

INTRODUCTION

This section provides a general introduction to the Eastern Shore of Virginia Hazard Mitigation Plan. The section consists of the following subsections:

- *Background*
- *Purpose Plan*
- *Organization*

BACKGROUND

Since the 1960s, Congress and the President have been under increasing pressure to organize resources for the nation during large disasters. The government has increasingly turned its attention to the federal response to these types of disasters. In the 1960s, the government created the National Flood Insurance Program to shift some of the costs to those who choose to live in the areas of most risk. In the 1970s, the Federal Emergency Management Agency (FEMA) was created to centralize a great deal of the assistance the federal government offers to states in emergency situations. In the 1980s, the Stafford Act was passed to standardize the federal response and to institute programs to decrease the United States' vulnerability to disasters. In the early '90s, the National Flood Insurance Program was reformed to increase the participation of those most at risk to flooding. Still, disaster assistance costs mounted and the late '80s and early '90s saw some of the largest disasters the country has ever experienced. This included multiple billion dollar events such as Hurricane Hugo, the Loma Prieta Earthquake, the Northridge Earthquake, Oakland wildfire, the Midwest Floods of 1993, Hurricane Andrew and Hurricane Iniki (*Planning for Post-Disaster Recovery and Reconstruction*, 1998).

In October 2000, the United States Congress passed an amendment to the Stafford Act called the Disaster Mitigation Act of 2000. This act seeks to protect lives and property and to reduce disaster assistance costs by mitigation, sustained actions to reduce long-term risk. FEMA has since written regulations based on this act.

Local governments are required to complete a Hazard Mitigation Plan to continue to receive certain types of disaster assistance.

In spring of 2003, the Virginia Department of Emergency Management asked the counties of the Eastern Shore and the Accomack-Northampton Planning District Commission (ANPDC) to undertake this work and directed the ANPDC to apply for a Pre-disaster mitigation grant to finance the planning process. The Eastern Shore's plan was originally completed and adopted in 2006 According to 44 CFR Part 78, flood mitigation assistance, and the Disaster Mitigation Act of 2000. The current update to the plan occurred in 2010 and 2011 with the updated plan being adopted in 2011.

As these plans continue to evolve across the country, the understanding of different hazards and hazard planning has expanded to include a broad range of potential disasters and a concept of community resiliency.

The counties and towns of the Eastern Shore of Virginia have worked diligently to complete the following revised Hazard Mitigation Plan, which is presented to address the requirements of the Disaster Mitigation Act of 2000.

PURPOSE

The purpose of the Eastern Shore of Virginia Hazard Mitigation Plan is to:

- Ensure the protection of life, safety, and property by reducing the potential for future damages and economic losses that result from hazards;
- Make local communities safer places to live, work, and play;
- Assist localities in meet the criteria for grant funding prior to and following disasters;
- Expedite the recovery and redevelopment process following disasters;
- Exhibit a commitment from localities to hazard mitigation in the region; and
- Comply with federal and state legislative requirements for hazard mitigation plans.

PLAN ORGANIZATION

The chapters comprising this document follow the process spelled out in the Disaster Mitigation Act of 2000 and are organized to be both functional and reader-friendly as possible. The organization and intended flow of this document is described in the following sections.

Chapter 1, Hazards on the Shore, provides an overview of the hazards that have historically impacted the region and provides insight into the geographic and geologic setting of the region. A chronology of hazard events documents both pre-historic and historic hazard events that have impacted the Shore.

Chapter 2, Planning Process, narrates a complete description of the process used to prepare the Plan including how the public and other stakeholders were involved and who participated on the Hazard Mitigation Steering Committee.

Chapter 3, Risk Assessment, identifies and analyzes the hazards, assesses the risks associated with each hazard that threatens the region, and gauges the capability of available and cost-effective mitigation options for each hazard. This process builds on available historical data, defines detailed profiles for each hazard, and ranks each hazard for associated risk based on occurrence frequency, affected structures, primary and secondary impacts, and mitigation options. The outcome of this process is a priority ranking of hazards that impact the region.

Chapters 4 through 7 profile the four hazards that were given the highest hazard priority ranking: high wind, coastal erosion, coastal flooding, and storm water flooding. Each chapter provides background information, historical accounts, explanations of potential damages, and vulnerability overviews regarding each of the four high priority hazards.

Chapters 8 provides insight to the potential impacts of hazards on the regional level. As rural, low-population, and isolated Virginia counties, many entities must operate at a regional level to be successful and efficient with resources. This is a new chapter for the 2016 Plan and provides a significant level of detailed information.

Chapters 9 and 10 are profiles for each of the two Counties on the Eastern Shore of Virginia. The profiles are ordered alphabetically and provide a general description of the community including geographic, physical, demographic, and economic characteristics. In addition; land-use patterns, general historical disaster data, and building characteristics are discussed. These profiles assist County officials and residents by providing baseline information on concerning environmental and economic character that is plays a role in determining hazard vulnerability.

Chapters 11 through 26 are profiles of each Town locality that took part in the planning process. The profiles are ordered alphabetically and provide a general description of the community including geographic, physical, demographic, and economic characteristics. In addition; land-use patterns, general historical disaster data, and building characteristics are discussed. These profiles assist local officials and residents by providing baseline information on each community's social, environmental, and economic character that is plays a role in determining community vulnerability to hazards. Maps illustrating areas expected to be impacted by the highest priority hazards are included in the profile chapters for Accomack and Northampton Counties.

Chapters 27 through 31 consist of broad vision and regional goal statements that guide the identification and prioritization of specific mitigation projects for the region and for each local government jurisdiction participating in the planning process and funding options for implementation. Descriptions for how the plan is to be maintained by government officials are included in the mitigation strategy chapters for Accomack County, Northampton County, and the Town of Chincoteague (Chapters 28, 29, and 30 respectively). Each specific project is assigned a start timeline and a responsible department/person to ensure action is taken to make localities less vulnerable to the damaging forces of hazards, while improving the economic, social, and environmental health of the community. Chapter 31 describes federal mitigation funding options available to localities prior to and following natural disasters. Together, these chapters are designed to make the Plan both strategic through identification of long-term goals and functional through the identification of short-term and immediate actions that will guide daily decision making and project implementation.

LIST OF ACRONYMS USED IN THE PLAN

A-NPDC – Accomack-Northampton Planning District Commission

BFE – Base Flood Elevation

CBBT – Chesapeake Bay Bridge Tunnel

CBPA – Chesapeake Bay Preservation Area

CRS – Community Rating System

FEMA – Federal Emergency Management Agency

FIRM – Flood Insurance Rate Map

FIS – Flood Insurance Study

GIS – Geographical Information System

HAZMAT – Hazardous Materials

HIRA – Hazard Identification and Risk Assessment

HMGP – Hazard Mitigation Grant Program

MSC - Marine Science Consortium

NASA – National Aeronautics and Space Administration

NFIP – National Flood Insurance Program

NHC – National Hurricane Center

NOAA – National Oceanic Atmospheric Administration

NOAA CSC – National Oceanic Atmospheric Administration Coastal Services Center

NWS – National Weather Service

RMA – Resource Management Area

RPA – Resource Protection Area

SFHA – Special Flood Hazard Area

USGS – United States Geological Survey

UVA LTER – University of Virginia Long Term Ecological Research

VDEM – Virginia Department of Emergency Management

VDEQ – Virginia Department of Environmental Quality

VDOF – Virginia Department of Forestry

VIMS – Virginia Institute of Marine Science

WFF – Wallops Flight Facility

DEFINITIONS OF FREQUENTLY USED MITIGATION TERMS IN THE PLAN

<u>Mitigation Term</u>	<u>Definition</u>
Acquisition of Hazard-Prone Structures	Local governments can acquire lands in high hazard areas through conservation easements, purchase of development rights, or outright purchase of property.
Adaptation	The process of developing traits or habits suitable for sustainment of a given activity
Base Flood Elevation (BFE)	The elevation of the base flood in relation to a specified datum, such as the National Geodetic Vertical Datum of 1929. The BFE is used as a standard for the National Flood Insurance Program.
Capability Assessment	An assessment that provides a description and analysis of a community or state’s capacity to address the threats associated with hazards. The capability assessment attempts to identify and evaluate existing policies, regulations, programs, and practices that positively or negatively affect the community or state’s vulnerability to hazards or specific threats.
Community Rating System (CRS)	CRS is a program that provides incentives for National Flood Insurance Program communities to complete activities that reduce flood hazard risk. When the community completes specified activities, the insurance premiums of these policyholders in communities are reduced.
Critical Facilities	Facilities vital to the health, safety, and welfare of the population that are especially important following disasters. These include, but are not limited to, shelters, police and fire stations, and hospitals.
Debris	The scattered remains of assets broken or destroyed in a hazard event. Debris transported by a wind or water hazard event can cause additional damage to other assets.
Disability	In ACS: Covers 6 disability types: Hearing, Vision, Cognitive, Ambulatory (serious difficulty walking or climbing stairs), Self-care (difficulty bathing or dressing), and/or Independent Living.
Disaster Mitigation Act of 2000	The latest legislation to improve the planning process. Signed into federal law on October 30, 2000, this legislation reinforces the importance of mitigation planning and emphasizes planning for disasters prior to their occurrence.
Displacement Time	The average time which the building’s occupants typically must operate from a temporary location while repairs are made to the original building due to damages resulting from a hazard event.

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Elevation of Structures	Raising structures above the base flood elevation to protect structures located in areas prone to flooding.
Erosion	Wearing away of the land surface by detachment and movement of sediments during a flood or storm through the action of wind, water, or other geologic processes.
Federal Emergency Management Agency (FEMA)	Federal agency created in 1979 to provide a single point of accountability for all federal activities related to disaster mitigation and emergency preparedness, response, and recovery. FEMA is currently part of the U.S. Department of Homeland Security.
Flood	A general and temporary condition of partial or complete inundation of normally dry areas from (1) the overflow of inland or tidal waters, (2) the unusual and rapid accumulation of runoff or surface waters from any source, or (3) mudflows or the sudden collapse of shoreline land.
Flood Depth	Height of the flood water surface above ground surface.
Flood Elevation	Elevation of the water surface above an established datum, e.g. National Geodetic Vertical Datum of 1929, North American Vertical Datum of 1988, or Mean Sea Level.
Flood Insurance Rate Map (FIRM)	Map of a community prepared by FEMA that shows both the special flood hazard areas and the risk premium zones applicable to the community.
Flood Insurance Study (FIS)	A study that provides an examination, evaluation, and determination of flood hazards and if appropriate, corresponding water surface elevations in a community or communities.

LAND USE CATEGORY DESCRIPTIONS

Land Use Category	Description
Developed	Areas characterized by a high percentage (30 percent or greater) of constructed materials (e.g. asphalt, concrete, buildings, etc).
High	Includes infrastructure (e.g. roads, railroads, etc.) and all highly developed areas.
Medium	Includes highly developed areas where people reside in high numbers. Examples include apartment complexes and row houses. Vegetation accounts for less than 20 percent of the cover. Constructed materials account for 80 to 100 percent of the cover.
Low	Includes areas with a mixture of constructed materials and vegetation. Constructed materials account for 30-80 percent of the cover. Vegetation may account for 20 to 70 percent of the cover. These areas most commonly include single-family housing units. Population densities will be lower than in high intensity residential areas.
Open	Includes areas that have approximately 100 percent vegetative cover. These areas could be large grass yards, recreational fields, golf courses, etc.
Planted/Cultivated	Areas characterized by herbaceous vegetation that has been planted or is intensively managed for the production of food, feed, or fiber; or is maintained in

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	developed settings for specific purposes. Herbaceous vegetation accounts for 75-100 percent of the cover.
Cultivated Crops	Areas used for the production of crops, such as corn, soybeans, vegetables, rice, etc.
Hay/Pasture	Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops.
Natural	
Forested Uplands	Areas characterized by tree cover (natural or semi-natural woody vegetation, generally greater than 6 meters tall); tree canopy accounts for 25-100 percent of the cover.
Deciduous Forest	Areas dominated by trees where 75 percent or more of the tree species shed foliage simultaneously in response to seasonal change.
Evergreen Forest	Areas dominated by trees where 75 percent or more of the tree species maintain their leaves all year. Canopy is never without green foliage.
Mixed Forest	Areas dominated by trees where neither deciduous nor evergreen species represent more than 75 percent of the cover present.
Low Vegetation	
Herbaceous	Areas dominated by upland grasses and forbs. In rare cases, herbaceous cover is less than 25 percent, but exceeds the combined cover of the woody species present. These areas are not subject to intensive management, but they are often utilized for grazing.
Shrub/Scrub	Areas dominated by shrubs; shrub canopy accounts for 25-100 percent of the cover. Shrub cover is generally greater than 25 percent when tree cover is less than 25 percent. Shrub cover may be less than 25 percent in cases when the cover of other life forms (e.g. herbaceous or tree) is less than 25 percent and shrubs cover exceeds the cover of the other life forms.
Wetlands	Areas where the soil or substrate is periodically saturated with or covered with water as defined by Cowardin et al.
Woody Wetlands	Areas where forest or shrubland vegetation accounts for 25-100 percent of the cover and the soil or substrate is periodically saturated with or covered with water.
Emergent Herbaceous Wetlands	Areas where perennial herbaceous vegetation accounts for 75-100 percent of the cover and the soil or substrate is periodically saturated with or covered with water.

Source: Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, 1979. Classification of Wetlands and Deepwater Habitat of the United States, Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C.