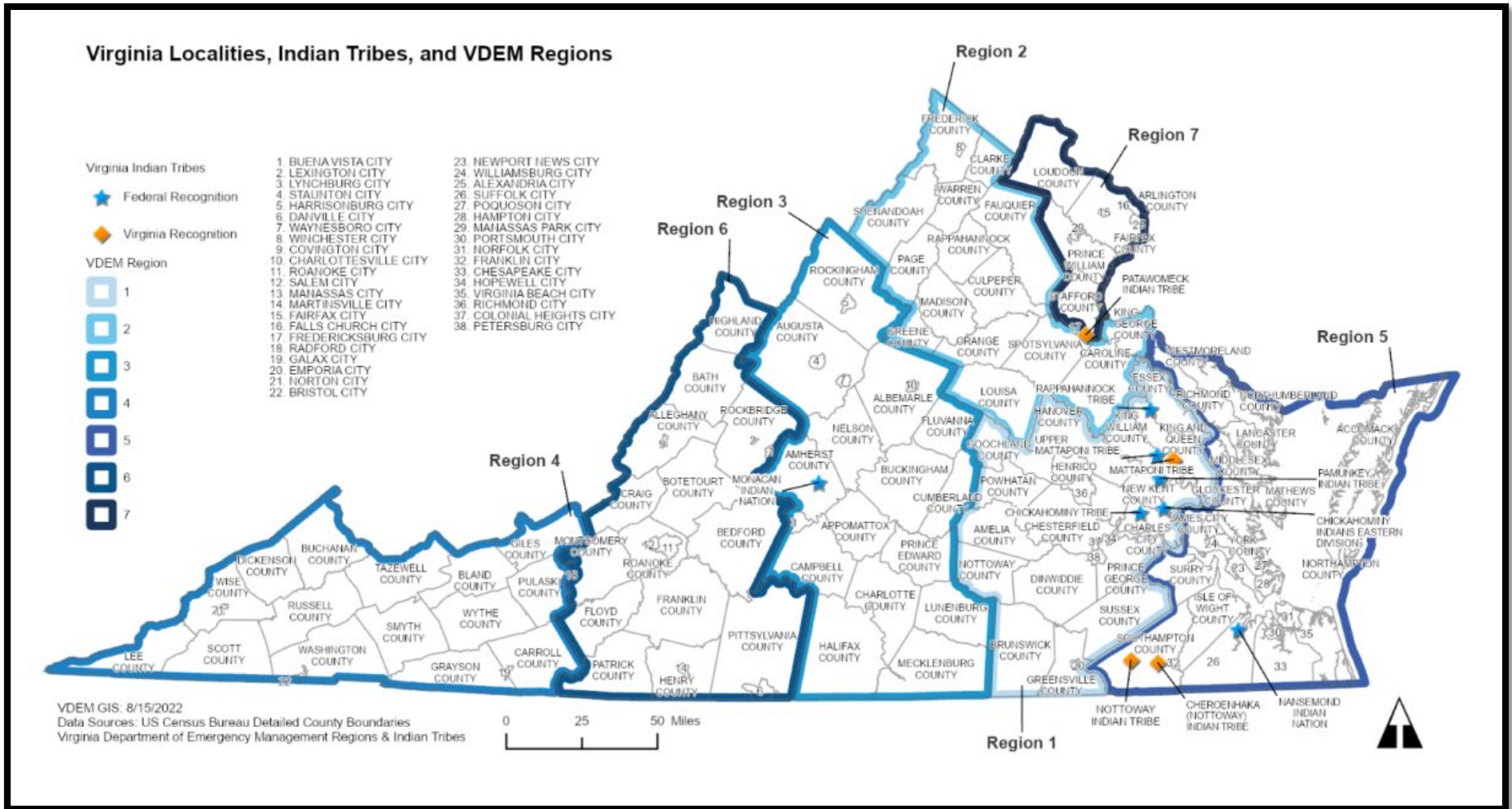
An approved HMP helps tribes prepare before a disaster. It also readies them to recover more quickly, because the hazards, capabilities and mitigation actions are recorded. This helps tribes act on them throughout the disaster cycle. Hazard mitigation planning leads to actions that will reduce long-term risk from hazards, as well as protect tribal citizens.

[FEMA Region 3 Resilience Report](#)

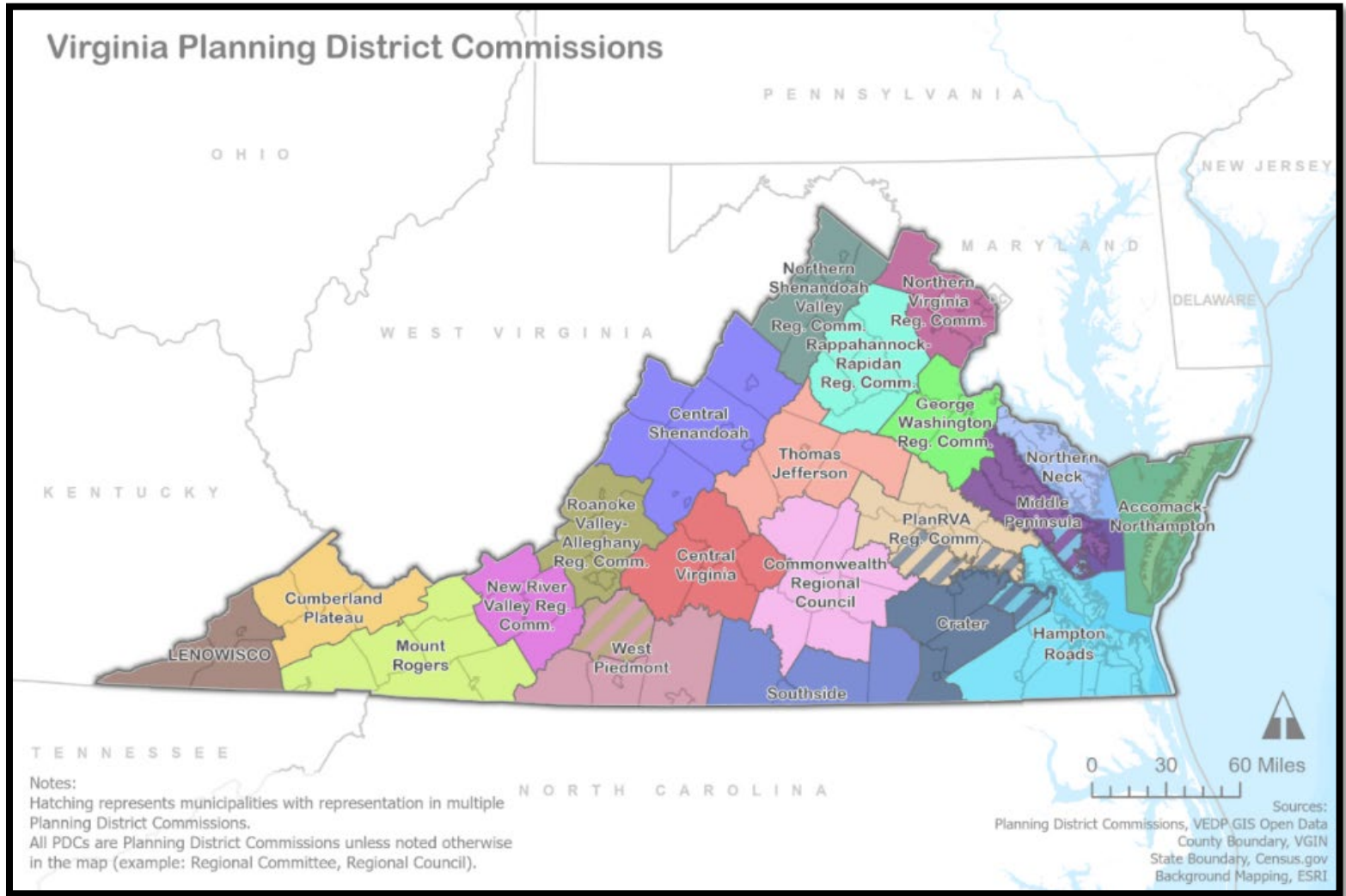
Highlighted in this section: FEMA Region 3 **approved its first tribal-only Hazard Mitigation Plan** by The Chickahominy Indian Tribe, approved in August 2022



Local Plan Coordination



Local Plan Coordination



Plan Implementation & Maintenance

The Hazard Mitigation Plan is intended to be a living document, one that is operationalized through the continuous implementation of the actions identified in the Mitigation Strategy.

It is also intended to be dynamic – changing and improving as needed through routine maintenance procedures that help to ensure the plan is reviewed, revised, and updated as conditions and information change.

This chapter outlines more specifically how the plan will be implemented and maintained by the Commonwealth.

The key components of the schedule for regularly maintaining the plan are below:

- Annual Plan Review
- Post Disaster Review
- Five Year Plan Review and Update
- Annual Consultation with FEMA



What's Changed

HIRA

- Hazard name changes
 - Non-Rotational Wind to Non-Tornadic Wind
 - Communicable Disease to Pandemic
 - Solar Storm to Space Weather
- New and recategorized hazards
 - Extreme Heat, Extreme Cold, and Erosion are now standalone hazards
 - Hurricane was added as a new hazard.
- New information included in the hazard sections
 - Description of expected/anticipated climate change-related impacts
- New inclusive analysis and assessments for all hazards
 - Potential impacts to vulnerable populations (FEMA's National Risk Index (NRI) tool)
 - Assessed for linkages to FEMA's Community Lifelines

Mitigation Strategy: Revised Mitigation Goals and New Mitigation objectives

The Planning Committee: Increased participation

	2018	2023
Advisory Committee	20	45
Working Group	43	71



Closing

Notable Items

- Plan Approved - March 2023
 - Full draft plan submitted to FEMA – December 2022
 - FEMA Approvable Pending Adoption (APA) and State Adoption – February 2023
- New Mitigation Action Tracker concept introduced – Summer 2023
- Enhanced Plan Revisions – Fall 2024/Summer 2025

Strengths

- Increased committee membership
- Objectives added to the Mitigation goals
- Involvement of VDEM Community Impact Specialist

Opportunities for Improvement

- Speak more to the need for potential funding to survey environmental and historic resources at the local level – relates to preparing for future disasters and mitigating potential loss.
- Include some top CRS communities in Virginia to help other jurisdictions with best practices in enforcing their floodplain ordinance and have a good floodplain program.
- Include state agency and NGO social services reps to provide insight and information on vulnerable populations (actual needs/requirements, etc.) and can assist in outreach to these vulnerable populations.



THANK YOU!



Contact Information

rachel.slotter@vdem.virginia.gov, 804-426-3302
thomas.berry@vdem.virginia.gov, 804-659-5282
leigh.chapman@vdem.virginia.gov