



# SECTION 1. INTRODUCTION

## 1.1 Overview

The State of West Virginia (the State) has experienced hazardous events of all kinds, including events resulting from both natural and man-made hazards.

The State has received 77 federal disaster declarations since 1954. Of these, 32 involved floods and 31 involved severe storm incidents. Of the 77 federal disasters, 66 were major disaster declarations (DR), 9 were emergency declarations (ER), and 2 were fire suppression assistance (now known as fire management assistance declarations [FM]). All have resulted in a hefty cost to the State's people, environment, property, and economy.

Reducing risks associated with hazards requires an integrated and collaborative approach that emphasizes building community resilience through federal, state, and local cooperation. Preparing a hazard mitigation plan is a pathway to effectively reduce risk.

Hazard mitigation is the sustained effort to reduce loss of life and property by lessening or eliminating the impacts of disasters, natural hazards, and human-caused threats. It creates safer communities and helps maintain the quality of life. Effective hazard mitigation requires an understanding of all risks and investment in long-term community well-being through the implementation of short-term and long-term strategies before the next disaster (FEMA 2022). The purpose of hazard mitigation planning is to identify and assess hazards that impact the state, develop a strategy to reduce losses from those hazards, and establish a coordinated process to implement the strategy

Since 2004, the State has been eligible to receive non-emergency Stafford Act assistance and federal mitigation pre-disaster assistance by maintaining an approved state hazard mitigation plan (SHMP) compliant with Title 44 of the Code of Federal Regulations (C.F.R.) Section 201.4 (44 C.F.R. §201.4) and related FEMA mitigation planning guidance. This also qualifies the State to obtain funding for repairing and replacing infrastructure damaged in natural disasters. The 2018 SHMP was approved on October 17, 2018, and has an expiration date of October 16, 2023. The State is committed to updating and implementing its long-term strategy for reducing the risks of hazards, as documented in this updated 2023 SHMP.

The 2023 SHMP demonstrates the State's continued commitment to reduce risks from identified natural and man-made hazards and maintain eligibility for Federal assistance. The SHMP serves as a guide for state, regional, and local decision-makers to make important risk-informed decisions to reduce the impacts of the identified hazards on people, property, and the environment.

### Key Terms

**Hazard Mitigation** – Sustained action to reduce or eliminate the long-term risk to human life and property from hazards.

**State Hazard Mitigation Plan** – Demonstrates the State's commitment to reduce risks from natural hazards and serves as a guide for decision makers for reducing the effects of natural hazards as resources are committed.

Source: FEMA State Mitigation Plan Review Guide, effective March 2016.



## 1.2 Authority, References, and Assurances

**44 C.F.R. §201.4(c)(2)(ii):** The plan must include assurances that the State will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 C.F.R. parts 200 and 3002. The State will amend its plan whenever necessary to reflect changes in State or Federal statutes and regulations.

### 1.2.1 State Authorities

West Virginia's SHMP effort is led by the West Virginia Emergency Management Division (WVEMD), whose mission is to ensure protection of life and property by providing coordination, guidance, support, and assistance to local emergency managers and first responders. Authorized by the West Virginia State Code and the West Virginia Emergency Operations Plan, the agency manages disaster preparedness, mitigation, response, and recovery efforts throughout West Virginia by working alongside all responsible government and non-governmental agencies. In the event of a federally declared disaster, FEMA works closely with WVEMD to administer assistance programs.

The primary responsibilities of WVEMD in preparing and implementing the SHMP are as follows:

- Ensure that the SHMP meets FEMA requirements and is approved by FEMA.
- Coordinate the continued development of the SHMP with stakeholders, strategic working groups, and outreach to other local, public/private, state, and federal agencies in order to keep the plan relevant.
- Provide opportunities for stakeholder involvement in the continuous update and implementation of the SHMP.
- Administer FEMA hazard mitigation assistance programs, including the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC) grant program, and Flood Mitigation Assistance (FMA) program.
- Support the Department of Environmental Protection (DEP) with the administration of the Rehabilitation of High Hazard Potential Dams (HHPD) grant program.
- Support integration of local and regional hazard mitigation efforts with the SHMP.

### 1.2.2 Federal Guidance and References

FEMA requires that states update their hazard mitigation plans every five years and submit them to FEMA for review and approval. States must ensure that each plan update reflects changes in development, progress in statewide mitigation efforts, and changes in priorities. FEMA provides resource and guidance documents to aid states in meeting federal hazard mitigation planning requirements. This update to West Virginia's SHMP used FEMA's most recent State Mitigation Planning Policy Guide, effective April 2023. That document provides critical guidance on prioritizing the inclusion of socially vulnerable and underserved communities and planning for future conditions that may impact the location, intensity, and frequency of hazards.



### Planning for Equitable Outcomes

FEMA defines equity as the consistent and systematic fair, just, and impartial treatment of all individuals. Centering equity in the SHMP helps ensure an inclusive planning process that benefits the whole community. Inclusive processes take time and thoughtful planning to ensure that everyone has the resources to meaningfully participate, make progress, and benefit from hazard mitigation. Equity is essential to reducing risk to the whole community, including those who face barriers to accessing assistance and populations disproportionately affected by disasters.

### Planning for Future Conditions

Future conditions, such as changes in population, development, and the nature of the hazards themselves, can impact the frequency, duration, and intensity of hazards, such as wildfires, extreme heat, drought, storms, and heavy precipitation. Communities are continuously responding to these changing conditions. These variations create new risks to state and local governments and challenge pre-existing mitigation plans. They also pose a unique threat to the nation's most at-risk populations by exacerbating the impacts of disasters on underserved and socially vulnerable populations who already experience the greatest losses from natural hazards.

While adaptation efforts may be undertaken separately or in addition to the hazard mitigation planning process, hazard mitigation and adaptation are complementary efforts that have the same goal: long-term risk reduction for people and increased safety for communities. Adapting to projected future conditions is a form of hazard mitigation. An SHMP that addresses future conditions in its risk assessment and includes adaptation actions in its mitigation strategy may reduce risk to current and future events.

### Eligibility for FEMA Assistance

In accordance with 44 C.F.R. §201.4(a), states must have an approved SHMP meeting the requirements in 44 C.F.R. §201.4 as a condition of receiving certain non-emergency assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) and FEMA mitigation grants, including the following programs:

- Public Assistance Categories C–G (PA C–G)
- Fire Management Assistance Grants (FMAG)
- BRIC
- HMGP
- HMGP Post Fire
- FMA
- Rehabilitation of HHPD

Authority for this plan originates from the following federal sources:

- Robert T. Stafford Disaster Relief and Emergency Assistance, 42 U.S.C., Section 322, as amended
- Code of Federal Regulations (C.F.R.), Title 44, Parts 79.4, 201 and 206
- Disaster Mitigation Act (DMA) of 2000, Public Law 106-390, as amended

The Stafford Act, Public Law 100-707, signed into law in 1988, amended the Disaster Relief Act of 1974 (Public Law 93-288). The Stafford Act constitutes the statutory authority for most federal disaster response activities.



The DMA of 2000 is the current federal regulation addressing hazard mitigation planning. It amended the Stafford Act to require the preparation of hazard mitigation plans by state and local governments, emphasizing planning for disasters before they occur. The requirement for an SHMP is continued as a condition for disaster assistance.

The following FEMA guides and reference documents were used to prepare the 2023 SHMP. Refer to the References section for a complete list of resources used to prepare the plan.

- State Mitigation Planning Policy Guide, April 2023
- State Mitigation Planning Key Topics Bulletin: Mitigation Capabilities, November 2022
- State Mitigation Planning Key Topics Bulletin: Planning Process, October 2022
- State Mitigation Planning Key Topics Bulletin: Mitigation Strategy, October 2016
- State Mitigation Planning Key Topics Bulletin: Risk Assessment, June 2016
- Plan Integration: Linking Local Planning Efforts, July 2015
- Hazard Mitigation Assistance Guidance, February 2015
- Integrating Disaster Data into Hazard Mitigation Planning: A State and Local Mitigation Planning How-to-Guide, February 2015
- Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for Community Officials, March 2013
- Mitigation Ideas. A Resource for Reducing Risk to Natural Hazards, January 2013

### 1.2.3 Assurances

As a condition of approval of an SHMP by the FEMA Regional Administrator, 44 C.F.R. §201.4(c)(7) requires that the plan contain certain assurances. The assurances convey that the state is aware of, and understands, the obligations to comply with applicable federal statutes and regulations, including grant programs, grant management, and mitigation planning.

Accordingly, under the authorities provided in WV Code § 15-5-1, *et seq*, and Executive Order No. 18-03, WVEMD pledges that it will continue to:

- Comply with all applicable federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with 44 C.F.R. §13.11(c), including the timely submission of quarterly financial and performance reports; and
- Update and amend the State Hazard Mitigation Plan whenever necessary to reflect changes in state or federal laws and statutes as required in 44 C.F.R. §13.11(d).

## 1.3 Organization of the Plan

West Virginia's 2023 SHMP has been designed to use plain language and provide an engaging experience for readers by focusing on making critical information easily identifiable and ensuring that the plan is accessible. Additionally, the SHMP is a resource for local governments to better support work at the local and regional levels.



The 2023 SHMP represents a significant revision to the 2018 SHMP. The SHMP continues to be a “living document” that supports relationship building, promotes resiliency and sustainability, aids in consistent evaluation, and provides a means to reduce the costs associated with response and recovery.

An updated outline of the 2023 SHMP is presented below with a brief summary of each section’s contents.

- **Section 1: Introduction**—This section defines mitigation and the planning requirements for the SHMP. It also discusses the 2023 SHMP organization and a summary of changes made during the 2023 update.
- **Section 2: State Profile**—This section provides a description of the State’s physical setting, demographics, economy, state assets and critical facilities, cultural assets, natural resources, and land use and development.
- **Section 3: Planning Process**—This section documents the planning process, including the agencies, stakeholders, and subject matter experts involved and the manner of their involvement. It highlights the extended outreach efforts conducted to encourage participation and increased engagement during the 2023 SHMP update. This section also describes how the planning process has been integrated into ongoing federal and state programs and initiatives.
- **Section 4: Risk Assessment**—This section provides an overview of the risk assessment, including the process to identify hazards, the asset inventories collected and utilized, and the hazard-specific data and methodologies used in the vulnerability assessment.
- **Section 5: Hazard Overview**—This section lists any commonly recognized natural hazards that were not included in the SHMP and explains why.
  - **Sections 5.1 through 5.16: Risk Assessment for Each Hazard**—The risk assessment for each hazard is divided into two parts: (1) hazard profile and (2) vulnerability assessment. The vulnerability assessment follows the hazard profile so that all information about a hazard is found in one section.
    - All hazard profiles and vulnerability assessments have been updated and enhanced to include more detailed and current technical information. The hazard profile includes a hazard description, location, extent, warning time, previous occurrences and losses, probability of future occurrence, and potential effects of future conditions.
    - The vulnerability assessment includes qualitative and quantitative assessments of state assets and counties, including buildings, roads, critical facilities, population, the built environment, land use, environmental resources, cultural assets, and projected development.
- **Sections 6 through 8: Capability Assessment**—These sections provide a comprehensive review and evaluation of state and local capabilities used to support and facilitate mitigation activities and describes the process utilized by West Virginia to support, promote, and coordinate mitigation planning at the local level.
- **Section 9: Progress on Previous Plan**—This section provides a description of the status of each mitigation action in the previous plan and lists an action as completed or not completed. If the action is incomplete, the action is either included in the updated SHMP or discontinued.
- **Section 10: Goals for Hazard Mitigation**—This section includes goals to reduce long-term vulnerabilities from the identified hazards. These goals represent what the State seeks to accomplish through mitigation plan implementation using a variety of funding.



- **Section 11: Mitigation Strategy**—This section sets the State’s mitigation program priorities and helps to guide the counties as they update their plans. This section also includes goals and objectives and evaluates the previous SHMP’s actions.
- **Section 12: Adoption**—This section includes information regarding adopting the SHMP.
- **Section 13: Review, Evaluation, and Implementation**—This section describes how the SHMP will be enforced and remain relevant and includes the system for tracking the implementation of the mitigation actions and projects identified in the mitigation strategy.

## 1.4 Overview of Changes from 2018 to 2023

WVEMD’s vision for the 2023 SHMP is to streamline the plan, resulting in a practical and more readable document for the public and an implementable document for the State to support future risk reduction. In addition, the 2023 SHMP will serve as a technical reference for the next round of local hazard mitigation plan (LHMP) updates with a robust risk assessment that expands the assets assessed and integrates the best available data.

With that in mind, the 2023 SHMP includes a comprehensive update to the 2018 SHMP risk assessment. The 2023 SHMP has been reformatted and organized to be more readable while paralleling the structure of the requirements outlined in 44 C.F.R. §201.4 and FEMA’s State Mitigation Planning Policy.

The 2023 SHMP includes references to the C.F.R. throughout to provide the reader with context. These references provide specific section and subsection notations. References to the C.F.R. appear in light blue text boxes, as seen in an example below:

**44 C.F.R. §201.4(a):** States must have an approved Standard State Mitigation Plans meeting the requirements of this section as a condition of receiving non-emergency Stafford Act assistance and FEMA mitigation grants.

Table 1-1 crosswalks the section changes from the 2018 SHMP to the 2023 SHMP.

*Table 1-1 Crosswalk of Section Changes to the 2023 SHMP*

2018	2023
Section 1 – Introduction	Section 1 – Introduction
Section 2 – Planning Process	Section 3 – Planning Profile
Section 3 – State Profile	Section 2 – State Profile
Section 4 – Hazard Identification and Risk Analysis	Section 4 – Risk Assessment and Section 5 – Hazard Profiles
Section 5 – Supporting Local Plans	Section 8 – Local Government Planning Coordination
Section 6 – Mitigation Strategies	Section 9 – Progress on Previous Plan, Section 10 – Goals for Hazard Mitigation, and Section 11 – Mitigation Actions
Section 7 – Plan Monitoring, Maintenance & Revision	Section 13 – Review, Evaluation, and Implementation
Appendix A – Capability Assessment	Section 6 – Local Capabilities and Section 7 – State Capabilities
Appendix I – Adoption Letter	Section 12 – Adoption

Source: WVEMD 2018

At the beginning of each section, there is a bulleted summary of changes made. The following highlights the significant changes and enhancements made for the 2023 SHMP organized by key topic.



### *Planning Process*

- One of the WVEMD priorities for the 2023 SHMP was to ensure increased outreach and collaboration among various sectors to ensure a comprehensive update. The following sectors were engaged throughout the planning process: emergency management, economic development, land use and development, housing, health and social services, infrastructure, natural and cultural resources, and academia.

### *Risk Assessment*

- **State Buildings**—An enhancement to the 2023 SHMP was utilizing data provided directly from the State through the WVEMD. Through increased interagency coordination between the WVEMD and the State Resiliency Office (SRO), this dataset was made available to utilize in the 2023 risk assessment update. New state buildings were not available for the 2018 SHMP; therefore, changes in risk and vulnerability of these facilities over the performance period of the plan cannot be assessed.
- **Critical Facilities**—Another enhancement to the 2023 SHMP risk assessment was the updated definition of a critical facility and the utilization of a more robust critical facility and infrastructure dataset. For the 2023 SHMP, the definition and identification of critical facilities used were a result of a collaborative planning effort conducted with county, state, federal, private sector, and non-governmental organizations.
- **Socially Vulnerable Populations**—Impacts to socially vulnerable populations, such as children, older adults, and persons with disabilities, were integrated into the risk assessment to adhere to FEMA guidelines.
- **Local Vulnerability**—The enhanced risk assessment not only evaluates state assets but also evaluates local vulnerability to the identified hazards so that results may be integrated into upcoming LHMP updates. Each section discusses potential impacts to the population, built environment, and critical facilities.

### *Capabilities*

- State and local capabilities have been comprehensively reviewed, updated, and reformatted. The following plan elements have been consolidated into a single section: State Mitigation Capability Assessment, Local Capability Assessment, and Local Government Planning Coordination.

### *Mitigation Strategy*

- The 2018 SHMP mitigation actions, updated risk assessment, updated capability assessment, and LHMP actions were used to identify mitigation actions for the 2023 SHMP. Each identified mitigation action now includes detailed implementation information as well as a clearly articulated and uniformly applied prioritization scheme.