

WHAT IS HAZARD MITIGATION?

Hazard Mitigation is defined as those actions taken to reduce, or eliminate, the effects of natural hazards on a locality and its population. Mitigation is one of the four phases of emergency management, in conjunction with preparedness, response, and recovery.



WHAT IS THE PURPOSE OF THE REGIONAL HAZARD MITIGATION PLAN?

The purpose of a hazard mitigation plan is to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property from future hazardous events.

The Rappahannock-Rapidan Regional Hazard Mitigation Plan identifies the natural hazards likely to affect the citizens, economy, and infrastructure in the Rappahannock-Rapidan region through historical data analysis. The plan develops high-level estimates of the potential impact of the identified natural hazards and enables participating localities to identify mitigation strategies designed to reduce the impact of these natural hazards in the future.

Adoption of the Plan also enables participating local governments to meet the requirements of the 2000 Disaster Mitigation Act (DMA). The DMA requires local and state governments to adopt Hazard Mitigation Plans in order to maintain eligibility for federal assistance through the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) program administered by the Federal Emergency Management Agency (FEMA).

WHAT LOCALITIES ARE COVERED BY THIS PLAN?

The Rappahannock-Rapidan Regional Hazard Mitigation Plan was first developed, approved, and adopted in 2005 and subsequent revisions and re-adoptions have occurred in 2012 and 2018. Since natural hazards do not follow jurisdictional boundaries, the historical data, hazard analysis and high-level vulnerability analysis are completed at a regional level, as opposed to each jurisdiction duplicating similar efforts. Local jurisdictions participating in the process provide specific information related to unique hazard impacts, local capabilities, and specific local mitigation strategies.

This plan covers the following localities that participated in the 2018 Hazard Mitigation Plan review and revision process:

- Culpeper County
- Fauquier County
- Madison County
- Orange County
- Rappahannock County
- Town of Culpeper
- Town of Gordonsville
- Town of Madison
- Town of Orange
- Town of Remington
- Town of Warrenton

HOW WAS THE PLAN DEVELOPED?

The Rappahannock-Rapidan Regional Commission coordinated the review, revision, and update of the Plan, with participation by locality representatives, state and federal agencies, and other regional stakeholders. The plan revision began in March 2017 and included a series of stakeholder committee meetings, public survey tools, and data collection and analysis. The draft plan was released for public review and comment in June 2018.

Locality representatives included Elected Officials, Emergency Management staff, Fire/Emergency Services Coordinators, Community Development/Planning Directors & staff, Public Works Directors, Town Managers, and County Administrators.

Participating localities were primarily responsible for:

- Participation/Attendance at mitigation planning meetings;
- Completion the Local Capability Assessment Survey;
- Identification of any unique local hazards apart from the identified regional hazards;
- Identification of completed mitigation projects, if applicable; and
- Update and development of additional mitigation actions and strategies.

Following public review, the plan was then delivered to the Virginia Department of Emergency Management and FEMA for review and received an *Approved Pending Adoption* status in November 2018.

WHAT HAZARDS ARE IDENTIFIED IN THIS PLAN?

Hazards identified as impacting the Rappahannock-Rapidan region in this plan are as follows:

- Flood
- Hurricanes & Tropical Storms
- Winter Storms
- Severe Thunderstorms & Tornados
- Dam Failure
- Landslides & Erosion
- Earthquakes
- Wildfire
- Land Subsidence (Karst and/or Sinkholes)
- Drought & Extreme Heat



The historic Ritz Hi-Hat building in downtown Culpeper, Virginia was destroyed by the August 23, 2011 earthquake. The picture above shows the demolition and removal phase one week after the earthquake.

HOW WERE IDENTIFIED HAZARDS ANALYZED?

Using historic hazard data and Geographic Information System (GIS) analysis, RRRRC staff completed hazard analyses and vulnerability analyses for the identified hazards to produce a quantitative assessment of each hazard's impact. Flood, Earthquake, and Hurricane hazards were analyzed using HAZUS software created by FEMA. Other hazards were analyzed using historic data, depending on availability.

The stakeholder committee also ranked hazards based on the likelihood of occurrence, geographic extent of the hazard, and the potential impact within the region. This qualitative assessment was combined with the quantitative analysis to rank hazards as high-risk, moderate-risk, and low-risk.

HIGH RISK HAZARDS	Flood	Severe Thunderstorms & Tornadoes	Winter Storms
MODERATE RISK HAZARDS	Drought	Hurricanes & Tropical Storms	Wildfire
LOW RISK HAZARDS	Earthquake	Sinkholes and/or Karst	Landslides and/or Erosion Dam Failure

WHAT ARE MITIGATION STRATEGIES?

Each participating locality, as well as the Rappahannock-Rapidan Regional Commission, identifies a series of mitigation strategies and activities that are designed to enhance preparedness and address identified hazards. The strategies generally meet the broad definitions of the following mitigation techniques. A complete listing of strategies for each participating locality can be found in Appendix A.

Prevention

Preventative activities 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.

Property Protection

Property protection measures may include improved structural stability, removal of structures from hazard-prone locations, or insurance subscription to cover potential loss.

Natural Resource Protection

Natural resource protection not only reduces hazard impacts but preserves and/or restores the function of natural systems.

Structural Projects

Structural mitigation projects reduce hazard impacts by modifying the environment or hardening structures.

Emergency Services

Although not typically considered a mitigation technique, emergency services minimize the impact of a hazard on people and property. Examples include early warning systems, evacuation planning, and flood management techniques.

Public Information and Awareness

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.

WHAT HAPPENS NOW?

Upon adoption of the 2018 Rappahannock-Rapidan Regional Hazard Mitigation Plans, local governments are encouraged to incorporate the identified mitigation strategies into other local plans, including Comprehensive Plans, Capital Improvements Plans, Emergency Operations Plans, and other documents. Strategies for each participating jurisdiction may be implemented at the discretion of each jurisdiction, and opportunities for cross-jurisdictional collaboration are also possible for mitigation actions targeting training, public awareness and education, and prevention.

Ultimately, funding is the critical factor impacting the implementation of mitigation strategies. Low-cost strategies or those strategies with existing funding through local Capital Improvements Programs or other funding sources offer opportunity for jurisdictions to make immediate progress in implementation. Projects with higher costs, or those requiring significant additional planning prior to advancement, may be achievable with strong local and/or regional support. The Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) program are available sources for local projects. Local governments should coordinate with Rappahannock-Rapidan Regional Commission, VDEM, and FEMA contacts to develop potential grant projects, as applicable.

At minimum, status of the identified mitigation strategies will be updated on an annual basis. The 2000 DMA requires the adopted Hazard Mitigation Plan to be reviewed and revised every five years. The next formal update to the plan will begin in 2021.

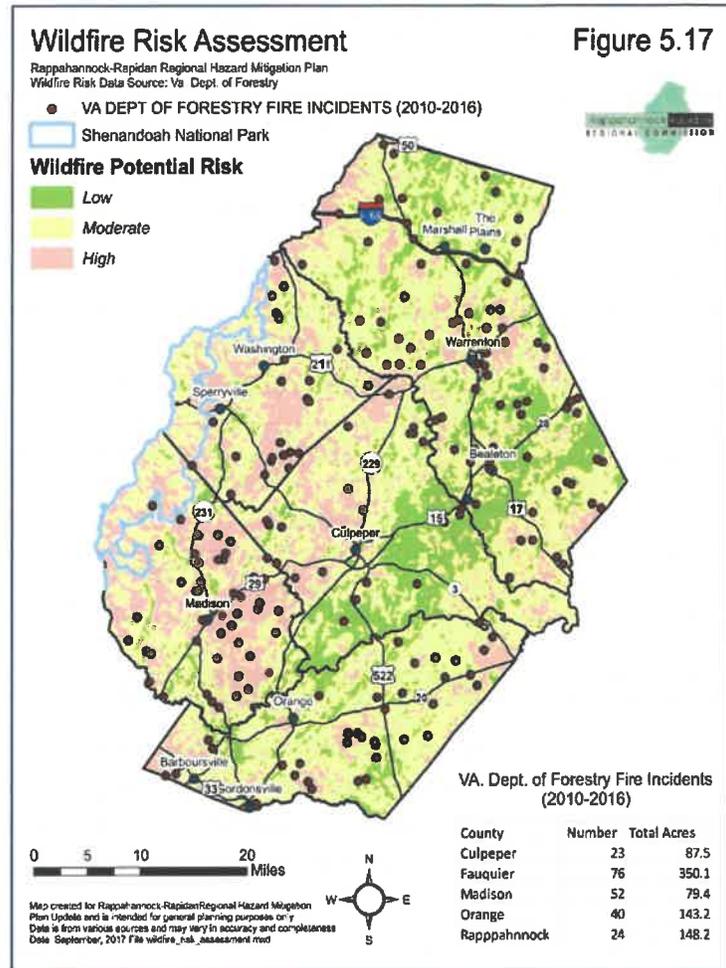


Figure 5.17