

**REGION 8**  
**PLANNING & DEVELOPMENT COUNCIL**  
**MULTI-JURISDICTIONAL**  
**HAZARD MITIGATION PLAN UPDATE 2018**



**PREPARED BY**  
**JH CONSULTING, LLC OF WEST VIRGINIA**  
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## 1.0 INTRODUCTION

This section presents an introduction to the hazard mitigation plan and defines the authority, scope and purpose of the plan.

### Plan Introduction

The *Region 8 Hazard Mitigation Plan* details natural and technological hazards that threaten Grant, Hampshire, Hardy, Mineral, and Pendleton Counties and their various municipalities. The plan fulfills the requirements set forth by the Disaster Mitigation Act of 2000 (DMA2K). This Act requires counties to formulate a hazard mitigation plan in order to be eligible for mitigation funds made available by the Federal Emergency Management Agency (FEMA).

### Plan Authority

This multi-jurisdictional plan has been completed in accordance with Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000. The guidelines for the completion of this plan appear in the Code of Federal Regulations under Title 44: Emergency Services, Part 201.6. Specific reference is made to the Local Mitigation Planning Handbook (USDHS/FEMA, 2013).

### Plan Scope

The *Region 8 Hazard Mitigation Plan* includes all cities, villages, and townships within Grant, Hampshire, Hardy, Mineral, and Pendleton Counties. All hazards that have or can affect the residents of the region are analyzed. Hazard mitigation objectives, goals and projects are discussed, as are project lead agencies and potential funding sources.

### Plan Purpose

The purpose of the *Region 8 Hazard Mitigation Plan* is to identify and evaluate all natural and technological hazards that can and may affect Grant, Hampshire, Hardy, Mineral, and Pendleton Counties and to describe mitigation strategies to address these hazards.

## Organization of the Plan

This plan is organized in a way that both follows the federal criteria for hazard mitigation plans and is user-friendly.

- **Section 1.0: Introduction:** Outlines the process used to update the plan and describes the planning area.
- **Section 2.0: Risk Assessment:** Includes a description of risk, probability and severity; identifies and profiles the hazard risks most probable throughout the region. This section also analyzes other factors (cascading events and complicating variables) that contribute to or stem from a hazard. This section contains a list of critical, vulnerable, historic, special, and economic assets in the region. Regional development trends are included here.
- **Section 3.0: Mitigation Strategy:** Outlines the goals and objectives of hazard mitigation activities. It also identifies mitigation projects to be undertaken by the member governments in the region.
- **Section 4.0: Plan Maintenance Process:** Identifies the process by which the member governments plan to update their own mitigation efforts as well as how this document is to be maintained.
- **Section 5.0:** Contains documentation of all meetings, source data for the hazards, completed surveys, text citations, and the adopting resolutions (once the plan has been approved).

## Changing Priorities

During this update process, the committee looked inward to their own communities and jurisdictions and outward to their surrounding jurisdictions and partners, striving for a whole community approach. Inwardly, this hazard mitigation plan committee prioritized having a comprehensive, manageable, realistic project list that jurisdictions could employ to achieve resilience in their communities. Outwardly, the committee members and Region 8 PDC reached out to surrounding jurisdictions, planning organizations, and a variety of stakeholders for input in the plan. The committee recognizes that mitigation efforts are valuable not only within the communities, but also when the cascading effects of hazards within a Region 8 community can affect other places and vice versa.

## **2018 Updates**

The plan organization follows the previous plan's very closely; where appropriate, sections have been updated to reflect the most recent available information. In general, the plan has been reformatted to present information in a more user-friendly way (i.e., tables and graphics where appropriate). Each section includes a "2018 Update" where it describes the changes and updates more specifically.



## 1.1 THE PLANNING PROCESS

§201.6(b) and  
201.6(c)(1)

An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

### 2018 UPDATE

This portion of the plan has mostly changed since the previous plan submittal; all information about the process is new, only one section describes the previous process of 2012. Plan update processes before 2012 have been omitted.

#### 1.1.1 Plan Development Process of 2017

The Region 8 Planning and Development Council (PDC), an existing organization that addresses issues related to economic and community development, utilized the services of a consultant, JH Consulting, LLC, to navigate the plan updating process. The *Region 8 Hazard Mitigation Plan* update of 2017 consisted of integrating two committees: a planning and a steering committee. The Region 8 PDC members served as the planning committee for the plan update and appointed individuals to a steering committee.

A more hands-on steering committee was formed consisting of members from the Region 8 PDC, all five representative counties, and two jurisdictions. The remaining jurisdictions channeled their updates to the plan through the county representatives on the steering committee and the consultant. For more information on how the steering committee and all jurisdictions in Region 8 participated in this process, see [Section 1.1.2 Jurisdictional Involvement](#).

### 1.1.2 Jurisdictional Involvement

All the jurisdictions and steering committee members had the opportunity to be involved in a variety of activities ranging from in-person meetings, teleconferences, email, and phone correspondence to discussing hazards, capabilities, projects, and development trends and challenges in their communities. The representatives from each jurisdiction and a description of how each one participated in the process, is outlined in [Table 1.1.2.A](#).

TABLE 1.1.2.A JURISDICTIONAL INVOLVEMENT			
<i>Jurisdiction</i>	<i>Participation Level</i>	<i>Representative(s)</i>	<i>Title</i>
Bayard, Town of	2, 3	Steven Durst	Mayor
Capon Bridge, Town of	2, 3	Penny Feather	Clerk
Carpendale, Town of	3	Butch Armentrout	Mayor
		Rhonda Vanmeter	
Elk Garden, Town of	3	Tom Braithwaite	Councilman
Franklin, Town of	1, 2, 3, 4	Frank Wehrle	Floodplain Manager
Grant County	1, 2, 3	Peggy Bobo-Alt	OEM Director
		Cullen Sherman	Sanitarian
Hampshire County	1, 2, 3, 4	Brian Malcolm	HSEM Director
Hardy County	1, 2, 3	Paul Lewis	OEM Director
		Melissa Scott	Floodplain Manager
Keyser, City of	2, 3	Brandi Paugh	Recorder
Mineral County	1, 2, 3, 4	Luke McKenzie	HSEM Director
		Drew Brubaker	Commissioner
		Roger Leatherman	Commissioner
Moorefield, City of	2, 3	Gary Stalnaker	Mayor
Pendleton County	1, 2, 3	Bruce Minor	OEM Director
		Gene McConnell	Commissioner
Petersburg, City of	3	Sheila Vanmeter	City Manager
Piedmont, City of	2, 3	Ben Smith	Mayor
Ridgeley, Town of	3	Mark Jones	Mayor
Romney, City of	1, 2, 3	Jessica Szabo	City Administrator
Wardensville, Town of	2, 3	Greg Alderman	Mayor
Region 8 PDC	1, 2, 3, 4	Terry Lively	Executive Director
		Carla Dent	Office Assistant
<ol style="list-style-type: none"> <li>1. Involved in the steering committee by attending meetings and direct contact with the consultant.</li> <li>2. Completed or provided at least one of the following: asset inventory update, jurisdictional project status update, new project worksheet completion, hazard information for the jurisdiction, NFIP survey, and/or the online capabilities survey.</li> <li>3. Had direct contact with the Region 8 PDC, a steering committee member or the consultant about updates in their jurisdiction relevant to the project.</li> <li>4. Posted or published the public survey online or in print.</li> </ol>			

Planning and steering committee members attended several in-person and teleconference meetings throughout the update process. The following table describes the meeting types, dates, and what was discussed as part of the update.

TABLE 1.1.2.B MEETING SCHEDULE		
Type	Date	Topic
Planning (In Person)	July 20, 2017	<ul style="list-style-type: none"> <li>• Introduction to hazard mitigation plan update process</li> <li>• Selection of the steering committee to work with the consultant.</li> </ul>
Steering (In Person)	August 8, 2017	<ul style="list-style-type: none"> <li>• Overview of the hazard mitigation planning process</li> <li>• Review and approval of the hazard list</li> <li>• Activities:               <ul style="list-style-type: none"> <li>○ Risk Assessment Matrix</li> <li>○ Asset Inventory updates</li> <li>○ Hazard occurrence narratives</li> <li>○ Capabilities assessment survey</li> </ul> </li> <li>• Discussion of public involvement strategies</li> </ul>
Steering (In Person)	September 11, 2017	<ul style="list-style-type: none"> <li>• Review and update of goals and objectives</li> <li>• Review of public survey results thus far</li> <li>• NFIP survey completion request</li> <li>• Update of previous 2012 plan project status</li> </ul>
Planning (In Person)	September 21, 2017	<ul style="list-style-type: none"> <li>• Update to the committee of when the steering committee had met and next meetings.</li> <li>• All encouraged to attend next steering committee meeting</li> <li>• Update about tasks the committee members have completed and review of goals and objectives</li> </ul>
Steering (Teleconference)	September 26, 2017	<ul style="list-style-type: none"> <li>• Review and approval of new goals and objectives</li> <li>• Project status update request</li> </ul>
Steering (In Person)	October 25, 2017	<ul style="list-style-type: none"> <li>• Review of public survey results thus far</li> <li>• Reminder of tasks to be completed (asset lists, project status updates, online capabilities survey, sharing of public survey link)</li> <li>• New projects discussion and activity</li> <li>• Discussion on plan maintenance and integration procedures</li> <li>• Discussion on present and future development in the communities that could be affected by hazards</li> </ul>

The Region 8 PDC plans to hold one more meeting relating to hazard mitigation during their regular quarterly PDC meeting on June 21, 2018; this event brings together all the jurisdictional representatives from the region and gives them the opportunity to further discuss mitigation and hazards in their area. This meeting comes soon after all the counties received disaster declarations from the floods at the beginning of June, 2018.

### 1.1.3 Whole Community Approach

The Region 8 PDC recognizes that involving the right partners is crucial to the success of the project. For this reason, it involved community members from various sectors within the region. For example, planning committee members were representatives from sectors that are affected by mitigation action or policy: governmental, quasi-governmental organizations, private businesses, economic assets, and higher education.



Government

Grant County Commission  
Petersburg Mayor  
Bayard Mayor  
Romney Mayor  
Hampshire County Commission  
Wardensville Mayor  
Mineral County Commissioner  
Carpendale Mayor  
Ridgeley Mayor  
Keyser Mayor  
Piedmont Mayor  
Elk Garden Council  
Franklin Council  
Capon Bridge Mayor  
Moorefield Mayor  
Pendleton County Commission  
Hardy County Commission

Quasi-Government

Grant County Development Authority  
Region 7 Workforce Investment Board  
Hardy County Rural Development Authority

Private Business

Bean & Bean Attorneys  
Insurance Company  
Farmers  
Bed and Breakfast

Economic Asset

Capon Valley Bank  
Pendleton Community Bank  
Grant County Bank

Higher Education

Workforce Education EWVC

The Region 8 PDC also invited other partners that were not on the planning committee to provide feedback about hazards in their environments and to comment on their risks. The Region 8 PDC reached out to the following entities (see [Appendix 2: Process and Participation](#) for letters and emails sent out and responses received).

Quasi-Government

Region 4 Planning and Development Council  
Region 7 Planning and Development Council  
Region 9 Planning and Development Council  
Mineral County Board of Education  
Hardy County Board of Education  
Grant County Board of Education  
Pendleton County Board of Education

Higher Education

Eastern WV Community & Technical College

Private Business

Pilgrim's Pride  
Allegheny Dimension  
American Woodmark  
Judy's Drug Store

Healthcare

Grant Memorial Hospital  
Grant County Rehabilitation Center  
Potomac Valley Hospital

The Region 8 steering committee recognized the need early on in the process for a different approach to engaging the public; in the past, public meetings have been minimally attended by the public. Members of the steering committee posted and published the link to an online survey on their social media pages and in the newspaper (see [Appendix 2: Process and Participation](#) for screenshots of postings and public survey results). Through this they were able to attain 58 responses that indicated several things:

- the hazard that the public who took the survey is most concerned about is severe winter weather, followed closely by flooding, severe summer weather, and wildfires,
- 89% of the participants rated their community's ability to handle hazard events as average, good, or excellent,
- 59% of participants received warning information via social media, followed by radio, television, and text message,
- 40% of the participants do not have a 72-hour emergency kit in their household,
- 55% of the participants do not know if they live in a special flood hazard area (SFHA),
- 72% are willing to spend their own money on mitigation activities for their home, but only 52% have performed any improvements to their home to reduce their risk (mainly tree maintenance or removal and roof repair or replacement), and
- 25% of the participants indicated that they, or someone in their household, have a functional or access need that service providers should be aware of in an emergency.

Select comments that people had who took the survey included the need for stricter regulations in reference to building in the floodplain, the concern for pandemics rather than natural hazards, and the need to be provided a 911 address.

#### **1.1.4 Research Conducted**

The research conducted for the risk assessment phase of this update included data from federal, state, higher education, and mass media sources. The research aim was primarily to validate and describe the hazards included for consideration in this plan. Specific sources relative to individual hazards are listed in [Appendix 5: Citations](#).

The consultant reviewed a number of existing plans and reports to (a) identify any obvious inconsistencies between other development and mitigation efforts, (b) as baseline

information for such sections as Analyzing Development Trends, and (c) to support discussions surrounding mitigation projects. Those documents included the following.

<b>TABLE 1.1.4.A GENERAL RESEARCH</b>		
<i>Document Type</i>	<i>Document Citation</i>	<i>How Incorporated Into Plan</i>
Technical Information	USDHS FEMA Region 2I. (July, 2015). <i>Plan Integration: Linking Local Planning Efforts</i> . Federal Government: Washington, D.C.	Used as guidance on incorporating local planning efforts/plans into the planning process.
Technical Information	USDHS FEMA. (June, 2016). <i>National Mitigation Framework</i> . Federal Government: Washington, DC	Used as general guidance on mitigation planning.
Technical Information	USDHS FEMA. (May, 2005). <i>Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning</i> . Federal Government: Washington, D.C.	Used as general guidance for incorporating historic property and cultural protection.
Technical Information	USDHS FEMA. (March, 2013). <i>Local mitigation planning handbook</i> . Federal Government: Washington, D.C.	Used as general guidance on revised mitigation planning process
Technical Information	USDHS FEMA. (March, 2013). <i>Integrating Hazard Mitigation Into Local Planning</i> . Federal Government: Washington, D.C.	Used as general guidance on existing plan integration for hazard mitigation
Plan	Region 8 Planning and Development Council. (2017). <i>FY 2018 Regional Development Plan Update Comprehensive Economic Development Strategy</i> . Regional: Petersburg, WV.	Used for investigation of current mitigation projects and development trends in the area.
Report	Bureau of Business & Economic Research. (2014). <i>Potomac Highlands Economic Outlook</i> . Regional: Morgantown, WV.	Used as reference for economic status and development for the region.
Plan	Hampshire County (n.d.). <i>Floodplain Management Plan</i> . County Government: Romney, WV.	Used as reference for flooding in Hampshire County.
Plan	Hampshire County. (2009). <i>Hampshire County Comprehensive Plan</i> . County Government: Romney, WV.	Used for investigation of current mitigation projects and development trends in Hampshire County.
Plan	Town of Franklin. (2016). <i>Source Water Protection Plan</i> . Local Government: Franklin, WV.	Used for investigation of current mitigation projects and plans for Franklin.
Plan	Grant County Planning Commission. (2013). <i>Grant County Plan</i> . County Government: Morgantown, WV.	Used for investigation of current mitigation projects and development trends in Grant County.
Plan	Hardy County Planning Office. (August, 2011). <i>Hardy County Comprehensive Plan</i> . County Government: Moorefield, WV.	Used for investigation of current mitigation projects and development trends in Hardy County.
Plan	Mineral County Development Authority. (2014). <i>2014 Strategic Plan for the Mineral County Development Authority</i> . County Government: Keyser, WV.	Used for investigation of current mitigation projects and development trends in Mineral County.
Plan	Eastern Panhandle Health Response Team. (June, 2016). <i>All-Hazards Response Plan</i> . Regional.	Used for investigation of current mitigation projects and epidemiologic capabilities in the region.

### **1.1.5 Implementing the Plan and Monitoring the Process**

Region 8 stakeholders realize that the plan must remain viable in order to appropriately guide mitigation in the region. To that end, plan implementation (i.e., the mitigation strategy and project prioritization) is presented in [Section 3.0 Action Plan](#). The monitoring process is presented in [Section 4.0 Plan Maintenance](#).

### **1.1.6 Plan Development Process of 2012**

The previous Region 8 Hazard Mitigation Plan update of 2012 represented the third step in the evolution of the hazard mitigation plan; it was a consolidation of individual county plans compiled by the Region 8 Planning and Development Council (PDC) between 2003 and 2010. To accomplish this goal, the PDC hired a contractor to work with both the Council and its member governments to create a document that was truly regional, yet represented the individual interests of the PDC's member governments. As a part of this effort, the contractor coordinated with each county to update any projects and/or risks necessary since the 2009/2010 updates.

The PDC frequently updated its member governments on the status of this project at regularly-scheduled council meetings. Further, a public meeting was held on October 13, 2011, at the PDC office to encourage public participation in the development of the document. The meeting was minimally attended by the public. Further, upon completion of the update, the PDC published an advertisement in each of the local newspapers serving the region inviting the public to visit the PDC office, review the plan, and list any comments on a PDC-provided form. The PDC posted the updated document and a comment form on its website.

## 1.2 DESCRIPTION OF THE PLANNING AREA

### 2017 UPDATE

As this section was updated, the section for development trends was moved to its own section in the risk assessment; geographical descriptions of the region as well as information on demographics, transportation, and utilities were updated. New subtitles under this section include medical services, media, jurisdictional capabilities, and disaster declarations.

### 1.2.1 Regional Geography, Climate, and Environment

Region 8 is located on the Eastern Panhandle of West Virginia between Maryland and Virginia. It consists of five counties, Grant, Hampshire, Hardy, Mineral and Pendleton, and all their municipalities which include a total of eight towns and three cities.

The Region 8 counties are nestled in the heart of the Appalachian region in an area called the Potomac Highlands. Some areas have mountain elevations of up to 4,500 feet. West Virginia has several physiographic provinces; most of the geographic area of Region 8 is located in the Valley and Ridge Province, and a small part in the Allegheny Mountain Section, divided by the Allegheny Font, a prominent geological feature which runs northeast-southwest across the state. The Valley and Ridge Province in the east contains folded and faulted rocks that range in age from late Precambrian to early Mississippian and the Allegheny Mountain Section combines elements of the folded mountains to the east and the dissected plateau (WVGES, 2017).

The main rivers in the region include the North Branch and South Branch of the Potomac River, Cacapon River, and North and South Forks of the South Branch which all flow in a northeastern direction to the Potomac River, ultimately ending up in the Chesapeake Bay, all forming part of the Chesapeake Bay Watershed (Geology.com, n.d.).

The Allegheny Mountains create a rain shadow, thus the western part of the state receives more precipitation than the eastern panhandle, but the mountains receive the

<i>Name</i>	<i>Type</i>	<i>County</i>
Bayard	Town	Grant
Capon Bridge	Town	Hampshire
Carpendale	Town	Mineral
Elk Garden	Town	Mineral
Franklin	Town	Pendleton
Grant	County	N/A
Hampshire	County	N/A
Hardy	County	N/A
Keyser	City	Mineral
Mineral	County	N/A
Moorefield	Town	Hardy
Pendleton	County	N/A
Petersburg	City	Grant
Piedmont	City	Mineral
Ridgeley	Town	Mineral
Romney	City	Hampshire
Wardensville	Town	Hardy



most. Annual precipitation in the Allegheny Mountains is 53.8 inches while in the Ridge and Valley it is only 36.6 inches. Elevation also plays an important role in precipitation; the average annual precipitation increases by 6" as the elevation increases from 2,000 - 3,000 ft. on the western side of the mountains. On the eastern side annual precipitation decreases by 9" as elevation decreases from 3,000 - 2,000 ft.

The average annual temperature in, in the Allegheny Mountains is 49.4 degrees F, and 52.8 degrees F in the Ridge and Valley. Mean annual temperature decreases by 2.9 F for each 1,000 foot increase in elevation (Pauley, n.d.).

There are eight areas in the Potomac Highlands that are designated as environmentally sensitive because of breeding grounds for native wildlife, wilderness areas, recreational areas, and underground cavern sites. The region has ten rare species of plants and various endangered or threatened wildlife species (CEDs, 2017).

### 1.2.2 Demographics

From the census in 2000 to 2010, Hampshire and Hardy counties saw a 10 to 24.9% increase in population; Grant and Mineral Counties also experienced a growth of around 0 to 9.9%, and Pendleton County lost from 0.01-10% of its population. According to the Census, population change in the United States from 2010 to January 1, 2018 is 5.9% increase. West Virginia is the state that lost most population in this time period (-2%). However, Census information indicates that since the last update of this plan in 2012, all counties have experienced at least some population growth.

<i>Fact</i>	<i>Grant County</i>	<i>Hampshire County</i>	<i>Hardy County</i>	<i>Mineral County</i>	<i>Pendleton County</i>	<i>Totals/Average</i>
<i>Population</i>						
Population estimates, July 1, 2016, (V2016)	11,732	23,301	13,889	27,411	7,051	<b>83,384</b>
Persons under 5 years, percent, July 1, 2016, (V2016)	5.20%	4.90%	5.20%	5.50%	4.50%	<b>5.06%</b>
Persons under 18 years, percent, July 1, 2016, (V2016)	19.50%	19.90%	20.10%	20.10%	17.50%	<b>19.42%</b>
Persons 65 years and over, percent, July 1, 2016, (V2016)	23.70%	20.90%	21.00%	20.60%	26.80%	<b>22.60%</b>
Female persons, percent, July 1, 2016, (V2016)	50.10%	49.10%	49.80%	50.30%	49.40%	<b>49.74%</b>
White alone, percent, July 1, 2016, (V2016)	97.70%	97.00%	93.70%	94.80%	96.20%	<b>95.88%</b>
Black or African American alone, percent, July 1, 2016, (V2016)	1.00%	1.20%	3.50%	3.00%	2.10%	<b>2.16%</b>
American Indian and Alaska Native alone, percent, July 1, 2016, (V2016)	0.10%	0.20%	0.20%	0.20%	0.30%	<b>0.20%</b>



<b>TABLE 1.2.2.A DEMOGRAPHIC DATA FOR REGION 8</b>						
<i>Fact</i>	<i>Grant County</i>	<i>Hampshire County</i>	<i>Hardy County</i>	<i>Mineral County</i>	<i>Pendleton County</i>	<i>Totals/Average</i>
Asian alone, percent, July 1, 2016, (V2016)	0.20%	0.30%	1.00%	0.50%	0.10%	<b>0.42%</b>
Two or More Races, percent, July 1, 2016, (V2016)	0.90%	1.20%	1.50%	1.40%	1.30%	<b>1.26%</b>
Hispanic or Latino, percent, July 1, 2016, (V2016)	1.30%	1.40%	4.80%	0.90%	1.20%	<b>1.92%</b>
White alone, not Hispanic or Latino, percent, July 1, 2016, (V2016)	96.70%	95.80%	89.90%	94.10%	95.10%	<b>94.32%</b>
Veterans, 2011-2015	870	1,615	1,110	2,169	706	<b>6470</b>
Foreign born persons, percent, 2011-2015	0.10%	0.40%	2.70%	0.50%	0.50%	<b>4.20%</b>
<i>Housing</i>						
Housing units, July 1, 2016, (V2016)	6,583	13,870	8,168	13,106	5,179	<b>46,906</b>
Median value of owner-occupied housing units, 2011-2015	\$124,900	\$121,400	\$118,800	\$128,300	\$100,500	<b>\$118,780</b>
Households, 2011-2015	4,175	10,194	5,156	11,289	3,095	<b>33,909</b>
Language other than English spoken at home, percent of persons age 5 years+, 2011-2015	1.90%	1.40%	5.70%	1.30%	1.00%	<b>2.26%</b>
<i>Education</i>						
High school graduate or higher, percent of persons age 25 years+, 2011-2015	81.90%	78.20%	79.40%	88.70%	80.20%	<b>81.68%</b>
Bachelor's degree or higher, percent of persons age 25 years+, 2011-2015	12.30%	10.10%	14.00%	12.40%	15.30%	<b>12.82%</b>
<i>Health</i>						
With a disability, under age 65 years, percent, 2011-2015	11.10%	16.80%	12.20%	16.00%	12.80%	<b>13.78%</b>
Persons without health insurance, under age 65 years, percent	7.70%	9.40%	9.70%	6.80%	8.40%	<b>8.40%</b>
<i>Economy</i>						
In civilian labor force, total, percent of population age 16 years+, 2011-2015	55.00%	50.10%	58.30%	52.00%	47.80%	<b>52.64%</b>
Mean travel time to work (minutes), workers age 16 years+, 2011-2015	27.2	38.1	25.3	27.9	30.2	<b>29.74</b>
Median household income (in 2015 dollars), 2011-2015	\$39,088	\$27,995	\$40,303	\$36,153	\$36,953	<b>\$36,098.40</b>
Per capita income in past 12 months (in 2015 dollars), 2011-2015	\$20,052	\$18,477	\$22,195	\$20,093	\$21,979	<b>\$20,559.20</b>
Persons in poverty, percent	15.90%	18.60%	14.40%	15.60%	16.40%	<b>16.18%</b>
Total employment, percent change, 2014-2015	3.20%	1.60%	1.50%	-4.90%	-3.30%	<b>-0.38%</b>
<i>Other</i>						
Population per square mile, 2010	25	37.4	24.1	86.1	11.1	<b>36.74</b>
Land area in square miles, 2010	477.37	640.25	582.31	327.83	696.05	<b>2723.81</b>

### 1.2.3 Transportation

#### Roads

The transportation network of the Region 8 area includes four-lane, divided highways, two-lane roadways, and single-lane roadways. This network passes through a



rural and mountainous area (often referred to as the “Potomac Highlands”); therefore, many of the routes are curvy and traverse steep grades. The primary and secondary transportation routes through Region 8 are as follows:

<u>Primary Routes</u>	<u>Secondary Routes</u>
US Route 48 (Corridor H)	State Route 28
US Route 33	State Route 46
US Route 50	State Route 55
US Route 220	State Route 93
	State Route 259

Corridor H is a four-lane divided highway that is currently under construction. All sections of the corridor are constructed and open to traffic except the section between Wardensville and Virginia; the “final design of this segment through Hardy County is anticipated to begin in 2020. Construction tentatively is scheduled to begin in 2027” (WVDOH, 2017). This route, when completed, will run through Grant and Hardy Counties and is expected to bring significant development to the area. With that development could come additional heavy traffic as well as an increased risk of transportation-based hazardous material incidents. Additionally, it may provide a major east-west thoroughfare through the northern portions of West Virginia. Some plans have called for it to be used as an evacuation route for populations leaving the National Capital Region (NCR) should a catastrophic incident occur in the Washington, D.C. and/or Baltimore areas.

Several state routes also serve as secondary transportation routes. The roadways are largely well-maintained two-lane highways; they are, however, somewhat more rural than the routes listed as “primary”.

### Rail

Four of the five Region 8 counties have railroads running through them. The Capitol Limited (Amtrak) runs along the Potomac River at the northern border of the State with Maryland in Mineral and Hampshire Counties. The Potomac Eagle Railroad is a scenic railroad that runs roughly north to south in Hardy and Hampshire Counties. The South Branch Valley Railroad in Grant County provides freight and passenger service to the state’s eastern panhandle (WVDOT, n.d.). At least four railroad projects were proposed in Pendleton County, but none materialized. Pendleton never obtained a permanent railroad,

although several temporary logging railroads penetrated the county in the early 20th century (Taylor, 2013).

Air

There is one airport, categorized as a general aviation facility in Region 8: the Grant County Airport that serves Petersburg.

**1.2.4 Economy**

In all five counties, the economy (i.e., local work force) is driven by education, healthcare, and social assistance and manufacturing whereas five years ago it was government and the trade, transportation, and utilities industries. [Table 1.2.4.B](#) shows the top five industries in each county, with the percent of individuals employed by each.

<b>TABLE 1.2.4.A TOP INDUSTRIES BY COUNTY</b>					
<i>County</i>	<i>INDUSTRY 1 Name (%)</i>	<i>INDUSTRY 2 Name (%)</i>	<i>INDUSTRY 3 Name (%)</i>	<i>INDUSTRY 4 Name (%)</i>	<i>INDUSTRY 5 Name (%)</i>
Grant	Education, Healthcare & Social Assistance (21.5%)	Manufacturing (16.8%)	Construction (15.0%)	Retail Trade (9.8%)	Transportation, Warehousing, and Utilities (6.5%)
Hampshire	Education, Healthcare & Social Assistance (26.2%)	Manufacturing (10.1%)	Retail Trade (14.8%)	Construction (10.1%)	Public Administration (6.9%)
Hardy	Manufacturing (26.6%)	Education, Healthcare & Social Assistance (20.2%)	Retail Trade (10.5%)	Arts, Entertainment, Recreation, Accommodation & Food Services (9.9%)	Construction (6.0%)
Mineral	Education, Healthcare & Social Assistance (24.5%)	Manufacturing (18.3%)	Retail Trade (13.7%)	Arts, Entertainment, Recreation, Accommodation & Food Services (10.0%)	Public Administration (7.5%)
Pendleton	Education, Healthcare & Social Assistance (27.1%)	Manufacturing (12.4%)	Construction (12.2%)	Retail Trade (10.5%)	Public Administration (8.9%)

Source: WVU County Data Profiles (2016)

[Table 1.2.4.B](#) shows the top ten employers in each county. The county Board of Education is one of the top three employers in every county.



TABLE 1.2.4.B TOP 10 EMPLOYERS IN REGION 8					
	Grant	Hampshire	Hardy	Mineral	Pendleton
1	Grant Memorial Hospital	Hampshire County Board of Education	Pilgrim's Pride Corporation of West Virginia	Alliant Techsystems, Inc.	Pendleton County Board of Education
2	Virginia electric and Power Company	West Virginia Schools for the Deaf and the Blind	American Woodmark Corporation	Mineral County Board of Education	Pendleton Manor, Inc.
3	Grant County Board of Education	Valley Health System, Inc.	Hardy County Board of Education	IBM Corporation	US Department of Defense
4	APCom Power Inc.	Potomac Comprehensive Diagnostic Guidance Center	Wal-Mart Stores, Inc.	Wal-Mart Stores, Inc.	Greer Industries, Inc.
5	Power Piping Company	Hampshire County Committee on aging	Eastern WV Community & Technical College	West Virginia University	Allegheny Wood Products, Inc.
6	Grant County Nursing Home	Hampshire County Commission	Summit Community Band, Inc	West Virginia Department of Highways	Pendleton Senior and Family Service
7	WACO, Inc.	Bank of Romney	E.A. Hawse Health Center, Inc.	Potomac Valley Hospital of West Virginia	Pendleton Community Care, Inc.
8	A.L.L. Construction, Inc.	Romney Health Care Center	E.A. Hawse Nursing and Rehabilitation Center, Inc.	Lumber and Things, Inc.	Pendleton Community Bank, Inc.
9	Allegheny Wood Products, Inc.	West Virginia Regional Jail & Correctional Facility Authority	Hardy County Commission	Automated Packaging Systems, Inc.	Hinkle Trucking, Inc.
10	Commission on Aging Family Service	Maharishi Purusha Program, Inc.	Packers Sanitation Services, Inc.	Heartland Employment Services, Inc.	Franklin IGA, Inc.

Source: Work Force West Virginia Profiles (2014).

### 1.2.5 Medical Services

A combination of private and public hospitals and free clinics exist in the counties of Region 8. [Table 1.2.5.A](#) outlines these hospitals in clinics in the area.

TABLE 1.2.5.A MEDICAL SERVICES IN REGION 8		
County	Name	Location
Grant	Grant Memorial Hospital	Petersburg
	Grant Pediatrics Interna Free Clinic	Petersburg
	Mt. Storm Health Center	Mt. Storm
Hampshire	Hampshire Memorial Hospital	Romney
Hardy	Potomac Valley Family Medicine	Moorefield
	E.A. Hawse Health Center	Baker
	E.A. Hawse Nursing Rehab Clinic	Baker
	E.A. Hawse Health Center	Mathias
	EZCare Walk-In Medical Center	Moorefield
Mineral	Potomac Valley Hospital	Keyser
Pendleton	Pendleton Community Care	Franklin
	North Fork Primary Care Clinic	Riverton

Source: [theagapecenter.com](http://theagapecenter.com), [freeclinics.com](http://freeclinics.com)



### 1.2.6 Media

The type of media in Region 8 with most variety is the non-daily newspapers (six) followed by radio stations (three) and one each daily newspaper, college newspaper, and college radio.

TABLE 1.2.6.A MEDIA IN REGION 8		
Type of Media	Name	Location
Daily Newspaper	Mineral Daily News-Tribune	Keyser
Non-Daily Newspaper	Echo (Weekender)	Keyser
Non-Daily Newspaper	Moorefield Examiner	Moorefield
Non-Daily Newspaper	Piedmont Herald	Piedmont
Non-Daily Newspaper	Grant County Press	Petersburg
Non-Daily Newspaper	Hampshire Review	Romney
Non-Daily Newspaper	Pendleton Times	Franklin
College Newspaper	Pasquino	Keyser
Radio	WQZK-FM 94.1	Keyser
Radio	WVa Public Radio-FM 89.5	Petersburg
Radio	WKLP-AM 1390	Keyser
College Radio	WJGF-FM 104.1	Romney

Source: wmediaguide.com

### 1.2.7 Utilities

In Region 8 there are several services for utilities such as cable television, electric, gas, sewer, solid waste, and water. [Table 1.2.7.A](#) outlines each type of utility and the providers for the counties.

TABLE 1.2.7.A UTILITIES IN REGION 8	
County	Utility Name
<i>Cable Television</i>	
Grant	C T & R Cable
Grant	Cequel III Communications II LLC
Grant	Shenandoah Cable Television, LLC
Hampshire	Atlantic Broadband (Penn), LLC
Hardy	Hardy Telecommunications, Inc.
Hardy	Atlantic Broadband (Penn), LLC
Hardy	C T & R Cable
Mineral	Atlantic Broadband (Penn), LLC
Mineral	Cequel III Communications II LLC
Mineral	Shenandoah Cable Television, LLC
Mineral	Comcast Communications
Pendleton	Cequel III Communications II LLC
Pendleton	Shenandoah Cable Television, LLC
Pendleton	Spruce Knob Seneca Rocks Telephone, Inc.
<i>Electric</i>	

<b>TABLE 1.2.7.A UTILITIES IN REGION 8</b>	
<i>County</i>	<i>Utility Name</i>
Grant	Monongahela Power Company
Grant	The Potomac Edison Company
Hampshire	The Potomac Edison Company
Hardy	The Potomac Edison Company
Mineral	Monongahela Power Company
Mineral	The Potomac Edison Company
Pendleton	Monongahela Power Company
Grant	Mt. Storm Wind Force, LLC
Grant	New Creek Wind, LLC
Grant	Shell WindEnergy, Inc.
Mineral	Pinnacle Wind, LLC
Grant	Trans-Allegheny Interstate Line Company
Hampshire	Trans-Allegheny Interstate Line Company
Hardy	Trans-Allegheny Interstate Line Company
<i>Gas</i>	
Grant	Mountaineer Gas Company
Hardy	Mountaineer Gas Company
Mineral	Mountaineer Gas Company
<i>Sewer</i>	
Hardy	Moorefield/Hardy County Wastewater Authority
Mineral	Fountainhead Homeowners Association, Inc.
Grant	Mountain Top Public Service District
Hampshire	Central Hampshire Public Service District
Hardy	Hardy County Public Service District
Mineral	New Creek Public Service District
Mineral	Frankfort Public Service District
Mineral	Mountain Top Public Service District
Grant	City of Petersburg Sewer Department
Hampshire	Town of Capon Bridge (Sewer)
Hampshire	City of Romney (Sewer Department)
Hardy	Town of Moorefield
Hardy	Town of Wardensville
Mineral	Town of Carpendale (Sewer)
Mineral	City of Keyser Sewer Department
Mineral	City of Piedmont (Sewer)
Mineral	Town of Ridgeley
Pendleton	Town of Franklin Sewer System
Grant	C & J Utilities, LLC
Hampshire	P & P Enterprises Utilities, LLC
Mineral	Lakewood Utilities, Inc.
<i>Solid Waste</i>	
Grant	Petersburg Transfer Station
Grant	Region Eight Solid Waste Authority
Grant	LCS Services
Hampshire	LCS Services
Hardy	LCS Services



TABLE 1.2.7.A UTILITIES IN REGION 8	
County	Utility Name
Mineral	LCS Services
Pendleton	LCS Services
<i>Telephone</i>	
Grant	Citizens Telecommunications Company of WV
Grant	Frontier West Virginia Inc.
Hampshire	Citizens Telecommunications Company of WV
Hardy	Hardy Telecommunications, Inc.
Hardy	Citizens Telecommunications Company of WV
Mineral	Citizens Telecommunications Company of WV
Mineral	Frontier West Virginia Inc.
Pendleton	Spruce Knob Seneca Rocks Telephone, Inc.
Pendleton	Frontier West Virginia Inc.
<i>Water</i>	
Grant	Grant County Public Service District
Grant	Mountain Top Public Service District
Hampshire	Central Hampshire Public Service District
Hardy	Hardy County Public Service District
Mineral	Fountain Public Service District
Mineral	Frankfort Public Service District
Mineral	Mountain Top Public Service District
Pendleton	Pendleton County Public Service District
Grant	Petersburg Water Department City of
Hampshire	Town of Capon Bridge (Water)
Hampshire	City of Romney (Water Department)
Hardy	Moorefield Municipal Water Works
Hardy	Town of Wardensville
Mineral	Town of Carpendale (Water)
Mineral	City of Keyser Water Department
Mineral	City of Piedmont Municipal Water Department
Mineral	Town of Ridgeley (Water Department)
Pendleton	Franklin Municipal Water Department
Hampshire	P & P Enterprises Utilities, LLC
Mineral	Lakewood Utilities, Inc.
Mineral	Mountain View Water System LLC
Hardy	Hardy County Rural Development Authority
Mineral	New Creek Water Association, Inc.

Source: Public Service Commission of West Virginia

### 1.2.8 Jurisdictional Capabilities

The counties and municipalities within Region 8 PDC have a number of capabilities that can support mitigation efforts including comprehensive plans, building codes, subdivision and land use ordinances, zoning ordinances, and floodplain regulations. The



PDC's consultant worked with steering committee members to complete a "capabilities assessment." Steering committee members answered questions about the following plans, codes, and ordinances from the perspectives of their home jurisdictions.

- **Comprehensive Plans:** Comprehensive plans promote sound land use and regional cooperation among local governments to address planning issues. These plans serve as the official policy guide for influencing the location, type, and extent of future development by establishing the basic decision-making and review processes on zoning matters, subdivision and land development, land uses, public facilities, and housing needs over time.
- **Building Codes:** Building codes regulate construction standards for new construction and substantially renovated buildings. Standards can be adopted that require resistant or resilient building design practices to address hazard impacts common to a given community.
- **Subdivision and Land Use Development Ordinances:** Subdivision and land development ordinances (SALDOs) are intended to regulate the development of housing, commercial, industrial or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Within these ordinances, guidelines on how land will be divided, the placement and size of roads and the location of infrastructure can reduce exposure of development to hazard events.
- **Zoning Ordinances:** Zoning ordinances allow for local communities to regulate the use of land in order to protect the interests and safety of the general public. Zoning ordinances can address unique conditions or concerns within a given community. They may be used to create buffers between structures and high-risk areas, limit the type or density of development and/or require land development to consider specific hazard vulnerabilities.
- **National Flood Insurance Program (NFIP) Participation and Floodplain Management Ordinances:** Through administration of floodplain ordinances, municipalities can ensure that all new construction or substantial improvements to existing structures located in the floodplain are flood-proofed, dry-proofed, or built above anticipated flood elevations. Floodplain ordinances may also prohibit development in certain areas altogether. The National Flood Insurance Program (NFIP) establishes minimum ordinance requirements which must be met in order for

that community to participate in the program. However, a community is permitted and encouraged to adopt standards which exceed NFIP requirements.

**TABLE 1.2.8.A JURISDICTIONAL CAPABILITIES**

<i>Jurisdiction</i>	<i>Comprehensive Plan</i>	<i>Building Codes</i>	<i>Participate in NFIP</i>	<i>Subdivision or Land Use Ordinance</i>	<i>Zoning Ordinance</i>	<i>Capital Budget Funds for Mitigation Projects</i>	<i>Public Works Budget for Mitigation projects</i>
Grant County	YES	NO	YES*	YES	NO	NO	NO
Hampshire County	YES	YES	YES*	YES	NO	NO	NO †
Hardy County	YES	NO	YES	YES	YES	NO	NO
Mineral County	YES	NO	YES	YES	NO	NO †	NO †
Pendleton County	NO	NO	YES*	NO	NO	NO	NO
Bayard, Town of	NO	YES	YES*	NO	NO	NO †	NO †
Franklin, Town of	YES	YES	YES*	NO	NO	NO †	NO †
Keyser, City of	NO	NO	YES	NO	NO	NO	NO
Moorefield, City of	YES	YES	YES*	YES	YES	NO †	YES
Piedmont, City of	NO	YES	YES	NO	NO	NO	NO
Romney, City of	NO	NO	YES	NO	YES	NO †	NO †
Wardensville, Town of	YES	NO	YES	YES	YES	NO †	NO †

\* Exceeds the minimum standards of NFIP Requirements  
† No, but willing to consider for future projects

**Administrative and Technical Capability**

Administrative capability is described by an adequacy of departmental and personnel resources for the implementation of mitigation-related activities. Technical capability relates to an adequacy of knowledge and technical expertise of local government employees or the ability to contract outside resources for this expertise to effectively execute mitigation activities. Common examples of skill sets and technical personnel for hazard mitigation include planners with knowledge of land development/management practices, engineers or professionals trained in construction practices related to buildings and/or infrastructure (e.g., building inspectors), planners or engineers with an understanding of natural and/or human caused hazards, emergency managers, floodplain managers, land surveyors, scientists familiar with hazards in the community, staff with the education or expertise to assess community vulnerability to hazards, personnel skilled in geographic information systems, resource development staff or grant writers, and fiscal staff to handle complex grant application processes.



### Fiscal Capability

The decision and capacity to implement mitigation-related activities is often strongly dependent on the presence of local financial resources. While some mitigation actions are less costly than others, it is important that money is available locally to implement policies and projects. Financial resources are particularly important if communities are trying to take advantage of state or federal mitigation grant funding opportunities that require local-match contributions. Federal programs which may provide financial support for mitigation activities include, but are not limited to:

- Community Development Block Grant (CDBG),
- Disaster Housing Program,
- Emergency Conservation Program,
- Emergency Management Performance Grants (EMPG),
- Emergency Watershed Protection Program,
- Hazard Mitigation Grant Program (HMGP),
- Flood Mitigation Assistance Program,
- Non-Insured Crop Disaster Assistance Program,
- Pre-Disaster Mitigation Program,
- Repetitive Flood Claims Program (RFC),
- Section 108 Loan Guarantee Programs,
- Severe Repetitive Loss (SRL) Program, and
- Weatherization Assistance Program.

### Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to mitigate hazard events. The adoption of hazard mitigation measures may be seen as an impediment to growth and economic development. In many cases, mitigation may not generate interest among local officials when compared with competing priorities. Therefore, the local political climate must be considered when designing mitigation strategies, as it could be the most difficult hurdle to overcome in accomplishing the adoption or implementation of specific actions.

Self-Assessment

Representing the largest jurisdictions in Region 8, committee members completed a self-assessment for their jurisdictions to serve as representative capabilities within the region to effectively implement hazard mitigation activities. As part of this process, the Region 8 consultant encouraged members to consider barriers to implementing proposed mitigation strategies in addition to the mechanisms that could enhance or further such strategies. In response to the survey questionnaire, local officials classified each of the capabilities as either “limited,” “moderate,” or “high.” [Table 1.2.8.B](#) summarizes the results of the self-assessment survey as a percentage of the eight responses received.

TABLE 1.2.8.B CAPABILITY SELF-ASSESSMENT			
Capability	High	Moderate	Limited
Planning & Regulatory	14.29%	57.14%	28.57%
Administrative & Technical	14.29%	42.86%	42.86%
Fiscal	0%	28.57%	71.43%
Political	0%	71.43%	28.47%

The 2017 self-assessment also included four questions to gauge community receptiveness to several types of mitigation strategies. [Table 1.2.8.C](#) details the results.

TABLE 1.2.8.C SELF-ASSESSMENT: PROJECT CONSIDERATIONS					
Sample Mitigation Strategy	Very Willing	Willing	Neutral	Unwilling	Very Much Unwilling
XYZ community guides development away from known hazard areas.	21.43%	42.86%	21.43%	14.29%	0%
XYZ community restricts public investments or capital improvements within hazard areas.	7.14%	50%	28.57%	14.29%	0%
XYZ community enforces local development standards (e.g., building codes, floodplain management ordinances, etc.) that go beyond minimum state or federal requirements.	14.29%	27.14%	21.43%	7.14%	0%
XYZ community offers financial incentives (e.g., through property tax credits) to individuals and businesses that employ resilient construction techniques (e.g., voluntarily elevate structures, employ landscape designs that establish buffers, install green infrastructure elements, etc.).	7.14%	28.57%	42.86%	21.43%	0%

**1.2.9 Disaster Declarations**

When a hazard incident occurs in a state, and the capabilities exceed those of the state, after the preliminary damage assessment, the Governor can request that the President declare an emergency or a disaster.



- **Emergency Declarations:** The President can declare an emergency for any occasion or instance when the President determines federal assistance is needed. Emergency declarations supplement State and local or Indian tribal government efforts in providing emergency services, such as the protection of lives, property, public health, and safety, or to lessen or avert the threat of a catastrophe in any part of the United States. The total amount of assistance provided for in a single emergency may not exceed \$5 million. The President shall report to Congress if this amount is exceeded.
- **Major Disaster Declarations:** The President can declare a major disaster for any natural event, including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought, or, regardless of cause, fire, flood, or explosion, that the President determines has caused damage of such severity that it is beyond the combined capabilities of state and local governments to respond. A major disaster declaration provides a wide range of federal assistance programs for individuals and public infrastructure, including funds for both emergency and permanent work. Assistance available under a major disaster declaration includes individual, public, and hazard mitigation.

West Virginia is no stranger to emergency and disaster declarations. The majority of the declarations that the state has had are due to severe storms and flooding. The table below outlines the declarations in Region 8 counties alone since 2007.

<b>TABLE 1.2.9.A DECLARATIONS IN REGION 8 SINCE 2007</b>				
<i>Declaration Number</i>	<i>Event Type</i>	<i>Counties Affected</i>	<i>Dates of Event</i>	<i>Public Assistance</i>
DR-4093	Hurricane Sandy	Pendleton	October 29, 2012 - November 8, 2012	\$9.75 per capita
DR-4071	Severe Storms and Straight-Line Winds	Grant Hardy Pendleton	June 29, 2012 - July 8, 2012	\$11,718,720.76 per event
EM-3345	Severe Storms	Grant Hampshire Hardy Mineral Pendleton	June 29, 2012 - July 10, 2012	N/A
DR-1903	Severe Winter Storms and Snowstorms	Grant Hampshire Hardy Mineral	February 5, 2010 - February 11, 2010	\$3,302,658.43 per event

<b>TABLE 1.2.9.A DECLARATIONS IN REGION 8 SINCE 2007</b>				
<i>Declaration Number</i>	<i>Event Type</i>	<i>Counties Affected</i>	<i>Dates of Event</i>	<i>Public Assistance</i>
DR-1881	Severe Winter Storm and Snowstorm	Pendleton	December 18, 2009 - December 20, 2009	\$3.66 per capita
DR-1696	Severe Storms, Flooding, Landslides, and Mudslides	Grant Hardy Pendleton	April 14, 2007 - April 18, 2007	\$6,708,634.83 per event

On June 3, 2018, West Virginia Governor declared a state of emergency for all Region 8 PDC counties due to heavy rainfall that caused significant flooding.