



# REGION 8 PLANNING & DEVELOPMENT COUNCIL

Multi-Jurisdictional  
Hazard Mitigation Plan

**REGION 8 PLANNING AND DEVELOPMENT COUNCIL**  
**HAZARD MITIGATION PLAN**  
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# **SECTION 1.0**

# **INTRODUCTION**

Section 1.0 provides introductory material for the regional Hazard Mitigation Plan (HMP). This section presents an overall purpose statement, documents the process used to develop the plan, and describes the planning area in detail.

## 1.1 PURPOSE STATEMENT

This multi-jurisdictional hazard mitigation 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 (CFR) under Title 44: Emergency Services, Part 201.6. The West Virginia Division of Homeland Security and Emergency Management (WVDHSEM) further monitored the planning process. Funding for the project was distributed by the WVDHSEM under the Pre-Disaster Mitigation (PDM) program.

The Region 8 Planning & Development Council (PDC) acted as the lead agency for the completion of this plan. Originally, the PDC assisted its member governments in completing HMP requirements circa 2003. Later, between 2007 and 2009, the PDC assisted these same member governments with updates to their plans. Finally, to consolidate the plans and ensure a level of consistency between the counties, the PDC contracted the creation of this document out; it was completed between March, 2011, and October, 2011.

The *Region 8 Multi-Jurisdictional Hazard Mitigation Plan* is considered “multi-jurisdictional” for several reasons. In addition to the five (5) county governing bodies, all 12 municipal member governments participated in the data compilation and action plan development through the efforts of individual county offices of emergency management and the PDC. All municipalities are represented by at least one (1) project in the action plan. Further, all government entities in Region 8 formally adopted the plan by resolution.

It is significant to note that this document mimics the all-hazards approach that the local emergency management community takes as part of its regular operation. Such a decision was considered prudent because county-level emergency management offices throughout Region 8 are the ones charged with the maintenance and implementation (at a coordinating level) of many of the strategies listed in this plan. As such, this document assumes that the responsibility for mitigation activities rests with the

lowest affected jurisdictional level, which is also consistent with the National Incident Management System (NIMS).

A number of documents were utilized as resources throughout the development of the Hazard Mitigation Plan (HMP). References to these documents are, at times, direct and cited; other references are indirect and implied. This paragraph serves to formally recognize these documents.

- *Grant County Multi-Jurisdictional Hazard Mitigation Plan*
- *Hampshire County Multi-Jurisdictional Hazard Mitigation Plan*
- *Hampshire County Emergency Operations Plan*
- *Hardy County Multi-Jurisdictional Hazard Mitigation Plan*
- *Mineral County Multi-Jurisdictional Hazard Mitigation Plan*
- *Mineral County Emergency Operations Plan*
- *Region 8 Regional Development Plan Update, Comprehensive Economic Development Strategy (CEDS) 2010 Annual Report*
- *Pendleton County Multi-Jurisdictional Hazard Mitigation Plan*
- *Pendleton County Emergency Operations Plan*
- *Pendleton County Commodity Flow Study*

#### Organization of the Plan

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

- **Section 1.0: Introduction:** Describes the process used to develop the plan as well as profiles the planning area.
- **Section 2.0: Risk Assessment:** Identifies and profiles the hazard risks most probable throughout the region. This section also analyzes the regional implications of the risks (i.e., how does an occurrence of a hazard in one county affect the neighboring county). \*NOTE: Hazard profiles contain averaged loss estimates. Such estimates are based on the county-specific loss estimates (and asset inventories), which are developed and maintained separately by individual jurisdictions.
- **Section 3.0: Mitigation Strategy:** Identifies mitigation projects to be undertaken by the member governments in the region. Again, the regional implications of implementing these projects are examined.

- **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.

## 1.2 DOCUMENTATION OF THE PLANNING PROCESS

§201.6(b) and 201.6(c)(1)	<p>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:</p> <ol style="list-style-type: none"><li>(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;</li><li>(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</li><li>(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.</li></ol> <p>[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.</p>
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To guide the completion of this plan, a multi-jurisdictional core planning team was established. This team was comprised of key officials with a stake in mitigation, and included a county commission representative from each county, the mayor of each municipality, the emergency manager from each county, and a public representative from each county.

### PLANNING PROCESS – CREATION OF THE REGIONAL DOCUMENT

As mentioned in Section 1.1 above, this document represents the third step in the evolution of the hazard mitigation plan. It is 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. This document represents a new direction for mitigation planning throughout Region 8.

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 not attended by anyone from 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. Further, the PDC posted the updated document and the comment form on its website.

## PLANNING PROCESS – PREVIOUS PLAN DEVELOPMENT AND UPDATES (BY COUNTY)

The remainder of Section 1.2 presents the planning processes used by both the PDC and the individual counties to both develop and update their HMPs between 2003 and 2011.

### Grant County

#### FIRST UPDATE

In February of 2009, the Grant County Office of Emergency Services (GCOES) was advised by the Federal Emergency Management Agency (FEMA) to revise the plan and then seek adoption by the County of Grant, City of Petersburg, and Town of Bayard after a proper public review and comment period. A copy of the updated version was placed for at the Grant County Library for public review prior to formal adoption. Notice of all meetings was advertised in the *Grant County Press*. Documentation was included in the update.

The revised plan covered Grant County and the towns of Petersburg and Bayard. All jurisdictions participated in the update. Meetings were held in March, 2009. A number of corrections were made and highlighted in the original document. Many of these dealt with changes in personnel.

The newspaper advertisements also allowed the opportunity for neighboring communities and others interested parties to participate and/or comment. A local mitigation plan “workshop” sponsored by the West Virginia Division of Homeland Security and Emergency Management (WVDHSEM) on February 24, 2009, in Roanoke, West Virginia provided many opportunities for surrounding and neighboring counties to comment (since they all attended the same workshop).

#### ORIGINAL PLAN DEVELOPMENT

The *Grant County Hazard Mitigation Plan* was developed by the plan

committee with the assistance of the Region 8 PDC. In the Fall of 2002, the Town of Bayard, the City of Petersburg, and the Grant County Commission executed letters of agreement recognizing the Region 8 PDC as the lead agency in the development of the county's Hazard Mitigation Plan (HMP). Initial development began on a regional basis and then the Grant County plan committee with assistance of the Region 8 PDC continued development on a local level.

The "Grant County Hazard Mitigation Plan Committee" consisted of the following representatives:

- Sarah Moomau, the City of Petersburg
- Alvin Rumer, the City of Petersburg
- Steve Durst, the Town of Bayard
- Peggy Bobo Alt, GCOES
- Bob Livingston, Grant Co. Health Department, Grant Co. Floodplain Manager

Throughout the development of the plan, several committee meetings were held, including a special meeting with the City of Petersburg and the Town of Bayard. A total of five (5) committee members were actively involved in the development of the plan. In addition to the state and regional meetings, the county held five (5) committee meetings and two (2) public meetings. The County Commission and municipalities held a countywide public meeting to seek input for the draft plan. Even though the meeting was properly advertised, there were no members of the general public in attendance at the meeting. The county held a second public hearing to present the final plan and receive comments on the plan from the public. Additionally, the plan was made available to the public for review for a minimum of 15 days.

The county also held a meeting on May 15, 2003 to allow comments on the draft from other interested agencies. The county invited agencies such as the West Virginia Development Office (WVDO), the West Virginia Division of Highways (WVDOT), the Grant County Health Department, the Board of Education, West Virginia University (WVU) Extension Service, Natural Resources Conservation Service (NRCS), local fire departments, and any other agencies recommended by the plan committee. Representatives from the WVDO presented information to the attendees on the various programs offered through the development office and some suggestions of programs where the county's mitigation strategies may qualify for funding.

Additionally, the committee identified other plans to be reviewed and included as an essential part of the county's HMP. These plans included the State Office of Emergency Services (OES) Manual, the West Virginia Emergency Response Plan, and the Local Emergency Planning Committee (LEPC) plan.

### Timeline

<u>Event</u>	<u>Completion Date</u>
• Execute Letters of Agreement	8/29/02
• Organize Resources	9/16/02
• Risk Assessment Phase Due	11/29/02
• Draft Mitigation Plan Due	3/29/03
• Hazard Mitigation Plan Complete	7/29/03

### Hampshire County

#### FIRST UPDATE

The *Hampshire County Hazard Mitigation Plan* was formally updated in the spring/summer of 2009. The Hampshire County Office of Emergency Management hired a contractor, JH Consulting, LLC of Buckhannon, to assist with the update.

On April 23, 2009, a Hazard Mitigation Committee (HMC) meeting was scheduled at 1:00 p.m. at the Hampshire County Courthouse. (The HMC was comprised of many members of the LEPC.) The meeting was well attended. The primary topics of conversation were to (1) update the hazard list, (2) add hazard occurrences, (3) update project status, and (4) add new mitigation projects.

Also, at 3:00 p.m. on April 23rd, the county held a public meeting to review the newly revised project list and updated hazard list as part of its regularly-scheduled LEPC meeting. (LEPC meetings are normally advertised and open to the public.) The public portion of the meeting was poorly attended; only LEPC members were in attendance.

#### ORIGINAL PLAN DEVELOPMENT

The *Hampshire County Hazard Mitigation Plan* was developed by the plan committee with the assistance of the Region 8 Planning and Development Council. In the fall of 2002, the Town of Capon Bridge, the City of Romney and the Hampshire County Commission executed letters of agreement recognizing the Region 8 PDC as

the lead agency in the development of the County's Hazard Mitigation Plan. Initial development began on a regional basis and then the Hampshire County plan committee with assistance of the Region 8 PDC continued development on a local level.

### **Timeline**

<u>Event</u>	<u>Completion Date</u>
• Execute Letters of Agreement	8/29/02
• Organize Resources	9/16/02
• Risk Assessment Phase Due	11/29/02
• Draft Mitigation Plan Due	3/29/03
• Hazard Mitigation Plan Complete	7/29/03

Throughout the development of the plan, several committee meetings were held. A total of six committee members were actively involved in the development of the plan. In addition to the state and regional meetings, the county held five committee meetings and two public meetings. The County Commission and municipalities held a countywide public meeting to seek input for the draft plan. The meeting was advertised in the local paper and some members of the general public were in attendance. The County held another meeting prior to submission of the final draft to again allow the public to make comments on the plan.

The County also held a meeting on June 4, 2003 to allow comments on the draft from other interested agencies. The County invited agencies such as the WVDO, the WVDOH, the Hampshire County Health Department, the Board of Education, WVU Extension Service, NRCS, local fire departments, and any other agencies recommended by the plan committee. Representatives from the WVDO presented information to the attendees on the various programs offered through the development office and some suggestions of programs where the county's mitigation strategies may qualify for funding.

Further, the committee identified other plans to be reviewed and included as an essential part of the county's HMP. These plans included the State OES Manual, the WV Emergency Response Plan, the County Emergency Operations Plan, the County Health Department Plan and Maryland Emergency Management Agency's Dam Failure Plans.

### Hardy County

The *Hardy County Hazard Mitigation Plan* was developed by the plan committee with the assistance of the Region 8 PDC. In August 2002, the Towns of Moorefield and Wardensville and the Hardy County Commission executed letters of agreement recognizing the Region 8 PDC as the lead agency in the development of the county's HMP. Initial development began on a regional basis and then the Hardy County plan committee with assistance of the Region 8 PDC continued development on a local level.

The "Hardy County Hazard Mitigation Plan Committee" consisted of representatives from each municipality, the County Commission, and the County Planning Commission. Throughout the development of the plan, several committee meetings were held. A total of six (6) committee members were actively involved in the development of the plan. In addition to the state and regional meetings, the county held six (6) committee meetings and two (2) public meetings. The County Commission and municipalities held a countywide public meeting to seek input for the plan before submitting the draft for review by the FEMA. Even though the meeting was properly advertised, there were no members of the general public in attendance. Unfavorable travel conditions may have affected meeting attendance. The county held a second public meeting on August 21, 2003, to present the final plan and receive comments on the plan from the public. The meeting was properly advertised and the plan was made available to the public for review.

The county also held a meeting on May 22, 2003, to allow comments on the draft from other interested agencies. The county invited agencies such as the WVDO, the WVDOH, the Hardy County Health Department, the Board of Education, WVU Extension Service, NRCS, local fire departments, and any other agencies recommended by the plan committee. Additionally, the WVDO supplied information on the various programs offered through the office and the information was made available to attendees.

Additionally, the committee identified other plans to be reviewed and included as an essential part of the county's HMP. These plans included the State OES Manual, the West Virginia Emergency Response Plan, and the LEPC plan.

## Timeline

<u>Event</u>	<u>Completion Date</u>
• Execute Letters of Agreement	8/29/02
• Organize Resources	9/16/02
• Risk Assessment Phase Due	11/29/02
• Draft Mitigation Plan Due	3/29/03
• Hazard Mitigation Plan Complete	7/29/03

### Mineral County

The *Mineral County Hazard Mitigation Plan* was developed by the plan committee with the assistance of the Region 8 PDC. In 2002, the City of Piedmont, the Town of Carpendale, the Town of Ridgeley, the Town of Elk Garden, and the Mineral County Commission executed letters of agreement recognizing the Region 8 PDC as the lead agency in the development of the county's HMP. Initial development began on a regional basis and then the Mineral County plan committee with assistance of the Region 8 PDC continued development on a local level.

The "Mineral County Hazard Mitigation Plan Committee" consisted of the following representatives:

- Janice LaRue, Mineral County Commission
- Mike Bland, Mineral County Coordinator
- Butch Armentrout, Town of Carpendale
- Dennis McGann, Mineral County OES
- Robert Swink, Town of Elk Garden
- Chuck Dawson, City of Piedmont
- Mitchell Reeves, Town of Ridgeley
- Charlie Baker, Mineral County Planner
- Marques Rice, City of Keyser, Fire & Rescue Representative

Several committee meetings were held throughout the development of the plan. A total of nine (9) committee members were actively involved in the development of the plan. In addition to the state and regional meetings, the county held six (6) committee meetings and two (2) public meetings. The County Commission and municipalities held a countywide public meeting to seek input for

the plan. Minutes from the meeting are also attached. The county held a second public meeting to receive comments on the plan after the plan was placed for public review.

Additionally, the county held a meeting on May 23, 2003, to allow comments on the draft from other interested agencies. The county invited agencies such as the WVDO, the WVDOH, the Mineral County Health Department, the Board of Education, WVU Extension Service, NRCS, FEMA, the WVDHSEM, and other agencies recommended by the plan committee.

Additionally, the committee identified other plans to be reviewed and included as an essential part of the County's Hazard Mitigation Plan. These plans included the State OES Manual, the West Virginia Emergency Response Plan, and the LEPC plan.

### **Timeline**

<u>Event</u>	<u>Completion Date</u>
• Execute Letters of Agreement	8/29/02
• Organize Resources	9/16/02
• Risk Assessment Phase Due	11/29/02
• Draft Mitigation Plan Due	3/29/03
• Hazard Mitigation Plan Complete	7/29/03

### Pendleton County

#### FIRST UPDATE

At the direction of the Pendleton County Office of Emergency Management (PCOEM) and the Town of Franklin, Pendleton County developed and conducted the first update to the county's HMP in a continuing effort to indicate probable hazard risks, profile future hazard events, estimate damage and losses as a result of future hazard events, and advocate mitigation projects to reduce the effects of the identified hazards on the communities within the county. The plan's aim is to create safer, more disaster-resistant communities. The *Pendleton County Hazard Mitigation Plan* was developed by the planning committee with the assistance of the County Commission and Town of Franklin.

The following plans were integrated into Pendleton County's HMP: the *Pendleton County Hazards Mitigation Plan*, *Pendleton County Emergency*

*Operations Plan* (2009), and the *Pendleton County Continuity of Operations Plan*. This HMP will be utilized to assist in developing of future land use planning in Pendleton County as well as all other emergency planning efforts.

The planning process utilized in Pendleton County was based on the Section 322 local planning requirements of the Disaster Mitigation Act of 2000 and supporting guidance documents developed by the FEMA and the WVDHSEM.

### **Timeline**

<u>Event</u>	<u>Completion Date</u>
• Organize Planning Resources	1/22/2008
• Public Meeting	2/27/2008
• Risk Assessment	3/20//2008
• Mitigation Strategy	4/17/2008
• Plan Maintenance	5/28/2008
• Draft Mitigation Plan Due	7/31//2008
• Public Meeting	8/27/2008
• Execute Letter of Agreement	9/2//2008
• Hazard Mitigation Plan Complete	9/31/09

The “Pendleton County Hazard Mitigation Planning Committee” consisted of representatives from the Town of Franklin, the Pendleton County Commissioners (Commissioner/Carl Heavener serving as Hazard Mitigation Officer), the Pendleton County LEPC members, PCOEM Director, collaborative agencies, and members of the general public. Throughout the development of the plan, committee meetings were held to give opportunity to comment on the plan during the draft development stage. A total of 15 committee members were actively involved in developing the plan.

On February 27, 2008, the Pendleton County LEPC held a countywide public meeting to give those interested an opportunity to comment on the plan during the drafting development stages. A newsletter article was submitted to the *Pendleton Times* newspaper which ran for two (2) weeks. Also, numerous emails were sent out to residents, businesses, and other interested parties.

The Pendleton County Health Department held a Pandemic Flu Planning Committee meeting on May 1, 2008. At that time, agencies were asked to bring

disaster plans. The HMP was made available for review by everyone attending. There were no added comments.

On August 27, 2008, the Pendleton County LEPC held the final draft review public meeting, in conjunction with the LEPC meeting. There were 12 participants that reviewed the plan and it was suggested that the plan be review throughout the year at LEPC meeting. The LEPC meets four (4) times a year: November, February, May, and August. A subcommittee of eight (8) was appointed to do an evaluation of the plan twice a year (in November and May).

#### ORIGINAL PLAN DEVELOPMENT

The Pendleton County Hazard Mitigation Plan was developed by the plan committee with the assistance of the Region 8 PDC. In August 2002, the Town of Franklin and Pendleton County Commission executed letters of agreement recognizing the Region 8 PDC as the lead agency in the development of the county's HMP. Initial development began on a regional basis and then the Pendleton County plan committee with assistance of the Region 8 PDC continued development on a local level.

The "Pendleton County Hazard Mitigation Plan Committee" consisted of representatives from the Town of Franklin, the County Commission, the LEPC, and the PCOEM. Throughout the development of the plan, several committee meetings were held. A total of four (4) committee members were actively involved in the development of the plan. In addition to the state and regional meetings, the county held six (6) committee meetings and one (1) public meeting.

The Pendleton County Commission and the Town of Franklin held a countywide public meeting to seek input for the plan. Even though the meeting was properly advertised, there were no members of the general public in attendance at the meeting. The county held another meeting in September to present the draft plan and receive comments on the plan from the public. The county also held a meeting on May 16, 2003 to allow comments on the draft from other interested agencies. The county invited agencies such as the WVDO, the WVDOH, the Pendleton County Health Department, the Board of Education, WVU Extension Service, NRCS, local fire departments, and any other agencies recommended by the plan committee. Representatives from the WVDO presented information to the attendees on the various programs offered through the development office and some suggestions of

programs where the county's mitigation strategies may qualify for funding.

Additionally, the committee identified other plans to be reviewed and included as an essential part of the county's HMP. These plans included the State OES Manual, the West Virginia Emergency Response Plan, and the LEPC.

### **Timeline**

<u>Event</u>	<u>Completion Date</u>
• Execute Letters of Agreement	8/29/02
• Organize Resources	9/16/02
• Risk Assessment Phase Due	11/29/02
• Draft Mitigation Plan Due	3/29/03
• Hazard Mitigation Plan Complete	7/29/03

## 1.3 REGION PROFILE

Region 8 Planning & Development Council (PDC) is comprised of a total of 17 member governments, five (5) of which are counties and 12 of which are municipalities. Table 1.3.1 lists the member governments.

**Table 1.3.1**

NAME	TYPE	COUNTY
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

### Transportation

The transportation network of the Region 8 area includes four (4)-lane, divided highways, two (2)-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 transportation routes through Region 8 are as follows:

- Corridor H
- US Route 33
- US Route 50
- US Route 220

Secondary routes are as follows:

- State Route 28
- State Route 46
- State Route 55
- State Route 93
- State Route 259

Corridor H is a four (4)-lane divided highway that is currently under construction. Sections between Moorefield and Baker and Wardensville and the Virginia line have been constructed; the remainder of the route is either under construction or being designed. 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 (2)-lane highways; they are, however, somewhat more rural than the routes listed as “primary”.

### Economy

In all five (5) counties, the economy (i.e., local work force) is driven by government and the trade, transportation, and utilities industries. Other industries with significant work forces vary considerably from county to county. For example, Hardy County’s manufacturing work force is high on account of the Pilgrim’s Pride plant in Moorefield. Mineral County’s manufacturing numbers are higher on account of the timber industry. The other most common industry in the remaining counties is “education and health services” (which ranks fourth in both Hardy and Mineral Counties). Table 1.3.2 shows the top four (4) industries in each county, with the number of individuals employed by each.

**Table 1.3.2**

<b>Top Industries by Jurisdiction</b>				
<i>County</i>	<i>INDUSTRY 1 Name (#)</i>	<i>INDUSTRY 2 Name (#)</i>	<i>INDUSTRY 3 Name (#)</i>	<i>INDUSTRY 4 Name (#)</i>
Grant	Government (992)	Trade, Transportation, Utilities (784)	Education & Health Services (456)	Manufacturing (310)
Hampshire	Government (1,422)	Education & Health Services (644)	Trade, Transportation, Utilities (616)	Leisure & Hospitality (391)
Hardy	Manufacturing (2,741)	Government (815)	Trade, Transportation, Utilities (760)	Education & Health Services (481)
Mineral	Manufacturing (1,919)	Government (1,593)	Trade, Transportation, Utilities (1,347)	Education & Health Services (1,061)
Pendleton	Government (475)	Trade, Transportation, Utilities (337)	Education & Health Services (277)	Leisure & Hospitality (110)

Source: WVBEF

Figures 1.3.1 through 1.3.5 depict the non-farm employment in each county as of August, 2011.

**Figure 1.3.1 – Grant County**

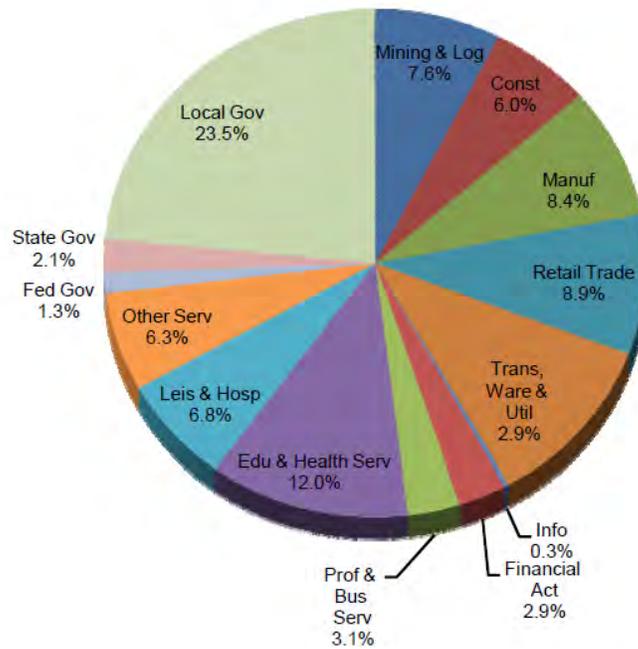


Figure 1.3.2 – Hampshire County

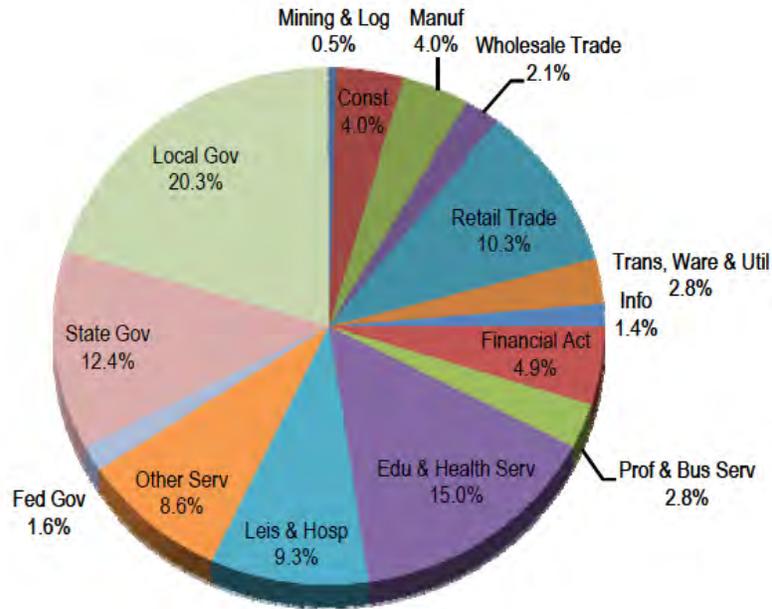


Figure 1.3.3 – Hardy County

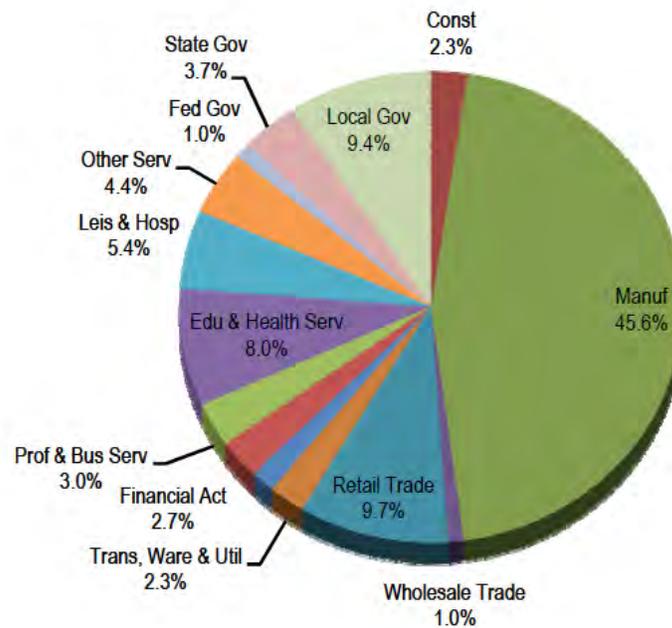


Figure 1.3.4 – Mineral County

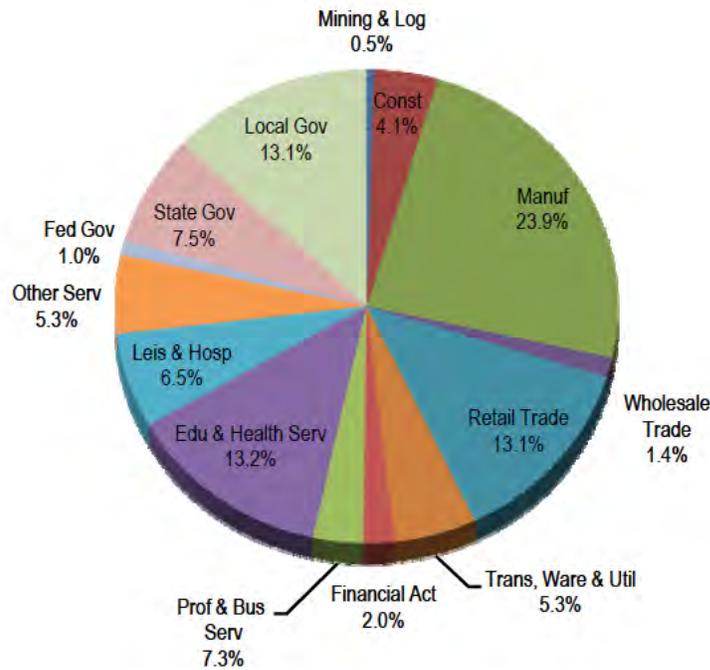
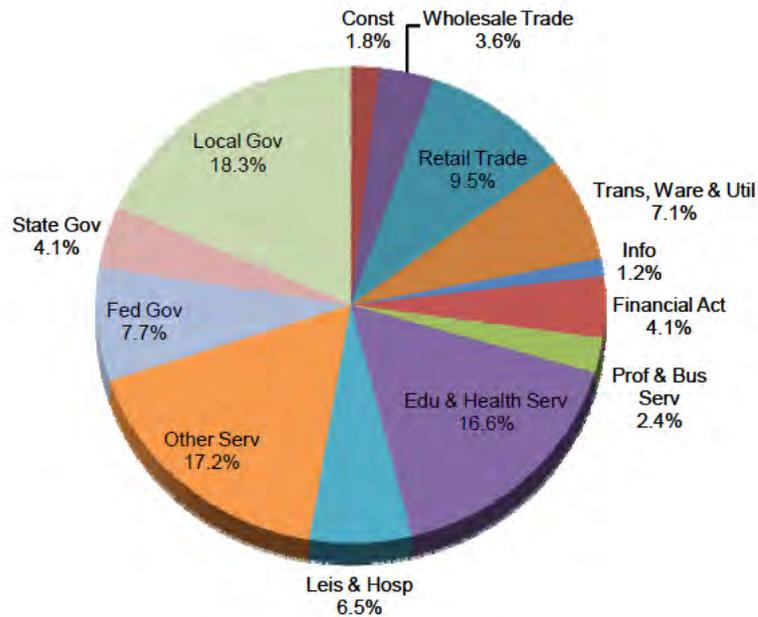


Figure 1.3.5 – Pendleton County



All five (5) counties have available space for development, primarily commercial/business but also some space for industrial development. All five (5) counties employ Economic Development Authorities (EDAs) that work to bring development and jobs to the counties. The top employers, by jurisdiction, are as follows (*Source: WV Bureau of Employment Programs*).

- Grant County
  - Grant Memorial Hospital
  - Grant County Board of Education
  - Virginia Electric and Power Company
  - Mettiki Coal (WV), LLC
  - Grant County Nursing Home
  
- Hampshire County
  - Hampshire County Board of Education
  - West Virginia Schools for the Deaf and the Blind
  - Valley Health System
  - Potomac Comprehensive Diagnostic Guidance Center
  - Hampshire County Committee on Aging
  
- Hardy County
  - Pilgrim's Pride Corporation of West Virginia
  - American Woodmark Corporation
  - Hardy County Board of Education
  - Wal-Mart Associates, Inc.
  - Easter WV Community & Technical College
  
- Mineral County
  - Alliant Techsystems, Inc.
  - Mineral County Board of Education
  - Wal-Mart Stores, Inc.
  - West Virginia University
  - IBM Corporation

- Pendleton County
  - Pendleton County Board of Education
  - Pendleton Manor, Inc.
  - Department of Defense
  - Greer Industries, Inc.
  - Hinkle Trucking, Inc.

Additionally, the Region 8 area sees a high percentage of its workforce work in other states, which is not surprising considering the region borders both Maryland and Virginia. Further, its northern portions are considered the outlying portions of the National Capital Region (NCR). According to the 2000 Census, the following estimated numbers of workers commute to another state for employment.

- **Grant County:** 475
- **Hampshire County:** 3,849
- **Hardy County:** 1,320
- **Mineral County:** 5,362
- **Pendleton County:** 818

## DEMOGRAPHICS

Demographic data has been consolidated based on Census data from each of the counties unless otherwise noted.

### Population

The population of the area represented by the Region 8 PDC is 85,833 according to 2010 Census data. A breakdown by counties is shown in Figure 1.3.6 (Source: US Census Bureau). Generally speaking, the majority of the population is located in the eastern portion of the region. Such a figure could be expected given the presence of such larger municipal areas as Cumberland (MD) and Winchester (VA) as well as this area's designation as part of the NCR. Additionally,

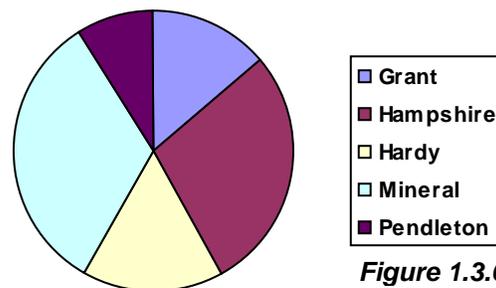


Figure 1.3.6

the western and southern counties of Grant and Pendleton are slightly more mountainous than the remaining three (3) counties. Approximately 61% (52,176 residents) of the region's population resides in its two (2) easternmost counties (i.e., Hampshire and Mineral Counties).

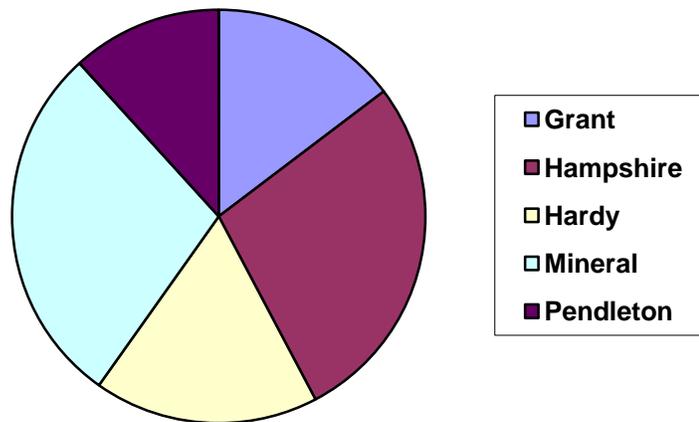
Nearly 20% of the population in the region lives within a municipality (approximately 16,849 residents). Many of the municipalities lie along the arterial transportation routes of the region: US 33, 50, and 220.

### Housing

As with population, it is not surprising to see that counties with a more robust transportation infrastructure have a higher number of housing units. What is also interesting to note is that the majority of these housing units are along the major transportation routes throughout the region. There are over 46,000 housing units in the region. On average, 77.2% of residents in the region own their own homes. (The average median value of housing is \$114,180.)

Figure 1.3.7 shows the distribution of housing across the region. Table 1.3.3 provides a more detailed overview of the housing characteristics in each one of the counties (Source: US Census Bureau).

**Figure 1.3.7**



**Table 1.3.3**

<b>Housing Characteristics in Region 8 Counties</b>					
<i>Demographic</i>	<i>Grant</i>	<i>Hampshire</i>	<i>Hardy</i>	<i>Mineral</i>	<i>Pendleton</i>
Housing Units	6,793	12,786	8,131	13,182	5,438
Owner Occupied	5,475	9,526	6,472	10,137	4,138
Renter Occupied	1,318	3,260	1,659	3,045	1,300
Ownership Rate	80.6%	74.5%	79.6%	76.9%	76.1%
Median Value	\$99,600	\$132,300	\$125,500	\$108,600	\$104,900

## UTILITIES

Utilities are provided by many different companies. Infrastructure provider breakdowns are as follows.

- Grant County
  - **Electricity:** Potomac Edison
  - **Natural Gas:** Petersburg Oil, Columbia Gas
  - **Water:** City of Petersburg, Mountain Top Public Service District (PSD), Grant County PSD
  - **Sewer:** City of Petersburg, Mountain Top PSD
  - **Telephone:** Frontier Communications
  - Wireless carriers are AT&T, US Cellular and some Sprint. There are some areas where service is virtually non-existent.
  
- Hampshire County
  - **Electricity:** Potomac Edison
  - **Natural Gas:** Columbia Gas
  - **Water:** Town of Romney, Town of Capon Bridge, Central Hampshire PSD
  - **Sewer:** Town of Romney, Central Hampshire PSD
  - **Telephone:** Frontier Communications
  - Wireless carriers are AT&T, US Cellular and some Sprint. There are some areas where service is virtually non-existent.
  
- Hardy County
  - **Electricity:** Shenandoah Valley Electric Co-Op, Potomac Edison
  - **Natural Gas:** Columbia Gas
  - **Water:** Town of Moorefield, Town of Wardensville, Hardy County PSD
  - **Sewer:** Town of Moorefield, Town of Wardensville, Hardy County PSD

- **Telephone:** Frontier Communications
- Wireless carriers are AT&T, US Cellular and some Sprint. There are some areas where service is virtually non-existent.
  
- Mineral County
  - **Electricity:** Potomac Edison
  - **Natural Gas:** Mountaineer, Columbia Gas
  - **Water:** Town of Keyser, Town of Piedmont, Mountain Top PSD, New Creek PSD, Fountain PSD, Frankfort PSD
  - **Sewer:** Town of Keyser, Town of Piedmont, Frankfort PSD, New Creek PSD, Town of Ridgeley, Town of Elk Garden
  - **Telephone:** Frontier Communications
  - Wireless carriers are AT&T, US Cellular and some Sprint. There are some areas where service is virtually non-existent.
  
- Pendleton County
  - **Electricity:** Mon Power, Potomac Edison
  - **Natural Gas:** Franklin Oil, Valley National Gas, ATCO
  - **Water:** Town of Franklin, Pendleton County PSD
  - **Sewer:** Town of Franklin, Pendleton County PSD
  - **Telephone:** Frontier Communications
  - Wireless carrier is AT&T. There are some areas where service is virtually non-existent.

#### ANALYZING DEVELOPMENT TRENDS: CURRENT AND FUTURE LAND USE

§201.6(c)(2)(ii)(C)

[The plan should describe vulnerability in terms of] providing a general discussion of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

All five (5) counties in the region are largely rural. All counties are located in what is generally considered a mountainous region. As such, the potential for development is somewhat limited. The topography often drives development to flatter areas which are often in or near floodplains. Local floodplain development

regulations carefully balance the needs for economic development and growth in the employment sector with a basic responsibility to buffer potential and existing businesses from the effects of hazards. All counties indicated that the majority of the commercial and industrial development in their counties is located in or near the municipalities. Several development sites have been established along the primary roadways throughout the region.

Recently, the jurisdictions throughout the region have been pursuing a number of infrastructure projects. Examples of recently-completed infrastructure projects include the City of Romney's wastewater improvement project (total cost \$7,500,000), the City of Keyser's water treatment plan (total cost \$9,000,000), and the Town of Franklin's wastewater improvement project (total cost \$5,000,000). All of these projects, while not directly considered a "mitigation" effort, help these jurisdictions maintain self-sufficiency for greater periods of time.

Other projects have been more closely related to mitigation efforts. For example, in 2010, the Town of Bayard (with assistance from the Region 8 PDC) repaired the Buffalo Creek flood control levee at a cost of \$252,677. Bayard is also planning a storm sewers project as part of a flood management initiative. The Grant County Levee Project is another example of an on-going mitigation project. Further, the US Route 220 North/South Corridor project is a transportation infrastructure project that would have region-wide impacts. In Hampshire County, the Town of Romney has been pursuing an emergency generator for its water plant.

Each participating county and a number of municipal jurisdictions are planning various types of projects, ranging from water/sewer to recreation to education to job creation efforts. The Region 8 PDC maintains a list of these projects in its Comprehensive Economic Development Strategy (CEDS). Summaries of these projects are listed in Tables 1.3.4 through 1.3.8 below.

Denser residential development is likely to continue to occur near to municipalities and along roadways. A number of educational projects are planned for the entire region, including the Potomac Highland Early Childhood Center and the Potomac State College Lab Science Building. As a general statement, the PDC has indicated that the primary sites for development are the business parks. Generally, development can be anticipated in the following areas.

- Grant County

**Table 1.3.4**

Targeted Development Areas	Primary Potential Hazard
Grant County Industrial Park	Flooding (in some areas)
Grant Business Park Power Project	N/A
Corridor H	N/A
Deep Spring Water Project	Hazardous Materials
Petersburg Water Plant	Hazardous Materials
Petersburg Sewer Plant Expansion	Hazardous Materials
Grant County Industrial Building	N/A
Mountain Apartments	N/A
Grant County PSD Water Plant	Flooding, Hazardous Materials, Land Subsidence
Union Education Complex Athletic Track and Field	N/A
Grant County Health Facility	N/A

- Hampshire County

**Table 1.3.5**

Targeted Development Areas	Primary Potential Hazard
Romney Sewer Plant Improvement	Flooding, Hazardous Materials
Romney Rail Spur – Station	N/A
Central Hampshire Sewer Upgrade	Land Subsidence
Capon Bridge Water Improvement	Land
WV Broadband Co-Op Fiber Project	Subsidence
Romney Water Plant Emergency Generator	Utility/ Communications
Capon Bridge Sewer Plant	Failure
Springfield Sewer System	Hazardous Materials
Hampshire County Child Care Facility	Flooding, Hazardous Materials
East Hampshire Water	Land
East Hampshire Sewer	Subsidence
West Hampshire Water	Land
	Subsidence

- Hardy County

**Table 1.3.6**

Targeted Development Areas	Primary Potential Hazard
Moorefield Sewer Plant Improvement	Flooding, Hazardous Materials
Hardy County Business Park	N/A
Baker Water Plant and Distribution System	Hazardous Materials
Wardensville Regional Government Services Building	Terrorism
E-Byrd Learning Project	N/A
Stoney Run Watershed	Land Subsidence

- Mineral County

**Table 1.3.7**

Targeted Development Areas	Primary Potential Hazard
Keyser Water System Improvement	Land Subsidence
Potomac State Information Technology Center	N/A
SR 28 Corridor between Wiley Ford and Fort Ashby	N/A
Corridor H	N/A
New Creek Corridor along SR 972 and US 50	N/A
Wiley Ford Airport	N/A
Fort Ashby Business and Technology Park	N/A
Potomac Highlands Airport Industrial Park	N/A
New Creek Sewer System III	Flooding, Land Subsidence
Frankfort District Sewer System Phase 2	Land Subsidence
Keyser CSX Industrial Park	Hazardous Materials
Piedmont Water Improvement	Flooding, Land Subsidence
Frankfort Water Extensions	Land Subsidence

Targeted Development Areas	Primary Potential Hazard
Fountain Water Extensions	Land Subsidence
Barnum Trail Extension	N/A
Piedmont Sewer Improvements	Land Subsidence
Carpendale Water Storage Tank	Hazardous Materials
New Creek Water Tank Replacement	Hazardous Materials, Land Subsidence
Keyser Accessible Housing	N/A
Ridgeley Water Distribution System Improvement	Land Subsidence
Mountain Top Line Extensions and Upgrades	Land Subsidence
Mineral County Geographic Information System (GIS) Upgrades	N/A
Keyser Limestone Dam	N/A
Elk Garden Community Improvement	N/A
Ridgeley Sidewalks Phase IV	N/A
Keyser Recreation Improvement	N/A
Elk Garden Water Improvement	Land Subsidence

- **Pendleton County:** No priority development projects underway or proposed.

**Table 1.3.8**

Targeted Development Area	Primary Potential Hazard
North Fork Business & Technology Park	N/A
Pendleton Broadband Project	Utility/ Communications Failure
South Fork Industrial Park	N/A
Franklin Sewer Plant Upgrades	Flooding, Hazardous Materials
Pendleton Water System Extensions	Land Subsidence
Ridge Road Water Extension	Land Subsidence
Habitat for Humanity – Sugar Grove	N/A
Sandy Ridge Water Project	Land Subsidence
Ruddle Park	N/A

Hazard susceptibility in the above tables was derived in two (2) ways. First, for such projects as water and sewer upgrades, land subsidence was listed due to the construction activities that would be necessary to complete the project as well as the damage that any instance of land subsidence could potentially do to the lines. Other projects, such as water treatment plants, were listed as vulnerable to hazardous material incidents on account of the use of treatment chemicals. Additionally, the location of projects – especially those resulting in new buildings – contributed to susceptibility. For example, if a building is proposed in an area known to be susceptible to land subsidence, the hazard was noted.

Many rural areas in the region see timbering and natural gas operations. In general, timbering is declining. The oil and natural gas industry is rapidly expanding across West Virginia, although its development in the Region 8 area has been slower than in other areas of the state. Significant changes in land use are not expected. As such, local officials and emergency managers should concentrate mitigation efforts on the existing high-density population areas and those along arterial transportation routes.

# **SECTION 2.0**

# **RISK ASSESSMENT**

Section 2.0 is a multi-hazard risk assessment, analyzing primarily the natural hazards affecting the entire region. This particular assessment includes brief analyses of the hazardous material and terrorism risks. In addition to a simple identification of applicable hazards, this section profiles those hazards (i.e., describes them in the regional context) and discusses the regional implications of these hazard risks.

It is important to understand that the risk assessment portion of this planning process was cyclical. For example, hazards were identified and analyzed on an “area-wide” basis. Upon completion of the initial assessment, such factors as targeted development areas, the locations of critical facilities, etc. were compared to the initial data. Where warranted, additional risk analysis was done in those areas to determine the primary hazards affecting, for example, a potential development. Further, determining probability and severity could be affected by the presence of a number of critical facilities or developable areas in a “hazard zone”.

## 2.1 HAZARD IDENTIFICATION

§201.6(c)(2)(i)

[The risk assessment shall include a] description of the type...of all natural hazards that can affect the jurisdiction.

The hazard identification serves as a guide to all communities in the Region 8 Planning and Development Council (PDC) planning district when assessing their vulnerabilities to hazards. The purpose of the hazard identification is to (1) identify all the natural hazards that could affect the planning area, (2) assess the extent to which the area is vulnerable to the effects of these hazards, and (3) prioritize the potential risks to the community.

### Hazard Identification

The following chart – Table 2.1.1 – Illustrates the hazards to which the planning area could be susceptible. The table also includes a list of the research sources used to identify the hazards as well as a brief statement justifying their inclusion in this analysis. Those hazards with justification for inclusion in the hazard profiling section are highlighted in yellow. In addition to all sources identified in the following table, each county’s most recent hazard mitigation plan was also used as a

research source.

It is significant to note that it is not the intent of Table 2.1.1 to list all occurrences of the hazards in consideration. Table 2.1.1 simply seeks to demonstrate that a particular hazard is indeed worthy of further risk analysis.

**Table 2.1.1**

HAZARD	HOW IDENTIFIED	WHY IDENTIFIED
<b><i>Avalanche</i></b>	<ul style="list-style-type: none"> <li>• Research indicates that these jurisdictions are not susceptible to this hazard.</li> </ul>	<ul style="list-style-type: none"> <li>• The general contour of the land in the region is mountainous, but they are not high enough in elevation to cause avalanche activity.</li> <li>• Further, the amount of snowfall the region receives is insufficient for any kind of avalanche.</li> </ul>
<b><i>Coastal Erosion</i></b>	<ul style="list-style-type: none"> <li>• MapQuest</li> </ul>	<ul style="list-style-type: none"> <li>• Coastal erosion is not a significant risk as the region is more than 450 miles from the Atlantic Ocean.</li> </ul>
<b><i>Coastal Storm</i></b>	<ul style="list-style-type: none"> <li>• See “Thunderstorm”</li> </ul>	<ul style="list-style-type: none"> <li>• Coastal storms are not a threat to the region as it is more than 450 miles from the Atlantic Ocean.</li> </ul>
<b><i>Dam Failure</i></b>	<ul style="list-style-type: none"> <li>• WV Department of Environmental Protection (WVDEP) Dam Safety</li> <li>• Interviews w/ Local Officials</li> <li>• Internet Research <a href="http://itouchmap.com">http://itouchmap.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• Grant County contains a number of dams, including the Dominion-owned Mt. Storm Lake/Power Plant Dam.</li> <li>• Three (3) dams, located in Maryland, could impact the North Branch of the Potomac, causing flooding in northern Hampshire County.</li> <li>• Mineral County has one dam, Patterson Creek Dam Site #37, which needs some rehabilitation to reduce risk.</li> <li>• The Region 8 PDC indicates that there are dam facilities in each of its five (5) counties.</li> </ul>
<b><i>Debris Flow</i></b>	<ul style="list-style-type: none"> <li>• See “Land Subsidence”</li> </ul>	<ul style="list-style-type: none"> <li>• See “Land Subsidence”</li> </ul>

HAZARD	HOW IDENTIFIED	WHY IDENTIFIED
<b><i>Drought</i></b>	<ul style="list-style-type: none"> <li>National Climatic Data Center (NCDC) Event Records</li> </ul>	<p>NCDC reports the following:</p> <ul style="list-style-type: none"> <li>Grant – 10 droughts since 1997</li> <li>Hampshire – 11 droughts since 1997</li> <li>Hardy – 11 droughts since 1997</li> <li>Mineral – 10 droughts since 1997</li> <li>Pendleton – 10 droughts since 1998</li> </ul>
<b><i>Earthquake</i></b>	<ul style="list-style-type: none"> <li>US Geological Survey (USGS)</li> <li>Internet Research <a href="http://www.earthquake.gov">http://www.earthquake.gov</a></li> </ul>	<ul style="list-style-type: none"> <li>According to the USGS, the counties in the region range from a 2 to a 4 in Peak Ground Acceleration (PGA) with a 10% chance of exceedance in 50 years.</li> <li>An earthquake felt throughout the region occurred in August, 2011.</li> </ul>
<b><i>Epidemic</i></b>	<ul style="list-style-type: none"> <li>Interviews w/ Local Officials</li> </ul>	<ul style="list-style-type: none"> <li>The H1N1 outbreak was considered a “pandemic” in 2010.</li> </ul>
<b><i>Expansive Soils</i></b>	<ul style="list-style-type: none"> <li>See “Land Subsidence”</li> </ul>	<ul style="list-style-type: none"> <li>See “Land Subsidence”</li> </ul>
<b><i>Extreme Heat</i></b>	<ul style="list-style-type: none"> <li>NCDC Event Records</li> </ul>	<ul style="list-style-type: none"> <li>Temperatures in the region seldom exceed 100 degrees.</li> <li>If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote “extreme heat”.</li> </ul>
<b><i>Flooding</i></b>	<ul style="list-style-type: none"> <li>NCDC Event Records</li> <li>Interviews w/ Local Officials</li> </ul>	<ul style="list-style-type: none"> <li>NCDC reports the following: <ul style="list-style-type: none"> <li>Grant – 31 since 1995</li> <li>Hampshire – 41 since 1995</li> <li>Hardy – 36 since 1993</li> <li>Mineral – 29 since 1993</li> <li>Pendleton – 29 since 1993</li> </ul> </li> <li>Local officials unanimously indicated that flooding was the most probable hazard in all jurisdictions.</li> <li>A number of communities in the region were significantly affected by the 1985 flood.</li> </ul>

HAZARD	HOW IDENTIFIED	WHY IDENTIFIED
<b>Hailstorm</b>	<ul style="list-style-type: none"> <li>• NCDC Event Records</li> </ul>	NCDC reports the following: <ul style="list-style-type: none"> <li>• Grant – 13 hail events since 1962</li> <li>• Hampshire – 31 hail events since 1991</li> <li>• Hardy – 17 hail events since 1962</li> <li>• Mineral – 15 hail events since 1988</li> <li>• Pendleton – 17 hail events since 1991</li> </ul>
<b>Hazmat Incident</b>	<ul style="list-style-type: none"> <li>• Annual Tier II filings</li> <li>• Pendleton Local Emergency Planning Committee (LEPC) Operating Guidelines (OGs)</li> <li>• Mineral Commodity Flow Study (CFS)</li> <li>• Pendleton CFS</li> <li>• Interviews w/ Local Officials</li> </ul>	<ul style="list-style-type: none"> <li>• All counties in Region 8 receive Tier II filings indicating the use and storage of hazardous materials.</li> </ul>
<b>Hurricane</b>	<ul style="list-style-type: none"> <li>• See “Thunderstorm”</li> </ul>	<ul style="list-style-type: none"> <li>• The region does not experience the hurricane conditions of extremely high winds, rains, and hail.</li> <li>• In some instances, the region may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere.</li> </ul>
<b>Land Subsidence</b>	<ul style="list-style-type: none"> <li>• Interviews w/ Local Officials</li> <li>• USGS Landslide Overview Map</li> <li>• Internet Research <a href="http://www.nationalatlas.gov">http://www.nationalatlas.gov</a></li> </ul>	<ul style="list-style-type: none"> <li>• According to the USGS map, areas throughout the region are classified as “high susceptibility/ moderate incidence”.</li> </ul>
<b>Landslide</b>	<ul style="list-style-type: none"> <li>• See “Land Subsidence”</li> </ul>	<ul style="list-style-type: none"> <li>• See “Land Subsidence”</li> </ul>
<b>Terrorism</b>	<ul style="list-style-type: none"> <li>• Interviews w/ Local Officials</li> </ul>	<ul style="list-style-type: none"> <li>• There are locations that could be considered targets in the region.</li> </ul>

HAZARD	HOW IDENTIFIED	WHY IDENTIFIED
<b>Thunderstorm</b>	<ul style="list-style-type: none"> <li>• NCDC Event Records</li> </ul>	NCDC reports the following: <ul style="list-style-type: none"> <li>• Grant – 45 thunderstorms since 1987</li> <li>• Hampshire – 64 thunderstorm wind events since 1986</li> <li>• Hardy – 39 thunderstorm events since 1970</li> <li>• Mineral – 45 severe thunderstorms since 1991</li> <li>• Pendleton – 23 recorded thunderstorm events since 1969</li> </ul>
<b>Tsunami</b>	<ul style="list-style-type: none"> <li>• MapQuest</li> </ul>	<ul style="list-style-type: none"> <li>• The Atlantic Ocean is approximately 450 miles from the region.</li> </ul>
<b>Volcano</b>	<ul style="list-style-type: none"> <li>• USGS</li> </ul>	<ul style="list-style-type: none"> <li>• No volcanoes exist on the east coast.</li> </ul>
<b>Wildfire</b>	<ul style="list-style-type: none"> <li>• NCDC Event Records</li> </ul>	<ul style="list-style-type: none"> <li>• There has been 1 wildfire event in Pendleton County in the last 10 years (i.e., 2002).</li> <li>• The region is rural with a number of heavily wooded areas.</li> </ul>
<b>Wind</b>	<ul style="list-style-type: none"> <li>• NCDC Event Records</li> </ul>	NCDC reports the following: <ul style="list-style-type: none"> <li>• Grant – 20 high wind events since 1995 and 2 tornados since 1997</li> <li>• Hampshire – 12 high wind events since 1994 and 2 tornados since 1998</li> <li>• Hardy – 9 high wind events since 1995</li> <li>• Mineral – 21 high wind events since 1995 and 2 tornados since 1998</li> <li>• Pendleton – 15 high wind events since 1994 and 2 tornados since 1970</li> </ul>
<b>Winter Storm</b>	<ul style="list-style-type: none"> <li>• NCDC Event Records</li> </ul>	NCDC reports the following: <ul style="list-style-type: none"> <li>• Grant – 192 snow and ice events since 1995</li> <li>• Hampshire – 107 snow and ice events since 1995</li> <li>• Hardy – 97 snow and ice events since 1995</li> <li>• Mineral – 116 snow and ice events since 1995</li> <li>• Pendleton – 122 snow events since 1995</li> </ul>

Over an area as large as that covered by the Region 8 PDC, it seems intuitively obvious that the hazards listed in Table 2.1.1 above would not affect the entire region in the same manner. For instance, Hampshire County's dam failure risk is quite different than Grant County's risk because the dams that could affect the county are not located in Hampshire County (or even West Virginia). Even though all counties contain dams, Hampshire County's risk is different – possibly lower – because it only sees the affect of water damage, not the economic impact of a failed dam structure itself.

To capture this concept, Table 2.1.2 depicts the region's county jurisdictions in comparison. The baseline hazard risk is a generalized average in each county. If a county appears to be more or less affected by a particular hazard, evidence was sought through research. The variances in risk are discussed in Section 2.2 below.

**Table 2.1.2**

JURISDICTION	HAZARDS												
	Dam Failure	Drought	Earthquake	Epidemic	Flooding	Hailstorm	Hazmat Incident	Land Subsidence	Terrorism	Thunderstorm	Wildfire	Wind	Winter Storm
<b>Grant County</b>	=	=	=	=	=	=	>	=	>	=	=	=	>
<b>Hampshire County</b>	<	=	=	=	=	=	=	=	=	=	=	=	=
<b>Hardy County</b>	=	=	=	=	=	=	>	=	=	=	=	=	=
<b>Mineral County</b>	=	=	=	=	=	=	=	=	>	=	=	=	=
<b>Pendleton County</b>	=	=	=	=	=	=	=	=	>	=	=	=	>

**KEY:**

- =: Equal risk
- <: Lower risk
- >: Higher risk

Probability vs. Severity Explanation

The historical data collected includes accounts of all the hazard types listed above. Some hazards, however, have occurred much more frequently than others with a wide range of impacts. By analyzing the historical frequency of each hazard

along with the associated impacts, the hazards that pose the most significant risks to the Region 8 PDC planning district can be identified. Such an analysis allows participating communities to focus mitigation strategies on those hazards that are most likely to cause significant losses.

Prioritizing the potential hazards that can threaten the planning district is based on two (2) separate factors:

- The probability that a potential hazard will affect the community, and
- The potential impacts to the community in the event that such a hazard occurs (i.e., severity).

The probability of a hazard event occurring is largely based on the historical recurrence interval of the hazard. Such sources as the NCDC's "event record database", local media archives, and interviews with local officials were used to determine the number of occurrences. If repeated coverage was given to a particular hazard event, that event was considered highly probable to occur. Also, local officials were able to verify or identify those hazards occurring frequently. For instance, if flood damage occurs every five (5) years versus a tornado causing damage every 50 years, the flood probability would score much higher than the tornado.

Probability for each county jurisdiction in the region was calculated in comparison to one another. For instance, the total number of hazard events reported in each county was averaged to determine the number of occurrences of each hazard on a regional basis. Figure 2.1.1 explains this calculation with an example.

**Figure 2.1.1**

**CALCULATING AVERAGE HAZARD OCCURRENCES**

Grant County's plan reported 31 floods, Hampshire's listed 41 floods, Hardy had 36, and Mineral and Pendleton Counties each listed 29 floods.

$$(31+41+36+29+29)/5 = 33$$

Floods (avg)

With these figures, another computation determined the average number of total hazard events. The average number of total hazards (19) was used as the median to determine probability. Table 2.1.3 depicts this calculation. The distance above or below the median was determined by a percentage.

**Table 2.1.3**

<b>CALCULATING MEDIAN HAZARD OCCURRENCES</b>												
<i>Dam</i>	<i>Drought</i>	<i>Quake</i>	<i>Epidemic</i>	<i>Flood</i>	<i>Hail</i>	<i>Hazmat</i>	<i>Sub.</i>	<i>Terror</i>	<i>Thunder</i>	<i>Fire</i>	<i>Wind</i>	<i>Winter</i>
0.2	2.2	0.2	0.2	33.2	18.6	1.6	0	0	43.2	0.2	17	126.8
<b>AVERAGE (Sum of Averages / 13):</b>												<b>19</b>

\*NOTE: Averages for each hazard were calculated per Figure 2.1.2 above.

Table 2.1.4 lists the classifications considered for hazard probability. The percentages were used to determine the appropriate “hazard probability classification”. For instance, 0 – 20% was listed as improbable, 21 – 40% was listed as remote, 41 – 60% was listed as occasional, 61 – 80% was listed as probable, and 81 – 100% was listed as frequent.

**Table 2.1.4**

**Hazard Probability Classifications**

<i>Label</i>	<i>Specific Hazard Event</i>	<i>Frequency</i>
Frequent	Likely to occur frequently	Continuously experienced
Probable	Will occur several times in the life of an item	Experienced several times
Occasional	Likely to occur sometime in the life of an item	Experienced
Remote	Unlikely but possible to occur in the life of an item	Unlikely that it has been experienced
Improbable	So unlikely that it can be assumed occurrence may not be experienced	Not experienced

The hazard’s severity is made up of three (3) separate factors: the extent of the potentially affected geographic area, the primary impacts of the hazard event, and any cascading (or secondary) effects. While primary impacts are a direct result of the hazard, secondary impacts can only arise subsequent to a primary impact. For example, a primary impact of a flood may be road closures due to submerged pavement. A possible secondary impact in such an incident would be restricted access of emergency vehicles due to a road closure.

Severity calculations, on the whole, were less exact. The median and various averages were calculated as outlined above for probability. The figures used for the severity calculations, however, were estimates with no mathematical basis. Loss

figures presented with NCDC event records, local official recollections, and the loss estimates for each hazard presented in previous versions of each individual county's hazard mitigation plans were used to compare severity. Percentages were again used.

As with probability, severity classifications were made. Table 2.1.5 lists the severity classifications that were considered. Percentage assignments were as follows:

- 0 – 25%: Negligible;
- 26 – 50%: Marginal;
- 51 – 75%: Critical; and
- 76 – 100%: Catastrophic.

**Table 2.1.5**

**Hazard Severity Classifications**

<i>Description</i>	<i>Mishap Definition</i>
Catastrophic	Death or major structural loss
Critical	Severe injury, severe illness, or marginal structural damage
Marginal	Minor injury, minor illness, or structural damage
Negligible	Less than minor injury, illness, or structural damage

Figure 2.1.2 combines the probability and severity information into a “risk assessment matrix” that generalizes the potential impact of each hazard included in the plan. This is the figure that was re-formatted into a bar graph as described above.

Figure 2.1.2

**Risk Assessment Matrix**

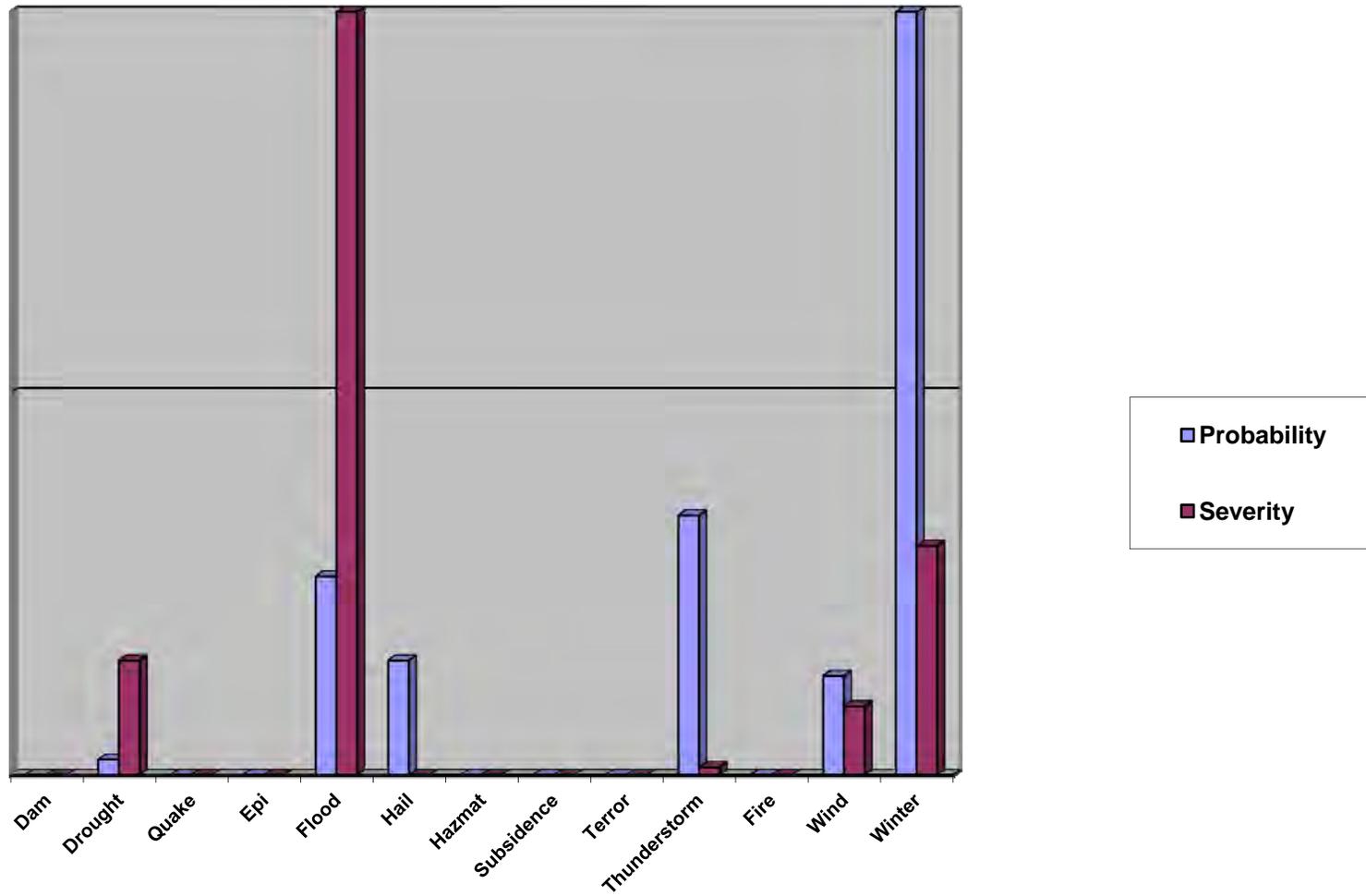
<b>Hazard Severity</b>	<b>Hazard Probability</b>				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic				Flood	
Critical					
Marginal	Winter Storm				
Negligible				Thunderstorm, Wind	Dam Failure, Drought, Earthquake, Epidemic, Hailstorm, Hazmat, Subsidence, Terrorism, Wildfire

Figure 2.1.3 below was created to enhance the usability of the plan. It provides a more holistic snapshot of risk in terms of probability and severity in a format that is more familiar to most readers of this plan. To create the bar graph, the following approximations were used.

- Probability
  - Frequent = 4
  - Probable = 3
  - Occasional = 2
  - Remote = 1
  - Improbable = 0
  
- Severity
  - Catastrophic = 4
  - Critical = 3
  - Marginal = 2
  - Negligible = 1

As a general note, Appendix 2 contains a risk assessment matrix for each participating county.

Figure 2.1.3



### Inventorizing Assets

This risk assessment identifies “at-risk” community assets such as critical facilities, critical infrastructure, historical properties, commercial/industrial facilities, etc. “Assets” contribute directly to the quality of life throughout the region as well as ensure its continued operation. As such, government facilities are often listed, as are water/wastewater and transportation infrastructure. “Assets” can also be irreplaceable items within the community, such as historical structures or even vulnerable populations (including the elderly or youths).

Inventorizing assets first involves determining what in the community can be affected by a hazard event. The core planning committee maintains a specific list of community assets as part of this plan. (\*NOTE: Individual jurisdictions may also maintain these types of lists for their own areas.) Assets were grouped into the following categories.

- **Critical Facilities:** Governmental facilities, water/wastewater facilities, dams, emergency services facilities, medical facilities (hospitals/clinics), military facilities, and the transportation infrastructure.
- **Vulnerable Populations:** Schools, nursing homes, and senior centers.
- **Economic Assets:** Large commercial/industrial facilities or large employers (not covered in other categories).
- **Special Considerations:** Residences, community outreach facilities, post offices, and libraries.
- **Historical Considerations:** Areas/structures listed on the National Register of Historic Places.

While compiling the inventory, much information can be gathered that could assist in estimating the impact that the loss of each asset could have on the community. Each specific asset is listed with its size, replacement value (structure only), contents value, function use or value (annual operating budget), displacement cost (\$ per day), and occupancy. Following is a brief description of how the above numbers are derived.

- **Size:** County assessor data or by directly contacting the facility.
- **Replacement Value:** County assessor data or by directly contacting the facility.

- **Contents Value:** Directly contacting the facility.
- **Function Use or Value:** Directly contacting the facility.
- **Displacement Cost:** Function Use or Value divided by 365.
- **Occupancy:** Directly contacting the facility.

Table 2.1.6 lists the assets identified throughout Region 8. This matrix is loosely derived from Worksheet #3b in the FEMA 386-2, *State and Local Mitigation Planning How-To Guide: Understanding Your Risks* document.

Table 2.1.6

## Region 8 Asset Inventory

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historic/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
		X	X	X	X	X						
Allegheny Power	Miller Road Co. Rte. 28/1, Carpendale				X			N/A				
Amerigas	Hampshire			X								
Anderson House	125 Trout Run Rd of Wardensville					X		\$19,800				
Antique's Etc.	(Barney Bldg), E Main fo Wardensville			X				\$57,000				
Augusta Church of Christ	Rt 50 , Hampshire				X			\$945,000				
Augusta EMS	Rt 50, Romney	X						\$180,000				
Augusta ES	Rt 50 W, Hampshire	X						\$3,710,016				
Augusta VFD	Rt 50, Romney	X						\$850,000				
Baker Home/Conway Thorne	Virginia Ave. of Petersburg					X		\$92,100				
Baker House	215 W Main St. Of Wardensville					X		\$414,333				
Bank of Romney - Augusta	Hampshire				X							
Bank of Romney - Capon Bridge	Hampshire				X							

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Bank of Romney - Romney	Hampshire				X							
Bank of Romney - Springfield	Hampshire				X							
Bannock House	55 W Main St of Wardsville					X		\$32,400				
Baptist Church Manse/King Cl.	114 Virginia Ave. of Petersburg					X		\$197,100				
Barr's BP Station	108 S. Main St. of Petersburg				X			\$66,700				
Barr's market	280 E Main St of Wardsville				X			\$131,800				
Basagic Funeral Home	Keyser Ave. of Petersburg	X						\$132,400				
Bayard Fire Department	Cherry Lane of Bayard	X						\$11,520				
Bayard Police Department	Maple Street of Bayard	X						\$16,920				
Bayard Police Dept	Maple Street of Grant	X										
Bayard Post Office	State Highway 90 of Bayard				X			\$20,400				
Bayard Town Hall	Maple Street of Bayard				X			\$16,920				
Bayard Volunteer Fire Dept	Cherry Lane, Bayard of Grant	X						\$20,500				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Board of Education Fountain School	Rt 46 of Cabin Run		X					\$241,700				
BOE Burlington Grad School	WV Rt 11, Welton		X					\$269,500				
BOE Fort Ashby MS	WV Rt. 46 Frankfort		X					\$5,052,400				
BOE Fort Ashby New ES Bldg	WV Rt. 46 Frankfort		X					\$286,200				
BOE Frankfort HS	County Rt 9 Short Gap		X					\$3,208,000				
BOE Keyser HS	Pine Swamp Rd, Rt 220/2. New Creek		X					\$9,361,800				
BOE Keyser Primary MS	Baker St & W/S Old Rt 220		X					\$3,697,900				
BOE Mineral Co. Minco Park Bldgs.	Rt. 11 of Cabin Run		X					\$289,733				
BOE New Creek School	Off Rt 50 on Rt 972		X					\$524,900				
BOE Office & Bus Garage	W/S Old Rt 220, New Creek Drive		X					\$274,000				
BOE Short Gap School	County Rt 9 Short Gap		X					\$168,000				
BOE VoTech School and Greenhouses	W/S Old Rt 220, New Creek Drive		X					\$1,509,100				
BOE Wiley Ford ES	Off WV Rt 28 of Frankfort		X					\$248,600				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
BP Gas Station Kimble's	402 S. Main Street of Moorefield				X			\$500,000				
Brandwine Elementary	Rt. 33 of Pendleton		X					\$1,750,000				
Brandywine Water Plant	Rt. 21 of Pendleton	X						\$5,000				
Brethren Church	Highland Ave. of Petersburg					X		\$208,200				
Brethren Church (Shelter)	115 Clay Street of Moorefield	X						\$1,000,000				
Bridge	Rt 46 into Westernport, MD			X								
Bridges	Hampshire				X							
Bullis Grocery Store	Hampshire				X							
Burch House	185 E Main St of Wardensville					X		\$17,300				
Burlington Methodist Children Group Home	Rt 220 S/5		X					\$76,100				
Burlington United Mehtodist Home for Children & Youth Inc Childrens Home Chapel	Off WV Rt 11, Welton		X					\$91,500				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Calvin Thompson Home	108 Virginia Ave. of Petersburg					X		\$96,400				
Capon Bridge Community Building	Rt 50, Hampshire				X			\$65,000				
Capon Bridge EMS	Rt 50 Capon Bridge	X						\$250,000				
Capon Bridge ES	Cold Stream Rd, Hampshire	X						\$4,765,200				
Capon Bridge Medical Associates	Hampshire	X										
Capon Bridge MS	Cold Stream Rd, Hampshire	X						\$5,658,770				
Capon Bridge Office of HC SO	Hampshire	X										
Capon Bridge PD/Town Office	Hampshire	X										
Capon Bridge PO	Hampshire				X							
Capon Bridge VFD	Rt 50 Capon Bridge	X						\$1,100,000				
Capon Springs VFD	Capon Springs Road, Hampshire	X						\$650,000				
Capon Valley Bank	717 N. Main Street of Moorefield				X			\$1,300,000				
Capon Valley Bank	2 W Main St of Wardensville			X				\$555,600				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Capon Valley Market	Hampshire				X							
Capon Valley Vol. Fire Dept	190 E Main St. of Wardensville					X		\$11,000				
Capt. David Pugh House	Hampshire					X						
Central Hampshire PSD WWTP	Hampshire	X										
Central Tie & Lumber Co.	Rt. 55 W of Petersburg				X			\$209,400				
Charles Stultz W W/Silver Tree Senior Apt. Bldg.	WV Rt 46		X					\$288,400				
Chevron Service Center	419 Virginia Ave. of Petersburg				X			\$215,400				
Chick Buckbee Juvenile Detention Center	Hampshire				X							
Chrisman Home	307 Winchester Ave. of Moorefield					X		\$400,000				
Church of God	Myrtle Ave. of Petersburg					X		\$463,600				
Churh of the Lord Jesus Christ	107 W. Central Ave. of Petersburg					X		\$300,600				
Circleville Fire Dept.	Rt. 28 of Pendleton	X						\$41,200				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Circleville Water Plant	Timber Ridge of Pendleton	X						\$4,000				
Citizens National Bank	N. Grove St. of Petersburg			X				\$190,400				
Citizens National Bank	N. Grove St. of Petersburg				X			\$190,400				
City of Keyser Sewage Disp	Rt 8, New Creek	X						\$28,500				
City of Keyser Wasteplant	Rt 8 & Rt 46	X						\$5,000				
City of Petersburg City Office	21 Mt. View St. of Petersburg				X			\$67,700				
City Office/Police	Mt View Street of Petersburg	X										
City Police Station	49 Third St., Piedmont	X						\$24,200				
Cline House	164 W Main St. of Wardensville					X		\$18,300				
Cline-Heishman House	50 Honeysuckle of Wardensville					X		\$43,000				
Commercial Bldg (vacant)	Oak St of Wardensville				X			\$22,500				
Country Pride Grocery	Hampshire				X							
Cross House	170 W Main St. of Wardesville					X		\$27,400				
CSX Railroad	of Bayard				X							
D & H Warehouse	Childs Ave., Piedmont				X			\$218,400				
Dave's Exxon	Hampshire				X							



Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Electric Substation	of Bayard				X							
Emergency Oper.	Hardy	X						\$613,400				
Episcopal Church	307 Winchester Ave. of Moorefield					X		\$750,000				
Evans House	E Main St. of Wardensville					X		\$40,000				
Exxon Breaktime	Keyser Ave. of Petersburg				X			\$157,900				
Faith Assembly of God	Rt. 55 W. of Petersburg					X		\$397,800				
Family Crisis Center	Off Rt 220/2, New Creek				X			\$58,400				
Family Dollar Store	Rt. 33 of Pendleton				X			\$247,200				
Fansler House	150 W Main St. of Wardensville					X		\$43,100				
(Feeding Center) Senior Ctr.	409 Spring Street of Moorefield				X			See Notes				
Fertig Cabinet Co.	141 Beans Lane of Moorefield			X				\$3,000,000				
Fire Co. Burlington Station	US Rt 50, Welton	X						\$464,500				
Fire Co. Keyser Volunteer Station I	Mineral St, Keyser	X						\$57,600				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Fire Co. Patterson Creek Community Bldg	WS Rt 28-3 Patterson Creek Rd Frankfort				X			\$31,600				
Fire Co. Patterson Creek Fire Station	WS Rt 28-3 Patterson Creek Rd Frankfort	X						\$6,100				
Fire Department	South Main St. of Petersburg	X						\$235,300				
Fire Dept. #24	52 Second St., Piedmont	X						\$213,800				
First Bank	544 S. Main Street of Moorefield				X			\$750,000				
First Baptist Church	112 Virginia Ave. of Petersburg					X		\$197,100				
First National Bank - Capon Bridge	Hampshire				X							
First National Bank - Romney	Hampshire				X							
First United Bank	Hampshire				X							
Flood Control Levee	Along Buffalo Creek of Bayard				X							
Food Lion	599 S. Main Street of Moorefield				X			\$1,850,000				
Food Lion Grocery	Hampshire				X							

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Former Methodist Church	65 E Main St of Wardensville					X		\$15,400				
Fort Ashby Community Center Inc.	WV Rt 28 Frankfort				X			\$604,400				
Fort Ashby Fire Co. - Fairgrounds	WV Rt 28 Frankfort	X						\$167,300				
Fort Ashby Fire Co. Bldg.	WV Rt 46 and Rt 28 Frankfort	X						\$489,100				
Fort Ashby Fire Co. Fire Station	South St. Fort Ashby	X						\$150,300				
Fort Mulligan	Rt. 55 W. of Petersburg					X		\$404,800				
Fountain Fire Co. Inc. Fire Hall	Rt. 46 of Cabin Run	X						\$101,700				
Fountain Public Service Dist. Pump House	ES Rt. 46 Fountain Prop of Cabin Run				X			\$5,800				
Fraleys EMS	106 Washington Street of Moorefield	X						\$500,000				
Franklin Oil Co.	Rt. 220 of Pendleton			X				\$150,000				
Frontier Communications	Grove St. of Petersburg	X						\$140,600				
Frye House	105 Trout Run Rd of Wardensville					X		\$28,900				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Funk & Crabell Bldg	100-104 W Main St. of Wardensville					X		\$30,800				
Garrett Insurance Agency	175 W Main St of Wardensville				X			\$27,000				
Gas Station Sheetz	701 N. Main Street of Moorefield				X			\$860,000				
Geoffrey Byrd House	105 W Main St of Wardensville					X		\$47,300				
Grace Lutheran Church	5 Pine St. of Petersburg					X		\$202,000				
Grant County Bank	500 S. Main Street of Moorefield				X			\$1,300,000				
Grant County Bank	3 N. Main St. of Petersburg			X				\$1,786,000				
Grant County Bank	3 N. Main St. of Petersburg				X			\$1,786,000				
Grant County Farm Service	Potomac Ave. of Petersburg	X						\$56,500				
Grant County Health Dept.	Rte. 55 W. of Petersburg	X						\$733,420				
Grant County Maintance	Grove St. of Petersburg	X						\$128,524				
Grant County Multipurpose Bld	Valley View St. of Petersburg	X						\$627,700				
Grant County Nursing Home	27 Early Ave. of Petersburg	X						\$4,121,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historic/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Grant County Nursing Home	Early Avenue of Grant		X					\$4,121,000				
Grant County Press	South Main St. of Petersburg	X						\$134,800				
Grant County Senior Center	111 Virginia Ave. of Petersburg		X					\$318,321				
Grant Memorial Hospital	Rte. 55 W. of Petersburg	X						\$10,319,400				
Grant Memorial Hospital	Route 33 of Grant	X						\$10,319,400				
Green Spring Rail Yard	Hampshire				X							
Griffin Funeral Home	Hampshire				X							
Grove St. Methodist Church	Grove St. of Petersburg					X		\$162,400				
Hahn Medical (Hardy Co. Med)	422 S. Main St. Mfld.	X						\$409,200				
Hampshire County Co-Op	Hampshire				X							
Hampshire County Courthouse	Hampshire	X						\$11,000,000				
Hampshire County EOC/911 Center	Hampshire	X										
Hampshire County Health Dept.	Hampshire	X						\$650,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Hampshire Distributors	Hampshire			X								
Hampshire Healthcare Center	Hampshire		X									
Hampshire HS	Rt 50, Hampshire	X						\$17,848,064				
Hampshire Memorial Hospital	549 Center Ave, Romney	X						\$2,000,000				
Harco Co. Medical	8 Lee Street of Moorefield	X						\$1,000,000				
Hardman's Hardware	131 N. Main Street of Moorefield				X			\$750,000				
Hardy Co. Comm. Mitigation Site	Hardy				X			\$55,500				
Hardy Co. Comm. Park Bldg.	Hardy				X			\$15,600				
Hardy Co. Comm Aging H Add Whetzel	Hardy		X					\$598,600				
Hardy Co. Comm Aging Senior Center	Spring Ave. Moorefield		X					\$218,500				
Hardy Co. Community Dog Pound	Rt. 55 E of Moorefield				X			\$27,000				
Hardy Co. Court	Hardy				X			\$4,000,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Hardy Co. Courthouse	204 Washington Street	X						\$4,200,000				
Hardy Co. Health & Wellness Clinic	411 Spring Street.	X						\$3,500,000				
Hardy Co. Health Dept.	Spring Ave. Mfld.				X			\$1,500,000				
Hardy Co. Historical	Hardy					X		\$32,600				
Hardy Co. Library	Main St. Moorefield				X			\$187,900				
Hardy Co. PSD Booster Pump	Hardy	X						\$15,000				
Hardy Co. PSD Booster Pump	Hardy	X						\$12,000				
Hardy Co. RDA	Rte. 55E of Moorefield				X			\$21,580				
Hardy Co. RDA Armory	Rte. 55E of Moorefield				X			\$2,666,667				
Hardy Co. RDA Child Care	Rte. 55E of Moorefield		X					\$250,092				
Hardy Co. RDA McMechan House.	Main St. Moorefield					X		\$234,600				
Hardy Co. RDA Powers	Hardy				X			\$366,500				
Hardy Co. RDA Spec. Bldg.	hardy				X			\$876,225				
Hardy County Health Clinic	422 S. Main Street	X										
Hardy County Rod & Gun	South Fork Estates III Rd.				X			\$3,200				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Hardy Telecom	Hardy				X			\$243,100				
Hardy Telecom	121 S. Main Street of Moorefield	X						\$500,000				
Haven Crest Manor	Hampshire		X									
Helen Byrd House	160 W Main St. of Wardensville					X		\$22,200				
Hermatige Motor Inn	203 Virginia Ave. of Petersburg				X			\$563,000				
Hermatige Motor Inn	203 Virginia Ave of Petersburg					X		\$563,000				
Hester Office Building	104 S. Main Street of Moorefield					X		\$850,000				
Highland Storage	360 E. Main St. of Wardensville				X			\$30,000				
Highland Trace Realty	200 E Main St of Wardensville				X			\$25,600				
Hisghman House	E Main St. of Wardensville					X		\$34,500				
Historic Homes-Presby Manse	106 N. Elm Street of Moorefield					X		\$400,000				
Hogbin Oil	Hampshire				X							
Holy Cross United Methodist Church	Cedar Avenue of Carpendale				X			\$250,000				
Homestead Motor Inn	Rt. 55 W. of Petersburg				X			\$278,800				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Hott-Orndorf House	Wardensville					X		\$82,000				
Human Resources	15 Grant St. of Petersburg				X			\$81,400				
J&E Truck Stop	Hampshire											
Jim Oates	115 W Main St of Wardensville					X		\$54,400				
John Glover House	106 Virginia Ave. of Petersburg					X		\$58,800				
John J. Cornwell ES	Rt. 5, Hampshire	X						\$1,257,990				
John VanMeter Law Office	28 Virginia Ave. of Petersburg					X		\$188,700				
Judy's Drug Store	24 N. Main St. of Petersburg				X			\$194,000				
June Fisher Home	202 S. Main Street of Moorefield					X		\$200,000				
K & J Motel	Virginia Ave. of Petersburg				X			\$149,900				
Kac-A_Pon Restaurant	395 E Main St of Wardensville				X			\$38,400				
Kerr House	210 W Main St of Wardensville					X		\$35,600				
Keyser Building Commission City Hall & Apts	Corner Armstrong & Davis, Keyser				X			\$97,700				
Keyser City of Filtration Plant	Caruskadon Lane, Keyser	X						\$310,700				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Keyser City of Keyserhouse Apts.	12 N Main St, Keyser				X			\$1,823,000				
Keyser Fire Co Fire Station #2	S Cornell St off Southern Dr, Keyser	X						\$890,200				
Keyser Housing Authority Apts.	South of Front St, Keyser				X			\$1,184,900				
Keyser-Mineral Co Library Association Burlington Library	WV Rt 11, Welton				X			\$49,800				
Keyser-Mineral Co Library Association/ Fort Ashby Library	Off WV Rt 28 of Frankfort				X			\$52,300				
Kingsford Charcoal Warehouse	Kingsford, Carpendale				X			\$450,000				
Koppers	Hampshire			X								
Kuykendall Polyagonal Barn	Hampshire					X						
Large storage building	W Main St. of Wardensville					X		\$30,900				
Leatherman's Hardware	1 Veach St. of Petersburg				X			\$154,000				
Levels VFD	Jersey Mountain Road, Romney	X						\$550,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Levy Gate	220 N. Bridge Virginia Ave. of Petersburg	X										
Levy Pumping Station	Lunice Creek Levy of Petersburg	X						\$56,500				
Library Mineral County Library Bldg.	N. Main St, Keyser				X			\$66,400				
Liggett House	115 Trout Run Rd of Wardensville					X		\$30,200				
Literary Hall	Hampshire					X						
Little Place Day Care	5 Grant St. of Petersburg		X					\$100,700				
Love Memorial Clinic	112 Kuykendall Lane, Mfld.	X						\$245,600				
Love Memorial Clinic	112 Kuykendall Lane of Moorefield	X						\$1,000,000				
Loy Giffin Funeral Home	110 W Main St of Wardensville					X		\$97,400				
Loy's Furniture Bldg	155 W Main St of Wardensville					X		\$11,600				
220 N. Lunice Creek Bridge	Virginia Ave. of Petersburg	X										
Lutheran Parsonage House	W Main St of Wardensville					X		\$31,500				
Mae King Home	218 Main St. of Petersburg					X		\$43,600				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Main St. Methodist Church	102 N. Main St. of Petersburg					X		\$552,900				
Maple Hill Cemetary	N. Main St. of Petersburg					X		\$418,200				
Maslin House	131 S. Main Street of Moorefield					X		\$450,000				
Masteller Coal Co. Operation Bldgs.	Rt 46, Piedmont			X				\$213,600				
Maysville Elemenetary School	Route 42 of Grant		X					\$1,303,900				
Maysville Volunteer Fire Dept	Route 42 Maysville of Grant	X						\$62,500				
McCoy Museum	121 N. Main Street of Moorefield					X		\$1,750,000				
McDanial Home/Mernie Judy	210 Virginia Ave. of Petersburg					X		\$164,300				
McKeever House	Maple St of Wardensville					X		\$77,500				
McKeever House	Maple St of Wardensville					X		\$41,100				
McKeever House	Maple St of Wardensville					X		\$39,900				
McKeever/Kotz House	Carpenters Ave of Wardensville					X		\$31,666				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
McMechen House	121 N. Main Street of Moorefield					X		\$750,000				
Mead Westvaco Westbaco Beryl Wood Yard	Rt. 1, Piedmont				X			\$699,500				
Methodist Home & Hospital Inc. Burlington Untied Methodist Childrens Home	Off US Rt 11, Welton		X					\$543,800				
Methodist Hospital & Homes Inc. Burlington United Methodist Childrens Home	Off US Rt 50, Welton		X					\$9,900				
Mfld. Elementary	N. Main St. Mfld.		X					\$3,917,721				
Mfld. Elementary School	402 N. Main Street		X									619
Mfld. High School	N. Main St. Mfld.		X					\$6,105,600				
Mfld. High School	401 N. Main Street		X									390
Mfld. Sewage	Hardy	X						\$4,500,000				
Mfld. Water Tanks (4)	Hardy	X						\$6,000,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Midrise Building	51 Jones St., Piedmont				X			\$940,700				
Mielzarek House	50 W Main St. of Wardensville					X		\$43,000				
Miley House	W Main St of Wardensville					X		\$5,000				
Miley House	(main bldg) W Main St of Wardensville					X		\$57,000				
Mill Race Bridge	S. Main St. of Petersburg	X										
Miller House	205 W Main St of Wardensville					X		\$24,600				
Millers Market	Hampshire				X							
Mineral County Commissiion Health Dept. Bldg	New Creek Drive				X			\$670,900				
Mineral County Commission Courthouse	150 Armstrong St. Keyser				X			\$373,000				
Mineral County Commission Detention Center	East St, Keyser				X			\$442,200				
Mineral County Committee on Aging/Senior Citizens Center	Church St, Keyser		X					\$56,000				
Mineral County Court Larenim Park Bldgs.	Rt 11 of Cabin Run				X			\$67,100				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Moomau Library	18 Mt. View St. of Petersburg					X		\$507,400				
Moorefield American Woodmark	108 S. Fork Rd. of Moorefield			X				\$12,000,000				
Moorefield Con Agra	104 S. Main Street of Moorefield			X				See Notes				
Moorefield Elementary School	402 N. Main Street	X						\$10,700,000				
Moorefield Flood Levee (COE)	Moorefield	X						\$24,000,000				
Moorefield Examiner Building	Moorefield					X						
Moorefield High School	401 N. Main Street	X						\$12,500,000				
Moorefield Middle School	55E. Of Moorefield		X					\$4,426,600				
Moorefield Pilgrim's Pride	129 Potomac Street of Moorefield			X				See Notes				
Moorefield Town Library	102 N. Main Street of Moorefield					X		\$750,000				
Moorefield Town Office	206 Winchester Ave.	X						\$500,000				
Moorefield Town Office	204 Winchester Ave. of Moorefield					X		See Notes				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Moorefield Waste Water System	125 Sewer Plant Rd.	X						\$9,000,000				
Moorefield Water Plant System	175 Water Plant Drive	X						\$4,500,000				
Morman Church	Valley View St. of Petersburg					X		\$2,548,000				
Mountain View Apts.	Valley St. of Petersburg				X			\$791,600				
Mountaineer Country Store	W Main St of Wardsville				X			\$28,000				
Mountaineer Mart	Keyser Ave. of Petersburg				X			\$89,800				
Mountaineer Restaurant	W Main St of Wardsville				X			\$36,600				
Mountaintop Truck Stop	Hampshire				X							
Mountainview Manor	Campbell Road, Romney				X							
Mt. Storm Vounteer Fire Dept	Intersection of Routes 42 and 50, Mt. Storm of Grant	X						\$49,600				
Munting House	107 Virginia Ave. of Petersburg					X		\$67,200				
MVFC	114 Kuykendall Lane of Moorefield	X						\$750,000				
Myrtle Park Home	21 N. Main St. of Petersburg					X		\$99,100				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Natural Gas Lines	Hardy	X						\$1,500,000				
Natural Gas Lines	throughout municipality of Elk Garden	X										
Natural Gas Lines/Substations	Throughout Town of Bayard	X										
Nature's Way	Hampshire		X									
Naval Communications	Rt. 21 of Pendleton	X						Amount Unavailable				
Naval Fire & Rescue	Rt. 21 of Pendleton	X						Amount Unavailable				
New Creek Fire Co. Bldg.	W/S Rt 972	X						\$13,067				
New Creek Fire Co. Station Bldg.	On Rt 972	X						\$232,300				
New Grant County Courthouse	5 Highland Ave. of Petersburg	X						\$2,617,307				
Norma Groves Home	101 Virginia Ave. of Petersburg					X		\$69,800				
North Fork Elem. School	Rt. 28 of Pendleton		X					\$1,945,000				
North Fork Primary Care	Rt. 33 of Pendleton		X					\$800,000				
North Fork Rescue	Rt. 33 of Pendleton	X						\$200,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
North Fork Water Line	Rt. 220 of Pendleton	X						\$7,000				
North River Valley VFD	Ford Hill Road, Hampshire	X						\$450,000				
Old Bank (Sager)	107 S. Main Street of Moorefield					X		\$750,000				
Old Courthouse	115 Virginia Ave. of Petersburg					X		\$299,600				
Old District Parsonage	Hampshire					X						
Old Fields Bridge	Hardy	X						\$3,000,000				
Old Grant County Bank	1 N. Main St. of Petersburg					X		\$1,786,000				
Old Halterman Bldg.	S. Main St. of Petersburg					X		\$24,100				
Old Jail/Blacksmith's	W. Main St. of Wardensville					X						
Old Town Hall Building	55 Oak St of Wardensville					X						
Omps Grocery	Hampshire				X							
Orndorf-Sayers House	70 W. Main Street of Wardensville					X		\$38,200				
Park Motel	34 N. Main St. of Petersburg				X			\$159,000				
Pend. Business Center	Rt. 220 of Pendleton				X			\$411,876				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Pendleton Bank	402 S. Main Street of Moorefield				X			\$1,300,000				
Petersburg Block	Rt. 55 W of Petersburg				X			\$385,100				
Petersburg City Hall	Mt. View Street of Grant				X			\$67,600				
Petersburg Elementary School	Field Area/Rigg Street of Grant		X					\$3,066,200				
Petersburg Foodland	107 S. Grove St. of Petersburg				X			\$1,030,500				
Petersburg High School	Jefferson Ave. of Petersburg	X						\$6,355,800				
Petersburg High School	Jefferson Avenue of Grant		X					\$6,355,800				
Petersburg Oil Co.	12 S. Grove St. of Petersburg				X			\$339,100				
Petersburg Oil Co. Bulk Plant	Potomac St. of Petersburg	X						\$160,500				
Petersburg Oil Co. Bulk Plant	Potomac Ave. of Petersburg				X			\$160,500				
Petersburg Oil Company	Hampshire			X								
Petersburg Police Dept	Mt. View Street of Grant	X						\$67,600				
Petersburg Volunteer Fire Dept	Main Street of Grant	X						\$235,366				
Polly Peer House	40 W Main St. of Wardensville					X		\$38,600				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Post Office	410 Spring Street of Moorefield				X			\$750,000				
Potable Waste	Water St., Piedmont	X						\$2,200,000				
Potomac Highland Guild	Park St. of Petersburg				X			\$201,200				
Potomac Highland Mental Health Group Home	Petersburg		X					\$179,300				
Potomac Highlands Airport Bldgs	Rt. 28 Wiley Ford Frankfort	X						\$3,923,500				
Potomac Highlands Group Guild Home	Washington Street, Romney				X							
Potomac Highlands Mental Health Guild Bldg.	NW Rt 220				X			\$142,500				
Potomac Highlands Regional Jail	Hampshire				X							
Potomac State College Farm	WV Rt 46/4, Keyser		X					\$64,000				
Potomac State College Farm	WV Rt 46/4, Keyser		X					\$338,400				
Potomac State College Gym & Farm Shop	State Street, Keyser		X					\$749,500				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Potomac State College Maintenance Shop	B St. Keyser				X			\$79,400				
Potomac State College Parking Lot & WV Area Center	State Street, Keyser				X			\$25,200				
Potomac State College President's Home & Main Campus Bldgs	Mineral St & Fort Ave. Keyser		X					\$4,269,000				
Potomac State College Stadium and Apts	South end of B St. and Arnold St., Keyser		X					\$122,400				
Potomac Valley Hospital of WV Inc	Mineral St/US Rt 220 S, Keyser	X						\$161,500				
Potomac Valley Hospital of WV Inc.	Mineral St/ US Rt 220 S, Keyser	X						\$1,429,000				
Potomac Valley Hospital of Wv Inc/ Clinic	US Rt 220 S, Keyser	X						\$115,400				
Potomac Valley Medicine	Spring Ave. Mfld.	X						\$2,500,000				
Potomac Village Assoc. - Housing	500 Carskadon Lane, Keyser				X			\$3,129,600				





Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Romney WWTP	Hampshire	X										
Rt. 46	Throughout the city of Piedmont			X								
Scanlon Farm	Hampshire					X						
Schaffer Funeral Home	11 N. Main St. of Petersburg	X						\$235,700				
See's Motel	30 W Main St. of Wardensville				X			\$46,900				
Sencindiver House	80 High St of Wardensville					X		\$22,900				
Seneca Rocks Fire Dept.	Rt. 33 of Pendleton	X						\$35,800				
Seven Eleven	Hampshire				X							
7-11 Service Center	Virginia Ave. of Petersburg				X			\$83,000				
7-11 Store	15 W Main St of Wardensville				X			\$86,000				
Sewer Pumping Station	(5) Various Locations of Carpendale	X						\$190,000				
Sheetz	Hampshire				X							
Sheetz Convenience Store	Keyser Ave. of Petersburg				X			\$248,100				
Shop & Save	749 N. Main Street of Moorefield				X			\$1,850,000				
Silver Tree Apartments	450 Depot Street, Romney				X							
Sine House	Carpenters Ave of Wardensville					X		\$41,000				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
SJ Morse Company	Hampshire			X								
Slanesville EMS	Rt 29, Hampshire	X						\$850,000				
Slanesville ES	Rt 29, Hampshire	X						\$2,383,968				
Slanesville VFD	Rt 29, Hampshire	X						\$650,000				
Sloan Parker House	Hampshire					X						
Smith Bldg	135 W Main St of Wardensville					X		\$28,166				
Snider House	80-84 Carpenters Ave of Wardensville					X		\$55,833				
Snider House	80-84 Carpenters Ave of Wardensville					X		\$8,600				
Snider/Pugh House	Carpenters Ave of Wardensville					X		\$40,800				
Snider-Orndorf House 1	105 High St of Wardensville					X		\$35,800				
Snider-Orndorf House 2	High St. of Wardensville					X		\$8,100				
Snider-Osberg House	Maple St of Wardensville					X		\$50,000				
Social Security Office	N. Main St. of Petersburg				X			\$208,700				
Soil Conservation Service	308 N. Main St. of Petersburg				X			\$167,200				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
220 South Branch of Pot.- Bridge	S. Main St. of Petersburg	X										
South Branch Railroad	S. Main St. of Petersburg	X						\$223,000				
South Branch Stock Yard	341 Clay Street of Moorefield			X				\$1,500,000				
South Branch Valley Railroad	120 Water Plant Drive of Moorefield			X				\$20,000,000				
South Branch Vo Tech	Pierpont St of Grant		X					\$1,607,700				
South Fork Fire/Rescue	Rt. 33 of Pendleton	X						\$243,000				
Southern Blasting	Hampshire			X								
Southern States	Hampshire			X								
Southern States	15 Potomac St. of Petersburg	X						\$210,700				
Southern States	115 Potomac St. of Petersburg				X			\$210,700				
Springfield EMS	Green Spring Valley Road, Hampshire	X						\$180,000				
Springfield VFD	Springfield Grad Road, Romney	X						\$850,000				
Springfield-Greenspring ES	Rt 28, Hampshire	X						\$1,315,674				
Spruce Knob Telephone	Rt. 33 of Pendleton				X			\$300,900				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
St. Mary's Catholic Church	5 Pierpont St. of Petersburg					X		\$100,700				
St. Peters Lutheran Church	60 W Main St of Wardensville					X		\$167,300				
State BD of Control Potomac State College Art Center	C St and B St, Keyser		X					\$833,400				
State of West Virginia National Guard Armory	Off Arnold Sr, Keyser			X				\$316,600				
State Police & 911	Rt. 33 of Pendleton	X						\$860,000				
State Police Barracks and 911	WV Rt 46 of Frankfort	X						\$95,500				
Summit Finance	N. Main St. of Petersburg			X				\$589,600				
Summit Finance	S. Grove St. of Petersburg			X				\$124,500				
Summit Finance	N. Main St. of Petersburg				X			\$589,600				
Summit Finance	S. Grove St. of Petersburg				X			\$124,500				
Summit Financial	107 & 310 N. Main Street of Moorefield				X			See Notes				
Summit Financial Bank Hq.	310 N. Main Street of Moorefield			X				\$8,000,000				
Sycamore Dale	Hampshire					X						

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
T&S Country Market	Hampshire				X							
Teddy Bear Day Care	Keyser Ave.of Petersburg		X					\$107,400				
Telephone Lines	throughout municipality of Elk Garden	X										
Timbrook Residential Board & Care Home	Hampshire		X									
Town Garage	Cedar Avenue of Carpendale				X			\$40,000				
Town Hall Building	Cedar Avenue of Carpendale			X				\$125,000				
Town Hall/Rural Health Clinic	Main Street, Elk Garden				X			\$150,000				
Town of Moorefield	Hardy				X			\$1,347,000				
Town Shed & Equipment	339 Clay Street of Moorefield	X						\$500,000				
Tri Towns After School Program at Methodist Church	34 Jones St., Piedmont				X			\$410,900				
Triplett House	60 High St of Wardensville					X		\$37,500				
U.S. Post Office	Oak and Center Streets, Elk Garden				X							

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Union Educational Complex	Route 50 near Mt. Storm of Grant		X					\$2,656,900				
Unity Apartments	250 Fairfax St, Romney				X							
Upper Tract Fire & Rescue	Rt. 220 of Pendleton	X						\$100,000				
Upper Tract Industrial Pk.	Rt. 220 of Pendleton				X			\$159,397				
Upper Tract Water Plant	Smoke Hole Rd. of Pendleton	X						\$22,500				
US Army Reserve Center	Hampshire				X							
US Post Office	1 Postal Square of Petersburg				X			\$1,157,800				
USA ABL Bldgs.	Off Rt. 956 Frankfort				X			\$99,000,000				
Valley National Gas	Rt. 33 of Pendleton	X						\$15,100				
Valley Transport	71/2 Grant Street of Petersburg				X			\$53,200				
Verizon Telephone	108 S. Elm Street of Moorefield	X						\$15,000,000				
Verizon Telephone Office	Green St., Piedmot			X				\$40,000				
Veterans of Foreign War	E Main St. of Wardensville				X			\$46,100				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Volunteer Ambulance Station	Maple Street, Elk Garden	X						\$179,000				
Volunteer Fire Station	Maple Street, Elk Garden	X						\$575,000				
W' ville Sewage	Hardy	X						\$4,500,000				
W' ville Town Office	Hardy				X			\$145,839				
W' ville Water Tank	Hardy	X						\$70,000				
War Memorial Building	190 E Main St. of Wardsville					X		\$137,300				
Warden Hotel Bldg	205 W Main St of Wardsville					X		\$64,200				
Wardsville Cemetary	E Main St. of Wardsville					X		\$8,333				
Washington Bottom Farm	Hampshire					X						
Washington Gas	Hampshire				X							
Waste Water	Water St., Piedmont	X						\$4,800,000				
Waste Water Treatment Plant	Virginia Ave. of Petersburg	X						\$534,900				
Waste Water Treatment Plant	Rig Street of Petersburg	X						\$3,066,200				
Waste Water Treatment Plant	401 Pierpont St. of Petersburg	X						\$1,067,100				
Waste Water Treatment Plant	Elk Avenue, Elk Garden	X										
Wastewater Treatment Plant	Middlesex Street of Bayard	X						\$13,200				

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Water Storage Facility	Rte. 55 W. of Petersburg	X										
Water Storage Facility	Laurel Rd. of Petersburg	X										
Water Supply Tower	outside municipality of Elk Garden	X										
Water Treatment Plant	Petersburg City Park of Petersburg	X						\$1,477,900				
Wendell "Del" Hester Bridge	Hardy	X						\$3,500,000				
Westvaco Medical Center	22 Orchard St., Piedmont	X						\$695,400				
White Star Restaurant & Apts	80 W Main St of Wardensville					X		\$54,300				
Wiley Ford Fire Co. Fire Dept. Garage	WS State Street of Frankfort	X						\$29,700				
Wiley Ford Fire Co. Fire Dept. Storage Bldg.	WS State St. Fronting Dixie St. of Frankfort				X			\$58,200				
Wilson Hotel Bldg	W Main St of Wardensville					X						
Wilson -Peer House	Maple St of Wardensville					X		\$36,500				
Wilson-Woodrow Mytinger House	Hampshire					X						

Name or Description of Asset	Address Location/ Jurisdiction	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$)	Occupancy or Capacity (#)
Wise Home	308 Winchester Ave. of Moorefield					X		\$400,000				
WQWV Radio Station	2 Alt Ave. of Petersburg	X						\$450,900				
WV Co. Rte. 28/1	Roadway, Carpendale			X				N/A				
WV Dept. Highways New Creek Garage	SS/Rees Ld on Rt 50, New Creek				X			\$51,900				
WV Dept. of Highways A Corp Burlington District	US Rt 50/220, Welton				X			\$1,247,500				
WV RR Maintenance	Hardy				X			\$155,200				
WV School for the Deaf & Blind	Hampshire				X							
WV State Police	Rte 220S of Moorefield	X						\$476,000				
WVSP Barracks Romeny	Hampshire	X						\$3,000,000				

## 2.2 HAZARD PROFILES

§201.6(c)(2)(i)

[The risk assessment shall include a] description of the...location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

The section above identifies which hazards affect the jurisdictions in Region 8, but it does not explain *how* these hazards affect them. To do so, “profiles” have been developed for each hazard identified in Section 2.1. The profile describes how each hazard manifests itself in each of the Region 8 counties.

Each of the 13 profiles below contains estimated losses as a result of the hazard being profiled. All loss estimates were calculated in the same manner, which is as follows. See Appendix 2 below for copies of the applicable worksheets from each county.

Worksheet #3a from Federal Emergency Management Agency (FEMA) 386-2, *State and Local Mitigation Planning How-To Guide: Understanding Your Risks*, contains space for the total number of structures and the total value of structures. For each (the number and the value), a percentage in hazard-prone areas is identified. The values corresponding to the percentage in hazard areas correspond to the loss estimates for each category: residential, commercial, industrial, agricultural, religious/non-profit, government, education, and utilities.

Historical hazard event research often contains estimates of losses in a variety of categories, some of which correspond with the categories used in this plan; consequently, historical data contributed heavily to the process of determining potential damage percentages. During the hazard identification research for this project, planners noted loss totals from large incidents. Dollar amounts computed on Worksheet #3a are compared to those from historical events.

2.2.1: Dam Failure

A dam failure is when downstream flooding occurs as the result of the complete or partial inundation of an impoundment.

RESEARCH SOURCES

- WV Department of Environmental Protection (WVDEP) Dam Safety
- Interviews with Local Officials
- Internet Research (<http://itouchmap.com>)

Period of Occurrence:	At any time
Number of Events to Date (1914-2011):	1
Probability of Event:	Infrequent – Dams that fail typically have some deficiency that causes the failure that should be detected by regular inspections and subsequently repaired. Heavy rains or moderate earthquakes may trigger a dam failure.
Warning Time:	Minimal – Depends on frequency of inspection
Potential Impacts:	Potential loss of human life, economic loss, environmental damage, disruption of lifeline facilities
Cause Injury or Death:	Injury and risk of multiple deaths
Potential Facility Shutdown:	30 days or more

HAZARD EFFECTS

Dam failure is often the result of prolonged rainfall or flooding or, during prolonged dry periods, erosion. The primary hazard surrounding dam failure is the swift, unpredictable flooding of those areas immediately downstream. While general inundation areas can be determined, it is often impossible to know exactly how and where water held back by a dam will flow during a rapid failure of the dam.

Generally, there are three (3) types of dam failures: hydraulic, seepage, and structural.

- **Hydraulic Failure:** Hydraulic failures result from the uncontrolled flow of water over the dam, around and adjacent to the dam, and the erosive action of water on the dam and its foundation. Earthen dams are particularly vulnerable to hydraulic failure since earth erodes at relatively small velocities.

- **Seepage Failure:** All dams exhibit some seepage that must be controlled in velocity and amount. Seepage occurs both through the dam and the foundation. If uncontrolled, seepage can erode material from the foundation of an earthen dam to form a conduit through which water can pass. This passing of water often leads to a complete failure of the structure, known as piping.
- **Structural Failure:** Structural failures involve the rupture of the dam and/or its foundation. This is particularly a hazard for large dams and for dams built of low strength materials such as silts, slag, fly ash, etc.

Dam failures generally result from a complex interrelationship of several failure modes. Uncontrolled seepage may weaken the soils and lead to a structural failure. Structural failure may shorten the seepage path and lead to a piping failure. Surface erosion may lead to structural or piping failures.

The WVDEP classifies dams into four (4) categories, including the following:

- **Class 1 (High Hazard):** Dams located where failure may cause loss of human life or major damage to dwellings, commercial or industrial buildings, main railroads, important public utilities, or where a high-risk highway may be affected or damaged.
- **Class 2 (Significant Hazard):** Dams located where failure may cause minor damage to dwellings, commercial or industrial buildings, important public utilities, main railroads, or cause major damage to unoccupied buildings, or where a low-risk highway may be affected or damaged. Loss of human life from a failure of a Class 2 dam is unlikely.
- **Class 3 (Low Hazard):** Dams located in rural or agricultural areas where failure may cause minor damage to non-residential and normally unoccupied buildings, or rural or agricultural land. Failure of a Class 3 dam would cause only a loss of the dam itself and a loss of property use, such as use of related roads, with little additional damage to adjacent property.
- **Class 4 (Negligible Hazard):** Dams where failure is expected to have no potential for loss of human life, no potential for property damage, and no potential for significant harm to the environment.

## HAZARD PROFILE

There is a very minor history of occurrences in the region. In January, 1914, the Old Stony River Dam in Grant County failed, though there was no damage or deaths. Further, the level of severity was listed as “minimal”.

There are numerous dam facilities throughout the region, some of which are more high profile than others. Further, susceptibility to the hazard of dam failure appears to be slightly subjective. Grant County, for instance, classifies the probability of dam failure occurrence as well as its severity to be “moderate”. The Potomac Valley Soil Conservation District was contacted concerning dam rehabilitation and inspections for its facilities throughout the region. It provided the following information.

- **Grant County:** No dams within the county were classified as a threat.
- **Hardy County:** No dams within the county were classified as a threat.
- **Mineral County:** Patterson Creek Dam Site #37 is in need of rehabilitation to reduce risk.
- **Pendleton County:** No dams within the county were classified as a threat.

Other facilities in the region could contribute to the dam failure hazard. The Mount Storm Lake dam near the Mount Storm Power Plant along State Route (SR) 93 in Grant County holds back a large impoundment. The Grant County Office of Emergency Services (GCOES) coordinates heavily with Dominion, including maintaining a copy of the dam safety plan for the facility. Pendleton County noted the presence of 21 dams throughout the county. All are located in the eastern portion of the county. These facilities include the following dams along the South Fork: No. 6, No. 9, No. 10, No. 11, No. 12, No. 13, No. 14, No. 15, No. 16, No. 17, No. 18, No. 19, No. 21, No. 27, No. 32, No. 33, No. 35, No. 36, and No. 37. Some are nearing 50 years in age.

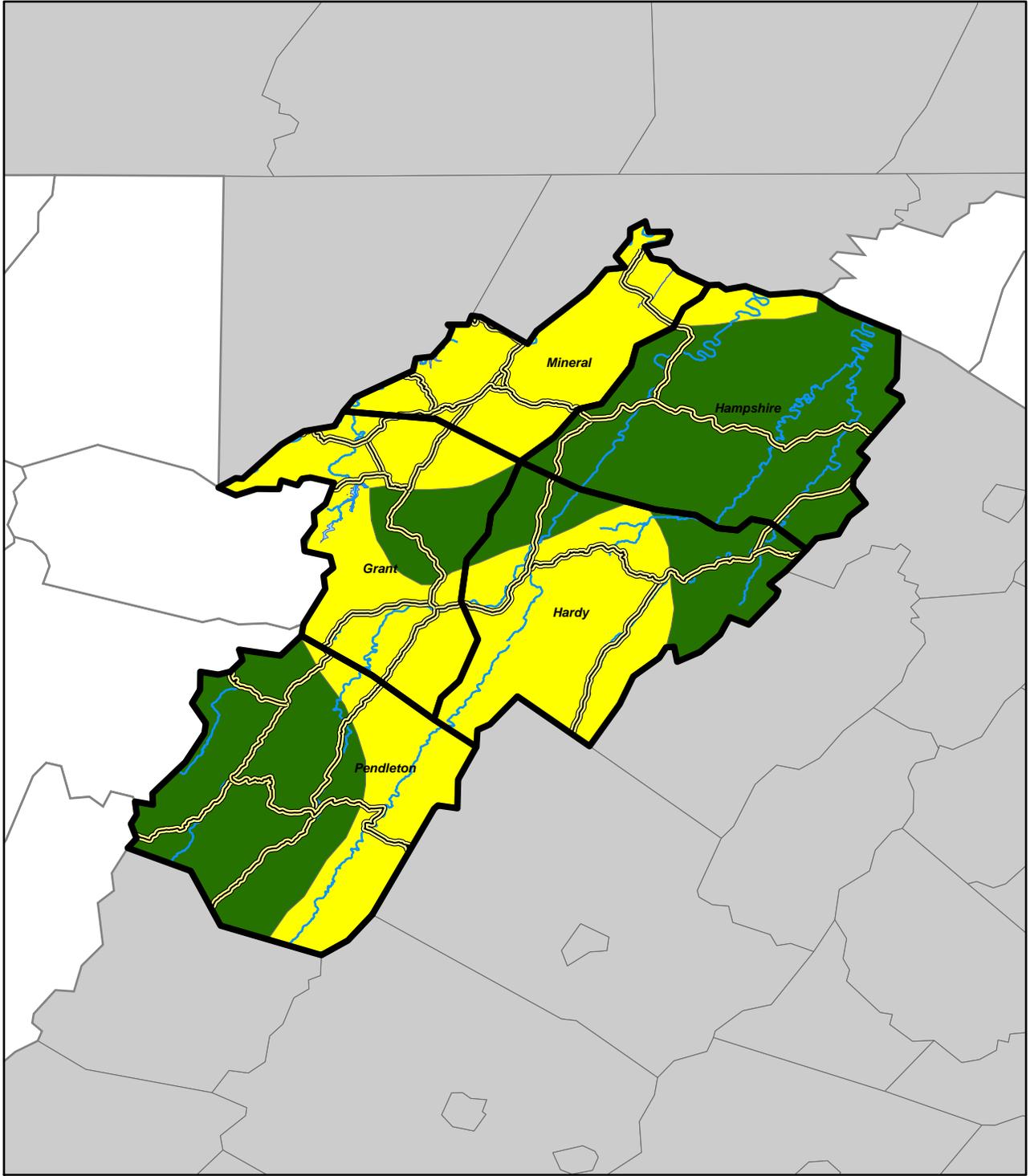
Other facilities, outside of the region, could impact Region 8’s communities. The Maryland Department of the Environment (MDE) Dam Safety Program indicates that there are two (2) dams that could impact the North Branch of the Potomac River. Both are rated Class 1 – High Hazard. If an event were to occur, the community of Green Spring in Hampshire County could experience significant flooding.

VULNERABLE STRUCTURES

Vulnerable Structures – Dam Failure								
County	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Utilities
Grant	4883	0	1	363	18	0	0	0
Hampshire	500	5	1	25	3	0	1	1
Hardy	2423	0	0	154	11	0	0	0
Mineral	9127	0	1	345	28	0	0	0
Pendleton	513	0	0	150	4	0	0	0
<b>TOTALS</b>	<b>17446</b>	<b>5</b>	<b>3</b>	<b>1037</b>	<b>64</b>	<b>0</b>	<b>1</b>	<b>1</b>

LOSS ESTIMATES

In an effort to assist jurisdictional understanding of risks and implementation of strategies, loss estimates were done for each county (see Appendix 2). By averaging those estimates, this plan assumes a total, regional loss estimate *per dam failure incident* to be as much as \$387,995,928. If all counties in the region were affected to the “worst case scenario” level, as much as \$1,939,979,640 could be lost.



**Vulnerability to Dam Failure**

-  Low Hazard
-  Moderate Hazard

2.2.2: Drought

Drought is an extended period of deficient rainfall relative to the statistical mean for a region.

RESEARCH SOURCES

- National Climatic Data Center (NCDC) Event Records

Period of Occurrence:	Summer months or extended periods with no precipitation
Number of Events to Date (1997 – 2011):	11
Probability of Event:	Infrequent – Small scale droughts occur frequently, but events causing major disruption and economic loss are infrequent
Warning Time:	Weeks
Potential Impacts:	Activities that rely heavily on high water usage may be impacted significantly, including agriculture, tourism, wildlife protection, municipal water usage, commerce, recreation, electric power generation, and water quality deterioration. Droughts can lead to economic losses such as unemployment, decreased land values, and agrobusiness losses. Minimal risk of damage or cracking to structural foundations, due to soils.
Cause Injury or Death:	None
Potential Facility Shutdown:	None

HAZARD EFFECTS

Droughts are defined according to meteorological, hydrological, and agricultural criteria. Any significant deficit of precipitation is categorized as meteorological. Hydrological drought is apparent in noticeably reduced river and stream flow and critically low groundwater tables. Agricultural drought indicates an extended dry period that results in crop stress and harvest reduction.

The Palmer Drought Severity Index (PDSI) is widely used throughout the United States as a measure of drought and to track moisture conditions. The PDSI is defined as “an interval of time, generally in months or years in duration, during which the actual moisture supply at a given place rather consistently falls short of the climatically expected or climatically appropriate moisture supply”. The range of the PDSI is from -

4.0 (extremely dry) to +4.0 (excessively wet), with the central half (-2.0 to +2.0) representing normal or near normal conditions.

#### HAZARD PROFILE

A drought could have a significant impact to the economy of Region 8, as all counties are home to agricultural activity. Further, a number of historical droughts have been recorded. For example, Grant, Hampshire, Mineral, and Pendleton Counties were among the 41 West Virginia counties to be designated an “agricultural disaster area” by the United States Department of Agriculture (USDA) between January 1 and November 19, 2002.

<b>Agriculture in Region 8 Counties</b>			
<i>County</i>	<i>Number of Farms</i>	<i>Market Value of Crops</i>	<i>Percent Change in Value from 2002</i>
Grant	471	\$42,123,000	+32
Hampshire	677	\$32,549,000	+7
Hardy	514	\$148,029,000	+10
Mineral	493	\$15,470,000	+6
Pendleton	600	\$91,788,000	+10
<b>TOTALS</b>	<b>2,755</b>	<b>\$329,959,000</b>	

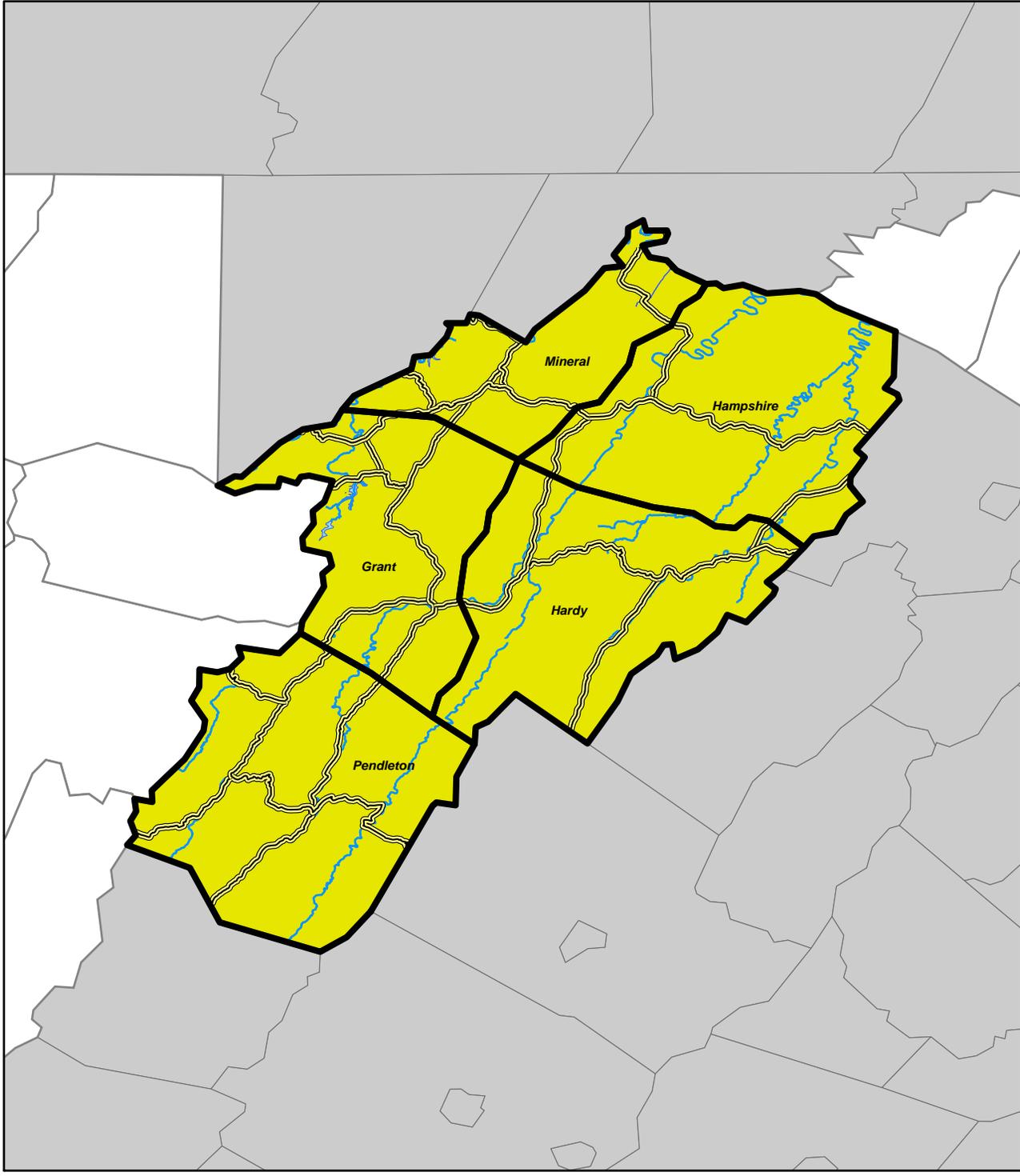
As with many hazards, determining specific risk and vulnerability areas for drought is difficult. Drought is an “overall” hydrologic condition; that is, if one small area was without precipitation but a nearby area was not, it would be difficult to classify the entire area as “in a drought” due to the eventual seepage of said precipitation to the overall groundwater supply. Consequently, drought is said to affect the entire region evenly.

#### LOSS ESTIMATES

To show drought’s impact on the region, though, the following chart depicts historical drought losses (*Source: NCDC Event Records*) as well as each county’s estimate of WCS drought losses.

<b>Historical Drought Occurrences and Losses</b>			
<i>County</i>	<i>Number of Droughts</i>	<i>Estimated Losses</i>	
Grant	10	\$19,400,000	
Hampshire	11	\$19,400,000	
Hardy	11	\$19,400,000	
Mineral	10	\$19,400,000	
Pendleton	10	\$7,000,000	
<b>TOTALS</b>	<b>11*</b>	<b>\$19,400,000*</b>	Avg. per Incident: \$1,763,636 (actual); \$19,400,000 (estimated WCS)

\*NOTE: These are likely the same instances.



**Vulnerability to Drought**

 Moderate Hazard

### 2.2.3: Earthquake

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulation within or along the edge of the Earth's tectonic plates.

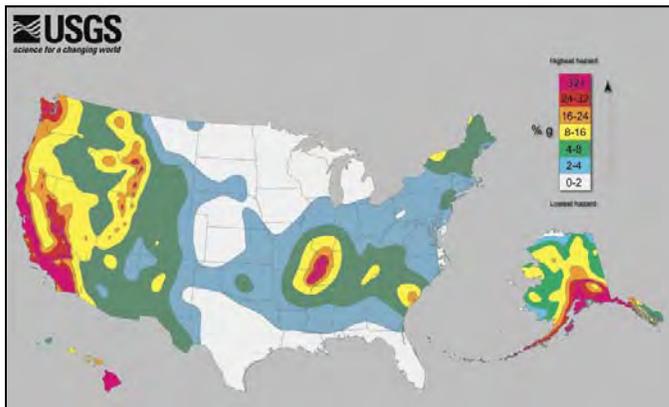
#### RESEARCH SOURCES

- US Geological Survey (USGS)
- Internet Research (<http://www.earthquake.gov>)

Period of Occurrence:	At any time
Number of Events to Date (1950 – 2011):	0 Epicenters; 1 Event
Probability of Event:	Infrequent
Warning Time:	None
Potential Impacts:	According to FEMA, areas with a PGA of 2 to 4 (0.02 to 0.04) will incur little to no damage with no function loss.
Cause Injury or Death:	Minor risk of injury
Potential Facility Shutdown:	None

#### HAZARD EFFECTS

An earthquake's sudden release of stored energy may manifest itself by shaking or displacing the ground. The severity of these effects is dependent on the amount of energy released from the fault (or epicenter) of the quake. The effects of an earthquake can be felt far beyond the site of its occurrence. Earthquakes usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties.



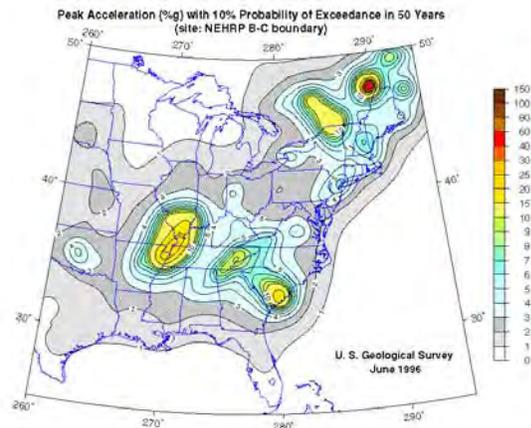
Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Peak Ground Acceleration (PGA) is a measure of strength of ground movements. The PGA measures the rate in change of motion relative to the established rate of

acceleration due to gravity.

#### HAZARD PROFILE

The map provided by the USGS (shown below) depicts the PGA values for areas with a 10% chance of being exceeded over the next 50 years. West Virginia does have

an earthquake risk as it is located in the 2 and 3%g area. All of the counties in Region 8 are located in the lower risk areas of eastern West Virginia. PGA values for each of Region 8's counties are list as between 2 (0.02) and 4 (0.04). These approximate values were determined by estimating the PGA values shown by the figure at right. The FEMA states that areas with these PGAs are considered to have a low to moderate earthquake risk. As such, earthquake vulnerability is rated "low".



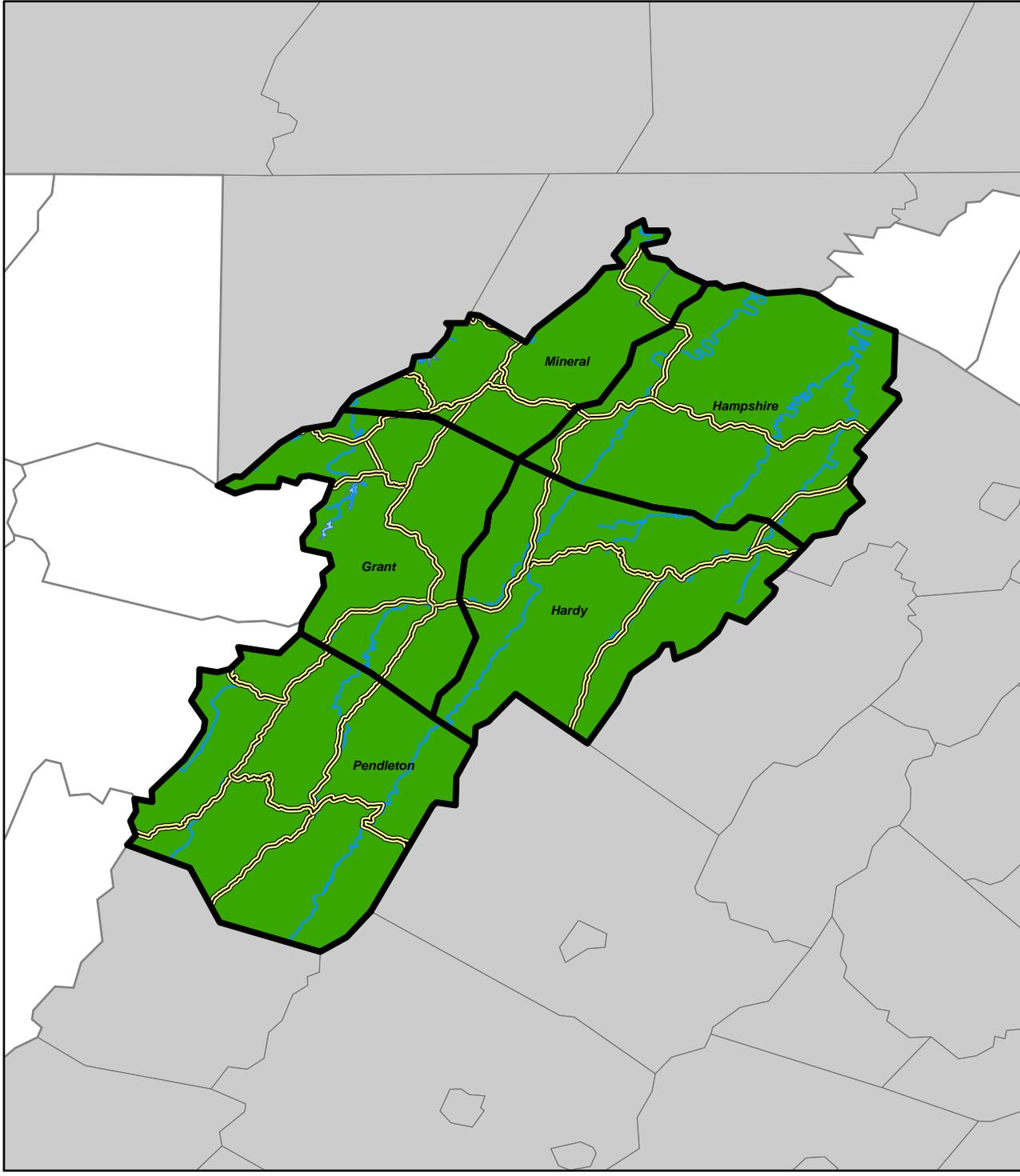
The Central and Southeast United States region covers a large area of relatively diffuse, low-rate seismicity. Principle areas of activity include the New Madrid Seismic Zone of the central Mississippi Valley and the Southern Appalachian Seismic Zone, extending from Virginia to Alabama. These areas of continued seismic activity increase the likelihood of Region 8's counties experiencing or being affected by an earthquake at some point in time. This assumption recently proved true, as a small earthquake (magnitude 2.9) occurred in April, 2010, near the Town of Man in Logan County (southwest of Region 8). A second small earthquake (magnitude 2.8) also occurred in April near Sutton in Braxton County, again to the southwest of the region.

The most high-profile earthquake event to occur near the Potomac Highlands of West Virginia occurred in August, 2011. A magnitude 5.8 earthquake centered in Louisa, Virginia (less than 100 roadway miles from the community of Brandywine in Pendleton County) shook structures throughout West Virginia, Pennsylvania, Virginia, Maryland, and New York. Damage to such structures as the National Cathedral and the Washington Monument were noted in Washington, D.C. Evacuations occurred in D.C. as well as New York City because the general population was not accustomed to experiencing an earthquake of that magnitude.

The eastern panhandle of West Virginia has a long history of earthquakes (albeit minor ones). For instance, the USGS reports a "strong earthquake" in the Charles Town-Martinsburg area in April of 1909. The total "felt" area was approximately 6,500 square kilometers. Its epicenter was near the convergence of West Virginia, Virginia, and Maryland.

## LOSS ESTIMATES

The somewhat random historical occurrences of earthquakes would indicate that all structures throughout Region 8's counties to be equally at risk from earthquakes. The severity of those earthquakes, though, is expected to be very low (according to FEMA's 386-2 document). Given this low severity, officials in all five (5) counties of Region 8 estimated earthquake losses to be zero.



**Vulnerability to Earthquake**

 Low Hazard

2.2.4: Epidemic

An epidemic is a disease, usually contagious, that recurs in a community and attacks a large number of people at the same time. The potential impacts of an epidemic are illness or fatalities, disruption or closing of schools, or the forced closure of businesses and industrial operations.

RESEARCH SOURCES

- Interviews with Local Officials

Period of Occurrence:	At any time
Number of Events to Date (2003–2011):	1
Probability of Event:	Unlikely – Large-scale biological incidents are infrequent.
Warning Time:	Months
Potential Impacts:	Potential loss of human life, economic loss, disruption of lifeline facilities
Cause Injury or Death:	Injury and risk of multiple deaths
Potential Facility Shutdown:	Weeks to Months

HAZARD EFFECTS

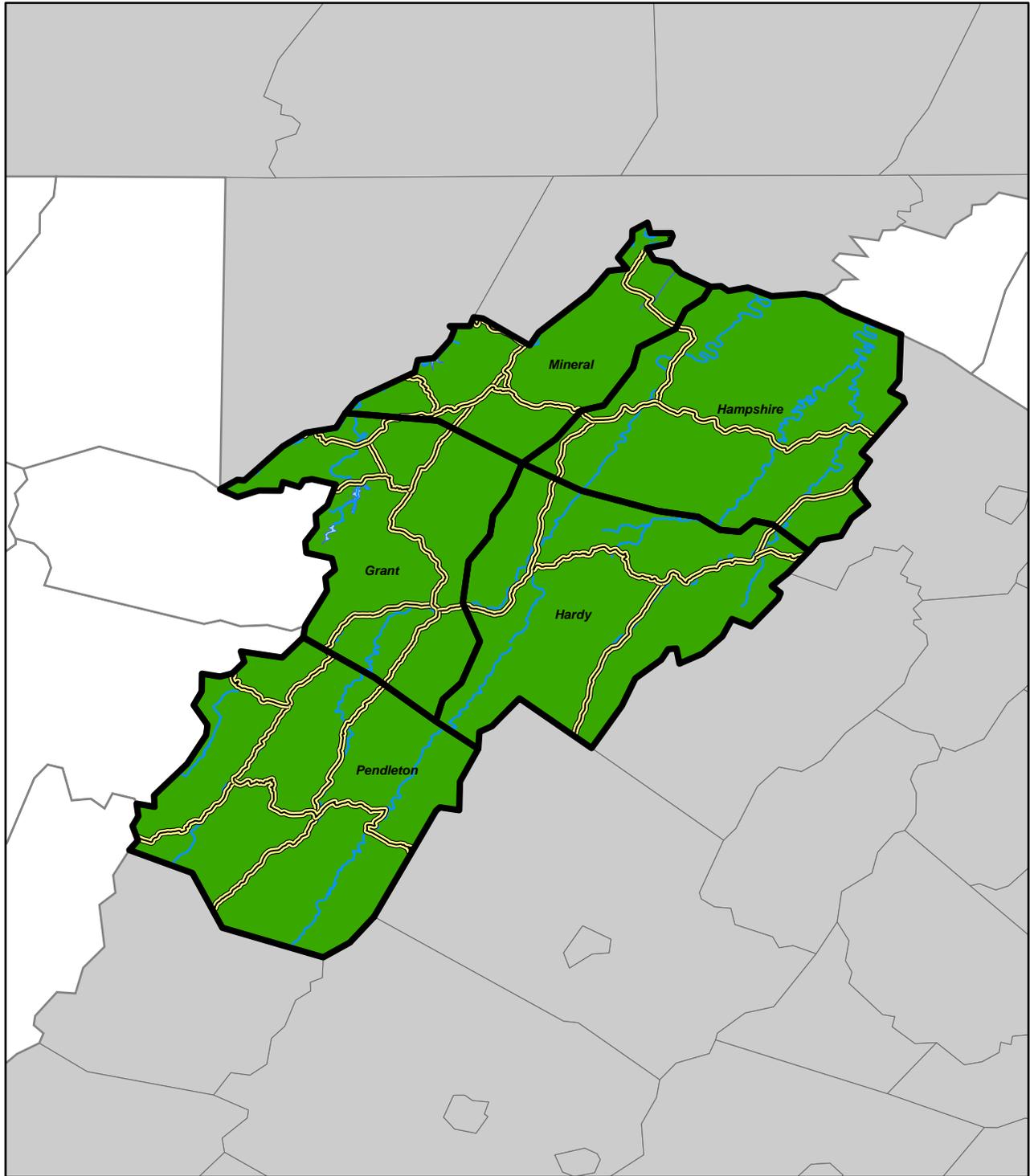
An epidemic can affect all parts of the region, but is more probable to occur in densely populated areas, particularly large, multi-unit residential developments. Epidemic situations can also spread rapidly through such congregate facilities as nursing homes and hospitals and even schools and colleges.

Epidemics can develop with little or no warning and quickly erode the capacity of local medical care providers. A fast developing epidemic can last several days and extend into several weeks. In some extreme cases, they can last for several months. An epidemic can occur at any time of the year, but the warm summer months, when bacteria and microorganism growth are at their highest, present the greatest risk.

Local health departments have taken many steps to ensure a base level of preparedness for epidemic and pandemic conditions. Initiatives surrounding general preparedness for Avian flu (beginning in 2006) and most recently for H1N1 (swine flu) in 2010 have led other local governments to create and adopt business continuity plans. Since numerous residents throughout the region travel and because groups/individuals from out of county (or state) frequently travel to the area’s destinations, the possibility does exist for novel strains to be introduced to the local population, thus validating epidemic/pandemic planning efforts. Additionally, the region is located in close proximity to high-density populations in Cumberland (MD), Harrisonburg (VA), and the National

Capital Region (NCR), which may lead to outbreaks near and, ultimately, in the area.

Additionally, it should also be noted that the region is one (1) of the major poultry-producing areas of the United States. Moorefield is the home to a large poultry manufacturing facility. As an example, a turkey farm in Pendleton County experienced an outbreak of Avian influenza some years ago that resulted in the euthanasia of approximately 26,000 birds. (Pendleton County contains 90 farms and 300 poultry houses.) Neighboring poultry industries also suffered as a result of Avian flu – specifically those in Virginia.



### Vulnerability to Epidemic

 Low Hazard

2.2.5: Flooding

Flooding is defined as a general temporary condition of partial or complete inundation of normally dry land areas from: overflow of inland or tidal waters; unusual and rapid accumulation of runoff of surface water from any source; mudflows; or the sudden collapse of shoreline land. A flash flood is a rapid flooding of low-lying areas, rivers, and streams that is caused by intense rainfall and is often associated with thunderstorms.

RESEARCH SOURCES

- NCDC Event Records
- Interviews with Local Officials

Period of Occurrence:	Potomac River – Primarily January through May (history shows incidents occurring year-round) Flash Flood – At any time depending on recent weather conditions Result of Dam Failure – At any time
Number of Events to Date (1985 – 2011):	42
Probability of Event:	Frequent
Warning Time:	River Flood – 3 to 5 days Flash Flood – Minutes to hours Dam Failure – None
Potential Impacts:	Impacts to human life, health, and public safety. Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, fire, damaged or destroyed critical facilities, and hazardous material releases. Can lead to economic losses such as unemployment, decreased land values and agrobusiness losses. Floodwaters are a public safety issue due to contaminants and pollutants.
Cause Injury or Death:	Injury and moderate risk of death
Potential Facility Shutdown:	Days to Weeks

HAZARD EFFECTS

Flooding is arguably the highest priority hazard in all five (5) counties throughout the region (as is the case in most of West Virginia). The counties are susceptible to flooding largely due to physical geography, which includes several rivers and creeks as well as varied topography. The worst floods usually occur when a river overflows its

banks. Periodic floods occur naturally on most rivers, forming an area known as a “floodplain”. With enough rainfall, the rivers and creeks will rise up to and over the floodplain, thus causing a flood.

Flash flooding is also a common concern throughout the region. Historical occurrences can indicate where flash flooding will strike, but it is somewhat more unpredictable than riverine flooding. Flash flooding can be a result of an overloaded storm water management system, a washed out creek bed, water rushing off of a hill or mountain, etc. In some cases, flash floods result in great damage because areas that are not in identified floodplains (and are thus not prepared for potential flooding) are affected.

#### DESCRIPTION OF EXISTING FLOOD HAZARD AND IDENTIFICATION OF FLOOD RISK

All of the Region 8 counties have an extensive history of flooding. Examples include the following.

- **Grant County:** The county experienced flooding events in both January and September of 1996. The areas that felt the most effects were Cabins and the Town of Bayard. Grant County, like many other areas in West Virginia, sufferance the most devastating flood of the past 40 years in 1985. Petersburg was significantly affected in 1985. A number of the deaths reported as a result of the 85 Flood occurred in Grant County.
- **Hampshire County:** In November, 1985, small stream and river flooding in the Potomac river basin affected Hampshire County. Individual assistance for Hampshire County following the November 1985 flood was as follows:
  - 55 SBA home loans approved - \$1,892,300
  - 11 SBA business loans approved - \$957,000
  - FEMA Temporary Housing – 122 assisted
  - 39 State Flood Assistance Program Grants - \$78,834.97
  - 75 Individual Family Grants - \$259,073.99

Additionally, FEMA provided \$145,051 to Hampshire County; \$79,300 to the City of Romney; \$4,500 to the Romney Fire Company; and \$3,313 to the Springfield Volunteer Fire Company in public assistance funds.

Two (2) large flooding events also occurred in 1996. The first was the result of snow melt and heavy rains. In Hampshire County 5 homes were destroyed and 15 were damaged. Numerous roads and one bridge sustained damages. The Springfield area was without water for several days until the National Guard provided a 3,500 gallon water tanker for the residents. Also, in September 1996 Hurricane Fran dropped 4 to 6 inches of rain across the already saturated Potomac Highlands. In Hampshire County, 240 homes were damaged, 13 single-family homes and 108 mobile homes were destroyed and 40 single-family homes received major damage.

A number of roadways commonly flood in Hampshire County. These include the following.

- Silas Milleson Road 28/5
  - Cliffside Road 28/5
  - Herriott Road 28/5
  - Buffalo Hollow Road 28/1
  - Taylor Road 3/7
  - Maple Landing on Rt. 3
  - Toll Bridge on Rt. 1
  - Arnold Stickley Road North 1/1
  - Foxes Hollow Road 50/4
  - Mack Road 7/5
  - River Road (Capon Bridge) Rt. 15
  - Branch to Kump Road 23/9
  - Gaston Road 45/7
  - Little Cacapon Road South Rt. 12
  - Christian Church Road. Rt. 13
  - Dillons Run Road 50/25
- 
- **Hardy County:** Like the other areas in the region, Hardy County experienced significant flooding in 1985 and 1996. Moorefield as well as the communities of Fisher and Lost River have frequently experienced flooding.

- **Mineral County:** The county was also noted as being heavily affected by events in 1985 and 1996. Isolated floods have affected the area in 2009, 2010, and 2011.
- **Pendleton County:** Pendleton County was another area that experienced a number of deaths as a result of the 1985 flood. Pendleton County was identified as one of the most devastated counties in the state. Fifty-eight (58) single-family homes and 130 mobile homes were totally destroyed. Eighty-six (86) single-family homes and 59 mobile homes received major damage and 214 single-family homes and 3 mobile homes received minor damages. Thirty-nine (39) businesses were destroyed or damaged. Eighteen (18) public buildings, 60 private bridges, 206 outbuildings, 51 barns, and 204 recreational vehicles received damage or were destroyed. Farmland damage was estimated at \$175 million. In January, 1996, heavy rain and melting snow caused small stream and river flooding across the region. Major problems for Pendleton County included water supply and the need for hay to feed cattle. However, in September, 1996, the county received a greater amount of damage thanks to the remnants of Hurricane Fran dropping between five (5) and six (6) inches of rain onto the already saturated Potomac Highlands. One hundred total homes were damaged, with one (1) single family home and 32 mobile homes being totally destroyed. Ten (10) West Virginia Counties, including the five (5) counties of the Potomac Highlands, were declared federal disaster areas by President Clinton. Additionally, during 2003, there were three (3) isolated floods in the county.

The table below lists the number of flooding events faced in the counties since 1985 as well as the reported damage and any injury/death information.

<b>Historical Flood Events in Region 8</b>				
<i>County</i>	<i>Number of Events</i>	<i>Reported Damage</i>	<i>Injuries</i>	<i>Deaths</i>
Grant	31	\$21,144,000	0	1
Hampshire	41	\$21,279,000	0	0
Hardy	36	\$31,570,000	2	0
Mineral	26	\$23,010,000	0	0
Pendleton	29	\$32,737,000	2	1
<b>TOTALS</b>	<b>166</b>	<b>\$129,730,000</b>	<b>4*</b>	<b>2*</b>

\*NOTE: NCDC records did **not** include the 1985 flood.

To better profile the type of impact flooding events could have on the region, Hazus reports were generated for 10-year, 25-year, and 50-year flood events in each of the region's counties. (\*NOTE: The full Hazus reports are included in Appendix 1.)

### 10-Year Flood Event

This type of flood event has a 10% chance of occurring in any single year (Source: *Wikipedia*). The following impacts, listed by county, are anticipated.

- Grant
  - Areas to the immediate southwest of Petersburg could experience up to \$5,000,000 in damage.
  - Areas to the immediate east of Petersburg toward Welton could experience up to \$5,000,000 in damage.
  - The Cabins area could experience up to \$5,000,000 in damage.
  - Areas from approximately Hopeville Gap south of SR 28 toward Cabins and south along the South Branch of the Potomac River could experience up to \$500,000 in damage.
  - Areas between US 220, North Mill Creek, and Mill Creek could experience up to \$500,000 in damage.
  - Areas near Dorcas could experience up to \$500,000 in damage.
  - The Gorman area could experience up to \$500,000 in damage.
  
- Hampshire
  - The following areas could experience up to \$500,000 in damage.
    - Green Spring
    - Little Cacapon, Levels, Neals Run
    - South of the railroad grade along the Cacapon River clear south to Capon Bridge
    - Shanks area
    - Bubbling Spring
    - Yellow Spring
    - Capon Springs

- The following areas could experience up to \$1,000,000 in damage.
  - Capon Lake
  - Intermont
  - Sector
  
- The Augusta area could experience up to \$5,000,000 in damage.
  
- Hardy
  - Downtown Moorefield could see losses in excess of \$5,000,000.
  - Areas between the South Branch of the Potomac River and Hutton Run could experience up to \$1,000,000 in damage.
  - Areas south of US 220 and Moorefield and west of the South Fork of the South Branch could experience up to \$500,000 in damage.
  - The Peru area could experience up to \$1,000,000 in damage.
  - The Baker area could experience up to \$1,000,000 in damage.
  - Areas to the north of Wardensville could experience up to \$500,000 in damage.
  
- Mineral
  - Areas along the eastern side of Patterson Creek from Headsville south could see up to \$500,000 in damage.
  - Areas in Burlington and on the west side of Patterson Creek near Headsville could see up to \$1,000,000 in damage.
  - The New Creek area could see up to \$500,000 in damage.
  - Portions of Keyser could see up to \$1,000,000 in damage.
  - Areas along Patterson Creek from Fort Ashby north to the state line could see up to \$1,000,000 in damage.
  - The Carpendale, Ridgeley, and Wiley Ford areas could see as much as \$5,000,000 in damage.

- Pendleton
  - The following areas could experience up to \$500,000 in damage.
    - Franklin
    - Onego
    - Riverton
    - Seneca Rocks
  
  - The following areas could experience up to \$1,000,000 in damage.
    - Franklin (near the community building)
    - Ruddle
    - Upper Tract

### 25-Year Flood Event

Twenty-five (25)-year floods have a 4% chance of occurring in any single year. The following impacts, listed by county, are anticipated.

- Grant
  - Areas to the immediate southwest of Petersburg could experience up to \$5,000,000 in damage.
  - Areas to the immediate east of Petersburg toward Welton could experience up to \$5,000,000 in damage.
  - The Cabins area could experience up to \$5,000,000 in damage.
  - Areas along US 220 and the North Fork of the South Branch River could experience up to \$500,000 in damage.
  - Areas between US 220, North Mill Creek, and Mill Creek could experience up to \$500,000 in damage.
  - The communities of Pansy and Landes could experience up to \$500,000 in damage.
  - Areas near Dorcas could experience up to \$500,000 in damage.
  - The Gorman area could experience up to \$500,000 in damage.

- Hampshire
  - The following areas could experience up to \$500,000 in damage.
    - Green Spring
    - Little Cacapon, Levels, Neals Run
    - South of the railroad grade along the Cacapon River clear south to Capon Bridge
    - Shanks area
    - Yellow Spring
    - Capon Springs
  
  - The following areas could experience up to \$1,000,000 in damage.
    - Areas to the immediate south of Augusta
    - Communities along the northern-most ebbs of the Cacapon River
    - Bubbling Spring
    - Capon Lake
    - Intermont
    - Sector
  
  - The Augusta area could experience up to \$5,000,000 in damage.
  
- Hardy
  - Downtown Moorefield could see losses in excess of \$5,000,000.
  - Areas between US 220/SR 55 and the South Branch could see losses of \$5,000,000.
  - Areas between the South Branch of the Potomac River and Hutton Run could experience up to \$1,000,000 in damage.
  - Areas south of US 220 and Moorefield and west of the South Fork of the South Branch could experience up to \$500,000 in damage.
  - The Peru area could experience up to \$5,000,000 in damage.
  - The Baker area could experience up to \$1,000,000 in damage.
  - Areas to the north of Wardensville could experience up to \$500,000 in damage.

- Mineral
  - Areas along the eastern side of Patterson Creek from Headsville south could see up to \$500,000 in damage.
  - Areas in Burlington and on the west side of Patterson Creek near Headsville could see up to \$1,000,000 in damage.
  - The New Creek area could see up to \$500,000 in damage.
  - Portions of Keyser could see up to \$1,000,000 in damage.
  - Areas along Patterson Creek from Fort Ashby north to the state line could see up to \$1,000,000 in damage.
  - The Fort Ashby area could experience up to \$5,000,000 in damage.
  - The Ridgeley and Wiley Ford areas could see as much as \$5,000,000 in damage.
  - The Carpendale area could experience in excess of \$5,000,000 in damage.
  
- Pendleton
  - The following areas could experience up to \$500,000 in damage.
    - Areas between the South Branch and US 220 between Franklin and Ruddle
    - Franklin
    - Onego
    - Riverton (majority of)
    - Seneca Rocks
  
  - The following areas could experience up to \$1,000,000 in damage.
    - Franklin (near the community building)
    - Riverton (small portions)
    - Ruddle
    - Upper Tract

### 50-Year Flood Event

These types of events have a 2% chance of occurring in any single year. The following impacts, listed by county, are anticipated.

- Grant
  - Areas to the immediate southwest of Petersburg could experience up to \$5,000,000 in damage.
  - Areas to the immediate east of Petersburg toward Welton could experience up to \$5,000,000 in damage.
  - The Cabins area could experience up to \$5,000,000 in damage.
  - Areas along US 220 and the North Fork of the South Branch River could experience up to \$500,000 in damage.
  - Areas between US 220, North Mill Creek, and Mill Creek could experience up to \$500,000 in damage.
  - The communities of Pansy and Landes could experience up to \$500,000 in damage.
  - Areas along Lunice Creek between Arthur and Maysville could experience up to \$500,000 in damage.
  - Areas near Dorcas could experience up to \$500,000 in damage.
  - The Gorman area could experience up to \$500,000 in damage.
  - Areas just north of Stoney River could experience up to \$1,000,000 in damage.
  
- Hampshire
  - The following areas could experience up to \$500,000 in damage.
    - Green Spring
    - Little Cacapon, Levels, Neals Run
    - South of the railroad grade along the Cacapon River clear south to Capon Bridge
    - Shanks area
    - Yellow Spring
    - Capon Springs

- The following areas could experience up to \$1,000,000 in damage.
  - Areas to the immediate south of Augusta
  - Bubbling Spring
  - Capon Lake
  - Intermont
  - Sector
  
- The following areas could experience up to \$5,000,000 in damage.
  - Communities along the northern-most ebbs of the Cacapon River
  - Augusta
  
- Hardy
  - Downtown Moorefield could see losses in excess of \$5,000,000.
  - Areas between US 220/SR 55 and the South Branch could see losses of \$5,000,000.
  - Areas between the South Branch of the Potomac River and Hutton Run could experience up to \$5,000,000 in damage.
  - Areas south of US 220 and Moorefield and west of the South Fork of the South Branch could experience up to \$500,000 in damage.
  - The Peru area could experience up to \$5,000,000 in damage.
  - The Baker area could experience up to \$1,000,000 in damage.
  - Areas to the north of Wardensville could experience up to \$500,000 in damage.
  
- Mineral
  - Areas along the eastern side of Patterson Creek from Headsville south could see up to \$500,000 in damage.
  - Areas in Burlington and on the west side of Patterson Creek near Headsville could see up to \$1,000,000 in damage.
  - The New Creek area could see up to \$500,000 in damage.
  - Portions of Keyser could see up to \$1,000,000 in damage.
  - Areas along Patterson Creek from Fort Ashby north to the state line could see up to \$1,000,000 in damage.
  - The Fort Ashby area could experience up to \$5,000,000 in damage.

- The Ridgeley and Wiley Ford areas could see as much as \$5,000,000 in damage.
- The Carpendale area could experience in excess of \$5,000,000 in damage.
- Pendleton
  - The following areas could experience up to \$500,000 in damage.
    - Areas between the South Branch and US 220 between Franklin and Ruddle
    - Franklin
    - Onego
    - Riverton (majority of)
    - Seneca Rocks
  - The following areas could experience up to \$1,000,000 in damage.
    - Franklin (near the community building)
    - Riverton (small portions)
    - Ruddle
    - Upper Tract

Hazus reports were also compiled for the 100-year flood event, which is a flood event with a 1% chance of being equaled or exceeded in any single year (*Source: Wikipedia*). If an event, though, were to be classified as a 100-year flood in any county, it is likely that the event itself would be regional and affect, at least minimally, other nearby counties. The following estimates apply to a 100-year flood.

- Grant County
  - Areas to the immediate southwest of Petersburg could experience up to \$5,000,000 in damage.
  - Areas to the immediate east of Petersburg toward Welton could experience up to \$5,000,000 in damage.
  - The Cabins area could experience up to \$5,000,000 in damage.
  - Areas along US 220 and the North Fork of the South Branch River could experience up to \$500,000 in damage.

- Areas between US 220, North Mill Creek, and Mill Creek could experience up to \$500,000 in damage.
- The communities of Pansy and Landes could experience up to \$500,000 in damage.
- Areas along Lunice Creek between Arthur and Maysville could experience up to \$500,000 in damage.
- Areas near Dorcas could experience up to \$500,000 in damage.
- The Rough Run area could experience up to \$1,000,000 in damage.
- The Gormanian area could experience up to \$500,000 in damage.
- Areas just north of Stoney River could experience up to \$1,000,000 in damage.
  
- Hampshire County
  - The following areas could experience up to \$500,000 in damage.
    - Green Spring
    - Little Cacapon, Levels, Neals Run
    - South of the railroad grade along the Cacapon River clear south to Capon Bridge
    - Shanks area
    - Yellow Spring
    - Capon Springs
  
  - The following areas could experience up to \$1,000,000 in damage.
    - Areas to the immediate south of Augusta
    - Bubbling Spring
    - Capon Lake
    - Intermont
  
  - The following areas could experience up to \$5,000,000 in damage.
    - Communities along the northern-most ebbs of the Cacapon River
    - Augusta
    - Sector

- Hardy County
  - Downtown Moorefield could see losses in excess of \$5,000,000.
  - Areas between US 220/SR 55 and the South Branch could see losses of \$5,000,000.
  - Areas between the South Branch of the Potomac River and Hutton Run could experience up to \$5,000,000 in damage.
  - Areas south of US 220 and Moorefield and west of the South Fork of the South Branch could experience up to \$500,000 in damage.
  - The Peru area could experience up to \$5,000,000 in damage.
  - The Baker area could experience up to \$1,000,000 in damage.
  - Areas to the north of Wardensville could experience up to \$500,000 in damage.
  - Areas between SR 259 and the Cacapon River north of Wardensville could see up to \$1,000,000 in damage.
  - The Lost River areas could see up to \$500,000 in damage.
  
- Mineral County
  - Areas along the eastern side of Patterson Creek from Headsville south could see up to \$500,000 in damage.
  - Areas in Burlington and on the west side of Patterson Creek near Headsville could see up to \$1,000,000 in damage.
  - The New Creek area could see up to \$500,000 in damage.
  - Portions of Keyser could see up to \$1,000,000 in damage.
  - Areas along Patterson Creek from Fort Ashby north to the state line could see up to \$1,000,000 in damage.
  - The Fort Ashby area could experience up to \$5,000,000 in damage.
  - The Ridgeley and Wiley Ford areas could see as much as \$5,000,000 in damage.
  - The Carpendale area could experience in excess of \$5,000,000 in damage.

- Pendleton County
  - The following areas could experience up to \$500,000 in damage.
    - Areas between the South Branch and US 220 between Franklin and Ruddle
    - Franklin
    - Onego
    - Riverton (majority of)
    - Seneca Rocks
  - The following areas could experience up to \$1,000,000 in damage.
    - Franklin (near the community building)
    - Riverton (small portions)
    - Ruddle
    - Upper Tract

#### REPETITIVE LOSS PROPERTIES

Several communities see repeated flooding problems. Some even contain a number of properties that have been flooded and repaired multiple times. These properties are referred to as “Repetitive Loss” (RL) properties. Actual RL listings are protected by privacy laws because of the presence of names, addresses, losses, etc. These properties, though, can be depicted in this document by type (i.e., single family, 2-4 family, etc.). To better illustrate areas with repeated flooding problems, the *general* areas where these properties are located is also listed.

- **Capon Bridge:** 4 single family properties
- **Grant County:** 6 total properties (3 each – single family, non-resident)
- **Hampshire County:** 33 total properties
  - 32 single family
  - 1 Other residential
- **Hardy County:** 2 total properties (1 each – single family, non-resident)

- **Keyser:** 15 total properties
  - 11 single family
  - 1 “assmd” condo
  - 2 2-4 family
  - 1 other residential
  
- **Mineral County:** 7 total properties (6 single family, 1 non-resident)
- **Moorefield:** 2 total properties (1 each – single family, non-resident)
- **Pendleton County:** 6 total properties (5 single family, 1 non-resident)
- **Petersburg:** 10 total properties
  - 5 single family
  - 1 “assmd” condo
  - 1 other residential
  - 3 non-resident

#### NFIP COMPLIANCE

The following local governments in Region 8 are participants in the National Flood Insurance Program (NFIP). (The date the jurisdiction joined the NFIP is included in parentheses.)

- Town of Bayard (August, 1979)
- Town of Capon Bridge (April, 1988)
- Town of Franklin (August, 1989)
- Grant County (August, 1987)
- Hampshire County (August, 1987)
- Hardy County (June, 1985)
- City of Keyser (September, 1991)
- Mineral County (September, 1991)
- Town of Moorefield (December, 1990)
- Pendleton County (August, 1989)
- Town of Petersburg (May, 1990)
- City of Piedmont (September, 1991)
- Town of Romney (June, 1988)
- Town of Wardensville (August, 1987)

Each jurisdiction has designated an “NFIP Coordinator”, sometimes referred to as the “Floodplain Manager”. This individual maintains the jurisdiction’s floodplain ordinance and ensures that development is compliant with that ordinance (and, consequently, the NFIP). The operations of the floodplain offices in Region 8 are similar from jurisdiction to jurisdiction (*Sources*: Interviews with floodplain managers, existing mitigation plans). The Region 8 Planning & Development Council (PDC) maintains contact information for all 17 floodplain managers as well as exact lists of the services they provide.

Generally, all provide three (3) basic services: floodplain identification, floodplain management, and outreach.

#### Floodplain Identification

Throughout the region, the floodplain managers are the primary local contact for floodplain mapping. In many cases, they are responsible for using these maps to determine whether structures or proposed structures/developments are either in or out of the floodplain. Floodplain managers can provide information as to the “zone” (e.g., A, AE, etc.) a proposed development is located. Zone designations can affect insurance policies and rates.

Floodplain managers work with surveyors and engineers to assist the public with elevation certificates. This assistance includes putting those in need in contact with appropriate surveyors, providing access to certain forms (e.g., letter of map amendment, etc.), etc. Floodplain managers may also serve as a liaison with the Federal Emergency Management Agency (FEMA) by collecting and submitting completed certificates.

Finally, on an as-needed basis, floodplain managers review updates to the flood maps themselves. This type of service is done to varying degrees throughout the region. As a follow up to map review, floodplain managers work with their governing body to update the floodplain ordinance appropriately. In some jurisdictions, such maintenance is a joint approach. For example, in Pendleton County, the Office of Emergency Management (PCOEM) and the County Commission support the local request for map updates. Additionally, the PCOEM and Commission assists with local floodplain determinations; the PCOEM shares new and technical scientific data that could result in map revisions with FEMA within six (6) months of creation or identification of new data. Other jurisdictions perform similar functions.

It is significant to note that all counties in Region 8 have adopted the most recent

versions of the Flood Insurance Rate Map (FIRM) mapping for their jurisdictions.

### Floodplain Management

In many ways, “floodplain management” is difficult to define. All floodplain managers work closely with their governing bodies to ensure that the floodplain ordinance is current and viable. Floodplain managers are responsible for enforcing the floodplain ordinance (usually through the floodplain identification tasks discussed above). Floodplain managers also keep records of all maps and certificates for their jurisdictions.

The coordinators for the five (5) counties in the region also often provide support to municipal floodplain coordinators. County and other municipal floodplain coordinators often support these municipalities with advice, technical assistance, quality control (i.e., a “second opinion”), etc. Further, many of the municipal jurisdictions throughout the region are small with part-time or volunteer government staff. County coordinators can support these efforts as well. Municipalities themselves, though, are responsible for providing the “ultimate say” for cases within their jurisdiction.

Municipal floodplain management is also closely related to the building permitting process. Many municipal coordinators indicated that determining whether a proposed project was in the floodplain was a part of their approval process.

### Outreach

Finally, the floodplain coordinators serve as the Points of Contact (POCs) for their jurisdiction’s residents regarding floodplain regulations. All coordinators indicated that they maintain the appropriate forms, contact lists for local surveyors and engineers, the most recent version of FIRM or D-FIRM information, etc. Educating the community about the value of flood insurance also falls under this category.

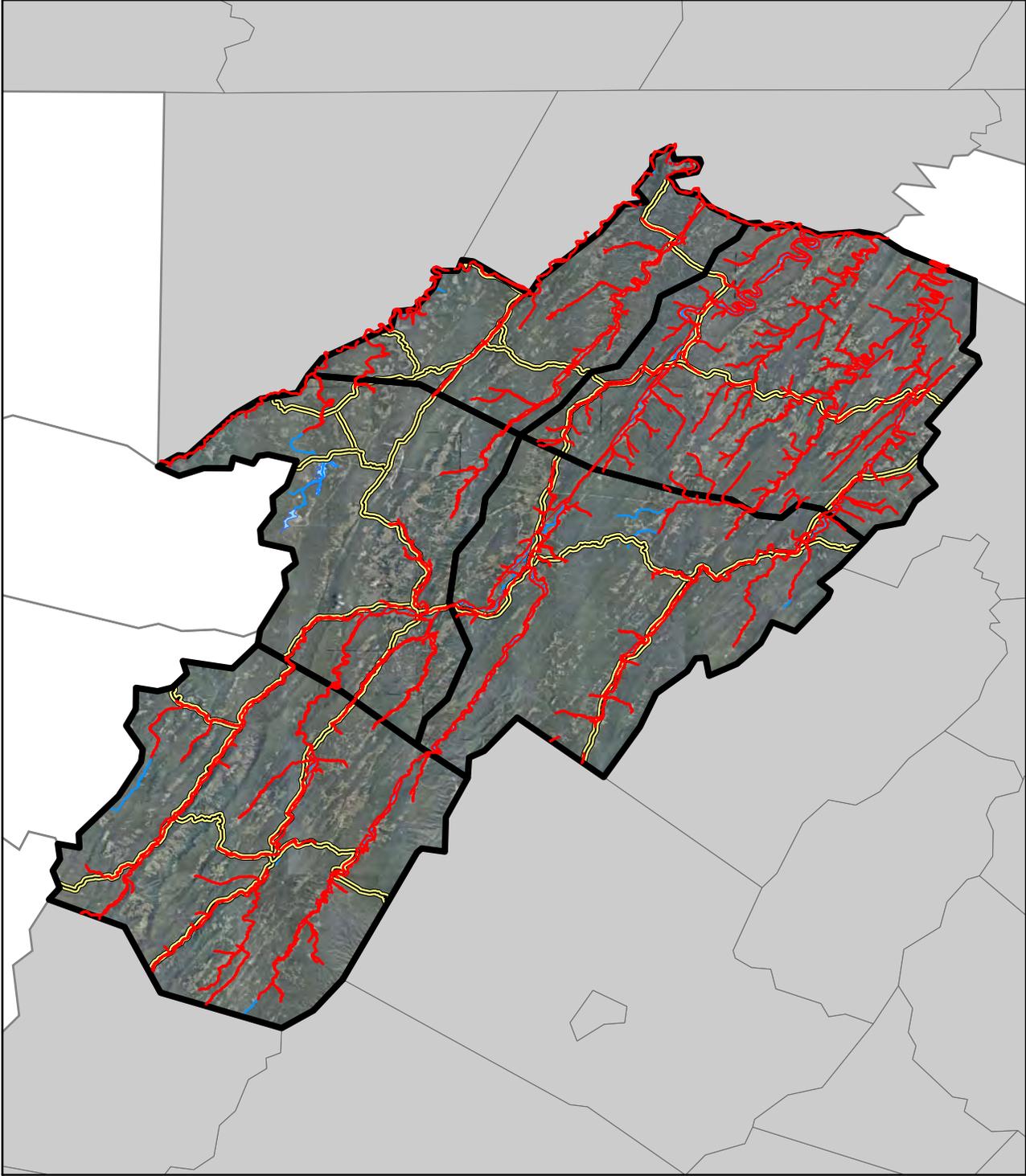
VULNERABLE STRUCTURES

Vulnerable Structures – Flooding								
County	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Utilities
Grant	318	5	0	33	0	0	0	3
Hampshire	2500	50	1	400	15	2	2	10
Hardy	646	13	0	51	1	0	0	6
Mineral	652	9	0	25	1	0	0	12
Pendleton	411	6	0	120	4	0	0	4
<b>TOTALS</b>	<b>4527</b>	<b>83</b>	<b>1</b>	<b>629</b>	<b>21</b>	<b>2</b>	<b>2</b>	<b>35</b>

**LOSS ESTIMATES:** Loosely based on a 100-year flood, the counties in Region 8 could experience the following aggregate losses.

- **Grant:** \$36,166,031
- **Hampshire:** \$281,600,644
- **Hardy:** \$93,666,558
- **Mineral:** \$84,223,615
- **Pendleton:** \$54,977,892

\*NOTE: Detailed flood mapping for each county is maintained by each jurisdiction in Region 8. Identification of floodplain areas on those maps is based on FIRM data (D-FIRM, if available) produced by the National Flood Insurance Program NFIP. Additional resources, such as the West Virginia Flood Hazard Determination Tool (<http://www.mapwv.gov/flood/>) can also be used. See the regional flood map that is appended to this document for a general, graphic depiction of flood risk in Region 8.



**Vulnerability to Flooding**

 100 Year Flood Plain

2.2.6: Hailstorm

Hail is a form of precipitation which occurs when freezing water in thunderstorm type clouds accumulates in layers around an icy core. When this event takes place, balls or irregular lumps of ice are created. On average, hail can be from 5mm to 50mm in diameter.

RESEARCH SOURCES

- NCDC Event Records

Period of Occurrence:	At any time
Number of Events to Date (1962 – 2011):	31
Probability of Event:	Likely – Usually associated with severe thunderstorms
Warning Time:	Minutes to hours
Potential Impacts:	Large hail can minimally damage property (facilities) as well as crops
Cause Injury or Death:	Injury
Potential Facility Shutdown:	Minimal

HAZARD EFFECTS

When hail occurs, it can cause damage by battering crops, structures, automobiles, and transportation systems. When hailstorms are large, especially when combined with high winds, damage can be somewhat extensive. Hailstorms are more common in elevated areas, such as the mountains, than tropical areas since locations such as mountains are closer to the bottom of thunderstorms. In mountainous areas, the falling hail has less time to melt before touching the ground. The counties in Region 8 are susceptible to hailstorms due to their proximity in the mountainous portions of eastern West Virginia.

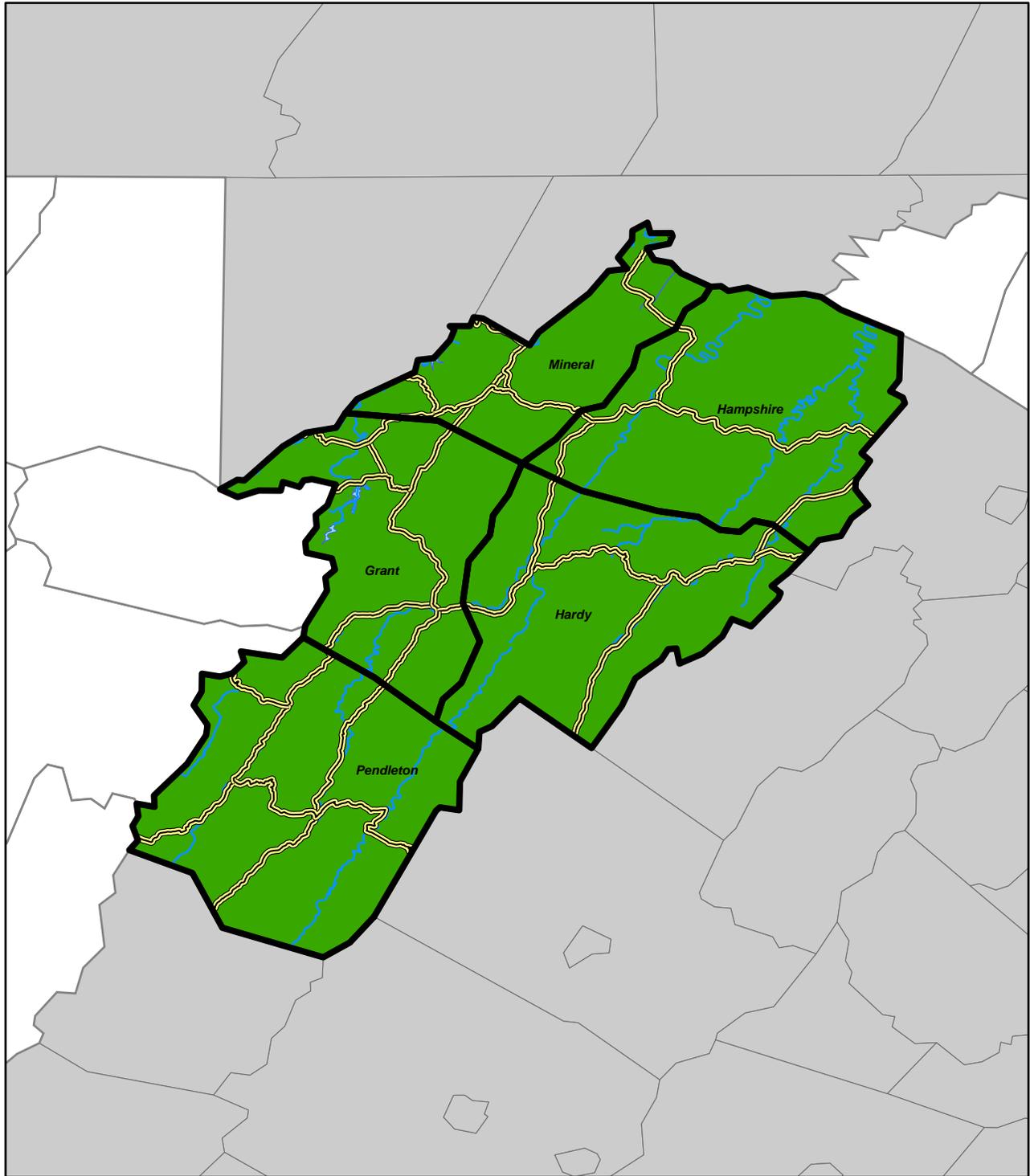
Hail is a relatively minor natural hazard in all parts of the region. It has been included in this plan by virtue of the frequent occurrences. All parts of the region are affected equally. Even with these frequent occurrences, losses are small, especially to critical facilities and other infrastructure. Much like minor thunderstorms, hailstorms rarely slow down the daily lives of the residents in the region. If their vehicles or homes are damaged, they usually claim those damages on their insurance policies or repair the damage themselves.

Historical occurrences include the following. Hampshire County, for example, has not experienced a hailstorm that caused any reported property damage two (2) decades. Total, countywide property damage was never in excess of \$5,000 (according to the

NCDC reports). Crop damage, though, rose to nearly \$50,000 as a result of a June 1998 hailstorm in the Green Spring area. These reported storms contained hail ranging from 0.75" to 2.75" in diameter.

#### LOSS ESTIMATES

As a minor hazard, potential losses as a result of hail are small, even though all structures in the region can be said to be at risk of hail damage. The average losses per worst-case scenario hail event could total \$107,078. If all counties were damaged to the "worst-case scenario" level, losses could be as much as \$535,392. \*NOTE: Loss estimates are listed at these levels because of the confusion usually results in damage from hailstorms (as directly from hail or as part of the thunderstorm producing hail).



## Vulnerability to Hail Storm

 Low Hazard

2.2.7: Hazardous Material Incident

A technological hazard refers to the origins of incidents that can arise from human activities such as the manufacture, transportation, storage, and use of hazardous materials.

RESEARCH SOURCES

- Annual Tier II filings
- Pendleton LEPC  
OGs
- Pendleton, Mineral  
CFS
- Interviews with  
Local Officials

Period of Occurrence:	At any time
Number of Events to Date (2003 – 2011):	8
Probability of Event:	Infrequent
Warning Time:	None
Potential Impacts:	Potential loss of human life, economic loss, environmental damage
Cause Injury or Death:	Injury and risk of multiple deaths
Potential Facility Shutdown:	Days to weeks

HAZARD EFFECTS

The manufacture, storage, transportation, and use of hazardous materials can become a hazard if an accident occurs. Hazardous material incidents typically happen in one (1) of two (2) ways: fixed facility releases and/or transportation accidents. The major difference between the two is that it is reasonably possible to identify and prepare for a fixed facility incident because laws require those facilities to notify state and local authorities of what materials are being used, stored, and/or produced at that facility.

Transportation incidents are substantially more difficult for which to prepare, however, because it is difficult to determine what material(s) could be involved until the accident actually happens. Information is routinely compiled on the locations of facilities that store hazardous materials. Further, the US Department of Transportation (USDOT) estimates that the vast majority of hazardous material incidents occur during the transport phase.

## HAZARD PROFILE

All counties in Region 8 contain “covered facilities” that report the use and/or storage of hazardous materials to the appropriate county Local Emergency Planning Committee (LEPC). The following are approximate facility counts for each county (*Source: Local LEPCs*):

- **Grant:** 15\*
- **Hampshire:** 11
- **Hardy:** 15\*
- **Mineral:** 18
- **Pendleton:** 19

\*NOTE: “Star” denotes estimated numbers.

It could be easy to predict the location of fixed facility hazardous material incidents. The probability of such occurrences, though, is relatively low. Should an event occur, many facilities have internal response protocols to contain the release.

The map below depicts high and moderate risk areas for transportation hazardous material incidents throughout the region. The red bands roughly follow the paths of US 33, 50, and 220 and represent high risk areas. The yellow bands following SR 28, SR 46, SR 55, and SR 93 represent moderate transportation hazmat hazards. According to commodity flow studies completed in Mineral and Pendleton Counties, materials from a number of hazard classes are transported through the region. For example, a high percentage of flammable liquids and corrosives are transported through Mineral County. Flammable and non-flammable gases, flammable liquids, and corrosives were also transported through Pendleton County. Further, the presence of the rail industry in a number of Mineral County communities could add to the hazardous material risk. According to the county’s flow study, flammable liquids, toxic materials, and corrosives are transported via rail, including four (4) “extremely hazardous substances” as denoted by the US Environmental Protection Agency (USEPA): chlorine, environmentally hazardous substances, sulfuric acid, and sulfuric acid spent.

All of the hazardous material incidents reported since 2003 occurred in Pendleton County. (NOTE: This does not mean that other incidents did not occur; these were the only ones reported.) These events included the following.

- **11/10/04:** Hazmat diesel spill in the Town of Franklin at US 33 and US 220 intersection

- **5/18/2004:** Hazard incident US 220 South at Kimble Lawn and Garden. Truck having 32,000 pounds of Hercon 80
- **8/26/2004:** Hazmat incident Soft Trac Plant in Upper Tract Industrial Park leaking drums of clear seal 300 concrete sealer behind the building
- **7/2/2004:** Tractor trainer roll-over Allegheny Mountain (US 33). Hazmat clean-up 50,000 pounds Geon Plastic Pellets
- **4/11/2006:** Tractor trailer roll-over Allegheny Mountain (US 33)
- **4/15/2007:** Hazmat tractor trailer roll-over Allegheny Mountain on US 33. Fifty (50) 55-gallon drums of Class 3 flammable liquid containing cyanide were released
- **3/8/2008:** Hazmat possible satellite re-entry plan carrying 1,000 pounds titanium and a propellant tank with 1,000 pounds frozen hydrazine
- **7/16/2008:** Tractor trailer roll-over North Mountain (US 33)

#### VULNERABLE STRUCTURES

Vulnerable Structures – Hazardous Material Incident								
County	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Utilities
Grant	1273	11	1	24	1	3	1	4
Hampshire	3500	200	10	225	15	7	3	10
Hardy	2827	76	1	51	13	4	3	6
Mineral	5216	277	11	25	4	1	4	12
Pendleton	3849	107	4	150	33	0	5	4
<b>TOTALS</b>	<b>16665</b>	<b>671</b>	<b>27</b>	<b>475</b>	<b>66</b>	<b>15</b>	<b>16</b>	<b>36</b>

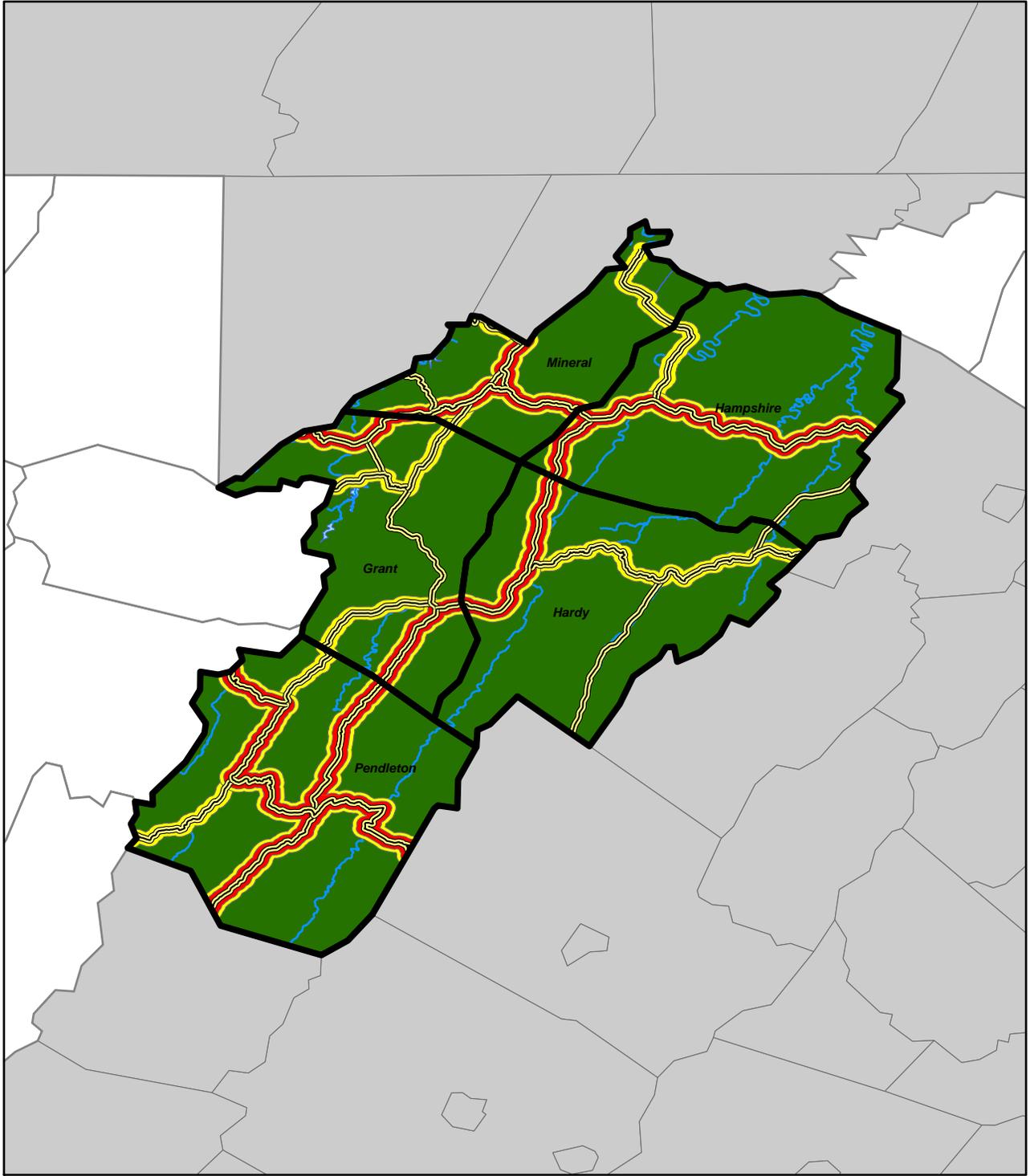
#### LOSS ESTIMATES

In general, due to the higher number of covered facilities and the presence of major thoroughfares, Mineral and Hampshire Counties are at a higher risk from hazardous materials than Grant, Hardy, and Pendleton Counties. Loss estimates, though, should be done for all five (5) counties given the presence of covered facilities (who will likely have materials shipped to or from their facility).

In an effort to assist jurisdictional understanding of risks and implementation of

strategies, such estimates were done for each county; the following table reflects those efforts. These are WCS estimates and were organized by county because hazardous material incidents are site-specific hazards.

<b>Estimated Hazardous Material Losses</b>	
<i>County</i>	<i>Loss Estimate</i>
Grant	\$140,995,048
Hampshire	\$379,088,346
Hardy	\$389,709,557
Mineral	\$616,652,999
Pendleton	\$452,754,189
<b>TOTALS</b>	<b>\$1,979,200,139</b>



**Vulnerability to Hazmat**

	High Hazard		Moderate Hazard		Low Hazard
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2.2.8: Land Subsidence

Land subsidence refers to any failures in the ground that cause collapses in the earth's surface.

RESEARCH SOURCES

- Interviews with Local Officials
- USGS Landslide Overview Map
- Internet Research (<http://www.nationalatlas.gov>)

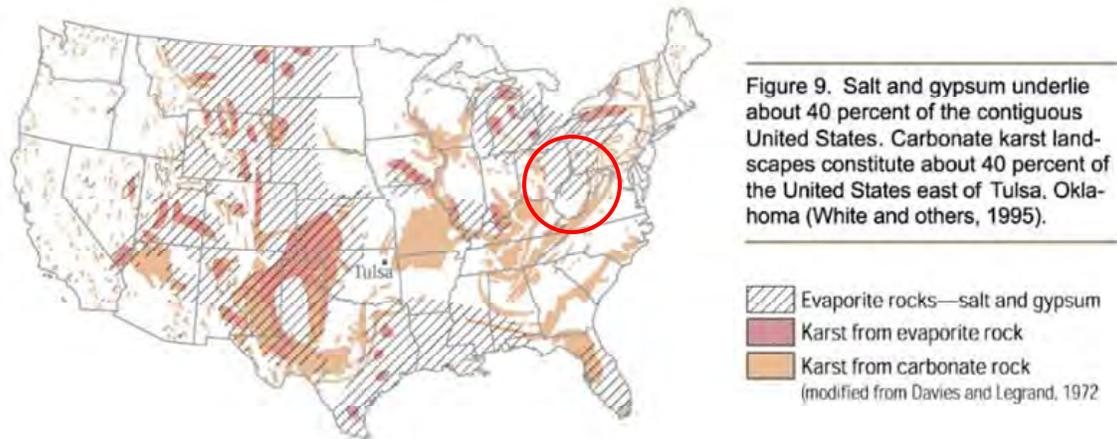
Period of Occurrence:	At any time – Chance of occurrence increases following long periods of heavy rain, snowmelt, or near construction activity
Number of Events to Date (2003 – 2011):	0
Probability of Event:	Infrequent
Warning Time:	Weeks to months – Some instances of land subsidence can occur quickly without warning, but often in the context of other storm events.
Potential Impacts:	Economic losses such as decreased land values, agrobusiness losses, disruption of utility and transportation systems, and costs for any litigation. May cause geological movement, causing infrastructure damages ranging from minimal to severe.
Cause Injury or Death:	Injury
Potential Facility Shutdown:	Days to weeks

HAZARD EFFECTS

Land subsidence hazards include: landslides (a wide range of earth movement such as rock falls), debris flow (e.g., mudslides and avalanches), and expansive soils (which is the swelling and sinking of soil). Each of these hazards involves ground movement in or on the earth's surface. These hazards can be caused by natural processes such as the dissolving of limestone underground, earthquakes, or volcanic activity. Land subsidence hazards can also occur as a result of human actions such as the withdrawal of subsurface fluids or underground mining; unplanned commercial, residential or industrial developments; roadway construction; etc.

## HAZARD PROFILE

Most of Region 8's counties lie on a geological formation containing evaporate rocks such as salt and gypsum. (The map below demonstrates the presence of "evaporite rocks" in West Virginia and roughly throughout the Region 8 area.) The southern-most portions of the region also contain karst formations. These southern-most



portions contain a number of underground caves that could collapse, causing subsidence on top of the ground. Many portions of the region have been undermined, which could also result in subsidence. As a result, the entire region appears susceptible to subsidence, but it should be noted that the type of subsidence could vary. According to [nationalatlas.gov](http://nationalatlas.gov), sink holes and other subsidence are not predicted to be extensive in the areas of West Virginia containing these formations.

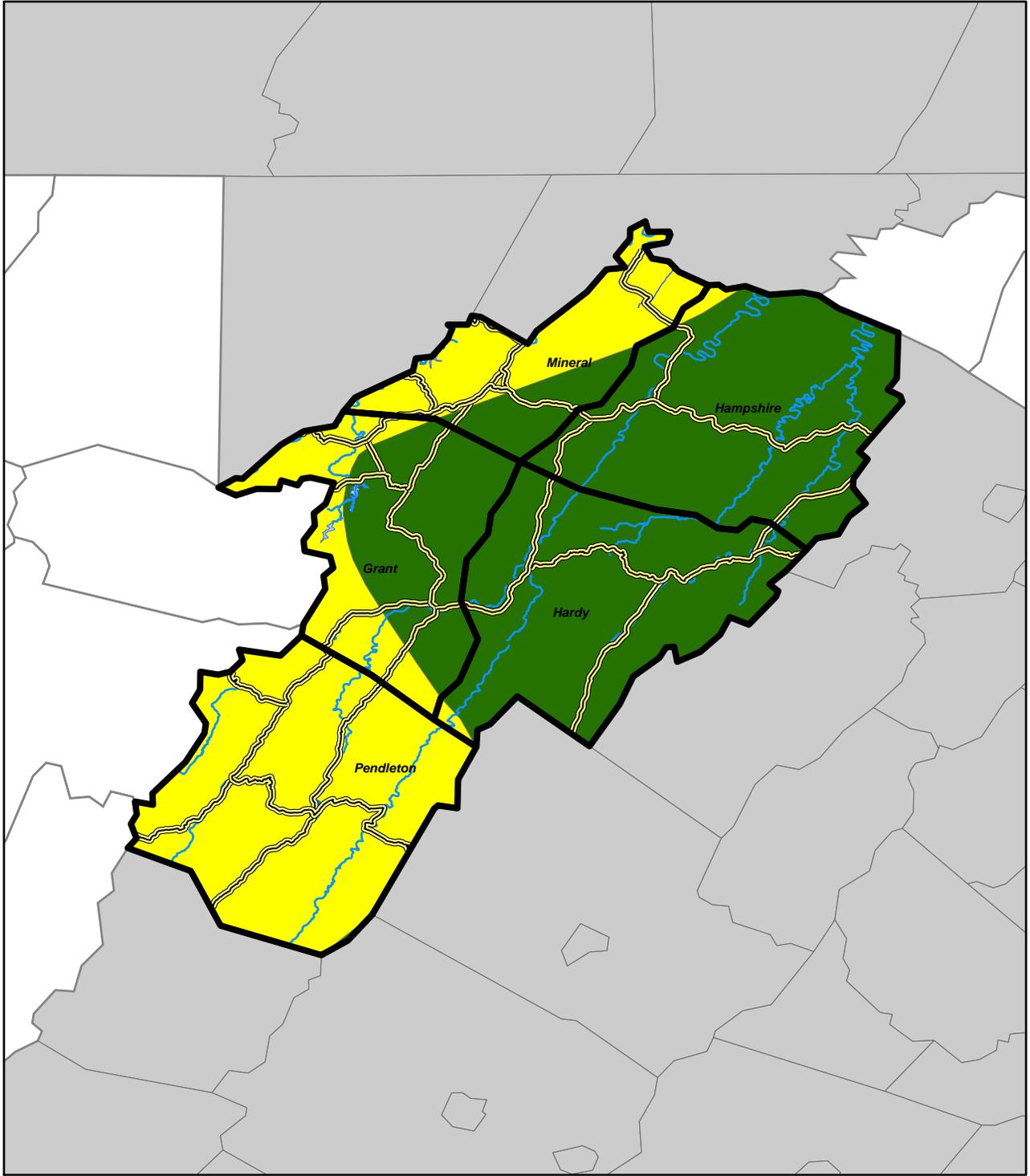
Fortunately, most counties in the region have not reported significant numbers of historical land subsidence occurrences. Most slippage is a result of other hazards, such as heavy rains. Other instances of landslides result from construction activities.

VULNERABLE STRUCTURES

Vulnerable Structures – Land Subsidence								
County	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Utilities
Grant	1273	23	0	155	8	2	1	1
Hampshire	12511	364	10	677	46	7	10	15
Hardy	8078	254	8	514	37	7	8	6
Mineral	6520	346	11	247	20	11	28	9
Pendleton	5132	143	4	600	44	26	7	4
<b>TOTALS</b>	<b>33514</b>	<b>1130</b>	<b>33</b>	<b>2193</b>	<b>155</b>	<b>53</b>	<b>54</b>	<b>35</b>

LOSS ESTIMATES

Land subsidence can be a gradually-occurring hazard or it can occur rapidly. In either case, repairing damages as a result of subsidence can be costly. Structural foundations can be damaged; transportation and other infrastructure can be damaged; etc. Consequently, subsidence-based loss estimates are somewhat high. The WCS average on a per county basis is \$15,001,463. \*NOTE: A region-wide estimate was not compiled since land subsidence is often considered a site-specific hazard.



**Vulnerability to Subsidence**

- Low Hazard
- Moderate Hazard

2.2.9: Terrorism

Terrorism is the use of force or violence, including threats of force or violence, against persons or property in violation of the criminal laws of the United States for the purposes of intimidate, coercion, or ransom.

RESEARCH SOURCES

- Interviews with Local Officials

Period of Occurrence:	At any time
Number of Events to Date (2001 – 2011):	0
Probability of Event:	Infrequent
Warning Time:	Minimal – Depends on the presence of a threat
Potential Impacts:	Potential loss of human life, economic loss, environmental damage, disruption of lifeline facilities
Cause Injury or Death:	Injury and risk of multiple deaths
Potential Facility Shutdown:	Days to weeks or more

HAZARD EFFECTS

“Acts of terrorism include threats of terrorism; assassinations; kidnappings; hijackings; bomb scares and bombings; cyber attacks (computer-based); and the use of chemical, biological, nuclear and radiological weapons. High-risk targets for acts of terrorism include military and civilian government facilities, international airports, large cities, and high-profile landmarks. Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers. Further, terrorists are capable of spreading fear by sending explosives or chemical and biological agents through the mail.” (Source: USDHS FEMA)

**\*NOTE: Throughout the remainder of this profile, terrorism will be discussed generally. This profile does not include any information on any threats that have been received, specific listings of potential targets in the region, etc.**

HAZARD PROFILE

All of the counties in the region contain what could be considered “targets”. In general, governmental, educational, and industrial facilities could be considered *targets*, but such a consideration usually has more to do with other circumstances surrounding the facility than the facility’s identification as a governmental, educational, or industrial

facility. Three (3) of the five (5) counties contain significant targets due to the potential affect on infrastructure (both within and beyond the region), the population – either permanent or transient – that could be affected, the symbolic and/or historical influence of the site/facility, etc.

Terrorism is not always accomplished on a “grand scale”, as is the case with international terrorists who are attempting to coerce the federal government. Such terrorism, while technically a hazard in throughout Region 8, is more unlikely than what is known as “domestic terrorism” or “homegrown violent extremism”. Domestic terrorism can involve disgruntled employees (in the case of large industrial plants), angry parents (at schools), upset citizens (at government facilities), etc. Domestic terrorists may often only intend to harm a single individual or a small group of individuals, but the threat of their actions can be highly disruptive. Historical acts of domestic terrorism include such incidents as the Columbine High School shooting and the bombing of the Murrah Federal Building in Oklahoma City. School districts throughout the region report occasional bomb threats.

A terrorist event would, at a minimum, cripple the region. The effects of a terrorist incident are not only monetary; they are often emotional and symbolic. The communities throughout the region are rural and small. Any mass loss of life would take an emotional toll on the affected and nearby communities. Recent technological hazard incidents in West Virginia (e.g. the Sago and Upper Big Branch mine disasters) have shown how these losses of life impact the entire state.

Symbolically, an implemented act of terrorism would erode the feeling of security that the region enjoys. It would also likely result in a loss of faith in local decision makers and public safety officials. A loss of public support, especially in the public safety and emergency services sectors, could affect agency operating budgets, personnel recruitment, etc., thus adversely affecting the level of service that could be provided in subsequent years.

The most obvious effects of a terrorist incident would be economic. Infrastructure, including “hard” infrastructure such as facilities and systems, but also “soft” infrastructure such as people could be diminished or destroyed. Any loss of tax base and employment would be extremely hard for the communities throughout the region to overcome. The Region 8 area, though, is somewhat unique in comparison to other communities throughout West Virginia given its proximity to the National Capital Region (NCR), which is one of the most target-rich areas of the country. Should a

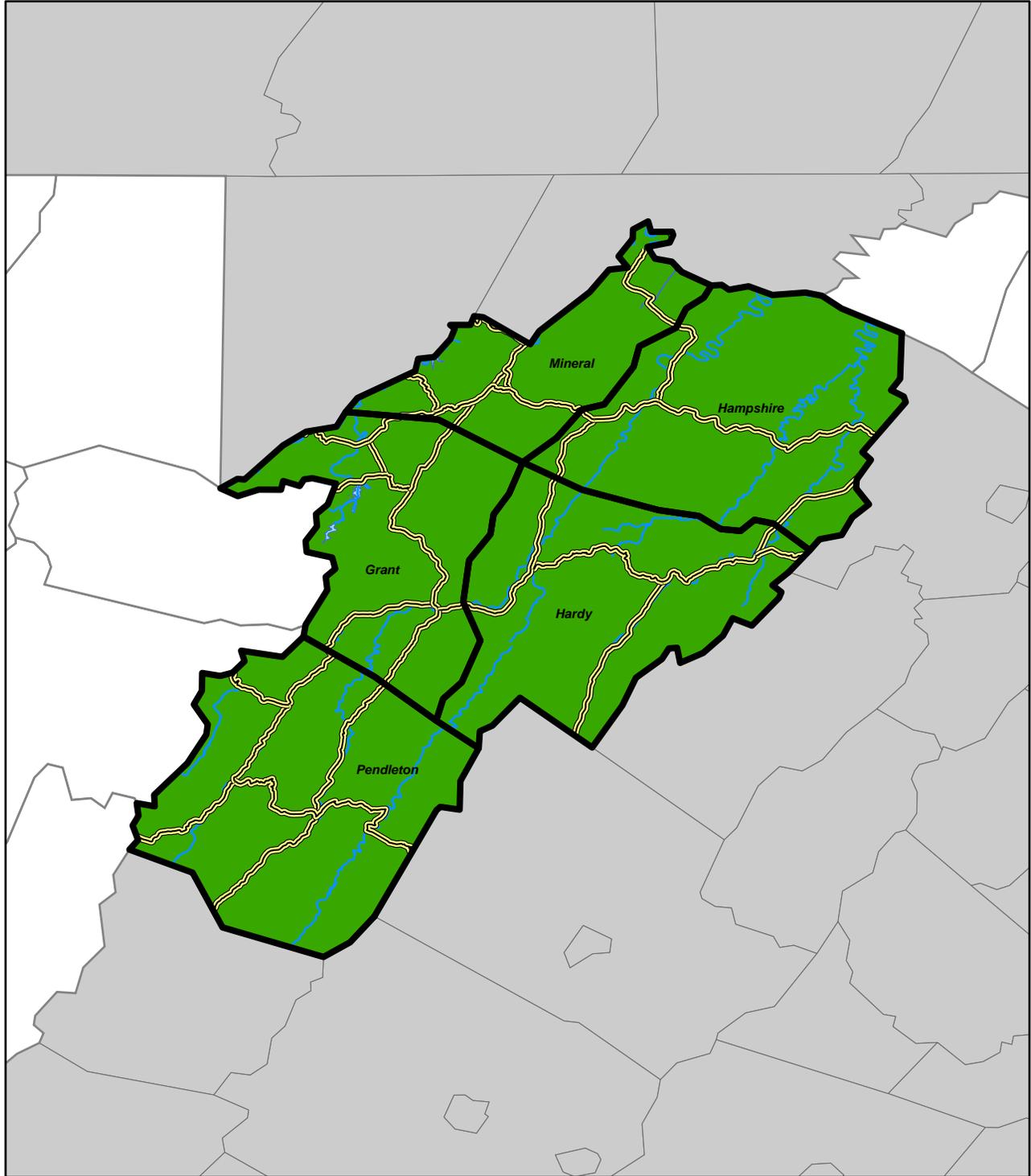
terrorist strike the NCR, the region could see a mass influx of residents evacuating the area. The region could also suffer the indirect economic effects of the incident as many residents work in or close to D.C.

### VULNERABLE STRUCTURES

Vulnerable Structures – Terrorism								
County	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Utilities
Grant	191	0	1	0	0	0	0	0
Hampshire	7000	156	7	100	20	5	6	7
Hardy	1131	76	2	0	0	0	0	1
Mineral	913	5	1	247	0	1	2	1
Pendleton	257	0	0	300	0	20	0	0
<b>TOTALS</b>	<b>9492</b>	<b>237</b>	<b>11</b>	<b>647</b>	<b>20</b>	<b>26</b>	<b>8</b>	<b>9</b>

### LOSS ESTIMATES

In an effort to assist jurisdictional understanding of risks and implementation of strategies, loss estimates were done for each county (see Appendix 2). By averaging those estimates, this plan assumes a total, regional loss estimate *per incident* to be as much as \$201,336,252. If all counties in the region were affected to the “worst case scenario” level, as much as \$1,006,681,262 could be lost.



## Vulnerability to Terrorism

 Low Hazard

2.2.10: Thunderstorm

A thunderstorm is considered severe when that storm produces a tornado, winds of at least 58 mph (50 knots), and/or hail at least ¾" in diameter. Structural wind damage may imply the occurrence of a severe thunderstorm. A thunderstorm wind equal to or greater than 40 mph (35 knots) and/or hail of at least ½" is defined as "approaching severe".

RESEARCH SOURCES

- NCDC Event Records

Period of Occurrence:	Spring, summer, and fall
Number of Events to Date (1969 – 2011):	64
Probability of Event:	Frequent
Warning Time:	Minutes to hours
Potential Impacts:	Utility damage and outages, infrastructure damage (transportation and communication systems). Impacts human life, health, and public safety.
Cause Injury or Death:	Injury
Potential Facility Shutdown:	Days

HAZARD EFFECTS

The wind gusts associated with thunderstorms pose a threat to life and/or property. Severe thunderstorms also have the potential of producing a tornado with little or no advanced tornado warning. These storms may contain frequent cloud-to-ground lightning and heavy downpours which can lead to localized flooding. Generally, a weak thunderstorm which produces a wind gust of the required strength would be defined as "severe" whereas a very violent thunderstorm with continuous lightning and very heavy rain (but without the required wind gusts, hail, or tornado/funnel cloud) would not. For the purposes of this plan, though, these violent thunderstorms are also considered severe because they are more frequent and cause a significant amount of damage annually throughout the county.

HAZARD PROFILE

Thunderstorms are one of the most frequently-occurring hazards throughout the region (second only to winter storms). The following table illustrates the number of thunderstorm events in each of the region's counties as well as the damage caused by those storms (*Source: NCDC Event Records*).

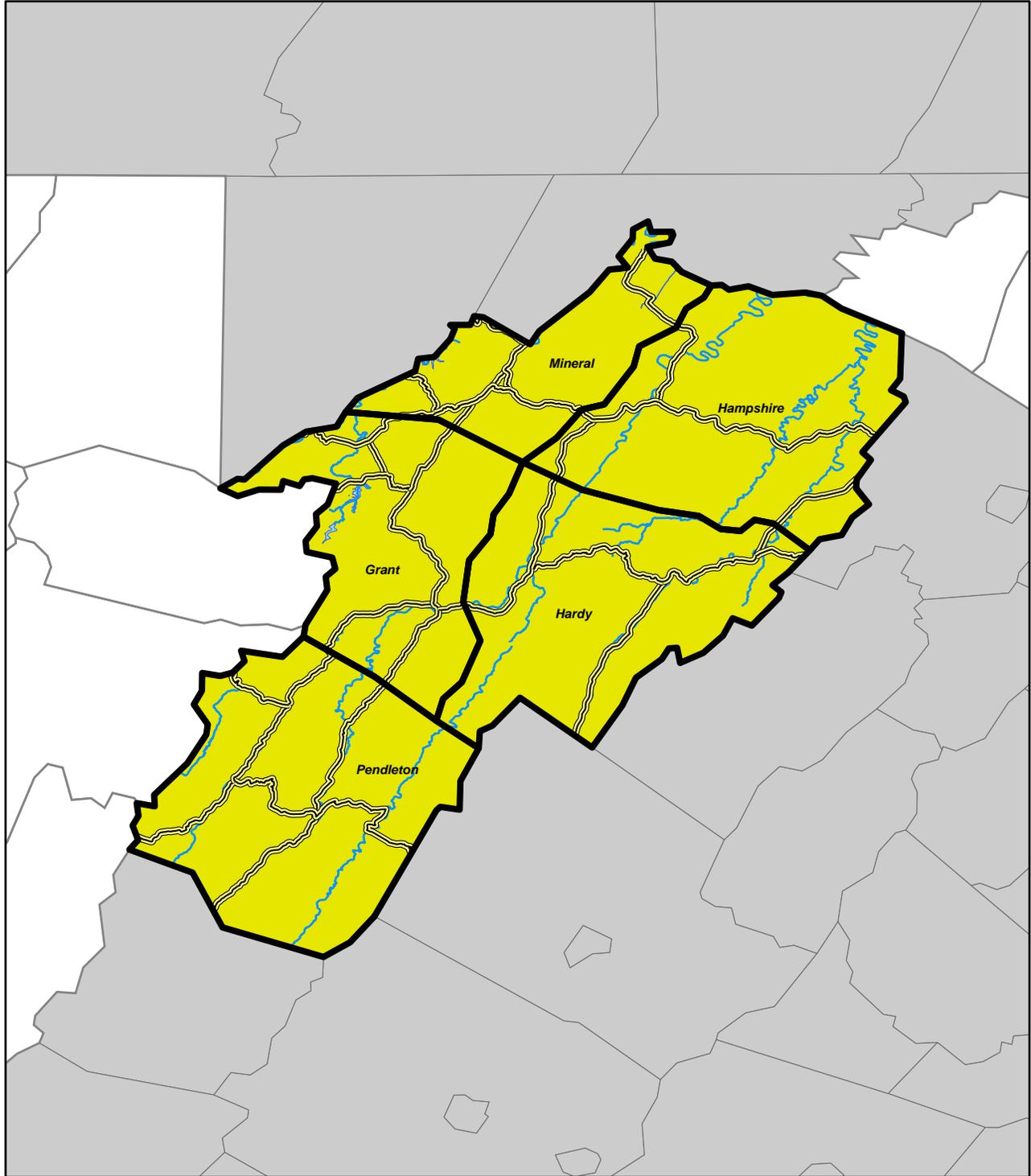
<b>Thunderstorms Throughout Region 8</b>		
<i>County</i>	<i>Number of Storms</i>	<i>Reported Damage</i>
Grant	45	\$83,000
Hampshire	64	\$452,000
Hardy	39	\$88,000
Mineral	46	\$143,000
Pendleton	23	\$67,000
<b>TOTALS</b>	<b>216</b>	<b>\$833,000</b>

Five (5) injuries directly related to these storms have been reported. NCDC records reflect the most severe of thunderstorms. Storms, however, are common throughout the spring and summer months (although a thunderstorm can occur in any season) that cause downed trees and power lines. Residents and businesses are likely to incur more damage as a result of these “smaller” storms as individual houses and vehicles are damaged by fallen limbs and businesses are forced to close due to a lack of electricity.

#### LOSS ESTIMATES

Thunderstorm is another hazard that can be said to affect the entire region equally (i.e., all structures in the region are at risk). As part of the loss estimates completed by all of the region’s counties, the average county-level WCS event could total \$10,707,822 in losses. A region-wide WCS event could total as much as \$53,539,110.

In many ways, the cascading effects of thunderstorms are more damaging than the storm itself. For example, as mentioned above, lightning strikes may cause power surges that result in damage. Thunderstorm winds may down trees that fall onto personal property. Tracking these types of damages is difficult as many people may not turn such claims into their insurance.



## Vulnerability to Thunderstorms

 Moderate Hazard

2.2.11: Wildfire

A wildfire is an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures.

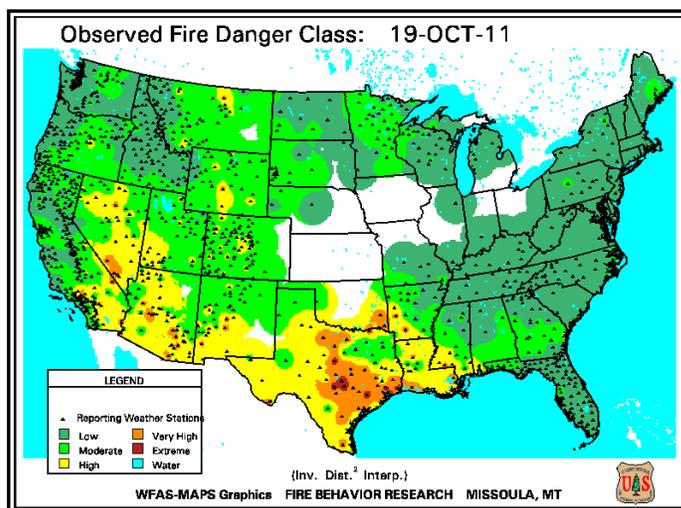
RESEARCH SOURCES

- NCDC Event Records

Period of Occurrence:	At any time – Primarily summer
Number of Events to Date (2002 – 2011):	1
Probability of Event:	Infrequent
Warning Time:	Minimal
Potential Impacts:	Impacts human life, health, and public safety. Loss of wildlife habitat, increased soil erosion, and degraded water quality. Utility damage and outages, infrastructure damage (transportation and communication systems), and damaged or destroyed critical facilities.
Cause Injury or Death:	Injury and risk death
Potential Facility Shutdown:	Days to weeks or more

HAZARD EFFECTS

Wildfires often begin unnoticed and spread quickly. They are usually signaled by dense smoke that fills the area for miles around. Grasses, bushes, trees, and other vegetation supply fuel for the wildfire. The size of a wildfire is contingent on the amount of fuel available, weather conditions, and wind speed and direction. In a map from



Wildland Fire Assessment System (WFAS)-Maps, Fire Behavior Research (see left), the majority of West Virginia was labeled as being at low risk for wildfires. The National Interagency Fire Center also indicates that Region 8's counties are at a low risk of wildfires. The NCDC reported

one (1) wildfire in Pendleton County.

## HAZARD PROFILE

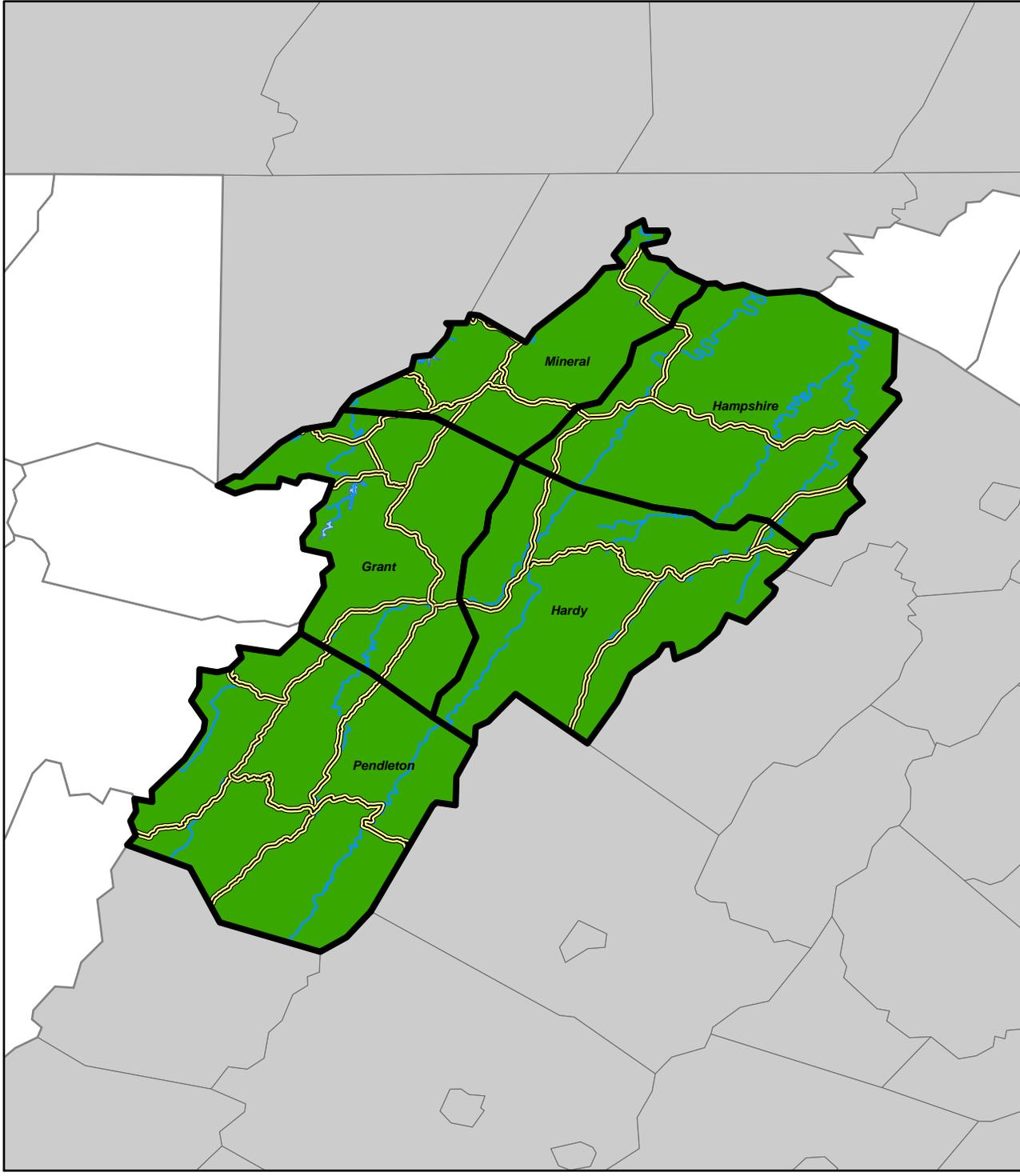
Just because a single wildfire has been reported, one should not assume that vegetation fires do not occur frequently. Representatives from local fire departments throughout the region confirm that brush fires, ranging in size from a single acre to hundreds of acres occur each year. Many of these fires are extinguished before becoming a major problem. Additionally, most of these events occur in rural areas rather than in areas of urban-wildland interface.

## VULNERABLE STRUCTURES

Vulnerable Structures – Wildfire								
County	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Utilities
Grant	5156	11	1	471	12	0	0	2
Hampshire	2500	25	0	250	15	0	0	1
Hardy	6866	13	0	257	19	0	0	13
Mineral	9127	23	1	247	20	0	0	6
Pendleton	4721	14	3	300	33	0	0	2
<b>TOTALS</b>	<b>28370</b>	<b>86</b>	<b>5</b>	<b>1525</b>	<b>99</b>	<b>0</b>	<b>0</b>	<b>24</b>

## LOSS ESTIMATES

Individual county loss estimates were calculated on the assumption that a wildfire could occur in an area of urban-wildland interface; consequently, the estimates could be considered high when compared to historical occurrences. This document, however, estimates losses based on WCS events. The estimated WCS event for a single-county incident is \$634,301,187, while the WCS estimate for a region-wide incident would be \$3,171,505,936.



**Vulnerability to Wildfire**

 Low Hazard

2.2.12: Wind

Wind storms are destructive wind events that occur with or without the presence of other storm events, such as tornados or severe thunderstorms.

A tornado is a violently rotating column of air extending from a thunderstorm to the ground.

RESEARCH SOURCES

- NCDC Event Records

Period of Occurrence:	At any time – Primarily during March through August
Number of Events to Date (1970–2011):	21 (8 tornado events)
Probability of Event:	Infrequent
Warning Time:	Minutes to hours
Potential Impacts:	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, and damaged or destroyed critical facilities. Impacts human life, health, and public safety.
Cause Injury or Death:	Injury and risk of multiple deaths
Potential Facility Shutdown:	Days to weeks or more

HAZARD EFFECTS – WIND

A wind storm is a severe weather condition indicated by high winds and with little or no rain. Localized geographical conditions can exacerbate the damages from high winds and cause increases in wind intensity. Since 1970, counties in Region 8 have experienced 21 high wind events. (This number may appear low since a single event was likely to affect all or most counties; as such, simply totaling the number of events per county would not provide an accurate picture of wind storm frequency.)

## HAZARD PROFILE – WIND

These events have resulted in significant damage as well as ten (10) known injuries and one (1) death. The following table illustrates the high wind events, damages reported, and injuries known for each county.

High Wind Events in Region 8			
County	Number of Events	Damages Reported	Known Injuries
Grant	22	\$2,574,000	6 (1 death)
Hampshire	14	\$2,837,000	10 (1 death)
Hardy	9	\$2,547,000	6 (1 death)
Mineral	36	\$3,002,000	6 (1 death)
Pendleton	17	\$1,029,500	6 (1 death)
<b>TOTALS</b>	<b>85</b>	<b>\$11,989,500</b>	<b>10 (1 death)*</b>

\* Five (5) injuries and the one (1) death are likely from the same, widespread wind events.



The “Design Wind Speed Map for Community Shelters” is one way of graphically analyzing wind risks. As can be seen, all of the counties in the region are in a “Zone II” with respect to design wind speeds, which means that shelters constructed for protective purposes should be designed to withstand up to 160 mph winds.

Severe wind events can cause a variety of secondary, or cascading, hazard events. For instance, wind may blow limbs from trees down knocking out electric power or blocking roadways. Wind often results in damages to roofs and other home finishings (such as siding, etc.).

#### HAZARD EFFECTS - TORNADO

The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of one (1) mile wide and 50 miles long. Tornadoes are among the most unpredictable of weather phenomena. Tornadoes can occur in any state in the United States but are more frequent in the Midwest, Southeast, and Southwest.

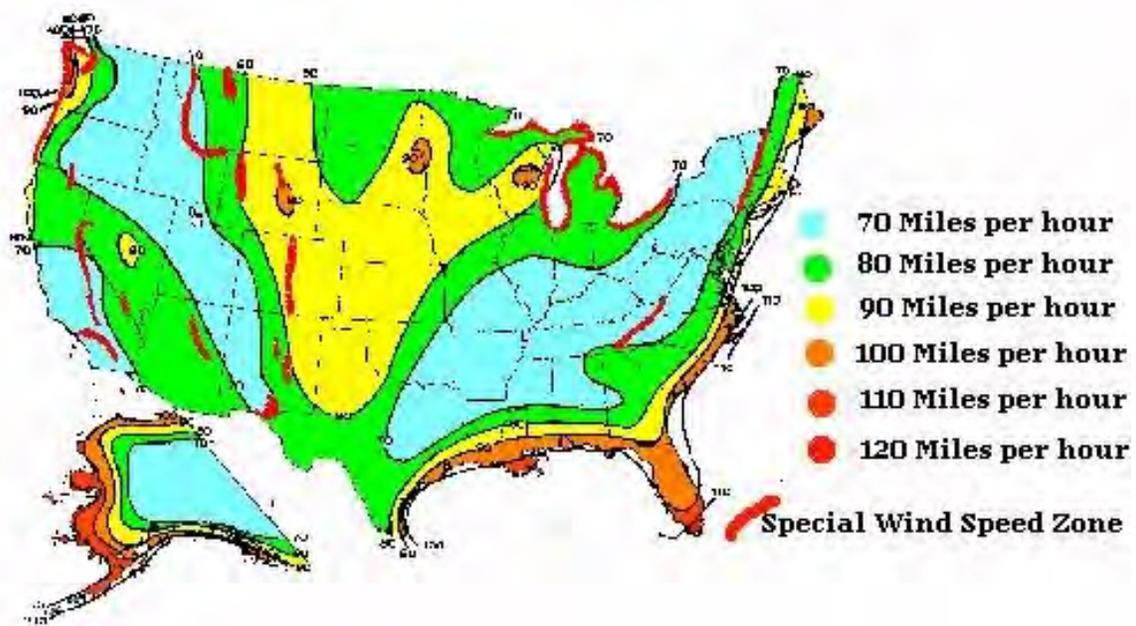
The nature of tornadoes is that they strike at random. While it is known that some areas of the country experience tornadoes more than others, predicting exactly what parts of the region have a greater chance of being struck by a tornado is difficult. The best predictor of future tornadoes is the occurrence of previous tornadoes.

#### HAZARD PROFILE – TORNADO

According to NCDC records, there have been two (2) tornadoes recorded in Hampshire County. One of these storms caused approximately \$100,000 in property damage and nearly \$50,000 in crop damage. The other storm caused nearly \$20,000 in property damage and another \$100,000 in crop damage.

	Description	Wind Speeds
F0	<b>Gale Tornado:</b> Some damage to chimneys; break branches off of trees, pushes over shallow-rooted trees, damages signs.	40-70
F1	<b>Moderate Tornado:</b> The lower limit is the beginning of hurricane wind speed; peels surfaces off of roofs; mobile homes destroyed.	73-112
F2	<b>Significant Tornado:</b> Considerable damage; roofs torn off frame houses; mobile homes demolished; boxcars pushed over; larger trees snapped or uprooted; light object missiles generated.	113-157
F3	<b>Severe Tornado:</b> Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	158-206
F4	<b>Devastating Tornado:</b> Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown; large missiles generated.	207-260
F5	<b>Incredible Tornado:</b> Strong frame houses lifted off foundations and carried considerable distances; automobile-sized missiles fly in excess of 100 meters.	261-318
F6	<b>Inconceivable Tornado:</b> The area of damage produced would be unrecognizable.	319-379

For planning purposes, it is less important to map the tornado risk than it is to identify it. This is because it is so difficult to predict the path of future tornadoes. The Fujita scale provides us with an idea of the strength and extent of damages of tornadoes that can occur in the region. An additional resource to help understand the extent of tornado risks in the county is the “Design Wind Speed Map for Community Shelters” developed by the Disaster Center. The Disaster Center has also developed a map (shown below) that is similar to the “Design Wind Speed Map for Community Shelters” that suggests building standards with respect to wind speed.

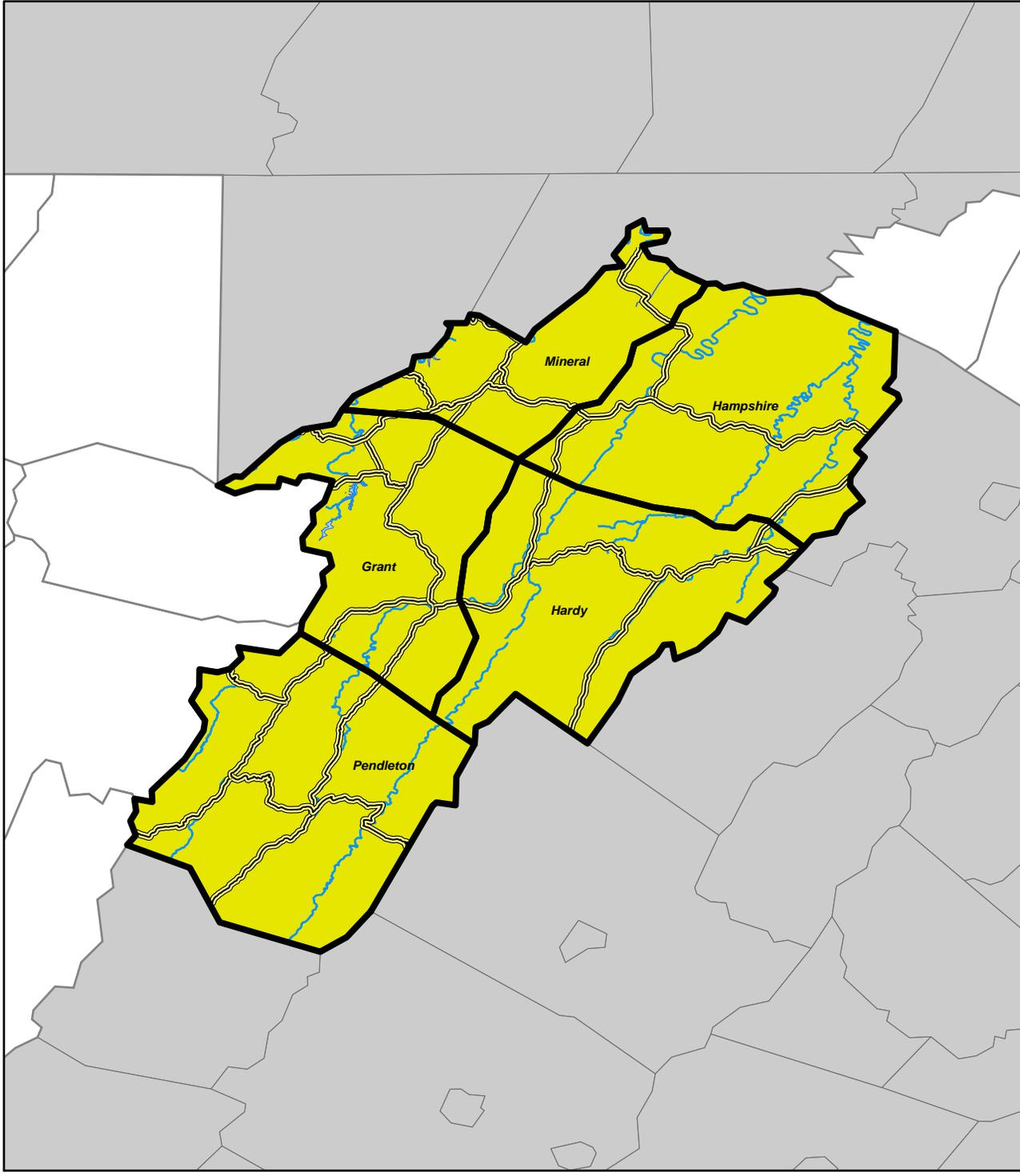


As can be seen, all of West Virginia is shown with the lowest wind speed (or the equivalent to a “gale tornado” as described above).

High wind, in general, is another of the hazards that can be said to affect the entire region. Tornadoes can also be said to affect the entire region due to their unpredictable nature. Tornadoes, however, appear to strike the least mountainous counties in Region 8; therefore, Grant, Hardy, and Pendleton Counties can be considered to have a *slightly* higher tornado risk than Hampshire and Mineral Counties.

## LOSS ESTIMATES

Wind-related loss estimates are quite high because both high wind and tornado loss estimates are combined and because of the amount of damage that can be done by a single incident. As an example, consider the extremely high damage estimates from the tornado events versus just the high wind events. The average WCS wind event in a single county could result in as much as \$17,221,249 in losses; a region-wide WCS event could tally \$86,106,243 in losses.



**Vulnerability to Severe Wind**

 Moderate Hazard

2.2.13: Winter Storm

A winter storm is a type of storm in which the dominant varieties of precipitation are forms that only occur at cold temperatures such as snow or sleet, or a rainstorm where ground temperatures are cold enough to allow ice to form.

RESEARCH SOURCES

- NCDC Event Records

Period of Occurrence:	Winter
Number of Events to Date (1995 – 2011):	192
Probability of Event:	Likely
Warning Time:	Snow – Days Ice – Minutes to hours
Potential Impacts:	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, damaged critical facilities. Can cause severe transportation problems and make travel extremely dangerous. Power outages, which result in loss of electrical power and potentially loss of heat. Extreme cold temperatures may lead to frozen water mains and pipes, damaged car engines, and prolonged exposure to cold resulting in frostbite.
Cause Injury or Death:	Injury
Potential Facility Shutdown:	Days

HAZARD EFFECTS

Winter storms vary in size and strength and can be accompanied by strong winds that create blizzard conditions and dangerous wind chill. There are three (3) categories of winter storms:

- **Blizzard:** A blizzard is the most dangerous of all winter storms. It combines low temperatures, heavy snowfall, and winds of at least 35 miles per hour (mph), reducing visibility to only a few yards.
- **Heavy Snowstorms:** A heavy snowstorm is one that drops four (4) or more inches of snow in a 12-hour period.
- **Ice Storm:** An ice storm occurs when moisture falls and freezes immediately upon impact.

Winter storms tend to encompass the entire county whereas flooding generally occurs within predictable boundaries along the regulatory Special Flood Hazard Area (SFHA) and its main branches and tributaries. Risks associated and identified with severe winter storms include but are not limited to the following:

- Emergency medical evacuation of the sick, elderly, and infirmed to shelters.
- Power outages to those on life support systems.
- Communications interruptions and/or outages.
- Loss of the ability to heat homes.
- Interruption of the delivery of home supplies and food.

These above-described events fall within two (2) general categories 1) road closures due to snow drifts and 2) utility failures (such as damaged supply lines). Additionally, data indicates that structural damage has occurred in several instances in the past as a result of extremely heavy snowfall. Structures damaged were usually buildings such as barns, garages, carports, etc. Additionally, severe winter storms, because of the county's mountainous terrain, frequently result in dangerous driving conditions.

#### HAZARD PROFILE

Winter storms are reported to be the most frequently-occurring hazard in the region. The following table illustrates the number of winter storm (i.e., snow, ice, and blizzard) events in each of the region's counties as well as the damage caused by those storms (*Source: NCDC Event Records*).

<b>Winter Storms Throughout Region 8</b>		
<i>County</i>	<i>Number of Storms</i>	<i>Reported Damage</i>
Grant	192	\$7,827,000
Hampshire	107	\$7,760,000
Hardy	97	\$7,840,000
Mineral	108	\$8,022,000
Pendleton	122	\$7,802,000
<b>TOTALS</b>	<b>634</b>	<b>\$39,251,000</b>

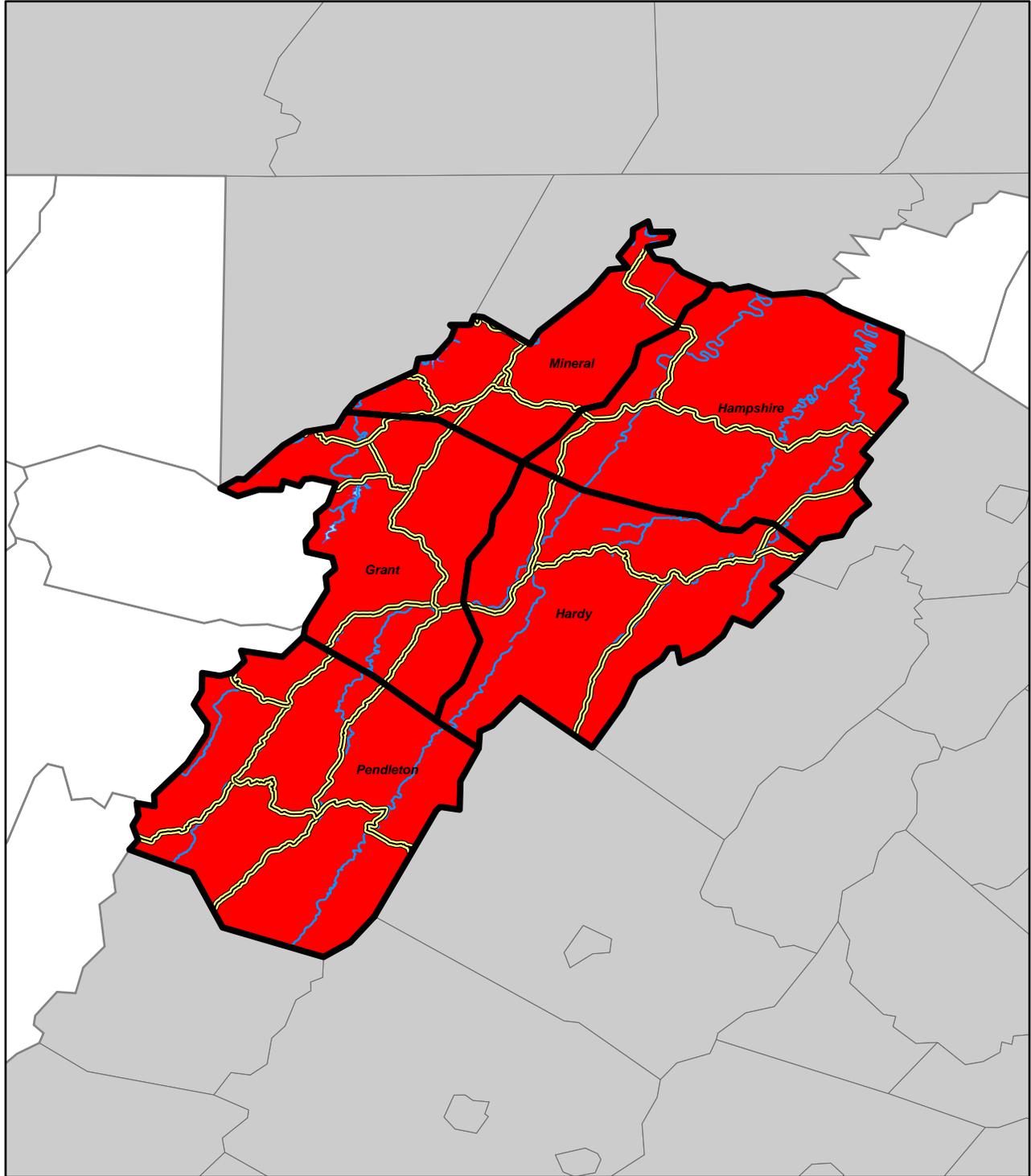
For example, in February of 2003, the Potomac Highlands experienced one of the greatest winter storms of the decade. Areas throughout the region received up to 36" of snow. However, there is no official record of damages occurred during the storm. The

storm did result in a Federal Declaration for snow removal assistance for public entities. At least five (5) injuries have resulting from winter storms have been reported in all counties (one [1] each).

A winter storm is another hazard that can be said to affect the entire region equally (i.e., all structures in the region are at risk). One must realize, though, that the cascading hazards resulting from winter storms (e.g., slick roadways, drifts covering roadways, communities being isolated as a result of snow, etc.) can vary within the region – even within a single county – due to factors such as topography. Further, winter storms are often considered “just a way of life”; many residents do not report the losses from these storms. For instance, in Pendleton County (which is one of the most mountainous counties in the region), local officials and residents alike recognize winter storms as a hazard, but do not feel that most winter storms significantly interrupt their daily activities. Such an attitude is likely shaped by the frequency with which residents face these events.

#### LOSS ESTIMATES

As part of the loss estimates completed by all of the region’s counties, the average county-level WCS event could total \$120,615,563 in losses. A region-wide WCS event, again according to the county’s individual loss estimates, could total as much as \$603,077,817.



## Vulnerability to Winter Storms

 High Hazard

## 2.3 REGIONAL IMPLICATIONS

The hazard profiles above present, in a general sense, a regional hazard risk. This risk, though, is based off of individual county assessments of how risk *individual counties*. This section discusses how region-wide risks are realized.

Flooding, as one of the primary hazards addressed by this plan, does pose a risk regionally. Even flash flooding, which is widely considered to be a site-specific hazard, can contribute to a regional flooding impact. For example, many of the streams and rivers throughout the region are tributaries of the Potomac River. As such, flooding in Hardy and Grant Counties may be indicative of flooding (possibly worse flooding) along the Potomac, and in particular the Carpendale/Ridgeley areas. Riverine flooding can also be manifested in the same way.

The hazardous material risk also bears a regional implication, primarily in the planning function. Hazmat incidents are widely considered to be site-specific hazards, and this document would concur with such an assumption. The risk, though, is shared; risk areas can be predicted in one county based on facts and figures from a neighboring county. For instance, emergency preparedness officials in Hampshire County can assume that materials observed on US 50 in Grant County would pass through their county on those same routes.

As Local Emergency Planning Committees (LEPCs) educate communities on the hazardous material risk, these efforts should extend beyond county lines. Further, the training and exercising often used to strengthen response agency capabilities can be coordinated throughout the region to strengthen the overall region's response capability.

# **SECTION 3.0**

# **MITIGATION STRATEGY**

Section 3.0 uses the risk assessment information from Section 2.0 to generate a list of action items that Region 8’s member governments can consider to greatly lessen potential hazard losses. This section lists and prioritizes them.

As was done in the first version of the Region 8 plan, projects are listed primarily by jurisdiction. This document does list “regional” projects – or those which most (or all) of the participating jurisdictions feel would be successful at lessening losses – as Section 3.4.

### 3.1 GOALS, OBJECTIVES, AND STRATEGIES

§201.6(c)(3)(i)	[The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
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Several hazard mitigation projects have been listed in this plan. It is significant to note that mitigation projects are developed in much the same way as other projects (i.e., community and economic development projects) considered and/or administered by the Region 8 Planning and Development Council (PDC). Member governments – in this case, their emergency management/preparedness representatives – are encouraged to compile lists of the projects they feel are most beneficial to their jurisdiction. These projects are submitted to the PDC for (consideration by and) inclusion into this plan.

Goals, objectives, and strategies are only listed in this section as a “quick reference guide” for users of the plan. Strategies – which are the mitigation projects under consideration – are organized both by hazard and jurisdiction. A simple status statement is also listed for each project. Projects can be classified as: New, Completed, Deleted, Deferred, Unchanged, or On-Going. Detailed discussions on the implementation and prioritization of mitigation projects, including an explanation of each status indicator, can be found in Sections 3.2 and 3.3 below.

BAYARD, TOWN OF

**Goal A1: Minimize loss of life and property due to flooding.**

*Objective A1.1:* Undertake structural projects to prevent flood damage.

*Strategy A1.1.1:* Renovation of the Town of Bayard's floodwall.

**Status:** COMPLETED in 2010

*Strategy A1.1.2:* Construction of a proper storm water drainage system for the Town of Bayard.

**Status:** ON-GOING

CAPON BRIDGE, TOWN OF

**Goal B1: Minimize loss of life and property as well as economic losses due to flooding.**

*Objective B1.1:* Minimize repeated losses due to flooding.

*Strategy B1.1.1:* Continue to buyout repetitive and non-repetitive loss properties vulnerable to flooding as funding is available.

**Status:** ON-GOING

**Goal B2: Minimize the negative effects of miscellaneous hazards throughout Capon Bridge.**

*Objective B2.1:* Assist, to the extent possible, emergency services organizations.

*Strategy B2.1.1:* Continue to provide fire protection for Capon Bridge and upgrade capabilities as need and funding are available.

**Status:** ON-GOING

CARPENDALE, TOWN OF

**Goal C1: Minimize losses due to terrorism.**

*Objective C1.1:* Minimize loss of human life due to chemical attack.

*Strategy C1.1.1:* Address issue of Carpendale having only one road leading in and out of municipality.

**Status:** NEW

ELK GARDEN, TOWN OF

**Goal D1: Undertake projects to lessen losses from a number of different hazards.**

*Objective D1.1:* Minimize effects of extreme power outages on community.

*Strategy D1.1.1:* Educate the public on preparedness and response.

**Status:** ON-GOING

*Strategy D1.1.2:* Coordinate with utility companies to ensure restoration of utility services.

**Status:** ON-GOING

FRANKLIN, TOWN OF

**Goal E1: Minimize loss of life and economic loss due to flooding.**

*Objective E1.1:* Prevent essential areas of the town from being flooded.

*Strategy E1.1.1:* Flood wall needed for Town of Franklin.

**Status:** ON-GOING

GRANT COUNTY

**Goal F1: Minimize loss of life and property due to dam failures.**

*Objective F1.1:* Ensure that new development is mindful of existing and/or potential hazards.

*Strategy F1.1.1:* Discourage development in areas around dams or encourage development of sound structures.

**Status:** ON-GOING

*Objective F1.2:* Ensure that a response capability is in place should a dam failure occur.

*Strategy F1.2.1:* Develop and distribute detailed evacuation plans with maps.

**Status:** ON-GOING

*Strategy F1.2.2:* Ensure personnel are trained to handle evacuation process.

**Status:** ON-GOING

*Objective F1.3:* Coordinate, as appropriate, with dam owners.

*Strategy F1.3.1:* Seek grants to rehabilitate dams.

**Status:** DEFERRED to dam owners

*Strategy F1.3.2:* Properly monitor and maintain dams.

**Status:** DEFERRED to dam owners

**Goal F2: Minimize loss of human and animal life due to diseases as well as minimize economic losses.**

*Objective F2.1:* Plan, to include identification of potential resources, for epidemics, pandemics, and animals in disaster.

*Strategy F2.1.1:* Review State OES manual that is available to deal with disease epidemics on the local level.

**Status:** COMPLETED per Grant County Office of Emergency Services (GCOES) review

*Strategy F2.1.2: Review the West Virginia EOP, Annex W.*

**Status:** COMPLETED per GCOES review

*Strategy F2.1.3: Support local pandemic influenza planning.*

**Status:** NEW

*Strategy F2.1.4: Support local animals in disaster planning.*

**Status:** NEW

<p><b>Goal F3: Minimize the potential of loss due to drought conditions.</b></p>
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*Objective F3.1: Identify alternate sources of water for use during drought conditions.*

*Strategy F3.1.1: Local water sources for both livestock and potable water.*

**Status:** ON-GOING

*Strategy F3.1.2: Local water for fighting fires.*

**Status:** ON-GOING

*Strategy F3.1.2: Educate the public on conserving water.*

**Status:** ON-GOING

<p><b>Goal F4: Minimize loss of life and property due to earthquakes.</b></p>
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*Objective F4.1: Include earthquakes in on-going, all-hazard public outreach efforts.*

*Strategy F4.1.1: Educate the public on how to protect themselves and to be prepared to provide for themselves.*

**Status:** ON-GOING

*Objective F4.2: Review policies that could impact earthquake risk and response.*

*Strategy F4.2.1: Review emergency response plans.*

**Status:** COMPLETED per the GCOES' annual review of four (4) EOP annexes

*Strategy F4.2.2:* Enforce building codes.

**Status:** DELETED due to low risk of earthquakes

<p><b>Goal F5: Minimize loss of life and property and economic losses due to flooding. Additionally, minimize repeated losses due to flooding.</b></p>
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*Objective F5.1:* Undertake a variety of projects aimed at prevention of flood-related losses.

*Strategy F5.1.1:* Buyout homes (both Repetitive Loss [RL] and non-RL) located in the floodplain.

**Status:** ON-GOING

*Strategy F5.1.2:* Advise public to heed warning system.

**Status:** COMPLETED per an update to the county's National Weather Service (NWS) alert list. The call down/activation list notifies hospitals, nursing homes, schools, radio stations, TV stations, newspapers, emergency service providers, parks, municipalities, water and sewer departments, etc. of impending weather, which includes flooding.

*Strategy F5.1.3:* Enforce building codes referencing Flood Insurance Rate Maps (FIRMs).

**Status:** ON-GOING

*Strategy F5.1.4:* Construct a floodwall to protect homes in the North Fork Retreat development.

**Status:** ON-GOING

**Goal F6: Minimize loss life and control economic losses due to hazardous material incidents. Reduce risk to public due to hazardous material incidents.**

*Objective F6.1:* Strengthen local response capabilities with respect to hazardous material incidents.

*Strategy F6.1.1:* Additional training needed for personnel handling hazardous spills.

**Status:** ON-GOING

*Strategy F6.1.2:* Additional volunteers needed.

**Status:** ON-GOING

*Strategy F6.1.3:* Coordinate local LEPC plan with state plan concerning hazardous spills.

**Status:** COMPLETED per a variety of Local Emergency Planning Committee (LEPC)-sponsored Hazardous Material Emergency Planning (HMEP)/State Emergency Response Commission (SERC) projects

*Strategy F6.1.4:* Utility regional response teams located throughout state.

**Status:** DEFERRED until structure and organization of regional response teams is better defined

**Goal F7: Minimize hazards associated with landslides, specifically traffic hazards.**

*Objective F7.1:* Strengthen local capabilities to respond to hazardous material incidents.

*Strategy F7.1.1:* Educate response teams.

**Status:** DELETED on account of low risk

*Strategy F7.1.2:* Identify locations of heavy equipment.

**Status:** DELETED on account of low risk

*Strategy F7.1.3:* Identify locations of available personnel.

**Status:** DELETED on account of low risk

*Strategy F7.1.4:* Coordinate, as necessary, with the West Virginia Division of Highways (WVDOH).

**Status:** DELETED on account of low risk

<p><b>Goal F8: Minimize loss of life and property and minimize concerns regarding supplies for influx of people from metropolitan areas.</b></p>
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*Objective F8.1:* Strengthen local capabilities to identify, respond to, and recovery from suspicious activities and/or terrorist acts.

*Strategy F8.1.1:* Synchronize the *West Virginia Emergency Operations Plan (EOP)* and the local EOP.

**Status:** ON-GOING

*Strategy F8.1.2:* Increase public awareness.

**Status:** COMPLETED per inclusion of terrorism hazard in public outreach efforts

*Strategy F8.1.3:* Train public to identify what is suspicious.

**Status:** COMPLETED per inclusion of terrorism hazard in public outreach efforts

*Strategy F8.1.4:* Identify risk areas of county.

**Status:** COMPLETED per this and other risk assessment projects

*Strategy F8.1.5:* Additional training for law enforcement to handle incidents.

**Status:** ON-GOING

<p><b>Goal F9: Minimize the loss of life and property due to tornados and wind storms.</b></p>
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*Objective F9.1:* Ensure adequate warning of the public for wind events.

*Strategy F9.1.1:* Educate the public on preparedness and protection measures.

**Status:** ON-GOING

*Strategy F9.1.2:* Identification of search and rescue teams.

**Status:** COMPLETED per the LEPC's recent compilation of a county resource manual

*Strategy F9.1.3:* Identify shelters.

**Status:** DEFERRED to the American Red Cross

*Strategy F9.1.4:* Encourage construction to withstand wind storms typical for the area.

**Status:** COMPLETED per local adoption of the standard building code

<p><b>Goal F10: Minimize loss of forest areas and property due to wildfires.</b></p>
--

*Objective F10.1:* Strengthen response capabilities with respect to wildland fires.

*Strategy F10.1.1:* Provide additional training for personnel.

**Status:** ON-GOING

*Strategy F10.1.2:* Stay organized. Keep track of personnel and resources.

**Status:** DELETED as this becomes a resource management function of a potential response

**Goal F11: Minimize loss of life and economic loss due to winter storms.**

*Objective F11.1:* Include winter weather in all-hazard public outreach efforts.

*Strategy F11.1.1:* Educate the public on preparedness.

**Status:** ON-GOING

*Objective F11.2:* Bolster available personnel and equipment resources.

*Strategy F11.2.1:* WVDOH needs additional equipment to keep roads clear.

**Status:** DEFERRED to WVDOH

*Strategy F11.2.2:* Additional law enforcement needed.

**Status:** DEFERRED on account of budget constraints

*Objective F11.3:* Establish relationships with private sector partners to strengthen the county's whole community approach.

*Strategy F11.3.1:* Utilize good working relationship with Allegheny Power and telephone companies.

**Status:** COMPLETED; Grant County has established very good working relationships with Allegheny Power and Frontier

HAMPSHIRE COUNTY

**Goal G1: Eliminate loss of life and property due to dam failures.**

*Objective G1.1:* Coordinate with officials in neighboring jurisdictions regarding dam safety.

*Strategy G1.1.1:* Advise and educate the public of the dam failure risk, to include providing real estate disclosure at the time of sale.

**Status:** ON-GOING

*Strategy G1.1.2:* Ensure that plans are in place for the inspection and rehabilitation of dams. Coordinate with the Maryland Department of the Environment, Dam Safety Program as these dams are not located in Hampshire County.

**Status:** ON-GOING

*Strategy G1.1.3:* Coordinate with Maryland officials to continue monitoring water levels on the North Branch of the Potomac River.

**Status:** ON-GOING

**Goal G2: Minimize the potential of economic losses due to drought conditions.**

*Objective G2.1:* Identify sources of additional water.

*Strategy G2.1.1:* As planning for animals in disaster continues, ensure that provisions to maintain water for animals are included.

**Status:** ON-GOING

*Strategy G2.1.2:* Coordinate the identification of backup water sources (e.g. additional aquifers, etc.) to ensure the continuity of existing systems.

**Status:** NEW

**Goal G3: Ensure that the public is aware of the earthquake hazard.**

*Objective G3.1:* Ensure stakeholders and the public are aware of the earthquake hazard.

*Strategy G3.1.1:* Educate the public on the possibility of an earthquake.

**Status:** ON-GOING

**Goal G4: Minimize loss of life and property as well as economic losses due to flooding.**

*Objective G4.1:* Minimize loss of life and property and economic losses due to flooding.

*Strategy G4.1.1:* Continue to enforce ordinances that new structures do not interfere with flood mitigation measures.

**Status:** ON-GOING

*Strategy G4.1.2:* Educate the public on potential flooding hazards and provide tips on how to survive for 72 hours without significant assistance.

**Status:** ON-GOING

*Strategy G4.1.3:* Coordinate with gas companies and retailers operating in Hampshire County, to ensure that household propane tanks are secured.

**Status:** ON-GOING

*Objective G4.2:* Minimize repeated losses due to flooding.

*Strategy G4.2.1:* Continue to buyout repetitive and non-repetitive loss properties vulnerable to flooding as funding is available.

**Status:** ON-GOING

*Strategy G4.2.2:* Begin compiling the information necessary to apply for participation in the Community Rating System (CRS).

**Status:** NEW

<p><b>Goal G5: Minimize loss of life and control economic losses due to hazardous spills.</b></p>
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*Objective G5.1:* Reduce risk to public due to hazardous spills.

*Strategy G5.1.1:* Coordinate the development of mutual aid agreements with such agencies as the Regional Response Team (RRT) and neighboring county hazmat response teams.

**Status:** ON-GOING

*Strategy G5.1.2:* Continue on-going hazardous material planning efforts at the local level, to include integration of local and state efforts.

**Status:** ON-GOING

*Strategy G5.1.3:* Explore options for ordinances to ensure that residential propane tanks are secured.

**Status:** NEW

*Strategy G5.1.4:* Coordinate with emergency planning partners throughout Hampshire and surrounding counties to inventory resources that might be available for hazmat response.

**Status:** NEW

*Strategy G5.1.5:* Undertake training and other educational efforts to inform responders about extinguishing fires with ethanol additives. Training should be relative to new technologies.

**Status:** NEW

<p><b>Goal G6: Minimize hazards associated with land subsidence, including traffic hazards.</b></p>
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*Objective G6.1:* Work with stakeholders to determine the subsidence risk as well as educate the population as to the subsidence risk.

*Strategy G6.1.1:* Educate the public as to the risk of land subsidence, to include providing information to developers about the risks associated with Karst topography.

**Status:** ON-GOING

*Strategy G6.1.2:* Continue coordination with the WVDOH to expand shoulder area of roadways (to reduce the number of road closures due to landslides).

**Status:** ON-GOING

*Strategy G6.1.3:* Coordinate with oil and natural gas exploration companies to ensure that measures are in place to guard against a loss of groundwater and sinking/settling in heavily drilled areas.

**Status:** NEW

**Goal G7: Minimize loss of life and property as a result of terrorist incidents.**

*Objective G7.1:* Undertake planning projects to prepare the county for terrorist incidents.

*Strategy G7.1.1:* Continue to update Annex M of the *Hampshire County Emergency Operations Plan* in an effort to prepare for potential domestic and international terrorist incidents.

**Status:** ON-GOING

*Strategy G7.1.2:* Coordinate with the Hampshire County Health Department to continue planning efforts regarding biological concerns.

**Status:** ON-GOING

**Goal G8: Minimize the loss of life and property due to tornadoes and wind storms.**

*Objective G8.1:* Ensure the public can prepare itself for severe wind events.

*Strategy G8.1.1:* Educate the public on preparedness and protection measures.

**Status:** ON-GOING

**Goal G9: Minimize loss of forest areas and property due to wildfires.**

*Objective G9.1:* Assist local response agencies to the extent possible.

*Strategy G9.1.1:* Ensure road access to unpopulated and/or developing (wooded) areas to provide for firefighter access.

**Status:** ON-GOING

*Objective G9.2:* Undertake public education projects specifically targeting the wildland fire hazard.

*Strategy G9.2.1:* Educate the public about “urban-wildland” interface and the hazards associated with planting trees very close to their homes. Such programs as “Firewise” can be utilized, as can a cooperative outreach effort with the West Virginia Division of Forestry (WVDOF).

**Status:** NEW

**Goal G10: Minimize loss of life and economic loss due to winter storms.**

*Objective G10.1:* Undertake public education projects specifically targeting the winter storm hazard.

*Strategy G10.1.1:* Educate the public about winter storm risks and encourage them to maintain enough supplies to be self-reliant for 72 hours.

**Status:** ON-GOING

*Objective G10.2:* Coordinate with appropriate preparedness partners to lessen potential winter storm losses.

*Strategy G10.2.1:* Coordinate with the WVDOH to ensure that roadways are cleared during significant snow or ice events.

**Status:** ON-GOING

*Strategy G10.2.2:* Coordinate with utility companies to ensure that they have planned for business continuity during prolonged emergencies.

**Status:** ON-GOING

**Goal G11: Minimize the negative effects of miscellaneous hazards throughout Hampshire County.**

*Objective G11.1:* Assist, to the extent possible, emergency services organizations.

*Strategy G11.1.1:* Continue to provide fire protection for Romney and Capon Bridge and upgrade capabilities as need and funding are available.

**Status:** ON-GOING

*Strategy G11.1.2:* Continue to ensure and upgrade communications capabilities throughout the county.

**Status:** ON-GOING

*Objective G11.2:* Undertake a variety of all-hazards, whole community planning projects aimed at mitigation and preparedness.

*Strategy G11.2.1:* Continue partnering with the Hampshire County Health Department regarding pandemic planning.

**Status:** ON-GOING

*Strategy G11.2.2:* Continue planning for the provision of food, water, and housing to county residents displaced by large-scale emergencies.

**Status:** ON-GOING

*Strategy G11.2.3:* Continue to partner with state and neighboring jurisdictions to plan for an “urban-to-rural” evacuation from the National Capital Region (NCR) into the eastern panhandle of West Virginia.

**Status:** NEW

## HARDY COUNTY

<b>Goal H1: Minimize loss of life and property due to dam failures.</b>
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*Objective: H1.1:* Undertake projects aimed at better understanding the risk from dam failures.

*Strategy H1.1.1:* Ensure that dams are inspected periodically.

**Status:** DEFERRED to Potomac Valley Conservation District, United States Army Corps of Engineers (USACE), and other dam owners

*Strategy H1.1.2:* Establishment of a communication system to monitor increasing risk.

**Status:** ON-GOING

*Strategy H1.1.3:* Review disclosure information provided by sellers to ensure that risk is acknowledged.

**Status:** COMPLETED per completion of emergency plans for dam facilities

*Strategy H1.1.4:* Identify structures located around dam structures to be affected by dam failure.

**Status:** ON-GOING

*Objective H1.2:* Undertake prevention projects to lessen the identified risk.

*Strategy H1.2.1:* Limit number of structures affected by potential dam failures.

**Status:** ON-GOING

<p><b>Goal H2: Minimize loss of human and animal life due to diseases. Minimize economic loss due to disease epidemics.</b></p>
---

*Objective H2.1:* Undertake planning projects to ensure resources are available to respond to animal and/or human disease outbreaks.

*Strategy H2.1.1:* Review Hardy County Health Department plan.

**Status:** ON-GOING

*Strategy H2.1.2:* Review the *West Virginia EOP*, Annex W and adapt to Hardy County.

**Status:** COMPLETED per Hardy County Office of Emergency Management (HCOEM) review

*Strategy H2.1.3:* Compile an animals in disaster plan for Hardy County.

**Status:** NEW

*Strategy H2.1.4:* Support business continuity planning efforts throughout Hardy County.

**Status:** NEW

**Goal H3: Minimize the potential of loss due to drought conditions.**

*Objective H3.1:* Identify additional sources of water.

*Strategy H3.1.1:* Locate facilities for irrigation.

**Status:** ON-GOING

*Strategy H3.1.2:* Locate water for livestock and poultry farm use.

**Status:** ON-GOING

*Strategy H3.1.3:* Identify water resources.

**Status:** ON-GOING

*Strategy H3.1.4:* Locate water for poultry plant production.

**Status:** ON-GOING

*Objective H3.2:* Evaluate the current water system's ability to provide water during emergencies.

*Strategy H3.2.1:* Need a countywide water resource study.

**Status:** ON-GOING

*Strategy H3.2.2:* Evaluate the current infrastructure abilities to meet the minimum water demands of public water customers.

**Status:** ON-GOING

**Goal H4: Minimize loss of life and property due to earthquakes.**

*Objective H4.1:* Ensure the earthquake risk is included in all-hazard public outreach efforts.

*Strategy H4.1.1:* Educate the public on how to protect themselves and to be prepared to provide for themselves.

**Status:** ON-GOING

*Strategy H4.1.2:* Keep public informed on pending disasters.

**Status:** ON-GOING

*Objective H4.2:* Identify, in quantifiable and qualifiable terms, the actual earthquake risk in Hardy County.

*Strategy H4.2.1:* Identify potential for damage to dams.

**Status:** COMPLETED per completion of emergency plans for dam facilities

<p><b>Goal H5: Minimize loss of life and property and economic losses due to flooding. Minimize repeated losses due to flooding.</b></p>
--

*Objective H5.1:* Strengthen response and resource capabilities.

*Strategy H5.1.1:* Local declaration of State of Emergency by municipalities and by County Commission.

**Status:** COMPLETED per HCOEM review of local EOP

*Strategy H5.1.2:* Early evacuation of threatened areas.

**Status:** DELETED since this represents a response function

*Strategy H5.1.3:* The county should develop a plan to ensure all contacts for emergency personnel are made.

**Status:** ON-GOING

*Strategy H5.1.4:* The county needs to purchase equipment (hovercraft) to ensure that residents in the Old Fields area are accessible should a flood close US 220 out of Moorefield.

**Status:** ON-GOING

*Strategy H5.1.5:* Improve local emergency services response to flooding hazards by upgrading equipment and providing training of personnel.

**Status:** ON-GOING

*Strategy H5.1.6:* Information provided by river gauges needs to be available on all websites for monitoring.

**Status:** ON-GOING

*Objective H5.2:* Ensure continued compliance with the National Flood Insurance Program (NFIP).

*Strategy H5.2.1:* Hardy County must ensure that new construction complies with requirements of the NFIP.

**Status:** ON-GOING

*Strategy H5.2.2:* Hardy County should buyout homes (both RL and non-RL) that are repeatedly flooded.

**Status:** ON-GOING

*Strategy H5.2.3:* Update flood maps for the Trout Run area, which have not been updated after the floods of 1996.

**Status:** COMPLETED per completion of flood map modernization project

*Objective H5.3:* Undertake structural projects aimed at lessening the flooding risk.

*Strategy H5.3.1:* Larger, more appropriate culverts should replace inadequate ones throughout the county.

**Status:** DEFERRED to WVDOH

*Strategy H5.3.2:* Construct stonewalls to protect historical homes countywide.

**Status:** DEFERRED on account of feasibility

**Goal H6: Minimize loss of life and control economic losses due to hazardous material incidents. Reduce risk to public due to hazardous material incidents.**

*Objective H6.1:* Undertake hazardous material emergency planning projects.

*Strategy H6.1.1:* Ensure that poultry plants are following plant safety programs.

**Status:** ON-GOING

*Strategy H6.1.2:* Ensure that driver safety programs are provided for transporters of hazardous materials.

**Status:** DEFERRED to shipping companies

*Strategy H6.1.3:* Review the *Hardy County EOP* plans and fire department plans for compatibility.

**Status:** ON-GOING

*Strategy H6.1.4:* Review evacuation process with HCOEM and emergency personnel.

**Status:** ON-GOING

*Strategy H6.1.5:* Ensure that LEPC continues involvement in the regional meetings discussing hazardous material incidents.

**Status:** ON-GOING

*Objective H6.2:* Upgrade response capabilities.

*Strategy H6.2.1:* Purchase additional equipment including hazardous material suits and decontamination equipment for emergency personnel.

**Status:** ON-GOING

*Strategy H6.2.2:* Provide training updates for emergency personnel.

**Status:** ON-GOING

*Strategy H6.2.3:* Ensure sufficient equipment is on hand to handle roadway spills.

**Status:** DELETED and combined with Strategy H6.2.1

*Objective H6.3:* Undertake projects designed to further define risk.

*Strategy H6.3.1:* Ensure that storage tanks are located out of flood zone and/or installed with safety measures.

**Status:** ON-GOING

*Strategy H6.3.2:* Identify location of natural gas lines.

**Status:** ON-GOING

<p><b>Goal H7: Minimize hazards associated with landslides, specifically traffic hazards.</b></p>
---

*Objective H7.1:* Coordinate with planning partners.

*Strategy H7.1.1:* Coordinate with the WVDOH.

**Status:** ON-GOING

<p><b>Goal H8: Minimize loss of life and property from terrorist incidents.</b></p>
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*Objective H8.1:* Undertake planning projects to strengthen response capabilities for terrorist incidents.

*Strategy H8.1.1:* Review the *West Virginia EOP*.

**Status:** COMPLETED per HCOEM review

*Strategy H8.1.2:* Coordinate with the WVDHSEM.

**Status:** COMPLETED per weekly conference calls and Situation Reports on Eteam

*Strategy H8.1.3:* Provide training for emergency personnel to identify human diseases.

**Status:** ON-GOING

*Strategy H8.1.4:* Ensure that local fire departments coordinate with the local and state emergency managers.

**Status:** ON-GOING

*Strategy H8.1.5:* Protect critical infrastructure and facilities.

**Status:** ON-GOING

*Objective H8.2:* Identify resources necessary for terrorist incident response.

*Strategy H8.2.1:* Facilitate counseling and support to lessen impact on the community, particularly for school-aged children.

**Status:** ON-GOING

*Strategy H8.2.2:* Address how to handle local housing, water, and food supply needs.

**Status:** ON-GOING

<p><b>Goal H9: Minimize the loss of life and property due to tornados and wind storms.</b></p>
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*Objective H9.1:* Ensure adequate public notice and education capabilities.

*Strategy H9.1.1:* Educate the public on preparedness and protection measures, including the use of wind charts that are available.

**Status:** ON-GOING

*Strategy H9.1.2:* Provide adequate warning to public.

**Status:** ON-GOING

*Objective H9.2:* Undertake prevention projects.

*Strategy H9.2.1:* Encourage construction to withstand wind storms typical for the area.

**Status:** COMPLETED per adoption of the standard building code

*Objective H9.3:* Strengthen resource capabilities to respond to wind events.

*Strategy H9.3.1:* Identify shelters, particularly those with basements, for use during tornados. Shelters should be identified for both municipalities and the county.

**Status:** ON-GOING

<p><b>Goal H10: Minimize loss of forest areas and property due to wildfires.</b></p>
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*Objective H10.1:* Ensure the public understands the wildfire risk.

*Strategy H10.1.1:* Include wildland fire hazard discussions in existing all-hazard public outreach efforts.

**Status:** ON-GOING, but revised to be an inclusive public outreach strategy (former strategy referenced educating the public to keep brush away from homes)

*Strategy H10.1.2:* Ensure the public knows exit routes for evacuation.

**Status:** DELETED and combined with Strategy H10.1.1

*Strategy H10.1.3:* Monitor wind patterns as they develop.

**Status:** ON-GOING

*Objective H10.2:* Strengthen response capabilities, specific to wildland fires.

*Strategy H10.2.1:* Identify water sources needed for fighting fires.

**Status:** ON-GOING

*Strategy H10.2.2:* Preserve plant vegetation as an effective source of firebreak.

**Status:** DEFERRED to forestry and conservation agencies

**Goal H11: Minimize loss of life and economic loss due to winter storms.**

*Objective H11.1:* Ensure public notification, education, and planning capabilities are sufficient with respect to winter storms.

*Strategy H11.1.1:* Include winter storm preparedness in existing all-hazard public outreach efforts.

**Status:** ON-GOING, but revised to be an inclusive public outreach strategy (former strategy referenced educating public on preparedness)

*Strategy H11.1.2:* Educate the public on snow removal processes.

**Status:** DELETED and combined with Strategy H11.1.1

*Strategy H11.1.3:* Review building codes and update if necessary to minimize roof collapses.

**Status:** COMPLETED per adoption of the standard state building code

*Strategy H11.1.4:* Evaluate flood risk potential of local rivers, streams, and basis related to ice dams and quick thawing.

**Status:** ON-GOING

*Strategy H11.1.5:* Provide advance warning for the public.

**Status:** ON-GOING

*Objective H11.2:* Strengthen response capabilities and processes.

*Strategy H11.2.1:* Local declaration of state of emergency by municipalities and County Commission.

**Status:** COMPLETED per HCOEM review of local EOP

*Strategy H11.2.2:* Implement snow route procedures after 2” of accumulated snowfall to protect infrastructure such as roads, alleys, and highways that are needed for emergency response capability.

**Status:** ON-GOING

*Objective H11.3:* Coordinate with planning partners regarding winter storm preparedness.

*Strategy H11.3.1:* Coordinate with the West Virginia University (WVU) Extension Service.

**Status:** ON-GOING

#### KEYSER, CITY OF

<b>Goal I1: Minimize losses due to flooding.</b>
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*Objective: I1.1:* Minimize economic losses.

*Strategy I1.1.1:* Maintain or replace retaining walls in Keyser along Water Street.

**Status:** ON-GOING

#### MINERAL COUNTY

<b>Goal J1: Minimize loss of life and property due to dam failures.</b>
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*Strategy J1.1.1:* Review the safety and inspection of dams throughout the county.

**Status:** DEFERRED to the Soil Conservation Service

*Strategy J1.1.2:* Ensure funding for review and maintenance.

**Status:** ON-GOING

*Strategy J1.1.3:* Secure the dams. Protect from vandalism.

**Status:** ON-GOING

*Strategy J1.1.4:* Review plan for Jennings Randolph Dam in the Elk Garden area.

**Status:** ON-GOING

*Strategy J1.1.5:* Disclose the risk to those who build in area of dam.

**Status:** ON-GOING

*Strategy J1.1.6:* Coordinate with the State of Maryland concerning the Savage River Dam. Review plan.

**Status:** ON-GOING

*Strategy J1.1.7:* Coordinate with the Soil Conservation Service regarding dam inspections; also, maintain copies of inundation mapping and other dam risk assessments at the Mineral County Office of Emergency Management office (in an attempt to warn the public).

**Status:** NEW

<p><b>Goal J2: Minimize loss of life and economic losses from epidemics.</b></p>
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*Objective J2.1:* Minimize loss of human and animal life and minimize economic loss due to diseases.

*Strategy J2.1.1:* Review the Mineral County Health Department's plans.

**Status:** ON-GOING

*Strategy J2.1.2:* Regulate petting zoos concerning the spreading of diseases.

**Status:** DELETED per no petting zoos in Mineral County

*Strategy J2.1.3:* Monitor the risk of chronic wasting disease.

**Status:**

*Strategy J2.1.4:* Enforce laws concerning rabies.

**Status:** ON-GOING

*Strategy J2.1.5:* Monitor the risk of avian influenza.

**Status:** ON-GOING

*Strategy J2.1.6:* Work with the county fair association regarding prevention of the spread of animal diseases.

**Status:** NEW

**Goal J3: Minimize the potential for economic loss due to drought conditions.**

*Strategy J3.1.1:* County to assist with pumping water for livestock.

**Status:**

*Strategy J3.1.2:* Look for alternate water supplies and storage.

**Status:** ON-GOING

*Strategy J3.1.3:* Identify agency to regulate and monitor water usage during a drought period.

**Status:** DEFERRED to appropriate state regulatory agencies

**Goal J4: Minimize economic loss and human loss from the effects of an earthquake.**

*Strategy J4.1.1:* Educate the public as to the actual earthquake risk.

**Status:** ON-GOING

**Goal J5: Minimize loss due to flooding.**

*Objective J5.1:* Minimize economic losses.

*Strategy J5.1.1:* Introduce and use a mass notification warning system.

**Status:** ON-GOING

*Strategy J5.1.2:* Establish new construction ordinance.

**Status:**

*Strategy J5.1.3:* Identify buyout areas.

**Status:** COMPLETED per identification of repetitive loss properties

*Strategy J5.1.4:* Seek funding for buyouts.

**Status:** ON-GOING

*Strategy J5.1.5:* Pre-mitigate properties located along Water Street/Harley O Stagers' Drive.

**Status:** ON-GOING

*Strategy J5.1.6:* Educate Piedmont residents of concerns regarding the risk of storm cells causing flooding on the hillside.

**Status:** DEFERRED to Piedmont Floodplain Coordinator

*Strategy J5.1.7:* Eliminate concerns of storm water run-off.

**Status:** DELETED per feasibility

*Strategy J5.1.8:* Construct floodwalls in the New Creek area.

**Status:** DELETED per feasibility

*Strategy J5.1.9:* Regulate timbering throughout the County.

**Status:** DEFERRED to the West Virginia Department of Natural Resources

*Strategy J5.1.10:* Construct flood levee for the Harley O Stagers' Drive area.

**Status:** DELETED per feasibility

*Objective J5.2:* Provide for those who experience loss.

*Strategy J5.2.1:* Provide shelters, food, and medicine for those in need.

**Status:** ON-GOING

*Objective J5.3:* Aid with quick recovery process.

*Strategy J5.3.1:* Assist with development of plans for protection during an event.

**Status:** ON-GOING

*Strategy J5.3.2:* Identify flood prone structures in the county.

**Status:** ON-GOING

<b>Goal J6: Minimize losses due to hazardous material incidents.</b>
--

*Objective J6.1:* Reduce losses by improving response capabilities.

*Strategy J6.1.1:* Initiate response of Hazardous Incidents Response Team.

**Status:**

*Strategy J6.1.2:* Initiate response of Region III response team.

**Status:**

*Strategy J6.1.3:* Review the Mineral County Emergency Operations Plan regarding hazmat responses.

**Status:** ON-GOING

*Objective J6.2:* Reduce chances of spills during transportation.

*Strategy J6.2.1:* Develop a commodity flow study for the county concerning transportation of hazardous materials.

**Status:** COMPLETED by the Local Emergency Planning Committee in 2009

*Strategy J6.2.2:* Ensure regular updating of the commodity flow study.

**Status:** NEW

*Objective J6.3:* Reduce chances of spills resulting from fixed facilities.

*Strategy J6.3.1:* Coordinate with representatives from covered facilities to collectively determine mitigation strategies.

**Status:** NEW

*Objective J6.4:* Educate/alert the public as to the hazardous material risk.

*Strategy J6.4.1:* Educate public concerning response to hazardous incidents.

**Status:** ON-GOING

*Strategy J6.4.2:* Educate emergency personnel responding to hazardous incidents.

**Status:** ON-GOING

*Strategy J6.4.3:* Introduce and use a mass notification system.

**Status:** ON-GOING

<p><b>Goal J7: Minimize the chances of travel hazards due to land subsidence.</b></p>
---

*Strategy J7.1.1:* Coordinate with the West Virginia Division of Highways.

**Status:** DEFERRED to the WVDOH

<p><b>Goal J8: Minimize losses due to terrorism.</b></p>
--

*Objective: J8.1:* Minimize loss of human life due to biological attack.

*Strategy J8.1.1:* Ensure water facilities are locked and inaccessible by general public.

**Status:** COMPLETED per vulnerability assessments required by the federal Environmental Protection Agency

*Strategy J8.1.2:* Review the state Emergency Operations Plan.

**Status:** COMPLETED

*Strategy J8.1.3:* Treat as a hazardous material incident. Review plans for dealing with hazardous material incidents.

**Status:** DELETED and considered under “hazardous materials”

*Strategy J8.1.4:* Complete development of county Emergency Operations Plan.

**Status:** COMPLETED

*Objective: J8.2:* Minimize loss of human life due to chemical attack.

*Strategy J8.2.1:* Ensure facilities secure chemical agents.

**Status:** DELETED and considered under “hazardous materials”

*Strategy J8.2.2:* Regulate facilities using chemical agents.

**Status:** DEFERRED to the State Emergency Response Commission

*Strategy J8.2.3:* Review state Emergency Operations Plan.

**Status:** COMPLETED

*Strategy J8.2.4:* Treat as a hazardous material incident. Review plans for dealing with hazardous material incidents.

**Status:** DELETED and considered under “hazardous materials”

*Strategy J8.2.5:* Provide training and education for responders.

**Status:** DELETED and considered under “hazardous materials”

*Strategy J8.2.6:* Educate the public concerning shelter-in-place.

**Status:** DELETED and considered under “hazardous materials”

*Strategy J8.2.7:* Ensure West Vaco alarm system is working properly.

**Status:** DELETED and considered under  
“hazardous materials”

*Strategy J8.2.8:* Address issue of Carpendale having only one road leading in and out of municipality.

**Status:** DEFERRED to Carpendale officials

*Strategy J8.2.9:* Address issue of Piedmont transportation being limited to road access only.

**Status:** DEFERRED to Piedmont officials

*Objective: J8.3:* Minimize the risk of the communities due to the threat of bombs.

*Strategy J8.3.1:* Educate response teams.

**Status:** DELETED and considered under  
“hazardous materials”

*Objective: J8.4:* Enhance terrorism planning as a means of lessening vulnerabilities and losses.

*Strategy J8.4.1:* Compile, update, and maintain a terrorism vulnerability assessment for Mineral County.

**Status:** NEW

*Strategy J8.4.2:* Create a terrorism annex to the county Emergency Operations Plan.

**Status:** NEW

<p><b>Goal J9: Minimize the loss of life or property due to tornadoes or wind storms.</b></p>
---

*Strategy J9.1.1:* Educate the public through use of school education program.

**Status:** ON-GOING

*Strategy J9.1.2:* Alert public of threat.

**Status:** DELETED per pursuing of mass notification under other hazards

*Strategy J9.1.3:* Ensure communications systems working properly.

**Status:** ON-GOING

<p><b>Goal J10: Minimize loss of life or property due to the risk of wildfires.</b></p>
---

*Objective J10.1:* Reduce risk of wildfires.

*Strategy J10.1.1:* Coordinate with West Virginia Department of Natural Resources to sets burning regulations.

**Status:** DEFERRED to the Department of Natural Resources

*Strategy J10.1.2:* Coordinate with Governor to ensure burning bans enacted when needed.

**Status:** DEFERRED to state agencies

*Objective J10.2:* Reduce risk to people and property.

*Strategy J10.2.1:* Municipalities should ensure residents obtain burning permits.

**Status:** ON-GOING

<p><b>Goal J11: Minimize the loss of life or property due to winter storms.</b></p>
---

*Strategy J11.1.1:* Educate the public to be prepared.

**Status:** ON-GOING

*Strategy J11.1.2:* Access money for snow removal.

**Status:** ON-GOING

*Strategy J11.1.3:* Obtain additional snow removal equipment.

**Status:** ON-GOING

*Strategy J11.1.4:* Educate the public on the necessity of being aware of neighbors with special needs.

**Status:** ON-GOING

*Strategy J11.1.5:* Encourage state to enact a snow emergency plan.

**Status:** DEFERRED to state agencies

*Strategy J11.1.6:* Educate public through distribution of literature at schools.

**Status:** ON-GOING

*Strategy J11.1.7:* Consider coordinating with WVDOH regarding snow removal.

**Status:** NEW

*Strategy J11.1.8:* Consider creating a county-specific snow emergency plan.

**Status:** NEW

<p><b>Goal J12: Undertake projects to lessen losses from a number of different hazards.</b></p>
---

*Objective J12.1:* Minimize effects of extreme power outages on community.

*Strategy J12.1.1:* Educate the public on preparedness and response.

**Status:** ON-GOING

*Strategy J12.1.2:* Coordinate with utility companies to ensure restoration of utility services.

**Status:** ON-GOING

MOOREFIELD, TOWN OF

**Goal K1: Minimize loss of life and property due to flooding.**

*Objective: K1.1:* Ensure continued compliance with the National Flood Insurance Program (NFIP).

*Strategy K1.1.1:* The Town of Moorefield and Hardy County Commission should coordinate with the WVDOH to control additional flooding issues that may result from the construction of Corridor H.

**Status:** ON-GOING

*Strategy K1.1.2:* The Town of Moorefield must enforce requirements concerning construction of new dwellings in reference to its flood protection plan and the NFIP.

**Status:** ON-GOING

*Objective K1.2:* Undertake structural projects to lessen flood risk.

*Strategy K1.2.1:* Town of Moorefield should permanently install pumps on Allegheny Street to control ponding area problem.

**Status:** ON-GOING

*Strategy K1.2.2:* Town of Moorefield will provide additional small pumps for other ponding areas should the need arise.

**Status:** ON-GOING

*Strategy K1.2.3:* The Town of Moorefield should flood proof its wastewater treatment plant and lagoon.

**Status:** ON-GOING

*Strategy K1.2.4:* Flood proofing the Town of Moorefield's Water Treatment Plant.

**Status:** ON-GOING

**Goal K2: Minimize loss of life and property due to winter weather.**

*Objective K2.1:* Ensure appropriate planning at the municipal level relative to winter weather.

*Strategy K2.1.1:* The Town of Moorefield and the Town of Wardensville should develop a plan to address winter storms and snow removal.

**Status:** ON-GOING

PENDLETON COUNTY

**Goal L1: Minimize losses due to dam failure.**

*Objective: L1.1:* Increase monitoring capabilities.

*Strategy L1.1.1:* Need for early warning system to be established.

**Status:** ON-GOING

*Strategy L1.1.2:* IFLOWS system needs to be utilized. Additional personnel needed to monitor properly. Website to monitor IFLOWS/river gauges must be utilized.

**Status:** COMPLETED by the addition of two 92) volunteers added to the Pendleton County Office of Emergency Management (PCOEM) staff that can help monitor the system

*Strategy L1.1.3:* Additional river gauges need to be placed throughout county.

**Status:** ON-GOING

*Objective: L1.2:* Lessen the number of at-risk structures.

*Strategy L1.2.1:* Limit number of structures in area surrounding dam.

**Status:** ON-GOING

*Strategy L1.2.2:* Identify structures located within spillways of dams in cooperation with the Potomac Valley Conservation District and Natural Resource Conservation Service (NRCS).

**Status:** ON-GOING

<p><b>Goal L2: Minimize losses due to disease epidemics (including animal diseases).</b></p>
--

*Objective L2.1:* Determine partnerships that may assist in mitigating this risk.

*Strategy L2.1.1:* The West Virginia Division of Homeland Security and Emergency Management (WVDHSEM) manual is available to deal with disease epidemics on the local level.

**Status:** COMPLETED as it is addressed in the *West Virginia Emergency Operations Plan* under Annex W. It is also addressed in the *Pendleton County Emergency Operations Plan* under Annex G. Pandemic flu training events have been held throughout the state since 2006. County commissioners, PCOEM staff, health department staff, county medical and other related agencies participating in the trainings. On a county level, trainings were held by the health department. County plans have been updated to address these issues.

**Goal L3: Minimize the potential of loss due to drought conditions.**

*Objective L3.1:* Identify additional potential sources of water to be used during drought conditions.

*Strategy L3.1.1:* Utilize dams as other potential water source to offset drought.

**Status:** COMPLETED as dams are considered a water source in times of drought throughout Pendleton County.

*Objective L3.2:* Strengthen drought monitoring capabilities and early warning.

*Strategy L3.2.1:* Use drought monitor to determine where drought areas are located.

**Status:** ON-GOING

**Goal L4: Minimize loss of life due to earthquakes.**

*Objective L4.1:* Include earthquakes as a part of all-hazard public outreach efforts.

*Strategy L4.1.1:* Educate the public on how to protect themselves and to be prepared to provide for themselves.

**Status:** NEW

**Goal L5: Minimize loss of life and property and economic losses due to flooding. Additionally, minimize repeated losses due to flooding.**

*Objective L5.1:* Provide early warning and support other response measures during flood events.

*Strategy L5.1.1:* Use of early warning system.

**Status:** ON-GOING

*Strategy L5.1.2:* Early evacuation of threatened areas.

**Status:** COMPLETED per the completion of both a regional evacuation plan for Pendleton and surrounding counties as well as updates to Annex E of the local EOP.

*Strategy L5.1.3:* Local declaration of State of Emergency to citizens.

**Status:** COMPLETED per the following process: information concerning flooding is filtered through the PCOEM office and the County Commission declares the State of Emergency. Information is issued, in a timely manner, to the Public Information Officer (PIO) and disseminated through media such as radio, TV, 911 center, and websites.

*Strategy L5.1.4:* Continually monitor IFLOWS system.

**Status:** COMPLETED as PCOEM staff monitors IFLOWS during weather-related issues.

*Strategy L5.1.5:* Early activation of Search and Rescue (SAR) teams (local and state levels).

**Status:** COMPLETED as activation is done through the state report system Eteam.

*Objective L5.2:* Include flooding as a part of all-hazard public outreach efforts.

*Strategy L5.2.1:* Educate the public on potential flooding hazards and to be prepared to survive on own for at least 72 hours.

**Status:** ON-GOING

*Strategy L5.2.2:* Local LEPC needs to network information for county and Town of Franklin.

**Status:** ON-GOING

*Objective L5.3:* Ensure continued compliance with the NFIP.

*Strategy L5.3.1:* County floodplain maps need to be updated.

**Status:** COMPLETED as new maps are located on the WVDHSEM website.

*Strategy L5.3.2:* Buyout of homes (both RL and non-RL) in floodplain.

**Status:** ON-GOING

*Strategy L5.3.3:* Enforce floodplain laws and regulations as required by the NFIP.

**Status:** ON-GOING

<p><b>Goal L6: Minimize loss of life and control economic losses due to hazardous spills. Reduce risk to public due to hazardous spills.</b></p>
--

*Objective L6.1:* Ensure a response capability suitable for handing hazardous material situations.

*Strategy L6.1.1:* Additional training needed for personnel handling hazardous spills.

**Status:** ON-GOING

*Objective L6.2:* Continue planning efforts toward building a suitable hazmat response capability.

*Strategy L6.2.1:* Coordinate local LEPC plan with the state's plan concerning hazardous spills.

**Status:** COMPLETED per the completion of the *Pendleton County LEPC Operating Guidelines* document. Further, the Pendleton County LEPC has established a policy to ensure emergency responders maintain a constant state of readiness. The exercise schedule is comprised of Functional Exercises and Full-Scale Exercises. Periodic training sessions will be scheduled between exercise/drill events. The LEPC will coordinate with the PCOEM and other emergency responders when scheduling and planning exercises/drills. Exercises will involve fixed facilities and transportation providers. The WVDHSEM requires exercises every two (2) years. The LEPC Chair will distribute schedules of exercises on an annual basis. Documentation of exercises will be kept on file at the PCOEM.

<p><b>Goal L7: Minimize hazards associated with landslides, specific traffic hazards.</b></p>
---

*Objective L7.1:* Coordinate with stakeholders to ensure adequate response policies are in place for land subsidence incidents.

*Strategy L7.1.1:* Coordinate with the WVDOH to properly slope new road construction projects.

**Status:** DELETED due to low risk.

**Goal L8: Minimize the loss of life and property due to tornados and wind storms.**

*Objective L8.1:* Strengthen local warning and monitoring capabilities.

*Strategy L8.1.1:* Advise public of NWS warnings.

**Status:** ON-GOING

*Strategy L8.1.2:* Educate the public on preparedness and protection measures.

**Status:** ON-GOING

*Strategy L8.1.3:* Need for local wind gauges.

**Status:** COMPLETED as the PCOEM is equipped with wind instruments that identify the speed and temperature of wind. The funding for wind gauges has been unavailable.

**Goal L9: Minimize loss of forest areas and property due to wildfires.**

*Objective L9.1:* Ensure public warnings of wildfire conditions.

*Strategy L9.1.1:* Public should heed warnings announced by Forestry Service and NWS.

**Status:** COMPLETED per EOP Annex D: “notifications of wildfire warnings are announced to the public by way of 911 center public service announcement, radio and TV, and “RED FLAG” warning in the Town of Franklin from the PCOEM office.

*Objective L9.2:* Encourage preventive maintenance.

*Strategy L9.2.1:* Removal of debris needed throughout wooded areas to limit potential of wildfires.

**Status:** ON-GOING

**Goal L10: Minimize loss of life and economic loss due to winter storms.**

*Objective L10.1:* Strengthen warning and public information capabilities.

*Strategy L10.1.1:* Advise public of early warning system.

**Status:** ON-GOING

*Strategy L10.1.2:* Local weather station needed for monitoring.

**Status:** ON-GOING

*Objective L10.2:* Develop and ensure a sheltering capacity for Pendleton County.

*Strategy L10.2.1:* Generators needed for shelters created in fire stations.

**Status:** COMPLETED as per all fire stations now having generators.

PETERSBURG, CITY OF

**Goal M1: Minimize loss of life and property due to flooding.**

*Objective M1.1:* Undertake structural projects to prevent flood damage.

*Strategy M1.1.1:* Address surface water issues within the City of Petersburg.

**Status:** ON-GOING

PIEDMONT, CITY OF

**Goal N1: Minimize losses due to terrorism.**

*Objective N1.1:* Minimize loss of human life due to chemical attack.

*Strategy N1.1.1:* Address issue of Piedmont transportation being limited to road access only.

**Status:** ON-GOING

**Goal N2: Minimize losses due to flooding.**

*Objective N2.1:* Minimize economic losses.

*Strategy N2.1.1:* Educate Piedmont residents of concerns regarding the risk of storm cells causing flooding on the hillside.

**Status:** NEW

RIDGELEY, TOWN OF

**Goal O1: Undertake projects to lessen losses from a number of different hazards.**

*Objective O1.1:* Minimize effects of extreme power outages on community.

*Strategy O1.1.1:* Educate the public on preparedness and response.

**Status:** ON-GOING

*Strategy O1.1.2:* Coordinate with utility companies to ensure restoration of utility services.

**Status:** ON-GOING

ROMNEY, CITY OF

**Goal P1: Minimize the negative effects of miscellaneous hazards throughout Hampshire County.**

*Objective P1.1:* Assist, to the extent possible, emergency services organizations.

*Strategy P1.1.1:* Continue to provide fire protection for Romney and upgrade capabilities as need and funding are available.

**Status:** ON-GOING

WARDENSVILLE, TOWN OF

**Goal Q1: Minimize loss of life and property due to dam failure.**

*Objective: Q1.1:* Identify the actual dam failure risk for the Town of Wardensville.

*Strategy Q1.1.1:* Evaluate flood risk potential for the Town of Wardensville related to possible upstream dam failures that contribute to the Cacapon River and Trout Run streams that course through the town.

**Status:** ON-GOING

**Goal Q2: Minimize loss of life and property due to flooding.**

*Objective Q2.1:* Better define the town's flood risk and plan accordingly.

*Strategy Q2.1.1:* Conduct study for the east side of Wardensville to look at access concerns.

**Status:** DEFERRED to WVDOH

*Strategy Q2.1.2:* The Town of Wardensville should contact United States Geological Survey (USGS) to install gauges in proper areas of Lost River, Cacapon River, and Trout Run.

**Status:** DEFERRED to USGS

*Strategy Q2.1.3:* The Town of Wardensville needs additional environmental design to correct flooding problems to ensure access to roads is not cut off.

**Status:** ON-GOING

*Objective Q2.2:* Undertake structural projects with the goal of lessening flood risk.

*Strategy Q2.2.1:* The Town of Wardensville should replace culverts to correct flooding problems in repetitive loss area.

**Status:** ON-GOING

*Strategy Q2.2.2:* The Town of Wardensville should make necessary changes to its sewer lagoon embankment and wastewater treatment plant.

**Status:** ON-GOING

*Strategy Q2.2.3:* Assure efficient storm water management practices, such as clearing ditches and creating larger water basins for the town.

**Status:** ON-GOING

<p><b>Goal Q3: Minimize loss of life and property due to winter weather.</b></p>
--

*Objective Q3.1:* Ensure appropriate planning at the municipal level relative to winter weather.

*Strategy Q3.1.1:* The Town of Moorefield and the Town of Wardensville should develop a plan to address winter storms and snow removal.

**Status:** ON-GOING

*Strategy Q3.1.2:* Inspect river gauges for water levels at the eastern and western bridges in Wardensville.

**Status:** DELETED since this project is more of a response concern

*Strategy Q3.1.3:* Ensure needed snow removal equipment, emergency generators, shelters, and personnel are mobilized according to the town's snow plan.

**Status:** ON-GOING

## 3.2 IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

§201.6(c)(3)(ii) [The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

This portion of the plan builds on the strategies list presented in Section 3.1. Whereas Section 3.1 simply lists the mitigation goals, objectives, and strategies, this section analyzes those strategies as projects and discusses how they should be implemented. (\*NOTE: “Strategies” are considered mitigation “projects”.) Each strategy is listed along with a timeframe, primary coordinator, support agencies, potential funding source (and cost estimate), and its current status. Strategies are also categorized by six (6) different types of mitigation projects:

1. Prevention,
2. Property protection,
3. Natural resource protection,
4. Structural projects,
5. Emergency services, and
6. Public education and awareness.

It is important to note that the cost estimates are tentative and meant as a starting point for research on project feasibility. More specifically, these cost estimates are only ranges of probable project costs; all figures are approximations. At the time the implementation of any strategy is considered, a full cost estimate should be sought prior to securing funding. The Benefit-Cost Review was emphasized in the prioritization process. Mitigation actions were evaluated by their pros and cons, which are represented as costs and benefits.

Finally, as a navigational note, this section only contains current mitigation projects (organized by jurisdiction). If the status indicator in Section 3.1 classified as project as “Completed”, “Deleted”, or “Deferred”, it will not be listed below (unless the Hazard Mitigation Core Planning Committee chose to re-list the project because of a future benefit). As a result (especially during future updates), the strategy numbers may not run consecutively (e.g., Strategy X.1.5 may follow Strategy X.1.3).

BAYARD, TOWN OF

*Strategy A1.1.2:* Construction of a proper storm water drainage system for the Town of Bayard.

**Timeframe:** 5 years

**Cost Estimate** Up to \$1,000,000, contingent on the type of project that is  
*(Potential Funding):* undertaken (Small Cities Block Grant [SCGB], Infrastructure & Jobs  
Development Council [IJDC], Local Funding)

**Coordinating Agency:** Bayard Town Council

**Support Agencies:** Region 8 Planning & Development Council (PDC)

**Mitigation Type:** Structural Projects

**Status:** This project remains in the plan as it appears on the region's overall  
infrastructure improvements project list.

CAPON BRIDGE, TOWN OF

*Strategy B1.1.1:* Continue to buyout repetitive and non-repetitive loss properties vulnerable to flooding as funding is available.

**Timeframe:** 5 years

**Cost Estimate** Up to \$129,531 per purchased property (Hazard Mitigation Grant  
(*Potential Funding*): Program [HMGP])

**Coordinating Agency:** Capon Bridge Floodplain Coordinator

**Support Agencies:** Hampshire County Office of Emergency Management (HCOEM)

**Mitigation Type:** Prevention

**Status:** This project was added as a part of this update.

*Strategy B2.1.1:* Continue to provide fire protection for Capon Bridge and upgrade capabilities as need and funding are available.

**Timeframe:** 5 years

**Cost Estimate** Up to \$250,000 contingent on type of project (Assistance to  
(*Potential Funding*): Firefighters Grant Program [AFGP], Local Funding)

**Coordinating Agency:** Capon Bridge Volunteer Fire Department (VFD)

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Hampshire County's planning committee opted to leave this strategy in the plan because it is an on-going need.

CARPENDALE, TOWN OF

*Strategy C1.1.1:* Address issue of Carpendale having only one road leading in and out of municipality.

**Timeframe:** 5 years

**Cost Estimate** Unknown; the project is in the planning stages (N/A)

*(Potential Funding):*

**Coordinating Agency:** Carpendale Town Council

**Support Agencies:** West Virginia Division of Highways (WVDOH)

**Mitigation Type:** Prevention

**Status:** This project was added as part of this update.

ELK GARDEN, TOWN OF

*Strategy D1.1.1:* Educate the public on preparedness and response.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (Pre-Disaster Mitigation [PDM],

*(Potential Funding):* Emergency Management Performance Grant [EMPG], Local Funding)

**Coordinating Agency:** Elk Garden Municipal Council

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was broadened to include a farther-reaching outreach campaign for multiple hazards and listed as on-going.

*Strategy D1.1.2:* Coordinate with utility companies to ensure restoration of utility services.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Elk Garden Municipal Council

**Support Agencies:** Mineral County Office of Emergency Management

Utility Providers (e.g., electric, natural gas, water, sewer)

**Mitigation Type:** Emergency Services

**Status:** This strategy was listed as on-going since coordination would be necessary during future hazard occurrences.

FRANKLIN, TOWN OF

*Strategy E1.1.1:* Flood wall needed for Town of Franklin.

**Timeframe:** 5 years

**Cost Estimate** \$1,000,000+ (HMGP, United States Army Corps of Engineers

*(Potential Funding):* [USACE], SCBG, Local Funding)

**Coordinating Agency:** Franklin Town Council

**Support Agencies:** Region 8 PDC

Pendleton County Office of Emergency Management (PCOEM)

**Mitigation Type:** Structural Projects

**Status:** There is still a concern addressed within both the town and county governments. Lack of funding for dikes and flood walls has slowed this project.

## GRANT COUNTY

*Strategy F1.1.1:* Discourage development in areas around dams or encourage development of sound structures.

**Timeframe:** 5 years

**Cost Estimate** Little to no additional funding should be required as this is a part of  
*(Potential Funding):* existing programs (N/A)

**Coordinating Agency:** Grant County Building Inspector

**Support Agencies:** West Virginia Department of Environmental Protection (WVDEP)  
Dam Safety  
Grant County Office of Emergency Services (GCOES)

**Mitigation Type:** Prevention

**Status:** The West Virginia “Dam Safety Program” continually updates emergency plans for each dam which includes but is not limited to, evacuation plans and maps. Local officials can utilize these documents to inform its permitting process.

*Strategy F1.2.1:* Develop and distribute detailed evacuation plans with maps.

**Timeframe:** 5 years

**Cost Estimate** Little to no additional funding should be required as this is a part of  
*(Potential Funding):* existing programs (N/A)

**Coordinating Agency:** GCOES

**Support Agencies:** WVDEP Dam Safety

**Mitigation Type:** Prevention

**Status:** The West Virginia “Dam Safety Program” continually updates emergency plans for each dam which includes but is not limited to, evacuation plans and maps.

*Strategy F1.2.2:* Ensure personnel are trained to handle evacuation process.

**Timeframe:** 5 years

**Cost Estimate** Little to no additional funding should be required as this is a part of  
*(Potential Funding):* existing programs (N/A)

**Coordinating Agency:** GCOES

**Support Agencies:** Local Emergency Services Departments

**Mitigation Type:** Prevention

**Status:** Grant County recognizes that emergency evacuation is an on-going process accomplished by continual training and educating. A mock exercise is conducted yearly in September. The yearly exercises include all hazards, which include dam failure and evacuation.

*Strategy F2.1.3:* Support local pandemic influenza planning.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 annually, contingent upon the project (United States  
*(Potential Funding):* Department of Health and Human Services [USHHS], West Virginia Department of Health and Human Resources [WVDHHR], Local Funding)

**Coordinating Agency:** Grant County Health Department

**Support Agencies:** GCOES

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

*Strategy F2.1.4:* Support local animals in disaster planning.

**Timeframe:** 2 years

**Cost Estimate** Up to \$20,000 (State Homeland Security Grant Program [SHSP])  
*(Potential Funding):*

**Coordinating Agency:** GCOES

**Support Agencies:** Emergency Managers in Neighboring Counties

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

*Strategy F3.1.1: Local water sources for both livestock and potable water.*

**Timeframe:** 5 years  
**Cost Estimate** Resource identification should require little to no additional funding  
*(Potential Funding):* (N/A)  
**Coordinating Agency:** GCOES  
**Support Agencies:** WVU Extension Service  
Grant County Local Emergency Planning Committee (LEPC)  
**Mitigation Type:** Emergency Services  
**Status:** Local fire departments constantly identify water resources for use in the event of an emergency.

*Strategy F3.1.2: Local water for fighting fires.*

**Timeframe:** 5 years  
**Cost Estimate** Resource identification should require little to no additional funding  
*(Potential Funding):* (N/A)  
**Coordinating Agency:** Local Fire Departments  
**Support Agencies:** GCOES  
Grant County LEPC  
**Mitigation Type:** Emergency Services  
**Status:** Local fire departments constantly identify water resources for use in the event of an emergency.

*Strategy F3.1.3: Educate the public on conserving water.*

**Timeframe:** 5 years  
**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)  
*(Potential Funding):*  
**Coordinating Agency:** Grant County Public Service District (PSD)  
**Support Agencies:** GCOES  
Town of Petersburg  
Town of Bayard  
**Mitigation Type:** Public Education and Awareness  
**Status:** The county undertakes regular public outreach projects. This project remains in the plan to show the importance of include drought considerations in those efforts.

*Strategy F4.1.1:* Educate the public on how to protect themselves and to be prepared to provide for themselves.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** GCOES

**Support Agencies:** Grant County LEPC

**Mitigation Type:** Public Education and Awareness

**Status:** The county undertakes regular public outreach projects. This project remains in the plan to show the importance of include earthquake considerations in those efforts.

*Strategy F5.1.1:* Buyout homes (both Repetitive Loss [RL] and non-RL) located in the floodplain.

**Timeframe:** 5 years

**Cost Estimate** Up to \$99,600 per property purchased (HMGP)

*(Potential Funding):*

**Coordinating Agency:** Grant County Floodplain Coordinator

**Support Agencies:** Grant County Commission

**Mitigation Type:** Prevention

**Status:** This project remains in the plan as a valid option should funding become available.

*Strategy F5.1.3:* Enforce building codes referencing Flood Insurance Rate Maps (FIRMs).

**Timeframe:** 5 years

**Cost Estimate** Code enforcement is a part of the floodplain coordinator's mission,

*(Potential Funding):* thus it is a part of the existing budget (N/A)

**Coordinating Agency:** Grant County Floodplain Coordinator

**Support Agencies:** Grant County Commission

**Mitigation Type:** Prevention

**Status:** This project remains in the plan to show commitment to the county's NFIP compliance efforts.

*Strategy F5.1.4:* Construct a floodwall to protect homes in the North Fork Retreat development.

**Timeframe:** 10

**Cost Estimate** Up to \$1,000,000 contingent on size of project (SCBG, IJDC,

*(Potential Funding):* Federal Emergency Management Agency [FEMA], Local Funding)

**Coordinating Agency:** Grant County Commission

**Support Agencies:** Region 8 PDC

**Mitigation Type:** Structural Projects

**Status:** This project remains in the plan though funding could not be procured for it prior to this update.

*Strategy F6.1.1:* Additional training needed for personnel handling hazardous spills.

**Timeframe:** 5 years

**Cost Estimate** Many training opportunities are offered at no cost; other could cost

*(Potential Funding):* up to \$1,000 (EMPG, HMEP, SERC, Local Funding)

**Coordinating Agency:** Grant County LEPC

**Support Agencies:** GCOES  
Local Emergency Services Departments

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because of the cyclical nature of training, turnover of volunteer personnel, etc.

*Strategy F6.1.2:* Additional volunteers needed.

**Timeframe:** 5 years

**Cost Estimate** Recruitment of volunteers should require little to no additional

*(Potential Funding):* funding (N/A)

**Coordinating Agency:** Local Emergency Services Departments

**Support Agencies:** GCOES  
Grant County LEPC

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because of the cyclical nature of training, turnover of volunteer personnel, etc.

*Strategy F8.1.1: Synchronize the West Virginia Emergency Operations Plan (EOP) and the local EOP.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 if an entire plan update is done with the assistance of a  
*(Potential Funding):* consultant (HMEP, EMPG, Local Funding)

**Coordinating Agency:** GCOES

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because the GCOES updates portions of the EOP on an annual basis.

*Strategy F8.1.5: Additional training for law enforcement to handle incidents.*

**Timeframe:** 5 years

**Cost Estimate** Many training opportunities are offered at no cost; other could cost  
*(Potential Funding):* up to \$1,000 (EMPG, Hazardous Materials Emergency Planning Grant [HMEP], State Emergency Response Commission [SERC], Local Funding)

**Coordinating Agency:** Grant County Sheriff

**Support Agencies:** Grant County Commission  
GCOES  
Grant County LEPC  
Local Emergency Services Departments

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because of the cyclical nature of training, turnover of volunteer personnel, etc.

*Strategy F9.1.1: Educate the public on preparedness and protection measures.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, HMEP, Local Funding)  
*(Potential Funding):*

**Coordinating Agency:** GCOES

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** The county undertakes regular public outreach projects. This project remains in the plan to show the importance of include wildland fire considerations in those efforts.

*Strategy F10.1.1: Provide additional training for personnel.*

**Timeframe:** 5 years

**Cost Estimate** Many training opportunities are offered at no cost; other could cost  
*(Potential Funding):* up to \$1,000 (EMPG, HMEP, SERC, Local Funding)

**Coordinating Agency:** GCOES (as a clearinghouse of opportunities only)

**Support Agencies:** Local Emergency Services Departments

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because of the cyclical nature of training, turnover of volunteer personnel, etc.

*Strategy F11.1.1: Educate the public on preparedness.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, HMEP, Local Funding)  
*(Potential Funding):*

**Coordinating Agency:** GCOES

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** The county undertakes regular public outreach projects. This project remains in the plan to show the importance of include winter weather considerations in those efforts.

HAMPSHIRE COUNTY

*Strategy G1.1.1:* Advise and educate the public of the dam failure risk, to include providing real estate disclosure at the time of sale.

**Timeframe:** 5 years

**Cost Estimate** \$500 – \$2,500 contingent upon the size the campaign (PDM, Local  
(*Potential Funding*): Funding)

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** Maryland Department of the Environment (MDE), Dam Safety Program

**Mitigation Type:** Public Education and Awareness

**Status:** The Hampshire County planning committee chose to leave this project in the plan as a part of its whole community approach.

*Strategy G1.1.2:* Ensure that plans are in place for the inspection and rehabilitation of dams. Coordinate with the Maryland Department of the Environment, Dam Safety Program as these dams are not located in Hampshire County.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)  
(*Potential Funding*):

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** MDE, Dam Safety Program

**Mitigation Type:** Prevention

**Status:** The Hampshire County planning committee chose to leave this project in the plan as a part of its whole community approach.

*Strategy G1.1.3:* Coordinate with Maryland officials to continue monitoring water levels on the North Branch of the Potomac River.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)  
(*Potential Funding*):

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** MDE, Dam Safety Program

**Mitigation Type:** Prevention

**Status:** The Hampshire County planning committee chose to leave this project in the plan as a part of its whole community approach.

*Strategy G2.1.1:* As planning for animals in disaster continues, ensure that provisions to maintain water for animals are included.

**Timeframe:** 3 years

**Cost Estimate** Up to \$5,000 (EMPG, HMEP, USDHS, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** WV Division of Homeland Security & Emergency Management  
(WVDHSEM)

West Virginia Department of Agriculture

West Virginia University (WVU) Extension Service

**Mitigation Type:** Emergency Services

**Status:** Planning partnerships have been formed with the health department and other emergency managers from throughout the Eastern Panhandle region.

*Strategy G2.1.2:* Coordinate the identification of backup water sources (e.g. additional aquifers, etc.) to ensure the continuity of existing systems.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding. This project

*(Potential Funding):* includes the identification of other projects that might be necessary to install backup water capabilities, which may carry with them significant costs.)

**Coordinating Agency:** Central Hampshire PSD

**Support Agencies:** City of Romney

**Mitigation Type:** Structural Projects

**Status:** This project was added as a part of this update.

*Strategy G3.1.1:* Educate the public on the possibility of an earthquake.

**Timeframe:** 5 years

**Cost Estimate** \$500 to \$2,500 contingent on the size of the campaign (PDM, Local

*(Potential Funding):* Funding)

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** This project was left in the plan as a part of an on-going, all-hazards public outreach program.

*Strategy G4.1.1:* Continue to enforce ordinances that new structures do not interfere with flood mitigation measures.

**Timeframe:** 5 years

**Cost Estimate** N/A (Enforcement is already budgeted into the planning department's  
*(Potential Funding):* operations.)

**Coordinating Agency:** Hampshire County Planning

**Support Agencies:** Hampshire County Floodplain Coordinator  
Hampshire County Commission

**Mitigation Type:** Prevention

**Status:** This project remains in the plan because it represents an on-going element of Hampshire County's NFIP compliance.

*Strategy G4.1.2:* Educate the public on potential flooding hazards and provide tips on how to survive for 72 hours without significant assistance.

**Timeframe:** 5 years

**Cost Estimate** \$500 – \$2,500 contingent on size of campaign (HMGP, PDM, Local  
*(Potential Funding):* Funding)

**Coordinating Agency:** Hampshire County Floodplain Coordinator

**Support Agencies:** Romney National Flood Insurance Program (NFIP) Coordinator  
Capon Bridge NFIP Coordinator  
Hampshire County Office of Emergency Management

**Mitigation Type:** Public Education and Awareness

**Status:** This project was left in the plan as a part of an on-going, all-hazards public outreach program.

*Strategy G4.1.3:* Coordinate with gas companies and retailers operating in Hampshire County, to ensure that household propane tanks are secured.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)  
*(Potential Funding):*

**Coordinating Agency:** Hampshire County Planning

**Support Agencies:** N/A

**Mitigation Type:** Prevention

**Status:** This project was left in the plan as a part of Hampshire County's whole community approach.

*Strategy G4.2.1:* Continue to buyout repetitive and non-repetitive loss properties vulnerable to flooding as funding is available.

**Timeframe:** 5 years

**Cost Estimate** \$78,300 per purchased structure (HMGP)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Planning

**Support Agencies:** Hampshire County Commission  
Hampshire County Office of Emergency Management

**Mitigation Type:** Prevention

**Status:** This project remains in the plan as a part of the county's NFIP compliance.

*Strategy G4.2.2:* Begin compiling the information necessary to apply for participation in the Community Rating System (CRS).

**Timeframe:** 5 years

**Cost Estimate** N/A (Compiling materials for the CRS means collecting items that are

*(Potential Funding):* already available locally or that can be developed locally.)

**Coordinating Agency:** Hampshire County Floodplain Coordinator

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Public Education and Awareness

**Status:** This project was added as a part of this update.

*Strategy G5.1.1:* Coordinate the development of mutual aid agreements with such agencies as the Regional Response Team (RRT) and neighboring county hazmat response teams.

**Timeframe:** 5 years

**Cost Estimate** N/A (Creation of mutual aid agreements should not require significant

*(Potential Funding):* additional funding.)

**Coordinating Agency:** Local Fire Companies

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** The project remains in the plan, yet speaks to Mutual Aid Agreements (MAAs) with a variety of agencies as a part of the county's whole community approach.

*Strategy G5.1.2:* Continue on-going hazardous material planning efforts at the local level, to include integration of local and state efforts.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 (HMEP)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County LEPC

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan as it represents an element of the LEPC's core mission.

*Strategy G5.1.3:* Explore options for ordinances to ensure that residential propane tanks are secured.

**Timeframe:** 5 years

**Cost Estimate** N/A (Exploration of options should require little to no additional

*(Potential Funding):* funding.)

**Coordinating Agency:** Hampshire County Planning

**Support Agencies:** Hampshire County Commission

**Mitigation Type:** Prevention

**Status:** This project was added as a part of this update.

*Strategy G5.1.4:* Coordinate with emergency planning partners throughout Hampshire and surrounding counties to inventory resources that might be available for hazmat response.

**Timeframe:** 5 years

**Cost Estimate** Up to \$10,000 (EMPG, HMEP, USDHS, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** Hampshire County LEPC

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

*Strategy G5.1.5:* Undertake training and other educational efforts to inform responders about extinguishing fires with ethanol additives. Training should be relative to new technologies.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 per opportunity (EMPG, USDHS, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Local Fire Companies

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

*Strategy G6.1.1:* Educate the public as to the risk of land subsidence, to include providing information to developers about the risks associated with Karst topography.

**Timeframe:** 5 years

**Cost Estimate** \$500 to \$2,500 contingent on size of campaign (PDM, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** Hampshire County Development Authority

**Mitigation Type:** Public Education and Awareness

**Status:** This project was left in the plan as a part of an on-going, all-hazards public outreach program.

*Strategy G6.1.2:* Continue coordination with the WVDOH to expand shoulder area of roadways (to reduce the number of road closures due to landslides).

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)

*(Potential Funding):*

**Coordinating Agency:** Local WVDOH

**Support Agencies:** WVDOH (Charleston)

**Mitigation Type:** Prevention

**Status:** This project remains in the plan as indicative of Hampshire County's whole community approach.

*Strategy G6.1.3:* Coordinate with oil and natural gas exploration companies to ensure that measures are in place to guard against a loss of groundwater and sinking/settling in heavily drilled areas.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Planning

**Support Agencies:** Hampshire County Development Authority  
Gas Companies

**Mitigation Type:** Prevention

**Status:** This project was added as a part of this update.

*Strategy G7.1.1:* Continue to update Annex M of the *Hampshire County Emergency Operations Plan* in an effort to prepare for potential domestic and international terrorist incidents.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 (EMPG, HMEP, USDHS, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan as it represents an on-going responsibility of the Hampshire County Office of Emergency Management.

*Strategy G7.1.2:* Coordinate with the Hampshire County Health Department to continue planning efforts regarding biological concerns.

**Timeframe:** 5 years

**Cost Estimate** \$5,000 to \$15,000 contingent on the size of the project and whether

*(Potential Funding):* contractors are used (EMPG, USDHS, Local Funding)

**Coordinating Agency:** Hampshire County Health Department

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan but was revised to be inclusive of the health department's increased role in planning.

*Strategy G8.1.1:* Educate the public on preparedness and protection measures.

**Timeframe:** 3 years  
**Cost Estimate** \$500 to \$2,500 contingent on the size of the campaign (PDM, Local  
*(Potential Funding):* Funding)  
**Coordinating Agency:** Hampshire County Office of Emergency Management  
**Support Agencies:** N/A  
**Mitigation Type:** Public Education and Awareness  
**Status:** This project was left in the plan as a part of an on-going, all-hazards public outreach program.

*Strategy G9.1.1:* Ensure road access to unpopulated and/or developing (wooded) areas to provide for firefighter access.

**Timeframe:** 5 years  
**Cost Estimate** Up to \$1,000,000 contingent on the number of projects undertaken  
*(Potential Funding):* and the types of roads constructed (WVDOH, United States Department of Transportation [USDOT], Local Funding)  
**Coordinating Agency:** Local Fire Companies  
**Support Agencies:** Hampshire County Planning  
Private Developers  
WVDOH  
**Mitigation Type:** Emergency Services  
**Status:** This project remains in the plan but was revised to include upgrades to existing roads.

*Strategy G9.2.1:* Educate the public about “urban-wildland” interface and the hazards associated with planting trees very close to their homes. Such programs as “Firewise” can be utilized, as can a cooperative outreach effort with the West Virginia Division of Forestry.

**Timeframe:** 3 years  
**Cost Estimate** \$500 to \$2,500 contingent on the size of the campaign (PDM, Local  
*(Potential Funding):* Funding)  
**Coordinating Agency:** Hampshire County Office of Emergency Management  
**Support Agencies:** N/A  
**Mitigation Type:** Public Education and Awareness  
**Status:** This project was added as a part of this update.

*Strategy G10.1.1:* Educate the public about winter storm risks and encourage them to maintain enough supplies to be self-reliant for 72 hours.

**Timeframe:** 3 years

**Cost Estimate** \$500 to \$2,500 contingent on the size of the campaign (PDM, Local  
*(Potential Funding):* Funding)

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** This project was left in the plan as a part of an on-going, all-hazards public outreach program.

*Strategy G10.2.1:* Coordinate with the WVDOH to ensure that roadways are cleared during significant snow or ice events.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding. Further,  
*(Potential Funding):* WVDOH budgets include snow removal during the winter months.)

**Coordinating Agency:** Local WVDOH

**Support Agencies:** WVDOH (Charleston)

**Mitigation Type:** Emergency Services

**Status:** Coordination with WVDOH has been done but is necessary during each winter season.

*Strategy G10.2.2:* Coordinate with utility companies to ensure that they have planned for business continuity during prolonged emergencies.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)  
*(Potential Funding):*

**Coordinating Agency:** HCOEM

**Support Agencies:** Utility Companies

**Mitigation Type:** Prevention

**Status:** This project remains in the plan as indicative of the county's whole community approach.

*Strategy G11.1.1:* Continue to provide fire protection for Romney and Capon Bridge and upgrade capabilities as need and funding are available.

**Timeframe:** 5 years

**Cost Estimate** Up to \$500,000 contingent on the type of equipment purchased

*(Potential Funding):* (AFGP, Local Funding)

**Coordinating Agency:** Romney Vol. Fire Department  
Capon Bridge Vol. Fire Department

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project was revised to include the City of Romney and to generally address fire preparedness.

*Strategy G11.1.2:* Continue to ensure and upgrade communications capabilities throughout the county.

**Timeframe:** 5 years

**Cost Estimate** Up to \$1,000,000 contingent on the size of the project and the

*(Potential Funding):* equipment purchased (EMPG, USDHS, Local Funding)

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** Hampshire County 911  
Local Response Agencies

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan even though communications upgrades have occurred; additional upgrades are still necessary.

*Strategy G11.2.1:* Continue partnering with the Hampshire County Health Department regarding pandemic planning.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)

*(Potential Funding):*

**Coordinating Agency:** Hampshire County Health Department

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project remains to be indicative of the partnerships formed between the Hampshire County Office of Emergency Management and the health department.

*Strategy G11.2.2:* Continue planning for the provision of food, water, and housing to county residents displaced by large-scale emergencies.

**Timeframe:** 5 years

**Cost Estimate** N/A (Coordination requires little to no additional funding.)

*(Potential Funding):*

**Coordinating Agency:** HCOEM

**Support Agencies:** American Red Cross

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because it represents a core element of the Hampshire County Office of Emergency Management's mission.

*Strategy G11.2.3:* Continue to partner with state and neighboring jurisdictions to plan for an "urban-to-rural" evacuation from the National Capital Region (NCR) into the eastern panhandle of West Virginia.

**Timeframe:** 5 years

**Cost Estimate** N/A (Partnership and planning require little to no additional funding.)

*(Potential Funding):* Some identified projects may be funded through the United States Department of Homeland Security [USDHS] and EMPG program.)

**Coordinating Agency:** Hampshire County Office of Emergency Management

**Support Agencies:** Emergency Managers from Neighboring Counties

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

HARDY COUNTY

*Strategy H1.1.2:* Establishment of a communication system to monitor increasing risk.

**Timeframe:** 5 years

**Cost Estimate** \$3,000,000+ (SHSP, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Local Emergency Services Departments  
Regional Interoperable Committee (RIC)

**Mitigation Type:** Emergency Services

**Status:** The county constantly strives to upgrade its communications capabilities; therefore, this project remains on the list.

*Strategy H1.1.4:* Identify structures located around dam structures to be affected by dam failure.

**Timeframe:** 5 years

**Cost Estimate** Identification of structures should require little to no additional

*(Potential Funding):* funding (N/A)

**Coordinating Agency:** Dam Owners

**Support Agencies:** Potomac Valley Conservation District  
Natural Resources Conservation Service  
Hardy County Commission

**Mitigation Type:** Prevention

**Status:** This project is an on-going strategy; i.e., dam owners re-assess every so often as new development may occur.

*Strategy H1.2.1:* Limit number of structures affected by potential dam failures.

**Timeframe:** 5 years

**Cost Estimate** Code creation should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Commission

**Support Agencies:** Dam Owners

**Mitigation Type:** Prevention

**Status:** This project is listed as on-going since research is being done to define appropriate legal parameters.

*Strategy H2.1.1: Review Hardy County Health Department plan.*

**Timeframe:** 5 years

**Cost Estimate** Plan review and information sharing does not require additional

*(Potential Funding):* funding (N/A)

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County Health Department

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because it is indicative of on-going information sharing between the Hardy County Office of Emergency Management and the health department.

*Strategy H2.1.3: Compile an animals in disaster plan for Hardy County.*

**Timeframe:** 2 years

**Cost Estimate** \$20,000 (SHSP)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Emergency Managers in Neighboring Counties

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

*Strategy H2.1.4: Support business continuity planning efforts throughout Hardy County.*

**Timeframe:** 2 years

**Cost Estimate** \$6,000 (SHSP)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project was added as a part of this update.

*Strategy H3.1.1: Locate facilities for irrigation.*

**Timeframe:** 5 years

**Cost Estimate** Location of facilities should require little to no additional funding

*(Potential Funding):* (N/A)

**Coordinating Agency:** Hardy County Commission

**Support Agencies:** WVU Extension Service

**Mitigation Type:** Emergency Services

**Status:** This strategy represents an on-going effort of local fire departments.

*Strategy H3.1.2: Locate water for livestock and poultry farm use.*

**Timeframe:** 5 years

**Cost Estimate** Location of resources should require little to no additional funding

*(Potential Funding):* (N/A)

**Coordinating Agency:** Hardy County Commission

**Support Agencies:** WVU Extension Service

**Mitigation Type:** Emergency Services

**Status:** This strategy represents an on-going effort of local fire departments.

*Strategy H3.1.3: Identify water resources.*

**Timeframe:** 5 years

**Cost Estimate** Location of resources should require little to no additional funding

*(Potential Funding):* (N/A)

**Coordinating Agency:** Hardy County Public Service District

**Support Agencies:** Hardy County Commission

Hardy County Planning Commission

**Mitigation Type:** Emergency Services

**Status:** This strategy represents an on-going effort of local fire departments.

*Strategy H3.1.4: Locate water for poultry plant production.*

**Timeframe:** 5 years

**Cost Estimate** Location of resources should require little to no additional funding

*(Potential Funding):* (N/A)

**Coordinating Agency:** Town of Moorefield

**Support Agencies:** Poultry Industry

**Mitigation Type:** Emergency Services

**Status:** This strategy represents an on-going effort of local fire departments.

*Strategy H3.2.1:* Need a countywide water resource study.

**Timeframe:** 5 years

**Cost Estimate** Up to \$100,000 contingent on the use of a consultant (Unknown)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Planning Commission

**Support Agencies:** Region 8 PDC

**Mitigation Type:** Public Education and Awareness

**Status:** This project remains on the list while funding is sought.

*Strategy H3.2.2:* Evaluate the current infrastructure abilities to meet the minimum water demands of public water customers.

**Timeframe:** 5 years

**Cost Estimate** Evaluation should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Rural Development Association

**Support Agencies:** Town of Moorefield  
Town of Wardensville

**Mitigation Type:** Prevention

**Status:** This project represents an on-going effort for service providers.

*Strategy H4.1.1:* Educate the public on how to protect themselves and to be prepared to provide for themselves.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County LEPC

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going (i.e., annual) effort.

*Strategy H4.1.2:* Keep public informed on pending disasters.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County Commission

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going (i.e., annual) effort.

*Strategy H5.1.3:* The county should develop a plan to ensure all contacts for emergency personnel are made.

**Timeframe:** 5 years

**Cost Estimate** Updating an internal plan requires little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** The Hardy County Office of Emergency Management frequently updates its call-out rosters.

*Strategy H5.1.4:* The county needs to purchase equipment (hovercraft) to ensure that residents in the Old Fields area are accessible should a flood close US 220 out of Moorefield.

**Timeframe:** 5 years

**Cost Estimate** Up to \$50,000 (AFGP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Local Emergency Services Departments

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project was not originally completed due to lack of funding; local officials continue to seek funding.

*Strategy H5.1.5:* Improve local emergency services response to flooding hazards by upgrading equipment and providing training of personnel.

**Timeframe:** 5 years

**Cost Estimate** Unknown; contingent on type of equipment purchased (N/A)

*(Potential Funding):*

**Coordinating Agency:** Local Emergency Services Department

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Local agencies regularly review their equipment inventories and seek funding for upgrades. This project remains in the plan to be supportive of those efforts.

*Strategy H5.1.6:* Information provided by river gauges needs to be available on all websites for monitoring.

**Timeframe:** 5 years

**Cost Estimate** Information sharing should require little to no additional funding

*(Potential Funding):* (N/A)

**Coordinating Agency:** National Weather Service

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going information sharing effort.

*Strategy H5.2.1:* Hardy County must ensure that new construction complies with requirements of the NFIP.

**Timeframe:** 5 years

**Cost Estimate** Compliance is already built into the county budget and should

*(Potential Funding):* require little to no additional funding (N/A)

**Coordinating Agency:** Hardy County Floodplain Coordinator

**Support Agencies:** Hardy County Commission

**Mitigation Type:** Prevention

**Status:** This project remains in the plan to support Hardy County's on-going NFIP compliance efforts.

*Strategy H5.2.2:* Hardy County should buyout homes (both RL and non-RL) that are repeatedly flooded.

**Timeframe:** 5 years

**Cost Estimate** Up to \$125,500 per property purchased (HMGP)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Floodplain Coordinator

**Support Agencies:** Hardy County Commission  
Hardy County Office of Emergency Management

**Mitigation Type:** Prevention

**Status:** This project was not implemented due to a lack of funding but it remains a viable option should funding be available.

*Strategy H6.1.1:* Ensure that poultry plants are following plant safety programs.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Plant Management

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** As part of Hardy County's "whole community" approach, this project represents an on-going information sharing effort.

*Strategy H6.1.3:* Review the *Hardy County EOP* plans and fire department plans for compatibility.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 contingent on the use of a consultant and the scope of

*(Potential Funding):* the update (HMEP, EMPG, Local Funding)

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County LEPC

**Mitigation Type:** Emergency Services

**Status:** The Hardy County Office of Emergency Management reviews and updates a minimum of four (4) annexes per year as part of its EMPG compliance.

*Strategy H6.1.4:* Review evacuation process with Hardy County Office of Emergency Management and emergency personnel.

**Timeframe:** 5 years

**Cost Estimate** Review of processes should require little to no additional funding  
*(Potential Funding):* (N/A)

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Local Emergency Services Departments

**Mitigation Type:** Emergency Services

**Status:** This project represents an annual review of plans and policies.

*Strategy H6.1.5:* Ensure that the LEPC continues involvement in the regional meetings discussing hazardous material incidents.

**Timeframe:** 5 years

**Cost Estimate** Participation should require little to no additional funding; further,  
*(Potential Funding):* travel to state-wide meetings is often reimbursed (N/A)

**Coordinating Agency:** Hardy County LEPC

**Support Agencies:** Hardy County Commission

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan to support on-going LEPC efforts and to encourage members to participate in statewide functions.

*Strategy H6.2.1:* Purchase additional equipment including hazardous material suits and decontamination equipment for emergency personnel.

**Timeframe:** 5 years

**Cost Estimate** Up to \$250,000 contingent on the type of equipment purchased  
*(Potential Funding):* (AFGP, EMPG, Local Funding)

**Coordinating Agency:** Local Fire Departments

**Support Agencies:** Hardy County LEPC  
Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Response agencies regularly re-assess their equipment needs; this project remains in the plan to be supportive of those efforts.

*Strategy H6.2.2:* Provide training updates for emergency personnel.

**Timeframe:** 5 years

**Cost Estimate** Unknown; contingent on the training topic and location (N/A)

*(Potential Funding):*

**Coordinating Agency:** Local Emergency Services Departments

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Response agencies regularly re-assess their training needs; this project remains in the plan to be supportive of those efforts.

*Strategy H6.3.1:* Ensure that storage tanks are located out of flood zone and/or installed with safety measures.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Planning Commission

**Support Agencies:** Facility Owners

**Mitigation Type:** Prevention

**Status:** This project represents regular outreach to covered facilities via the LEPC.

*Strategy H6.3.2:* Identify location of natural gas lines.

**Timeframe:** 5 years

**Cost Estimate** Location should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Planning Commission

**Support Agencies:** Hardy County Rural Development Association  
Natural Gas Companies

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan to remind local officials to update their information as new gas lines are often added.

*Strategy H7.1.1: Coordinate with the WVDOH.*

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Commission

**Support Agencies:** WVDOH

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going information sharing initiative.

*Strategy H8.1.3: Provide training for emergency personnel to identify human diseases.*

**Timeframe:** 5 years

**Cost Estimate** Unknown; contingent on the training topic and location (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Health Department

**Support Agencies:** Hardy County LEPC

Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Agencies regularly re-assess their training needs; this project remains in the plan to be supportive of those efforts.

*Strategy H8.1.4: Ensure that local fire departments coordinate with the local and state emergency managers.*

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Local Fire Departments

West Virginia Division of Homeland Security and Emergency Management (WVDHSEM)

**Mitigation Type:** Emergency Services

**Status:** This project represents an on-going information sharing effort.

*Strategy H8.1.5: Protect critical infrastructure and facilities.*

**Timeframe:** 5 years

**Cost Estimate** As a planning project, this should require little funding; target  
*(Potential Funding):* hardening efforts, though, may require funding (N/A)

**Coordinating Agency:** Hardy County Commission

**Support Agencies:** Town of Moorefield  
Town of Wardensville

**Mitigation Type:** Emergency Services

**Status:** The protection of critical infrastructure has been started through such efforts as ACAMS; it is an on-going effort, though.

*Strategy H8.2.1: Facilitate counseling and support to lessen impact on the community, particularly for school-aged children.*

**Timeframe:** 5 years

**Cost Estimate** As a planning project, this should require little to no additional  
*(Potential Funding):* funding (N/A)

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County Health Department

**Mitigation Type:** Emergency Services

**Status:** This project represents a continual planning effort; it is included in this document as support for the effort.

*Strategy H8.2.2: Address how to handle local housing, water, and food supply needs.*

**Timeframe:** 5 years

**Cost Estimate** As a planning project, this should require little to no additional  
*(Potential Funding):* funding (N/A)

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** American Red Cross  
Faith-Based Organizations

**Mitigation Type:** Emergency Services

**Status:** This project represents a continual planning effort; it is included in this document as support for the effort.

*Strategy H9.1.1:* Educate the public on preparedness and protection measures, including the use of wind charts that are available.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County LEPC

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going (i.e., annual) effort.

*Strategy H9.1.2:* Provide adequate warning to public.

**Timeframe:** 5 years

**Cost Estimate** Unknown (SHSP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Neighboring County Emergency Managers

**Mitigation Type:** Public Education and Awareness

**Status:** Hardy County has aligned with Grant, Pendleton, Mineral, Hampshire, Berkeley, and Jefferson Counties in an attempt to get a mass notification system.

*Strategy H9.3.1:* Identify shelters, particularly those with basements, for use during tornados. Shelters should be identified for both municipalities and the county.

**Timeframe:** 5 years

**Cost Estimate** As a planning project, this should require little to no additional

*(Potential Funding):* funding (N/A)

**Coordinating Agency:** American Red Cross

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project represents a continual planning effort; it is included in this document as support for the effort.

*Strategy H10.1.1:* Include wildland fire hazard discussions in existing all-hazard public outreach efforts.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County LEPC

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going (i.e., annual) effort.

*Strategy H10.1.3:* Monitor wind patterns as they develop.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** National Weather Service (NWS)

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going information sharing effort.

*Strategy H10.2.1:* Identify water sources needed for fighting fires.

**Timeframe:** 5 years

**Cost Estimate** Location of resources should require little to no additional funding

*(Potential Funding):* (N/A)

**Coordinating Agency:** Local Fire Departments

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This strategy represents an on-going effort of local fire departments.

*Strategy H11.1.1:* Include winter storm preparedness in existing all-hazard public outreach efforts.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Hardy County LEPC

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going (i.e., annual) effort.

*Strategy H11.1.4:* Evaluate flood risk potential of local rivers, streams, and basis related to ice dams and quick thawing.

**Timeframe:** 5 years

**Cost Estimate** Evaluation should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** USACE

Potomac Valley Conservation District

National Weather Service

**Mitigation Type:** Public Education and Awareness

**Status:** This project is an on-going effort of a number of agencies; it is included for support.

*Strategy H11.1.5:* Provide advance warning for the public.

**Timeframe:** 5 years

**Cost Estimate** Unknown (SHSP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** Neighboring County Emergency Managers

**Mitigation Type:** Public Education and Awareness

**Status:** Hardy County has aligned with Grant, Pendleton, Mineral, Hampshire, Berkeley, and Jefferson Counties in an attempt to get a mass notification system.

*Strategy H11.2.2:* Implement snow route procedures after 2” of accumulated snowfall to protect infrastructure such as roads, alleys, and highways that are needed for emergency response capability.

**Timeframe:** 5 years

**Cost Estimate** Implementation of a plan of this sort would only require the funding  
*(Potential Funding):* of the resources carrying it out; such funding would be contingent on the duration of the implementation (Unknown)

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** WVDOH

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because it is actually still in the feasibility stage.

*Strategy H11.3.1:* Coordinate with the WVU Extension Service.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)  
*(Potential Funding):*

**Coordinating Agency:** Hardy County Office of Emergency Management

**Support Agencies:** WVU Extension Service

**Mitigation Type:** Public Education and Awareness

**Status:** This project represents an on-going information sharing initiative.

KEYSER, CITY OF

*Strategy 11.1.1:* Maintain or replace retaining walls in Keyser along Water Street.

**Timeframe:** 5 years

**Cost Estimate** Up to \$100,000 depending on the amount of materials and labor

*(Potential Funding):* needed to repair/replace a damaged section (Local Funding)

**Coordinating Agency:** Keyser Public Works

**Support Agencies:** N/A

**Mitigation Type:** Structural Projects

**Status:** This project represents an on-going initiative in the City of Keyser to maintain streets and alley ways within its jurisdiction.

## MINERAL COUNTY

*Strategy J1.1.2: Ensure funding for review and maintenance.*

**Timeframe:** 5 years

**Cost Estimate** Project calls for searches for funding, which would require little  
*(Potential Funding):* funding of its own (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management (MCOEM)

**Support Agencies:** Potomac Valley Conservation District  
WVDEP, Dam Safety  
MDE, Dam Safety

**Mitigation Type:** Prevention

**Status:** This strategy was revised to be more inclusive of other agencies as well as align better with partner agency missions.

*Strategy J1.1.3: Secure the dams. Protect from vandalism.*

**Timeframe:** 5 years

**Cost Estimate** Inspections are a part of existing budgets (N/A)  
*(Potential Funding):*

**Coordinating Agency:** Potomac Valley Conservation District

**Support Agencies:** N/A

**Mitigation Type:** Prevention

**Status:** This project was deferred to the conservation district but remains in the plan to show support of these efforts.

*Strategy J1.1.4: Review plan for Jennings Randolph dam in the Elk Garden area.*

**Timeframe:** As submitted

**Cost Estimate** Review of the document should require little to no additional funding  
*(Potential Funding):* at the local level (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Property Protection

**Status:** This project is listed as on-going; local officials review plans as they are submitted by the agencies that create them.

*Strategy J1.1.5:* Disclose the risk to those who build in area of dam.

**Timeframe:** 5 years

**Cost Estimate** Public outreach should require little to no additional funding if done

*(Potential Funding):* as part of existing permitting processes (N/A)

**Coordinating Agency:** Mineral County Building Permitting Officer

**Support Agencies:** Mineral County Commission  
MCOEM

**Mitigation Type:** Public Education and Awareness

**Status:** This project remains in the plan as local officials determine the most effective ways to disseminate this information.

*Strategy J1.1.6:* Coordinate with the State of Maryland concerning the Savage River Dam. Review plan.

**Timeframe:** 5 years

**Cost Estimate** Review of an existing plan should require little to no additional

*(Potential Funding):* funding (N/A)

**Coordinating Agency:** MCOEM

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan to be indicative of an on-going effort.

*Strategy J1.1.7:* Coordinate with the Soil Conservation Service regarding dam inspections; also, maintain copies of inundation mapping and other dam risk assessments at the Mineral County Office of Emergency Management office (in an attempt to warn the public).

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Soil Conservation Service

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy J2.1.1: Review the Mineral County Health Department's plans.*

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Mineral County Health Department

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This type of coordination already takes place between the health department and office of emergency management and is considered on-going.

*Strategy J2.1.3: Monitor the risk of chronic wasting disease.*

**Timeframe:** 5 years

**Cost Estimate** Disease monitoring is a part of the health department's regular

*(Potential Funding):* mission and should require little to no additional funding (N/A)

**Coordinating Agency:** Mineral County Health Department

**Support Agencies:** WV Bureau for Public Health

**Mitigation Type:** Prevention

**Status:** This project remains in the plan to show support for the health department's efforts.

*Strategy J2.1.4: Enforce laws concerning rabies.*

**Timeframe:** 5 years

**Cost Estimate** Enforcement of existing laws should require little to no additional

*(Potential Funding):* funding as per presence in existing budgets (N/A)

**Coordinating Agency:** Mineral County Animal Control

**Support Agencies:** Mineral County Health Department

**Mitigation Type:** Prevention

**Status:** This project is listed as on-going as per the comment regarding existing laws above.

*Strategy J2.1.5:* Monitor the risk of epidemic/pandemic situations.

**Timeframe:** 5 years

**Cost Estimate** Disease monitoring is a part of the health department's regular

*(Potential Funding):* mission and should require little to no additional funding (N/A)

**Coordinating Agency:** Mineral County Health Department

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy originally referenced a risk of "avian influenza"; it was listed as on-going, but revised for the broader scope of "epidemic" or "pandemic".

*Strategy J2.1.6:* Work with the county fair association regarding prevention of the spread of animal diseases.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Mineral County Fair Association

**Support Agencies:** Mineral County Health Department

Mineral County Office of Emergency Management

**Mitigation Type:** Prevention

**Status:** This project was added as part of this update.

*Strategy J3.1.1:* County to assist with pumping water for livestock.

**Timeframe:** 5 years

**Cost Estimate** Unknown; project calls for identification of resources before costs

*(Potential Funding):* can be estimated (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** WVU Extension Service

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because the local planning committee realized that it will take a phased approach for completion; further, the responsibilities of the local governments need to be determined before implementation can occur.

*Strategy J3.1.2: Look for alternate water supplies and storage.*

**Timeframe:** 3 years

**Cost Estimate** Unknown (N/A)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Commission

**Support Agencies:** West Virginia University

**Mitigation Type:** Natural Resource Protection

**Status:** This project was listed in the original mitigation plan and just recently implemented via a contract for a water study with West Virginia University. It was listed as on-going in this version since the contract is not yet complete.

*Strategy J4.1.1: Educate the public as to the actual earthquake risk.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (EMPG, PDM, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Local Emergency Planning Committee

**Mitigation Type:** Public Education and Awareness

**Status:** This project was listed as on-going with the understanding that local officials should add the earthquake hazard to its other public outreach efforts.

*Strategy J5.1.1: Introduce and use a mass notification warning system.*

**Timeframe:** 3 years

**Cost Estimate** Up to \$50,000 for installation plus annual operating costs (SHSP,

*(Potential Funding):* Local Funding)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County 911

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was listed in the original version of the plan specifically referencing the "Code Red" mass notification system, which was not purchased. It was broadened to include any mass notification system as per research being done for an upcoming West Virginia Homeland Security Region III project.

*Strategy J5.1.2: Establish new construction ordinance.*

**Timeframe:** 5 years

**Cost Estimate** Establishment of an ordinance should require little to no additional

*(Potential Funding):* funding; funding would be needed at the enforcement stage (N/A)

**Coordinating Agency:** Mineral County Commission

**Support Agencies:** Mineral County Building Permit Officer

**Mitigation Type:** Prevention

**Status:** This project remains in the plan as additional research is conducted.

*Strategy J5.1.4: Seek funding for buyouts.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$73,500 per property purchased (HMGP)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Planning Commission

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Prevention

**Status:** This project was listed as on-going; local officials at the county level always consider the appropriateness of buy-out projects when funding is available.

*Strategy J5.1.5: Pre-mitigate properties located along Water Street/Harley O Staggers' Drive.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$73,500 per property purchased (HMGP)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Planning Commission

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Prevention

**Status:** This project was listed as on-going; local officials at the county level always consider the appropriateness of buy-out projects when funding is available.

*Strategy J5.2.1: Provide shelters, food, and medicine for those in need.*

**Timeframe:** 5 years

**Cost Estimate** Unknown (N/A)

*(Potential Funding):*

**Coordinating Agency:** American Red Cross

**Support Agencies:** Mineral County Health Department  
Mineral County Office of Emergency Management  
USHHS

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan because it supports other planning efforts underway in Mineral County. Specific responsibility assignments will need to be identified, however, before full implementation of this project can occur.

*Strategy J5.3.1: Consider the development of a flood-specific annex to the Mineral County Emergency Operations Plan.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 (EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Planning Commission  
Municipal Floodplain Coordinators

**Mitigation Type:** Emergency Services

**Status:** Originally, this project was written much more general in nature; it was listed as on-going, but revised to specifically reference flooding.

*Strategy J5.3.2:* Make lists of flood-prone properties available to the residents of Mineral County.

**Timeframe:** 5 years

**Cost Estimate** Since the information is available, making it available to the public

*(Potential Funding):* should require little to no additional funding (N/A)

**Coordinating Agency:** Mineral County Planning Commission

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Public Education and Awareness

**Status:** This project originally directed local officials to identify properties in flood-prone areas, which was completed per obtaining a list of repetitive loss properties; it was listed as on-going and revised to reflect better public access to the information.

*Strategy J6.1.1:* Initiate response of Hazardous Incidents Response Team.

**Timeframe:** 5 years

**Cost Estimate** Unknown; project is still in the planning stage (N/A)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Local Emergency Services Departments

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan as research continues.

*Strategy J6.1.2:* Initiate response of Region III response team.

**Timeframe:** 5 years

**Cost Estimate** Unknown; project is still in the planning stage (N/A)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Emergency Managers in Neighboring Counties

**Mitigation Type:** Emergency Services

**Status:** This project remains in the plan as research continues.

*Strategy J6.1.3:* Review the Mineral County Emergency Operations Plan regarding hazmat responses.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 (EMPG, HMEP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Local Emergency Planning Committee  
Covered Facility Representatives

**Mitigation Type:** Emergency Services

**Status:** Originally, this project was written much more general in nature; it was listed as on-going, but revised to specifically reference hazmat incidents and directed to include such information as the updated commodity flow study.

*Strategy J6.2.2:* Ensure regular updating of the commodity flow study.

**Timeframe:** 5 years

**Cost Estimate** Up to \$7,500 (HMEP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Local Emergency Planning Committee

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy J6.3.1:* Coordinate with representatives from covered facilities to collectively determine mitigation strategies.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Local Emergency Planning Committee

**Mitigation Type:** Property Protection

**Status:** This project was added as part of this update.

*Strategy J6.4.1: Educate public concerning response to hazardous incidents.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (SERC, HMEP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Local Emergency Planning Committee

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was listed as on-going since it is one of the primary missions of the local emergency planning committee.

*Strategy J6.4.2: Educate emergency personnel responding to hazardous incidents.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 depending on the type of training, education, or

*(Potential Funding):* exercise that is sponsored (SERC, HMEP, Local Funding)

**Coordinating Agency:** Mineral County Local Emergency Planning Committee

**Support Agencies:** First Response Agencies

**Mitigation Type:** Emergency Services

**Status:** This strategy was listed as on-going since it is one of the primary missions of the local emergency planning committee. It also requires frequent coordination with first response agencies as they schedule their own training sessions.

*Strategy J6.4.3: Introduce and use a mass notification system.*

**Timeframe:** 3 years

**Cost Estimate** Up to \$50,000 for installation plus annual operating costs (SHSP,

*(Potential Funding):* Local Funding)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County 911

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was listed in the original version of the plan specifically referencing the "Code Red" mass notification system, which was not purchased. It was broadened to include any mass notification system as per research being done for an upcoming West Virginia Homeland Security Region III project.

*Strategy J8.4.1:* Compile, update, and maintain a terrorism vulnerability assessment for Mineral County.

**Timeframe:** 5 years

**Cost Estimate** Up to \$10,000 (SHSP, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy J8.4.2:* Create a terrorism annex to the county Emergency Operations Plan.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 (EMPG, SHSP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy J9.1.1:* Educate the public through use of school education program.

**Timeframe:** 5 years

**Cost Estimate** Coordinating with Mineral County Schools should require little to no

*(Potential Funding):* additional funding (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Schools

**Mitigation Type:** Public Education and Awareness

**Status:** This project was not implemented as per the language in the original plan, but it was listed as on-going since it can be added to an existing outreach effort through Mineral County Schools.

*Strategy J9.1.3:* Ensure communications systems working properly.

**Timeframe:** 5 years

**Cost Estimate** Up to \$1,000,000 depending on the scope of the project (SHSP,  
*(Potential Funding):* Local Funding)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** First Response Agencies

**Mitigation Type:** Emergency Services

**Status:** This strategy was listed as on-going to show support of local and regional initiatives to upgrade communications systems.

*Strategy J10.2.1:* Inform municipalities when individuals obtain burning permits within their corporate limits.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally  
*(Potential Funding):* (N/A)

**Coordinating Agency:** Unknown

**Support Agencies:** N/A

**Mitigation Type:** Prevention

**Status:** This strategy was re-focused and listed as on-going since municipalities are not responsible for issuing burning permits.

*Strategy J11.1.1:* Educate the public to be prepared for a variety of hazards, including winter storm.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (PDM, EMPG, Local Funding)  
*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was broadened to include a farther-reaching outreach campaign for multiple hazards and listed as on-going.

*Strategy J11.1.2:* Access money for snow removal when there is an emergency declaration and the potential for reimbursement.

**Timeframe:** 5 years

**Cost Estimate** Contingent on the nature of the hazard and the size of the snow  
*(Potential Funding):* removal contract (Unknown)

**Coordinating Agency:** Mineral County Commission

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This strategy was not implemented as per the language in the original version of this document. It was listed as on-going and broadened to reference the disaster declaration.

*Strategy J11.1.3:* Identify snow removal resources locally and regionally.

**Timeframe:** 5 years

**Cost Estimate** Identification of resources should not require additional funding (N/A)  
*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Emergency Services

**Status:** This strategy originally directed local officials to “obtain” snow removal equipment. While the spirit of the strategy remains valid, it was revised to reference the identification of snow removal resources that could be procured via the county’s emergency resource management policy.

*Strategy J11.1.4:* Educate the public on the necessity of being aware of neighbors with special needs.

**Timeframe:** 3 years

**Cost Estimate** Up to \$5,000 (EMPG, SHSP, Local Funding)  
*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Special Needs Service Providers  
Special Needs Facilities in Mineral County

**Mitigation Type:** Public Education and Awareness

**Status:** This project was revised to support upcoming planning for special populations and listed as on-going.

*Strategy J11.1.6:* Educate public through distribution of literature at schools.

**Timeframe:** 5 years

**Cost Estimate** Coordinating with Mineral County Schools should require little to no  
*(Potential Funding):* additional funding (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Schools

**Mitigation Type:** Public Education and Awareness

**Status:** This project was not implemented as per the language in the original plan, but it was listed as on-going since it can be added to an existing outreach effort through Mineral County Schools.

*Strategy J11.1.7:* Consider coordinating with West Virginia Division of Highways regarding snow removal.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally  
*(Potential Funding):* (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Commission  
West Virginia Division of Highways

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy J11.1.8:* Consider creating a county-specific snow emergency plan.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 (EMPG, Local Funding)  
*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Municipal Public Works Representatives  
West Virginia Division of Highways

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy J12.1.1:* Educate the public on preparedness and response.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was broadened to include a farther-reaching outreach campaign for multiple hazards and listed as on-going.

*Strategy J12.1.2:* Coordinate with utility companies to ensure restoration of utility services.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Mineral County Office of Emergency Management

**Support Agencies:** Mineral County Commission  
Utility Providers (e.g., electric, natural gas, water, sewer)

**Mitigation Type:** Emergency Services

**Status:** This strategy was listed as on-going since coordination would be necessary during future hazard occurrences.

MOOREFIELD, TOWN OF

*Strategy K1.1.1:* The Town of Moorefield and Hardy County Commission should coordinate with the WVDOH to control additional flooding issues that may result from the construction of Corridor H.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Moorefield Town Council

**Support Agencies:** Hardy County Commission  
WVDOH  
USACE

**Mitigation Type:** Prevention

**Status:** This project remains on the list as Corridor H is still being constructed.

*Strategy K1.1.2:* The Town of Moorefield must enforce requirements concerning construction of new dwellings in reference to its flood protection plan and the NFIP.

**Timeframe:** 5 years

**Cost Estimate** Compliance with the NFIP is currently budgeted by the town and

*(Potential Funding):* should require little additional funding (N/A)

**Coordinating Agency:** Moorefield Floodplain Coordinator

**Support Agencies:** Moorefield Town Council

**Mitigation Type:** Prevention

**Status:** This project remains on the list as indicative of the town's continued NFIP compliance efforts.

*Strategy K1.2.1:* Town of Moorefield should permanently install pumps on Allegheny Street to control ponding area problem.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 per pump (Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Moorefield Street Department

**Support Agencies:** N/A

**Mitigation Type:** Structural Projects

**Status:** This project is on hold until funding becomes available.

*Strategy K1.2.2:* Town of Moorefield will provide additional small pumps for other ponding areas should the need arise.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 per pump (Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Moorefield Street Department

**Support Agencies:** HCOEM

**Mitigation Type:** Structural Projects

**Status:** This project is on hold until funding becomes available; however, as an immediate measure, the project could imply working with the Hardy County Office of Emergency Management to identify resources for use only during disasters (i.e., those that are not owned by the town).

*Strategy K1.2.3:* The Town of Moorefield should flood proof its wastewater treatment plant and lagoon.

**Timeframe:** 5 years

**Cost Estimate** Up to \$1,000,000 (HMGP, SCBG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Moorefield Wastewater Department

**Support Agencies:** Moorefield Town Council

**Mitigation Type:** Structural Projects

**Status:** This project is on hold until funding becomes available.

*Strategy K1.2.4:* Flood proofing the Town of Moorefield's Water Treatment Plant.

**Timeframe:** 5 years

**Cost Estimate** Up to \$1,000,000 (HMGP, SCBG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Moorefield Water Department

**Support Agencies:** Moorefield Town Council

**Mitigation Type:** Structural Projects

**Status:** This project is on hold until funding becomes available.

*Strategy K2.1.1:* The Town of Moorefield and the Town of Wardensville should develop a plan to address winter storms and snow removal.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Moorefield Town Council

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project remains on the list as indicative of an on-going partnership between the town and county.

PENDLETON COUNTY

*Strategy L1.1.1:* Need for early warning system to be established.

**Timeframe:** 5 years

**Cost Estimate** Unknown (SHSP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** PCOEM

**Support Agencies:** Neighboring County Emergency Managers

**Mitigation Type:** Public Education and Awareness

**Status:** Continue to seek funding to establish early warning system. Pendleton County Schools installed a new school messaging system in July, 2009, for the county schools. Further, Pendleton County has aligned with Grant, Hardy, Mineral, Hampshire, Berkeley, and Jefferson Counties in an attempt to get a mass notification system.

*Strategy L1.1.3:* Additional river gauges need to be placed throughout county.

**Timeframe:** 5 years

**Cost Estimate** Contingent on the number of gauges placed; up to \$15,000 apiece

*(Potential Funding):* for placement and operation (United States Environmental Protection Agency [USEPA], FEMA, Local Funding)

**Coordinating Agency:** PCOEM

**Support Agencies:** Pendleton County Floodplain Coordinator

**Mitigation Type:** Public Education and Awareness

**Status:** There are still just two (2) river gauges in the county: one (1) each at Franklin and Brandywine.

*Strategy L1.2.1:* Limit number of structures in area surrounding dam.

**Timeframe:** 5 years

**Cost Estimate** Code development and enforcement is likely a part of existing

*(Potential Funding):* budgets (N/A)

**Coordinating Agency:** Pendleton County Commission

**Support Agencies:** N/A

**Mitigation Type:** Prevention

**Status:** Limitations on building in these areas are determined through and by the issuance of building permits through the County Commission's office.

*Strategy L1.2.2:* Identify structures located within spillways of dams in cooperation with the Potomac Valley Conservation District and Natural Resource Conservation Service (NRCS).

**Timeframe:** 5 years

**Cost Estimate** Identification of structures should require little to no additional  
*(Potential Funding):* funding (N/A)

**Coordinating Agency:** PCOEM

**Support Agencies:** N/A

**Mitigation Type:** Prevention

**Status:** Pendleton County uses the West Virginia Flood Hazard Determination Tool to identify structures. At this time, information on structures located within spillways of dams is incomplete.

*Strategy L3.2.1:* Use drought monitor to determine where drought areas are located.

**Timeframe:** 5 years

**Cost Estimate** Existing coordinating efforts require little to no additional funding  
*(Potential Funding):* (N/A)

**Coordinating Agency:** PCOEM

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** The county is making use of its resources through the WVDHSEM website. The county can determine areas of drought. PCOEM staff attends weather briefings on Monday and Friday mornings, weekly, from the state office. Also, the county receives daily updates from the state concerning alerts and weather situations. Quarterly meetings are held with the Board of Agriculture. The PCOEM partners with the NWS for Storm Spotters that report to the Sterling, VA NWS office with more accurate weather updates.

*Strategy L4.1.1:* Educate the public on how to protect themselves and to be prepared to provide for themselves.

**Timeframe:** 3 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** PCOEM

**Support Agencies:** Pendleton County LEPC

**Mitigation Type:** Public Education and Awareness

**Status:** This project was added as a part of this update.

*Strategy L5.1.1:* Use of early warning system.

**Timeframe:** 5 years

**Cost Estimate** Unknown (SHSP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** PCOEM

**Support Agencies:** Neighboring County Emergency Managers

**Mitigation Type:** Public Education and Awareness

**Status:** Continue to seek funding to establish an early warning system for the county. See the note for Strategy L1.1.1 above.

*Strategy L5.2.1:* Educate the public on potential flooding hazards and to be prepared to survive on own for at least 72 hours.

**Timeframe:** 3 years

**Cost Estimate** Up to \$2,500 per campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** PCOEM

**Support Agencies:** Pendleton County Floodplain Coordinator

**Mitigation Type:** Public Education and Awareness

**Status:** A new website for the county ([www.pendletoncountyoem.com](http://www.pendletoncountyoem.com)) has been created for public information. Also, disaster preparedness information and training is provided through health fairs by Community Emergency Response Team (CERT) members, the PCOEM, and the local health department.

*Strategy L5.2.2:* Local LEPC needs to network information for county and Town of Franklin.

**Timeframe:** 5 years

**Cost Estimate** Continuation of existing efforts, which do not require additional  
*(Potential Funding):* funding, should suffice (N/A)

**Coordinating Agency:** Pendleton County LEPC

**Support Agencies:** PCOEM

**Mitigation Type:** Public Education and Awareness

**Status:** The LEPC holds public meetings bi-monthly to provide information to the county and town. Meetings are published in the local papers and radio stations two (2) weeks in advance. Also, dates and times are posted on the website.

*Strategy L5.3.2:* Buyout of homes (both RL and non-RL) in floodplain.

**Timeframe:** 5 years

**Cost Estimate** Up to \$104,900 per structure purchased (HMGP)  
*(Potential Funding):*

**Coordinating Agency:** Pendleton County Floodplain Coordinator

**Support Agencies:** PCOEM

**Mitigation Type:** Prevention

**Status:** There has been no action in this area by the county government due to lack of funding. Some homeowners have relocated by choice. Information on the program is on file at the Pendleton County Assessor's Office.

*Strategy L5.3.3:* Enforce floodplain laws and regulations as required by the NFIP.

**Timeframe:** 5 years

**Cost Estimate** On-going enforcement should require little to no additional funding  
*(Potential Funding):* as it is already a part of existing budgets (N/A)

**Coordinating Agency:** Pendleton County Floodplain Coordinator

**Support Agencies:** Franklin Floodplain Coordinator

**Mitigation Type:** Prevention

**Status:** Pendleton County and Franklin have designated floodplain coordinators that handle this strategy on a daily, as-needed basis.

*Strategy L6.1.1: Additional training needed for personnel handling hazardous spills.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per event for materials, etc. (HMEP, SERC, EMPG,

*(Potential Funding):* Local Funding)

**Coordinating Agency:** Pendleton County LEPC

**Support Agencies:** PCOEM

**Mitigation Type:** Emergency Services

**Status:** This has been addressed in the *Pendleton County EOP*, Annex N.

The PCOEM and county LEPC will provide opportunities for annual exercises. The exercises will be conducted in accordance with the schedule of exercises submitted by the WVDHSEM. This is a two (2) per year schedule, which includes natural, technological, man-made, and national security exercises.

*Strategy L8.1.1: Advise public of NWS warnings.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$250 per all-hazard radio placement (PDM, NWS, EMPG,

*(Potential Funding):* Local Funding)

**Coordinating Agency:** PCOEM

**Support Agencies:** NWS

**Mitigation Type:** Public Education and Awareness

**Status:** According to the *Pendleton County EOP*, Annex D, notifications of tornados/wind storms will include radio, television, 911 center public service announcements. Websites can also be utilized.

*Strategy L8.1.2: Educate the public on preparedness and protection measures.*

**Timeframe:** 5 years

**Cost Estimate** Continuation of existing efforts should require little to no additional

*(Potential Funding):* funding (N/A)

**Coordinating Agency:** PCOEM

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** A new website for the county has been created for public information on the "outreach" page.

*Strategy L9.2.1:* Removal of debris needed throughout wooded areas to limit potential of wildfires.

**Timeframe:** 5 years

**Cost Estimate** Up to \$5,000 per project (West Virginia Division of Forestry, National  
*(Potential Funding):* Park Service, United States Department of Agriculture [USDA])

**Coordinating Agency:** PCOEM

**Support Agencies:** West Virginia Division of Forestry  
National Park Service  
USDA

**Mitigation Type:** Prevention

**Status:** The PCOEM coordinates with the National Forestry Staff to inform the public and make recommendations to the County Commission and the county Public Information Officer for guidance for laws and alerts for these situations.

*Strategy L10.1.1:* Advise public of early warning system.

**Timeframe:** 5 years

**Cost Estimate** Continuation of existing efforts should require little to no additional  
*(Potential Funding):* funding (N/A)

**Coordinating Agency:** PCOEM

**Support Agencies:** N/A

**Mitigation Type:** Public Education and Awareness

**Status:** According to the *Pendleton County EOP*, Annex D, notifications of winter storm warnings are announced to the public by way of 911 center PSAs, radio, and television.

Strategy L10.1.2: Local weather station needed for monitoring.

**Timeframe:** 5 years

**Cost Estimate** Unknown (N/A)

*(Potential Funding):*

**Coordinating Agency:** PCOEM

**Support Agencies:** NOAA

**Mitigation Type:** Public Education and Awareness

**Status:** The county still has a need for a weather station. The PCOEM is working with NOAA to develop a weather station in Franklin. The PCOEM has radios that have weather alerts and also monitors websites with weather information. An IFLOWS station should be moved to the area shortly.

PETERSBURG, CITY OF

*Strategy M1.1.1: Address surface water issues within the City of Petersburg.*

**Timeframe:** 5 years

**Cost Estimate** Up to \$1,000,000, contingent on the type of project that is  
*(Potential Funding):* undertaken (SCGB, IJDC, Local Funding)

**Coordinating Agency:** Petersburg City Council

**Support Agencies:** Region 8 PDC

**Mitigation Type:** Structural Projects

**Status:** This project remains in the plan as it appears on the region's overall  
infrastructure improvements project list.

PIEDMONT, CITY OF

*Strategy N1.1.1:* Address issue of Piedmont transportation being limited to road access only.

**Timeframe:** 5 years

**Cost Estimate** Unknown; project in early planning stages (N/A)

*(Potential Funding):*

**Coordinating Agency:** Piedmont Municipal Council

**Support Agencies:** WVDOH

**Mitigation Type:** Emergency Services

**Status:** This project was added as part of this update.

*Strategy N2.1.1:* Educate Piedmont residents of concerns regarding the risk of storm cells causing flooding on the hillside.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (PDM, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Piedmont Floodplain Coordinator

**Support Agencies:** Mineral County Planning Commission

**Mitigation Type:** Public Education and Awareness

**Status:** This project was added as part of this update.

RIDGELEY, TOWN OF

*Strategy O1.1.1:* Educate the public on preparedness and response.

**Timeframe:** 5 years

**Cost Estimate** Up to \$2,500 per outreach campaign (PDM, EMPG, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Ridgeley Municipal Council

**Support Agencies:** Mineral County Office of Emergency Management

**Mitigation Type:** Public Education and Awareness

**Status:** This strategy was broadened to include a farther-reaching outreach campaign for multiple hazards and listed as on-going.

*Strategy O1.1.2:* Coordinate with utility companies to ensure restoration of utility services.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding locally

*(Potential Funding):* (N/A)

**Coordinating Agency:** Ridgeley Municipal Council

**Support Agencies:** Mineral County Office of Emergency Management

Utility Providers (e.g., electric, natural gas, water, sewer)

**Mitigation Type:** Emergency Services

**Status:** This strategy was listed as on-going since coordination would be necessary during future hazard occurrences.

ROMNEY, CITY OF

*Strategy P1.1.1:* Continue to provide fire protection for Romney and upgrade capabilities as need and funding are available.

**Timeframe:** 5 years

**Cost Estimate** Up to \$250,000 contingent on type of project (AFGP, Local Funding)

*(Potential Funding):*

**Coordinating Agency:** Romney VFD

**Support Agencies:** Hampshire County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Hampshire County's planning committee opted to leave this strategy in the plan because it is an on-going need.

WARDENSVILLE, TOWN OF

*Strategy Q1.1.1:* Evaluate flood risk potential for the Town of Wardensville related to possible upstream dam failures that contribute to the Cacapon River and Trout Run streams that course through the town.

**Timeframe:** 5 years

**Cost Estimate** Evaluation should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Wardensville Police Department

**Support Agencies:** Wardensville Fire Department  
Hardy County Office of Emergency Management

**Mitigation Type:** Prevention

**Status:** This is an on-going strategy as development and other projects upstream could alter the impact to the town.

*Strategy Q2.1.3:* The Town of Wardensville needs additional environmental design to correct flooding problems to ensure access to roads is not cut off.

**Timeframe:** 5 years

**Cost Estimate** Unknown; project still in the planning phases (N/A)

*(Potential Funding):*

**Coordinating Agency:** Wardensville Town Council

**Support Agencies:** Region 8 PDC

**Mitigation Type:** Public Education and Awareness

**Status:** This project remains in the list as funding is sought.

*Strategy Q2.2.1:* The Town of Wardensville should replace culverts to correct flooding problems in repetitive loss area.

**Timeframe:** 5 years

**Cost Estimate** Up to \$10,000 per project, contingent on size (Local Funding,

*(Potential Funding):* WVDOH)

**Coordinating Agency:** Wardensville Street Department

**Support Agencies:** WVDOH

**Mitigation Type:** Structural Projects

**Status:** This project remains on the list to represent an on-going culvert maintenance schedule maintained by both the town and state.

*Strategy Q2.2.2:* The Town of Wardensville should make necessary changes to its sewer lagoon embankment and wastewater treatment plant.

**Timeframe:** 5 years

**Cost Estimate** Unknown; project still in the planning phases (N/A)

*(Potential Funding):*

**Coordinating Agency:** Wardensville Town Council

**Support Agencies:** Region 8 PDC

**Mitigation Type:** Structural Projects

**Status:** This project remains in the list as funding is sought.

*Strategy Q2.2.3:* Assure efficient storm water management practices, such as clearing ditches and creating larger water basins for the town.

**Timeframe:** 5 years

**Cost Estimate** Assuring efficient practices is administrative in nature and should not

*(Potential Funding):* require additional funding (N/A)

**Coordinating Agency:** Wardensville Street Department

**Support Agencies:** Wardensville Town Council

**Mitigation Type:** Structural Projects

**Status:** This project remains on the list to represent an on-going maintenance process.

*Strategy Q3.1.1:* The Town of Moorefield and the Town of Wardensville should develop a plan to address winter storms and snow removal.

**Timeframe:** 5 years

**Cost Estimate** Coordination should require little to no additional funding (N/A)

*(Potential Funding):*

**Coordinating Agency:** Wardensville Town Council

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** This project remains on the list as indicative of an on-going partnership between the town and county.

*Strategy Q3.1.3:* Ensure needed snow removal equipment, emergency generators, shelters, and personnel are mobilized according to the town's snow plan.

**Timeframe:** 5 years

**Cost Estimate** Identifying resource providers for the town's plan should require little  
*(Potential Funding):* to no additional funding (N/A, Local Funding)

**Coordinating Agency:** Wardensville Town Council

**Support Agencies:** Hardy County Office of Emergency Management

**Mitigation Type:** Emergency Services

**Status:** Resource management is an on-going practice; thus, the project remains on the list.

### 3.3 IMPLEMENTATION OF MITIGATION ACTIONS

§201.6(c)(3)(iii) [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

This section identifies the priority for implementing the projects identified in Sections 3.1 and 3.2. Each current project is listed with a “primary coordinator” in Section 3.2 that should be responsible for the overall implementation of the project.

Project (i.e., strategy) prioritization occurred in two (2) phases. First, the projects generated by the core planning team were grouped into categories based on shared characteristics. Each category of projects received a score of 1 to 3 for each of the following criteria; the projects under category receiving the highest score each received the highest priority ranking of one (1). Secondly, the categories were considered against the following criteria. It should be noted that a jurisdiction may have multiple top-ranked projects.

- **Social Impacts:** Consider whether the public would support implementation of the project. If so, priority likely rises.
- **Technical Feasibility:** Consider whether the project can be done and if it will yield the intended outcomes. If yes, priority would likely rise.
- **Administrative Requirements:** Consider the staffing, funding, and maintenance requirements of the project. If current capabilities can successfully manage and sustain the project, priority would be strengthened.
- **Political Impacts:** Consider the acceptability of the project from the political frame. If it is likely to cause political upheaval, it would receive a lower priority.
- **Legal Ramifications:** Consider whether the project can be lawfully implemented. If not, the project cannot be listed.
- **Environmental Impacts:** Consider whether there would be negative consequences to environmental assets should the project be implemented. If assets are impact, priority would be likely to fall.
- **Economic Impacts/Cost Benefit:** A brief “benefit cost review” per Federal Emergency Management Agency (FEMA) Publication 386-5: Using Benefit Cost

Review in Mitigation Planning was conducted for each project to determine the “pros” and “cons” of each project as it related to project prioritization. Maximizing the use of available funds would positively affect a project’s priority.

\*NOTE: The cost benefit review referenced in the Final Rule cannot be completed as it has not been released by the US Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA).

BAYARD, TOWN OF

Project Number	Strategy	Priority
A1.1.2	Construction of a proper storm water drainage system for the Town of Bayard.	1

CAPON BRIDGE, TOWN OF

Project Number	Strategy	Priority
B1.1.1	Continue to buyout repetitive and non-repetitive loss properties vulnerable to flooding as funding is available.	2
B2.1.1	Continue to provide fire protection for Capon Bridge and upgrade capabilities as need and funding are available.	1

CARPENDALE, TOWN OF

Project Number	Strategy	Priority
C1.1.1	Address issue of Carpendale having only one road leading in and out of municipality.	1

ELK GARDEN, TOWN OF

Project Number	Strategy	Priority
D1.1.1	Educate the public on preparedness and response.	1
D1.1.2	Coordinate with utility companies to ensure restoration of utility services.	2

FRANKLIN, TOWN OF

Project Number	Strategy	Priority
E1.1.1	Flood wall needed for Town of Franklin.	1

GRANT COUNTY

Project Number	Strategy	Priority
F1.1.1	Discourage development in areas around dams or encourage development of sound structures.	3
F1.2.1	Develop and distribute detailed evacuation plans with maps.	1
F1.2.2	Ensure personnel are trained to handle evacuation process.	2
F2.1.3	Support local pandemic influenza planning.	2
F2.1.4	Support local animals in disaster planning.	2
F3.1.1	Local water sources for both livestock and potable water.	1
F3.1.2	Local water for fighting fires.	1
F3.1.3	Educate the public on conserving water.	1
F4.1.1	Educate the public on how to protect themselves and to be prepared to provide for themselves.	
F5.1.1	Buyout homes (both Repetitive Loss [RL] and non-RL) located in the floodplain.	4
F5.1.3	Enforce building codes referencing Flood Insurance Rate Maps (FIRMs).	1

Project Number	Strategy	Priority
F5.1.4	Construct a floodwall to protect homes in the North Fork Retreat development.	6
F6.1.1	Additional training needed for personnel handling hazardous spills.	4
F6.1.2	Additional volunteers needed.	1
F8.1.1	Synchronize the <i>West Virginia Emergency Operations Plan (EOP)</i> and the local EOP.	1
F8.1.5	Additional training for law enforcement to handle incidents.	3
F9.1.1	Educate the public on preparedness and protection measures.	1
F10.1.1	Provide additional training for personnel.	5
F11.1.1	Educate the public on preparedness.	1

HAMPSHIRE COUNTY

Project Number	Strategy	Priority
G1.1.1	Advise and educate the public of the dam failure risk, to include providing real estate disclosure at the time of sale.	9
G1.1.2	Ensure that plans are in place for the inspection and rehabilitation of dams. Coordinate with the Maryland Department of the Environment, Dam Safety Program as these dams are not located in Hampshire County.	11
G1.1.3	Coordinate with Maryland officials to continue monitoring water levels on the North Branch of the Potomac River.	10
G2.1.1	As planning for animals in disaster continues, ensure that provisions to maintain water for animals are included.	3
G2.1.2	Coordinate the identification of backup water sources (e.g. additional aquifers, etc.) to ensure the continuity of existing systems.	10
G3.1.1	Educate the public on the possibility of an earthquake.	9

<b>Project Number</b>	<b>Strategy</b>	<b>Priority</b>
<b>G4.1.1</b>	Continue to enforce ordinances that new structures do not interfere with flood mitigation measures.	<b>9</b>
<b>G4.1.2</b>	Educate the public on potential flooding hazards and provide tips on how to survive for 72 hours without significant assistance.	<b>9</b>
<b>G4.1.3</b>	Coordinate with gas companies and retailers operating in Hampshire County, to ensure that household propane tanks are secured.	<b>10</b>
<b>G4.2.1</b>	Continue to buyout repetitive and non-repetitive loss properties vulnerable to flooding as funding is available.	<b>1</b>
<b>G4.2.2</b>	Begin compiling the information necessary to apply for participation in the Community Rating System (CRS).	<b>4</b>
<b>G5.1.1</b>	Coordinate the development of mutual aid agreements with such agencies as the Regional Response Team (RRT) and neighboring county hazmat response teams.	<b>10</b>
<b>G5.1.2</b>	Continue on-going hazardous material planning efforts at the local level, to include integration of local and state efforts.	<b>3</b>
<b>G5.1.3</b>	Explore options for ordinances to ensure that residential propane tanks are secured.	<b>9</b>
<b>G5.1.4</b>	Coordinate with emergency planning partners throughout Hampshire and surrounding counties to inventory resources that might be available for hazmat response.	<b>3</b>
<b>G5.1.5</b>	Undertake training and other educational efforts to inform responders about extinguishing fires with ethanol additives. Training should be relative to new technologies.	<b>6</b>
<b>G6.1.1</b>	Educate the public as to the risk of land subsidence, to include providing information to developers about the risks associated with Karst topography.	<b>9</b>
<b>G6.1.2</b>	Continue coordination with the West Virginia Division of Highways (WVDOH) to expand shoulder area of roadways (to reduce the number of road closures due to landslides).	<b>10</b>

<b>Project Number</b>	<b>Strategy</b>	<b>Priority</b>
<b>G6.1.3</b>	Coordinate with oil and natural gas exploration companies to ensure that measures are in place to guard against a loss of groundwater and sinking/settling in heavily drilled areas.	<b>10</b>
<b>G7.1.1</b>	Continue to update Annex M of the <i>Hampshire County Emergency Operations Plan</i> in an effort to prepare for potential domestic and international terrorist incidents.	<b>3</b>
<b>G7.1.2</b>	Coordinate with the Hampshire County Health Department to continue planning efforts regarding biological concerns.	<b>3</b>
<b>G8.1.1</b>	Educate the public on preparedness and protection measures.	<b>9</b>
<b>G9.1.1</b>	Ensure road access to unpopulated and/or developing (wooded) areas to provide for firefighter access.	<b>10</b>
<b>G9.2.1</b>	Educate the public about “urban-wildland” interface and the hazards associated with planting trees very close to their homes. Such programs as “Firewise” can be utilized, as can a cooperative outreach effort with the West Virginia Division of Forestry.	<b>5</b>
<b>G10.1.1</b>	Educate the public about winter storm risks and encourage them to maintain enough supplies to be self-reliant for 72 hours.	<b>9</b>
<b>G10.2.1</b>	Coordinate with the WVDOH to ensure that roadways are cleared during significant snow or ice events.	<b>10</b>
<b>G10.2.2</b>	Coordinate with utility companies to ensure that they have planned for business continuity during prolonged emergencies.	<b>6</b>
<b>G11.1.1</b>	Continue to provide fire protection for Romney and Capon Bridge and upgrade capabilities as need and funding are available.	<b>8</b>
<b>G11.1.2</b>	Continue to ensure and upgrade communications capabilities throughout the county.	<b>7</b>
<b>G11.2.1</b>	Continue partnering with the Hampshire County Health Department regarding pandemic planning.	<b>3</b>
<b>G11.2.2</b>	Continue planning for the provision of food, water, and housing to county residents displaced by large-scale emergencies.	<b>4</b>

Project Number	Strategy	Priority
<b>G11.2.3</b>	Continue to partner with state and neighboring jurisdictions to plan for an “urban-to-rural” evacuation from the National Capital Region (NCR) into the eastern panhandle of West Virginia.	<b>2</b>

HARDY COUNTY

Project Number	Strategy	Priority
<b>H1.1.2</b>	Establishment of a communication system to monitor increasing risk.	<b>9</b>
<b>H1.1.4</b>	Identify structures located around dam structures to be affected by dam failure.	<b>3</b>
<b>H1.2.1</b>	Limit number of structures affected by potential dam failures.	<b>10</b>
<b>H2.1.1</b>	Review Hardy County Health Department plan.	<b>1</b>
<b>H2.1.3</b>	Compile an animals in disaster plan for Hardy County.	<b>1</b>
<b>H2.1.4</b>	Support business continuity planning efforts throughout Hardy County.	<b>1</b>
<b>H3.1.1</b>	Locate facilities for irrigation.	<b>3</b>
<b>H3.1.2</b>	Locate water for livestock and poultry farm use.	<b>3</b>
<b>H3.1.3</b>	Identify water resources.	<b>1</b>
<b>H3.1.4</b>	Locate water for poultry plant production.	<b>11</b>
<b>H3.2.1</b>	Need a countywide water resource study.	<b>1</b>
<b>H3.2.2</b>	Evaluate the current infrastructure abilities to meet the minimum water demands of public water customers.	<b>1</b>
<b>H4.1.1</b>	Educate the public on how to protect themselves and to be prepared to provide for themselves.	<b>1</b>
<b>H4.1.2</b>	Keep public informed on pending disasters.	<b>1</b>
<b>H5.1.3</b>	The county should develop a plan to ensure all contacts for emergency personnel are made.	<b>1</b>

Project Number	Strategy	Priority
H5.1.4	The county needs to purchase equipment (hovercraft) to ensure that residents in the Old Fields area are accessible should a flood close US 220 out of Moorefield.	8
H5.1.5	Improve local emergency services response to flooding hazards by upgrading equipment and providing training of personnel.	6
H5.1.6	Information provided by river gauges needs to be available on all websites for monitoring.	1
H5.2.1	Hardy County must ensure that new construction complies with requirements of the NFIP.	1
H5.2.2	Hardy County should buyout homes (both RL and non-RL) that are repeatedly flooded.	5
H6.1.1	Ensure that poultry plants are following plant safety programs.	1
H6.1.3	Review the <i>Hardy County EOP</i> plans and fire department plans for compatibility.	1
H6.1.4	Review evacuation process with Hardy County Office of Emergency Management and emergency personnel.	1
H6.1.5	Ensure that the Local Emergency Planning Committee (LEPC) continues involvement in the regional meetings discussing hazardous material incidents.	1
H6.2.1	Purchase additional equipment including hazardous material suits and decontamination equipment for emergency personnel.	6
H6.2.2	Provide training updates for emergency personnel.	6
H6.3.1	Ensure that storage tanks are located out of flood zone and/or installed with safety measures.	1
H6.3.2	Identify location of natural gas lines.	1
H7.1.1	Coordinate with the WVDOH.	1
H8.1.3	Provide training for emergency personnel to identify human diseases.	1
H8.1.4	Ensure that local fire departments coordinate with the local and state emergency managers.	1
H8.1.5	Protect critical infrastructure and facilities.	5

Project Number	Strategy	Priority
H8.2.1	Facilitate counseling and support to lessen impact on the community, particularly for school-aged children.	6
H8.2.2	Address how to handle local housing, water, and food supply needs.	7
H9.1.1	Educate the public on preparedness and protection measures, including the use of wind charts that are available.	2
H9.1.2	Provide adequate warning to public.	1
H9.3.1	Identify shelters, particularly those with basements, for use during tornados. Shelters should be identified for both municipalities and the county.	1
H10.1.1	Include wildland fire hazard discussions in existing all-hazard public outreach efforts.	2
H10.1.3	Monitor wind patterns as they develop.	3
H10.2.1	Identify water sources needed for fighting fires.	1
H11.1.1	Include winter storm preparedness in existing all-hazard public outreach efforts.	1
H11.1.4	Evaluate flood risk potential of local rivers, streams, and basis related to ice dams and quick thawing.	4
H11.1.5	Provide advance warning for the public.	1
H11.2.2	Implement snow route procedures after 2" of accumulated snowfall to protect infrastructure such as roads, alleys, and highways that are needed for emergency response capability.	1
H11.3.1	Coordinate with the West Virginia University (WVU) Extension Service.	1

KEYSER, CITY OF

Project Number	Strategy	Priority
I1.1.1	Maintain or replace retaining walls in Keyser along Water Street.	1

MINERAL COUNTY

<b>Project Number</b>	<b>Strategy</b>	<b>Priority</b>
<b>J1.1.2</b>	Ensure funding for review and maintenance.	<b>2</b>
<b>J1.1.3</b>	Secure the dams. Protect from vandalism.	<b>1</b>
<b>J1.1.4</b>	Review plan for Jennings Randolph dam in the Elk Garden area.	<b>7</b>
<b>J1.1.5</b>	Disclose the risk to those who build in area of dam.	<b>3</b>
<b>J1.1.6</b>	Coordinate with the State of Maryland concerning the Savage River Dam. Review plan.	<b>1</b>
<b>J1.1.7</b>	Coordinate with the Soil Conservation Service regarding dam inspections; also, maintain copies of inundation mapping and other dam risk assessments at the Mineral County Office of Emergency Management office (in an attempt to warn the public).	<b>1</b>
<b>J2.1.1</b>	Review the Mineral County Health Department's plans.	<b>1</b>
<b>J2.1.3</b>	Monitor the risk of chronic wasting disease.	<b>8</b>
<b>J2.1.4</b>	Enforce laws concerning rabies.	<b>1</b>
<b>J2.1.5</b>	Monitor the risk of epidemic/pandemic situations.	<b>8</b>
<b>J2.1.6</b>	Work with the county fair association regarding prevention of the spread of animal diseases.	<b>7</b>
<b>J3.1.1</b>	County to assist with pumping water for livestock.	<b>8</b>
<b>J3.1.2</b>	Look for alternate water supplies and storage.	<b>6</b>
<b>J4.1.1</b>	Educate the public as to the actual earthquake risk.	<b>1</b>
<b>J5.1.1</b>	Introduce and use a mass notification warning system.	<b>1</b>
<b>J5.1.2</b>	Establish new construction ordinance.	<b>1</b>
<b>J5.1.4</b>	Seek funding for buyouts.	<b>6</b>
<b>J5.1.5</b>	Pre-mitigate properties located along Water Street/Harley O Stagers' Drive.	<b>4</b>
<b>J5.2.1</b>	Provide shelters, food, and medicine for those in need.	<b>1</b>
<b>J5.3.1</b>	Consider the development of a flood-specific annex to the Mineral County Emergency Operations Plan.	<b>1</b>

<b>Project Number</b>	<b>Strategy</b>	<b>Priority</b>
<b>J5.3.2</b>	Make lists of flood-prone properties available to the residents of Mineral County.	<b>5</b>
<b>J6.1.1</b>	Initiate response of Hazardous Incidents Response Team.	<b>1</b>
<b>J6.1.2</b>	Initiate response of Region III response team.	<b>4</b>
<b>J6.1.3</b>	Review the Mineral County Emergency Operations Plan regarding hazmat responses.	<b>7</b>
<b>J6.2.2</b>	Ensure regular updating of the commodity flow study.	<b>7</b>
<b>J6.3.1</b>	Coordinate with representatives from covered facilities to collectively determine mitigation strategies.	<b>7</b>
<b>J6.4.1</b>	Educate public concerning response to hazardous incidents.	<b>1</b>
<b>J6.4.2</b>	Educate emergency personnel responding to hazardous incidents.	<b>1</b>
<b>J6.4.3</b>	Introduce and use a mass notification system.	<b>1</b>
<b>J8.4.1</b>	Compile, update, and maintain a terrorism vulnerability assessment for Mineral County.	<b>1</b>
<b>J8.4.2</b>	Create a terrorism annex to the county Emergency Operations Plan.	<b>1</b>
<b>J9.1.1</b>	Educate the public through use of school education program.	<b>1</b>
<b>J9.1.3</b>	Ensure communications systems working properly.	<b>1</b>
<b>J10.2.1</b>	Inform municipalities when individuals obtain burning permits within their corporate limits.	<b>1</b>
<b>J11.1.1</b>	Educate the public to be prepared for a variety of hazards, including winter storm.	<b>1</b>
<b>J11.1.2</b>	Access money for snow removal when there is an emergency declaration and the potential for reimbursement.	<b>3</b>
<b>J11.1.3</b>	Identify snow removal resources locally and regionally.	<b>8</b>
<b>J11.1.4</b>	Educate the public on the necessity of being aware of neighbors with special needs.	<b>3</b>
<b>J11.1.6</b>	Educate public through distribution of literature at schools.	<b>1</b>

Project Number	Strategy	Priority
J11.1.7	Consider coordinating with West Virginia Division of Highways regarding snow removal.	8
J11.1.8	Consider creating a county-specific snow emergency plan.	1
J12.1.1	Educate the public on preparedness and response.	1
J12.1.2	Coordinate with utility companies to ensure restoration of utility services.	2

MOOREFIELD, TOWN OF

Project Number	Strategy	Priority
K1.1.1	The Town of Moorefield and Hardy County Commission should coordinate with the WVDOH to control additional flooding issues that may result from the construction of Corridor H.	3
K1.1.2	The Town of Moorefield must enforce requirements concerning construction of new dwellings in reference to its flood protection plan and the National Flood Insurance Program (NFIP).	1
K1.2.1	Town of Moorefield should permanently install pumps on Allegheny Street to control ponding area problem.	1
K1.2.2	Town of Moorefield will provide additional small pumps for other ponding areas should the need arise.	2
K1.2.3	The Town of Moorefield should flood proof its wastewater treatment plant and lagoon.	4
K1.2.4	Flood proofing the Town of Moorefield's Water Treatment Plant.	4
K2.1.1	The Town of Moorefield and the Town of Wardensville should develop a plan to address winter storms and snow removal.	1

PENDLETON COUNTY

<b>Project Number</b>	<b>Strategy</b>	<b>Priority</b>
L1.1.1	Need for early warning system to be established.	<b>5</b>
L1.1.3	Additional river gauges need to be placed throughout county.	<b>5</b>
L1.2.1	Limit number of structures in area surrounding dam.	<b>5</b>
L1.2.2	Identify structures located within spillways of dams in cooperation with the Potomac Valley Conservation District and Natural Resource Conservation Service (NRCS).	<b>3</b>
L3.2.1	Use drought monitor to determine where drought areas are located.	<b>1</b>
L4.1.1	Educate the public on how to protect themselves and to be prepared to provide for themselves.	<b>1</b>
L5.1.1	Use of early warning system.	<b>1</b>
L5.2.1	Educate the public on potential flooding hazards and to be prepared to survive on own for at least 72 hours.	<b>1</b>
L5.2.2	Local LEPC needs to network information for county and Town of Franklin.	<b>1</b>
L5.3.2	Buyout of homes (both RL and non-RL) in floodplain.	<b>6</b>
L5.3.3	Enforce floodplain laws and regulations as required by the NFIP.	<b>4</b>
L6.1.1	Additional training needed for personnel handling hazardous spills.	<b>5</b>
L8.1.1	Advise public of NWS warnings.	<b>1</b>
L8.1.2	Educate the public on preparedness and protection measures.	<b>1</b>
L9.2.1	Removal of debris needed throughout wooded areas to limit potential of wildfires.	<b>7</b>
L10.1.1	Advise public of early warning system.	<b>1</b>
L10.1.2	Local weather station needed for monitoring.	<b>2</b>

PETERSBURG, CITY OF

Project Number	Strategy	Priority
M1.1.1	Address surface water issues within the City of Petersburg.	1

PIEDMONT, CITY OF

Project Number	Strategy	Priority
N1.1.1	Address issue of Piedmont transportation being limited to road access only.	2
N2.1.1	Educate Piedmont residents of concerns regarding the risk of storm cells causing flooding on the hillside.	1

RIDGELEY, TOWN OF

Project Number	Strategy	Priority
O1.1.1	Educate the public on preparedness and response.	2
O1.1.2	Coordinate with utility companies to ensure restoration of utility services.	1

ROMNEY, CITY OF

Project Number	Strategy	Priority
P1.1.1	Continue to provide fire protection for Romney and upgrade capabilities as need and funding are available.	1

WARDENSVILLE, TOWN OF

Project Number	Strategy	Priority
Q1.1.1	Evaluate flood risk potential for the Town of Wardensville related to possible upstream dam failures that contribute to the Cacapon River and Trout Run streams that course through the town.	2

Project Number	Strategy	Priority
<b>Q2.1.3</b>	The Town of Wardensville needs additional environmental design to correct flooding problems to ensure access to roads is not cut off.	<b>3</b>
<b>Q2.2.1</b>	The Town of Wardensville should replace culverts to correct flooding problems in repetitive loss area.	<b>4</b>
<b>Q2.2.2</b>	The Town of Wardensville should make necessary changes to its sewer lagoon embankment and wastewater treatment plant.	<b>4</b>
<b>Q2.2.3</b>	Assure efficient storm water management practices, such as clearing ditches and creating larger water basins for the town.	<b>2</b>
<b>Q3.1.1</b>	The Town of Moorefield and the Town of Wardensville should develop a plan to address winter storms and snow removal.	<b>1</b>
<b>Q3.1.3</b>	Ensure needed snow removal equipment, emergency generators, shelters, and personnel are mobilized according to the town's snow plan.	<b>1</b>

### 3.4 REGIONAL IMPLICATIONS

In most cases, the individual implementation of the projects listed in Sections 3.1 through 3.3 would not have a large impact on the region as a whole. There should, however, be several things kept in mind as these projects are undertaken. For example, several member governments expressed a desire to upgrade communications capabilities. As these capabilities are updated, community leaders should bear interoperability in mind – not only within their own jurisdiction, but also with neighboring jurisdictions (including other counties in the region).

Other projects, such as public education and awareness efforts, could be accomplished through partnerships with neighboring jurisdictions. As such, individual jurisdictions could share costs and reduce duplication of effort. As can be seen by the above risk assessment, many of the communities in Region 8 are susceptible to the same types of hazards.

Though this document is a plan, it calls for a number of other planning initiatives to be completed. Those initiatives should keep this process as a part of the overall planning process. In other words, community leaders should not plan for the sake of planning. This document can provide evidence as to the hazards most likely faced by the communities and planning should strengthen capabilities to lessen the effects of these types of emergencies.

Finally, community leaders should remember that large structural projects could change the topography enough to affect neighboring jurisdictions, primarily with respect to the flooding hazard. For example, a stream bank stabilization project may channel water to another low-lying area (because it had previously dissipated by flooding upstream areas) and put additional structures at risk. Other projects, not related to mitigation, could have the same effect. For example, the construction of a shopping plaza with large parking lots could cause run-off to back up in unexpected places, many of which had not previously been susceptible to flooding. As with planning projects, local leaders would be encouraged to share their intentions (of implementing mitigation projects) with their neighbors.

There are a number of projects that were very similar in nature identified by each participating jurisdiction. Rather than list those individually for the jurisdictions, they are listed here. Not all of these strategies are not “true” mitigation projects (i.e., they do not remove people, facilities, etc. from hazard areas), but they do reduce losses by better

preparing affected jurisdictions. Additionally, these types of projects lend themselves well to collaborative implementation.

- **REGIONAL GOAL #1:** Lessen flood risk by maintaining compliance with the National Flood Insurance Program (NFIP) and undertaking buyout projects when funding is available.
  - **Objective:** Maintain compliance with the NFIP.
    - **Project:** Maintain compliance with the NFIP at the jurisdictional level by attending training, monitoring development, and ensuring the local floodplain regulations are as current and applicable as possible.
      - **Timeframe:** On-going
      - **Cost Estimate (Funding):** Costs can be loosely based on the median value of owner-occupied housing units as per Census data. (Hazard Mitigation Grant Program [HMGP])
      - **Coordinating Agency:** Floodplain Coordinators
      - **Support Agencies:** County Commissions, Municipal Councils
      - **Mitigation Type:** Public Education and Awareness
    - **Project:** Undertake buyout, elevation, and/or relocation projects when and if funding is available.
      - **Timeframe:** On-going
      - **Cost Estimate (Funding):** Costs can be loosely based on the median value of owner-occupied housing units as per Census data. (HMGP)
      - **Coordinating Agency:** Floodplain Coordinators
      - **Support Agencies:** County Commissions, Municipal Councils
      - **Mitigation Type:** Prevention

- **REGIONAL GOAL #2:** Enhance preparedness and mitigation communications failures by upgrading communications capabilities.
  - **Objective:** Mitigate potential loss of life and property by enhancing warning capabilities.
    - **Project:** Establish a wide-area mass notification system.
      - **Timeframe:** On-going
      - **Cost Estimate (Funding):** Up to \$1,000,000 for installation over a large area (State Homeland Security Grant Program [SHSP])
      - **Coordinating Agency:** County Emergency Managers
      - **Support Agencies:** County Commissions
      - **Mitigation Type:** Public Education and Awareness
  - **Objective:** Mitigate communications failures by enhancing interoperable communications capabilities.
    - **Project:** Continue to support build-out of the Statewide Interoperable Radio Network (SIRN).
      - **Timeframe:** On-going
      - **Cost Estimate (Funding):** Up to \$10,000,000 (Emergency Management Performance Grant [EMPG], SHSP, Local Funding, US Department of Homeland Security [USDHS], etc.)
      - **Coordinating Agency:** County Emergency Managers
      - **Support Agencies:** County Commissions, County Communications Directors
      - **Mitigation Type:** Emergency Services

- **REGIONAL GOAL #3:** Enhance mitigation efforts through public education and by increasing early warning capabilities.
  - **Objective:** Educate local residents as to hazard preparedness.
    - **Project:** Undertake periodic all-hazards public outreach campaigns to encourage residents to prepare for themselves, including being self-sufficient for up to 72 hours.
      - **Timeframe:** On-going
      - **Cost Estimate (Funding):** Up to \$2,500 per campaign per jurisdiction (Pre-Disaster Mitigation [PDM], EMPG, Local Funding)
      - **Coordinating Agency:** County Emergency Managers
      - **Support Agencies:** N/A
      - **Mitigation Type:** Public Education and Awareness

# **SECTION 4.0**

# **PLAN MAINTENANCE PROCESS**

As with any plan, this document must be actively maintained in order to be a viable mitigation tool for Region 8's member governments. Section 4.0 outlines the general process that will be used to maintain this document.

## 4.0 PLAN MAINTENANCE PROCESS

§201.6(c)(4)(i)	[The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
§201.6(c)(4)(ii)	[The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.
§201.6(c)(4)(iii)	[The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

The long-term success of this document depends in large part on routine monitoring, evaluating, and updating so that it will remain a valid tool for the participating communities to use. Also critical to the overall success of this strategy is the continued implementation of the local-level multi-jurisdictional mitigation efforts in accordance with this document.

### Formal Plan Adoption

A total of 17 local governments in the Potomac Highlands region of West Virginia have participated in this hazard mitigation planning process. At the municipal level, cities and towns participated directly in the development of the county-specific hazard mitigation plans that served as one (1) of the primary bases of this document. Municipal jurisdictions were given ample opportunity to review and approve their sections of this document. Counties coordinated that process as well as participated in this process (which was spearheaded by the Region 8 Planning and Development Council [PDC]).

This regional document has been designed to illustrate the impacts of hazards across the five (5)-county region and to highlight the benefits of a coordinated approach to hazard mitigation. Each of the jurisdictions affected by this document formally adopted it by a resolution of their governing board.

The adoption process included the delivery of a copy of this document to the local jurisdiction, along with a sample adopting resolution. The Region 8 PDC coordinated this delivery. Region 8 officials explained to municipal and county leaders that this document serves as updates to the local-level mitigation plans they had adopted and updated between 2003 and 2010. Adopting resolutions were collected by the Region 8 PDC. Copies of all resolutions were scanned upon receipt and included alphabetically in Appendix 4 of this document.

The document was submitted to the West Virginia Division of Homeland Security and Emergency Management (WVDHSEM) and the Federal Emergency Management Agency (FEMA) Region III prior to the adoption process to ensure that all federal and state planning regulations had been met. Doing so prior to adoption meant two (2) things: first, the plan was initially issued an “Approved Pending Adoption” status, and secondly, the adoption process was ultimately more efficient (because re-adoptions following revisions were not necessary).

### Implementation

The implementation of this plan will likely prove to be more difficult than its adoption. While this plan puts forth many worthwhile and “high” priority recommendations, there may be competition among the participating communities throughout Region 8 for limited mitigation funds. The decision of which action (i.e., project) to undertake first will be the primary issue that the PDC’s communities face. Fortunately, this plan has been designed with this issue in mind; as such, high priority actions have been included for each participating jurisdiction so each jurisdiction can pursue high-priority actions independently. Secondly, many of the jurisdictions in the region represent economically distressed areas, meaning that funding for large scale projects such as those advocated by this plan is often an issue. To ensure that mitigation efforts get underway, this document includes several low or no-cost recommendations.

An example of a low-cost, high-priority recommendation would be to pursue the education efforts necessary for elected officials and the general public as they relate to participation in the National Flood Insurance Program (NFIP). In other cases, jurisdictions may be considering updating and/or revising their local floodplain ordinances and assisting state and federal authorities as they update flood mapping in their communities.

Another example of a low-cost project would be to integrate mitigation awareness into the many other pre-emergency public information campaigns that local-level emergency managers distribute on a routine basis. As an example, a variety of information on preparedness for hazardous material emergencies is frequently disseminated by each county's Local Emergency Planning Committee (LEPC). Those efforts could be integrated into the counties' (and region's) overall mitigation strategy. Other public education efforts during such events as winter weather awareness week, etc. could equip the public with the knowledge necessary to "mitigate for themselves", which supports the concept of implementing mitigation at the lowest level possible.

Additionally, it should be noted that county emergency managers work with their counterparts in community and economic development planning to ensure that mitigation and emergency preparedness are integrated into other planning efforts, such as:

- Comprehensive planning,
- Capital improvement planning, and
- Economic development goals and incentives.

These emergency managers make risk information available to their local economic development agencies. Further, the presence of the Region 8 PDC can help ensure that future development does not add to the region's overall vulnerability. In fact, the Region 8 PDC serves as a clearinghouse of sorts for a variety of projects throughout the region, including mitigation projects. Examples include the flood mitigation efforts in Grant County and the Town of Bayard.

The guiding principle under the implementation of this plan is that mitigation should be incorporated as much as possible into the daily actions of the coordinating agencies responsible for project implementation. During the development of the individual county plans in 2003 and 2009, county mitigation planning committees attempted to align as many existing programs as possible with mitigation efforts. Such an approach was also incorporated into this document. This approach ensures that mitigation efforts occur by default. While ensuring these efforts occur certainly helps show progress when this document is updated, it also builds buy-in for the strengthening of the community by not asking certain coordinating agencies to shoulder an entire list of new responsibilities.

It is also important to continually monitor funding opportunities that can be utilized to implement some of the larger mitigation recommendations in this document. County commissions, municipal councils, and county-level emergency managers are often the Points of Contact (POCs) for such communication. Fortunately, emergency managers throughout the region (and West Virginia) frequently share these opportunities with colleagues. The PDC actually serves as a watchdog for funding opportunities as well. As such, a repository of funding options should be easy to maintain. Funding opportunities often present themselves in the aftermath of large-scale disasters, but they can also be present on a rotating cycle. The communities participating in this process have been cognizant of ranking both high and low-projects as “high priority” so that they can be in a position to take advantage of whatever funding opportunities arise.

By adopting this plan, communities served by the Region 8 PDC commit to the following:

- Pursuing the implementation of high-priority, low/no cost recommended actions,
- Keeping the concept of mitigation in the forefront of community decision-making by identifying and stressing the recommendations of the hazard mitigation plan when other community goals, plans, and activities are discussed, and
- Maintaining a constant monitoring of multi-objective, cost-share opportunities to assist the participating communities in implementing the recommended actions of this plan for which no current funding or support exists.

#### Integration into Existing Planning Mechanisms

As the custodial agency of the regional Hazard Mitigation Plan (HMP), the Region 8 PDC should ensure that mitigation planning is incorporated, as appropriate, into other planning mechanisms. Such a statement is not meant to say that mitigation planning should inhibit other types of planning, such as community and economic development efforts. Ensuring compatibility between these initiatives, rather, should provide an opportunity for all types of planners to understand the interplay between risk and development and the potential future vulnerabilities of fully-developed areas. Integration can open a dialogue between planners about how to responsibly plan the future of the communities throughout Region 8.

As mentioned, the Region 8 PDC acts as a sort of clearinghouse for planning initiatives around its region. The PDC does not “regulate” or “supervise” these efforts, but it does maintain a central repository of efforts that are underway throughout the planning area. It maintains such documents as a Comprehensive Economic Development Strategy (CEDS), housing and community development assessments, etc. The PDC can compare these areas highlighted for development and other projects through its documents with this mitigation plan. For instance, some traditional PDC projects, such as supporting infrastructure (e.g., water and sewer) system extensions, may support mitigation efforts for such hazards as drought and public health emergencies. These extensions may not have any effect on hazards such as flooding. In any circumstance, the PDC may be able to use support of a mitigation effort as further justification for the funding of a project.

Additional agencies throughout the region, such as the county-level offices of emergency management, will actively integrate the information contained in this risk assessment into other planning initiatives, such as the maintenance of their jurisdiction-specific Emergency Operations Plans (EOPs). These documents should support the strengthening of capabilities to respond to the hazards identified by the risk assessment. As mitigation projects are implemented and risk is thus reduced, the emergency services community may need to “re-plan” its response to address what has become (thanks to the mitigation project) a more critical risk.

Finally, it is significant to note that all 17 member governments within Region 8 are represented by the PDC itself. As the custodial agency of this document, the PDC can schedule a regular review with its member governments at one of its council meetings to ensure that local officials are educated as to the plan’s contents – and in agreement with its contents – even as those officials change and this document is updated. This representation should also facilitate local government comment on both the risks facing their jurisdictions and the types and numbers of mitigation projects that could be implemented.

### Maintenance

Plan maintenance requires an ongoing effort to monitor and evaluate the implementation of the plan, and to update the plan as progress, roadblocks, or changing circumstances are recognized. All five (5) counties in the region identified their county-level emergency management office as the coordinator of local reviews.

Local reviews are to occur at no less than five (5)-year intervals. The counties also indicated that they may facilitate reviews following major disasters.

Each county identified several conceptual elements that can guide a review of this document. Those elements are as follows:

- **Ease of Implementation:** How smoothly has implementing the project (or similar types of projects) been? Have programs been readily available to assist in funding the implementation of the project (or similar types of projects)?
- **Cost Effectiveness:** Have sufficient funding sources been available to implement the project at a cost manageable by the local government? Have the costs of implementing the project been significantly less than the cumulative future costs potentially incurred by an un-corrected situation?
- **Social Impacts:** Has the public perceived that the project has positively lessened hazard-related losses? Has implementing the project adversely affected any segment of the population?
- **Political Impacts:** Has implementing a particular project (or type of project) been delayed due to the political consequences of its implementation?
- **Economic Impacts:** Has the cost/benefit ratio of implementing the project been acceptable? Has implementing a project adversely affected a particular segment of the local economy?
- **Overall Positive Impacts:** Have local leaders generally agreed that implementing a particular project was beneficial to the community?

When each county convenes for a review, it should coordinate with the Region 8 PDC to ensure that this document is updated appropriately. Public participation should be assured as the plan is updated. The Region 8 PDC will ensure that a public review process *for the entire regional document* is undertaken at least once per five (5)-year period. This public review will include two (2) initiatives: publishing an advertisement in the primary newspaper in all five (5) counties that invites the public to review the existing document with a list of proposed updates (i.e., the public comment form in Appendix 4 can be used to document these comments even during future updates), and placing discussion of the plan on the agenda of one of the council's regularly-scheduled meetings (which are always advertised and open to the public).

This plan should be updated in written form at least once during the five (5)-year cycle. Such updates should be resubmitted to the WVDHSEM and FEMA Region III for approval. Upon approval, participating jurisdictions should re-adopt the plan by resolution.

# **APPENDIX 1**

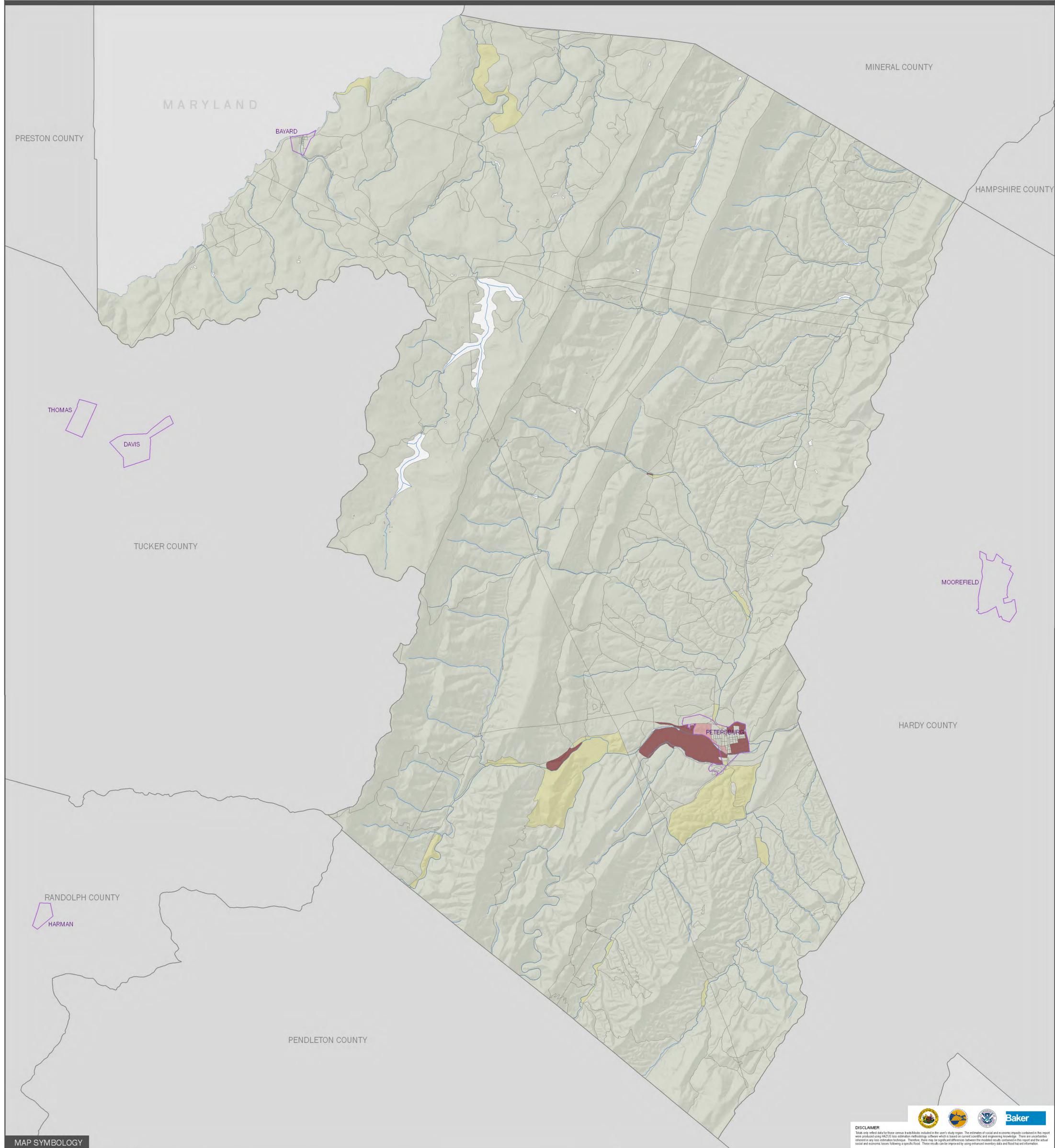
# **HAZUS FLOOD REPORTS FOR ALL**

# **REGION 8 COUNTIES**



# Grant County

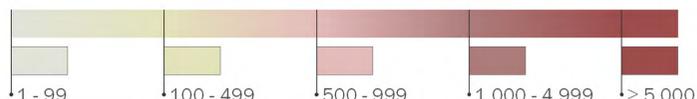
WEST VIRGINIA



### MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

10 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)

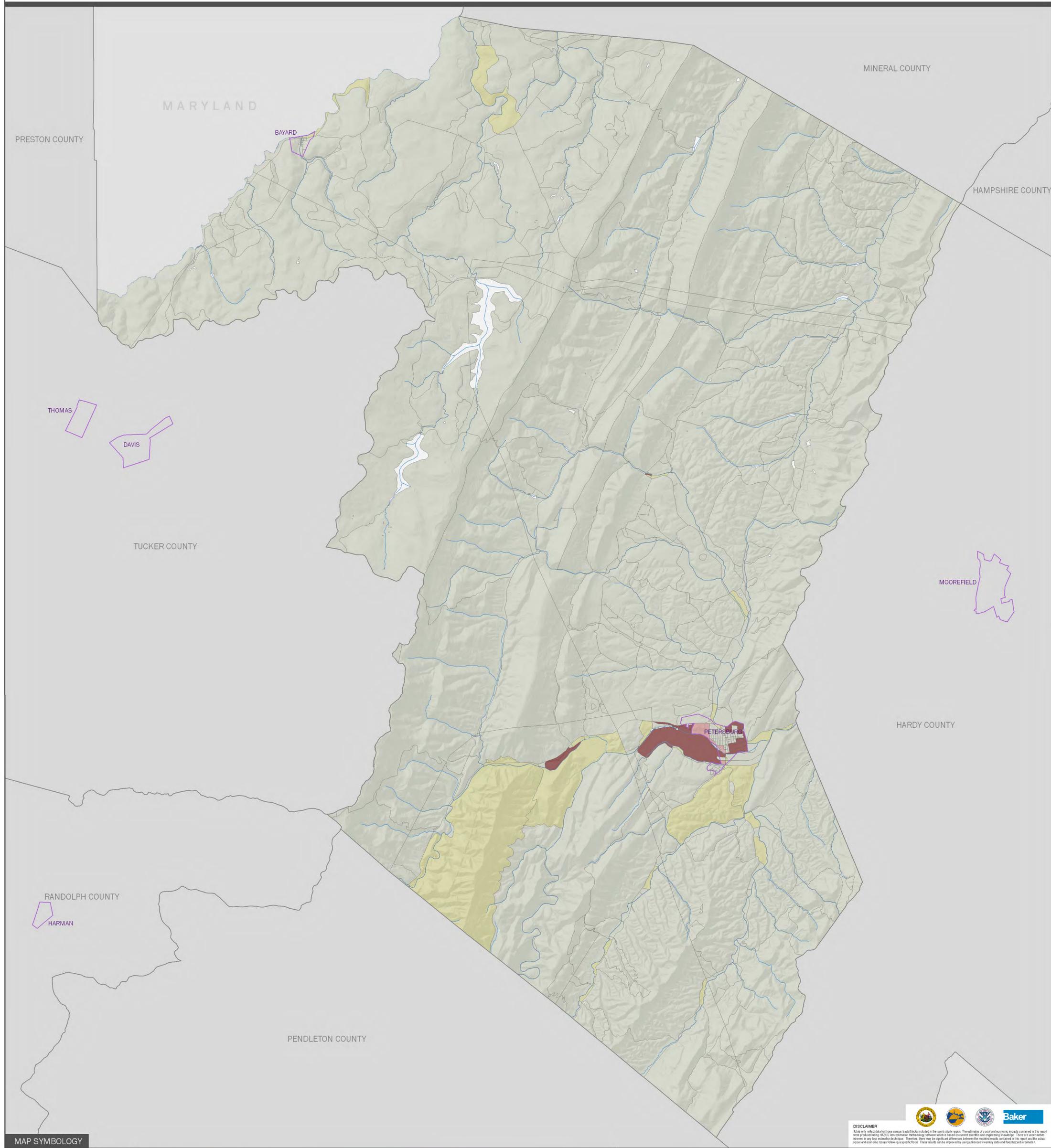


**DISCLAIMER**  
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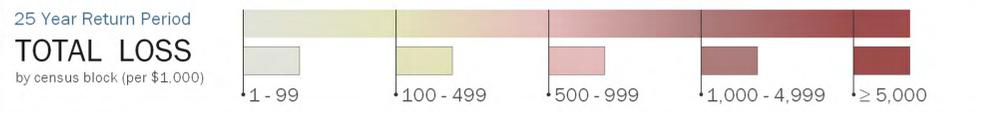
# Grant County

WEST VIRGINIA



### MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

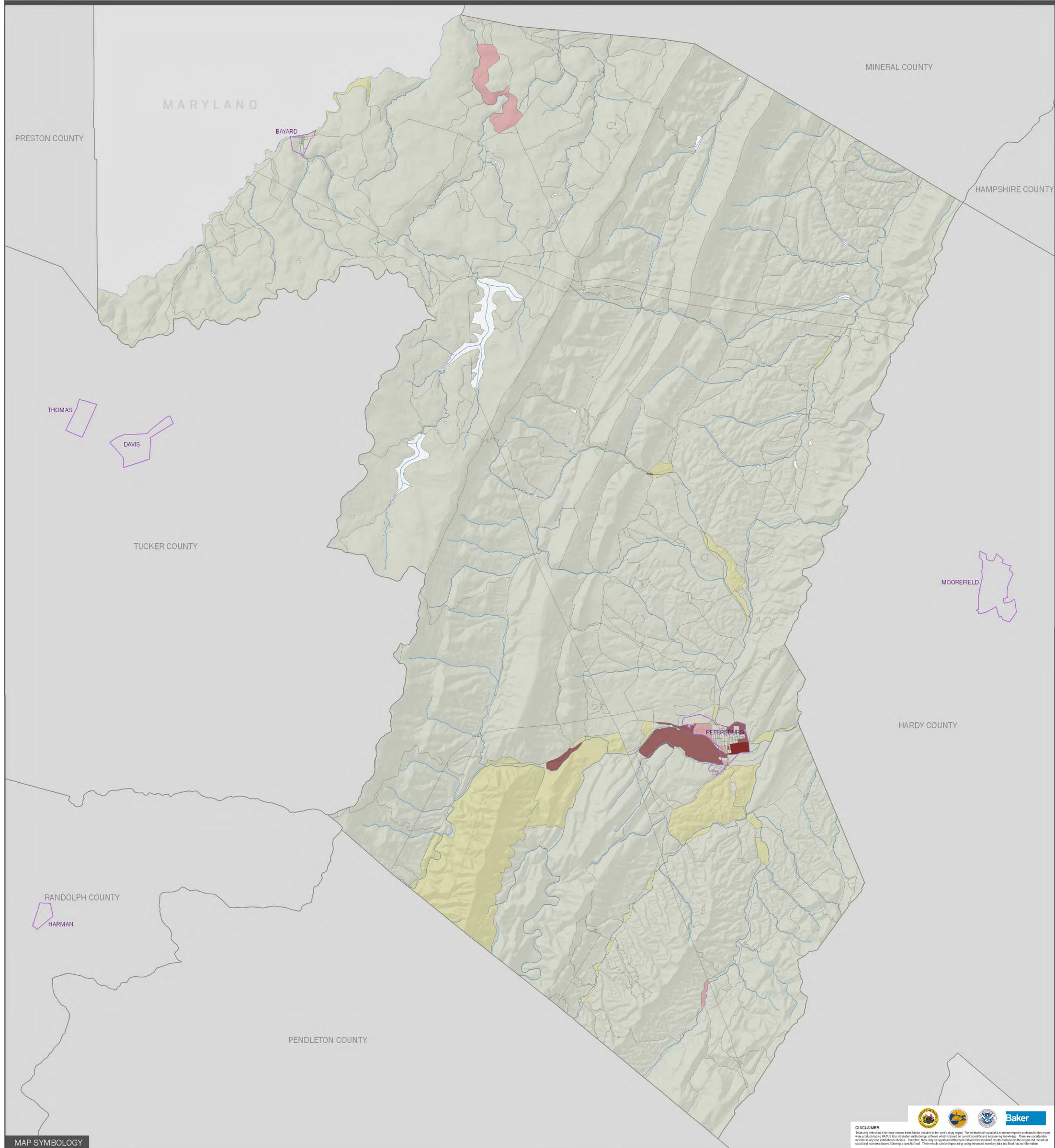


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# Grant County

WEST VIRGINIA



### MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

50 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)



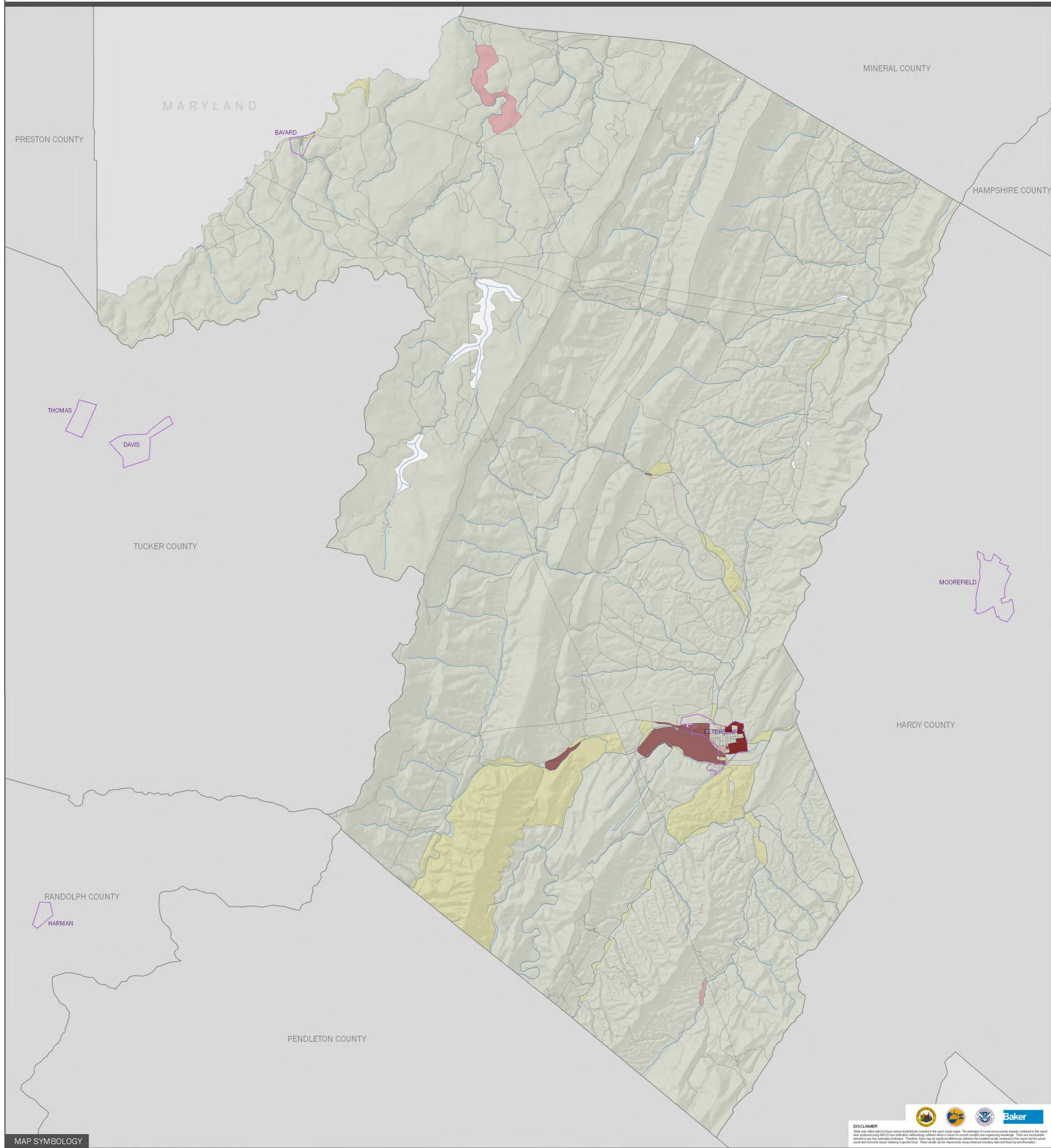
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# Grant County

WEST VIRGINIA



### MAP SYMBOLOLOGY

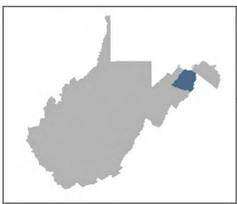
- Census Block
- Stream
- Community
- Outside County

100 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)



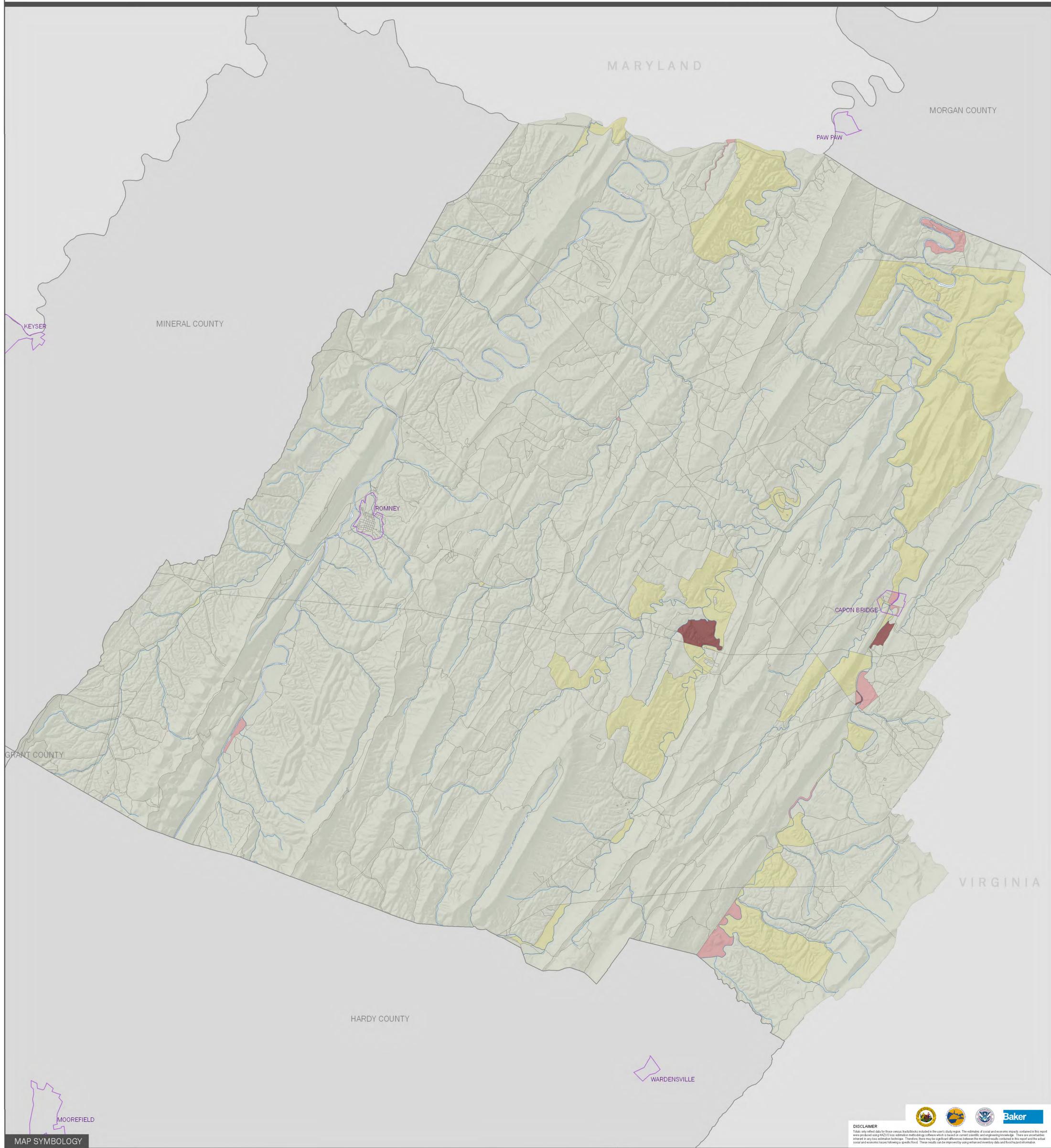
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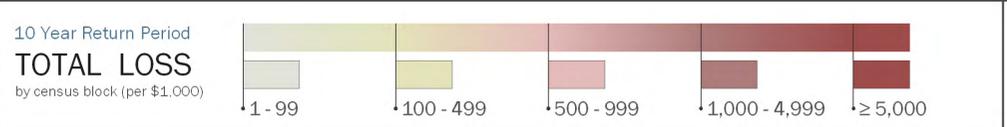
# Hampshire County

WEST VIRGINIA

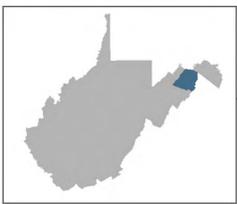


**MAP SYMBOLOGY**

- Census Block
- Community
- Stream
- Outside County

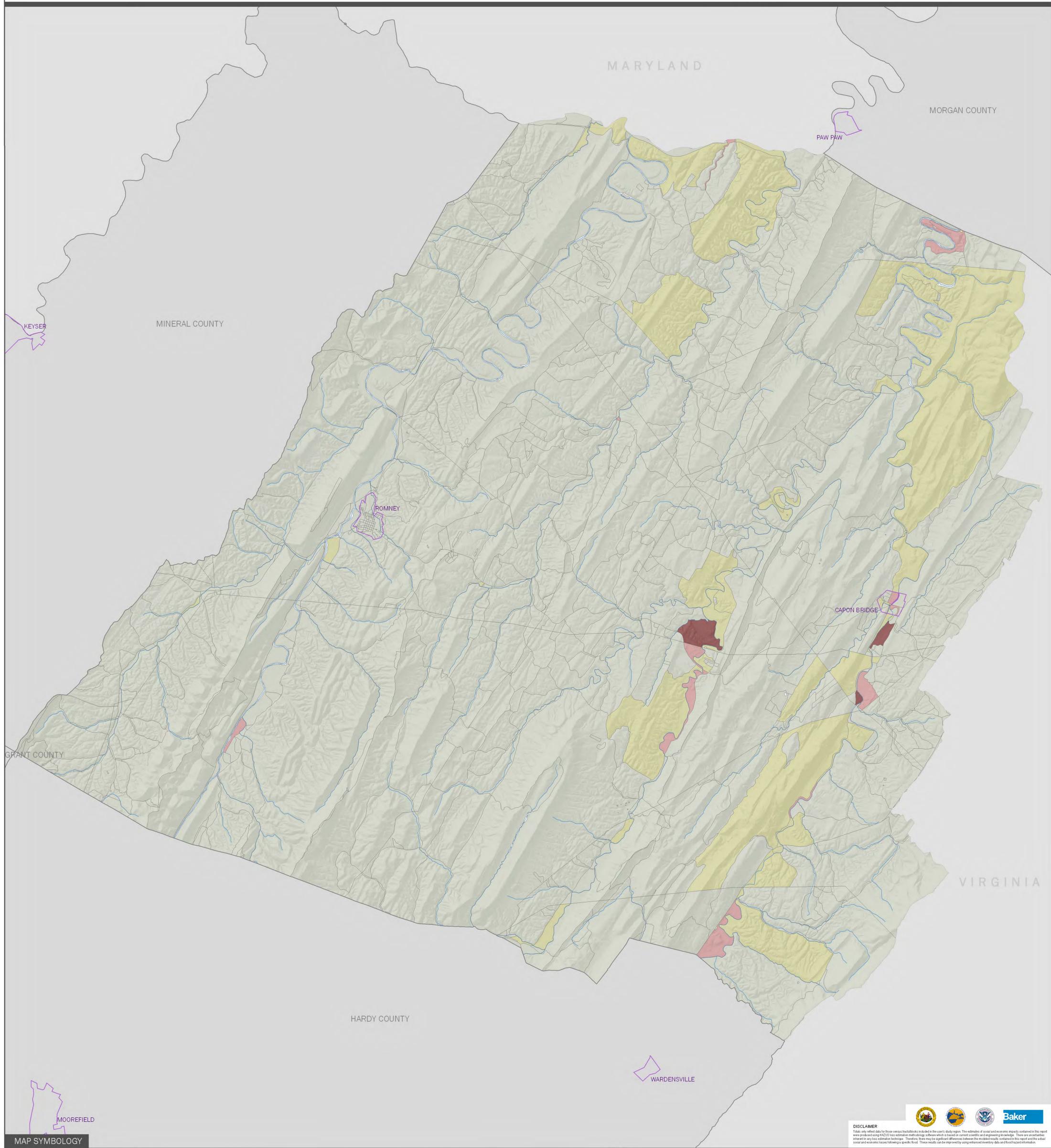


**DISCLAIMER**  
Total loss estimates are based on census tracts included in the user's study region. The estimates of social and economic impacts contained in this report were produced using HAZUS flood estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic impact following a flood. These results can be improved by using enhanced inventory data and flood hazard information.



# Hampshire County

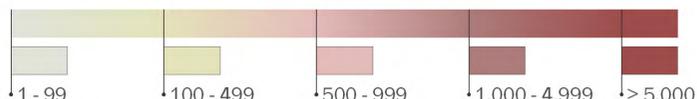
WEST VIRGINIA



MAP SYMBOLOGY

- Census Block
- Stream
- Community
- Outside County

25 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)

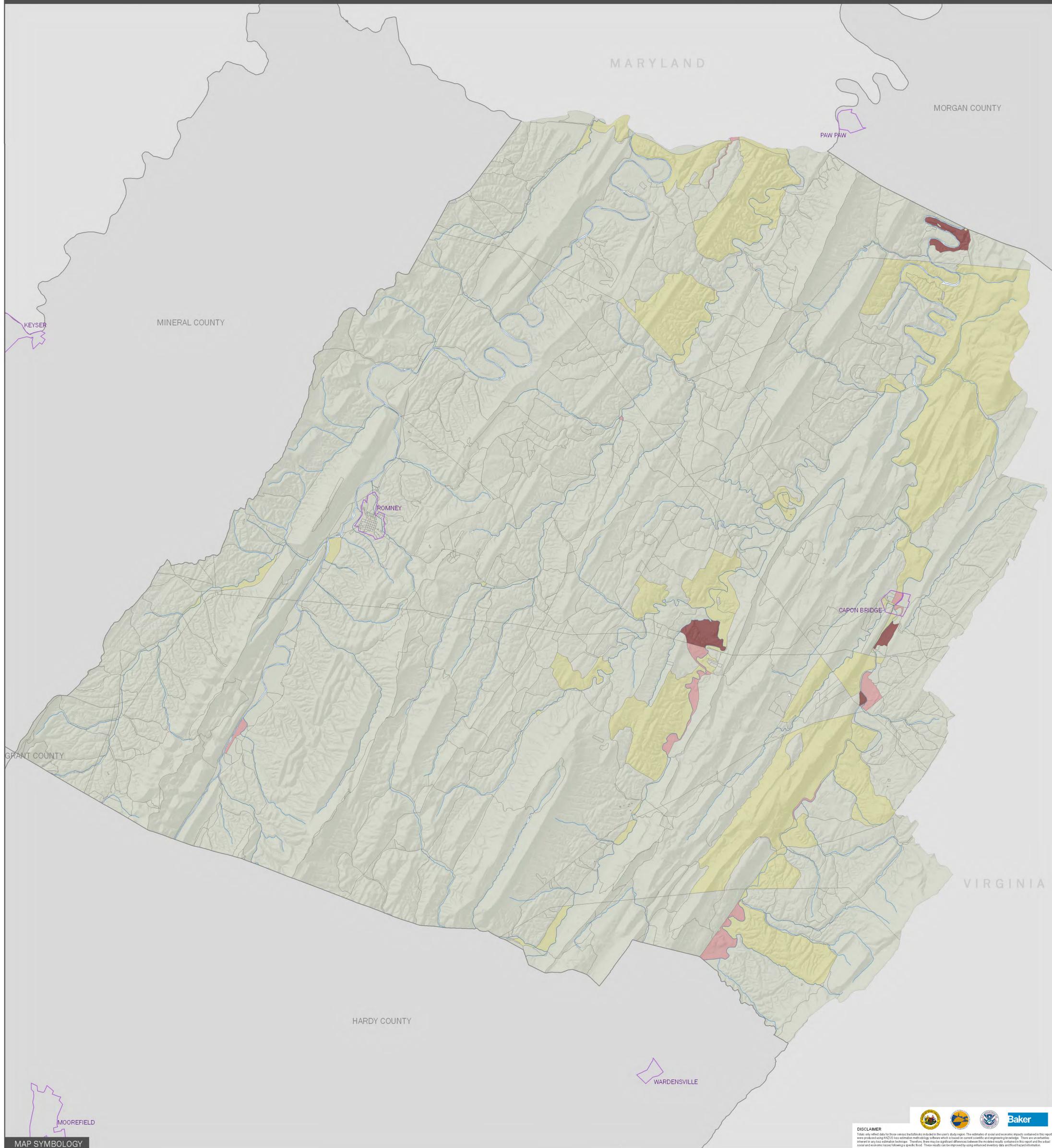


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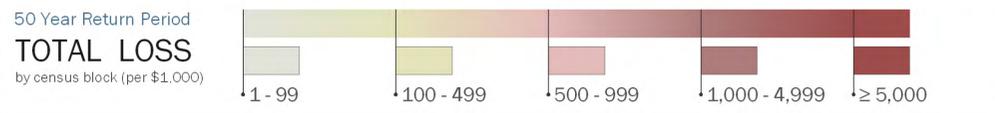
# Hampshire County

WEST VIRGINIA

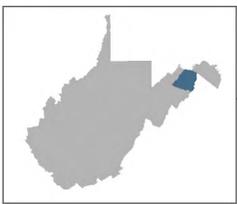


MAP SYMBOLOGY

- Census Block
- Stream
- Community
- Outside County

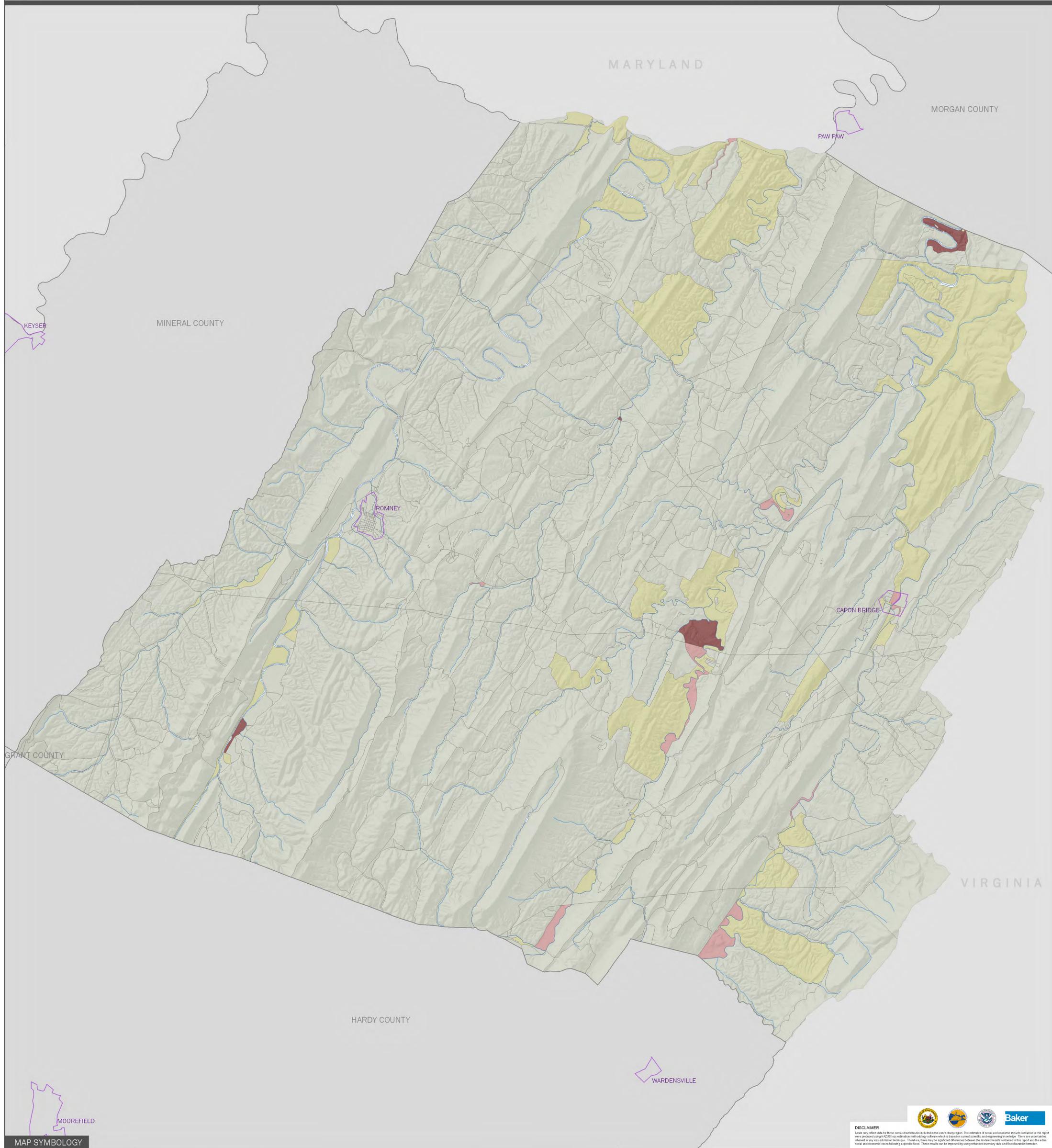


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# Hampshire County

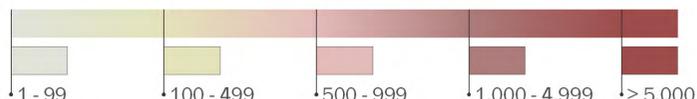
WEST VIRGINIA



### MAP SYMBOLOGY

- Census Block
- Stream
- Community
- Outside County

100 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)

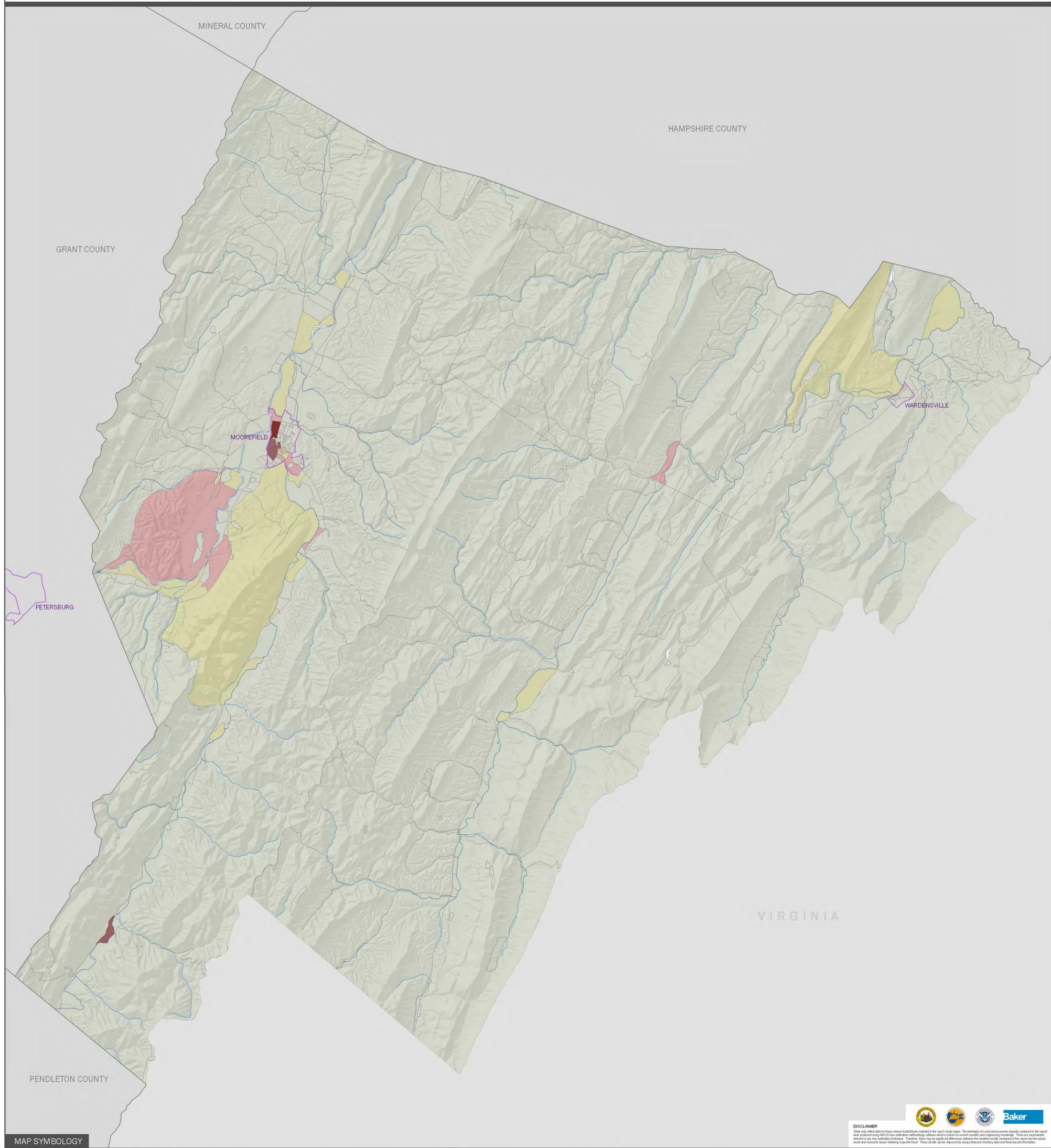


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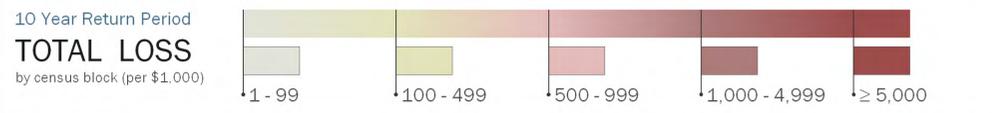
# Hardy County

WEST VIRGINIA



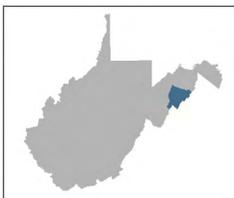
MAP SYMBOLOGY

- Census Block
- Stream
- Community
- Outside County



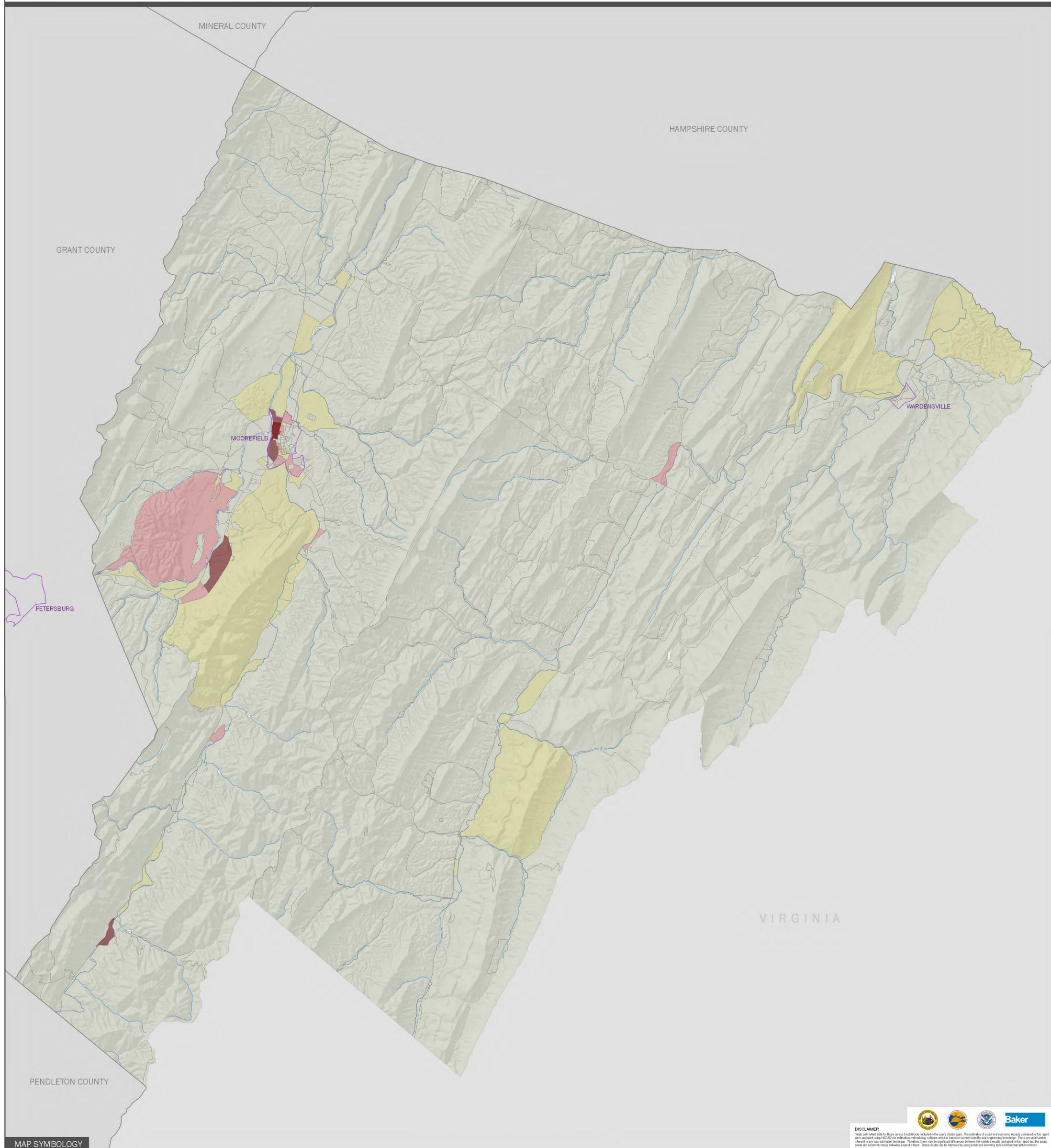
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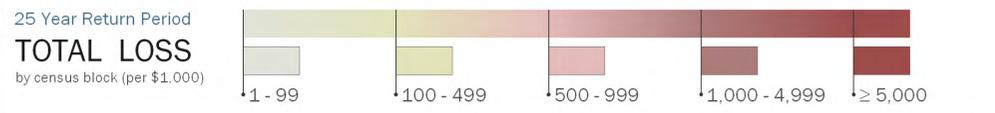
# Hardy County

WEST VIRGINIA



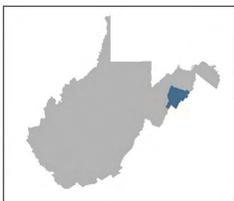
MAP SYMBOLOGY

- Census Block
- Stream
- Community
- Outside County



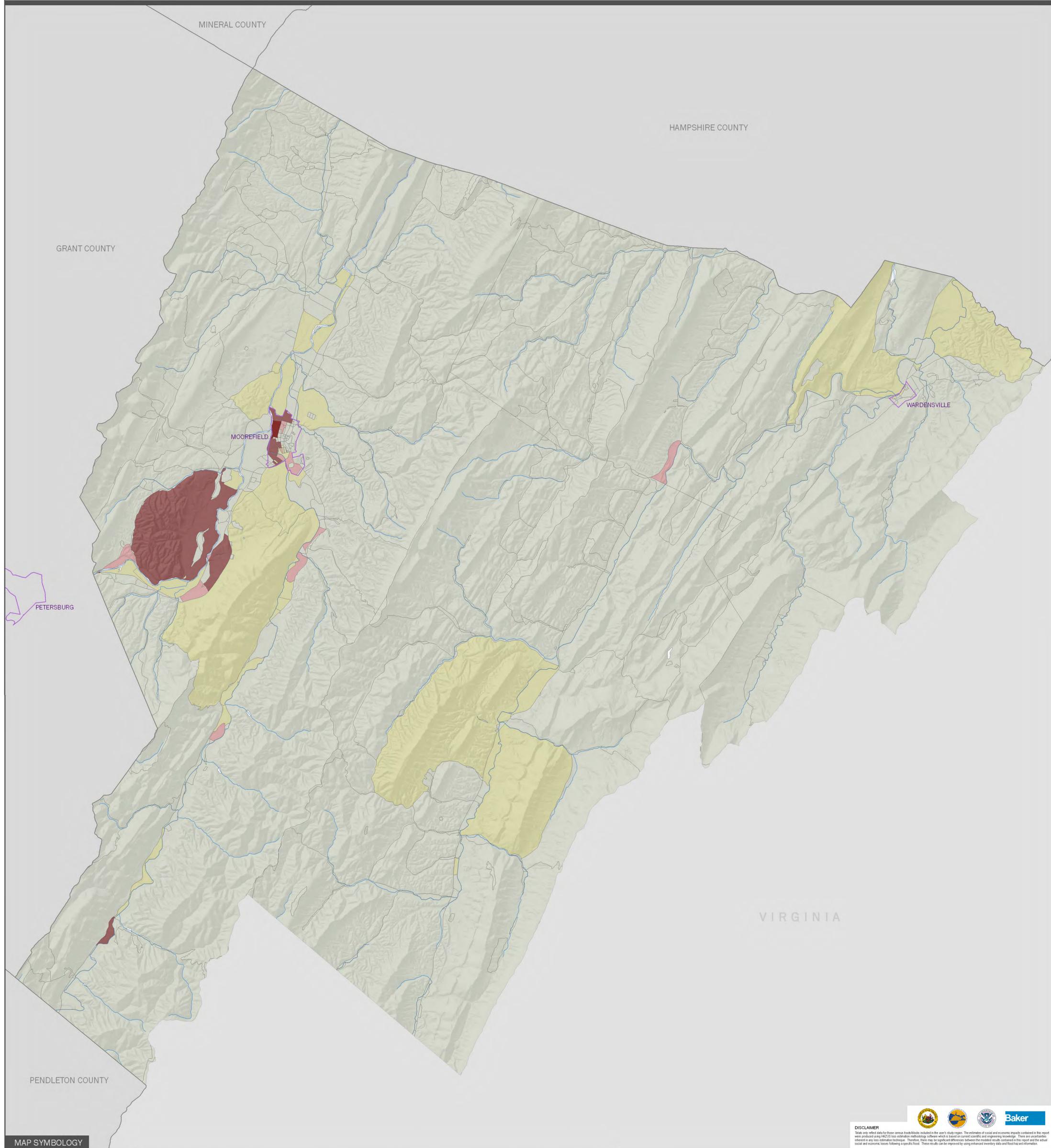
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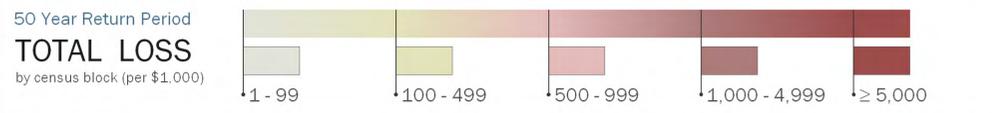
# Hardy County

WEST VIRGINIA



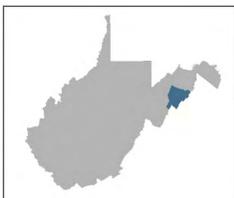
MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County



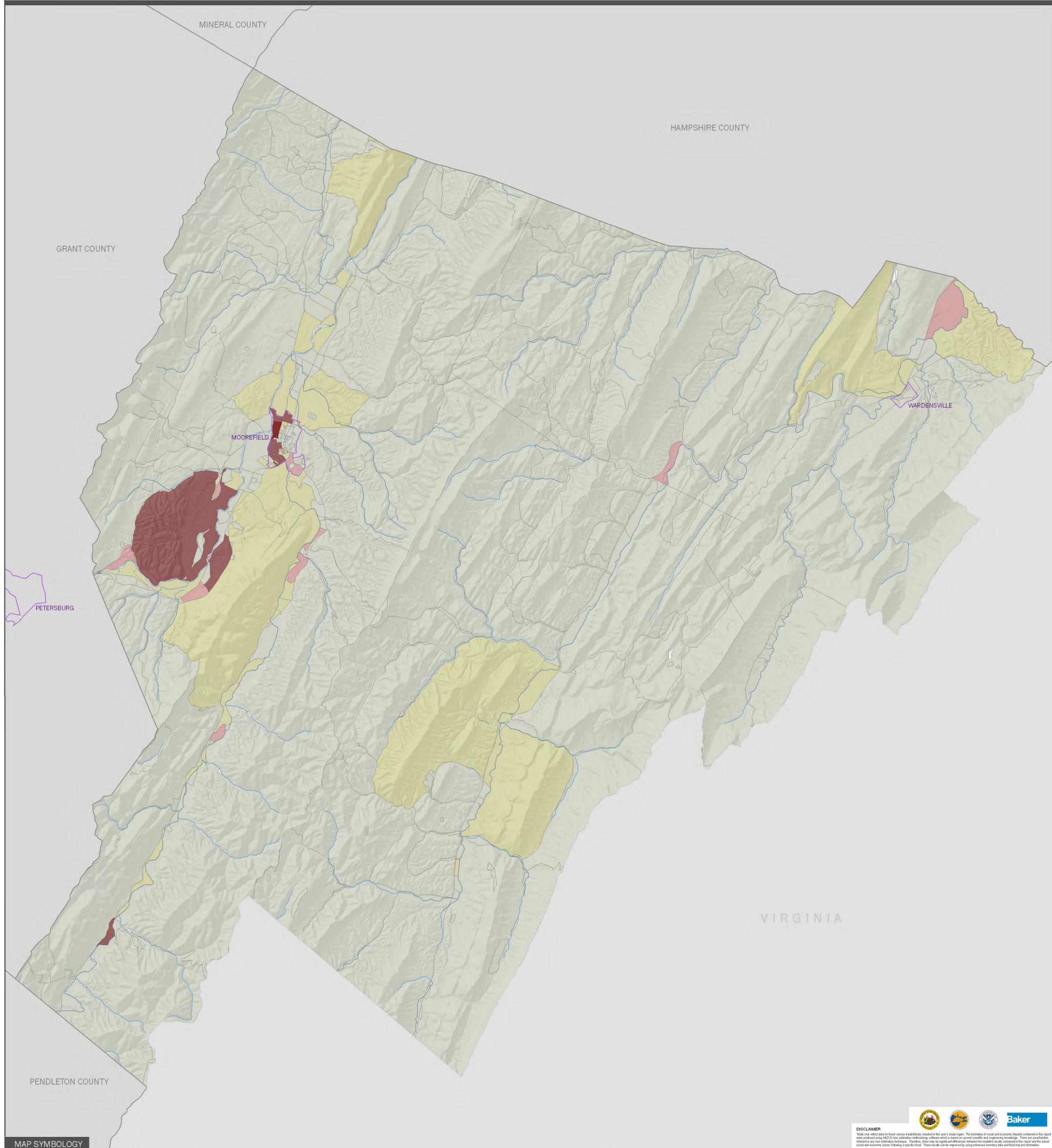
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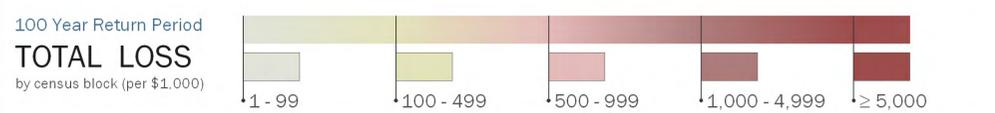
# Hardy County

WEST VIRGINIA



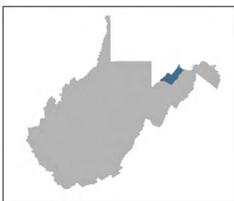
**MAP SYMBOLOLOGY**

- Census Block
- Community
- Stream
- Outside County



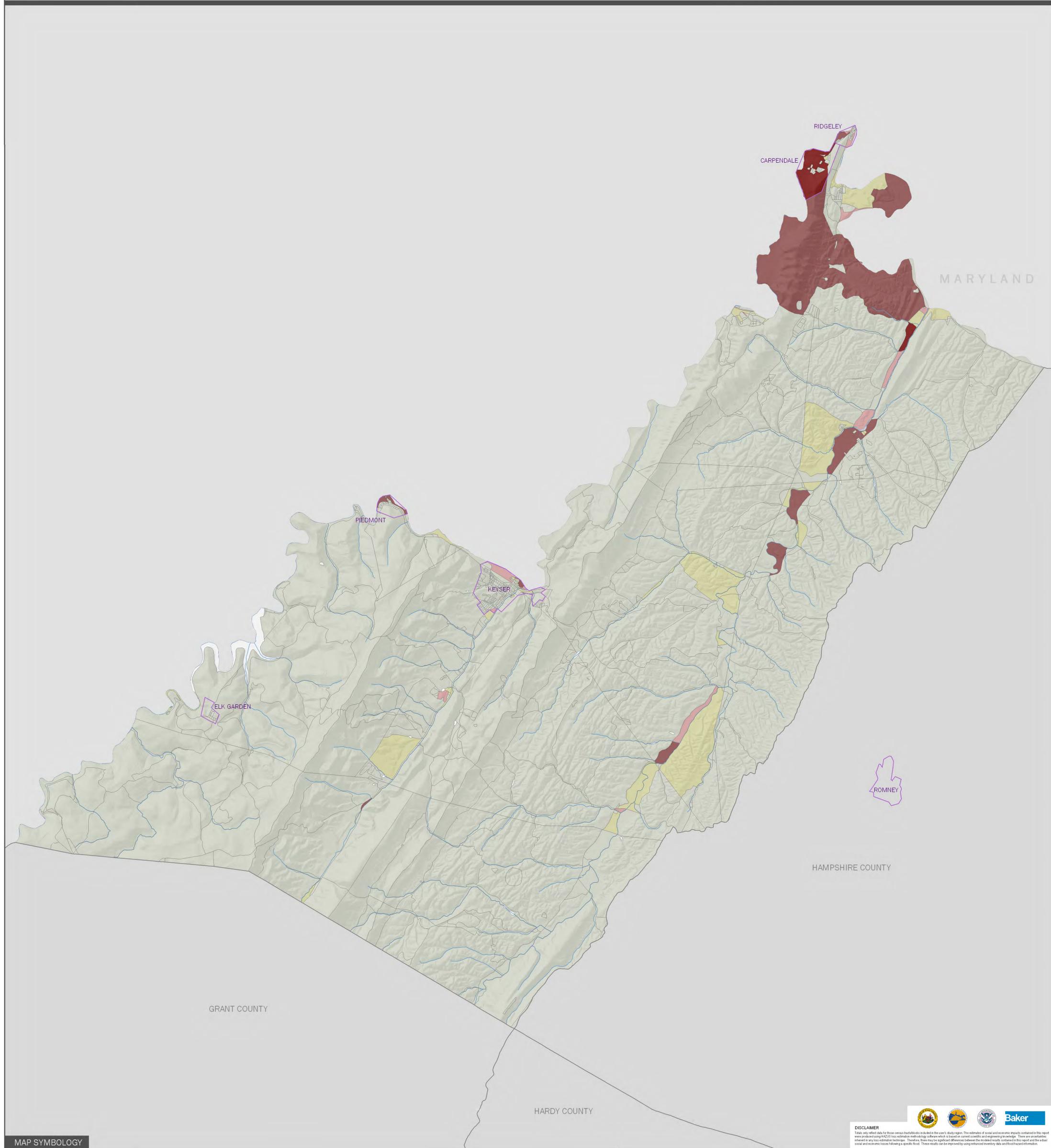
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# Mineral County

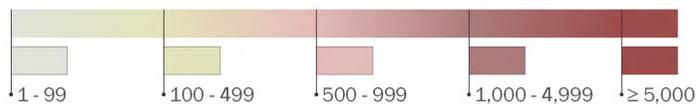
WEST VIRGINIA



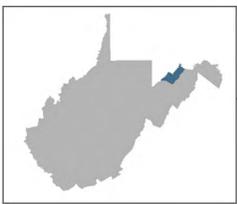
### MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

10 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)

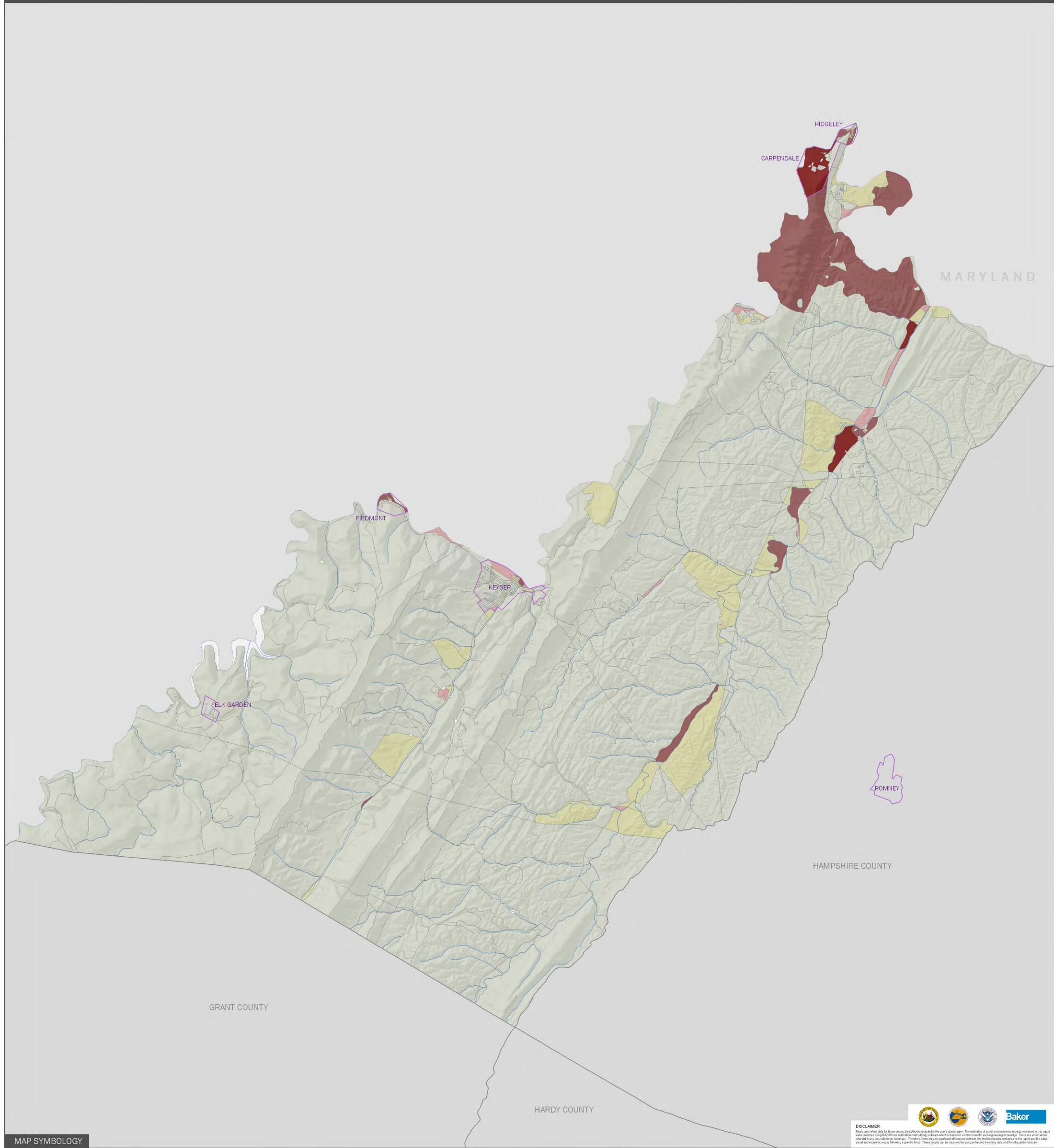


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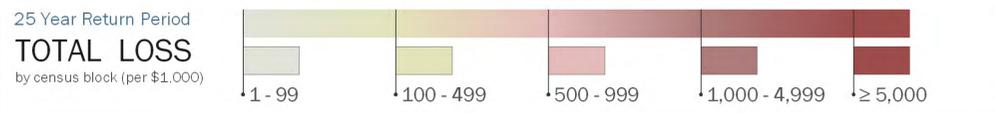
# Mineral County

WEST VIRGINIA



MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

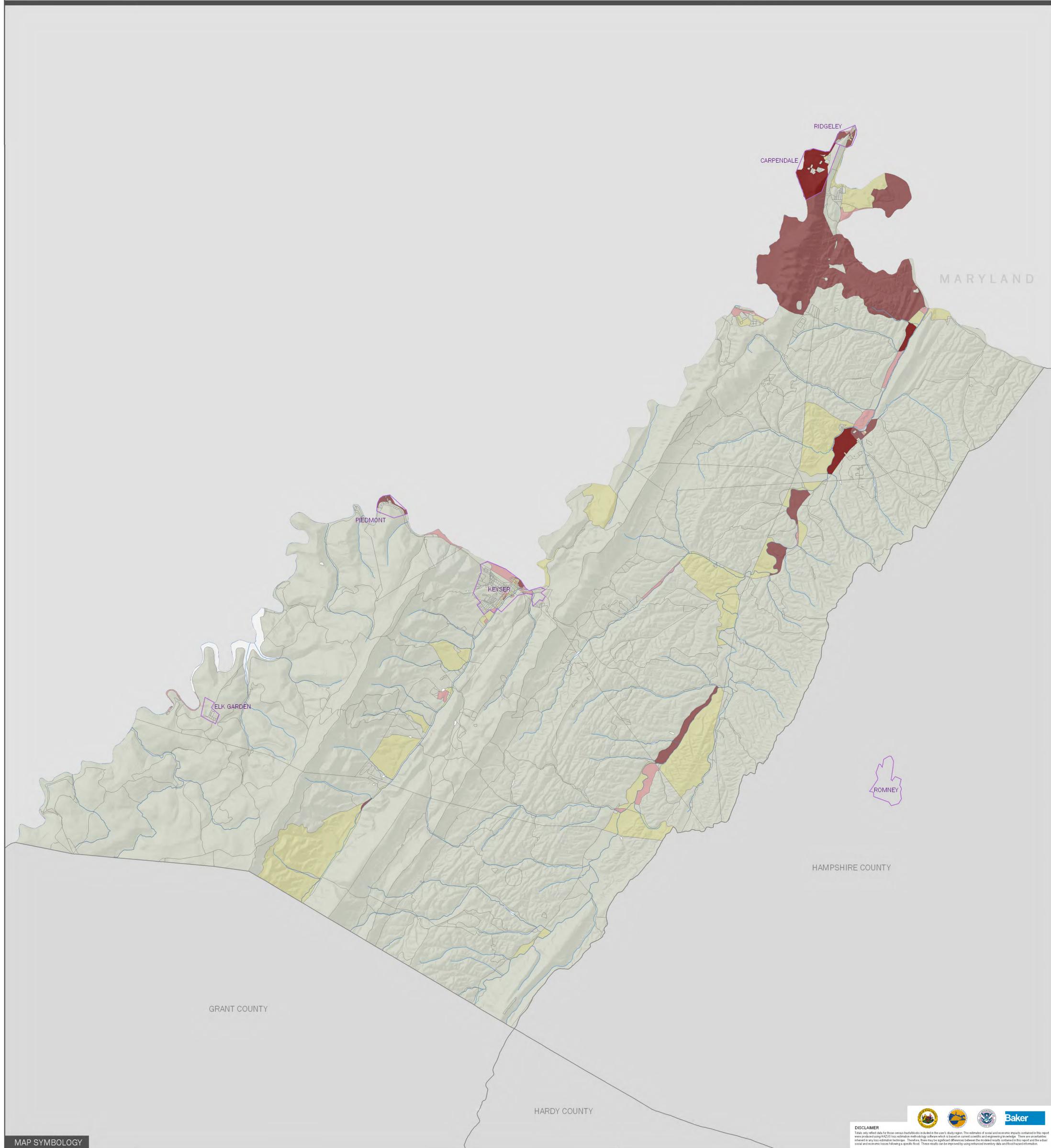


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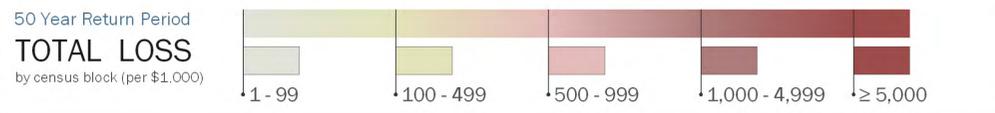
# Mineral County

WEST VIRGINIA

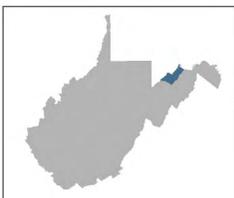


### MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

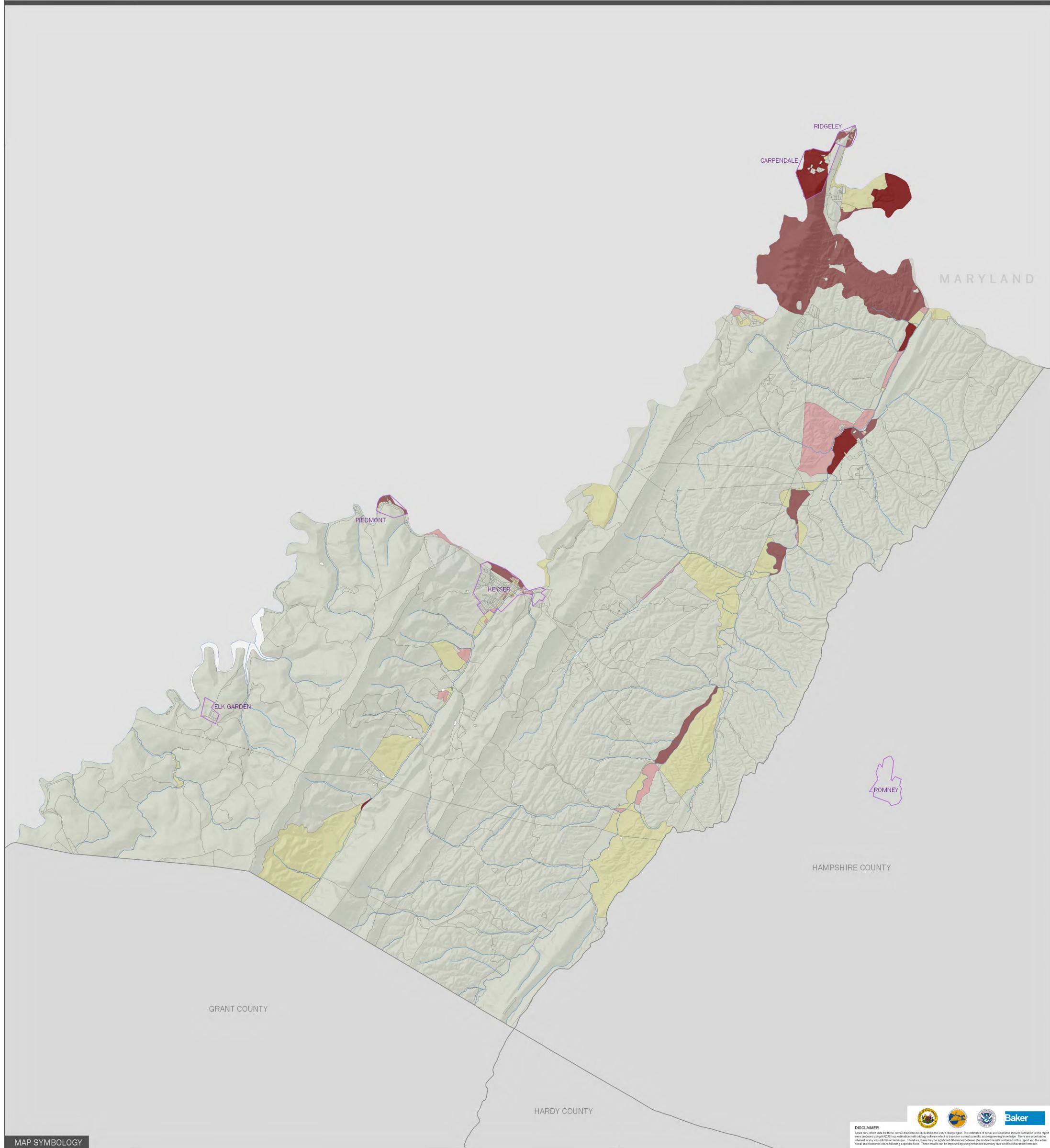


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# Mineral County

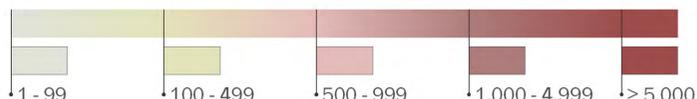
WEST VIRGINIA



### MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

100 Year Return Period  
**TOTAL LOSS**  
by census block (per \$1,000)

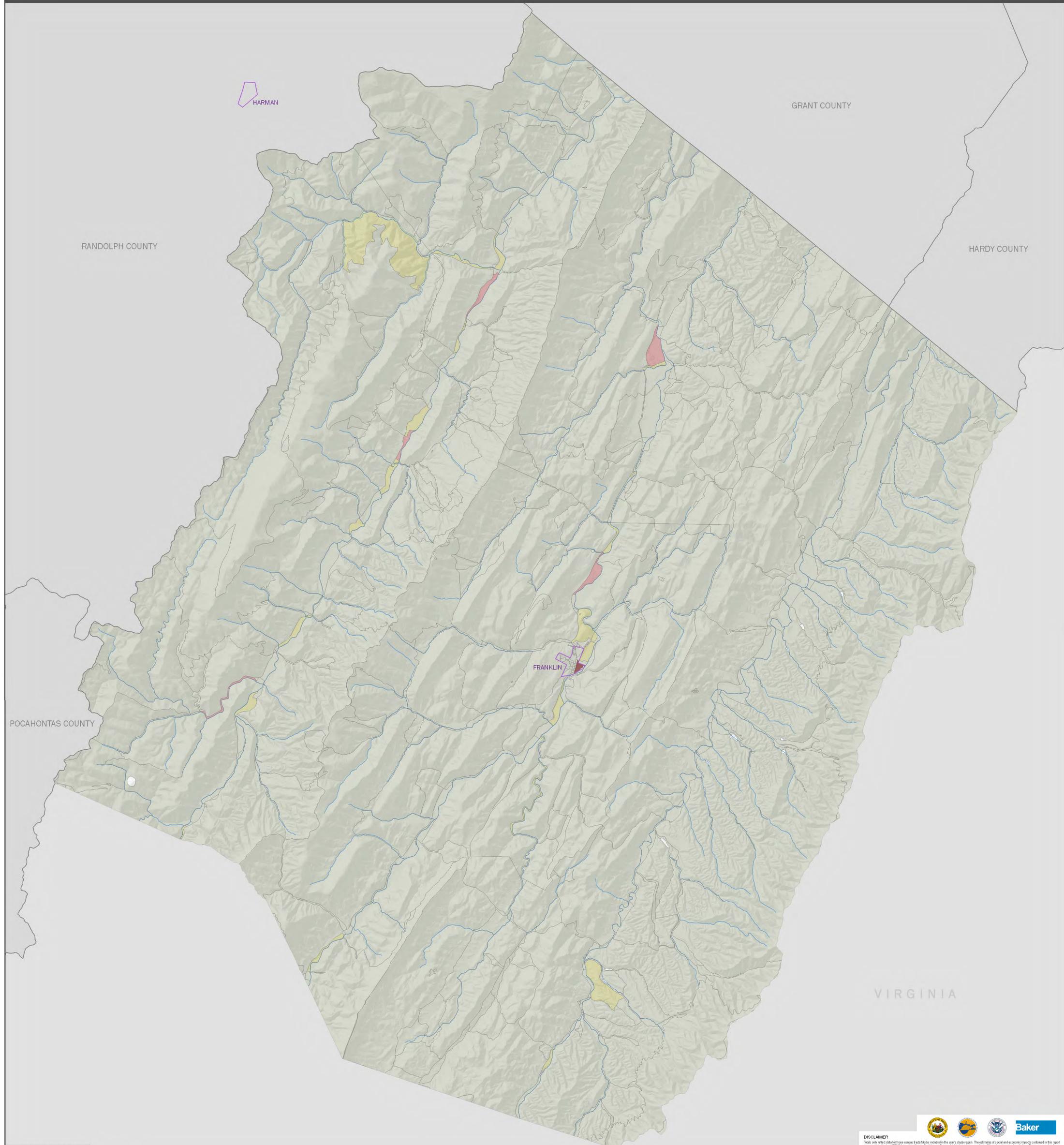


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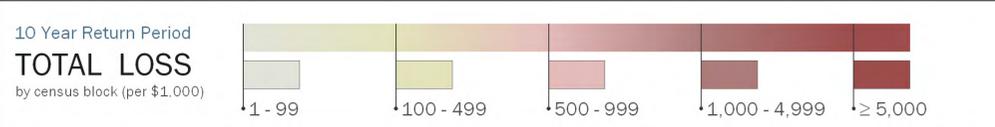
# Pendleton County

WEST VIRGINIA

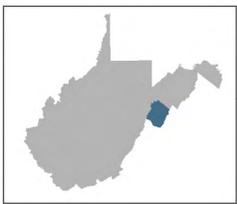


**MAP SYMBOLOLOGY**

- Census Block
- Community
- Stream
- Outside County

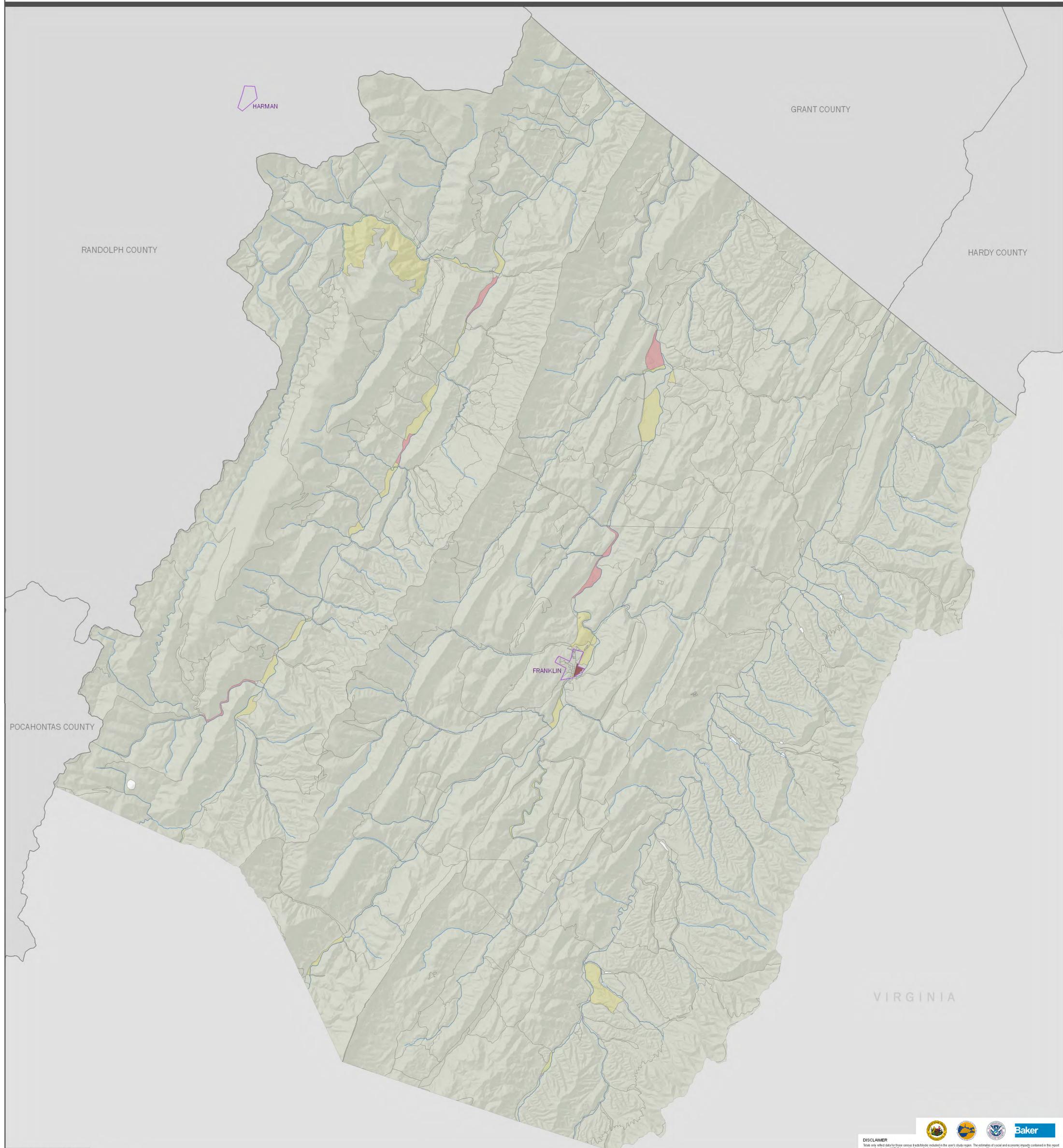


**DISCLAIMER**  
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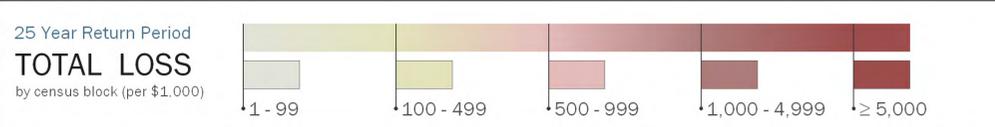
# Pendleton County

WEST VIRGINIA



**MAP SYMBOLOLOGY**

- Census Block
- Community
- Stream
- Outside County



0 3 6 12 Miles

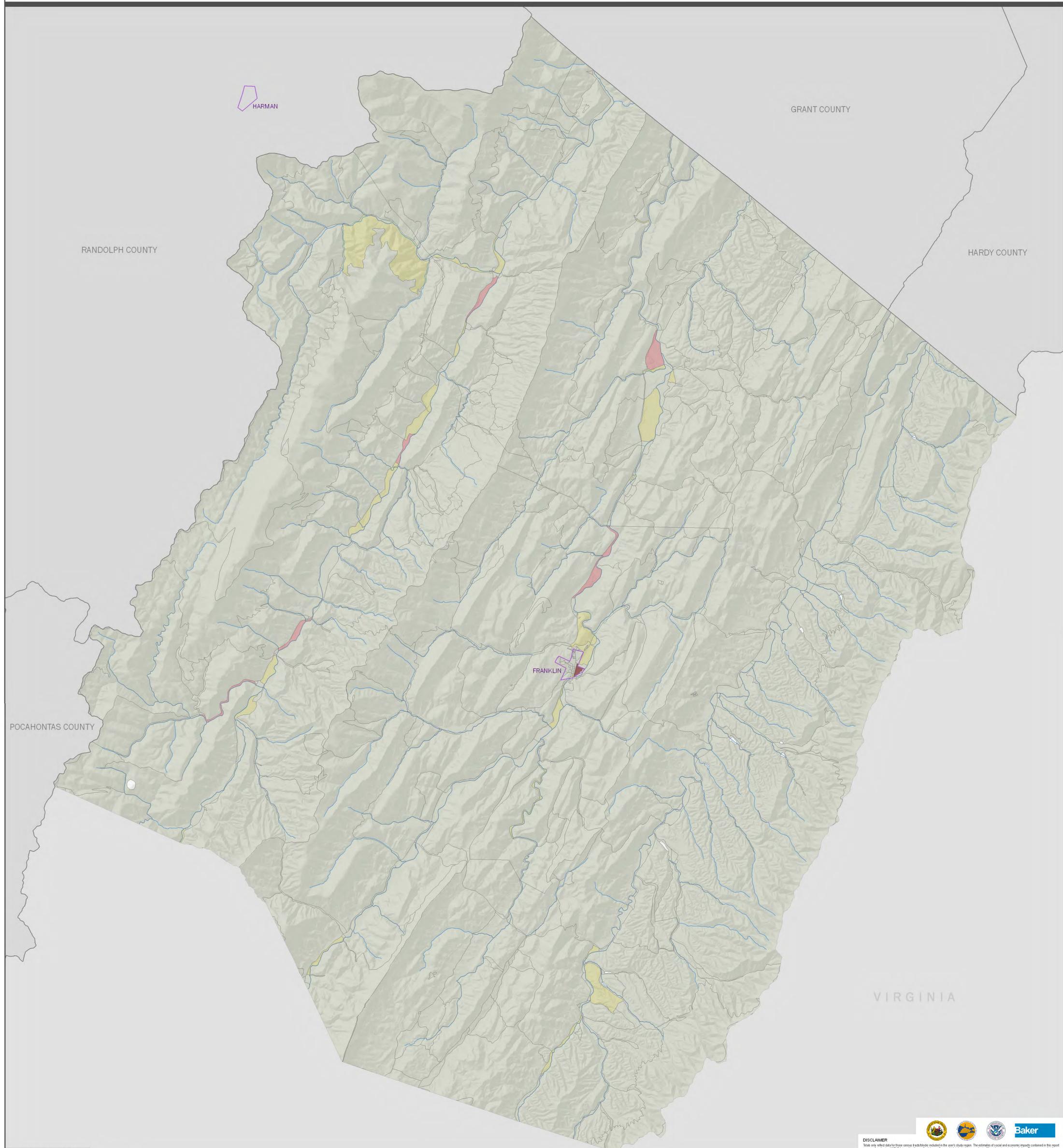
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Baker



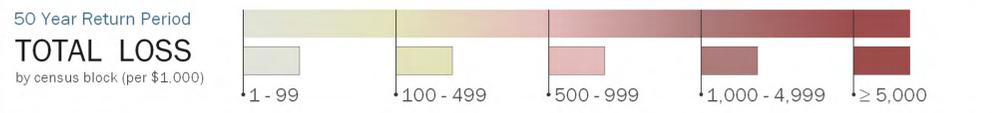
# Pendleton County

WEST VIRGINIA

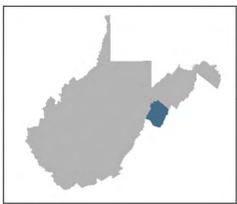


MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County

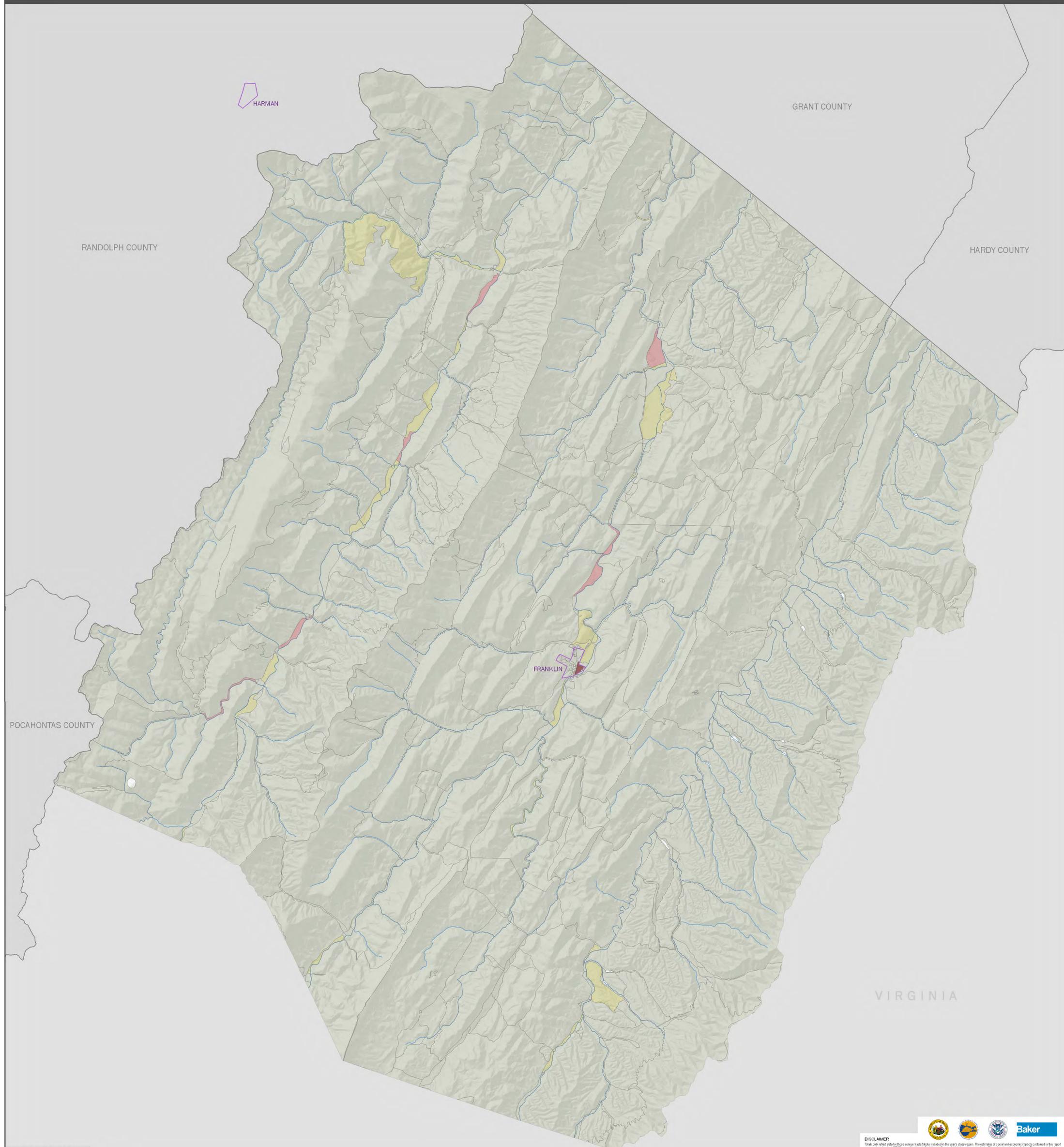


**DISCLAIMER**  
Results only reflect data for those census tracts/blocks included in the user's study region. The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific flood. These results can be improved by using enhanced inventory data and flood hazard information.



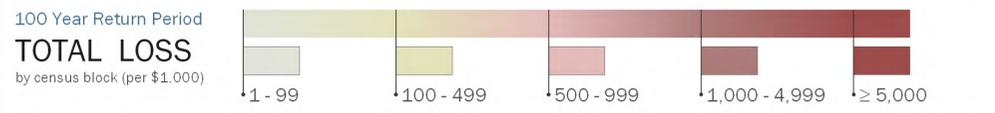
# Pendleton County

WEST VIRGINIA



MAP SYMBOLOLOGY

- Census Block
- Stream
- Community
- Outside County



**DISCLAIMER**  
 Maps only reflect data for those census tracts/blocks included in the user's study region. The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific flood. These results can be improved by using enhanced inventory data and flood hazard information.



**APPENDIX 2**

**REFERENCE COPIES OF**

**WORKSHEET #3A AND RISK**

**ASSESSMENT MATRICES FOR ALL**

**REGION 8 COUNTIES**

# GRANT COUNTY

**Hazard: Dam Failure**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	4,883	77%	\$634,053,600	\$488,221,272	77%	11,937	9,191	77%
<i>Commercial</i>	227	0	0%	\$7,006,355	\$0	0%	1,268	0	0%
<i>Industrial</i>	7	1	10%	\$6,094,424	\$609,442	10%	849	85	10%
<i>Agricultural</i>	471	363	77%	\$17,004,000	\$13,093,080	77%	471	363	77%
<i>Religious/Non-Profit</i>	24	18	75%	\$3,600,000	\$2,700,000	75%	1,200	900	75%
<i>Government</i>	6	0	0%	\$9,000,000	\$0	0%	992	0	0%
<i>Education</i>	8	0	0%	\$36,943,680	\$0	0%	3,011	0	0%
<i>Utilities</i>	4	0	0%	\$4,000,000	\$0	0%	91	0	0%
<b>Total</b>	<b>7,113</b>	<b>5,264</b>	<b>74</b>	<b>\$717,702,059</b>	<b>\$504,623,794</b>	<b>70</b>	<b>19,819</b>	<b>10,539</b>	<b>53</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Drought**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$0	0%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$0	0%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$0	0%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$0	0%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$0	0%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$0	0%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$0	0%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$0	0%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$0</b>	<b>0</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Earthquake**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$0	0%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$0	0%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$0	0%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$0	0%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$0	0%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$0	0%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$0	0%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$0	0%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$0</b>	<b>0</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Epidemic**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$0	0%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$0	0%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$0	0%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$0	0%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$0	0%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$0	0%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$0	0%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$0	0%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$0</b>	<b>0</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	318	5%	\$634,053,600	\$31,702,680	5%	11,937	597	5%
<i>Commercial</i>	227	5	2%	\$7,006,355	\$140,127	2%	1,268	25	2%
<i>Industrial</i>	7	0	1%	\$6,094,424	\$60,944	1%	849	8	1%
<i>Agricultural</i>	471	33	7%	\$17,004,000	\$1,190,280	7%	471	33	7%
<i>Religious/Non-Profit</i>	24	0	2%	\$3,600,000	\$72,000	2%	1,200	24	2%
<i>Government</i>	6	0	0%	\$9,000,000	\$0	0%	992	0	0%
<i>Education</i>	8	0	0%	\$36,943,680	\$0	0%	3,011	0	0%
<i>Utilities</i>	4	3	75%	\$4,000,000	\$3,000,000	75%	91	68	75%
<b>Total</b>	<b>7,113</b>	<b>359</b>	<b>5</b>	<b>\$717,702,059</b>	<b>\$36,166,031</b>	<b>5</b>	<b>19,819</b>	<b>756</b>	<b>4</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Hailstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$63,405	0.01%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$701	0.01%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$609	0.01%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$1,700	0.01%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$360	0.01%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$900	0.01%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$3,694	0.01%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$400	0.01%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$71,770</b>	<b>0.01</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Hazardous Materials

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	1,273	20%	\$634,053,600	\$126,810,720	20%	11,937	2,387	20%
<i>Commercial</i>	227	11	5%	\$7,006,355	\$350,318	5%	1,268	63	5%
<i>Industrial</i>	7	1	10%	\$6,094,424	\$609,442	10%	849	85	10%
<i>Agricultural</i>	471	24	5%	\$17,004,000	\$850,200	5%	471	24	5%
<i>Religious/Non-Profit</i>	24	1	5%	\$3,600,000	\$180,000	5%	1,200	60	5%
<i>Government</i>	6	3	50%	\$9,000,000	\$4,500,000	50%	992	496	50%
<i>Education</i>	8	1	10%	\$36,943,680	\$3,694,368	10%	3,011	301	10%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$4,000,000	100%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>1,318</b>	<b>19</b>	<b>\$717,702,059</b>	<b>\$140,995,048</b>	<b>20</b>	<b>19,819</b>	<b>3,507</b>	<b>18</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Land Subsidence**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	1,273	20%	\$634,053,600	\$9,510,804	2%	11,937	2,387	20%
<i>Commercial</i>	227	23	10%	\$7,006,355	\$105,095	2%	1,268	127	10%
<i>Industrial</i>	7	0	0%	\$6,094,424	\$91,416	2%	849	0	0%
<i>Agricultural</i>	471	155	33%	\$17,004,000	\$255,060	2%	471	155	33%
<i>Religious/Non-Profit</i>	24	8	33%	\$3,600,000	\$54,000	2%	1,200	396	33%
<i>Government</i>	6	2	33%	\$9,000,000	\$135,000	2%	992	327	33%
<i>Education</i>	8	1	10%	\$36,943,680	\$554,155	2%	3,011	301	10%
<i>Utilities</i>	4	1	33%	\$4,000,000	\$60,000	2%	91	30	33%
<b>Total</b>	<b>7,113</b>	<b>1,463</b>	<b>21</b>	<b>\$717,702,059</b>	<b>\$10,765,531</b>	<b>1.5</b>	<b>19,819</b>	<b>3,724</b>	<b>19</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Terrorism**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	191	3%	\$634,053,600	\$19,021,608	3%	11,937	358	3%
<i>Commercial</i>	227	0	0%	\$7,006,355	\$0	0%	1,268	0	0%
<i>Industrial</i>	7	1	10%	\$6,094,424	\$609,442	10%	849	85	10%
<i>Agricultural</i>	471	0	0%	\$17,004,000	\$0	0%	471	0	0%
<i>Religious/Non-Profit</i>	24	0	0%	\$3,600,000	\$0	0%	1,200	0	0%
<i>Government</i>	6	0	5%	\$9,000,000	\$450,000	5%	992	50	5%
<i>Education</i>	8	0	5%	\$36,943,680	\$1,847,184	5%	3,011	151	5%
<i>Utilities</i>	4	0	10%	\$4,000,000	\$400,000	10%	91	9	10%
<b>Total</b>	<b>7,113</b>	<b>193</b>	<b>3</b>	<b>\$717,702,059</b>	<b>\$22,328,234</b>	<b>3</b>	<b>19,819</b>	<b>652</b>	<b>3</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Thunderstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$6,340,536	1%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$70,064	1%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$60,944	1%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$170,040	1%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$36,000	1%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$90,000	1%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$369,437	1%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$40,000	1%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$7,177,021</b>	<b>1</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wildfire**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	5,156	81%	\$634,053,600	\$513,583,416	81%	11,937	9,191	77%
<i>Commercial</i>	227	11	5%	\$7,006,355	\$350,318	5%	1,268	63	5%
<i>Industrial</i>	7	1	10%	\$6,094,424	\$609,442	10%	849	85	10%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$17,004,000	100%	471	471	100%
<i>Religious/Non-Profit</i>	24	12	50%	\$3,600,000	\$1,800,000	50%	1,200	600	50%
<i>Government</i>	6	0	0%	\$9,000,000	\$0	0%	992	0	0%
<i>Education</i>	8	0	0%	\$36,943,680	\$0	0%	3,011	0	0%
<i>Utilities</i>	4	2	50%	\$4,000,000	\$2,000,000	50%	91	46	50%
<b>Total</b>	<b>7,113</b>	<b>5,654</b>	<b>79</b>	<b>\$717,702,059</b>	<b>\$535,347,176</b>	<b>75</b>	<b>19,819</b>	<b>10,456</b>	<b>53</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wind**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$9,510,804	1.5%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$105,095	1.5%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$91,416	1.5%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$255,060	1.5%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$54,000	1.5%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$135,000	1.5%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$554,155	1.5%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$60,000	1.5%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$10,765,531</b>	<b>1.5</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Winter Storm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	6,366	6,366	100%	\$634,053,600	\$12,681,072	2%	11,937	11,937	100%
<i>Commercial</i>	227	227	100%	\$7,006,355	\$140,127	2%	1,268	1,268	100%
<i>Industrial</i>	7	7	100%	\$6,094,424	\$121,888	2%	849	849	100%
<i>Agricultural</i>	471	471	100%	\$17,004,000	\$340,080	2%	471	471	100%
<i>Religious/Non-Profit</i>	24	24	100%	\$3,600,000	\$72,000	2%	1,200	1,200	100%
<i>Government</i>	6	6	100%	\$9,000,000	\$180,000	2%	992	992	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$738,874	2%	3,011	3,011	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$80,000	2%	91	91	100%
<b>Total</b>	<b>7,113</b>	<b>7,113</b>	<b>100</b>	<b>\$717,702,059</b>	<b>\$14,354,041</b>	<b>2</b>	<b>19,819</b>	<b>19,819</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

## GRANT COUNTY RISK ASSESSMENT MATRIX

<b>Hazard Severity</b>	<b>Hazard Probability</b>				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic					Drought, Flood
Critical					
Marginal	Winter Storm				
Negligible				Thunderstorm, Wind	Dam Failure, Earthquake, Epidemic, Hailstorm, Hazmat, Subsidence, Terrorism, Wildfire

Grant County also compiled the following chart in an effort to more effectively communicate hazard risks to local stakeholders.

<b>Affected Areas</b>	<b>Grant County Unincorporated</b>	<b>Bayard</b>	<b>Petersburg</b>
Dam Failure	X		
Drought	X	X	X
Earthquake	X	X	X
Extreme Heat	X	X	X
Flood	X	X	
Hailstorm	X	X	X
Landslide	X	X	X
Tornado/Wind	X	X	X
Wildfire	X	X	X
Winter Storm	X	X	X
<b>Probability of Occurrence</b>	<b>Grant County Unincorporated</b>	<b>Bayard</b>	<b>Petersburg</b>
Dam Failure	Medium		Low
Drought	Low	Low	Low
Earthquake	Low	Low	Low
Extreme Heat	Low	Low	Low
Flood	High	High	
Hailstorm	Low	Low	Low
Landslide	Low	Low	Low
Tornado/Wind	Low	Low	Low
Wildfire	Low	Low	Low
Winter Storm	Low	Low	Low
<b>Impact</b>	<b>Grant County Unincorporated</b>	<b>Bayard</b>	<b>Petersburg</b>
Dam Failure	Medium		
Drought	Low	Low	Low
Earthquake	Low	Low	Low
Extreme Heat	Low	Low	Low
Flood	High	High	
Hailstorm	Low	Low	Low
Landslide	Low	Low	Low
Tornado/Wind	Low	Medium	Medium
Wildfire	Medium	Low	Low
Winter Storm	Low	Low	Low

# **HAMPSHIRE COUNTY**

### Hazard: Dam Failure

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	500	4%	\$979,611,300	\$39,184,452	4%	22,574	903	4%
<i>Commercial</i>	364	5	1%	\$11,234,989	\$112,350	1%	1,456	15	1%
<i>Industrial</i>	10	1	10%	\$4,353,158	\$435,316	10%	565	57	10%
<i>Agricultural</i>	677	25	4%	\$5,857,559	\$234,302	4%	284	11	4%
<i>Religious/Non-Profit</i>	46	3	7%	\$690,000	\$48,300	7%	2,300	161	7%
<i>Government</i>	7	0	0%	\$10,562,811	\$0	0%	1,371	0	0%
<i>Education</i>	10	1	10%	\$46,179,602	\$4,617,960	10%	620	62	10%
<i>Utilities</i>	15	1	7%	\$101,025,961	\$7,071,817	7%	141	10	7%
<b>Total</b>	<b>13,640</b>	<b>536</b>	<b>4</b>	<b>\$1,159,515,380</b>	<b>\$51,704,498</b>	<b>4</b>	<b>29,311</b>	<b>1,218</b>	<b>4</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

### Hazard: Drought

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	12,511	100%	\$979,611,300	\$0	0%	22,574	22,574	100%
<i>Commercial</i>	364	364	100%	\$11,234,989	\$0	0%	1,456	1,456	100%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$0	0%	565	565	100%
<i>Agricultural</i>	677	677	100%	\$5,857,559	\$0	0%	284	284	100%
<i>Religious/Non-Profit</i>	46	46	100%	\$690,000	\$0	0%	2,300	2,300	100%
<i>Government</i>	7	7	100%	\$10,562,811	\$0	0%	1,371	1,371	100%
<i>Education</i>	10	10	100%	\$46,179,602	\$0	0%	620	620	100%
<i>Utilities</i>	15	15	100%	\$101,025,961	\$0	0%	141	141	100%
<b>Total</b>	<b>13,640</b>	<b>13,640</b>	<b>100</b>	<b>\$1,159,515,380</b>	<b>\$0</b>	<b>0</b>	<b>29,311</b>	<b>29,311</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Earthquake**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	12,511	100%	\$979,611,300	\$0	0%	22,574	22,574	100%
<i>Commercial</i>	364	364	100%	\$11,234,989	\$0	0%	1,456	1,456	100%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$0	0%	565	565	100%
<i>Agricultural</i>	677	677	100%	\$5,857,559	\$0	0%	284	284	100%
<i>Religious/Non-Profit</i>	46	46	100%	\$690,000	\$0	0%	2,300	2,300	100%
<i>Government</i>	7	7	100%	\$10,562,811	\$0	0%	1,371	1,371	100%
<i>Education</i>	10	10	100%	\$46,179,602	\$0	0%	620	620	100%
<i>Utilities</i>	15	15	100%	\$101,025,961	\$0	0%	141	141	100%
<b>Total</b>	<b>13,640</b>	<b>13,640</b>	<b>100</b>	<b>\$1,159,515,380</b>	<b>\$0</b>	<b>0</b>	<b>29,311</b>	<b>29,311</b>	<b>100</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

### Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	2,500	20%	\$979,611,300	\$195,922,260	20%	22,574	4,515	20%
<i>Commercial</i>	364	50	14%	\$11,234,989	\$1,572,898	14%	1,456	204	14%
<i>Industrial</i>	10	1	10%	\$4,353,158	\$435,316	10%	565	57	10%
<i>Agricultural</i>	677	400	59%	\$5,857,559	\$3,455,960	59%	284	168	59%
<i>Religious/Non-Profit</i>	46	15	33%	\$690,000	\$227,700	33%	2,300	759	33%
<i>Government</i>	7	2	29%	\$10,562,811	\$3,063,215	29%	1,371	398	29%
<i>Education</i>	10	2	20%	\$46,179,602	\$9,235,920	20%	620	124	20%
<i>Utilities</i>	15	10	67%	\$101,025,961	\$67,687,394	67%	141	94	67%
<b>Total</b>	<b>13,640</b>	<b>2,980</b>	<b>22</b>	<b>\$1,159,515,380</b>	<b>\$281,600,664</b>	<b>24</b>	<b>29,311</b>	<b>6,318</b>	<b>22</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Hailstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	12,511	100%	\$979,611,300	\$97,961	0.01%	22,574	22,574	100%
<i>Commercial</i>	364	364	100%	\$11,234,989	\$1,123	0.01%	1,456	1,456	100%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$435	0.01%	565	565	100%
<i>Agricultural</i>	677	677	100%	\$5,857,559	\$586	0.01%	284	284	100%
<i>Religious/Non-Profit</i>	46	46	100%	\$690,000	\$69	0.01%	2,300	2,300	100%
<i>Government</i>	7	7	100%	\$10,562,811	\$1,056	0.01%	1,371	1,371	100%
<i>Education</i>	10	10	100%	\$46,179,602	\$4,618	0.01%	620	620	100%
<i>Utilities</i>	15	15	100%	\$101,025,961	\$10,103	0.01%	141	141	100%
<b>Total</b>	<b>13,640</b>	<b>13,640</b>	<b>100</b>	<b>\$1,159,515,380</b>	<b>\$115,952</b>	<b>0.01</b>	<b>29,311</b>	<b>29,311</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Hazardous Material Incident**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	3,500	28%	\$979,611,300	\$274,291,164	28%	22,574	6,321	28%
<i>Commercial</i>	364	200	55%	\$11,234,989	\$6,179,244	55%	1,456	801	55%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$4,353,158	100%	565	565	100%
<i>Agricultural</i>	677	225	33%	\$5,857,559	\$1,932,994	33%	284	94	33%
<i>Religious/Non-Profit</i>	46	15	33%	\$690,000	\$227,700	33%	2,300	759	33%
<i>Government</i>	7	7	100%	\$10,562,811	\$10,562,811	100%	1,371	1,371	100%
<i>Education</i>	10	3	30%	\$46,179,602	\$13,853,881	30%	620	186	30%
<i>Utilities</i>	15	10	67%	\$101,025,961	\$67,687,394	67%	141	94	67%
<b>Total</b>	<b>13,640</b>	<b>3,970</b>	<b>29</b>	<b>\$1,159,515,380</b>	<b>\$379,088,346</b>	<b>33</b>	<b>29,311</b>	<b>10,191</b>	<b>35</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	12,511	100%	\$979,611,300	\$12,245,141	1%	22,574	22,574	100%
<i>Commercial</i>	364	364	100%	\$11,234,989	\$140,437	1%	1,456	1,456	100%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$54,414	1%	565	565	100%
<i>Agricultural</i>	677	677	100%	\$5,857,559	\$73,219	1%	284	284	100%
<i>Religious/Non-Profit</i>	46	46	100%	\$690,000	\$8,625	1%	2,300	2,300	100%
<i>Government</i>	7	7	100%	\$10,562,811	\$132,035	1%	1,371	1,371	100%
<i>Education</i>	10	10	100%	\$46,179,602	\$577,245	1%	620	620	100%
<i>Utilities</i>	15	15	100%	\$101,025,961	\$1,262,825	1%	141	141	100%
<b>Total</b>	<b>13,640</b>	<b>13,640</b>	<b>100</b>	<b>\$1,159,515,380</b>	<b>\$14,493,942</b>	<b>1.25</b>	<b>29,311</b>	<b>29,311</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Terrorism**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	7,000	56%	\$979,611,300	\$548,582,328	56%	22,574	12,641	56%
<i>Commercial</i>	364	156	43%	\$11,234,989	\$4,831,045	43%	1,456	626	43%
<i>Industrial</i>	10	7	70%	\$4,353,158	\$3,047,211	70%	565	396	70%
<i>Agricultural</i>	677	100	15%	\$5,857,559	\$878,634	15%	284	43	15%
<i>Religious/Non-Profit</i>	46	20	43%	\$690,000	\$296,700	43%	2,300	989	43%
<i>Government</i>	7	5	71%	\$10,562,811	\$7,499,596	71%	1,371	973	71%
<i>Education</i>	10	6	60%	\$46,179,602	\$27,707,761	60%	620	372	60%
<i>Utilities</i>	15	7	47%	\$101,025,961	\$47,482,202	47%	141	66	47%
<b>Total</b>	<b>13,640</b>	<b>7,301</b>	<b>54</b>	<b>\$1,159,515,380</b>	<b>\$640,325,476</b>	<b>55</b>	<b>29,311</b>	<b>16,106</b>	<b>55</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Thunderstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	12,511	100%	\$979,611,300	\$9,796,113	1%	22,574	22,574	100%
<i>Commercial</i>	364	364	100%	\$11,234,989	\$112,350	1%	1,456	1,456	100%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$43,532	1%	565	565	100%
<i>Agricultural</i>	677	677	100%	\$5,857,559	\$58,576	1%	284	284	100%
<i>Religious/Non-Profit</i>	46	46	100%	\$690,000	\$6,900	1%	2,300	2,300	100%
<i>Government</i>	7	7	100%	\$10,562,811	\$105,628	1%	1,371	1,371	100%
<i>Education</i>	10	10	100%	\$46,179,602	\$461,796	1%	620	620	100%
<i>Utilities</i>	15	15	100%	\$101,025,961	\$1,010,260	1%	141	141	100%
<b>Total</b>	<b>13,640</b>	<b>13,640</b>	<b>100</b>	<b>\$1,159,515,380</b>	<b>\$11,595,154</b>	<b>1</b>	<b>29,311</b>	<b>29,311</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Urban Fire**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	994	8%	\$979,611,300	\$78,368,904	8%	22,574	1,806	8%
<i>Commercial</i>	364	29	8%	\$11,234,989	\$898,799	8%	1,456	116	8%
<i>Industrial</i>	10	1	10%	\$4,353,158	\$435,316	10%	565	57	10%
<i>Agricultural</i>	677	54	8%	\$5,857,559	\$468,605	8%	284	23	8%
<i>Religious/Non-Profit</i>	46	4	9%	\$690,000	\$62,100	9%	2,300	207	9%
<i>Government</i>	7	7	100%	\$10,562,811	\$10,562,811	100%	1,371	1,371	100%
<i>Education</i>	10	5	50%	\$46,179,602	\$23,089,801	50%	620	310	50%
<i>Utilities</i>	15	1	7%	\$101,025,961	\$7,071,817	7%	141	10	7%
<b>Total</b>	<b>13,640</b>	<b>1,095</b>	<b>8</b>	<b>\$1,159,515,380</b>	<b>\$120,958,153</b>	<b>10</b>	<b>29,311</b>	<b>3,899</b>	<b>13</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wildfire**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	2,500	20%	\$979,611,300	\$195,922,260	20%	22,574	4,515	20%
<i>Commercial</i>	364	25	7%	\$11,234,989	\$786,449	7%	1,456	102	7%
<i>Industrial</i>	10	0	0%	\$4,353,158	\$0	0%	565	0	0%
<i>Agricultural</i>	677	250	37%	\$5,857,559	\$2,167,297	37%	284	105	37%
<i>Religious/Non-Profit</i>	46	15	33%	\$690,000	\$227,700	33%	2,300	759	33%
<i>Government</i>	7	0	0%	\$10,562,811	\$0	0%	1,371	0	0%
<i>Education</i>	10	0	0%	\$46,179,602	\$0	0%	620	0	0%
<i>Utilities</i>	15	1	7%	\$101,025,961	\$7,071,817	7%	141	10	7%
<b>Total</b>	<b>13,640</b>	<b>2,791</b>	<b>20</b>	<b>\$1,159,515,380</b>	<b>\$206,175,523</b>	<b>18</b>	<b>29,311</b>	<b>5,491</b>	<b>19</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wind**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	12,511	100%	\$979,611,300	\$19,592,226	2%	22,574	22,574	100%
<i>Commercial</i>	364	364	100%	\$11,234,989	\$224,700	2%	1,456	1,456	100%
<i>Industrial</i>	10	10	100%	\$4,353,158	\$87,063	2%	565	565	100%
<i>Agricultural</i>	677	677	100%	\$5,857,559	\$117,151	2%	284	284	100%
<i>Religious/Non-Profit</i>	46	46	100%	\$690,000	\$13,800	2%	2,300	2,300	100%
<i>Government</i>	7	7	100%	\$10,562,811	\$211,256	2%	1,371	1,371	100%
<i>Education</i>	10	10	100%	\$46,179,602	\$923,592	2%	620	620	100%
<i>Utilities</i>	15	15	100%	\$101,025,961	\$2,020,519	2%	141	141	100%
<b>Total</b>	<b>13,640</b>	<b>13,640</b>	<b>100</b>	<b>\$1,159,515,380</b>	<b>\$23,190,308</b>	<b>2</b>	<b>29,311</b>	<b>29,311</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Winter Storm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	12,511	5,505	44%	\$979,611,300	\$431,028,972	44%	22,574	9,933	44%
<i>Commercial</i>	364	207	57%	\$11,234,989	\$6,403,944	57%	1,456	830	57%
<i>Industrial</i>	10	3	30%	\$4,353,158	\$1,305,947	30%	565	170	30%
<i>Agricultural</i>	677	575	85%	\$5,857,559	\$4,978,925	85%	284	241	85%
<i>Religious/Non-Profit</i>	46	26	57%	\$690,000	\$393,300	57%	2,300	1,311	57%
<i>Government</i>	7	2	29%	\$10,562,811	\$3,063,215	29%	1,371	398	29%
<i>Education</i>	10	4	40%	\$46,179,602	\$18,471,841	40%	620	248	40%
<i>Utilities</i>	15	8	53%	\$101,025,961	\$53,543,759	53%	141	75	53%
<b>Total</b>	<b>13,640</b>	<b>6,331</b>	<b>46</b>	<b>\$1,159,515,380</b>	<b>\$519,189,904</b>	<b>45</b>	<b>29,311</b>	<b>13,205</b>	<b>45</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

## HAMPSHIRE COUNTY RISK ASSESSMENT MATRIX

<b>Hazard Severity</b>	<b>Hazard Probability</b>				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic				Flood	Drought
Critical					
Marginal	Winter Storm				
Negligible			Thunderstorm	Wind	Dam Failure, Earthquake, Epidemic, Hailstorm, Hazmat, Subsidence, Terrorism, Wildfire

# **HARDY COUNTY**

**Hazard: Dam Failure**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	2,423	30%	\$1,013,789,000	\$304,136,700	30%	14,025	4,208	30%
<i>Commercial</i>	254	0	0%	\$7,839,710	\$0	0%	1,506	0	0%
<i>Industrial</i>	8	0	5%	\$6,965,056	\$348,253	5%	2,922	146	5%
<i>Agricultural</i>	514	154	30%	\$57,122,000	\$17,136,600	30%	514	154	30%
<i>Religious/Non-Profit</i>	37	11	30%	\$5,550,000	\$1,665,000	30%	1,850	555	30%
<i>Government</i>	7	0	0%	\$10,500,000	\$0	0%	815	0	0%
<i>Education</i>	8	0	0%	\$36,943,680	\$0	0%	3,496	0	0%
<i>Utilities</i>	6	0	0%	\$6,000,000	\$0	0%	94	0	0%
<b>Total</b>	<b>8,912</b>	<b>2,589</b>	<b>29</b>	<b>\$1,144,709,446</b>	<b>\$323,286,553</b>	<b>28</b>	<b>25,222</b>	<b>5,063</b>	<b>20</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Drought**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$0	0%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$0	0%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$0	0%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$0	0%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$0	0%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$0	0%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$0	0%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$0	0%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$0</b>	<b>0</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Earthquake**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$0	0%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$0	0%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$0	0%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$0	0%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$0	0%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$0	0%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$0	0%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$0	0%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$0</b>	<b>0</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Epidemic**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$0	0%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$0	0%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$0	0%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$0	0%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$0	0%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$0	0%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$0	0%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$0	0%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$0</b>	<b>0</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	646	8%	\$1,013,789,000	\$81,103,120	8%	14,025	1,122	8%
<i>Commercial</i>	254	13	5%	\$7,839,710	\$391,986	5%	1,506	75	5%
<i>Industrial</i>	8	0	5%	\$6,965,056	\$348,253	5%	2,922	146	5%
<i>Agricultural</i>	514	51	10%	\$57,122,000	\$5,712,200	10%	514	51	10%
<i>Religious/Non-Profit</i>	37	1	2%	\$5,550,000	\$111,000	2%	1,850	37	2%
<i>Government</i>	7	0	0%	\$10,500,000	\$0	0%	815	0	0%
<i>Education</i>	8	0	0%	\$36,943,680	\$0	0%	3,496	0	0%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$6,000,000	100%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>717</b>	<b>8</b>	<b>\$1,144,709,446</b>	<b>\$93,666,558</b>	<b>8</b>	<b>25,222</b>	<b>1,526</b>	<b>6</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Hailstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$101,379	0.01%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$784	0.01%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$697	0.01%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$5,712	0.01%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$555	0.01%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$1,050	0.01%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$3,694	0.01%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$600	0.01%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$114,471</b>	<b>0.01</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Hazardous Materials

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	2,827	35%	\$1,013,789,000	\$354,826,150	35%	14,025	4,909	35%
<i>Commercial</i>	254	76	30%	\$7,839,710	\$2,351,913	30%	1,506	452	30%
<i>Industrial</i>	8	1	10%	\$6,965,056	\$696,506	10%	2,922	292	10%
<i>Agricultural</i>	514	51	10%	\$57,122,000	\$5,712,200	10%	514	51	10%
<i>Religious/Non-Profit</i>	37	13	35%	\$5,550,000	\$1,942,500	35%	1,850	648	35%
<i>Government</i>	7	4	50%	\$10,500,000	\$5,250,000	50%	815	408	50%
<i>Education</i>	8	3	35%	\$36,943,680	\$12,930,288	35%	3,496	1,224	35%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$6,000,000	100%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>2,981</b>	<b>33</b>	<b>\$1,144,709,446</b>	<b>\$389,709,557</b>	<b>34</b>	<b>25,222</b>	<b>8,077</b>	<b>32</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$10,137,890	1%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$78,397	1%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$69,651	1%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$571,220	1%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$55,500	1%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$105,000	1%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$369,437	1%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$60,000	1%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$11,447,094</b>	<b>1</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Terrorism**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	1,131	14%	\$1,013,789,000	\$141,930,460	14%	14,025	1,964	14%
<i>Commercial</i>	254	76	30%	\$7,839,710	\$2,351,913	30%	1,506	452	30%
<i>Industrial</i>	8	2	20%	\$6,965,056	\$1,393,011	20%	2,922	584	20%
<i>Agricultural</i>	514	0	0%	\$57,122,000	\$0	0%	514	0	0%
<i>Religious/Non-Profit</i>	37	0	0%	\$5,550,000	\$0	0%	1,850	0	0%
<i>Government</i>	7	0	5%	\$10,500,000	\$525,000	5%	815	41	5%
<i>Education</i>	8	0	5%	\$36,943,680	\$1,847,184	5%	3,496	175	5%
<i>Utilities</i>	6	1	10%	\$6,000,000	\$600,000	10%	94	9	10%
<b>Total</b>	<b>8,912</b>	<b>1,210</b>	<b>14</b>	<b>\$1,144,709,446</b>	<b>\$148,647,568</b>	<b>13</b>	<b>25,222</b>	<b>3,225</b>	<b>13</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Thunderstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$10,137,890	1%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$78,397	1%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$69,651	1%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$571,220	1%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$55,500	1%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$105,000	1%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$369,437	1%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$60,000	1%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$11,447,094</b>	<b>1</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wildfire**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	6,866	85%	\$1,013,789,000	\$861,720,650	85%	14,025	11,220	80%
<i>Commercial</i>	254	13	5%	\$7,839,710	\$391,986	5%	1,506	75	5%
<i>Industrial</i>	8	0	5%	\$6,965,056	\$348,253	5%	2,922	146	5%
<i>Agricultural</i>	514	257	50%	\$57,122,000	\$28,561,000	50%	514	257	50%
<i>Religious/Non-Profit</i>	37	19	50%	\$5,550,000	\$2,775,000	50%	1,850	925	50%
<i>Government</i>	7	0	0%	\$10,500,000	\$0	0%	815	0	0%
<i>Education</i>	8	0	0%	\$36,943,680	\$0	0%	3,496	0	0%
<i>Utilities</i>	6	3	50%	\$6,000,000	\$3,000,000	50%	94	47	50%
<b>Total</b>	<b>8,912</b>	<b>7,158</b>	<b>80</b>	<b>\$1,144,709,446</b>	<b>\$896,796,888</b>	<b>78</b>	<b>25,222</b>	<b>12,670</b>	<b>50</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wind**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$15,206,835	1.5%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$117,596	1.5%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$104,476	1.5%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$856,830	1.5%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$83,250	1.5%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$157,500	1.5%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$554,155	1.5%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$90,000	1.5%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$17,170,642</b>	<b>1.5</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Winter Storm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	8,078	8,078	100%	\$1,013,789,000	\$20,275,780	2%	14,025	14,025	100%
<i>Commercial</i>	254	254	100%	\$7,839,710	\$156,794	2%	1,506	1,506	100%
<i>Industrial</i>	8	8	100%	\$6,965,056	\$139,301	2%	2,922	2,922	100%
<i>Agricultural</i>	514	514	100%	\$57,122,000	\$1,142,440	2%	514	514	100%
<i>Religious/Non-Profit</i>	37	37	100%	\$5,550,000	\$111,000	2%	1,850	1,850	100%
<i>Government</i>	7	7	100%	\$10,500,000	\$210,000	2%	815	815	100%
<i>Education</i>	8	8	100%	\$36,943,680	\$738,874	2%	3,496	3,496	100%
<i>Utilities</i>	6	6	100%	\$6,000,000	\$120,000	2%	94	94	100%
<b>Total</b>	<b>8,912</b>	<b>8,912</b>	<b>100</b>	<b>\$1,144,709,446</b>	<b>\$22,894,189</b>	<b>2</b>	<b>25,222</b>	<b>25,222</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

## HARDY COUNTY RISK ASSESSMENT MATRIX

<b>Hazard Severity</b>	<b>Hazard Probability</b>				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic				Flood	
Critical					Drought
Marginal					
Negligible	Winter Storm			Thunderstorm	Dam Failure, Earthquake, Epidemic, Hailstorm, Hazmat, Subsidence, Terrorism, Wildfire, Wind

# **MINERAL COUNTY**

**Hazard: Dam Failure**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	9,127	70%	\$1,416,035,400	\$991,224,780	70%	28,212	19,748	70%
<i>Commercial</i>	461	0	0%	\$14,228,765	\$0	0%	2,597	0	0%
<i>Industrial</i>	14	1	5%	\$12,188,848	\$609,442	5%	2,317	116	5%
<i>Agricultural</i>	493	345	70%	\$15,469,847	\$10,828,893	70%	493	345	70%
<i>Religious/Non-Profit</i>	40	28	70%	\$6,000,000	\$4,200,000	70%	2,000	1,400	70%
<i>Government</i>	14	0	0%	\$21,000,000	\$0	0%	1,593	0	0%
<i>Education</i>	37	0	0%	\$170,864,520	\$0	0%	6,929	0	0%
<i>Utilities</i>	12	0	0%	\$12,000,000	\$0	0%	177	0	0%
<b>Total</b>	<b>14,110</b>	<b>9,501</b>	<b>67</b>	<b>\$1,667,787,380</b>	<b>\$1,006,863,115</b>	<b>60</b>	<b>44,318</b>	<b>21,609</b>	<b>49</b>

- |   | <b>Yes</b> | <b>No</b> |
|---|------------|-----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b>   |           |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b>   |           |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b>   |           |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b>   |           |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b>   |           |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b>   |           |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |            | <b>X</b>  |

### Hazard: Drought

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$0	0%	28,212	28,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$0	0%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$0	0%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$0	0%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$0	0%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$0	0%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$0	0%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$0	0%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$0</b>	<b>0</b>	<b>44,318</b>	<b>44,318</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Earthquake**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$0	0%	28,212	25,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$0	0%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$0	0%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$0	0%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$0	0%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$0	0%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$0	0%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$0	0%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$0</b>	<b>0</b>	<b>44,318</b>	<b>41,318</b>	<b>93.2307415</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Epidemic**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$0	0%	28,212	28,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$0	0%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$0	0%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$0	0%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$0	0%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$0	0%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$0	0%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$0	0%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$0</b>	<b>0</b>	<b>44,318</b>	<b>44,318</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	652	5%	\$1,416,035,400	\$70,801,770	5%	28,212	1,411	5%
<i>Commercial</i>	461	9	2%	\$14,228,765	\$284,575	2%	2,597	52	2%
<i>Industrial</i>	14	0	2%	\$12,188,848	\$243,777	2%	2,317	46	2%
<i>Agricultural</i>	493	25	5%	\$15,469,847	\$773,492	5%	493	25	5%
<i>Religious/Non-Profit</i>	40	1	2%	\$6,000,000	\$120,000	2%	2,000	40	2%
<i>Government</i>	14	0	0%	\$21,000,000	\$0	0%	1,593	0	0%
<i>Education</i>	37	0	0%	\$170,864,520	\$0	0%	6,929	0	0%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$12,000,000	100%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>699</b>	<b>5</b>	<b>\$1,667,787,380</b>	<b>\$84,223,615</b>	<b>5</b>	<b>44,318</b>	<b>1,751</b>	<b>4</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Hailstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$141,604	0.01%	28,212	28,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$1,423	0.01%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$1,219	0.01%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$1,547	0.01%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$600	0.01%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$2,100	0.01%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$17,086	0.01%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$1,200	0.01%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$166,779</b>	<b>0.01</b>	<b>44,318</b>	<b>44,318</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Hazardous Materials**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	5,216	40%	\$1,416,035,400	\$566,414,160	40%	28,212	11,285	40%
<i>Commercial</i>	461	277	60%	\$14,228,765	\$8,537,259	60%	2,597	1,558	60%
<i>Industrial</i>	14	11	75%	\$12,188,848	\$9,141,636	75%	2,317	1,738	75%
<i>Agricultural</i>	493	25	5%	\$15,469,847	\$773,492	5%	493	25	5%
<i>Religious/Non-Profit</i>	40	4	10%	\$6,000,000	\$600,000	10%	2,000	200	10%
<i>Government</i>	14	1	10%	\$21,000,000	\$2,100,000	10%	1,593	159	10%
<i>Education</i>	37	4	10%	\$170,864,520	\$17,086,452	10%	6,929	693	10%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$12,000,000	100%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>5,548</b>	<b>39</b>	<b>\$1,667,787,380</b>	<b>\$616,652,999</b>	<b>37</b>	<b>44,318</b>	<b>15,835</b>	<b>36</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	6,520	50%	\$1,416,035,400	\$21,240,531	1.5%	28,212	14,106	50%
<i>Commercial</i>	461	346	75%	\$14,228,765	\$213,431	1.5%	2,597	1,948	75%
<i>Industrial</i>	14	11	75%	\$12,188,848	\$182,833	1.5%	2,317	1,738	75%
<i>Agricultural</i>	493	247	50%	\$15,469,847	\$232,048	1.5%	493	247	50%
<i>Religious/Non-Profit</i>	40	20	50%	\$6,000,000	\$90,000	1.5%	2,000	1,000	50%
<i>Government</i>	14	11	80%	\$21,000,000	\$315,000	1.5%	1,593	1,274	80%
<i>Education</i>	37	28	75%	\$170,864,520	\$2,562,968	1.5%	6,929	5,197	75%
<i>Utilities</i>	12	9	75%	\$12,000,000	\$180,000	1.5%	177	133	75%
<b>Total</b>	<b>14,110</b>	<b>7,190</b>	<b>51</b>	<b>\$1,667,787,380</b>	<b>\$25,016,811</b>	<b>1.5</b>	<b>44,318</b>	<b>25,642</b>	<b>58</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Terrorism**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	913	7%	\$1,416,035,400	\$99,122,478	7%	28,212	1,975	7%
<i>Commercial</i>	461	5	1%	\$14,228,765	\$142,288	1%	2,597	26	1%
<i>Industrial</i>	14	1	5%	\$12,188,848	\$609,442	5%	2,317	116	5%
<i>Agricultural</i>	493	247	50%	\$15,469,847	\$7,734,924	50%	493	247	50%
<i>Religious/Non-Profit</i>	40	0	0%	\$6,000,000	\$0	0%	2,000	0	0%
<i>Government</i>	14	1	5%	\$21,000,000	\$1,050,000	5%	1,593	80	5%
<i>Education</i>	37	2	5%	\$170,864,520	\$8,543,226	5%	6,929	346	5%
<i>Utilities</i>	12	1	10%	\$12,000,000	\$1,200,000	10%	177	18	10%
<b>Total</b>	<b>14,110</b>	<b>1,168</b>	<b>8</b>	<b>\$1,667,787,380</b>	<b>\$118,402,358</b>	<b>7</b>	<b>44,318</b>	<b>2,807</b>	<b>6</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Thunderstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$14,160,354	1%	28,212	28,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$142,288	1%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$121,888	1%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$154,698	1%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$60,000	1%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$210,000	1%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$1,708,645	1%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$120,000	1%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$16,677,874</b>	<b>1</b>	<b>44,318</b>	<b>44,318</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wildfire**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	9,127	70%	\$1,416,035,400	\$991,224,780	70%	28,212	20,031	71%
<i>Commercial</i>	461	23	5%	\$14,228,765	\$711,438	5%	2,597	130	5%
<i>Industrial</i>	14	1	10%	\$12,188,848	\$1,218,885	10%	2,317	232	10%
<i>Agricultural</i>	493	247	50%	\$15,469,847	\$7,734,924	50%	493	247	50%
<i>Religious/Non-Profit</i>	40	20	50%	\$6,000,000	\$3,000,000	50%	2,000	1,000	50%
<i>Government</i>	14	0	0%	\$21,000,000	\$0	0%	1,593	0	0%
<i>Education</i>	37	0	0%	\$170,864,520	\$0	0%	6,929	0	0%
<i>Utilities</i>	12	6	50%	\$12,000,000	\$6,000,000	50%	177	89	50%
<b>Total</b>	<b>14,110</b>	<b>9,424</b>	<b>67</b>	<b>\$1,667,787,380</b>	<b>#####</b>	<b>61</b>	<b>44,318</b>	<b>21,727</b>	<b>49</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wind**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$21,240,531	1.5%	28,212	28,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$213,431	1.5%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$182,833	1.5%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$232,048	1.5%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$90,000	1.5%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$315,000	1.5%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$2,562,968	1.5%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$180,000	1.5%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$25,016,811</b>	<b>1.5</b>	<b>44,318</b>	<b>44,318</b>	<b>100</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Winter Storm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	13,039	13,039	100%	\$1,416,035,400	\$28,320,708	2%	28,212	28,212	100%
<i>Commercial</i>	461	461	100%	\$14,228,765	\$284,575	2%	2,597	2,597	100%
<i>Industrial</i>	14	14	100%	\$12,188,848	\$243,777	2%	2,317	2,317	100%
<i>Agricultural</i>	493	493	100%	\$15,469,847	\$309,397	2%	493	493	100%
<i>Religious/Non-Profit</i>	40	40	100%	\$6,000,000	\$120,000	2%	2,000	2,000	100%
<i>Government</i>	14	14	100%	\$21,000,000	\$420,000	2%	1,593	1,593	100%
<i>Education</i>	37	37	100%	\$170,864,520	\$3,417,290	2%	6,929	6,929	100%
<i>Utilities</i>	12	12	100%	\$12,000,000	\$240,000	2%	177	177	100%
<b>Total</b>	<b>14,110</b>	<b>14,110</b>	<b>100</b>	<b>\$1,667,787,380</b>	<b>\$33,355,748</b>	<b>2</b>	<b>44,318</b>	<b>44,318</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

## MINERAL COUNTY RISK ASSESSMENT MATRIX

<b>Hazard Severity</b>	<b>Hazard Probability</b>				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic				Flood	Drought
Critical					
Marginal	Winter Storm				
Negligible			Thunderstorm	Wind	Dam Failure, Earthquake, Epidemic, Hailstorm, Hazmat, Subsidence, Terrorism, Wildfire

# PENDLETON COUNTY

**Hazard: Dam Failure**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	513	10%	\$538,346,800	\$53,834,680	10%	7,695	770	10%
<i>Commercial</i>	143	0	0%	\$4,413,695	\$0	0%	573	0	0%
<i>Industrial</i>	4	0	0%	\$3,482,528	\$0	0%	157	0	0%
<i>Agricultural</i>	600	150	25%	\$36,028,000	\$9,007,000	25%	600	150	25%
<i>Religious/Non-Profit</i>	44	4	10%	\$6,600,000	\$660,000	10%	2,200	220	10%
<i>Government</i>	26	0	0%	\$39,000,000	\$0	0%	725	0	0%
<i>Education</i>	7	0	0%	\$32,325,720	\$0	0%	1,739	0	0%
<i>Utilities</i>	4	0	0%	\$4,000,000	\$0	0%	79	0	0%
<b>Total</b>	<b>5,960</b>	<b>668</b>	<b>11</b>	<b>\$664,196,743</b>	<b>\$63,501,680</b>	<b>10</b>	<b>13,768</b>	<b>1,140</b>	<b>8</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Drought**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$0	0%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$0	0%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$0	0%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$0	0%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$0	0%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$0	0%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$0	0%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$0	0%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$0</b>	<b>0</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Earthquake**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$0	0%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$0	0%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$0	0%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$0	0%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$0	0%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$0	0%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$0	0%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$0	0%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$0</b>	<b>0</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Epidemic**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$0	0%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$0	0%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$0	0%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$0	0%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$0	0%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$0	0%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$0	0%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$0	0%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$0</b>	<b>0</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	411	8%	\$538,346,800	\$43,067,744	8%	7,695	616	8%
<i>Commercial</i>	143	6	4%	\$4,413,695	\$176,548	4%	573	23	4%
<i>Industrial</i>	4	0	0%	\$3,482,528	\$0	0%	157	0	0%
<i>Agricultural</i>	600	120	20%	\$36,028,000	\$7,205,600	20%	600	120	20%
<i>Religious/Non-Profit</i>	44	4	8%	\$6,600,000	\$528,000	8%	2,200	176	8%
<i>Government</i>	26	0	0%	\$39,000,000	\$0	0%	725	0	0%
<i>Education</i>	7	0	0%	\$32,325,720	\$0	0%	1,739	0	0%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$4,000,000	100%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>544</b>	<b>9</b>	<b>\$664,196,743</b>	<b>\$54,977,892</b>	<b>8</b>	<b>13,768</b>	<b>1,014</b>	<b>7</b>

- |   | Yes      | No       |
|---|----------|----------|
| 1. Do you know where your greatest damages may occur in your hazard areas?  | <b>X</b> |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | <b>X</b> |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | <b>X</b> |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | <b>X</b> |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <b>X</b> |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | <b>X</b> |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   |          | <b>X</b> |

**Hazard: Hailstorm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$53,835	0.01%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$441	0.01%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$348	0.01%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$3,603	0.01%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$660	0.01%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$3,900	0.01%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$3,233	0.01%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$400	0.01%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$66,420</b>	<b>0.01</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Hazardous Materials

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	3,849	75%	\$538,346,800	\$403,760,100	75%	7,695	5,771	75%
<i>Commercial</i>	143	107	75%	\$4,413,695	\$3,310,271	75%	573	430	75%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$3,482,528	100%	157	157	100%
<i>Agricultural</i>	600	150	25%	\$36,028,000	\$9,007,000	25%	600	150	25%
<i>Religious/Non-Profit</i>	44	33	75%	\$6,600,000	\$4,950,000	75%	2,200	1,650	75%
<i>Government</i>	26	0	0%	\$39,000,000	\$0	0%	725	0	0%
<i>Education</i>	7	5	75%	\$32,325,720	\$24,244,290	75%	1,739	1,304	75%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$4,000,000	100%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>4,153</b>	<b>70</b>	<b>\$664,196,743</b>	<b>\$452,754,189</b>	<b>68</b>	<b>13,768</b>	<b>9,541</b>	<b>69</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$10,766,936	2%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$88,274	2%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$69,651	2%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$720,560	2%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$132,000	2%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$780,000	2%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$646,514	2%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$80,000	2%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$13,283,935</b>	<b>2</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Terrorism

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	257	5%	\$538,346,800	\$26,917,340	5%	7,695	385	5%
<i>Commercial</i>	143	0	0%	\$4,413,695	\$0	0%	573	0	0%
<i>Industrial</i>	4	0	0%	\$3,482,528	\$0	0%	157	0	0%
<i>Agricultural</i>	600	300	50%	\$36,028,000	\$18,014,000	50%	600	300	50%
<i>Religious/Non-Profit</i>	44	0	0%	\$6,600,000	\$0	0%	2,200	0	0%
<i>Government</i>	26	20	77%	\$39,000,000	\$30,030,000	77%	725	558	77%
<i>Education</i>	7	0	5%	\$32,325,720	\$1,616,286	5%	1,739	87	5%
<i>Utilities</i>	4	0	10%	\$4,000,000	\$400,000	10%	79	8	10%
<b>Total</b>	<b>5,960</b>	<b>577</b>	<b>10</b>	<b>\$664,196,743</b>	<b>\$76,977,626</b>	<b>12</b>	<b>13,768</b>	<b>1,338</b>	<b>10</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

### Hazard: Thunderstorm

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$5,383,468	1%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$44,137	1%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$34,825	1%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$360,280	1%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$66,000	1%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$390,000	1%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$323,257	1%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$40,000	1%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$6,641,967</b>	<b>1</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wildfire**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	4,721	92%	\$538,346,800	\$495,279,056	92%	7,695	7,002	91%
<i>Commercial</i>	143	14	10%	\$4,413,695	\$441,370	10%	573	57	10%
<i>Industrial</i>	4	3	75%	\$3,482,528	\$2,611,896	75%	157	118	75%
<i>Agricultural</i>	600	300	50%	\$36,028,000	\$18,014,000	50%	600	300	50%
<i>Religious/Non-Profit</i>	44	33	75%	\$6,600,000	\$4,950,000	75%	2,200	1,650	75%
<i>Government</i>	26	0	0%	\$39,000,000	\$0	0%	725	0	0%
<i>Education</i>	7	0	0%	\$32,325,720	\$0	0%	1,739	0	0%
<i>Utilities</i>	4	2	50%	\$4,000,000	\$2,000,000	50%	79	40	50%
<b>Total</b>	<b>5,960</b>	<b>5,074</b>	<b>85</b>	<b>\$664,196,743</b>	<b>\$523,296,322</b>	<b>79</b>	<b>13,768</b>	<b>9,167</b>	<b>67</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Wind**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$8,075,202	1.5%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$66,205	1.5%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$52,238	1.5%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$540,420	1.5%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$99,000	1.5%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$585,000	1.5%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$484,886	1.5%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$60,000	1.5%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$9,962,951</b>	<b>1.5</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

**Hazard: Winter Storm**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
<i>Residential</i>	5,132	5,132	100%	\$538,346,800	\$10,766,936	2%	7,695	7,695	100%
<i>Commercial</i>	143	143	100%	\$4,413,695	\$88,274	2%	573	573	100%
<i>Industrial</i>	4	4	100%	\$3,482,528	\$69,651	2%	157	157	100%
<i>Agricultural</i>	600	600	100%	\$36,028,000	\$720,560	2%	600	600	100%
<i>Religious/Non-Profit</i>	44	44	100%	\$6,600,000	\$132,000	2%	2,200	2,200	100%
<i>Government</i>	26	26	100%	\$39,000,000	\$780,000	2%	725	725	100%
<i>Education</i>	7	7	100%	\$32,325,720	\$646,514	2%	1,739	1,739	100%
<i>Utilities</i>	4	4	100%	\$4,000,000	\$80,000	2%	79	79	100%
<b>Total</b>	<b>5,960</b>	<b>5,960</b>	<b>100</b>	<b>\$664,196,743</b>	<b>\$13,283,935</b>	<b>2</b>	<b>13,768</b>	<b>13,768</b>	<b>100</b>

	<b>Yes</b>	<b>No</b>
1. Do you know where your greatest damages may occur in your hazard areas?	<b>X</b>	
2. Do you know whether your critical facilities will be operational after a hazard event?	<b>X</b>	
3. Is there enough data to determine which assets are subject to the greatest potential damages?	<b>X</b>	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	<b>X</b>	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	<b>X</b>	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	<b>X</b>	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		<b>X</b>

## PENDLETON COUNTY RISK ASSESSMENT MATRIX

<b>Hazard Severity</b>	<b>Hazard Probability</b>				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic				Flood	Drought
Critical					
Marginal	Winter Storm				
Negligible					Dam Failure, Earthquake, Epidemic, Hailstorm, Hazmat, Subsidence, Terrorism, Thunderstorm, Wildfire, Wind

Pendleton County also compiled the following chart in an effort to more effectively communicate hazard risks to local stakeholders.

## Pendleton County and the Town of Franklin Loss Estimation

Hazard Type	County	Town of Franklin
Dam Failure	M	L
Disease Epidemics	M	M
Drought	L	L
Earthquake	L	L
Extreme Heat	L	L
Flood	H	M
Hazardous Spills	L/M	L/M
Landslide	M	L
Terrorism	M	M
Tornado/Wind Storm	L	L
Wildfire	L	L
Winter Storm	H	H
Hurricane	L	L

L = Low  
M = Medium  
H = High

***\*Estimates are based on past events and knowledge of current risks.***

# **APPENDIX 3**

# **GLOSSARY**

## APPENDIX 3

This appendix contains a list of definitions for commonly-used terms in this mitigation plan. It also contains a list of the acronyms that are used throughout.

### DEFINITION OF TERMS

*10-Year Flood:* A flood event with a 10% chance of occurring in any single year.

*25-Year Flood:* A flood event with a 4% chance of occurring in any single year.

*50-Year Flood:* A flood event with a 2% chance of occurring in any single year.

*100-Year Flood:* A flood event with a 1% chance of being equaled or exceeded in any single year.

*Asset Inventory:* A listing of critical facilities, historical facilities, facilities housing vulnerable populations (e.g., schools, nursing homes, hospitals), large economic assets in the community, and other, community-designated special considerations on which a risk assessment is completed.

*Benefit Cost Review:* A process by which a community considers both the potential benefits of mitigation projects in comparison with their costs. It is a way to determine if the costs are achievable and feasible based on the benefits that can be realistically anticipated.

*Emergency Services Project:* Action that protects people and property during and immediately after a disaster or hazard event.

*Hazard Risk Assessment:* The process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from hazards by assessing the vulnerability of people, buildings, and infrastructure to hazards.

*Loss Estimate:* A mathematical calculation of the potential damage – structural, contents, and functional – a facility and/or community could occur as a result of a

specific hazard.

*Mitigation:* Activities providing a critical foundation in the effort to reduce the loss of life and property from natural and/or man-made disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction, and repeated damage. These activities or actions, in most cases, will have a long-term sustained effect.

*Natural Resource Protection:* Action that, in addition to minimizing hazard losses, also preserves or restores the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

*Prevention:* Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.

*Property Protection:* Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area.

*Public Education and Awareness Project:* Action to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.

*Robert T. Stafford Disaster Relief and Emergency Assistance Act:* Section 322 was added as part of the Disaster Mitigation Act (DMA) of 2000 to take a new and revitalized approach to mitigation planning. This new section emphasizes the need for local entities to closely coordinate mitigation planning and implementation efforts. In succinct terms, this is the mandate requiring local communities to compile and adopt a mitigation plan as an eligibility requirement for mitigation funding.

*STAPLEE Method:* A technique for identifying, evaluating, and prioritizing mitigation actions based on existing local conditions. It advocates an analysis based on the following conditions: social, technical, administrative, political, legal, economic, and environmental.

*Structural Project:* Action that involves the construction of structures to reduce the impact of a hazard.

#### DEFINITION OF ACRONYMS

AFGP	Assistance to Firefighters Grant Program
CEDS	Comprehensive Economic Development Strategy
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CFS	Commodity Flow Study
CRS	Community Rating System
DHS/FEMA	US Department of Homeland Security / Federal Emergency Management Agency
EDA	Economic Development Authority
EMPG	Emergency Management Performance Grant
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GCOES	Grant County Office of Emergency Services
GIS	Geographic Information System
HMC	Hazard Mitigation (Planning) Committee
HMEP	Hazardous Materials Emergency Planning (Grant)
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
IJDC	Infrastructure and Jobs Development Council
LEPC	Local Emergency Planning Committee
MAA	Mutual Aid Agreement
MCOEM	Mineral County Office of Emergency Management
MDE	Maryland Department of the Environment
NCDC	National Climatic Data Center

NCR	National Capital Region
NFIP	National Flood Insurance Program
NIMS	National Incident Management System
NRCS	Natural Resources Conservation Service
NWS	National Weather Service
OES	Office of Emergency Services
OG	Operating Guidelines
PCOEM	Pendleton County Office of Homeland Security and Emergency Management
PDC	Planning and Development Council
PDM	Pre-Disaster Mitigation (Grant)
PDSI	Palmer Drought Severity Index
PGA	Peak Ground Acceleration
PIO	Public Information Officer
POC	Point of Contact
PSD	Public Service District
RIC	Regional Interoperable Committee
RL	Repetitive Loss
RRT	Regional Response Team
SAR	Search and Rescue
SCBG	Small Cities Block Grant
SERC	State Emergency Response Commission
SFHA	Special Flood Hazard Area
SHSP	State Homeland Security (Grant) Program
SIRN	Statewide Interoperable Radio Network
SR	State Route
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDHS	United States Department of Homeland Security
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
USHHS	United States Department of Health and Human Services
WCS	Worst Case Scenario

WFAS	Wildland Fire Assessment System
WVDEP	West Virginia Department of Environmental Protection
WVDHHR	West Virginia Department of Health and Human Resources
WVDHSEM	West Virginia Division of Homeland Security and Emergency Management
WVDO	West Virginia Development Office
WVDOF	West Virginia Division of Forestry
WVDOH	West Virginia Division of Highways
WVU	West Virginia University

# **APPENDIX 4**

# **RECORD OF ADOPTION**

# Region 8 Hazard Mitigation Plan Public Comment Form

*The Region 8 Hazard Mitigation Plan has been developed as per the requirements of Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. As part of that requirement, members of the public must have an opportunity to review and comment on the document. During the preparation of the plan, member counties held a number of public meetings to allow the public a chance to review the existing county documents and make suggestions regarding improvements. This form is provided to the public to record comments on the updated version of the plan. Following your review of the plan, please use this document to mark any strengths or areas for improvement.*

1. List any hazards you feel were not included in the plan but should have been.

---

---

1a. Why should these be included?

---

---

2. What hazards are in the plan that should be removed?

---

2a. Why?

---

3. List any projects you feel should have been included in the plan but were not.

---

---

3a. Why?

---

---

4. What projects are in the plan that should be removed?

---

4a. Why?

---

5. Please list any general comments you have.

---

---

---

6. In what jurisdiction (i.e., city, town, or unincorporated area) do you live?

---

THANK YOU for completing this form. If you would like to leave your name and other contact information, you may do so on the back of this sheet.

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Grant County Commission accepts the Grant County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Grant County Hazard Mitigation Plan Committee. The Grant County Commission recognizes the plan as a living document and will make annual reviews and updates to the plan

Adopted this 9<sup>th</sup> day of September 2003 at a regular meeting of the Grant County Commission

  
\_\_\_\_\_  
Jeff Barger, President  
Grant County Commission

I, Shirley H. Green certify that the above resolution is a true and accurate copy of a resolution adopted on the 9<sup>th</sup> day of September 2003 at a meeting of the Grant County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution



Shirley H. Green  
Signature Date

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the City of Petersburg accepts the Grant County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Grant County Hazard Mitigation Plan Committee. The City of Petersburg recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 8 day of Sept 2003 at a regular meeting of the City of Petersburg

  
\_\_\_\_\_  
Gary A. Michael, Mayor  
City of Petersburg

I, Sarah J. McSwain, certify that the above resolution is a true and accurate copy of a resolution adopted on the 8 day of September, 2003 at a meeting of the City of Petersburg at which a quorum was present and with a majority voting affirmatively to pass this resolution



  
\_\_\_\_\_  
Signature Date 9/8/03

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Town of Bayard accepts the Grant County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Grant County Hazard Mitigation Plan Committee. The Town of Bayard recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 2 day of Sept, 2003 at a regular meeting of the Town of Bayard.

Steven F. Durst  
Steven F. Durst, Mayor  
Town of Bayard

I, Donna Cuff certify that the above resolution is a true and accurate copy of a resolution adopted on the 2 day of Sept, 2003 at a meeting of the Town of Bayard at which a quorum was present and with a majority voting affirmatively to pass this resolution. ✓

Donna Cuff 4/5/03  
Signature Date

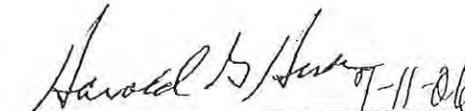
RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Grant County Commission accepts the Grant County Hazard Mitigation Plan as prepared and amended by the Region 8 Planning and Development Council and the Grant County Hazard Mitigation Plan Committee. The Commission recognizes that plan has been amended to add the County's floodplain ordinances. The Grant County Commission recognizes the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 11<sup>th</sup> day of July 2006 at a regular meeting of the Grant County Commission.

  
\_\_\_\_\_  
Charles Goldizen, President  
Grant County Commission

I, Harold G. Hiser certify that the above resolution is a true and accurate copy of a resolution adopted on the 11<sup>th</sup> day of July 2006 at a meeting of the Grant County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution. ✓

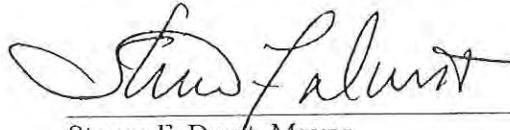
  
\_\_\_\_\_  
Signature Date



RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Town of Bayard accepts the Grant County Hazard Mitigation Plan as prepared and amended by the Region 8 Planning and Development Council and the Grant County Hazard Mitigation Plan Committee. The Town recognizes that plan has been amended to add the County's floodplain ordinances. The Town recognizes the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 17<sup>th</sup> day of July 2006 at a regular meeting of the Bayard Town Council.



Steven F. Durst, Mayor  
Town of Bayard

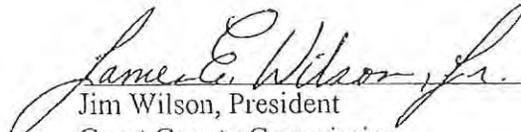
I, Parla Culp certify that the above resolution is a true and accurate copy of a resolution adopted on the 14<sup>th</sup> day of July 2006 at a meeting of the Town of Bayard at which a quorum was present and with a majority voting affirmatively to pass this resolution. ✓

Parla Culp 7-14-06  
Signature Date

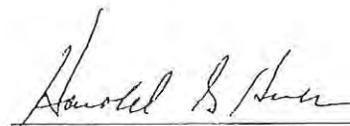
RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Grant County Commission accepts the revised Grant County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Grant County Hazard Mitigation Plan Committee. The County acknowledges that the plan has been revised to include the Grant County Housing Authority as one of the counties critical assets. The Grant County Commission recognizes the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 9<sup>th</sup> day of January 2007 at a regular meeting of the Grant County Commission.

  
Jim Wilson, President  
Grant County Commission

I, HAROLD G. HISER certify that the above resolution is a true and accurate copy of a resolution adopted on the 9<sup>th</sup> day of January 2007 at a meeting of the Grant County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution. ✓

 1-9-07  
Signature Date

### III. Documentation of the Planning Process

Each section was reviewed and updated as necessary as a part of this update. 2009

The Grant County Hazard Mitigation Plan was developed by the plan committee with the assistance of the Region 8 Planning and Development Council. In the Fall of 2002, the Town of Bayard, the City of Petersburg and the Grant County Commission executed letters of agreement recognizing the Region 8 PDC as the lead agency in the development of the County's Hazard Mitigation Plan. See attached letters of agreement. Initial development began on a regional basis and then the Grant County plan committee with assistance of the Region 8 PDC continued development on a local level.

#### Timeline

Event	Completion Date
Execute Letters of Agreement	8/29/02
Organize Resources	9/16/02
Risk Assessment Phase Due	11/29/02
Draft Mitigation Plan Due	3/29/03
Hazard Mitigation Plan Complete	7/29/03

The Grant County Hazard Mitigation Plan Committee consists of the following representatives:

Sarah Moomau, the City of Petersburg  
Alvin Rumer, the City of Petersburg  
Steve Durst, the Town of Bayard  
Peggy Bobo Alt, Grant County OES  
Cullen Sherman, Grant Co. Health Department, Grant Co. Floodplain Manager

Throughout the development of the plan, several committee meetings were held including a special meeting with the City of Petersburg and the Town of Bayard. A total of five committee members were actively involved in the development of the plan. In addition to the state and regional meetings, the county held five committee meetings and two public meetings. The sign-in sheets for all meetings have been attached in the meetings attachment section. The County Commission and municipalities held a countywide public meeting to seek input for the draft plan. Even though the meeting was properly advertised, there were no members of the general public in attendance at the meeting. Unfavorable travel conditions may have affected meeting attendance. The County held a second public hearing to present the final plan and receive comments on the plan from the public. Additionally, the plan was made available to the public for review for a minimum of 15 days. See attached information regarding the public meetings in the meeting information section.

The County also held a meeting on May 15, 2003 to allow comments on the draft from other interested agencies. The County invited agencies such as the WV Development Office, the West Virginia Department of Highways, the County Health Department, the Board of Education, WVU Extension Service, NRCS, local fire departments and any other agencies recommended by the plan committee. A sign-in sheet of those who attended is attached with the meeting information section. Representatives from the West Virginia Development Office presented information to the attendees on the various programs offered through the development office and some suggestions of programs where the County's mitigation strategies may qualify for funding.

Additionally, the Hazard Mitigation Committee identified other plans to be reviewed and included as an essential part of the County's Hazard Mitigation Plan. These plans include the State OES Manual, the WV Emergency Response Plan, and the local LEPC plan.

2/24/09 Alt was advised by FEMA to revise this plan and then seek adoption by the County of Grant, City of Petersburg and City of Bayard after a proper public review and comment period. A copy of this updated version will be for public review at the Grant County Library prior to formal adoption. Notice of all will be advertised in the Grant County Press. Documentation will be provided upon formal approval. Add documentation

The revised plan will cover Grant County, the town of Petersburg and the town of Bayard. All of these have participated in the update.

Meetings were held in March 2009 with Grant County, the towns of Petersburg and Bayard for updates. Add documentation

The planning staff did not remain the same and corrections are made and highlighted.

The news paper advertisements allowed the opportunity for neighboring communities and others interested parties to participate or comment.

Add documentation

A Local Mitigation Plan Workshop sponsored by the WVDHSEM on 2/24/09 in Roanoke WV provided much opportunity for surrounding and neighboring counties to comment since they attended the same meeting.

The County EOP was updated in 2009.

\*\*\* Peggy finish details and documentation after meetings\*\*\*

*Grant County Office of Emergency Services and E911  
4 North Main Street, Suite 1  
Petersburg, WV 26847*

*Public Meeting  
Grant County Hazard Mitigation Plan  
March 31, 2009  
9:00 a.m.  
Grant County Courthouse*

*This 2009 update was completed using the same process as the original plan. All sections were reviewed and updated as necessary.*

*Per WVDHSEM via phone 1242 3/31/09*

**Peggy Alt**

---

**From:** Peggy Alt [grantcooes@citlink.net]  
**Sent:** Friday, March 20, 2009 12:59  
**To:** GCC Cindy Whetzel (gcomm@mountain.net)  
**Cc:** 'svanmeterpetersburg@frontiernet.net'  
**Subject:** hazard mitigaion public meeting

Public Meeting  
 On Hazard Mitigation Plan

The Grant County Commission, The Grant County Office of Emergency Services, the Town of Bayard and the City of Petersburg will hold a public meeting to receive comments on the Grant County Hazard Mitigation Plan. The plan will be used by Grant County, the town of Bayard, the City of Petersburg, the WV Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Grant County Courthouse, 5 Highland Avenue, Petersburg, WV 26847 at 9:00 a.m. on Tuesday, March 31, 2009.

A copy of the plan is available for review at the Grant County Library, the Mt. Top Library and the Emergency Services Office. Written comments on the document should be mailed to Grant County Office of Emergency Services and 911, 4 North Main, Suite 1, Petersburg, WV 26847. If you have any questions regarding this meeting contact Peggy Bobo Alt at 304-257-5451.

3/20/09 - ok per Cindy Whetzel 1200  
 ok per Mayor Durst 1235 643-7300  
 ok per Shelia VanMeter 1236 svanmeterpetersburg@frontiernet.net  
 1306 - Sandy will post both days  
 1306 - Fouch will call if not rec fax

I Grant County Press  
 3/24/09  
 and  
 3/31/09 P. Balt

- Posted at Grant County Court house 3/20/09  
 - plans for review at Petersburg and mt storm  
 Libraries

Grant County Emergency Services

3/20/09

Public Meeting  
On Hazard Mitigation Plan

The Grant County Commission, The Grant County Office of Emergency Services, the Town of Bayard and the City of Petersburg will hold a public meeting to receive comments on the Grant County Hazard Mitigation Plan. The plan will be used by Grant County, the town of Bayard, the City of Petersburg, the WV Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Grant County Courthouse, 5 Highland Avenue, Petersburg, WV 26847 at 9:00 a.m. on Tuesday, March 31, 2009.

A copy of the plan is available for review at the Grant County Library, the Mt. Top Library and the Emergency Services Office. Written comments on the document should be mailed to Grant County Office of Emergency Services and 911, 4 North Main, Suite 1, Petersburg, WV 26847. If you have any questions regarding this meeting contact Peggy Bobo Alt at 304-257-5451.

Grant County Press  
FX 304-257-1691  
phone - 257-1844

please run in march 24 and 31  
editions. It can be very small  
and placed any where.

Y. Kent  
Peggy

Fax'd 1254  
3/20/09

**Peggy Alt**

---

**From:** Peggy Alt [grantcooes@citlink.net]  
**Sent:** Friday, March 20, 2009 13:05  
**To:** 'parksrec@mountain.net'  
**Subject:** hazard mitigaiton public meeting

sandy, thanks for posting on both doors today

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Public Meeting  
On Hazard Mitigation Plan

The Grant County Commission, The Grant County Office of Emergency Services, the Town of Bayard and the City of Petersburg will hold a public meeting to receive comments on the Grant County Hazard Mitigation Plan. The plan will be used by Grant County, the town of Bayard, the City of Petersburg, the WV Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Grant County Courthouse, 5 Highland Avenue, Petersburg, WV 26847 at 9:00 a.m. on Tuesday, March 31, 2009.

A copy of the plan is available for review at the Grant County Library, the Mt. Top Library and the Emergency Services Office. Written comments on the document should be mailed to Grant County Office of Emergency Services and 911, 4 North Main, Suite 1, Petersburg, WV 26847. If you have any questions regarding this meeting contact Peggy Bobo Alt at 304-257-5451.

*Grant County Office of Emergency Services and E911  
4 North Main Street, Suite 1  
Petersburg, WV 26847*

*Public Meeting  
Grant County Hazard Mitigation Plan  
March 31, 2009  
9:00 a.m.  
Grant County Courthouse*

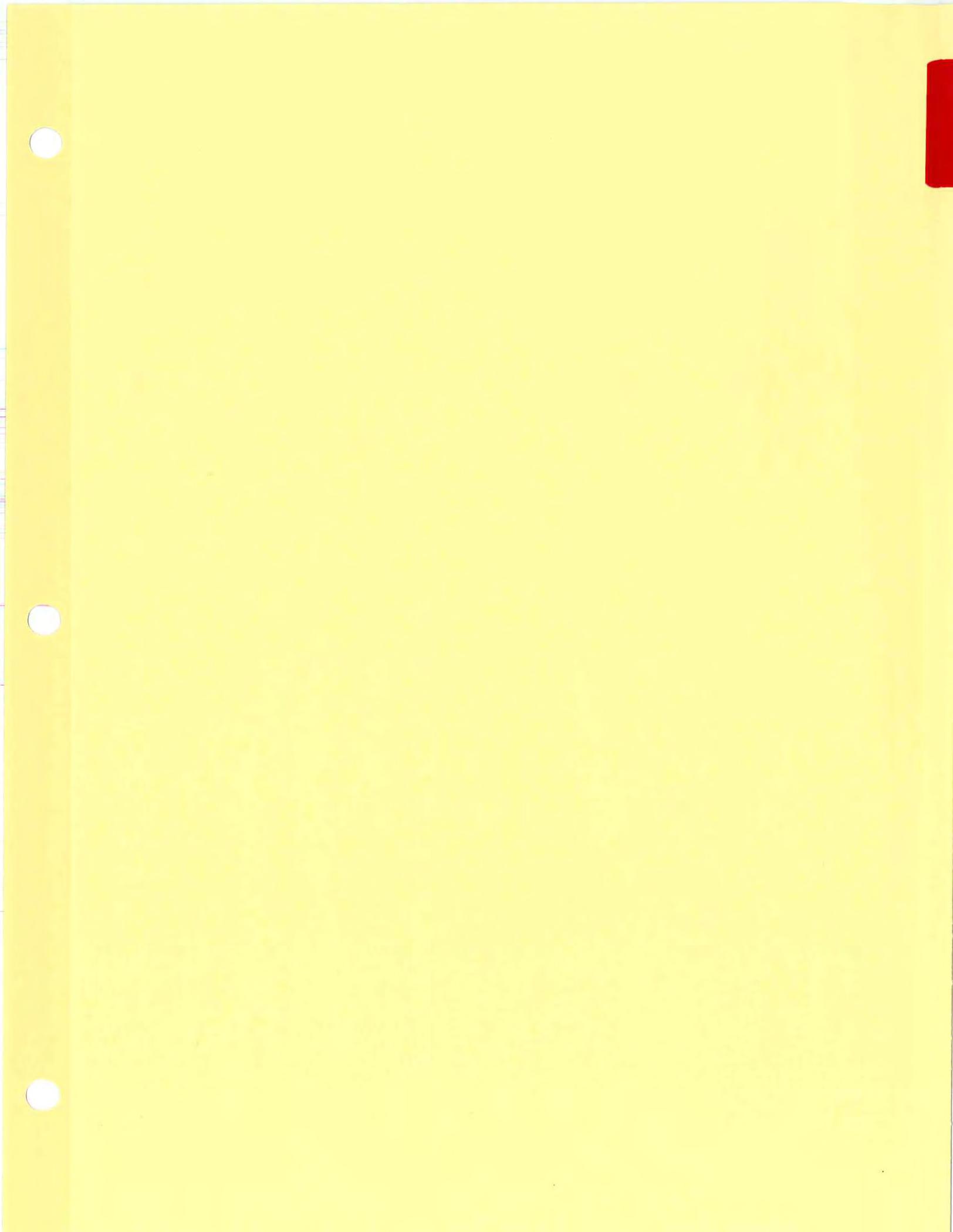
*Although properly advertised, no members of the general public attended the public meeting. No comments were received during the public meeting and no comments were provided via mail or telephone.*

*Peggy Bobo Alt was the only person in attendance.*

TRANSMISSION VERIFICATION REPORT

TIME : 03/31/2009 12:08  
NAME : GRANT911  
FAX : 3042579028  
TEL : 2579028  
SER.# : 000K5J911909

DATE, TIME	03/31 12:06
FAX NO./NAME	13049653216
DURATION	00:01:39
PAGE(S)	06
RESULT	OK
MODE	STANDARD ECM



Region 8 Planning and Development Council ♦ Potomac Highlands Support Services

Kenneth W. Dyché  
Executive Director  
Grant County Industrial Park  
P.O. Box 849  
Petersburg, WV 26947

Telephone (304) 257-2448  
Fax (304) 257-4958  
kdych@region8pdc.org

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirements of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Grant County Commission commits to participating in a multi-jurisdictional plan with the other four counties in the Region 8 Planning and Development District and the Region 8 Planning and Development Council. The planning effort will result in a regional risk assessment and plan with individual annexes for Grant, Hampshire, Hardy, Mineral and Pendleton Counties.

Grant County enters this agreement voluntarily with the understanding that the county in cooperation with the other four counties and the Region 8 PDC as the lead agency responsible for the multi-jurisdictional plan will be responsible for contributing information and will fully participate in the planning process.

The County agrees to adopt the completed multi-jurisdictional plan upon approval by FEMA. ✓

County	<u>Grant</u>
Point of Contact	<u>Jane Kite Keeling, President</u>
Region 8 PDC	<u>Kenneth Dyché, Executive Director</u>
Point of Contact	<u>Melissa Marie Manner</u>

### Signatures

Kenneth W. Dyché 8-27-02  
Region 8 PDC Date

Jane Kite Keeling 8/21/02  
County Date

Region 8 Planning and Development Council ♦ Potomac Highlands Support Services

Kenneth W. Dyche  
Executive Director  
Grant County Industrial Park  
PO Box 849  
Petersburg, WV 26847

Telephone (304) 257-2448  
Fax (304) 257-4958  
region8mail@region8pdc.org

Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirements of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan

With this letter the City of Petersburg commits to participating in a multi-jurisdictional plan with the Grant County Commission and the Region 8 Planning and Development Council. The planning effort will result in a regional risk assessment and plan with individual annexes for Grant, Hampshire, Hardy, Mineral, and Pendleton Counties. The Municipal Council, County Commission and Regional Council agree to join with other local governments to prepare the plan.

The City of Petersburg enters this agreement voluntarily with the understanding that the community, in cooperation with the county, and the Region 8 PDC as the lead agency responsible for the multi-jurisdictional plan, will be responsible for contributing information and will fully participate in the planning process

The community agrees to adopt the completed multi-jurisdictional plan upon approval by FEMA.

Community: City of Petersburg

Point of Contact: Alvin "Bub" Rumer  
PO Box 660  
Petersburg, WV 26847

County: Grant

Point of Contact: Jane Kite Keeling, President, Grant County Commission  
5 Highland Avenue, Petersburg, WV 26847  
(304) 257-4422

Region 8 PDC: Kenneth Dyche, Executive Director

Point of Contact: Melissa Earle, Planner

Signatures

[Signature] 10/8/02 [Signature]  
Community Date County Date

[Signature]  
Region 8 PDC Date

Region 8 Planning and Development Council ♦ Potomac Highlands Support Services

Kenneth W. Dyche  
Executive Director  
Grant County Industrial Park  
PO Box 849  
Petersburg, WV 26847

Telephone (304) 257-2448  
Fax (304) 257-4958  
region8mail@region8pdc.org

**Letter of Agreement**

In order for a multi-jurisdictional plan to meet the requirements of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Town of Bayard commits to participating in a multi-jurisdictional plan with the Grant County Commission and the Region 8 Planning and Development Council. The planning effort will result in a regional risk assessment and plan with individual annexes for Grant, Hampshire, Hardy, Mineral, and Pendleton Counties. The Municipal Council, County Commission and Regional Council agree to join with other local governments to prepare the plan.

The Town of Bayard enters this agreement voluntarily with the understanding that the community, in cooperation with the county, and the Region 8 PDC as the lead agency responsible for the multi-jurisdictional plan, will be responsible for contributing information and will fully participate in the planning process.

The community agrees to adopt the completed multi-jurisdictional plan upon approval by FEMA.

Community Town of Bayard

Point of Contact STEVEN P. DURST (MAYOR)  
PO Box 302  
BAYARD WV 26707

County Grant

Point of Contact Jane Kite Keeling, President, Grant County Commission  
5 Highland Avenue Petersburg, WV 26847  
(304) 257-4422

Region 8 PDC Kenneth Dyche, Executive Director

Point of Contact Melissa Earle, Planner

**Signatures**

[Signature] \_\_\_\_\_ [Signature] \_\_\_\_\_  
Community Date County Date

[Signature] \_\_\_\_\_  
Region 8 PDC Date

Hazard Mitigation Plan  
Grant County Committee Meeting  
January 23, 2003  
2:00 PM

	<u>Name</u>	<u>Representing</u>
1	Peggy Bobb A/H	Grant OES
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3	Patti Bennett	RBFDE
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Hazard Mitigation Plan  
Grant County Committee Meeting  
February 7, 2003  
10.00 AM

	<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>
1	BOB LIVINGSTON	PLANNING COMMISSION	257-4922
2	Peggy Roberts	HEALTH DEPARTMENT	ROBERTLIVINGSTON@WVDHHA.ORG
3	Walter Lee	Cellular	257-2140
4			grantcooks@earthlink.net
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**PLANNING ON HAZARD  
WITH EMERGENCY PLAN DEVELOPMENT  
COMMISSION & DEVELOPMENT COUNCIL  
P.O. BOX 9488 PETERSBURG, WV 26847**

The Planning and Development Council, the  
Town of Bayard and the  
City of Petersburg are holding a public meeting to receive  
input on the Emergency Plan Development Council's  
hazardous materials hazards, identify mitigation  
measures and projects to reduce risks. The plan  
will be used by the Town of Bayard, the City of Petersburg,  
the West Virginia State Office of Emergency Services  
and the Federal Emergency Management Agency for the  
hazardous materials investigation. The meeting will be  
held at the Planning and Development Council  
P.O. Box 9488 Petersburg, at 6:30 p.m. on  
February 26, 2003.  
The hazardous materials investigation planning pro-  
cess is extremely important and  
we are seeking your input for a quality planning effort.  
If you have any questions regarding this meeting, please  
contact the Planning and Development Council at (304) 257-2375.



Hazard Mitigation Plan  
Grant County Public Meeting  
February 27, 2003  
6:30 PM

<u>Name</u>	<u>Representing</u>
1 <i>[Handwritten Name]</i>	<i>[Handwritten Name]</i>
2 <i>[Handwritten Name]</i>	
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Public Meeting  
Grant County Hazard Mitigation Plan  
February 27, 2003

Although properly advertised, no member of the general public attended the public hearing.

Hazard Mitigation Plan  
Petersburg Committee Meeting  
March 4, 2003  
10 00 AM

	<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>
1	<i>[Faint handwritten name]</i>	<i>[Faint handwritten organization]</i>	<i>[Faint handwritten contact info]</i>
2	<i>[Faint handwritten name]</i>	<i>[Faint handwritten organization]</i>	<i>[Faint handwritten contact info]</i>
3	<i>[Faint handwritten name]</i>	<i>[Faint handwritten organization]</i>	<i>[Faint handwritten contact info]</i>
4			
5			



Hazard Mitigation Plan  
Bayard Committee Meeting  
March 21, 2003  
2.00 PM

<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>
1 <i>M. [unclear]</i>	<i>Bayard, C.A.C.</i>	
2 <i>Tony A. [unclear]</i>	<i>" " "</i>	
3 <i>[unclear]</i>	<i>Team of Bayard</i>	
4 <i>[unclear]</i>		
5		

✓

Hazard Mitigation Plan  
Grant County Committee Meeting  
April 22, 2003  
9 30 AM

<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>
1. <i>[Handwritten Name]</i>	<i>[Handwritten Name]</i>	
2. <i>[Handwritten Name]</i>	<i>[Handwritten Name]</i>	
3. <i>[Handwritten Name]</i>	<i>[Handwritten Name]</i>	
4.		
5.		

✓

Grant County Hazard Mitigation Meeting  
 May 15, 2003



Name	Representing	Address	Phone/Email
1	Michael Berg	NARS	
2	Paul Evans	Northwest Forest Partnership	
3	Paul Evans	Northwest Forest Partnership	
4	Paul Evans	Northwest Forest Partnership	
5	Paul Evans	Northwest Forest Partnership	
6	Paul Evans	Northwest Forest Partnership	
7	Paul Evans	Northwest Forest Partnership	
8	Paul Evans	Northwest Forest Partnership	
9	Paul Evans	Northwest Forest Partnership	
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11	Paul Evans	Northwest Forest Partnership	
12	Paul Evans	Northwest Forest Partnership	
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Grant County  
Hazard Mitigation Plan  
Draft Review Meeting  
May 15, 2003

A meeting was held on May 15, 2003 at the Region 8 Planning and Development Council to discuss the draft of the Grant County Hazard Mitigation Plan. Several agencies were invited. Twelve attendees gathered to review the plan and discuss changes and take comments on the plan. The following comments were made during discussion:

Consider Department of Justice – Homeland Security Funds for funding for mitigating against terrorists attacks.

There is no existing county building codes or inspector.

Potomac Valley Conservation District inspects dams annually.

Incorporate Mt. Storm Dam into plan. Coordinate with Dominion Power.

Also Stony River Dam. Who owns?

WVDEP regulations require emergency plans for dams. Get copy of plans.

Army Corps of Engineers does semi-annual inspection of flood dike in Petersburg.

Additionally, representatives of the West Virginia Development Office were in attendance to discuss the programs offered by their agency and possible funding sources for implementing mitigation strategies which have been identified for the County.

Hazard Mitigation Plan  
Grant County  
June 2, 2003  
10:00 AM

<u>Name</u>	<u>Representing</u>
1 <i>Robert S. [unclear]</i>	<i>[unclear]</i>
2 <i>Peggy Bobo Alt</i>	<i>Grant 025/911</i>
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**PUBLIC MEETING  
ON HAZARD MITIGATION PLAN**

**Region 8 Planning & Development Council  
P.O. Box 849 • Petersburg, WV 26847**

The Region 8 Planning & Development Council, the Grant County Commission, the Town of Bayard and the City of Petersburg will hold a public meeting to receive comments on the Grant County Hazard Mitigation Plan. The plan will be used by the Town of Bayard, the City of Petersburg, Grant County, the WV State Office of Emergency Services and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Region 8 Planning and Development Council, Grant County Industrial Park, Petersburg, at 6:30 p.m. on Wednesday, August 20, 2003.

The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. A copy of the plan is available for review at the Grant County Library and the offices of the local governments. Written comments on this document should be mailed to Region 8 PDC, P.O. Box 849, Petersburg, WV 26847 before August 20, 2003. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304) 257-2448.



Grant County Public Meeting  
August 20, 2003  
6:30 pm

Although properly advertised, there were no members of the general public in attendance at the public hearing to receive comments on the hazard mitigation plan. Additionally, no written comments were received.

## Hazard Mitigation Planning Workshop 2 Registration Form

County: Regina 8

Please list all individuals from your organization that will be attending the workshop. While there is no limit to the amount of attendees you can bring we strongly recommend that you limit participants to those who will be most involved in the planning process.

Name	Title	Phone	E-mail
<u>MINERAL COUNTY BOARD</u>	<u>COM</u> <u>COUNCIL</u>	<u>304-252-1913</u>	
X <u>Tara W. Long</u>	<u>Team Council</u>	<u>304/358-2668</u>	
X <u>Melissa Burke</u>	<u>Planner</u>	<u>(304) 257-2444</u>	<u>mcburke@regina8.org</u> <u>mcburke@mineralcountyrva.org</u>
X <u>Jason Summers</u>	<u>Planner</u>	<u>304-788-1457</u>	
X <u>Brian Mather</u>	<u>Mayor</u>	<u>304-788-1613</u>	
X <u>Phil L. Smith</u>	<u>Team Council</u> <u>Member</u>	<u>304-238-6112</u>	<u>lsmith@mineralcountyrva.org</u> <u>smith.phil@regina8.org</u>

Please fax this form to Joan Flack at 304-965-3216.

\*ALSO SERVES AS SIGN-IN SHEET FOR RISK ASSESSMENT PLANNING MEETING IN GRANIT AND MINERAL COUNTIES. (OCTOBER 18TH AND 22ND)

Grant County Emergency Services

3/20/09

Public Meeting  
On Hazard Mitigation Plan

The Grant County Commission, The Grant County Office of Emergency Services, the Town of Bayard and the City of Petersburg will hold a public meeting to receive comments on the Grant County Hazard Mitigation Plan. The plan will be used by Grant County, the town of Bayard, the City of Petersburg, the WV Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Grant County Courthouse, 5 Highland Avenue, Petersburg, WV 26847 at 9:00 a.m. on Tuesday, March 31, 2009.

A copy of the plan is available for review at the Grant County Library, the Mt. Top Library and the Emergency Services Office. Written comments on the document should be mailed to Grant County Office of Emergency Services and 911, 4 North Main, Suite 1, Petersburg, WV 26847. If you have any questions regarding this meeting contact Peggy Bobo Alt at 304-257-5451.

Grant County Press  
FX 304-257-1691  
phone - 257-1844

please run in march 24 and 31  
editions. It can be very small  
and placed any where.

Thank,  
Peggy

called 1254  
3/20/09

**Peggy Alt**

---

**From:** Peggy Alt [grantcooes@citlink.net]  
**Sent:** Friday, March 20, 2009 13:05  
**To:** 'parksrec@mountain.net'  
**Subject:** hazard mitigation public meeting

sandy, thanks for posting on both doors today

---

**Public Meeting  
On Hazard Mitigation Plan**

The Grant County Commission, The Grant County Office of Emergency Services, the Town of Bayard and the City of Petersburg will hold a public meeting to receive comments on the Grant County Hazard Mitigation Plan. The plan will be used by Grant County, the town of Bayard, the City of Petersburg, the WV Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Grant County Courthouse, 5 Highland Avenue, Petersburg, WV 26847 at 9:00 a.m. on Tuesday, March 31, 2009.

A copy of the plan is available for review at the Grant County Library, the Mt. Top Library and the Emergency Services Office. Written comments on the document should be mailed to Grant County Office of Emergency Services and 911, 4 North Main, Suite 1, Petersburg, WV 26847. If you have any questions regarding this meeting contact Peggy Bobo Alt at 304-257-5451.

***Grant County Office of Emergency Services and E911  
4 North Main Street, Suite 1  
Petersburg, WV 26847***

***Public Meeting  
Grant County Hazard Mitigation Plan  
March 31, 2009  
9:00 a.m.  
Grant County Courthouse***

***Although properly advertised, no members of the general public attended the public meeting. No comments were received during the public meeting and no comments were provided via mail or telephone.***

***Peggy Bobo Alt was the only person in attendance.***

Kenneth W. Dyche  
Executive Director  
Grant County Industrial Park  
PO Box 849  
Petersburg, WV 26847

Telephone (304) 257-2448  
Fax (304) 257-4958  
region8mail@region8pdc.org

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirements of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the City of Romney commits to participating in a multi-jurisdictional plan with the Grant County Commission and the Region 8 Planning and Development Council. The planning effort will result in a regional risk assessment and plan with individual annexes for Grant, Hampshire, Hardy, Mineral, and Pendleton Counties. The Municipal Council, County Commission and Regional Council agree to join with other local governments to prepare the plan.

The City of Romney enters this agreement voluntarily with the understanding that the community, in cooperation with the county, and the Region 8 PDC as the lead agency responsible for the multi-jurisdictional plan, will be responsible for contributing information and will fully participate in the planning process.

The community agrees to adopt the completed multi-jurisdictional plan upon approval by FEMA.

Community: City of Romney

Point of Contact Hoy G. Shingleton  
340 E. Main St.  
Romney, WV 26757 (304) 822-5118

County Hampshire

Point of Contact Michael Crouse, Director, Office of Emergency Services  
PO Box 806, Romney, WV 26757  
(304) 822-7513

Region 8 PDC Kenneth Dyche, Executive Director

Point of Contact Melissa Earle, Planner  
PO Box 849, Petersburg, WV 26847  
(304) 257-2448 ext. 228 email: mearle@region8pdc.org

### Signatures

Hoy G. Shingleton 8-28-02 E. Harry Shaulhoff 11/9/02  
Community Date County Date

[Signature]  
Region 8 PDC Date

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the City of Romney accepts the Hampshire County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hampshire County Hazard Mitigation Plan Committee. The City of Romney recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 08 day of SEPT 2003 at a regular meeting of the City of Romney.

William E. Hicks, Sr.  
William E. Hicks, Sr., Mayor  
City of Romney

I, Betty Colebank certify that the above resolution is a true and accurate copy of a resolution adopted on the 8 day of Sept., 2003 at a meeting of the City of Romney at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Betty Colebank 9-11-03  
Signature Date

My Commission Expires on August 16, 2013



Hazard Mitigation Plan  
Hampshire County Public Meeting  
August 25, 2003  
10:00 AM

<u>Name</u>	<u>Representing</u>
1 Shelley Kile	HC Planning
2 Mike Cannon	HC CES
3 Melissa Sull	Region 8
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Review



FEBRUARY 26, 2003

Notice  
**Public Hearing**

*Hampshire County Commission  
Hazard Mitigation Plan*

The Region 8 Planning and Development Council, the Hampshire County Commission, the City of Romney, and the Town of Capon Bridge will hold a public meeting for the purpose of receiving input on the community's hazard risks, identifying mitigation goals and discussing needed projects to reduce risks. Public input will be used in the development of a hazard mitigation plan for Hampshire County. The plan will be used by the County, Town of Capon Bridge, the City of Romney, the West Virginia State Office of Emergency Services and the Federal Emergency Management Agency. The meeting will be held on Thursday, March 6, 2003 at 6:30 p.m. at the Romney Fire Hall.

The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304) 257-2448

# Hazard Mitigation Planning Workshop 2 Registration Form

Region 8 (Grant, Hampshire, Hardy, Mineral, and Pendleton Counties)

Name	Title	Phone	E-mail
X Shelley Kite	Compliance officer	822-7018	S.Kite@hotmail.com
FRANK A WHITAKER	ASSESSOR	822-3326	fwhitacr@assessor.state.wv.us
JOSE VAN BEEM	MAPPER	822 3326	vanbeem@access.mountain.net
X Fred Berkenridge	Mayor Hampshire Co.	856-3625	FVBERK@HOTMAIL.COM
X Mike Crouse	Director DES	822-7513	hc0es@fant.resnet.net
X Patti Bennett		257-1221	upaaa@hardynet.com

Hazard Mitigation Plan  
Hampshire County Committee Meeting  
March 18, 2003  
10:00 AM

<u>Name</u>	<u>Representing</u>
1 <i>Melissa Esler</i>	<i>Region 8 ADC</i>
2 <i>Fred Berkeridge</i>	<i>Town of Capon Bridge</i>
3 <i>Mike Cause</i>	<i>HC OES</i>
4 <i>Shelley Kite</i>	<i>HC Planning</i>
5 <i>FRANK A WHITACRE</i>	<i>HAMPSHIRE ASSESSOR</i>
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Hazard Mitigation Plan  
Hampshire County Public Meeting  
March 6, 2003  
6:30 PM

Name

Address

- 1 *Madison East*
- 2 *Shelley Kile*
- 3 *BOB TURNER*
- 4 *Nannette Myfleson*
- 5 *George Stump*
- 6 *Evly Baskin*

*Region 8 PDC  
HC Planning  
CITY OF Romney  
Springfield, WV  
Romney WV  
Romney WV*

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Hampshire County Hazard Mitigation Meeting  
June 10, 2003

	<u>Name</u>	<u>Representing</u>	<u>Address</u>	<u>Phone/Email</u>
1	<u>Melvin Sells</u>	<u>Region 8 SAC</u>		<u>msells@region8.sac.fema.gov</u>
2	<u>Shelley Hill</u>	<u>H.C. Planning</u>		<u>s-hill@hctma.com</u>
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Hampshire County Hazard Mitigation Meeting  
June 4, 2003

Name	Representing	Address	Phone/Email
1 <u>Malina Sule</u>	<u>Region 8 POC</u>	<u>PO Box 819 Athol MA</u>	<u>malina@region8pok.org</u>
2 <u>Tom Riney</u>	<u>WVDO</u>	<u>Capitol Complex</u>	<u>PRING@WVDO.ORG</u>
3 <u>George Williams</u>	<u>Chief Romney Fire Co.</u>	<u>PO Box 970 Romney WV</u>	<u>822-5141</u> <u>romneyfireco@frontiernet.net</u>
4 <u>Mike Cress</u>	<u>Hampshire Co. OES</u>	<u>PO Box 506 Romney</u>	<u>hcres@frontiernet.net</u>
5 <u>Shelley Kik</u>	<u>Hamp Co Planning</u>	<u>PO Box 883 Romney</u>	<u>HKPC883@hotmail.com</u>
6 <u>Frank Berkeholder</u>	<u>Capitol Building</u>	<u>PO Box 127 Capitol Building</u>	<u>856-3625</u>
7 <u>Bob Turner</u>	<u>Romney</u>	<u>340 E. Main St. Romney</u>	<u>Romney@CITRINK.COM</u> <u>822-5118</u>
8 <u>STEVE RITZ</u>	<u>USDA-NRCS-HAMPSHIRE Co.</u>	<u>500 E. MAIN ST. ROMNEY</u>	<u>822-3020 ext. 101</u> <u>Steve.Ritz@wv.usda.gov</u>
9 <u>Terey Myshker</u>	<u>Hamp. Co Health Dept</u>	<u>66 N. High St Romney</u>	<u>822-5111 terey@myshker.com</u> <u>WVDHHR.org</u>
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Hazard Mitigation Plan  
Hampshire County Committee Meeting  
January 30, 2003  
10:00 AM

Name

Representing

1 ROBERT TURNER

THE CITY OF RANNEY

2 Shelley Kile

H.C. Planning

3 Fred Berkeridge

Town of Capon Bridge

4 Jake van Beem

Assessor's Office Mapping

5 Frank Whitlow

ASSESSOR'S OFFICE HAMPSHIRE

6 Mike Crowe

Hamp Co. OES

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Hampshire County  
Public Meeting  
Hazard Mitigation Plan  
March 6, 2003

The Hampshire County Commission, the Town of Capon Bridge, and the City of Romney held a public meeting on Thursday, March 06, 2003 to receive input for the County's Hazard Mitigation Plan. The meeting was called to order at 6:30 pm.

Melissa Earle of the Region 8 Planning and Development County gave a brief overview of the Disaster Mitigation Act of 2000 and the importance of a County Hazard Mitigation Plan. Further, those in attendance were given draft copies of the County's Risk Assessment including County maps to review. The floor was then opened for discussion.

The public identified several concerns, mostly flooding risks. It was asked that the County prepare a map of alternate routes for transportation. Shelley Kile, Hampshire County Compliance Officer, stated that Mike Crouse, with the County OES, was in the process of identifying those alternate routes.

Another concern identified was the question of solid waste management during a disaster. What could be done with waste resulting from the disaster? The plan committee will address the question.

Another suggestion was for the County to identify HAM Radios for communication purposes.

One last concern identified by the attendees was the concern of damming of the trough by debris during a flood. It was suggested that someone should be stationed to monitor the situation during a high water event.

Melissa concluded the meeting by commending the County Commission, the municipalities, and the plan committee for taking the initiative to develop a hazard mitigation plan and she thanked the committee members for the dedication and hard work in preparing the plan.

**Notice  
Public Hearing  
Hampshire County Commission  
Hazard Mitigation Plan**

The Region 8 Planning and Development Council, the Hampshire County Commission and the municipalities of Hampshire County will hold a public meeting for the purpose of receiving comments on the County's Hazard Mitigation Plan. The plan will be used by the County, the municipalities, the West Virginia State Office of Emergency Services and the Federal Emergency Management Agency. The meeting will be held on Monday, August 25, 2003, at 10 a.m. in the Hampshire County courthouse conference room.

The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. A copy of the Hampshire County Hazard Mitigation Plan is available for review at the Hampshire County Public libraries, the offices of local governments and by contacting the Region 8 Planning and Development Council. Written comments on this document should be mailed to Region 8 Planning and Development Council, P.O. Box 849, Petersburg, WV 26847 before August 25, 2003. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304) 257-2448.

Kenneth W. Dyche  
Executive Director  
PO Box 849  
Petersburg, WV 26847

Telephone (304) 257-2448  
Fax (304) 257-4958  
region8mail@region8pec.org

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirements of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Hampshire County Commission commits to participating in a multi-jurisdictional plan with the other four counties in the Region 8 Planning and Development District and the Region 8 Planning and Development Council. The planning effort will result in a regional risk assessment and plan with individual annexes for Grant, Hampshire, Hardy, Mineral, and Pendleton Counties.

Hampshire County enters this agreement voluntarily with the understanding that the county, in cooperation with the other four counties and the Region 8 PDC as the lead agency responsible for the multi-jurisdictional plan, will be responsible for contributing information and will fully participate in the planning process.

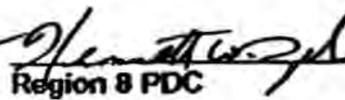
The County agrees to adopt the completed multi-jurisdictional plan upon approval by FEMA.

County Hampshire County  
Point of Contact Michael Crouse, Director, Office of Emergency Services  
PO Box 806, Romney, WV 26757  
(304) 822-7513

Region 8 PDC Kenneth Dyche, Executive Director

Point of Contact Melissa Earle, Planner  
PO Box 849, Petersburg, WV 26847  
(304) 257-2448 email: mearle@region8pdc.org

### Signatures

 8-27-02  8-27-02  
County Date Region 8 PDC Date

Hampshire County Hazard Mitigation Plan  
Draft Review  
June 4, 2003

A meeting was held on June 4, 2003 at Gourmet Central in Romney to discuss the draft of the Hampshire County Hazard Mitigation Plan. Several agencies were invited. Nine attendees gathered to review the plan and discuss changes and take comments on the plan.

Melissa Earle of the Region 8 Planning and Development Council gave a brief overview of the draft plan. The floor was then open for questions or comments concerning the plan and its development. One attendee asked if Apple Orchard Damage should be considered a risk. The group discussed the question and it was decided that the plan committee would review the topic further. Attendees ask questions such as where and how money would be made available to address the mitigation goals of the County. Attendees discussed funding possibilities.

Additionally, a representatives of the West Virginia Development Office was in attendance to discuss the programs offered by their agency and possible funding sources for implementing mitigation strategies which have been identified for the County.

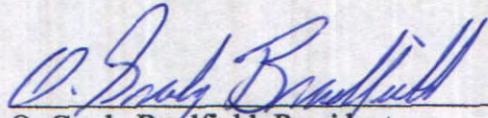
Hampshire County  
Public Meeting  
Hazard Mitigation Plan  
August 25, 2003

Although properly advertised, no member of the general public attended the 2<sup>nd</sup> public meeting held for the Hazard Mitigation Plan.

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Hampshire County Commission accepts the Hampshire County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hampshire County Hazard Mitigation Plan Committee. The Hampshire County Commission recognizes the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 3rd day of September 2003 at a regular meeting of the Hampshire County Commission.



O. Grady Bradfield, President  
Hampshire County Commission

I, Sharon H. Link certify that the above resolution is a true and accurate copy of a resolution adopted on the 3rd day of September 2003 at a meeting of the Hampshire County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Sharon H. Link 9-3-03  
Signature Date  
County Clerk



COUNTY OF HAMPSHIRE  
OFFICE OF COUNTY COMMISSION  
COURT HOUSE BUILDING  
ROMNEY, WEST VIRGINIA 26757  
304-822-5112

## RESOLUTION

**NOW THEREFORE BE IT RESOLVED** that the Hampshire County Commission accepts the Hampshire County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hampshire County Hazard Mitigation Plan Committee and revised in January, 2007. The Hampshire County Commission recognized the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 23<sup>rd</sup> day of January, 2007 at a regular meeting of the Hampshire County Commission.

A handwritten signature in black ink, appearing to be "Sharon H. Link", written over a horizontal line.

President, Hampshire County Commission

I, Sharon H. Link, certify that the above resolution is a true and accurate copy of a resolution adopted on the 23<sup>rd</sup> day of January, 2007, at a meeting of the Hampshire County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution.

*Sharon H. Link*

Sharon H. Link, County Clerk

January 23, 2007

Date

Hazard Mitigation Plan  
 Hampshire County Committee Meeting  
 February 11, 2003  
 10:00 AM

Name	Representing	Phone/Email
1 Shelley Kile	Planning	822-7018
2 Mike Crouse	HC OES	822-7513
3 Fred Berkovich	Towns of Copow & Bridg	854-3625
4 G. GRADY BROADFIELD	HAMPSHIRE CO COMM	874-3876

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RESOLUTION

NOW THEREFORE BE IT RESOLVED that the City of Romney accepts the Hampshire County Hazard Mitigation Plan as revised by the Region 8 Planning and Development Council to include the Romney Public Housing Authority in the asset survey section of the document. The City of Romney recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 5 day of February 2007 at a regular meeting of the City of Romney.

William E. Hicks, Sr.  
William E. Hicks, Sr., Mayor  
City of Romney

I, Jeff Maphis certify that the above resolution is a true and accurate copy of a resolution adopted on the 5 day of February, 2007 at a meeting of the City of Romney at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Jeff Maphis 2/5/07  
Signature Date

**MUTUAL AID ORDINANCE**

**WHEREAS,** to provide for the common safety and welfare of people and to mitigate damages to property in the City of Romney, West Virginia and Hampshire County, West Virginia an ordinance is required governing emergency management and mutual aid in the event of a declared disaster or emergency and,

**WHEREAS,** the City of Romney, West Virginia and Hampshire County, West Virginia agree that a record of expenses incurred, in sufficient detail to satisfy auditing requirements will be submitted through emergency management channels as soon as practicable following the use of emergency management and mutual aid, and

**WHEREAS,** detailed arrangements may require the expansion of this agreement among the Office of the Emergency Services Director of Hampshire County and the City of Romney, and

**WHEREAS,** expanded detailed arrangements will be incorporated in appropriate disaster plans and distributed to responsible agencies, departments and officials of the respective governments including the Romney Housing Authority, and

**WHEREAS,** this ordinance is not intended to alter, supersede or negate any existing or future agreements between operating services or agencies for mutual aid during non-emergency disaster operations.

Now therefore the City of Romney hereby adopts this Mutual Aid Ordinance as follows:

1. The City of Romney, West Virginia and Hampshire County, West Virginia as represented by the Office of the Emergency Services Director of Hampshire County will cooperate and enter into a written agreement in the event of a declared disaster or emergency to provide for the common safety and welfare of people and to mitigate damages to property.

2. The City of Romney, West Virginia and Hampshire County, West Virginia shall submit a record of expenses incurred, in sufficient detail to satisfy auditing requirements through emergency management channels as soon as practicable following the use of emergency management and mutual aid.

3. The expansion of the agreement between the Office of the Emergency Services Director of Hampshire County and the City of Romney is hereby authorized in order to satisfy detailed arrangements as may be required in appropriate disaster plans.

4. Expanded detailed arrangements as may be incorporated in appropriate disaster plans shall be distributed to responsible agencies, departments and officials of the respective governments including the Romney Housing Authority.

5. This ordinance shall not alter, supersede or negate any existing or future agreements between operating services or agencies for mutual aid during non-emergency disaster operations.

6. The agreement between Hampshire County and the City of Romney is hereby incorporated by reference as inclusive herein.

This ordinance is effective upon passage and upon the execution of the aforementioned agreement by the appropriate representatives of the respective governments and shall be implemented upon the declaration of a Local State of Emergency by the principal executive officers of Hampshire County and the City of Romney.

The Mayor and the Recorder of the City of Romney are authorized and directed to execute the agreement with Hampshire County.

2-5-07  
1st reading

2-5-07  
2nd reading

William F. White, Sr.  
Mayor

Cliff Maphis  
Recorder

# Region 8 Planning and Development Council ♦ Potomac Highlands Support Services

Kenneth W. Dyche  
Executive Director  
Grant County Industrial Park  
PO Box 849  
Petersburg, WV 26847

Telephone (304) 257-2448  
Fax (304) 257-4958  
region8mail@region8pdc.org

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirements of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Town of Capon Bridge commits to participating in a multi-jurisdictional plan with the Grant County Commission and the Region 8 Planning and Development Council. The planning effort will result in a regional risk assessment and plan with individual annexes for Grant, Hampshire, Hardy, Mineral, and Pendleton Counties. The Municipal Council, County Commission and Regional Council agree to join with other local governments to prepare the plan.

The Town of Capon Bridge enters this agreement voluntarily with the understanding that the community, in cooperation with the county, and the Region 8 PDC as the lead agency responsible for the multi-jurisdictional plan, will be responsible for contributing information and will fully participate in the planning process.

The community agrees to adopt the completed multi-jurisdictional plan upon approval by FEMA.

Community: Town of Capon Bridge

Point of Contact Frederic V Berkeridge  
PO Box 183  
Capon Bridge, WV 26711

County Hampshire

Point of Contact Michael Crouse, Director, Office of Emergency Services  
PO Box 806, Romney, WV 26757  
(304) 822-7513

Region 8 PDC Kenneth Dyche, Executive Director

Point of Contact Melissa Earle, Planner  
PO Box 849, Petersburg, WV 26847  
(304) 257-2448 ext. 228 email: mearle@region8pdc.org

### Signatures

Frederic V. Berkeridge 9 Oct 02 E. Harry Shank 11/4/02  
Community Date County Date

[Signature]  
Region 8 PDC Date

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Town of Capon Bridge accepts the Hampshire County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hampshire County Hazard Mitigation Plan Committee. The Town of Capon Bridge recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 9th day of Sept. 2003 at a regular meeting of the Town of Capon Bridge.

Frederic V. Berkeridge  
Frederic Berkeridge, Mayor  
Town of Capon Bridge

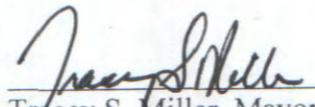
I, Coral Dickey certify that the above resolution is a true and accurate copy of a resolution adopted on the 9th day of Sept., 2003 at a meeting of the Town of Capon Bridge at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Coral L. Dickey 9/9/03  
Signature Date

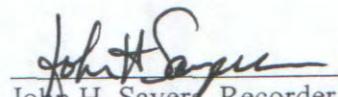
Town of Wardensville  
RESOLUTION 03-04  
Hardy County Hazard Mitigation Plan

NOW THEREFORE BE IT RESOLVED that the Town of Wardensville accepts the Hardy County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hardy County Hazard Mitigation Plan Committee. The Town of Wardensville recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 7<sup>th</sup> day of September 2003 at a regular meeting of the Town of Wardensville.

  
\_\_\_\_\_  
Tracey S. Miller, Mayor  
Town of Wardensville

I, John H. Sayers, Recorder of Wardensville, certify that the above resolution is a true and accurate copy of a resolution adopted on the 7<sup>th</sup> day of September, 2003 at a meeting of the Town of Wardensville at which a quorum was present and with a majority voting affirmatively to pass this resolution.

  
\_\_\_\_\_  
John H. Sayers, Recorder  
Town of Wardensville

## **PUBLIC MEETING**

### **ON HAZARD MITIGATION PLAN DEVELOPMENT** Region 8 P & DC Council, P.O. Box 849, Petersburg, WV 26847

The Region 8 Planning and Development Council, the Hardy County Commission, the Town of Moorefield and the Town of Wardensville will hold a public meeting to receive input on the community's hazards, identify mitigation goals and discuss needed projects to reduce risks. The plan will be used by the Town of Moorefield, the Town of Wardensville, Hardy County, the WV State Office of Emergency Services and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Moorefield Town Hall, 206 Winchester Avenue, Moorefield at 6:30 p.m. on February 26, 2003. The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304) 257-2448.

## **PUBLIC MEETING ON HAZARD MITIGATION PLAN**

The Region 8 Planning and Development Council, the Hardy County Commission, the Town of Moorefield and the Town of Wardensville will hold a public meeting to receive comments on the Hardy County Hazard Mitigation Plan. The plan will be used by the Town of Moorefield, the Town of Wardensville, Hardy County, the WV State Office of Emergency Services and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Moorefield Town Hall, 206 Winchester Avenue, Moorefield at 6:30 PM. on August 21, 2003. The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. A copy of the plan is available for review at the Hardy County Library and the offices of the local governments. Written comments on this document should be mailed to Region 8 Planning & Development Council, P.O. Box 849, Petersburg, WV 26847 or e-mail [mearle@region8pdc.org](mailto:mearle@region8pdc.org) before August 21, 2003. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304) 257-2448

## Hazard Mitigation Planning Workshop 2 Registration Form

County: Region 8

Please list all individuals from your organization that will be attending the workshop. While there is no limit to the amount of attendees you can bring we strongly recommend that you limit participants to those who will be most involved in the planning process.

Name	Title	Phone	E-mail
Alvin Rumea	CITY COUNCIL	304/257-1413	
X Ter W. Long	TOWN COUNCIL	304/358-2668	
X Melissa Earle	Planner	(304) 257-2448	mearle @ region8pde.org
X Jason Simmons	Planner	304-788-1457	mcp@mineralcountygov.wv
X Davis Mathis	Mayor	304-788-1613	
X Charles L. Silliman	TOWN OF MFD	304-538-6142	townofmfd@brady.net.wv

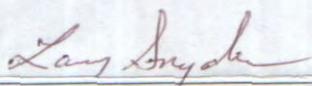
Please fax this form to Joan Flack at 304-965-3216.

**\*\*ALSO SERVES AS SIGN-IN SHEET FOR RISK ASSESSMENT PLANNING MEETING IN GRANT AND MINERAL COUNTIES. (OCTOBER 18TH AND 22ND)**

RESOLUTION

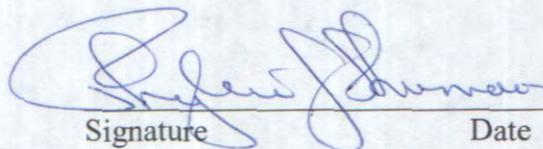
NOW THEREFORE BE IT RESOLVED that the Town of Moorefield accepts the Hardy County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hardy County Hazard Mitigation Plan Committee. The Town of Moorefield recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 2nd day of Sept 2003 at a regular meeting of the Town of Moorefield.



Larry Snyder, Mayor  
Town of Moorefield

I, Shirley J. Hummer certify that the above resolution is a true and accurate copy of a resolution adopted on the 2nd day of Sept, 2003 at a meeting of the Town of Moorefield at which a quorum was present and with a majority voting affirmatively to pass this resolution.



Signature

Date

9/2/03

Hardy County Hazard Mitigation Meeting  
 May 22, 2003

Name	Representing	Address	Phone/Email
1 Danny Evans	WV Conservation Agency	HC 85 Box 303 Murrefeld	demano@wca.us
2 ED KESECKE	USDA - NRCS	223 N. MAIN ST. MFLD	ED. KESECKE@WV.USDA.GOV
3 JOHN HARPER	Summit Environmental Group	310 N. MAIN ST. MFLD	jharper@summitfgi.com
4 Russ Ratiiff	Summit Community Bank	PO Box 680 MFLD	RATIIF@summitfgi.com
5 Paul R Lewis	Hardy County	204 Washington St Mfld	hlyexplor@HardyNet.com
6 Chuck Silliman	Town of Mfld.	204 W. Chester Av Mfld 26386	538-6162 townofmfield@beyondnet.com
7 Melissa Eane	Region 8 POC	PO Box 849 Petersburg	mea1k@regin8poc.wv
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Hazard Mitigation Plan  
Hardy County Committee Meeting  
March 7, 2003  
10:00 AM

<u>Name</u>	<u>Representing</u>
1 <i>Wilson East</i>	<i>Region 8 FOC</i>
2 <i>Charm Hillman</i>	<i>Town of Moorefield</i>
3 <i>Paul R Lewis</i>	<i>Hardy County</i>
4 <i>Jeff Driskill jr</i>	<i>WARDENSVILLE</i>
5 <i>Justin Kincaid</i>	<i>Wardensville</i>
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Hardy County Hazard Mitigation Meeting  
June 9, 2003

	Name	Representing	Address	Phone/Email
1	Alicia Ealy	Region 8 POC	204 Washington St Amarillo TX	hdy @ p10 @ Hardy Net. (538-6157)
2	Paul K. Lewis	Hardy County		
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Hazard Mitigation Plan  
Hardy County Committee Meeting  
January 23, 2003  
10:00 AM

	<u>Name</u>	<u>Representing</u>
1	Charles L. Silliman	Town of Moorefield.
2	Nelson Esle	Region 8 PDC
3	Patti Bennett	R8 PDC
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Hardy County Public Meeting  
Wednesday, February 26, 2003  
Minutes

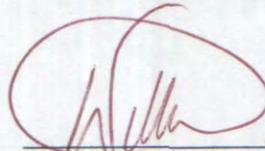
A public meeting was held on February 26, 2003 to receive input for Hardy County's Hazard Mitigation Plan. Although the meeting was publicized, there was no member of the general public present at the meeting.

However, two members of the hazard mitigation committee did attend the meeting to show their support. Unfavorable travel conditions could have played a role in low attendance to the meeting. The County will hold another meeting in the near future, to receive input for the plan.

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Hardy County Commission accepts the Hardy County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Hardy County Hazard Mitigation Plan Committee. The Hardy County Commission recognizes the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 2 day of Sept. 2003 at a regular meeting of the Hardy County Commission.

  
William (JR) Keplinger, President  
Hardy County Commission

I, JANET S. Ferrell certify that the above resolution is a true and accurate copy of a resolution adopted on the 2 day of September 2003 at a meeting of the Hardy County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Janet S. Ferrell 9/2/03  
Signature Date

Hazard Mitigation Plan  
Hardy County Public Meeting  
February 26, 2003  
6:30 PM

<u>Name</u>	<u>Representing</u>
1 Paul R Lewis	Hardy County
2 Melissa Earl	Region 8 PDC
3 Cheryl Sullivan	Town of Wfd.
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Hazard Mitigation Plan  
Hardy County Committee Meeting  
February 24, 2003  
10:00 AM

Name

- 1 *William Ewell*
- 2 *Paul R Lewis*
- 3 *Pattie Bennett*
- 4 *Chuck Silliman*
- 5 *JEFF DRISKILL JR*

Representing

- Region 8 PDC*
- Hardy County Planner*
- Region 8 PDC*
- TOWN OF MOOREFIELD*
- WARDENSVILLE P.D.*

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Hazard Mitigation Plan  
Hardy County Committee Meeting  
February 6, 2003  
10:00 AM

<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>
1 Justin Kincaid	Wardensville	874-3950
2 JEFF DRISKILL	WARDENSVILLE	874-3950 / wvillechief@usa.com
3 Peter Bennett	RB PCD	
4 Chuck Silliman	Team A Moorefield	Silliman@hoveky.net.com
5 Melissa Eason	Region 8 POC	
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Hardy County  
Hazard Mitigation Draft Review Meeting  
May 22, 2003

A meeting was held on May 22, 2003 at the Ponderosa Steakhouse to discuss the draft of the Hardy County Hazard Mitigation Plan. Several agencies were invited. Seven attendees gathered to review the plan and discuss changes and take comments on the plan. After Melissa Earle provided a brief overview of the County's Plan the floor was opened for discussion. The following comments were made during discussion:

Need Corridor H Maps concerning flooding issues in Moorefield.

Identify areas of natural gas lines.

Include reports from PVCD on dam inspections.

List of private dams. Report from NRCS.

DEP Dam Safety has complete list of all dams.

Hazard Mitigation Plan  
Hardy County Committee Meeting  
April 11, 2003  
9:30 AM

<u>Name</u>	<u>Representing</u>
1 <i>Melissa Earle</i>	<i>Region 8 PDC</i>
2 <i>Paul R Lewis</i>	<i>Hardy Co Commission/Planning</i>
3 <i>Keith Billman</i>	<i>Town of Moorefield.</i>
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Hardy County Public Meeting  
August 21, 2003  
6:30 pm

Although properly advertised, there were no members of the general public in attendance at the public hearing to receive comments on the hazard mitigation plan. Additionally, no written comments were received.



### **Notice Public Hearing Mineral County Commission Hazard Mitigation Plan**

The Region 8 Planning and Development Council, the Mineral County Commission and the municipalities of Mineral County will hold a public meeting for the purpose of receiving comments on the County's Hazard Mitigation Plan. The plan will be used by the County, the municipalities, the West Virginia State Office of Emergency Services and the Federal Emergency Management Agency. The meeting will be held on Monday, August 25, 2003 at 6:30 pm in the Commission Room of the Mineral County Courthouse.

The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. A copy of the Mineral County Hazard Mitigation Plan is available for review at public libraries within the county, the offices of local governments and by contacting the Region 8 Planning & Development Council, PO Box 849, Petersburg, WV 26847 before August 25, 2003. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304)257-2448.

**Notice Public Hearing  
Mineral County Commission  
Hazard Mitigation Plan**

The Region 8 Planning and Development Council, the Mineral County Commission and the municipalities of Mineral County will hold a public meeting for the purpose of receiving input on the community's hazard risks, identifying mitigation goals and discussing needed projects to reduce risks. Public input will be used in the development of a hazard mitigation plan for Mineral County. The plan will be used by the County, the municipalities, the West Virginia State Office of Emergency Services and the Federal Emergency Management Agency. The meeting will be held on Thursday, March 13, 2003 at 7:00 pm in the Court Room of the Mineral County Courthouse.

The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304)257-2448.

## Notice Public Hearing Mineral County Commission Hazard Mitigation Plan

The Region 8 Planning and Development Council, the Mineral County Commission and the municipalities of Mineral County will hold a public meeting for the purpose of receiving input on the community's hazard risks, identifying mitigation goals and discussing needed projects to reduce risks. Public input will be used in the development of a hazard mitigation plan for Mineral County. The plan will be used by the County, the municipalities, the West Virginia State Office of Emergency Services and the Federal Emergency Management Agency. The meeting will be held on Thursday, March 13, 2003 at 7:00 pm in the Court Room of the Mineral County Courthouse.

The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. If you have any questions regarding this meeting, please feel free to contact Melissa Earle at (304) 257-2448.

Hazard Mitigation Plan  
Mineral County Public Meeting  
August 25, 2003  
6:30 PM

<u>Name</u>	<u>Representing</u>
1 Thane Baker	Mineral County
2 Mr. E. Blund	Mineral County
3 Butch Armentrout	Carpendale
4 BOB SWINK	ELK GARDEN
5 Jack Bowers	Min. Co. Commission
6 Thelma Bowers	Fort Ashby
7 Cindy Pyles	Mineral County
8 CHARLITE HOTT	MINERAL COUNTY
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RESOLUTION

NOW THEREFORE BE IT RESOLVED that the City of Piedmont accepts the Mineral County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Mineral County Hazard Mitigation Plan Committee. The City of Piedmont recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 15<sup>th</sup> day of Sept. 2003 at a regular meeting of the City of Piedmont.



Michael Anthony Francis, Mayor  
City of Piedmont

I, Ronda Buxton certify that the above resolution is a true and accurate copy of a resolution adopted on the 15<sup>th</sup> day of Sept., 2003 at a meeting of the City of Piedmont at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Ronda Buxton 9/15/03  
Signature Date



BEHIND THE SADDLE IS THE BIRTHPLACE OF NANCY HANKS,  
MOTHER OF ABRAHAM LINCOLN

# County Commission of Mineral County

150 Armstrong Street  
Keyser, West Virginia 26726

MICHAEL C. BLAND, COUNTY COORDINATOR

PHONE: (304) 788-5921  
(301) 777-0602  
FAX: (304) 788-4109  
TDD: (304) 788-0568

THE COMMISSIONERS

JACK BOWERS, PRESIDENT  
Fort Ashby, West Virginia

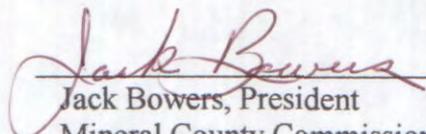
CYNTHIA L. PYLES  
Keyser, West Virginia

JANICE LARUE  
Piedmont, West Virginia

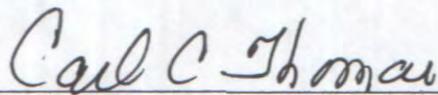
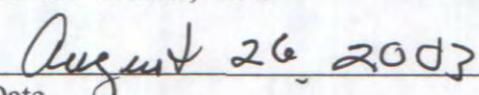
## RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Mineral County Commission accepts the Mineral County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Mineral County Hazard Mitigation Plan Committee. The Mineral County Commission recognizes the plan as a living document and will make annual reviews and updates to the plan.

Adopted this 26<sup>th</sup> day of August, 2003 at a regular meeting of the Mineral County Commission.

  
\_\_\_\_\_  
Jack Bowers, President  
Mineral County Commission

I, Carl C. Thomas, Clerk, certify that the above resolution is a true and accurate copy of a resolution adopted on the 26<sup>th</sup> day of August, 2003 at a meeting of the Mineral County Commission at which a quorum was present and with a majority voting affirmatively to pass this resolution.

  
\_\_\_\_\_  
Carl C. Thomas, Clerk  
  
\_\_\_\_\_  
Date

Hazard Mitigation Plan  
Mineral County Committee Meeting  
March 13, 2003  
6:00 PM

	<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>	<u>Address</u>
1	Pattie Bennett	Regis		
2	Bob Swink	ELK GARDEN	304-446-5135	PO Box 5 ELK GARDEN WV 26717
3	Janice Larue	Mineral Co. Commission	304-355-2613 / jlarue46@yahoo.com	276 W FAIRVIEW ST PIEDMONT WV 26750
4	Mike Bland	Mineral Co.		
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Hazard Mitigation Plan  
Mineral County Public Meeting  
March 13, 2003  
7:00 PM

<u>Name</u>	<u>Address</u>
1 Patti Bennett	Reg B
2 Bob Swink	PO Box 5 ELK GARDEN WV 26717
3 Jack Bowers	MINERAL COMMISSION
4 Janice Larve	MINERAL Co. Commission
5 Nicholas Bonnyet A.	→ Resident.
6 Michael Blad	Mineral County
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Mineral County  
Hazard Mitigation Committee  
March 3, 2003

<u>Name</u>	<u>Representing</u>	<u>Phone / E-mail</u>
Melissa Esler BOB SWINK	Region 8 PDC ELK GARDEN	304-446-5135
Michael Bland	Mineral Co. Comm.	304 788-5921
Chuck Dawson	Piedmont	304-355-2622
Janice LaRue	Mineral Co. Comm	304-355-2613
Patti Bennett	RB PDC	257-1221

RESOLUTION

NOW THEREFORE BE IT RESOLVED that the City of Keyser accepts the Mineral County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Mineral County Hazard Mitigation Plan Committee. The City of Keyser recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 27th day of August 2003 at a regular meeting of the City of Keyser.

Roger Newlin

Roger Newlin, Mayor  
City of Keyser

I, Deborah Pamepinto certify that the above resolution is a true and accurate copy of a resolution adopted on the 27 day of August, 2003 at a meeting of the City of Keyser at which a quorum was present and with a majority voting affirmatively to pass this resolution.



Deborah Pamepinto  
Signature

8/27/03  
Date



Hazard Mitigation Plan  
 Mineral County Committee Meeting  
 February 21, 2003  
 1:00 PM

	Name	Representing	Phone/Email	Address
1	Dennis McLean	Mineral Co OES	304 738 1821 mccoes@pennstate.edu	RR 1 BOX 107-6 KEYSER, WV 26725
2	LTC Cary Schmidt	WV ARNG	304-788-1821	Box 7 Richpoley 26753
3	Butch Armstrong	Carpenters	304-738-1612	
4	Janice Larue	Mineral County	304-355-2613 janicelarue4@yahoo.com	276 W FAIRVIEW ST, PIEDMONT, WV 26750
5	Michael Bland	Mineral County	mblond@mineralcounty.wv.com 304 288-5921	150 Armstrong St, Keyser WV
6	Pete Burnett	R8PDC	257-1221	P'burg
7	Melvin Esler	Region 8 ADC		
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RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Town of Elk Garden accepts the Mineral County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Mineral County Hazard Mitigation Plan Committee. The Town of Elk Garden recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 1<sup>ST</sup> day of SEPTEMBER 2003 at a regular meeting of the Town of Elk Garden.

Robert B. Swink

Robert B. Swink, Mayor  
Town of Elk Garden

I, BARBARA CLEMONS certify that the above resolution is a true and accurate copy of a resolution adopted on the 1<sup>ST</sup> day of SEPTEMBER, 2003 at a meeting of the Town of Elk Garden at which a quorum was present and with a majority voting affirmatively to pass this resolution.

✓ Barbara Clemons 9/1/03  
Signature Date

Mineral County  
Hazard Mitigation Plan Review  
May 23, 2003

Provide copies of plan to unincorporated areas (public libraries).

Should dams be recognized on FEMA maps?

Easements associated with PVCD dams (flood control dams) are outdated.

Coordination between Mineral County, NRCS, and Potomac Valley Conservation District.

Should be identified goal in plan.

Contact DEP Dam Safety Division for other dam structures located in counties.

Dams are re-certified every two years by NRCS Engineers. Dams are inspected annually.

Follow state regulations regarding dam spillways. (Top of dam)

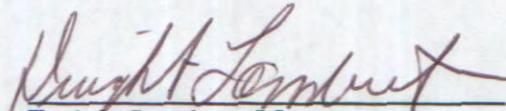
Enforcement of regulations concerning safety of water supply.

Identification of additional water sources.

## RESOLUTION

NOW THEREFORE BE IT RESOLVED that the Town of Carpendale accepts the Mineral County Hazard Mitigation Plan as prepared by the Region 8 Planning and Development Council and the Mineral County Hazard Mitigation Plan Committee. The Town of Carpendale recognizes the plan as a living document and will make annual reviews and updates to the plan in cooperation with the County Commission.

Adopted this 2<sup>nd</sup> day of Sept 2003 at a regular meeting of the Town of Carpendale.



Dwight Lambert, Mayor  
Town of Carpendale

I, Rhonda Van Meter certify that the above resolution is a true and accurate copy of a resolution adopted on the 2<sup>nd</sup> day of Sept, 2003 at a meeting of the Town of Carpendale at which a quorum was present and with a majority voting affirmatively to pass this resolution.

Rhonda Van Meter 9-2-03  
Signature Date

Hazard Mitigation Plan  
 Mineral County Committee Meeting  
 April 22, 2003  
 2:00 PM

	<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>	<u>Address</u>
1	Michael Bland	Mineral Co.	788-6747 5921	150 Armstrong Keyser
2	Dennis McGarr	Min. Co. OES/911	788 1321	RR1 Box 172-E, Keyser WV 26726
3	Dorrian Armentrout	Carpendale	738- <del>8</del> <sup>1612</sup>	P.O. Box 7 Ridgely, WV 26753
4	Charles Baker	Min Co Planning	788-1457	150 Armstrong Keyser <del>#266 Bonnet</del> Ranney WV 26757
5	Melina East	Region 8		
6	Janice Latree	Mineral Co	355-2613	276 W Fairview St Piedmont, WV 26750
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Mineral County  
Committee Meeting  
April 14, 2003  
10:00 AM

<u>Name</u>	<u>Representing</u>
Melissa Esler	Region 8
Dennis McGinnis	Min Co OES/911
Mungus R. S.	City of Keyser
JANICE LARUE	MINERAL County Commission
Michael Bland	Mineral Co. Coord.

Hazard Mitigation Plan  
Mineral County Committee Meeting  
April 9, 2003  
1:00 PM

	<u>Name</u>	<u>Representing</u>	<u>Phone/Email</u>	<u>Address</u>
1	Melissa Eise	Region 8 AOC		
2	Mike Bland	Mineral Co.	mbland@mineralcountywv.com	
3	DENNIS McGRANN	MINERAL Co OES	mcoes@PENNS <sup>S</sup> WOODS.NET	
4	Charlie Baker	Mineral	788-1457	
5	Janice Larue	MINERAL Co.	355-2613	janicelarue46@yahoo.com
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Mineral County  
Hazard Mitigation Plan Public Meeting  
August 25, 2003

A public meeting was held on Monday, August 25, 2003 at 6:30 pm in the Commission Room of the County Courthouse. In addition to several local officials there were two attendees from the general public.

After a brief overview of the plan by Melissa Earle and Mike Bland, the floor was open for discussion.

One attendee identified an unease regarding the possibility of hazardous waste dumping on farmland. The concern was identified because of a situation in another area where some sludge spreading had taken place. The sludge turned out to be unhealthy and caused the death of some animals and some sickness in residents of the area. The Commission discussed the topic and assured Mrs. Hott that they would keep the concern in mind and would talk with the DNR to ensure Mineral County would not face the same situation in the future. The concern will be added to the hazard mitigation plan as the County feels that it is an important issue.

Having no other comments from the floor, the meeting was adjourned.

Hazard Mitigation Plan  
Public Meeting – Mineral County  
Mineral County Court House  
March 13, 2003  
7:00 pm

ATTENDANCE:

Patti Bennett, Region 8 PDC; Bob Swink, Representative Elk Garden; Jack Bowers, Mineral County Commission; Janice LaRue, Mineral County Commission; Nickolas Boinovych, resident; and Michael Bland, Mineral County Commission.

BUSINESS:

Patti Bennett, who then proceeded to give an overview of the Hazard Mitigation Plan and its progress on the county level, started introductions. Aspects of the plan were discussed and the floor was open for questions.

Mr. Boinovych questioned the hazard potential of having a Class D Landfill on his property. Michael Bland addressed the question and after much discussion, it was noted that landfills in general do not pose a hazard that needs to be addressed in the county plan.

Mr Boinovych questioned the use of local contractors put on a call list used to assist in clean ups after a disaster, such as the removal of the 20+ inches of snow the county recently experienced. It was noted that this issue needs to be addressed to the DOH, not in the mitigation plan.

There being no further questions, the meeting was adjourned.

**Pendleton County Hazard Mitigation Plan  
Promulgation Statement-Resolution**

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**WHEREAS** preparedness to cope with effects of a disaster includes many diverse but interrelated elements which must be woven into an integrated hazard mitigation management system involving all departments of local government and private support agencies, as well as the individual citizen.

**AND WHEREAS** planning for population protection must be a cooperative effort to avert or minimize the effects of natural, technological, and/or man-made disasters, protect lives and property, and restore the stricken area to its pre-disaster status with a minimum of social and economic disruption.

**SO AS A RESULT**, pursuant to the requirement of Section 322 of the Disaster Mitigation Act of 2000, Pendleton County has developed the Pendleton County Hazard Mitigation Plan to provide a guide to mitigation for each community in Pendleton County.

**AND WHEREAS** the Pendleton County Hazard Mitigation Plan was developed to be responsive to federal and state requirements and is subject to approval by the State of West Virginia and the Federal Emergency Management Agency (FEMA).

**NOW THEREFORE IT IS RESOLVED, ORDERED AND DETERMINED**, that the Pendleton County Commission does hereby approve and adopt the Pendleton County Hazard Mitigation Plan, which is filed in the Office of the Pendleton County Commission at the Courthouse in Franklin, West Virginia, and which is incorporated herein by this reference.

**PASSED AND ADOPTED** by the County Commission of Pendleton County, State of West Virginia, this \_\_\_\_\_ day of \_\_\_\_\_, 2009.

---

**County Commission Signature**

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**Date**

---

**Town of Franklin, Mayor**

---

**Date**

---

**OEM Director**

---

**Date**

# OEM

Attachment B

PENDLETON COUNTY OFFICE OF  
EMERGENCY MANAGEMENT AND HOMELAND SECURITY

## Letter of Agreement

**In order for a multi-jurisdictional plan to meet the requirement of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.**

**With this letter the Pendleton County Commissioners commits to participating in a multi-jurisdiction plan with the Town of Franklin. The planning effort will result in a risk assessment and plan with individual annexes.**

**The County agrees to adopt the completed multi-jurisdiction plan upon approval by FEMA.**

**County: County Commission  
Point of Contact: Judy Hott/President**

**County: Pendleton  
Point of Contact: Curtis Crigler/Office of Emergency Management**

## Signatures

---

**County Commission**

**Date**

---

**County**

**Date**

# OEM

PENDLETON COUNTY OFFICE OF  
EMERGENCY MANAGEMENT AND HOMELAND SECURITY

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirement of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Pendleton County Commission commits to participating in a multi-jurisdiction plan with the County and the Town of Franklin. The planning effort will result in a risk assessment and plan with individual annexes.

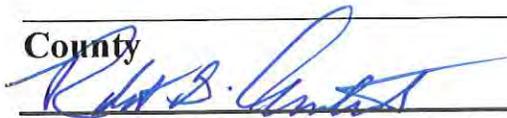
The County agrees to adopt the completed multi-jurisdiction plan upon approval by FEMA.

County: Pendleton

Point of Contact: Curtis Crigler/Office of Emergency Management

## Signatures

County



Pendleton County Commission

Date

9.2.08

Date

# OEM

Attachment C

PENDLETON COUNTY OFFICE OF  
EMERGENCY MANAGEMENT AND HOMELAND SECURITY

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirement of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Town of Franklin commits to participating in a multi-jurisdiction plan with the Town of Franklin. The planning effort will result in a risk assessment and plan with individual annexes.

The County agrees to adopt the completed multi-jurisdiction plan upon approval by FEMA.

County: County Town of Franklin  
Point of Contact: Pamela Waybright/Mayor

County: Pendleton  
Point of Contact: Curtis Crigler/Office of Emergency Management

## Signatures

---

County Commission

Date

---

County

Date

# OEM

PENDLETON COUNTY OFFICE OF  
EMERGENCY MANAGEMENT AND HOMELAND SECURITY

## Letter of Agreement

In order for a multi-jurisdictional plan to meet the requirement of Section 322 of the Disaster Mitigation Act of 2000 each participating jurisdiction must participate in the planning process and adopt the completed plan.

With this letter the Town of Franklin commits to participating in a multi-jurisdiction plan with the County and the Pendleton County Commission. The planning effort will result in a risk assessment and plan with individual annexes.

The Community agrees to adopt the completed multi-jurisdiction plan upon approval by FEMA.

**Community: Town of Franklin**  
**Point of Contact: Pamela Waybright/Mayor**

**County: Pendleton**  
**Point of Contact: Curtis Crigler/Office of Emergency Management**

## Signatures

County	<i>Pamela Waybright/Mayor</i>	Date	<i>9-5-08</i>
Community		Date	

**PUBLIC MEETING ON HAZARD MITIGATION PLAN DEVELOPMENT**

*Pendleton County Office of Emergency Management, the Pendleton County Commission, Town of Franklin, will hold a public meeting to receive input on the community's hazards, identify mitigation goals, and discuss needed projects to reduce risks. The plan will be used by the Town of Franklin, Pendleton County, and the WV State office of Emergency Services and The Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held at the Pendleton County Community Building at 10:00 a.m. on February 27, 2008.*

*The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. If you have any questions regarding this meeting, please feel free to contact Curtis Crigler at (304) 358-3889.*

**Pendleton County Local Emergency  
Planning Committee  
Meeting  
February 27, 2008  
Pendleton County Community Building  
10:00 a.m.**

**Agenda**

**Introductions**

**County Hazard Mitigation Plan Review**

**CWID-08**

**DEP Presentation/Tech Turner**

**Mass Evacuation Committee**

**Planning for County Drills**

**CERT Report**

**Officers Positions**

**Announcements**

**Next Meeting Date/Place/Time**

**Adjournment**

Pendleton County Public Hazard Mitigation Plan Development Meeting  
February 27, 2008 10:00 a.m.  
Pendleton County Community Center

Minutes:

A public meeting was held on February 27, 2008 along with the regular LEPC (Local Emergency Planning Committee) meeting at 10:00 a.m. at the Community Center in Franklin. Those attending reviewed a copy of the Hazard Mitigation Plan from 2004. The committee reviewed and updated the Planning Process, Time Line and the Assets Survey. Mitigation Strategies identified areas which will not need to be addressed in the update. The Plan Maintenance Procedures was updated that the plan would be review four times a year and a sub committee will do an evaluation review of the plan twice a year. Complete update of the plan will be completed every five years.

Submitted by:  
Edna Mullenax  
LEPC Acting Secretary

**Pendleton County Local Emergency Planning  
Committee Meeting/ February 27, 2008**

**Sign In Sheet**

**Name** Paul G Mallow  
**Agency/Title** Pendleton County Emergency Rescue, Inc. - V.P.  
**Address** P.O. Box 663  
Franklin W Va  
**Phone** 304-358-7013  
**E-Mail** \_\_\_\_\_

**Name** BRUCE MINOR  
**Agency/Title** FRANKLIN FIRE / FRANKLIN OIL  
**Address** P.O. Box 337, Franklin WV  
**Phone** (304) 358-2321 (H) 358-2354 (W)  
**E-Mail** bminor@franklinoil.com

**Name** Janet Underwood  
**Agency/Title** Pendleton Community Care  
**Address** PO Box 100  
Franklin, WV 26807  
**Phone** 304-358-2355 ext. 117  
**E-Mail** janet.pcc@CHNWV.ORG

Pendleton County Local Emergency Planning  
Committee Meeting/ February 27, 2008

Sign In Sheet

Name Judy Kisor  
Agency/Title EWUCA / Red Cross - SA -  
Address CERT 108 Highland Ave.  
Lebanon, WV  
Phone A-257-9140 - W-257-1107  
E-Mail ewuca grant @ Proतिक.net.net

Name Galen Hedrick  
Agency/Title CERT  
Address Franklin, WV 26807  
Phone 358-2709  
E-Mail mandghedrick@yahoo.com

Name Mary Hedrick  
Agency/Title CERT  
Address Franklin, WV 26807  
Phone 358-2709  
E-Mail mandghedrick@yahoo.com

**Pendleton County Local Emergency Planning  
Committee Meeting/ February 27, 2008**

**Sign In Sheet**

Name Pam Waybright  
Agency/Title Franklin Mayor  
Address Box 107  
Franklin, WV 26807  
Phone 358 7525  
E-Mail Waybright@yahoo.com

Name Edna Mullenax  
Agency/Title Citizen Corps Developer  
Address Hc 77 Box 90  
Circleville, WV 26804  
Phone 567-2477  
E-Mail mullenaxed@yahoo.com

Name Curtis Cugler  
Agency/Title Pend. Co. OEM  
Address P.O. Box 187  
Franklin, WV 26807  
Phone 358-3889  
E-Mail tact1200@yahoo.com

**Pendleton County Local Emergency Planning  
Committee Meeting/ February 27, 2008**

**Sign In Sheet**

**Name** GARNETT R. GREGORY  
**Agency/Title** \_\_\_\_\_  
**Address** HC 74 BOX 1B  
SUGAR GROVE, WV 26815  
**Phone** 249-5335  
**E-Mail** GREGORY GR 601 @ HOTMAIL.COM

**Name** Trent AIT  
**Agency/Title** Pendleton Co. Firemens ASSOC.  
**Address** HC 32 BX 52-A  
Upper Tract WV. 26866  
**Phone** 358-2784  
**E-Mail** TheAIT35@yahoo.com

**Name** EVE FIROR  
**Agency/Title** CHRISTIAN ASSISTANCE NETWORK  
**Address** PO Box 572  
**Phone** 359-2506  
**E-Mail** wefiror@gmail.com

**Pendleton County Local Emergency Planning  
Committee Meeting/ February 27, 2008**

**Sign In Sheet**

**Name** Barbara Feaster  
**Agency/Title** EWVCA, PadCross, SA, Cert  
**Address** 210 Mountain View Dr.  
Maysville, W.V. 26833  
**Phone** 304-749-1788  
**E-Mail** ewvca.grant@frontier.net.net.

**Name** \_\_\_\_\_  
**Agency/Title** \_\_\_\_\_  
**Address** \_\_\_\_\_  
\_\_\_\_\_  
**Phone** \_\_\_\_\_  
**E-Mail** \_\_\_\_\_

**Name** \_\_\_\_\_  
**Agency/Title** \_\_\_\_\_  
**Address** \_\_\_\_\_  
\_\_\_\_\_  
**Phone** \_\_\_\_\_  
**E-Mail** \_\_\_\_\_

Pendleton County Public Hazard Mitigation Plan Development Meeting  
August 27, 2008 10:00 a.m.  
Pendleton County Community Center

Minutes:

A public meeting was held on August 27, 2008 along with the regular LEPC (Local Emergency Planning Committee) meeting at 10:00 a.m. at the Community Center in Franklin. Those attending were given opportunity to review the updated Hazard Mitigation Plan. Additions wording was added to the Plan Maintenance Procedures that the plan would be reviewed four times a year, November, February, May and August. A sub committee would review the plan twice a year in April and June. The plan would be updated every five years.

Also, request that flood plain maps be updated and training be provided on how to read the maps.

There was also a suggestion to provide a copy of the updated plan to the Library in Franklin for public viewing.

To assure documentation for updated plan, Appendix P-Tracking Form from the State Mitigation Plan would be used.

Submitted by:

Edna Mullenax

LEPC Acting Secretary.

**Pendleton County Local Emergency  
Planning Committee  
Meeting  
August 27, 2008  
Pendleton County Community Building  
11:00 a.m.**

**Agenda**

**Introductions**

**Swift Reach Networks Web Presentation**

**Review of the Hazard Mitigation Plan**

**Officers Election  
(Vice Chair-Secretary-Treasure)**

**Mass Evacuation Committee  
(Set date for meeting) Update on Regional Planning**

**CERT Report**

**Other Reports:**

**Announcements:  
State LEPC/SERC Conference September 22-24 in Charleston**

**Next Meeting Date/Place/Time  
*November 19<sup>th</sup> @ 7:00 p.m. @ Community Building in Franklin***

**Adjournment**

## **PUBLIC MEETING ON HAZARD MITIGATION PLAN DEVELOPMENT**

*Pendleton County Office of Emergency Management, the Pendleton County Commission, Town of Franklin, will hold a public meeting to receive input on the community's hazards, identify mitigation goals, and discuss needed projects to reduce risks. The plan will be used by the Town of Franklin, Pendleton County, and the WV State office of Emergency Services and the Federal Emergency Management Agency for the purpose of local hazard mitigation. The meeting will be held in conjunction with the LEPC meeting at the Pendleton County Community Building at 11:00 a.m. on Wednesday, August 27, 2008.*

*The importance of the hazard mitigation planning process makes public participation extremely important and broad participation is needed for a quality planning effort. If you have any questions regarding this meeting, please feel free to contact Edna Mullenax/Local Emergency Planning Committee Chairperson at (304) 358-3889.*

**Pendleton County LEPC Meeting  
August 27, 2008**

**Sign In Sheet:**

Name DAVE NESBITT

Address WUDEP HC 63 Box 2545 Romney WV 26757

Phone # 304-822-7266 (office) 304-747-8650 (cell)

E-mail dauid.p.nesbitt@wu.gov

Name Maie Dahmer

Address HC 69, Box 3F Franklin WV 26807

Phone # (304) 358-3975

E-mail \_\_\_\_\_

Name Diana Mitchell

Address PO Box 1025 Franklin

Phone # 304 358 3271

E-mail PC911@rapidcable.com

Name Janet Underwood

Address PO Box 505, Franklin

Phone # 304-358-2180

E-mail JUnderwood@PCC-NPC.org