Region VII
Regional Hazard Mitigation Plan

Barbour, Braxton, Gilmer, Lewis, Randolph, Tucker, Upshur West Virginia Counties and the municipalities therein.

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Prologue

In the recent days since this RHMP was written and approved by Region VII Planning & Development Council membership a significant earthquake and hurricane event occurred on the east coast of the United States. Region VII is 200 miles inland from Irene's landfall and about 175 miles from the epicenter of the "Virginia Quake."

Magnitude 5.8 Virginia

The earthquake registered at 5.8 on the Richter Scale. Vibrations were significant in central West Virginia. The only damage reported in this Seven County Hazard Mitigation District was stones falling from a chimney of a 100 year old Courthouse. There is probably more damage that went unreported or un-noticed, but that damage was not newsworthy.

Points to note are:

- Generally, our structures are built to withstand significant earthquakes on fault lines near this region.
- Earthquakes in this Region are very rare; however people feel vibrations from earthquakes that occur at very distant places.
- With the internet, staff at the Region VII Office was able to determine it was an earthquake, and its location, within minutes of the event --- Information about Hazards & Disasters is available very quickly.

Hurricane Irene

Throughout its path, Irene caused widespread destruction and at least 55 deaths; monetary losses in the Caribbean could be as high as US$3.1 billion according to preliminary estimates. Early damage estimates in the U.S. are about $10-15 billion. Central West Virginia got some rain, but experienced mostly clouds from this storm. In the past hurricanes have caused great amounts of rainfall and flooding, Irene didn't physically impact this Regional Hazard Mitigation District significantly.

During the hurricane event the increased use of internet and social media as a warning network was very much in evidence. One who had access to cable TV or internet could follow the storm from the Caribbean to New York City without missing a minute of coverage.

Conjecture

Early warning and event information is critical to manage hazards and disasters on both a personal and an emergency management scale. Communication Infrastructure is a critical component in Hazard Mitigation in that it is a vehicle for warning and public education. The seven counties in Region VII are rural and mountainous; this Region VII does not have complete wireless or cable coverage. Population density is low; some people could fall through an emergency information crack without better communication infrastructure. Any projects that are proposed that would increase communication capacity should be fully supported from a hazard mitigation perspective.

Chapter 1: Region VII Hazard Mitigation Plan Work Plan

Counties:

Barbour, Commission President Tim McDaniel
Braxton, Commission President David Jack
Gilmer, Commission President David Hess
Lewis, Commission President Agnes Queen
Randolph, Commission President Mike Taylor
Tucker, Commission President Tom Carr
Upshur, Commission President Donnie Tenney

Municipalities:

Barbour
City of Belington, Mayor Carlton "Jodie" Haller
City of Philippi, Mayor David Mulneix
Town of Junior, Mayor Gary Miller

Braxton
Town of Burnsville, Mayor Paul Bragg
Town of Flatwoods, Carolyn Sue Marple
Town of Gassaway, Mayor Richard Roach
Town of Sutton, Mayor J.L. Campbell

Gilmer
City of Glenville, Mayor Tashua Allman
Town of Sand Fork, Mayor Franklin Tomblin

Lewis
City of Weston, Mayor Julia Spielberg
Town of Jane Lew, Mayor Sam West

Randolph
City of Elkins, Mayor Duke Talbot
Town of Beverly, Mayor David Harper
Town of Coalton, Mayor Jim Rossi
Town of Harman, Mayor Jerry Teter
Town of Huttonsville, Mayor Rodney McAtee
Town of Mill Creek, Mayor Bill Brock
Town of Montrose, Mayor Joseph Bennett

Tucker
City of Parsons, Mayor Dorothy L. Judy
City of Thomas, Mayor Matt Quattro
Town of Davis, Mayor Joe Drenning
Town of Hambleton, Mayor Linda Bates
Town of Hendricks, Mayor Solena Roberts

Upshur
Buckhannon, Mayor Kenneth Davidson

Assisting Agency:

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Points of Contact:

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Bob Jacobus, Community Development Specialist
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Regional Mitigation Plan Development:

West Virginia hazard mitigation planning is being reorganized from individual county plans into regional plans. The State Hazard Mitigation Planners approached Regional Planning & Development Councils to facilitate and update hazard mitigation plans that corresponded to their service geography. A Regional Hazard Mitigation Plan (RHMP) that meets FEMA specifications and guidelines and those of West Virginia Division of Homeland Security and Emergency Management (WVDHSEM) has been created by compiling recently updated county plans and incorporating any emerging information from scheduled meetings or written comments.

Region VII Planning & Development Council (RVII) members, Region VII PDC staff, County Flood Managers and interested citizens compile the general planning team. County Commissioners and Municipality Mayors are included in the RVII membership; these members may appoint proxies to the Hazard Mitigation planning team at any time. A special facilitation team from the group previously listed may form on an "as needed basis" if warranted during the planning process.

The US EDA has funded a Hazard Planning project from an economic development perspective for disaster declared counties of June 2008 in Region VII. Barbour, Braxton, Gilmer, Lewis and Tucker have been studied under the EDA program; final results are available at www.regionvii.com. 15 public meetings were conducted during the winter of 2010-2011 (See following page).

Plan of Action and Timeline:

All Counties in RVII have had their updated individual hazard mitigation plans approved by WVDHSEM and FEMA in the past three years. These plans were compiled and incorporated into the RHMP. A draft was prepared from the approved county plans then distributed to team members for comments. Additional Comments were solicited from the planning team and from the general public by means such as planning meetings, letters, web presence and public meetings. Region VII conducted joint CEDS/Hazard Mitigation Meetings in each Hazard Mitigation District County during summer 2011. Regional OES directors, floodplain managers and adjacent Regional Councils were individually contacted by phone or e-mail and invited to review the RHMP draft.

Region VII presented a draft for committee & public review in June 2011.

Budget:

Project costs to Region VII have exceeded the maximum reimbursements offered by West Virginia Division of Homeland Security and Emergency Management for Region VII's Regional Hazard Mitigation Plan.

Budget total: $14,000

Funding:

According to Roger Jefferson, West Virginia State Mitigation Planner, there are no other available funds to assist with the regionalization of the Region VII Hazard Mitigation Plan at this time.

Special Considerations:

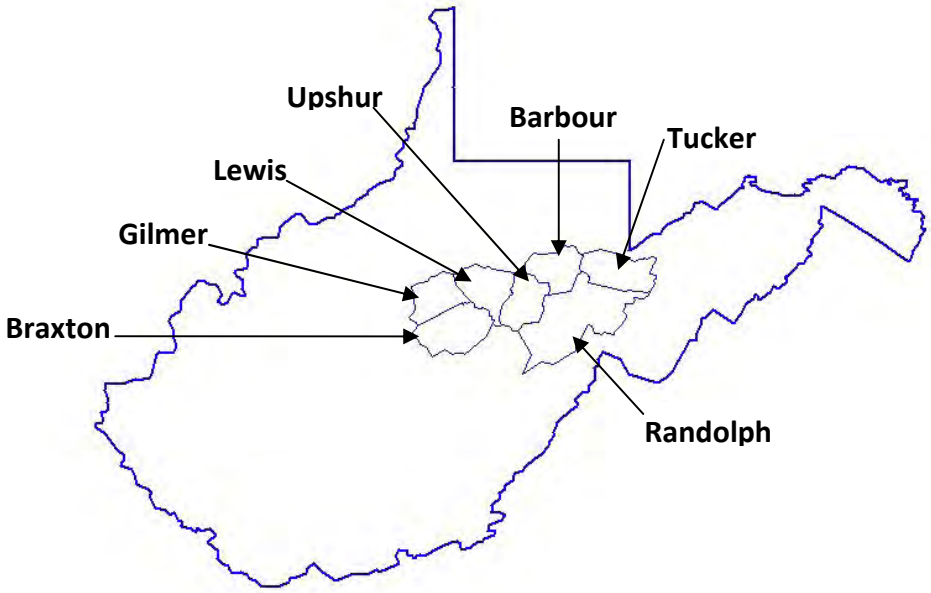
The Counties of Region VII Planning & Development Council are diverse in their geography and hazard mitigation needs. The elevation ranges from 700 feet above sea level to 4,000 feet above sea level. The highest annual precipitation of the State occurs in the eastern counties of this Region and the most severe flooding occurs in the most western counties. There is abundant snow at 3,000 feet and even more rain at 1,000 feet elevation.

Only a generalized Hazard Mitigation Plan will work on the Regional level because RVII hazards and their frequency are atypical for each county. The Region VII Hazard Mitigation Plan addresses common issues, exhibits common trends, serves as a guide to mitigation programs and provide record of important hazard mitigation projects in development. It is not the intent for the regional plan to supplant the important planning and benefits derived thereof from the planning at the county and municipal level. The Regional Hazard Mitigation Plan is symbiotic to those local efforts and provides an umbrella of regional planning that better serves the needs of State and Federal Hazard Mitigation Planners.

All counties in Region VII updated their respective HMPs since 2008. Their public meetings and involvement elements are recognized in this creation of a Regional HMP as having great value and providing a firm planning foundation. With the additional hazard mitigation public meetings conducted as part of the EDA Economic Adjustment project (the regional HMP was discussed at these meetings), Region VII PDC Quarterly meetings and various county & municipality meetings the public and elected officials have had ample opportunity to provide planning input. Further input is accepted and considered for implementation or future updates on a continuing basis.

Region VII Planning & Development Council

Member Counties



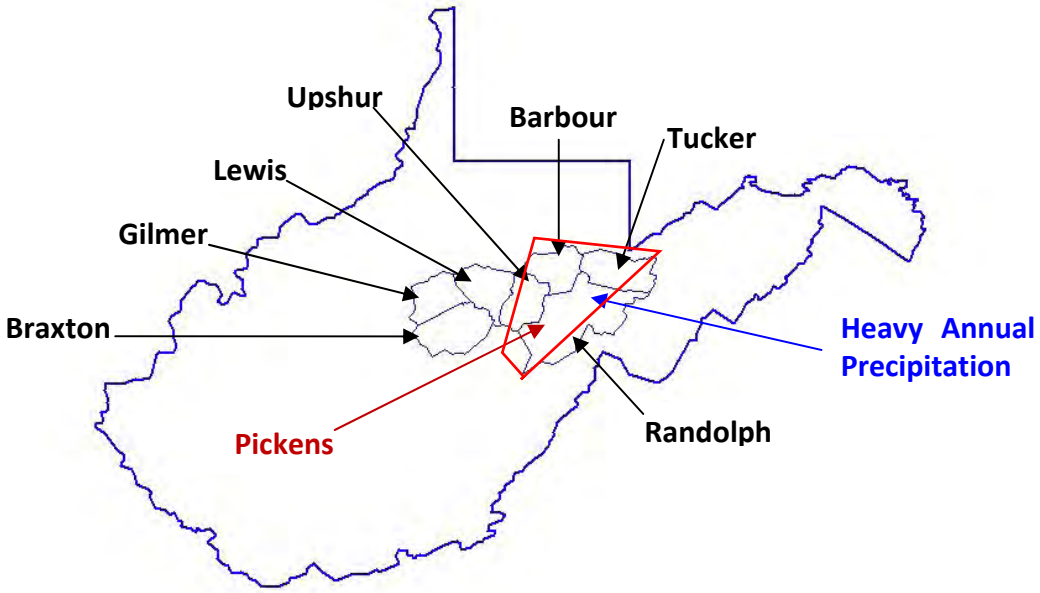
Region VII Planning & Development Council

Heavy Snows / Heavy Rains

Heavy precipitation occurs in the eastern sections of Region VII. The highest average annual rainfall in West Virginia is recorded at Pickens in Randolph County.

Drought can occur in the extreme east, both precipitation climates are caused by orthographic lifting.

For the most part, all the precipitation that occurs in the east drains through the western counties making them prone to flooding.



Record of Changes

June 10, 2011		This is a new Hazard Mitigation Plan…no changes have been made.
June 22, 2011		Update Mayor list
June 22, 2011		Edit Chapter 1 per WVDHSEM Comments & Crosswalk
June 22, 2011		Edit Chapter 2 per WVDHSEM Comments & Crosswalk
June 22, 2011		Delete Appendix XII Crosswalk
June 22, 2011		Add Appendix XII Identified Hazard Descriptions
June 24, 2011		Add Chapter 3 Crosswalk
June 24, 2011		Add Chapter 4 Crosswalk
June 24, 2011		Edit Chapter 5 per WVDHSEM Comments &Crosswalk
June 27, 2011		Edit Appendix IV add methods
June 29, 2011		Edit Appendix IX & change to Project List & Actions
June 30, 2011		Revise/Update Randolph Data throughout RHMP
July 18, 2011		Revise/Update Randolph Data throughout RHMP
July 21, 2011		Ad to Barbour Project List
August 11, 2011		Update Chapter Crosswalks
August 11, 2011		Update Project List from joint CEDS/RHM meetings
August 11, 2011		Update Mayors list – a resignation due to health
August 11, 2011		Add OES and Floodplain Managers contact info to Appendix VIII
September 9, 2011		Revise Cross Walk
September 12, 2011		Collate Resolutions & add
September 23, 2011		Revisions per State Reviewer

Planning Crosswalk

Adoption of Local Governing Body
See Appendix VII for support & adoption Resolutions

Multi-Jurisdictional Plan Adoption
See Appendix VII for support & adoption Resolutions

Multi-Jurisdictional Planning Participation
Individual County updates were completed and approved by FEMA since 2008. WVDHSEM planners indicated that the Regional Hazard Mitigation Plan (RHMP) is a composite of the updated County HMPs; therefore, the RHMP has considered all meetings and planning activities undertaken in the county plans as viable and directly part of the RHMP. Bob Jacobus, Community Development Specialist, conducted a content analysis of existing plans and drafted the RHMP at the staff level. Rosemary Wagner, Executive Director, provided primary review. Local leaders, emergency service professionals and stakeholders were welcome to examine and review plan for input. WVDHSEM staff had ongoing input and furnished the initial crosswalk. RHMP planning updates were presented at all Region VII Planning & Development Council meetings since June 2009. All Chief Elected Officials of the affected jurisdictions are members of Region VII, those who miss meetings receive mailings of minutes and important topics on a regular basis. Other meetings are listed in Appendix VIII. A letter calling for comments and input was distributed to local governments, council members and the Region VII stakeholder mailing list by the third week of June 2011. The RHMP was made available to all @regionvii.com. A RHMP meeting was dovetailed to a local CEDS meeting in each county during June, July and August 2011 prior to the RHMP's final submission. All comments and input were considered for inclusion of the RHMP. All RVII counties and municipalities continue to participate in hazard mitigation planning at the local level and are part of the RHMP.

Documentation of the Planning Process
A list of meetings and request for review letters are in Appendix VIII. In additional telephone calls and impromptu meetings took place but were not recorded over the planning cycle. Original sign in sheets are available for review at Region VII Planning & Development Council for meetings conducted by that agency. These lists are not included in the plan for privacy issues. The planning process incorporated Regular Region VII Planning & Development Council meetings, called RVI staff meetings, EDA Economic Adjustment Hazard Mitigation meetings and local CEDS meetings at the county level. The planning team reviewed the RHMP draft and provided comments and input which was incorporated in the final draft if appropriate and listed in the Record of Change.

Chapter 2: Risk Assessment

Identified Hazards

A content analysis was conducted on Hazard Mitigation Plans at the county level. These plans were approved and accepted by FEMA in the past 3 years. The following chart summarizes data gleaned from those documents.

It should be noted that these hazards were identified by individual county teams without regard to frequency of events. From a regional perspective, some hazards were not identified in counties that are at risk for a particular hazard. A generalized view for Region VII would include all hazards identified as having some potential across the Region. In Region VII some of the identified hazards that become disasters are outcomes of preliminary hazard events. Winter storms (snow, ice) and temporal storms (rain, wind, tornado, thunder/lightning or hail) can cascade into flooding, dam failure, landslides and utility failure. Precipitation events can also trigger technological/hazardous materials disasters if those two areas of concern are not well managed by people who use them.

The following hazards were identified in Region VII County Hazard Mitigation Plans that were updated in the past 3 years.

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur
Dam Failure	✓	✓	✓	✓	✓		✓
Drought	✓	✓		✓	✓	✓	✓
Earthquake	✓	✓		✓	✓		✓
Flooding	✓	✓	✓	✓	✓	✓	✓
Hailstorm	✓	✓	✓	✓	✓		✓
Hazardous Materials Incident	✓	✓		✓	✓	✓	
Technological Hazards			✓	✓	✓		
Land Subsidence		✓	✓	✓	✓		✓
Landslide		✓	✓	✓	✓		✓
Terrorism		✓	✓	✓	✓		✓
Thunderstorm/Lighting		✓	✓	✓	✓		✓
Urban Fire		✓	✓	✓			✓
Wind Storm/Tornado		✓	✓	✓	✓	✓	✓
Winter Storm		✓	✓	✓	✓	✓	✓
Wildfires		✓	✓	✓	✓		✓
Epidemic					✓		
Infestation					✓		
Temperature-Extreme Heat		✓			✓		
Utility Failure		✓					✓

Gilmer County has taken earthquakes off their identified hazards list in the most recent approved update of that County HMP. Their reasoning was that the likelihood of a disaster causing earthquake event in Gilmer County was very remote.

Profile Hazards

The Counties in Region VII Planning and Development Council area do not have a history with a great number of different hazards escalating into disasters. Flooding, winter storms, summer storms and drought are the natural disasters of concern in this region. In Region VII the hazard rated number one by county plans is an outcome of other climatic hazards. Flooding is caused by storms with heavy precipitation, or in other words two of the other top hazards, winter storms and temperate storms, spawn floods. Winter storms include the hazards of heavy snow, ice and wind. Temperate storms include the hazards of heavy rain, hail, electrical, wind and tornados. Tornados do occur in Region VII, but at very low frequency.

Precipitation events are prevalent due to orthographic lift. Orthographic lift occurs when an air mass travels over terrain that is rising (like a mountainside). As a result of the increased elevation, the air mass cools as it rises and the moisture in the air condenses into clouds. When these moisture laden clouds reach a threshold elevation they dump their water load. Most of Region VII Counties are located on the west facing slope of the Allegheny Front. Seasonal prevailing winds from the Great Lakes or Gulf of Mexico push warm moist air up the region's mountains and release precipitation in great quantities. Conversely, communities on the reverse slopes are in a rain shadow and receive no precipitation causing droughts. Areas on the western edge of Region VII do not experience the same amount of precipitation and are also at risk for drought; however, face flooding because the precipitation in the eastern, precipitation prone counties flow through them. Many historic Region VII communities were established along waterways, in the flood plain, and this exasperates the hazard problem.

Power outage is the most dehabilitating outcome, other than those associated with mass flooding, of all storms that escalate into disasters. While other hazards listed in the preceding section could occur in Region VII, their risk profile is low because damage would be at low levels, the resulting disaster would only affect individuals or extremely small areas. Hazards other than heavy precipitation events become disasters at very low frequencies.

A looming human hazard is the westward mass migration resulting from a chemical, biological, radiological nuclear (CBRN) incident on the U.S. East Coast. A CBRN disaster is different from a hazardous material incident because they are deliberate, malicious human acts designed to kill, injure and create havoc in society on a massive scale. One can expect huge casualties from a CBRN event. Should a CBRN incident occur in the Washington D.C./Baltimore MD area, the population of Region VII counties could grow 10 fold overnight as people flee the attack zone. This would tax the regions' existing rural infrastructure beyond capacity. If a CBRN disaster occurs in Region VII, it most likely would be a cascading outcome of an event outside the local seven county region. Food, water and shelter are important planning areas for this hazard.

Severe Repetitive Loss in Region VII will most likely occur from water damage from a flood or high volumes of surface run off from a precipitation event. Extended droughts will also cause repetitive loss and damage. Other common hazards will cause less severe damage over a general area and many hazards will not escalate into disasters in a human's lifetime. **Therefore, in Region VII it is most cost effective to focus on mitigation for precipitation, lack & abundance, and take an opportunistic approach to other hazard mitigation.**

Assessing Vulnerability

The following chart provides information from Region VII County Hazard Mitigation Plans on identified hazards and their scale of severity.

General Susceptibility Table

Hazard	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur
Dam Failure	low	nr		high			nr
Drought	low/mod	moderate	moderate	moderate	high	moderate	moderate
Earthquake	low	moderate	low	moderate	low	low	low
Flooding	high	high	high	high	high	high	high
Hailstorm	moderate	moderate	low	moderate	moderate		low
Hazardous Materials Incident	low	moderate	low	moderate	high	low	moderate
Technological Hazards			nr	moderate		low	moderate
Land Subsidence	high	low	high	moderate		low	moderate
Landslide	not rated	low	high	moderate	high		
Terrorism	low	low	low	low	low	low	low
Thunderstorm/Lighting	high	moderate	moderate	nr	nr		moderate
Urban Fire	low	moderate	low	moderate			low
Wind Storm/Tornado	moderate	moderate	nr	high	high	low	moderate
Wildfire	low	moderate	moderate	moderate	low	low	moderate
Winter Storm	moderate	high	moderate	high	high	moderate	high
Epidemic					low		
Infestation					high		
Temperature-Extreme Heat					nr		

*nr indicates the county plan listed but did not state degree of susceptibility

Events Reported in Region VII								
	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	total
Event Type	②	②	②	②	①	②	①	
Thunderstorm	34	50	32	47	65	12	52	292
Snow Related	43	25	24	25	71	76		264
Flood	24	28	31	29	42	17	29	200
Hail	2	43	22	30	47		29	173
Windstorm	47	11	10	9	16		52	145
Hot Weather	33	36	25	26	22			142
Cold Weather	26	26	26	24	33			135
Winter Storm	11	6	4	8	10	2	58	99
Drought	8	8	8	7	13	3	8	55
Rainstorm	4	4	5	11	5			29
Frost	2	3	3	5	5			18
Tornado	1	1	3	3	4	2		14
Infestation	2	2	2	2	1	2	2	13
Utility Failure					0		10+	10
Dam Failure	1	1	0	3			0	5
Lightning	2			1	1			4
Ice Storm	0	2	2	0				4
Earthquake	2	0	0	1			0	3
Landslide	1						2	3
Hazardous Material	1				0	0	0	1
Urban Fire					0		1	1
							① Data from County HMPs (2009)	
							② Data from RVII Economic Adjustment Strategies (2011)	
							NOAA Data - http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms	
							Red numbers are known events not reported by county HMPs	

Unreported Hazard Events in County HMPs

- Infestations: Gypsy Moth, Asian Lady Beetle.
- Landslide: Tygart's River Junction 2008 Summer Flood. Took out Railroad used to ship coal.
- Hazardous Material: Gas Spill Philippi 1988. Burnt historic covered bridge, site of the first Civil War land battle.
- Just prior plan sub-mission a 5.8 earthquake occurred in Virginia and Region VII. Experienced significant vibrations.
- Just after the earthquake Hurricane Irene made landfall in the Northeast, little effects in Region VII.

It should be noted different people coded and analyzed the information for the individual counties so there is considerable reporting error inherent in these charts; however it does support trends and is very accurate to specific county hazard issues.

Vulnerability can also be gauged by historical data. The following chart was developed from county level HMPs and a special economic HMP funded by the US Economic Development Adminstration for five of Region VII counties (see chapter 1 p. 3). Some county HMPs documented individual events but did not provide a total event number. These were supplemented by the NOAA database.

Hazardous events do not always escalate into disasters. The data does give general trends that can be interpreted to point to areas of higher risk and susceptibility. This is useful in determining and directing efforts to mitigate for those hazards.

Vulnerability Analysis

	Flooding	Snow & Ice	Drought	Rain & Wind
Thunderstorm & Wind				292
Flood	200			
Snow Related		264		
Hail				173
Windstorm				145
Hot weather			142	
Winter Storm		99		
Drought			55	
Rainstorm				29
Tornado				14
Lightning				1
Ice Storm		4		
Total	200	367	197	654

Rain & Wind are the most common hazard events in the Region VII Planning and Development Hazard Mitigation Area (HMA); however, the overwhelming concerns for disaster causing hazards are Flooding, Snow & Ice, and Drought. It is interesting that the #1 concern, flooding, is actually the outcome of storms that cause two of the other top four hazard concerns. A lineal analysis supports a hierarchy of Rain & Wind – Snow & Ice – Flood – Drought as the hazards that most often lead to damage and loss on a regional basis for this HMA.

Addressing Repetitive Loss Properties

In Region VII the vast majority of repetitive loss properties are the result of flooding. The jurisdictions have at their disposal the following practices and programs to address repetitive loss. Local projects may choose to use these tools at their discretion based on the best outcomes for the community.

Acquisition and Demolition

Acquisition and Demolition involves obtaining fee title or a perpetual easement on the land and the removal of the structures that are subject to flooding from the 100-year flood. The acquired property could be converted to a land use activity that would sustain minimal damage when flooding of the area occurs, such as open space. An adverse effect of acquisition and demolition of structures in the 100-year floodplain is the potential to reduce the tax base of the community. This is undesirable from an economic development perspective if the structure is occupied by an active business.

Acquisition and Relocation

Acquisition and relocation involves the purchase and physical relocation of a structure from areas subject to flooding during a 100-year flood to a "safe zone" that is not subject to flooding or where incidents of flooding are less than the 100-year flood. For the purpose of this study, the area between the 100-year flood zone and the 500-year flood zone can be considered to be a "safe zone" where the structure would be relatively safe from flooding. This technique would be practical for structures that are structurally sound, that can be readily loaded and transported by commercial building moving equipment, and where an adequate road or travel-way exists.

Flood Proofing

Flood proofing generally involves eliminating damage to a structure located in the 100- year floodplain from flooding. Technologies that can be used to flood proof an otherwise structurally sound building (in-place) include reinforcing the structure so its walls can withstand the hydrostatic pressure from floodwater, making the structure walls impervious, installing closure devices in the windows and low level entrances to eliminate the entrance of floodwater, and installing one-way drains in storm drain outlets. This technique would be practical for structures that are structurally sound. Since the structure surroundings would still be subjected to flooding, it is not advisable to use this technique where overnight occupancy will occur.

Elevation

Elevation involves the raising (in-place) of a structure so that it does not flood during a 100-year flooding event. As a rule, this technique can only be applied to buildings that are structurally sound or that can be reinforced in order to be elevated. Since the structure's surroundings would still be subject to flooding, evacuation of people from the premises, especially at night, presents additional risks.

Pre-disaster Construction

Pre-disaster construction – involves the planning, engineering, and installation of preemptive or protective measures to new construction or the rehabilitation of existing structures so that they can withstand the effects of hazard incidents events before they occur. Pre-disaster construction can be used to effectively mitigate for flooding, high winds, large ice and snow loadings, hailstorms and fire.

This technique can work well where the structure may not suffer significant damage during a hazard event, but the structure contents may be damaged or destroyed. Localized dikes and levees, channel restriction removal can also be used to mitigate flood damages.

Other forms of pre-disaster mitigation could include the installation of a back-up power supply source and to provide for alternate water supply sources.

Talking Points

- A significant hazard may not affect the whole region or an entire County due to the rural nature of the plan's boundary.
- The geography of Region VII varies 3,000 feet in elevation from the west to the east, the same direction of prevailing winds. This means that climate and climatic hazards are viewed differently across the breath of the Region and,
- Water generally drains east to west, precipitation due to orthographic lifting in the eastern areas of the HMA will still flood low lying communities in the western areas of the plan's boundary.
- People in the Region are most vulnerable to precipitation events, winter or temporal which cascade into flooding. Drought is an issue in ridge-top and rain-shadow areas that do not have public water.
- The Region could be more vulnerable to some of the listed hazards, such as wildfire, but there are very good response plans and procedures in place that mitigate for their threat.
- A Disaster is a hazard that has escalated to cause significant loss and damage.
- A Catastrophe is a disaster that escalates into widespread significant loss, damage and any loss of human life.

Hierarchy of Hazard Concerns in Region VII

1. Rain & Wind
2. Snow & Ice
3. Flooding
4. Drought

1. Flooding
2. Snow & Ice
3. Drought
4. Wildfire

Hierarchy of Disaster Concerns in Region VII

Asset Inventory

The "at-risk" community assets, including critical infrastructure, historical properties, commercial/industrial facilities, and others are listed in the appendices. "Assets" contribute directly to the quality of life in the community 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 elderly and youths. (Upshur HMP 2009)

The Asset Inventory has a large amount of resident data which can be used to estimate disaster losses. The data in this plan was gleaned from County level HMPs (Appendix III). Assets may have specifics such as size, replacement costs, content values, function use displacement costs and occupancy values.

Please note: The regional plan is a composite of the hard work done by local Hazard Mitigation Planners. Their plans and methods vary so data categories and organization will exhibit the different styles of the diverse group of coders. Data was lifted directly from County HMPs.

Loss Estimates

Estimating disaster loses is important so that local officials can prioritize mitigation projects and increase the efficiency of relief & recovery. Local assets that emerge as being higher "at-risk" to suffer loss or damage due to disasters can be targeted for hazard mitigation. Potential loss data can be used to evaluate new disaster impacts and guide recovery and assessment teams in their efforts. Loss data can also provide reasonable disaster event costs to elected officials, in an expedient manner, so that they can guide and request resources for relief and recovery.

The Loss Estimates can be found in Appendix IV following the Asset Inventories. This data, gathered at the local level, is useful as a starting point for disaster loss information. Values will have to be adjusted due to current fair market values, replacement costs, local wages and average income of community members. A total-disaster related loss can be calculated by simply adding the structural, contents and structure use/function losses.

A Hazard is a Disaster waiting to happen!

B. IN THE REGIONAL ECONOMY

SITUATION ASSESSMENT—THE AREA AND ITS ECONOMY

Area Development and Trends

General Description of Area

Geographic Location. Region VII Planning and Development Council (Region) serves seven counties located in an east to west band, generally two counties wide, from the geographic center of West Virginia to the western edge of the Eastern Panhandle. The entire Region is in the jurisdiction of the federal Appalachian Regional Commission.

Land Area of Counties

County	Square Miles
Barbour	341
Braxton	514
Gilmer	340
Lewis	389
Randolph	1040
Tucker	419
Upshur	355
Region Total	3398

Proximity to Markets. Region VII is centrally located to the major markets of Washington D.C./Baltimore MD, Pittsburgh PA, Columbus OH, Lexington/Louisville KY, and Bristol/Kingsport TN. Interstate 79 (I-79) connects Pittsburgh to Lewis and Braxton Counties. This interstate is the connecting point to the southern markets. Rt. 19 connects to I-79 south of Sutton in Braxton County and provides excellent access to the Bristol Tennessee markets. Some access is afforded Gilmer County; however, the proposed Little Kanawha Parkway would open Gilmer and the western segment of Region VII to the Ohio Valley market. This new road would benefit central West Virginia in its entirety. Completed portions of Corridor H (Route 33) connect Upshur, Barbour and Randolph Counties to I-79 and the Pittsburgh and southern markets. Corridor H is under construction in the east and when it is finished Tucker County will have access to both the markets serviced by I-79 and I-81 in the Shenandoah Valley of Virginia. With the completion of Corridor H the entire region will be connected to the eastern markets dominated by Washington, D.C. and Baltimore. Furthermore, Corridor H and I-79 has the potential to become the route of choice from the Baltimore Harbor to the commercial centers of the mid-south.

Natural Features. This area has three distinct geological provinces. The Ridge and Valley region is located in Randolph County and Tucker County. Long mountains extending from the southwest to the northeast with wide valleys characterize this geologic province. Tucker County is also home to Canaan Valley, the highest valley in elevation of its large size in the eastern United States. Barbour and Upshur Counties are transition areas from the Ridge and Valley to the Allegheny Plateau. The geologic province between the ridge and valley and plateau is often called the Allegheny Front. The watershed drains of the Front are more like gorges in contrast to the wide based valleys to the east. Barbour and Upshur Counties have mountains that gradate to rolling hills in the west. In between is somewhat rugged terrain. Gilmer, Lewis and Braxton Counties enjoy the rolling hill features of the Allegheny Plateau; however, there are islands of rugged terrain in each of the western counties.

The headwaters of at least 12 eastern rivers are located in Region VII and the Army Corps of Engineers maintain three large flood management lakes in Braxton and Lewis Counties. There is a large energy industry impoundment in Upshur. The majority of the land base is in forest; however, significant acreage is used for pasture and hay purposes. Much of Barbour, Randolph, and Tucker Counties are part of the Monongahela National Forest.

This region is rich in minerals and natural resources. Besides water and forests, much of the area has coal reserves. A major natural gas console is located in Central West Virginia and gas production is prominent in much of the Region's counties. A number of limestone deposits are also quarried.

Development Patterns. For the most part, new development is occurring in corridors along four-lane highways in Region VII. All towns and cities adjacent to the good highways are prospering. Barbour and Gilmer Counties, which are lacking four-lane highways, have some development at the great effort of community leaders. Tucker County has had some recent development on Rt. 92 near Davis. The new "Honey" Rubenstein State Youth Center and Canaan Valley Institute facilities have been completed. New residential/2nd home construction and development is occurring and is projected to boom once Corridor H is complete, probably due to the Urban to Rural Mass Evacuation issue in the National Capitol Region. Corridor H construction through Tucker County should boost the development and revitalization of the City of Parsons, the City of Thomas, and the Town of Davis at some point in the future. The WV Governor recently announced construction bidding for Corridor H east of Davis and the letting of engineering procurement for the Davis to Montrose portion of the highway. Residential development continues to exhibit low activity over the last year. Prefabricated and modular homes are quite popular; however, there are clusters of luxury homes throughout the region. Commercial development along the finished portions of Corridor H has seen moderate activity over the past year.

Population and Labor Force

The following chart summarizes population and labor force by county.

County	2009 Population (est.)	2000 Census	2009 Labor Force (July)	2010 Labor Force (July)
Barbour	15,758	15,557	6,590	6,640
Braxton	14,434	14,702	5,820	5,780
Gilmer	6,824	7,160	3,020	3,050
Lewis	17,391	16,919	7,470	7,520
Randolph	28,390	28,262	12,470	12,350
Tucker	6,812	7,321	2,990	2,780
Upshur	23,806	23,404	10,380	10,330
Totals	113,415	113,325	48,740	48,450

The chart indicates that the Region has decreased in workforce population by 290 persons (0.6%) from July 2009 to July 2010. Region VII is rural in nature. The City of Elkins (population 7,032) is the largest municipality.

Economy

There has been some upward movement in the Region's economy until the recent recession. An abundant hardwood forest began to reach economic maturity in the mid-1990s and the value added wood industry has expanded. However, many jobs have been lost due to the economic downturn the nation has faced for the last couple of years. Adequate volumes of raw timber reserves should last the first quarter of this century. The energy sector is developing with wind-electric farms becoming established in the ridge and valley province. Energy has always been a predominant attribute to the area's economy; however, new technology requires fewer jobs to produce market volumes of energy. In this Region, 3 of every 4 non-farm workers are service providers. Government is the largest employment sector.

Other Players. Plastic and specialty component manufacturing were very popular in the Region; however, there has been no significant expansion in those areas in the last several years. A cluster of correctional facilities includes two regional jails, a federal prison, a state prison, a state youth treatment center, and two private teen behavior programs. There are several other state and federal correction facilities dispersed in adjacent counties. Retail development is escalating at major intersections along I-79 and Corridor H. Completion of Corridor H to I-81 will have significant effects on the Region's economy. Marcellus Shale is now being exploited for gas production. It is anticipated the industry cluster emerging from this activity will significantly impact the region's economy for 60 years. The Army National Guard is constructing a new 50,000sf building along Corridor H in Randolph County and a USPFO Facility/Armory at Buckhannon in Upshur County.

Infrastructure and Services. Due to the rural nature of the Region, infrastructure development has not progressed as in urban America. Local governments and communities continue to address the infrastructure needs in the water/sewer arena. Most incorporated towns and cities have water/sewer; however, some municipalities have system components that are antiquated and need replaced. Some smaller, un-chartered communities such as Whitmer in Randolph County and Rock Cave in Upshur County desperately need services.

The Region is progressive in communications infrastructure. Broadband projects for rural residents have been implemented in Barbour County. That technology is available to most county seats and towns along the four-lane corridors. Fiber optics has been installed in the Verizon service area, a major hub located at Rock Cave in Upshur County. Frontier and Alltel provide top end copper technology to their customers. Broadband satellite services are readily available for the more rural consumer. Glenville has an established wireless system. It should be noted that Verizon sold all their land lines to Frontier and transfer of operation took place in 2010.

Each County has an industrial park except for Braxton, which has one in the planning stages. High quality shell, specification and multi-tenant/use buildings are on most sites. There are facilities available to firms looking to locate in this region. Tucker County is now complete with its industrial park and is currently being marketed to potential businesses.

Since completing its new multi-tenant, high tech center at the I-79 Flatwoods intersection, the Braxton County Development Authority has seen many new jobs locate to the this facility. The need for a new building has been demonstrated and is being planned for adjacent to the existing facility to meet business demand. Barbour County has a very good building ready for occupancy. US EDA is investing $1.75 million in the Upshur County Industrial Park at the 50% level to develop industrial sites and install infrastructure. This project is about 100% complete. The Lewis County Industrial Park at Jane Lew continues to grow with tenants funding almost all of the new construction.

New industrial sites that are in the preliminary development stage would include Franklin Hills in Gilmer County and Bridge Run in Upshur County. Mud Lick Road in Upshur County is blooming into a staging area for the natural gas industry complete with production firms and tool and device vendors.

Natural and Cultural Resources and Environmental Issues

Due to the rugged topography most sites suitable for development are located in floodplains. This precipitates into expensive site development for any industry. Archaeology is an important concern throughout the Region due to an abundance of Native American culture and Civil War sites. Architecture issues would include local governments trying to comply with Americans with Disabilities Act (ADA)/Section 504 requirements in buildings that are 150 years old. The State Historic Preservation Office (SHPO) is particular about how one installs an elevator in a cultural treasure. The Monongahela National Forest has finalizing a long term Forest Management Plan Revision that will impact this region for the next 40 years (last plan approved 1970s). This plan is more restrictive and reduces total acres available for commercial wood and fiber production. In FY2010, US EDA funded an Economic Adjustment Disaster Planning Grant to help mitigate for natural disasters in the region.

Weston Hospital. Lewis County is home to the largest hand cut stone building from the Civil War era. This facility once housed the West Virginia Mental Hospital. The hospital campus was auctioned for $1.5 million on August 29, 2007. Tours of the facility continue to be an attraction for Lewis County and Weston.

Clean Water Act. Environmental issues continue to play a large part of the Region's economic dynamic. Some County development is stifled by the regulations of the Clean Water Act. Tucker County, located in the Allegheny Highlands, contains many perched valleys in which natural bogs and beaver ponds are abundant. These ecotypes produce weak acid water with a high biologic component. This creates a condition in which there are high oxygen demands on water that does not have high oxygen capacity by nature. In many cases the naturally occurring oxygen demands are not in compliance with the Federal Statute. The water problem is further complicated by acid rain caused by Midwest industrial centers. Moisture laden air tends to condensate at higher elevations thus the warm air masses from the Great Lakes and Ohio Valley lose their capacity to hold water over Tucker County. This national clean water mandate is an onerous burden to certain communities of Region VII who would like to prosper, but cannot get past regulations. The Tier 2.5 stream classification process (Clean Water Act) is alarming to many of the Region's citizenry.

DEP. The State Department of Environmental Protection faces several issues including the Tier 2.5, coal extraction beneath streams, and residential waste problems.

National Forest. The Monongahela National Forest has completed a Forest Plan Revision. It is notable that the Forest Plan process for all national forests had its origins on the Monongahela. The original intent of the local citizens who raised forest management issues was to have commercial production and harvest without the gross exploitation of resources as practiced in that day. Today, local people still want the forest environment protected with wise use and harvest of the resource. The Forest Service has accomplished significant reduction of the number of forest acres (158,000) available for commercial harvest though stipulations in the chosen management alternative. This is a significant loss to the economy in Region VII since 3 of the 7 counties have National Forest lands in their boundaries and raw timber production is such a large part of the regional gross product.

Planning and Economic Development Activities

Region VII Planning and Development Council serves seven counties as a technical assistance provider. Also, Region VII is an Economic Development District (EDD) for the US Department of Commerce (DOC) Economic Development Administration (EDA) and the Local Development District (LDD) for the Appalachian Regional Commission (ARC). Each county in Region VII has an operational Economic Development Authority or Association for planning and project development purposes.

Consistently, several Small Cities Block Grant (SCBG) applications and U.S. Economic Development Administration (USEDA) grant applications are submitted on an annual basis. Qualified projects are developed and applications are submitted to ARC and USDA on a need/demand basis. Governor's Community Participation Grants, Transportation Enhancement Grants, Community Law Enforcement Block Grants, and Culture and History Preservation Grants are developed and submitted on an ongoing basis. Region VII Planning and Development Council staff provides technical assistance in project development and environmental clearance as requested and required by member governments and funding agencies.

Finish Corridor H! has been rated the #1 strategy & opportunity in the CEDS evaluation surveys for 7 years. An interesting trend emerged in the FY10 evaluation instrument. The desire and demand to finish Corridor H has gotten stronger to the point that the normal bell curve of responses has been destroyed. The statistical curve looks more like a spike than a bell. This statistical anomaly occurred again in the FY11 survey. Responses charted broadband development as #2 and identified improvement of infrastructure and recruiting of new industry as distant 3rd & 4th. Funding is the rated the #1 constraint of any development activities in this rural area.

instrument. **Corridor H!** Last year's major opportunity was **Develop Corridor H!** For the 6 previous years it was **Finish Corridor H!** This Highway is the most supported issue in the CEDS process for seven years in a row. Develop the broadband infrastructure was identified as distant second in regional opportunities. Other opportunities were significantly rated lower in the index score. For the fourth year in a row funding is the major constraint. Bureaucracy was considered the second limiting constraint while other identified constraints were rated significantly lower.

Strategic Evaluation

An evaluation instrument was developed using responses from the previous year's CEDS plan. This instrument was distributed to Region VII Planning and Development Council Members. Completed surveys came from leaders of community agencies such as economic development authorities, school systems, healthcare, youth agency directors, extension service, workforce investment, and senior citizens. This process was conducted during the fall of 2010.

Identification of Principal Opportunities and Constraints to Economic Development and Improved Quality of Life.

One major opportunity was identified again in the Region VII Planning and Development service area by this survey

Principal Opportunities. Last year it has been reported Corridor H will be complete by 2038; unless the project receives funding over the next five years or so. This picture is changing rapidly as the Governor of West Virginia announced letting construction bids on approximately half of the unfinished Corridor H sections. Additionally the Governor announced the procurement of design for the remainder of the highway project. When the highway is completed, it will provide unprecedented economic opportunities for Tucker, Randolph, Barbour, Upshur, and Lewis Counties. Braxton and Gilmer Counties will benefit also, but not to the extent of the counties located on the new highway. There will be a window of opportunity for commerce and enterprise and the Region is trying to prepare for the windfall. Tucker County's new industrial park near the Town of Davis will be adjacent to the new highway. The Belington Industrial Park in Barbour County

is available for expansion. The City of Parsons has an excellent Commerce Center project developed and Thomas is working towards revitalization. A regional jail has been constructed in Randolph County that will serve the corridor counties. In Upshur County, the Buckhannon/Upshur County Regional Airport has experienced vendor growth as a result of expanding its runway to accommodate small/medium jets. This airport is in demand as a business hub/center of operations for local air service and maintenance providers. They still hold a favorable position to incubate a centralized air courier/freight distribution cluster at a very centralized/competitive location. The HealthNet air ambulance operation is located at the Upshur site. The regional Corrections cluster is an outstanding opportunity for local citizens to obtain higher skill/higher wage jobs. The I-79 Corridor still offers economic growth activities and promotion of the Little Kanawha Parkway (Corridor L) would situate Braxton, Gilmer, and Lewis Counties for exponential economic growth in the future. Regional gas production from Marcellus Shale is an opportunity to capitalize on.

Constraints. One major opportunity is still identified in the Region VII Planning and Development service area by this survey instrument, **Finish Corridor H!** No other opportunity or activity dominates categories in the overall regional evaluation. The major constraint is lack of funding for all activities. Bureaucracy was the second most mentioned constraint while other identified constraints were rated significantly lower.

Identification of Growth Centers

In the previous CEDS the evaluation tool identified growth corridors instead of growth centers. Corridor H, and the towns and cities along that route were the most listed in the Great Growth and Great Potential categories of the survey instrument. Corridor H (RT. 33) connects with I-79 and divides the region into three parts providing some access to all counties in the region. Corridor H again was the most identified growth corridor. The past seven CEDS, including this year, have identified the Corridors and the towns along these routes as the major growth centers.

Industry growth centers identified energy followed by the tourism and healthcare.

Education is a very important regional cluster. Region VII has 3 very good private colleges and a state college spread across the seven counties. Fairmont State University has major extension education programs in Braxton and Lewis Counties.

Evaluation of how the Region's Projects, Programs, and Initiative Impact and Support Existing or Currently Targeted Industry Clusters in the Region

All of the Economic Development Authorities/Associations in the Region have done a reasonable job in providing industrial sites for economic development. These sites support the value-added wood cluster, energy related companies, plastics and the emerging specialty components sectors. Workforce development for the wood related industries is very well serviced by the Wood Technology Center located in Elkins, Randolph County.

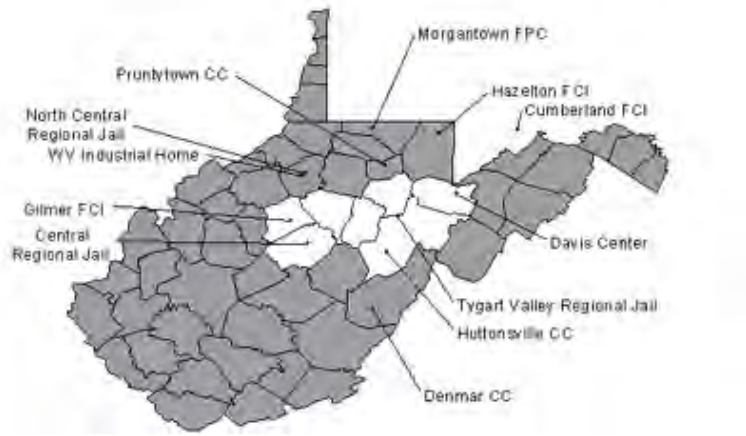
The Region VII Planning and Development Council continues to provide technical and facilitative support to the seven counties and the 24 municipalities in its service area. A Hardwood Alliance Zone (HAZ) has been organized by local development authorities in North-Central West Virginia. Barbour, Lewis, Randolph, Tucker, and Upshur Counties belong to this group whose purpose is to promote the wood industry cluster located in the region.

Wood Products Cluster. An initiative that has had positive impact in Region VII was the development of industrial parks. A goal was set to have a park devoted to industry established with at least one building and infrastructure in each county of Region VII. Braxton County does not have an industrial park, but the County does have a new 30,000 square foot multi tenant technology facility that is at full capacity. Tucker County has completed the second phase of development that includes lot development and the construction of a new multi tenant building. Value-added wood facilities are located in the industrial parks of Barbour, Gilmer, Randolph and Upshur Counties. Weyerhaeuser, who purchased an engineered structure wood plant in the Upshur Industrial Park, also has a major installation in Braxton County. Tucker County officials continue to recruit wood industries to its new industrial park. There are major and medium size log yard, but timber extraction has been slow the past 2 years due to the down turn in the national economy. Also tree stands are a bit harder to acquire since there has been heavy extraction for 15 years. The industrial site initiative has been a resounding success in wood industry recruitment and retention in Region VII.

Energy Cluster. An emergence of oil and gas cluster as companies have moved into this seven county region. Lewis County and Upshur County appear to be the most prominent counties with these energy related firms. Upshur County has benefited from the creation of over 200 jobs at Weatherford well servicing headquarters. Chesapeake Energy is located in Lewis County at the Jane Lew Industrial Park along I-79. Chesapeake Energy is the number one producer of U.S. natural gas. Other numerous oil and gas companies are also located at this park. Chesapeake has commissioned a major seismic survey of a 40 square mile area in Upshur County using helicopters to drop drills into forested terrain. They anticipate drilling 350 wells in the area and are looking for the best locations from this survey. This is a substantial investment by the natural gas producer.

Plastics Cluster. A fledgling plastics industry cluster has been encouraged by the availability of building sites in the industrial parks established in Region VII. A manufacturer of plastic tanks is located in the Philippi Industrial Park. A fiberglass pool firm, Viking Pools, is located in the Lewis County Industrial Park at Jane Lew. The Workforce Investment Board is working with Region VII to provide training services to employees displaced by this action. Natural gas utilities installed on the available industrial sites would greatly encourage growth.

Corrections Cluster. Region VII is central to a cluster of civil corrections facilities that contributes a positive impact the local economy. Many correctional installations are within the commuting community Region VII.



Risk Assessment Crosswalk

Description of Natural Hazards that affect Region VII
See Appendix XIII & Pages 8-11

Profiling Hazards
Location: The map on page 5 locates the heavy precipitation zone and the drought zone of Region VII. Flooding is the only hazard that historically causes repetitive loss to structures in the region. Other hazards can and will occur, but they affect the whole landscape in a general nature and are not limited to a narrow and repetitive area such as a floodplain. Chart on page 9 identifies location of hazards by county. Prioritizing Mitigation Strategies (page 38) also indicate location of particular hazards and their hierarchy in terms to mitigation goals set by county planners.

Extent: The chart on p. 11 identifies extent by county.

Event History: The number of recorded events by county can be found on page 12. This data was compiled by the most recent studies & NOAA.

Probability: The general Susceptibility Table on page 12 is a subjective indication of event possibility. County mitigation planners recorded this information in their respective county plans. High indicates a hazard will become a disaster will happen multiple times during the next 100 years. Moderate means the hazard may become more than a nuisance once every 10 years. Low means it could happen but a significant event may be once in 200 years (earthquake) or caused by premeditated human action (CBRN). See Appendix XII for additional excerpts from County HMPs.

Assessing Vulnerability: The General Susceptibility Table is indication of vulnerabilities in the region. A regional summarization appears in chapter one page 3 under Special Considerations. Page 10 also summarizes the hazard situation on a regional basis. Region VII is very vulnerable to flooding on a repetitive basis; all other hazards are not as repetitively severe to the same structures. The Hazard Mitigation Priority Chart (page 38) and Appendix I (Hazards & Strategies by County) give a very clear picture of a community's hazard vulnerability. See Appendix XII for impacts.

Addressing Repetitive Loss Properties: See Appendix V.

Identifying Structures: See Appendix III. Major new development in floodplain areas is not known to be taking place in the region. Other building projects utilize engineers/architects and contractors who design for known hazards of the region. Major regional infrastructure, such as water/sewer, is constructed underground and is not susceptible to common hazards of Region VII. No new building list in hazard areas are available.

Estimating Potential Losses: Appendix IV was compiled from approved county mitigation plans see Appendix IV for excerpts from county plans.

Analyzing Development Trends: See Development Trends p. 17-24 Construction in floodplains has been limited to undrground infrastructure (water /sewer). Building constrution is static, and due to floodplain ordances, new building construction is not anticipated in flood hazard areas.

Multi-Jurisdictional Risk Assessment: See Appendix XII

Chapter 3: Region Hazard Mitigation Goals

The Region VII Hazard Mitigation Province is very diverse and communities of this region have different hazard mitigation needs. In order for this RHMP to be useful for its constituents across the board the regional plan has to be general in nature and adaptable for each community. **The overriding goal is to reduce damage and loss from manifested hazards.**

Goal 1: Local Leadership

Local leadership is so very important to implement hazard mitigation plans. A primary goal of this RHMP is to support the autonomy of local leaders, recognizing their skill in disaster management and the institutional knowledge of their communities. The regional plan will be available for local leadership, to upgirth them with information and assistance. **In no way is the regional plan meant to supplant the hard efforts invested at the county level in Hazard Mitigation Plans.**

Goal 1 Objectives: Leaders at the County level identify, prioritize and submit County Hazard Mitigation Projects for Regional HMP maintainance.

Goal 2: Regional Leadership

In the rural communities of Region VII, many of the local leaders wear many hats. They serve with their full hearts to provide for the needs of their community in several different arenas. From a regional perspective, another goal of this plan is to develop a regional leadership model for Regional Planning & Development Councils in hazard mitigation. Regional leadership can maintain hazard mitigation plans, provide technical capacity in hazard mitigation project development, maintain a regional list of projects, act as a clearing house to curb duplication, disseminate information, track opportunities to fund hazard mitigation projects and administer funded projects. Implementing a Regional Hazard Mitigation Plan will be a two edged sword in that it helps communities cut red tape; therefore, expediting needed projects. It slices the amount of paperwork generated to maintain 7 County plans opposed to 1 Regional Plan and reduces the labor intensive review process for State and Federal Hazard Mitigation Planners. An added benefit to State and Federal Agencies would be utilizing the proven track record of project administration of Regional Councils when they fill regional leadership roles. A Regional Planning & Development Staff would not need to be retrained on reports, draws, procurement and labor monitoring requirements every time a new project emerges. Regional Hazard Mitigation Planning has a potential to be Win – Win – Win for all stakeholders.

Goal 2 Objectives: At minimum, add Hazard Mitigation Projects to Regional CEDS Project list. Update RHMP with information from County Hazard Mitigation Planners and appropriate CEDS narratives. Provide other services as funding permits.

Goal 3: Hazard Mitigation Project Development

A major hazard mitigation project requires a certain amount of skilled effort to develop. The project has to be identified, there may need to be some procurement of professional services, funding agencies identified and applications developed. **If a project entity does not feel they have capacity to manage the total project they can choose to contract with Region VII.**

Region VII Planning & Development Council has functioned in the Project Development Management Role for almost forty years. The Small Cities Block Grant Program, US EDA Economic Development Programs and Appalachia Regional Commission Programs all rely on Regional Council staff to keep projects moving.

Project Development

It is important that Hazard Mitigation Strategies complement other initiatives in the Region. In order to do this a simple method of project development needs to be in place.

Region VII Planning and Development Council has worked closely with State and Federal officials in implementing projects that are funded. The Council keeps a list of about 130 projects in various stages of development for a region that includes 7 Counties. Region VII Planning and Development Council staff has been active in project development since 1972. In 2010 three hazard mitigation projects, worth in aggregate over $1,500,000, were funded as a direct result of Region VII project development and those projects being listed in the Regional Councils project priority list. Prerequisites for these projects to qualify included 1) the project had to be identified, 2) developed, complete with costs and 3) reside on an official project list. The Regional Council has the capacity to make recommendations to the project owner for funding, provide procedural guidance in Architect/Engineering (A&E) procurement, act as liaison between funder and project sponsor and provide administrative services if the project supports that function.

The Method

When a potential project has been identified the local elected officials need to be contacted first. If it is in a municipality, town or city council members should be contacted. If the project is in the county outside of municipalities, then the county commissioners are appropriate contacts. Each local government is a member of Region VII Planning and Development Council and they may contact the Agency's Executive Director or request that the person with the project idea contact the Executive Director.

The staff at Region VII Planning and Development Council can make an expeditious assessment of the project and recommend the next step in project development. It may be gathering some more information, garnering more local participation or simply a project meeting with the Regional Council's Staff (staff). If the project has ample support and exhibits viable benefits, then in most cases A&E procurement would be the next step. The staff has capacity to facilitate that process for the project team. Please note; not all projects such as simple acquisition relocation projects require A&E services. The project would also be placed on the regional project list at this time.

When there is a written project description and costs estimated the project is ready to be developed into a funding application. Normally a funding program that fits the project has to be identified. Region VII Planning and Development Council has the capacity to complete intricate applications and has a working knowledge of funding opportunities. Some funders require public hearings or other public and regulatory input. Region VII Planning and Development Council is familiar with the process and can help move the project forward.

The method is very simple; contact the responsible local officials and then Region VII Planning & Development Council. The Council also acts as the regional clearinghouse of State and Federally funded projects. This additional role of the Regional Planning and Development Council ensures integration of strategies, reduction of duplicated services and the development of strong collaborations of funders and partners in the implementation of projects. Eligible and proper administrative fees for projects underwrite staff involvement.

Goal 3 Objectives: Develop at least one major Hazard Mitigation Project in Region VII on an annual basis.

Goal 4: Hazard Mitigation Project Implementation

Project implementation can be defined as that gray area between a funding award letter and the golden shovel at ground breaking. Often a project has many preliminary milestones to clear before it can be implemented. This is especially true for construction projects. Project design, permits, Americans with Disability Act surveys, environmental reviews and evidentiary materials of all types have to be collected and submitted to the funding agency.

Many major government agencies will use an existing program to manage the cash flow. Case in point; in Region VII three Disaster Recovery Initiatives were funded in 2008, their funds passed through West Virginia's Small Cities Block Grant Program. Region VII Staff has institutional knowledge of that program and was able to efficiently expedite the implementation of the projects.

Goal 4 Objectives: Implement developed Hazard Mitigation Projects as funding becomes available.

Goal 5: Develop WV Hazard Mitigation Districts

US Economic Development Administration (EDA) and the Appalachian Regional Commission (ARC) formed special districts to help facilitate services and projects for the public good. Region VII is an Economic Development District for EDA and a Local Development District for ARC. Each federal agency supports Region VII with annual planning grants to function as their special districts. The West Virginia Legislature also provides a yearly stipend which helps to underwrite planning and project development for such programs as Small Cities Block Grants and other infrastructure/community development programs.

This established model could be used to develop the Hazard Mitigation District concept. The WV Division of Homeland Security and Emergency Management have already implemented a bare bones Hazard Mitigation District system by organizing regional plans to coincide with Regional Planning & Development Districts. The next step is to fund the Regional Hazard Mitigation Efforts.

Mission

The Council performs, as dictated by legislature, as a local, multi-jurisdictional agency focused specifically on regional planning and economic development. The Council selects and employs an Executive Director. The Executive Director then selects and employs the staff to operate as low-key facilitators in a process that converts community and economic development needs into plans and strategies. These plans are then converted into the development of projects and programs. The Council's role is also to prioritize local goals and objectives, review and endorse projects, and to aid in pursuit of funding. Once funding is secured, the staff also provides project administration services on a contractual basis to member governments, public service districts, and other community organizations as needed.

Structure

The Council consists of the County Commission Presidents from each of the seven (7) Counties of the Region as well as the Mayors from its twenty-four (24) Municipalities. In addition, twenty-three (23) private sector or citizen representatives are selected by this Region's respective County Commissioners for an annual term. The private sector membership affords the Council's wide range of diverse opinions, experiences, and expertise to compliment the elected official's views. The background of the private sector members, by design, runs the gamut reflective of the region's particular identity. There are representatives from, but not limited to; minorities, small businesses, social services, education, state government, economic development, banking, real estate, senior programs, community development, and agriculture.

Currently, there are four (4) full-time positions, which include; Executive Director, Regional Development Director, Community Development Specialist, and an Administrative Assistant. A part time Project Manager, who is a registered Professional Engineer (P.E.), has been added to the staff. The Executive Director continues to hold regular staff meetings for open discussion and information sharing of all project concerns, prioritization and agency operations.

Programs

The operation budget continues to consist of federal and state funds, local assessment dues, and contractual project administration. Project administration, which contributes to 65% of the budget, is necessary to maintain an adequate level of staff to perform the requested services needed by the member governments and/or their local organizations.
Staff continues to utilize the Project Development Policy Process. This Council-approved process establishes a procedure to take a project from its initial discussion to completion and identifies appropriate staff involvement. This process is distributed to member governments, public service districts, development authorities, and engineering firms. This process is an effort to keep communication open and ongoing with all parties involved in the project. The Council remains committed to their resolution to support the Regional Councils as originally created.

Objective Goal 5: Establish Hazard Mitigation District with an annual allocation to provide hazard mitigation services

Hazard Specific, Mitigation Goals, Objectives & Strategies

Region VII Goal 6 - Floods

Objective: Reduce Negative effects of flooding
Strategies:

1. Review, update, and enact Ordinances
2. Acquisition/demolition projects
3. Review, update, enact/enforce floodplain development regulations
4. Develop surface/storm water management plans
5. Severe Repetitive Loss Projects
6. Coordinate efforts to participate in CRS
7. Public education
8. 100 year storm design for public roads
9. Update floodplain data
10. Highway culvert inspection
11. Promote flood insurance purchases
12. Develop warning system
13. Retention structures
14. Channel improvements
15. Training
16. Relocation Projects
17. Elevations Projects
18. Closely monitor stream/rain gauges
19. Preserve open space
20. Construct floodwalls & levees
21. Flood proofing
22. Protect critical facilities
23. Establish emergency/evacuation transportation routes
24. Identify/remove surface water drainage obstructions
25. Participate in FEMA proactive Hazard Mitigation Programs
26. Develop floodplain BMPs
27. Wetlands protection
28. Dams
29. Diversion canals
30. Storm sewers
31. Floodgates
32. Storm water pumping stations
33. Search for funding for planning projects
34. Flood response/disaster recover planning

Region VII Staff Recommendation: Pursue Community Rating System (CRS) http://www.fema.gov/business/nfip/crs.shtm

Outcomes: Lower flood insurance for community members and resulting flood hazard mitigation education from CRS activities.

Region VII Goal 7 – Winter Storms

Objective: Reduce Negative effects of severe winter storms
Strategies:

1. Develop debris management strategies & snow removal
2. Better building techniques
3. Improve right of way maintenance of public utilities
4. Public education
5. Underground electrical construction
6. Monitor weather/early warning system
7. Map highest incidences of storms
8. Develop stand-by generator network
9. Identify critical facilities to keep in operation

Region VII Goal 8 – Drought

Objective: Reduce negative effects of drought
Strategies:

1. Develop emergency water supply protocol/procure tanker
2. Develop a Water Conservation Plan
3. Public Education
4. Extend public infrastructure
5. Study and evaluate supply alternatives
6. Appoint a drought response officer
7. Promote water-conserving devices
8. Coordinate water construction projects
9. Improve current sources
10. Construct raw water impoundments
11. Use native plants for landscaping

Region VII Goal 9 – Wildfires

Objective: Protect population and forests from fire
Strategies:

1. Public Education
2. Develop safety zones around structures
3. Use flame retardant construction materials
4. Enhance relationships between local fire departments and U.S. Forest Service
5. Regulate construction
6. Report wildfires immediately
7. Improve ISO ratings

Region VII Goal 10 – Wind/Tornados

Objective: Reduce damage from severe winds and tornados
Strategies:

1. Public education
2. Monitor weather/early warning systems
3. Improve right of way maintenance of public utilities
4. Encourage/legislate better building techniques
5. Building codes
6. Monitor NOAA Weather Radio for tornado watches
7. Develop response plans
8. Develop debris management strategies
9. Map highest incidences of storms
10. Underground electrical construction
11. Strengthen vulnerable spots in structures
12. Identify critical facilities and ensure back-up power

Region VII Goal 11 – CBRN

Objective: Protection from terrorist threats (CBRN)
Strategies:

1. Public education
2. Monitor suspected terrorist groups
3. Maintain a working relationship with law enforcement
4. Protect public water supplies
5. Develop response plans
6. Coordinate public media as to alert status
7. Establish trauma centers
8. Thoroughly investigate all threats of violence

Region VII Goal 12 – Thunderstorms

Objective: Lessen damage from severe thunderstorms
Strategies:

1. Monitor weather/early warning system
2. Public education
3. Install rain gauges
4. Develop debris management strategies
5. Improve right of way maintenance of public utilities
6. Map highest incidences of storms
7. Underground electrical construction
8. Encourage better building techniques

Region VII Goal 13 – Earthquakes

Objective: Reduce potential effects of earthquakes Strategies:

1. Public education
2. Better building techniques
3. Review, update or enact building codes
4. Expect aftershocks
5. Develop response plans
6. Upgrade public infrastructure

Region VII Goal 14 – Hail

Objective: Lessen hail damage
Strategies:

1. Monitor weather/early warning
2. Public education
3. Map highest incidences of storms

Region VII Goal 15 – Land Subsidence

Objective: Reduce negative effects of land subsidence
Strategies:

1. Map at risk areas
2. Public education
3. Promote insurance purchase
4. Structural design
5. Develop more effective response plans

Region VII Goal 16 – Hazardous Materials

Objective: Protection from hazardous materials
Strategies:

1. Hazardous material inventory
2. Public education
3. Map most likely transportation routes hazardous materials travel
4. Develop incident response/emergency action plans
5. Create safe zone/shelters
6. Determine most likely place for road accidents
7. Develop containment plans and have on hand spill containment equipment

Region VII Goal 17 - Landslides

Objective: Reduce effects of landslides Strategies:

1. Regulated construction
2. Public education
3. Forestry BMPS
4. Response plans
5. DEP Storm Water Permitting
6. Map at risk areas
7. Promote insurance purchases

Region VII Goal 18 – Utility Failures

Objective: Reduce negative effects of utility failures Strategies:

1. Inventory at risk people
2. Develop a shelter network
3. Inventory at risk power lines
4. Develop back-up sources

Region VII Goal 19 – Dam Failures

Objective: Reduce the potential for dam failure
Strategies:

1. Develop monitoring system
2. Develop intra-county inventory of impoundments and their impact areas
3. Inventory potential inter-county dam failure impact areas
4. Develop response plans compatible with county emergency operation plans

Region VII Goal 21 - Hurricanes

Objective: Protection from Hurricanes
Strategies:

1. Public education

Region VII Goal 22 – Communications Failure

Objective: Protection from Communications Failure
Strategies:

1. Develop monitoring system to keep open lines between EMS & communities
2. Develop a HAM Operators network

Region VII Goal 23 (tie) – Broad Scope Hazard Mitigation

Objective: General public awareness and broad-scope hazard mitigation
Strategies:

1. Public education
2. Integrate a county plan with existing regulation and programs
3. Commodity study (hazardous materials inventory) and monitoring
4. Prioritize mitigation projects
5. Continue to pursue funding opportunities
6. Active Hazard Mitigation Committee at county level
7. Link emergency services, hazard mitigation programs and public education
8. Explore funding sources
9. Supply NOAA radios to critical facilities
10. Install multi-tone alarms to different hazards in fire stations
11. Reverse 911 system
12. Coordinate with other agencies to strengthen mitigation efforts
13. Develop collaborative programs between real estate, insurance, public and private sectors
14. Determine types of hazardous materials being used by well service companies

Region VII Goal 23 (tie) – Epidemics

Objective: Protect from epidemic
Strategies:

1. Public education
2. Public declaration if epidemic occurs
3. Stockpile vaccinations and other health supplies

Region VII Goal 24 – Geological Hazards

Objective: Reduce negative effects of Geological Hazards
Strategies:

1. Public education
2. See earthquakes

Region VII Goal 25 (tie) – Radiologic Hazards

Objective: Reduce negative effects of Radiologic Hazards
Strategies:

1. Public education
2. Known radon gas issues
3. Emergency plan

Region VII Goal 25 (tie) – Infestation

Objective: Protect from infestation
Strategies:

1. Public education

Region VII Goal 26 – Heat Wave

Objective: Protect from heat wave
Strategies:

1. Public education

Hazard Mitigation Goals Crosswalk

Description of Mitigation Goals
26-36

Identification and Analysis of Mitigation Goals
A comprehensive range of mitigation actions are identified on pages 30-36. Hazard effects to/on new buildings and existing buildings are also addressed in Appendix I & Appendix III.

National Flood Insurance Program (NFIP) Compliance
All counties represented by this plan are participants in the NFIP. In order to do this the jurisdictions, at a minimum, has adopted floodplain management regulations and these regulations meet or exceed floodplain management requirements found in 44 CRF Part 60.3. Counties and municipalities also have floodplain managers. See Appendix II

Implementation of Mitigation Actions
A distinction should be made between mitigation actions and mitigation plans. Mitigation actions are those carried out on the local level using available means such as legislation and leadership for various actions. Public education and relations is a cost effective mitigation action for every hazard that faces a community. Mitigation projects are normally high cost construction/hardware type improvements that involve financial assistance from outside the community, an example would be an acquisition/demolition project in an at-risk floodplain. Mitigation actions and projects are **prioritized** by local planners and submitted to the regional plan facilitator for inclusion into the RHMP. Ranking actions are based on the community's capacity and demonstrated demands for actions. NFIP & CRS requirements are considered and heavily influence the priority of mitigation actions. Ranking of projects emphasize the use of Benefit/Cost Analysis. See Appendix IX for more information. Each jurisdiction is responsible for their action and project **implementation** as stated in their individual county HMPs which were approved by FEMA. The jurisdictions may contract with Region VII Planning and Development Council for planning services and administrative services for larger actions and projects if local capacity is not available (See page 26-28). The project/milestone list (appendix IX) **identifies mitigation actions** and associated status. Communities follow county and regional goals unless specifically stated otherwise in the local HMP.

Prioritizing Mitigation Strategies

Regional Hazard Mitigation Goals and Strategies were prioritized by a content analysis of the currently FEMA approved County Plans. Strategies were recorded by county and ranked by the total number of times they appeared in the mitigation strategies sections of the county level plans. Regional goals are unique to this document. Identified Hazard Mitigation Goals and Strategies are listed in the previous section by the content analysis rank.

Hazard Mitigation Goals

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	total	Regional Rank
Reduce Negative effects of flooding	1	1	1	1	4	1	1	10	1
Reduce Negative effects of severe winter storms	2	2		2	10	10	2	28	2
Lessen damage from severe thunderstorms		3		3	8		3	17	7
Lessen hail damage		9		9	5		4	27	9
Eliminate damage from severe winds and tornados		4		4	9	9	5	31	5
Reduce negative effects of land subsidence		8		8		8	6	30	10
Reduce the potential for dam failure		16		16			7	39	14
Reduce potential effects of earthquakes		6		6	2		8	22	8
Reduce negative effects of drought	3	7		7	1	2	9	29	3
Reduce negative effects of utility failures		12		12			9	33	13
Protect population and forests from fire		10		10	12	4	10	46	4
Protect population from miscellaneous hazards	4						11	15	15
Reduce effects of landslides		5		5	7			17	12
Protection from Hurricanes		11		11				22	16
Protection from Communications Failure		13		13				26	17
Protection from terrorist threats (CBRN)		14	2	14	14	7		51	6
Protection from hazardous materials		15		15	13	3		46	11
General public awareness and broad-scope hazard mitigation			3					3	18
Protect from epidemic			3					3	18
Protect from infestation					6			6	20
Protect from heat wave					11			11	21
Reduce negative effects of Geological Hazards						5		5	19
Reduce negative effects of Radiological Hazards						6		6	20

methodology: Each category was recorded according to county ranking. Then these categories were color coded according to the number of counties the category appeared in. Categories were then rated by color code, starting with the highest occurrence, then by low total of county rankings.

Prioritizing Hazard Mitigation Goals Crosswalk

Implementation of Mitigation Actions

A distinction should be made between mitigation actions and mitigation plans. Mitigation actions are those carried out on the local level using available means such as legislation and leadership for various actions. Public education and relations is a cost effective mitigation action for every hazard that faces a community. Mitigation projects are normally high cost construction/hardware type improvements that involve financial assistance from outside the community, an example would be an acquisition/demolition project in an at-risk floodplain. Mitigation actions and projects are **prioritized** by local planners and submitted to the regional plan facilitator for inclusion into the RHMP. Ranking actions are based on the community's capacity and demonstrated demands for actions. NFIP & CRS requirements are considered and heavily influence the priority of mitigation actions. Ranking of projects emphasize the use of Benefit/Cost Analysis. See Appendix IX for more information. Each jurisdiction is responsible for their action and project **implementation** as stated in their individual county HMPs which were approved by FEMA. The jurisdictions may contract with Region VII Planning and Development Council for planning services and administrative services for larger actions and projects if local capacity is not available (See page 26).The project/milestone list (appendix IX) **identifies mitigation actions** and associated status. Communities follow county and regional goals unless specifically stated otherwise in the local HMP.

Chapter 4: Maintenance of the Regional Hazard Mitigation Plan

Local HMPs are still viable, valid and are carried out at the local level. Methods for local plan maintenance reside within the local plan. Changes in the local plan are submitted to Region VII who will incorporate them to the RHMP as an addendum. The RHMP will be updated every 5 years.

Region VII will provide as much assistance as possible to member governments in maintaining the Regional Hazard Mitigation Plan. However, the funding climate is volatile and Region VII may not have the ability to fully maintain a Regional Hazard Mitigation Plan over time without stable funding to do so. An administrative fee, commensurate to 2008 update consultant costs, may be charged to each county for the 5 year update to meet FEMA requirements.

At minimum, at current funding and staff levels with no county stipends, Region VII Planning & Development Council Hazard can add Mitigation projects to the Annual CEDS project list and the changes in development trends in the CEDS can also serve for the sister section in the RVII Regional Hazard Mitigation Plan. It is the responsibility of the local leadership to maintain and implement hazard mitigation planning and strategies at the county and municipal level.

Region VII RHMP Benchmarks

The updated RHMP will benchmark progress by reporting the empirical data from project development, implementation and commissioning. Qualitative data can be gleaned from new reports and articles plus possible field interviews and surveys.

Sample RHMP Benchmark Spreadsheet

Project	Location	Structures or Beneficiaries	Cost/Funder	Implementation Date	Completion Date
Elaine Repetitive Loss Project	Elaine, WV	10 Structures / 25 people	$1,200,000 FEMA	10-15-2011	
Elaine CRS Project Phase I	Elaine, WV	745 people	$4,000 General Revenue	6-15-11	
Elaine CRS Project Phase II	Elaine, WV	745 people	BOGO Fund	1-15-2012	
Jenkins Repetitive Loss Project	Jenkins, WV	85 structures / 1,250 people	$12,245,000 FEMA	10-15-2011	

Plan Maintenance Crosswalk

Monitoring, Evaluating, and Updating the Plan
Local HMPs will continue at their local level and revised per FEMA approved local HMPs. A call for updates will be made at **5 year** intervals at the regional level for the RHMP (page 40). Local planners will **evaluate** the updated plan in relation to their local plans. The Project List/ Benchmarks Table (Appendix IX) is an ongoing tool to monitor and evaluate the local HMP and RHMP from local, regional, State and Federal levels.

Incorporation into Existing Planning Mechanisms
The RHMP project lists are included in **CEDS planning** and the Annual CEDS document (page 469). Information from this plans source (local HMPs) was used in the **EDA Economic Adjustment Hazard Mitigation Strategies** (page 2 &3). All **Environmental Review Records** (ERR) for public works projects (normally administered by Region VII PDC) have an eight-step floodplain/wetlands process which complements floodplain management and local HMPs across Region VII. Most projects must pass this environmental review before they are funded, Region VII by virtue of position as project administrator and regional hazard mitigation planner, can **incorporate**/speak to hazard mitigation strategies in the developmental stages of projects.

Continued Public Involvement
The local HMP are still operative and the public has means provided for input in those plans. Local HMP planners speaking and gathering input at public meetings, notices and other means of public input that are still valid at the local level. Region VII maintains a website that has a RHMP page were contact information concerning public input is available.

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APPENDICES

Appendix I

Identified Hazards & Mitigation Strategies by County

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	Total
Flooding								
• Training		X		X			X	3
• Acquisition/demolition projects	X	X	X	X	X	X		6
• Relocation Projects		X	X			X		3
• Elevations Projects		X	X			X		3
• Severe Repetitive Loss Projects	X		X	X		X		4
• Coordinate efforts to participate in CRS			X		X	X	X	4
• Review, update, and enact Ordinances	X	X	X	X	X	X	X	7
• Review, update, enact/enforce floodplain development regulations	X	X	X	X	X	X		6
• Closely monitor stream/rain gauges	X		X					2
• Update floodplain data	X	X	X	X				4
• Identify/remove surface water drainage obstructions	X							1
• Develop surface/storm water management plans	X	X	X	X	X			5
• Highway culvert inspection		X		X		X		3
• Promote flood insurance purchases			X	X		X		3
• Participate in FEMA proactive Hazard Mitigation Programs			X					1
• Search for funding for planning projects								0
• Public education		X	X	X		X		4
• 100 year storm design for public roads		X	X	X		X		4
• Preserve open space					X	X	X	2
• Develop floodplain BMPs						X		1
• Develop warning system			X	X	X	X		4
• Construct floodwalls & levees			X			X		2
• Flood proofing				X		X		2
• Wetlands protection/Site Reclamation				X		X		2
• Dams						X		1
• Retention structures			X	X		X		3
• Diversion canals						X		1
• Channel improvements			X			X	X	3
• Storm sewers						X		1
• Floodgates						X		1
• Storm water pumping stations						X		1
• Protect critical facilities			X			X		2
• Flood response/disaster recover planning		X						1
• Establish emergency/evacuation transportation routes			X			X		2
Winter Storms								
• Develop debris management strategies & snow removal	X	X	X	X	X			5
• Improve right of way maintenance of public utilities	X	X			X			3
• Public education	X	X		X				3
• Monitor weather/early warning system	X	X						2
• Map highest incidences of storms	X							1
• Underground electrical construction	X				X			2
• Better building techniques	X		X				X	3
• Develop stand-by generator network					X			1
• Identify critical facilities to keep in operation								0

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	Total
Drought								
• Public Education	X	X			X	X		4
• Study and evaluate supply alternatives	X				X			2
• Develop emergency water supply protocol/procure tanker	X	X	X	X		X		5
• Coordinate water construction projects	X							1
• Improve current sources	X							1
• Develop a Water Conservation Plan		X		X	X	X		4
• Appoint a drought response officer					X	X		2
• Promote water-conserving devices					X	X		2
• Construct raw water impoundments/Other Backup Supplies		X			X			2
• Use native plants for landscaping						X		1
• Extend public infrastructure	X		X				X	3
Wildfires								
• Public Education		X	X	X			X	4
• Develop safety zones around structures					X	X		2
• Enhance relationships between local fire departments and U.S. Forest Service					X			1
• Regulate construction					X			1
• Use flame retardant construction materials					X	X		2
• Report wildfires immediately						X		1
• Improve ISO ratings							X	1
Wind/Tornados								
• Public education	X	X	X	X	X	X	X	7
• Develop debris management strategies	X							1
• Improve right of way maintenance of public utilities	X			X		X		3
• Monitor weather/early warning systems	X	X	X	X	X			5
• Map highest incidences of storms	X							1
• Underground electrical construction	X							1
• Encourage/legislate better building techniques	X			X				2
• Building codes		X			X			2
• Monitor NOAA Weather Radio for tornado watches					X	X		2
• Develop response plans					X	X		2
• Strengthen vulnerable spots in structures				X		X		2
• Identify critical facilities and ensure back-up power						X		1
CBRN								
• Public education		X		X	X			3
• Protect public water supplies			X					1
• Develop response plans				X	X			2
• Monitor suspected terrorist groups					X	X		2
• Maintain a working relationship with law enforcement					X	X		2
• Coordinate public media as to alert status					X			1
• Establish trauma centers					X			1
• Thoroughly investigate all threats of violence						X		1

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	Total
Thunderstorms								
• Public education	X	X		X	X			4
• Develop debris management strategies			X					1
• Improve right of way maintenance of public utilities	X							1
• Monitor weather/early warning system	X	X	X	X	X		X	6
• Map highest incidences of storms	X							1
• Underground electrical construction	X							1
• Encourage better building techniques								0
• Install rain gauges			X				X	2
Earthquakes								
• Public education		X		X	X		X	4
• Better building techniques					X	X		2
• Review, update or enact building codes					X	X		2
• Develop response plans								0
• Expect aftershocks						X		1
• Upgrade public infrastructure								0
Hail								
• Public education		X			X		X	3
• Monitor weather/early warning		X	X	X	X			4
• Map highest incidences of storms								0
Land Subsidence								
• Public education					X	X		1
• Map at risk areas		X		X		X		3
• Promote insurance purchase					X	X		1
• Structural design/Building Permits/Storm Water Management		X		X	X	X		4
• Develop more effective response plans							X	1
Hazardous Materials								
• Public education		X		X	X			3
• Hazardous material inventory		X		X	X	X		4
• Develop hazardous material incident response/emergency action plans		X			X			2
• Create safe zone/shelters					X			1
• Map most likely transportation routes hazardous materials travel					X	X		2
• Determine most likely place for road accidents						X		1
• Develop containment plans and have on hand spill containment equipment						X		1
Landslides								
• Public education					X			1
• Regulated construction		X	X	X	X			4
• DEP Storm Water Permitting								0
• Forestry BMPS				X				1
• Map at risk areas								0
• Promote insurance purchases								0
• Response plans			X					1
Utility Failures								
• Develop back-up sources				X				1
• Inventory at risk people		X		X				2
• Develop a shelter network		X		X				2
• Inventory at risk power lines		X		X				2

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	Total
Dam Failures								
• Develop monitoring system		X		X				2
• Develop intra-county inventory of impoundments and their impact areas							X	1
• Inventory potential inter-county dam failure impact areas							X	1
• Develop response plans compatible with county emergency operation plans							X	1
Miscellaneous Hazards								
Hurricanes								
• Public education		X		X				2
• Early Warning System								0
Communications Failure								
• Develop monitoring system to keep open lines between EMS & communities		X		X				2
• Develop a HAM Operators network		X		X				2
Broad Scope Hazard Mitigation								
• Public education	X		X					2
• Prioritize mitigation projects	X							1
• Continue to pursue funding opportunities	X							1
• Active Hazard Mitigation Committee at county level	X							1
• Develop collaborative programs between real estate, insurance, public and private sectors	X							1
• Integrate a county plan with existing regulation and programs	X						X	2
• Link emergency services, hazard mitigation programs and public education	X							1
• Commodity study (hazardous materials inventory) and monitoring	X						X	2
• Explore funding sources	X							1
• Supply NOAA radios to critical facilities							X	1
• Install multi-tone alarms to different hazards in fire stations							X	1
• Reverse 911 system							X	1
• Coordinate with other agencies to strengthen mitigation efforts							X	1
• Determine types of hazardous materials being used by well service companies							X	1
Epidemics								
• Public education					X			1
• Public declaration if epidemic occurs					X			1
• Stockpile vaccinations and other health supplies					X			1
Infestation								
• Public education					X			1
Heat Wave								
• Public education								
Geological Hazards								
• Public education			X		X			2
• See earthquakes								
Radiological Hazards								
• Public education								0
• Known radon gas issues						X		1
• Emergency plan						X		1

Appendix II

Region VII
Floodplain & Land Use Management

FLOODPLAIN & LAND USE MANAGEMENT

	Floodplain Regulations	Zoning Regulations	Subdivision Regulations
	Yes	Yes	Yes
Barbour	✓		
Belington	✓	✓	
Junior	✓		
Philippi	✓	✓	
Braxton	✓		
Burnsville	✓		
Flatwoods	✓		
Gassaway	✓		
Sutton	✓		
Gilmer	✓		
Glenville	✓		
Sandfork	✓		
Lewis	✓		
Jane Lew	✓		
Weston	✓		
Randolph	✓		
Beverly	✓		
Elkins	✓		
Harman	use county FPM		
Huttonsville	use county FPM		
Mill Creek	use county FPM		
Montrose	use county FPM		
Tucker	✓		
Davis	✓		
Hendricks	✓		
Hambleton	✓		
Parsons	✓		
Thomas	✓		
Upshur	✓		
Buckhannon	✓	✓	✓

Appendix III

Asset Inventory

Extracted from Approved County Plans

Figure 2.3.1.

Barbour County Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Adaland					X						
Alderson Broaddus College		X	X			493,776	78,967,750.00	13,409,238.00	13,560,000.00	$37,151	
Anker Mining Co.			X								
Barbour County BOE	X	X	X								
Barbour County Courthouse					X						
Barbour County Emergency Squad	X										
Barbour CountyGood Samaritan Center	X		X								
Barbour County S.O.	X					?	?	?	300,000.00	$822	?
Barbour County Senior Center Inc.		X	X								
Belington ES		X				29,708	5,275,000.00	360,000.00	2,387,454.00	$6,541	400
Belington Head Start		X									
Belington MS		X				44,708	6,000,000.00	400,000.00	1,659,748.00	$4,547	300
Belington EMS	X										

Belington PD	X										
Belington VFD	X										
Broaddus Hosp. Assoc. Inc.	X	X	X			46,000	8,000,000.00	3,000,000.00	13,000,000.00	$35,616	252
Builders Group			X								
Carrolton Covered Bridge					X						
Crim House					X						
Gold Diggers Inc.			X								
Junior Cummunity VFD	X										
Junior ES		X				14,581	2,000,000.00	260,000.00	1,020,138.00	$2,795	150
Junior PD	X										
Kasson ES/MS		X				45,815	6,000,000.00	4,000,000.00	1,883,193.00	$5,159	300
Mount Vernon ES		X				14,581	2,000,000.00	260,000.00	662,899.00	$1,816	150
Mountain Hospice Inc	X	X	X			5,480	370,000.00	350,000.00	4,500,000.00	$12,329	75
Peck-Crim-Chesser House					X						
Philip Barbour HS		X				205,854	34,000,000.00	2,700,000.00	5,334,774.00	$14,616	1000
Philippi B&O Railroad Station					X						
Philippi Covered Bridge					X						
Philippi ES		X				46,300	5,550,000.00	360,000.00	2,820,000.00	$7,726	500
Philippi Head Start		X									
Philippi Historic District					X						
Philippi MS		X				55,400	6,500,000.00	400,000.00	1,621,351.00	$4,442	500
Philippi PD	X										
Philippi VFD	X										
Residential		x					$254,233,980				

Volga-Century ES		X				14,581	2,000,000.00	260,000.00	702,494.00	$1,925	150
Whitescarver Hall					X						
Wilmoth House					X						
WVSP Philippi	X										

BARBOUR COUNTY ASSET INVENTORY

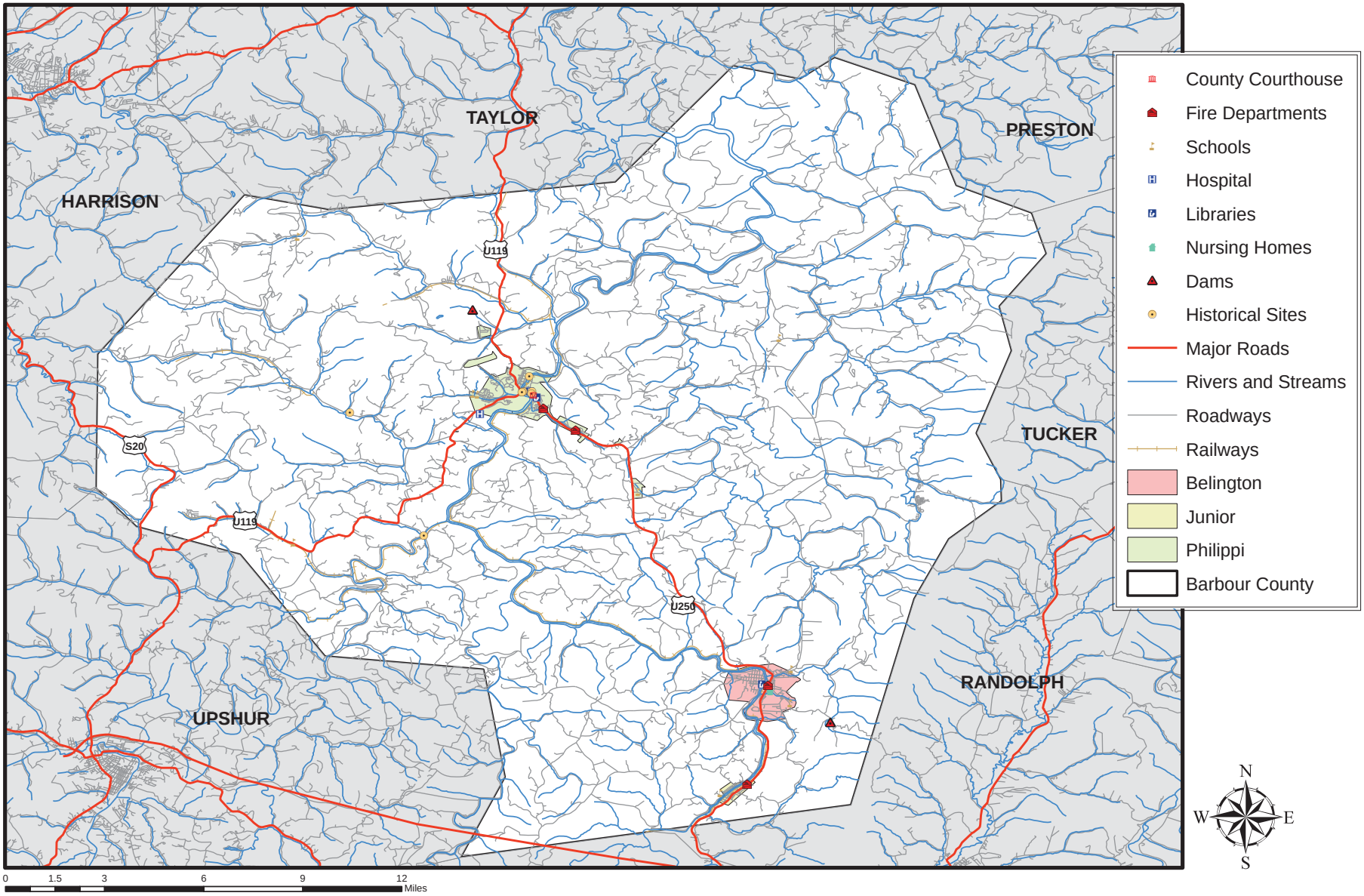


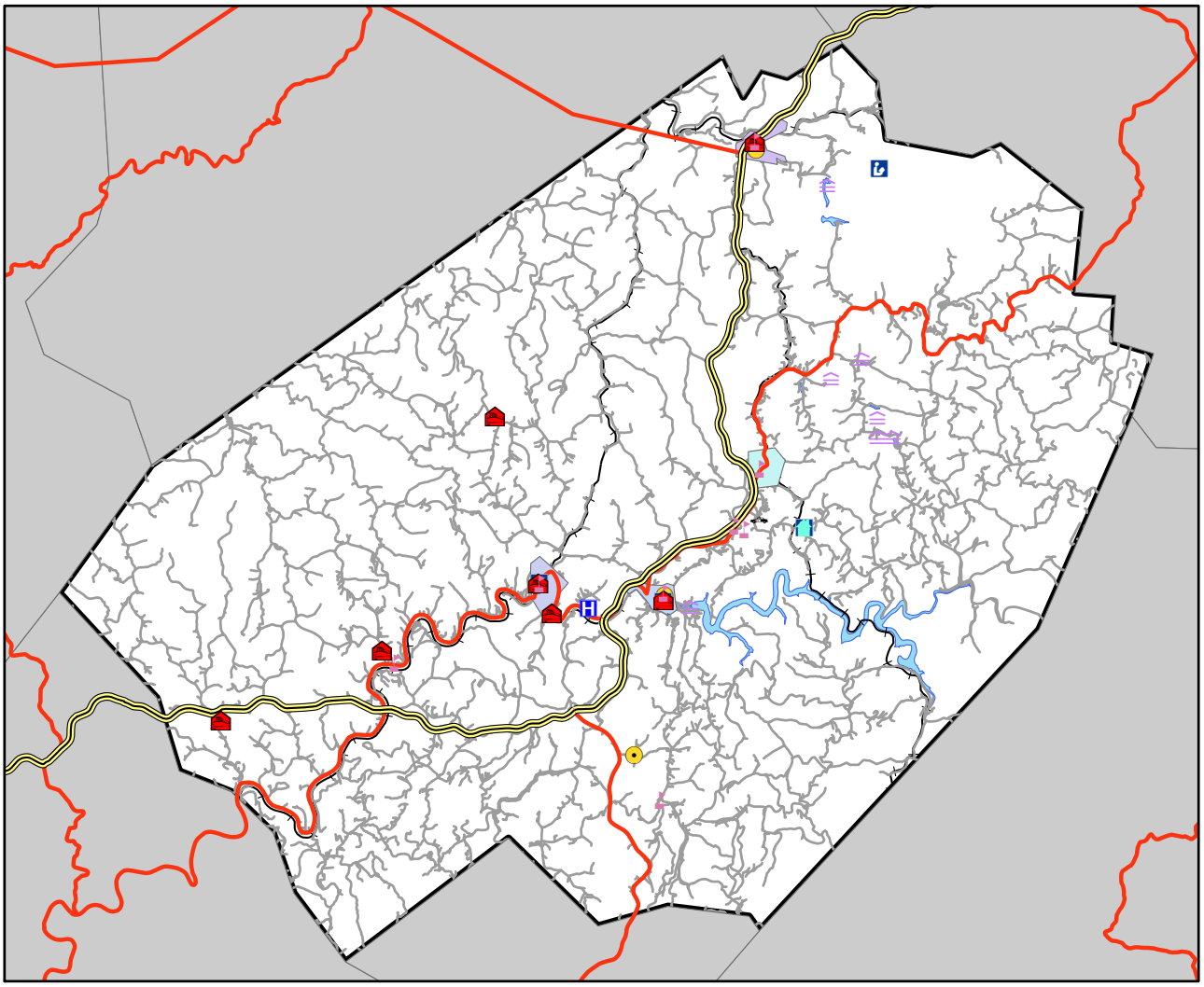
Figure 2.3.1.

Braxton County Assets

Name or Description of Asset	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historical/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)	Occupancy or Capacity (#)
Braxton County BOE											
Braxton County Courthouse											
Braxton County HS											
Braxton County MS											
Braxton County Senior Center											
Braxton County Sheriff's Office											
Braxton Health Care Center, LLC											
Braxton Memorial Hospital											
Bridges											
Burnsville ES											
Burnsville FD											
Burnsville Water Treatment Plant											
Central WV Aging Services											
Chapel FD											
Davis ES											
Flatwoods ES											

Flatwoods-Canoe Run Water Treatment Plant											
Frametown ES											
Frametown FD											
Gassaway FD											
Gassaway PD											
Go-Mart, Inc											
John Skidmore Dev. Inc											
Little Birch ES											
Mountain Cap of WV											
Residential											
Roads											
Servia FD											
Sutton ES											
Sutton FD											
Sutton PD											
Weyerhaeuser Co											
WV RJCFA											

BRAXTON COUNTY ASSET INVENTORY



- County Courthouse
- Dams
- Fire Departments
- Historical Sites
- Hospital
- Libraries
- Nursing Homes
- Schools
- WVSP Barracks
- Burnsville
- Flatwoods
- Gassaway
- Sutton
- Braxton County

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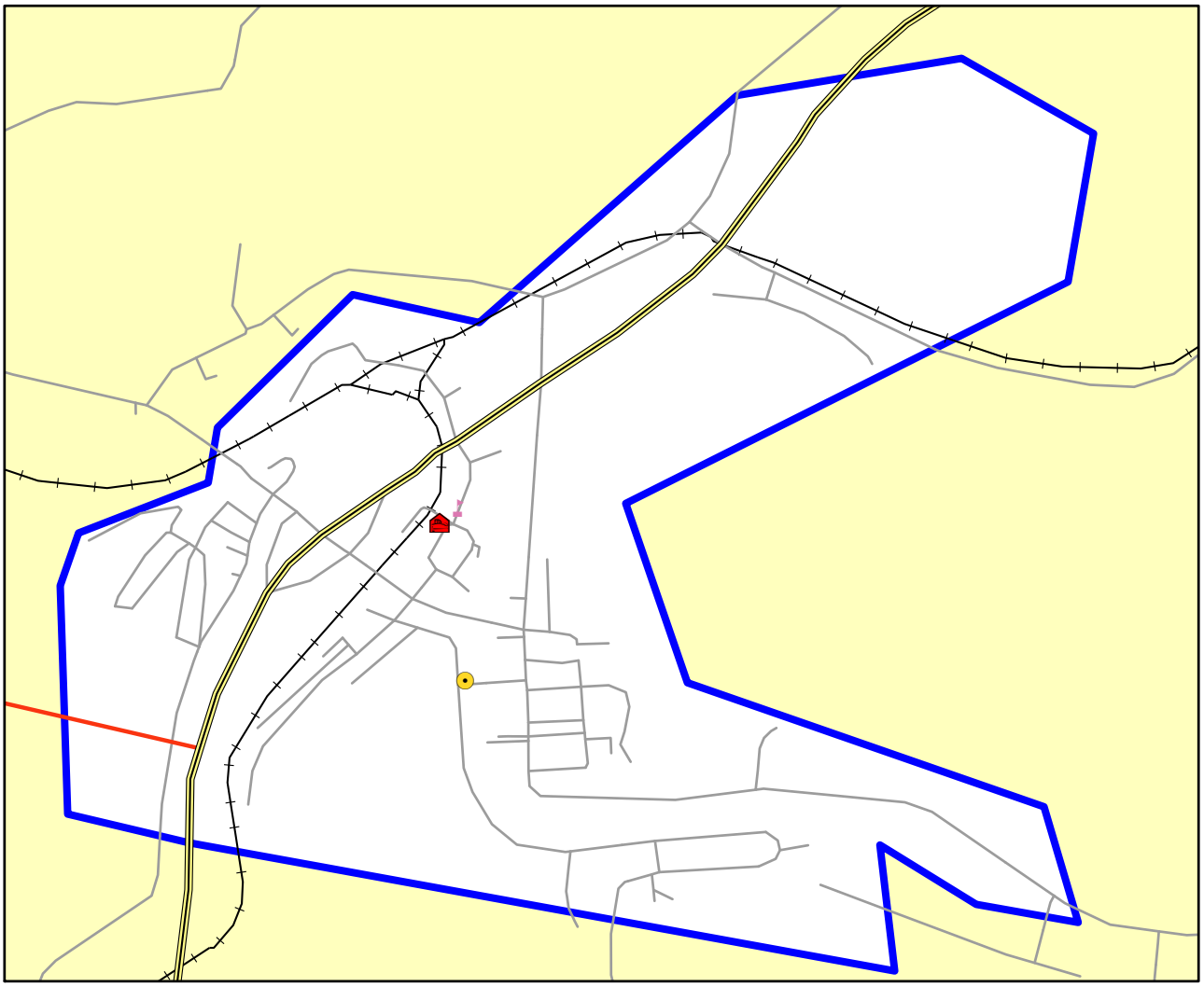
Source: WVGIS Tech Center
http://wvgis.wvu.edu/

Figure 2.3.2.

Burnsville Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Burnsville PD											
Burnsville ES											
Residential											
Roads											

BURNSVILLE
ASSET INVENTORY



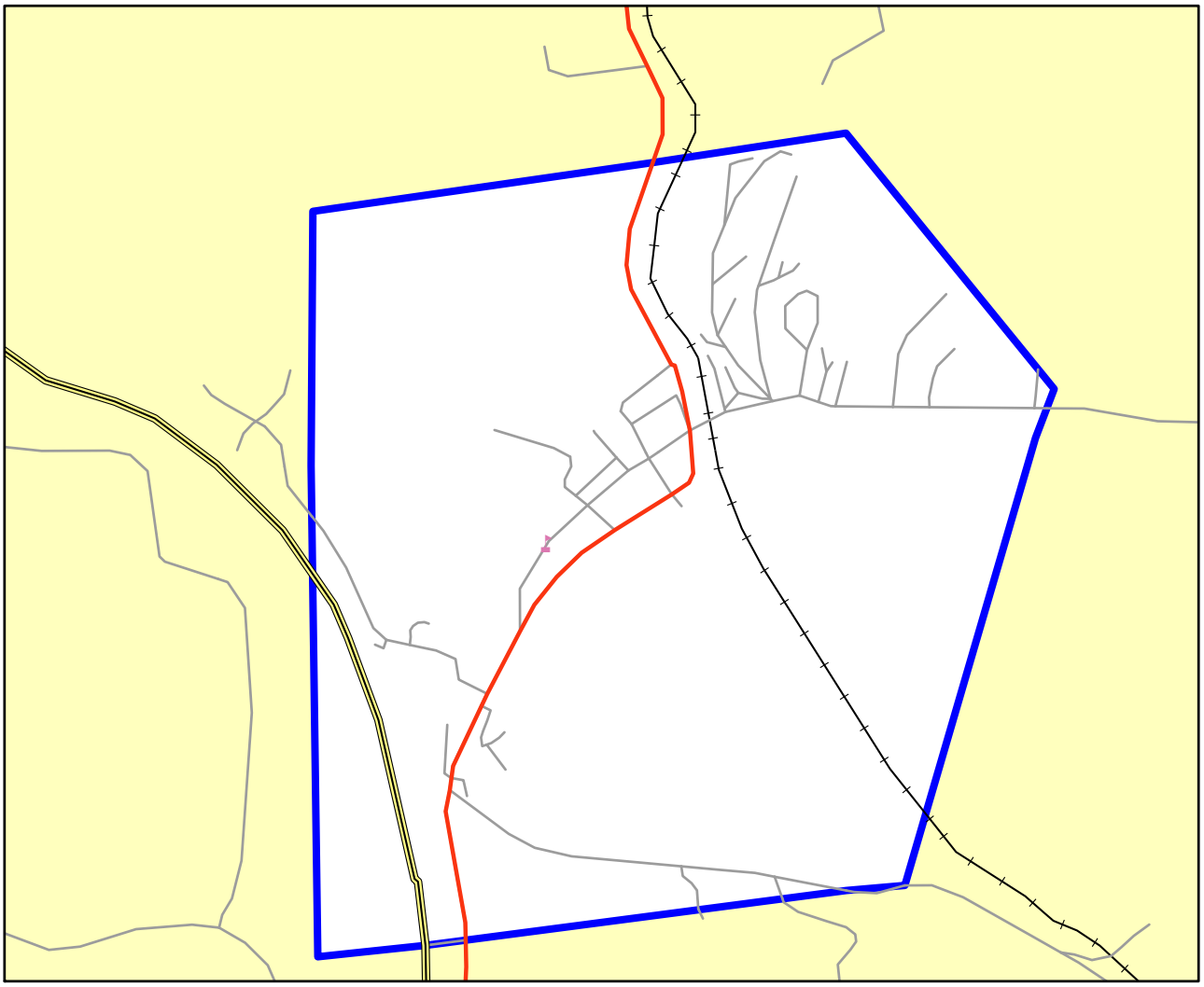
Source: WVGIS Tech Center
http://wvgis.wvu.edu/

Figure 2.3.3.

Flatwoods Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Flatwoods PD											
Residential											
Roads											

FLATWOODS
ASSET INVENTORY



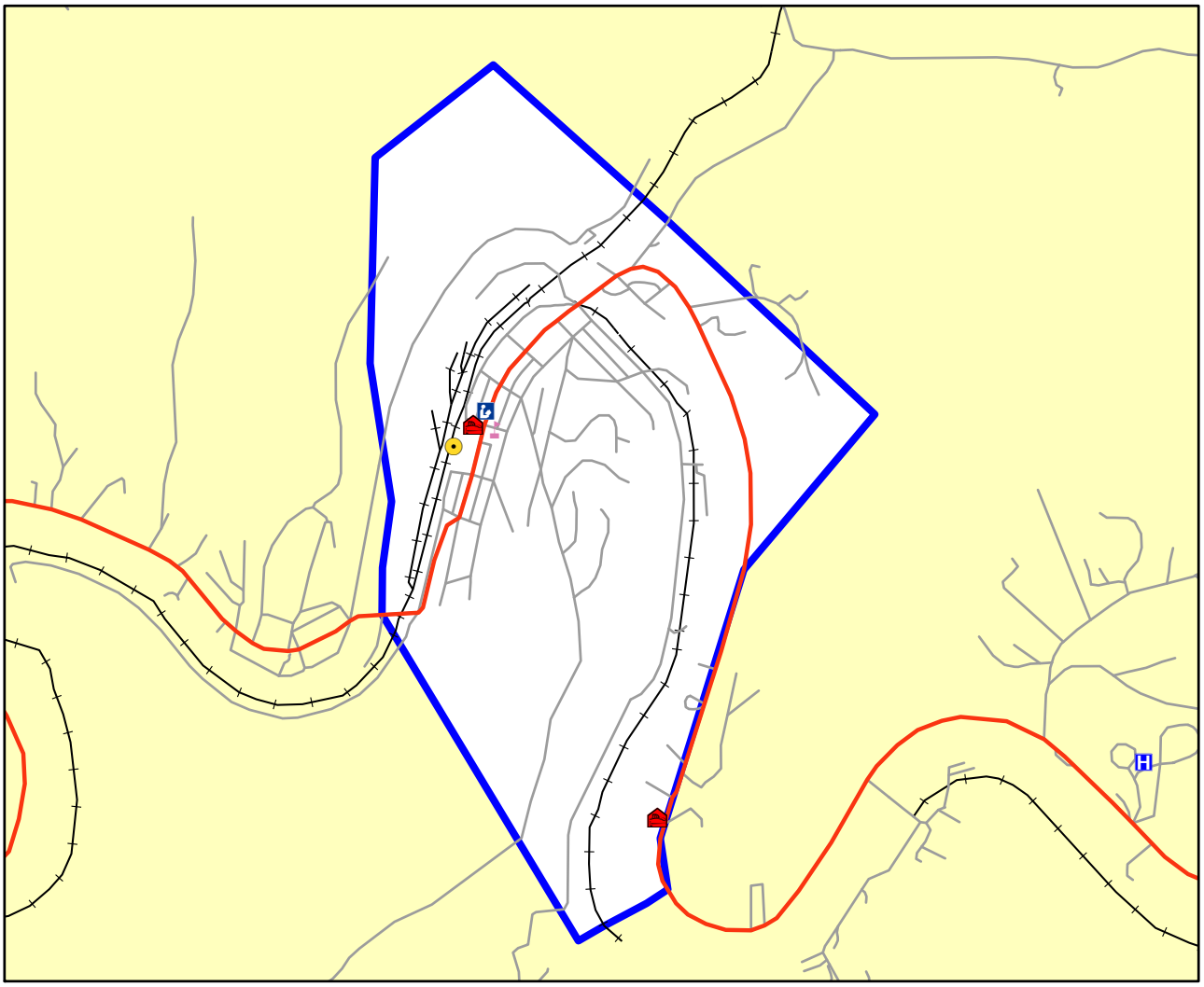
Source: WVGIS Tech Center
http://wvgis.wvu.edu/

Figure 2.3.4.

Gassaway Assets

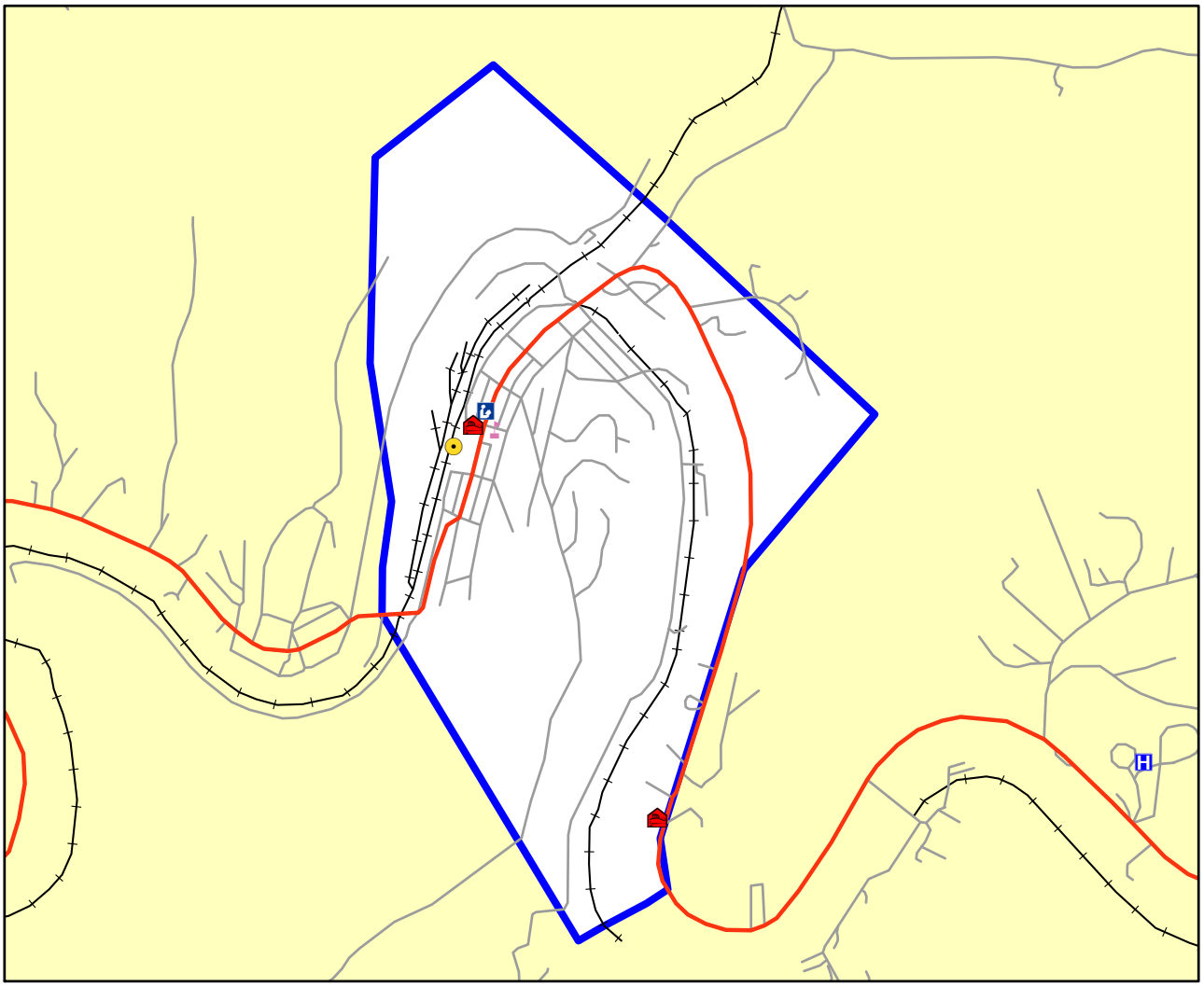
Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)	Occupancy or Capacity (#)
	X	X	X	X	X						
Gassaway FD											
Gassaway PD											
Residential											
Roads											

GASSAWAY
ASSET INVENTORY



Source: WVGIS Tech Center
http://wvgis.wvu.edu/

GASSAWAY
ASSET INVENTORY



Source: WVGIS Tech Center
http://wvgis.wvu.edu/

Figure 2.3.1.

Gilmer County Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Aramark Campus Inc.											
Bridges											
Cedar Creek State Park											
Cederville VFD						112067200	$200,000	$200,000	$10,000	$25	8
Council of Senior Citizens	X					12,000	$1,740,900	$132,764	$50,000	$1,337	250
Courthouse/Jail						22248	$1,950,000	$500,000	$200,000	$550	20
FCI Federal Prison						150000	$150,000,000	$70,000,000			2000
Flying W Plastics	X					64,366	?	?	?	?	?
Foodland											
Gilmer Co. Ambulance Service						1800	$134,680	$260,000	$320,000	$875	8
Gilmer Co. FD						4560	$273,600	$1,165,000	$100,000	$275	10
Gilmer Co. SO											
Gilmer County HS						81924	$7,455,100	$7,455,100	$2,853,600	$7,800	588
Gilmer County Public Library						2700	$139,500	$150,000	$60,000	$165	3
Gilmer Courthouse Annex						6120	$530,000	$530,000	$200,000	$550	20
Glenville ES						29844	$2,715,800	$2,715,800	$1,426,800	$3,900	204

Glenville PO						5920	$521,000	$250,000	$100,000	$275	10
Glenville State College											
Lignetics of WV Inc.						35000	$2,000,000	$3,500,000	$4,000,000	$1,100	45
McDonalds of Glenville											
Normantown ES						6425	$584,675	$584,675	$1,426,800	$3,900	144
Normantown VFD						1120	$67,200	$200,000	$10,000	$25	8
Railroads						42192	$1,814,300				
Residences							$142,471,440				
Roads						405118	$48,614,000				
Sand Fork ES						21060	$1,916,460	$1,916,460	$1,426,800	$3,900	129
Sand Fork VFD						1120	$67,200	$325,000	$10,000	$25	8
Sunbridge Care and Rehab											
Troy ES						14976	$1,362,800	$1,362,800	$1,426,800	$3,900	152
Troy VFD						1200	$72,000	$200,000	$10,000	$25	8
Waco Oil & Gas/Trio Petroleum Corp.						43000	$3,000,000	$1,000,000	$1,825,000	$5,000	50
Wastewater Plant						2100	$3,183,200	$3,183,200	$25,000,000	$68,000	2
Water Plant						2300	$2,178,000	$1,500,000	$3,000,000	$8,200	2
WVSP											

GILMER COUNTY ASSET INVENTORY

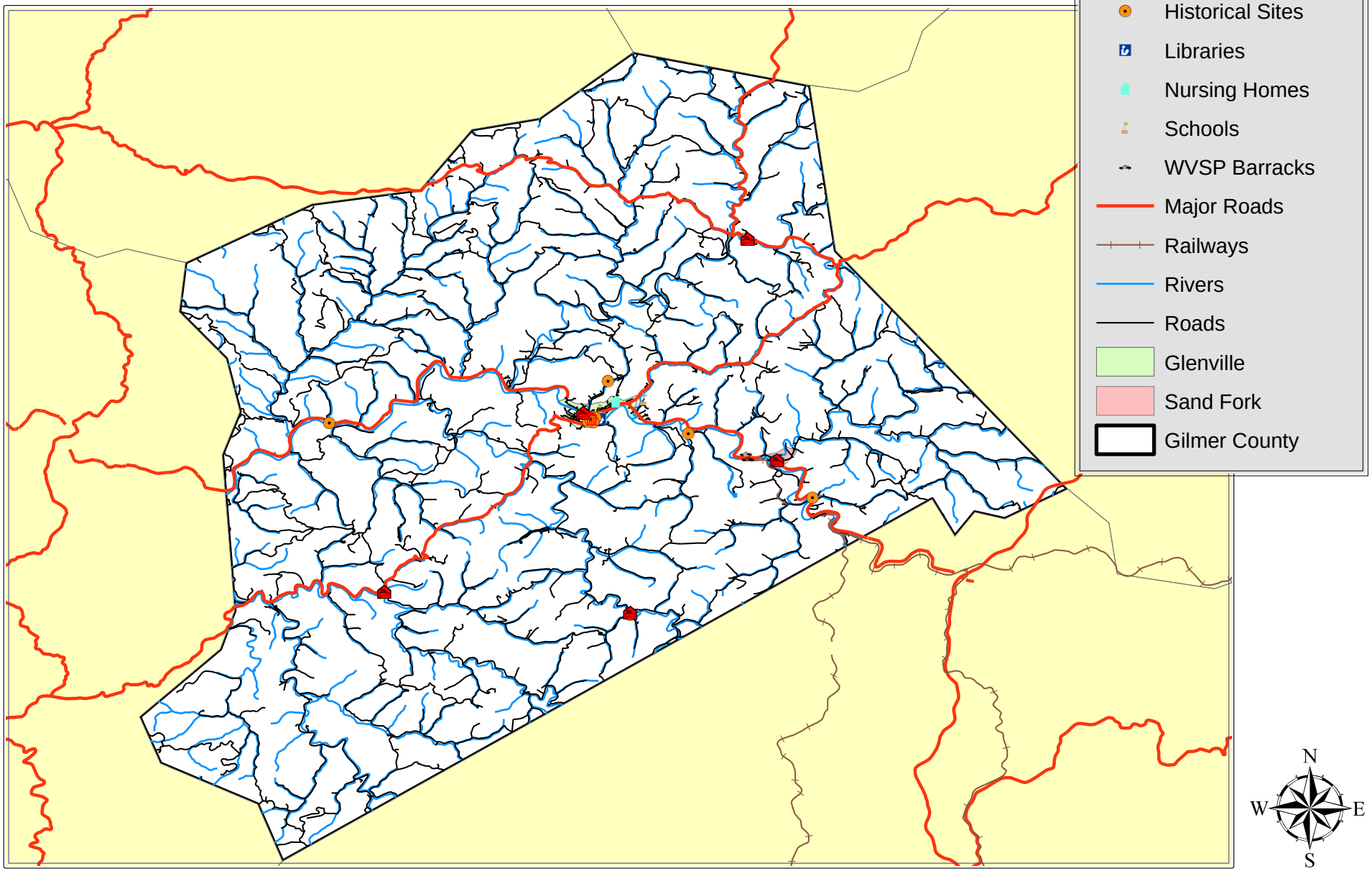


Figure 2.3.1.

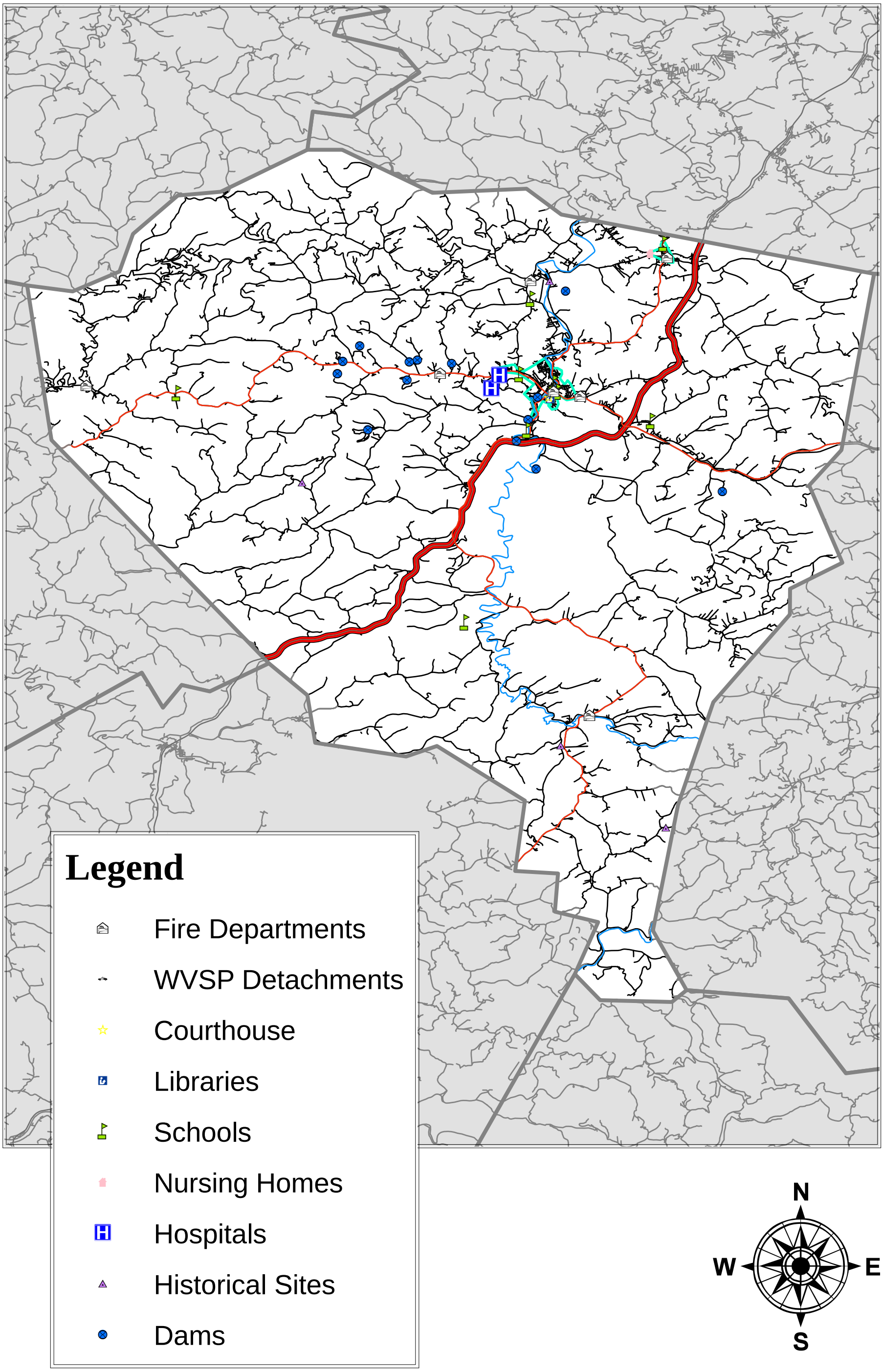
Lewis County Asset Inventory

Name or Description of Asset	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						
Alum Bridge ES		**X**				9,540	$1,908,000.00	$190,000.00	$3,828,571.40	$10,489.24	103
Alum Bridge PO				**X**							
Annamede					**X**		$271,400.00				
Bridges	**X**										
Camden PO				**X**							
Crestview Manor		**X**				26,237	$3,400,000.00	$4,200,000.00	$4,100,000.00	$11,232.88	76
Dams	**X**										
Dominion Hope			**X**			2,400	$539,400.00	$180,000.00			14
Hackers Creek Pioneers					**X**						
Halliburton Energy Services			**X**				$379,400.00				
Ireland PO				**X**							
Jackson's Mill					**X**						
Jackson's Mill State 4-H Camp (WVU)					**X**	186,535	$11,308,450.00	$5,187,708.00	$2,100,000.00	$5,753.42	450 (max)
Jackson's Mill VFD	**X**					7,150	$250,000.00	$647,000.00	$50,000.00	$136.99	300 (max)
Jane Lew ES		**X**				37,720	$7,544,000.00	$754,000.00	$3,828,571.40	$10,489.24	714
Jane Lew Town Hall	**X**					800	$174,000.00	$5,000.00	$103,000.00	$282.19	2
Jane Lew PO				**X**							
Jane Lew VFD	**X**					10,000	$750,000.00	$1,500,000.00	$105,000.00	$287.67	500 (max)
Key Oil			**X**			2,018	$175,600.00	$100,000.00			10

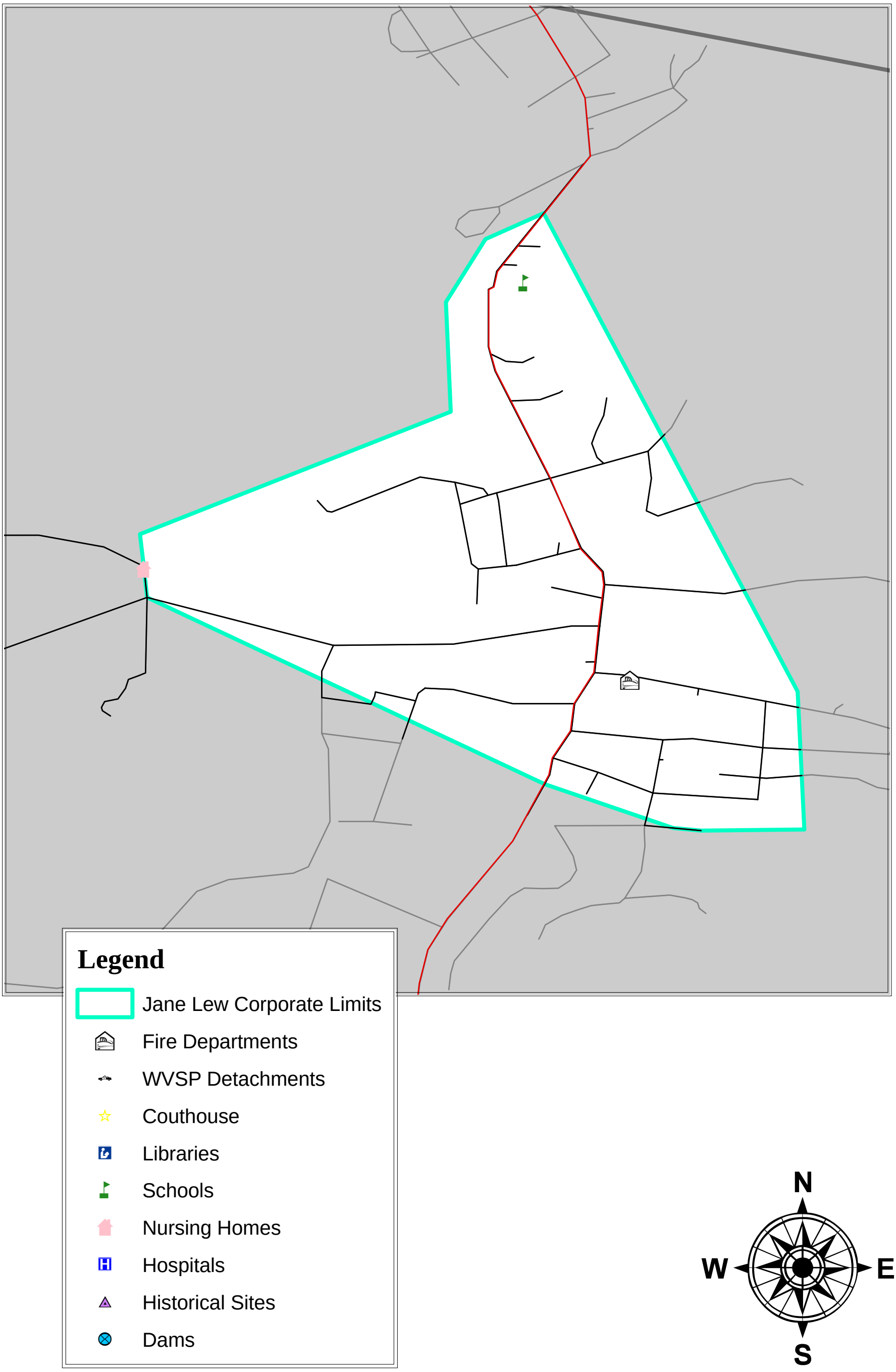
Name or Description of Asset	Critical Facility X	Vulnerable Populations X	Economic Assets X	Special Considerations X	Historic/Other Considerations X	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)	Occupancy or Capacity (#)
Lewis County Board of Education	**X**					59,220	$9,475,200.00	$473,760.00	$3,828,571.40	$10,489.24	540
Lewis County Communications Ctr.	**X**					3,200	$99,000.00	$500,000.00	$1,500,000.00	$4,109.59	
Lewis County Courthouse	**X**					25,135	$5,237,449.00	$995,008.00	$4,733,558.00	$12,968.65	
Lewis County EMS	**X**					12,316	$985,280.00	$367,245.00	$450,000.00	$1,232.88	5
Lewis County Extension Office				**X**							
Lewis County HS		**X**				164,904	$36,278,880.00	$3,627,888.00	$3,828,571.40	$10,489.24	1,010
Lewis County Senior Citizens Center		**X**				9,000	$1,125,000.00	$141,000.00	$2,400,000.00	$6,575.34	150
Louis Bennett Public Library				**X**	**X**	5,000	$1,200,000.00	$703,009.00	$130,000.00	$356.16	12
Midway VFD	**X**					6,250	$45,000.00	$310,000.00	$35,000.00	$95.89	
National Guard Amory, Weston	**X**					15,479	$2,250,000.00				500 (max)
Peterson-Central ES		**X**				47,180	$9,436,000.00	$943,600.00	$3,828,571.40	$10,489.24	500
Pricetown VFD	**X**					5,000	$377,179.00	$74,013.00	$102,514.00	$280.86	200 (max)
Residential				**X**			$188,458,740.00				16,670
Roadways	**X**										
Roanoke ES		**X**				26,500	$5,300,000.00	$530,000.00	$3,828,571.40	$10,489.24	140
Robert L. Bland MS		**X**				113,570	$24,955,000.00	$2,498,504.00	$3,828,571.40	$10,489.24	880
St. Bernard Church and Cemetery					**X**						
St. Patrick ES		**X**				15,120	$3,050,000.00	$3,000.00	$405,000.00	$1,109.59	350

Name or Description of Asset	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 (#)
Stonewall Jackson Memorial Hospital	**X**					87,025	$17,794,489.00	$3,000,000.00	$56,000,000.00	$153,424.66	70
Upper Glady School					**X**						
Walkersville Covered Bridge					**X**						
Walkersville PO				**X**			$74,500.00				
Walkersville VFD	**X**					7,000	$750,000.00	$1,000,000.00	$90,000.00	$246.58	500 (max)
Wal-Mart			**X**				$2,972,130.00				
Weston City Hall	**X**						$788,843.00	$500,000.00	$1,600,000.00	$4,383.56	
Weston Colored School					**X**		$2,200.00				
Weston Downtown Historical District					**X**						
Weston State Hospital					**X**		$2,084,200.00				
Weston PO				**X**							
Weston Street Dept.	**X**						$103,809.00				
Weston VFD	**X**						$753,624.00				
Weston Wastewater Plant	**X**					4,560		$300,000.00	$1,273,500.00	$3,489.04	12
WV American Water Plant	**X**						$663,700.00				
Wm. R. Sharpe, Jr. Hospital	**X**					215,180	$40,000,000.00	$8,000,000.00	$25,700,000.00	$70,410.96	150

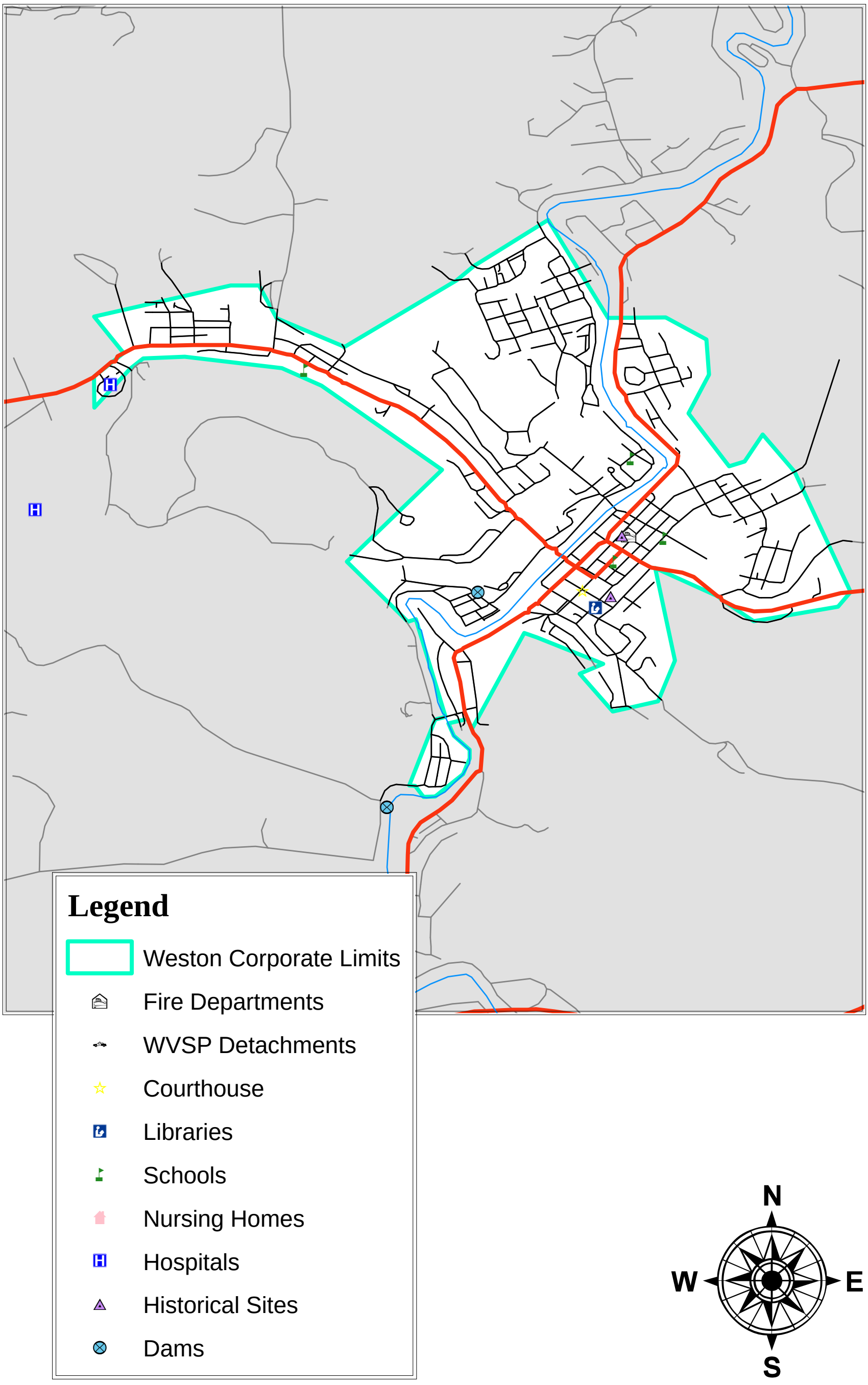
Lewis County Asset Inventory



Jane Lew Asset Inventory



Weston Asset Inventory



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Randolph County Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph Co., Courthouse			X			21,792	$8,000,000	$300,000	$32,000,000	$87,700	31
Randolph Co., CH Annex.			X			25,000	$1,500,000	$300,000	$1,900,000	$5,200	22
Randolph Co., Magistrate Annex.			X			12,000	$800,000	$200,000	$600,000	$1,600	17
Randolph Co., Jail	X					5,820	$2,500,000	$1,200,000	$395,000	$1,100	15
Randolph Co., EMS - Elkins	X					6,000	$450,000	$674,000	$1,043,600	$2,900	18
Randolph Co., EMS - Harman	X					1,200	$120,000	$100,000	$5,000	$13	0
Randolph Co., EMS - Mill Ck.	X					1,200	$120,000	$205,000	$75,000	$200	3
Federal Aviation Admin.			X			10,000	$1,500,000	$3,000,000	$4,500,000	$12,300	32
Elkins City Hall			X				$2,475,087	$282,095			
Beverly Town Hall			X			1,156	$115,634	$30,000	$30,000	$100	2
Coalton Town Hall			X			3,024	$302,400	$25,000	$42,000	$100	2
Harman Town Hall			X								
Huttonsville Town Hall			X			4,000	$400,000	$350,000	$50,000	$100	2

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Mill Creek Town Hall			X								
Montrose Town Hall			X			2,600	$120,000	$25,000	$12,000	$33	6
Elkins-Rand. Co. Library - Elkins (Main Building)			X			5,000	$424,500	$120,000	$139,000	$400	7
Elkins-Rand. Co., Library - Elkins (Storage Bldg.)			X			1,440	$40,000				
Pioneer Memorial Library - Harman			X			1,920	$86,000	$45,000	$28,000	$100	4
Tygart Valley Library - Mill Creek			X			3,710	$325,000	$75,000	$35,000	$100	4
Valley Head Library - Valley Head			X								
Elkins Vol. Fire Dept.	X					15,552	$137,081	$59,488			
Beverly Vol. Fire Dept.	X					18,720	$2,500,000	$1,500,000	$173,000	$500	38
Coalton Vol. Fire Dept.	X					5,500	$110,000	$639,500	$50,000	$100	16
Harman Vol. Fire Dept.	X					3,200	$200,000	$660,000	$30,000	$100	20

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Huttonsville VFD - Huttonsville	X					2,592	$120,000	$150,000	$50,000	$100	
Huttonsville VFD - Mill Creek	X					4,800	$150,000	$280,000	$50,000	$100	39
Leading Creek VFD - Stn. 1	X					1,152	$42,000	$22,000	$4,500	$12	
Leading Creek VFD - Stn. 2	X					5,160	$416,000	$634,000	$41,000	$100	26
Pickens VFD	X					4,250	$280,000	$450,000	$40,000	$100	25
Tygart Valley VFD - Dailey Stn.	X					5,920	$200,000	$750,000	$50,000	$100	30
Tygart Valley VFD - Valley Bend	X					960	$50,000	$200,000	$50,000	$100	N/A
Valley Head VFD - Station #1	X					4,096	$175,000	$530,000	$22,000	$100	20
Valley Head VFD - Station #2	X					1,200	$70,000	$80,000	$5,000	$14	N/A
Whitmer VFD - Stn. #1	X					1,600	$100,000	$400,000	$60,000	$200	18
Whitmer VFD - Stn. #2	X					1,200	$60,000	$40,000	$60,000	$200	N/A
Beverly USPS			X			1,500	$140,000	$40,000	$185,000	$500	5
Coalton USPS			X			928	$92,800	$5,000	$80,000	$200	2
Dailey USPS			X			561	$56,100	$10,000	$16,000	$44	2

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Dry Fork USPS			X			360	$40,000	$8,000	$40,000	$100	2
Elkins USPS			X			23,697	$2,500,000	$150,000	$1,497,435	$4,100	23
Glady USPS			X			388	$38,800	$6,000	$1,500	$4	2
Harman USPS			X			864	$65,000	$11,000	$60,000	$200	3
Helvetia			X			285	$28,500	$20,000	$5,000	$13	2
Huttonsville USPS			X			720	$72,000	$10,000	$80,059	$200	2
Kernes USPS			X			928	$92,000	$6,500	$52,000	$100	2
Mabie USPS			X			928	$92,800	$7,000	$60,000	$200	3
Mill Creek USPS			X			3,049	$350,000	$50,000	$200,000	$500	4
Montrose USPS			X			1,168	$116,800	$5,000	$126,000	$300	6
Norton USPS			X			530	$53,000	$10,000	$54,300	$100	2
Pickens USPS			X			240	$50,000	$20,000	$7,000	$20	3
Valley Bend USPS			X			1,056	$106,000	$30,000	$75,000	$200	2
Valley Head USPS			X			600	$60,000	$8,000	$43,000	$100	2
Elkins-Randolph Co., Airport Terminal Bldg.	X					7,652	$765,200	$150,000	$120,000	$300	1
W.D.N.E. Radio				X							
W.E.L.K. Radio				X		4,000	$200,000	$250,000	$850,000	$2,300	20
Randolph - Elkins Health Dept.	X					3,000	$250,000	$200,000	$1,243,426	$3,400	49
Davis Memorial Hospital	X					160,000	$40,000,000	$50,000,000	$100,000,000	$274,000	700
Davis Memorial Cancer Center	X					7,500	$1,500,000	$1,500,000	$1,000,000	$2,700	20

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Davis Health Care Facilities	X					36,204	$5,430,600	$5,000,000	$2,000,000	$5,500	50
Davis Home Health Care	X					8,654	$900,000	$500,000	$1,800,000	$4,900	25
Davis Women's Health Care	X					6,000	$700,000	$500,000	$1,500,000	$4,100	20
Elkins Reg. Convalescent Center	X						$5,875,000		$3,500,000	$9,600	136
Colonial Place			X								
Nellie's Inc. Bldg. #1			X			34,000	$4,950,000	$600,000	$4,000.000.00	$10,900	80
Nellie's Inc. Bldg. #2			X			32,000	$4,750,000	$500,000	$3,000.000.00	$8,200	85
Randolph Co., 4-H Camp			X								
National Guard Armory	X										
U.S. Army Reserve	X										
Huttonsville Correctional Center	X					262,800	$100,000,000	$50,000,000	$13,427,651	$36,800	297
Beverly Elementary School	X					33,550	$4,193,750	$2,096,875			280
Randolph Co., Board Office - Elkins	X					9,304	$1,163,000	$581,500			48

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph Co., School Bus Garage - Elkins	X					13,560	$1,695,000	$847,500			62
Coalton Elementary School	X					44,660	$5,582,500	$2,779,125			203
Randolph Co., School - Gold Bldg. Elkins	X					5,400	$675,000	$337,500			30
Randolph Co., School - Blue Bldg. Elkins	X					60,000	$7,500,000	$3,750,000			0
Elkins Middle School	X					79,500	$9,937,500	$4,968,750			798
Elkins High School	X					167,000	$20,875,000	$10,437,500			929
Elkins Third Ward School	X					38,853	$4,856,625	$2,428,312			334
George Ward Elementary School	X					32,425	$4,053,125	$2,026,562			282
Harman Elementary/High School	X					24,460	$4,307,500	$2,153,750			250
Homestead Elementary School	X					31,000	$3,875,000	$1,943,750			134

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Jennings Randolph Elementary School	X					37,283	$4,660,375	$2,330,187			296
Midland Elementary School	X					38,025	$4,753,125	$2,376,562,00			348
North Elementary School	X					30,458	$3,807,250	$1,903,625			286
Pickens Elementary/High School	X					20,400	$2,550,000	$1,275,000			49
Tygarts Valley Middle/High School	X					75,850	$9,481,250	$4,740,725			622
Valley Head Elementary School	X					21,040	$2,630,000	$1,315,000			94
Randolph Co., VoTech Center	X					57,800	$7,225,000	$3,612,500			35
Randolph Co., VoTech Center Modular #1	X					960	$120,000	$60,000			0
Randolph Co., VoTech Center Modular #2	X					960	$120,000	$60,000			0
Elkins Mtn. School - Main Campus	X					230,000	$1,600,000	$150,000	$4,200,000	$11,500	100

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Elkins Mtn. School - Oak Ridge	X					8,800	$600,000	$350,000	$1,000,000	$2,700	20
Davis and Elkins College	X					See Below	See Below	See Below	$15,000,000	$41,100	182FT/126PT
D&E Albert Hall	X					27,860	$1,758,402	$65,267	See Above		See Above
D&E Allen Hall	X					23,830	$2,383,000	$500,000	See Above		See Above
D&E Benedum Hall	X					24,480	$1,859,759	$155,350	See Above		See Above
D&E Boiler House Theatre	X					4,739	$357,092	$42,067	See Above		See Above
D&E Booth Library	X					40,279	$7,000,200	$1,862,748	See Above		See Above
D&E Chapel	X					1,806	$580,000	$35,820	See Above		See Above
D&E Darby Hall	X					25,837	$2,423,178	$37,330	See Above		See Above
D&E Gate House	X					1,267	$76,950	$26,100	See Above		See Above
D&E Gate Towers	X					2,402	$150,000	$50,000	See Above		See Above
D&E Graceland	X					9,646	$4,000,000	$400,000	See Above		See Above
D&E Gribble Hall	X					23,876	$1,875,321	$36,153	See Above		See Above
D&E Gymnasium	X					28,767	$1,545,236	$83,650	See Above		See Above
D&E Halliehurst	X					18,000	$1,710,000	$259,150	See Above		See Above
D&E H Campus Center	X					77,600	$5,905,800	$517,650	See Above		See Above
D&E Ice House	X					1,592	$186,795	$2,610	See Above		See Above

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
D&E International Hall	X					24,480	$3,751,569	$26,100	See Above		See Above
D&E Liberal Arts Hall	X					28,920	$1,768,500	$477,400	See Above		See Above
D&E Maintenace Bldg.	X					7,200	$130,707	$47,250	See Above		See Above
D&E Presidential Hall	X					24,880	$2,582,100	$26,100	See Above		See Above
D&E Presidents Home	X					5,656	$574,200	$99,900	See Above		See Above
D&E Randolph Hall	X					14,580	$1,514,718	$670,700	See Above		See Above
D&E 05 Sycamore House	X					2,555	$102,600		See Above		See Above
D&E 311 H'town House	X					1,412	$102,150		See Above		See Above
D&E 315 H'town House	X					1,392	$102,150		See Above		See Above
D&E 319 H'town House	X					1,392	$102,150		See Above		See Above
D&E 323 H'town House	X					1,392	$102,150		See Above		See Above
D&E Ross House	X					2,429	$85,500		See Above		See Above
D&E Roxanna Booth Hall	X					30,906	$2,601,900	$79,950	See Above		See Above

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
D&E Science Center	X					60,778	$5,400,000	$550,950	See Above		See Above
D&E Upward Bound Center	X					3,950	$127,800	$31,150	See Above		See Above
Elkins FAA ATCC				X							
Elkins FAA AFSS				X							
US Forest Service Bldg.				X							
Jennings Randolph Federal Bldg.				X							
DOH Weight Stn. CR11 - Bldg. No. 4233				X		625	$36,058	$40,000	$200,000	$500	4
DOH Sign & Storage - Bldg. No. 4232				X		15,060	$386,331	$250,000	$1,050,000	$2,900	21
DOH Parts & Small Eng. Repair - Bldg. No. 4299				X		7,562	N/A	$250,000	$150,000	$400	3
DOH Welding/Blacksmith - Bldg. No. 4234				X		899	$15,453	$20,000			
DOH Sign Shop - Bldg. 4230				X		4,480	$139,079	$150,000	$571,410	$1,600	6

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
DOH Dist. Hqs. Material Lab. - Bldg. 4231				X		2,020	$61,511	$100,000	$100,000	$300	4
DOH Dist. Hqs. Lot Storage - Bldg. No. 4242				X		100	$3,091	$3,000			
DOH Dist. Hqs. Tool Shed - Bldg. No. 4244				X		36	$2,500	$3,000			
DOH Dist. Hqs. Nuclear Storage Shed - Bldg. No. 4248				X		204	$15,000	$20,000			
DOH Dist. Hqs. Bldg #2, Bldg. No. 42101				X		13,256	$60,000	$60,000	$13,355,467	$36,600	61
DOH Dist. Hqs. - Dist Hqs.- Bldg No. 4285				X		9,344	$540,000	$390,000	$2,820,000	$7,700	27
DOH Dist. Hqs. - DM - Office & Storage - Bldg. No. 4292				X		4,704	$128,777	$100,000	$500,000	$1,400	14
DOH Dist. Hqs. Storage Bldg. - Bldg. No. 4250				X		1,728	$20,000	$20,000			
DOH Dist. Hqs. Harman Maint. Hqs. Bldg. No. 4206				X		3,680	$133,928	$30,000	$600,000	$1,600	8

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	X	X	X	X	X						
DOH Dist. Hqs. Harman Salt Shed _ Bldg. NO. 4241				X		2,460	$52,058	$20,000			
DOH Dist. Hqs. Harman Spreader Rack. Bldg. No. 4249				X		580	$3,000				
DOH Dist. Haines Knob Radio Twr. Bldg. No. 4240				X		288	$15,000	$70,000			
DOH Dist, CR250/90 Norton Explosive Magazine - Bldg. No. 4235				X		120	$2,220	$700			
DOH Dist. CR 250/9 Norton Explosive Magazine - Bldg. No. 4236				X		56	$1,903	$500			
DOH Randolph Co. Hqs. CR219/11 - Bldg. No 4201				X		7,680	$378,696	$150,000	$2,200,000	$6,000	30

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	X	X	X	X	X						
DOH Randolph Co. Hqs. CR219/11 - Bldg. No 4208				X		3,090	$36,058	$20,000			
DOH Randolph Co, Hqs. CR219/11 - Bldg. No. 4209				X		1,320	$40,000	$50,000			
DOH Randolph Co., Hqs. Storage Bldg, CD219/11 - Bldg. No. 4210				X		1,012	$20,000	$5,000			
DOH Randolph Co., Hqs. Salt Shed, CD219/11 - Bldg, No. 4212				X		2,496	$60,000	$20,000			
DOH Randolph Co., Gas House CD219/11 Bldg. No. 4216				X		740	$15,543	$2,000			
DOH Randolph Co., Spreader Rack, CR219/11 - Bldg. No. 4221				X		640	$10,302				
DOH Randolph Co., Asphalt Tank CR219/250 - Bldg. No. 4243				X		5,000	$10,120	$2,500			

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	X	X	X	X	X						
DOH Randolph Co., Hotsy Shed, CD219/11 - Bldg. No. 4247				X		1,008	$22,000	$2,000			
DOH Randolph Co. Coalton Hqs. CR53 - Bldg. No. 4202				X		3,360	$154,000	$50,000	$700,000	$1,900	10
DOH Randolph Co., Coalton Hqs. CR53 Storage Bin - Bldg. No. 4211				X		480	$5,151	$500			
DOH Randolph Co., Coalton Hqs. CR53 Gas House - Bldg. No. 4217				X		96	$10,749	$600			
DOH Randolph Co., Coalton Hqs. CR53, Wash Bay, Bldg. No. 4222				X		1,024	$25,000	$2,000			
DOH Randolph Co., Coalton Hqs. CR53, Spreader Rack, Bldg. No. 0425				X		320	$5,151	$0			

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	X	X	X	X	X						
DOH Randolph Co., Coalton Hqs. CR53, Salt Shed, Bldg. No. 4226				X		3,060	$69,511	$60,000			
DOH Randolph Co., Valley Head Hqs. WV15, Bldg, No. 4203				X		3,360	$154,532	$50,000	$400,000	$1,100	5
DOH Randolph Co., Valley Head Hqs. WV15, Salt Shed Bldg, No. 4213				X		2,496	$61,000	$20,000			
DOH Randolph Co., Valley Head Hqs., WV15, Gas House - Bldg. No. 4218				X		96	$2,749	$600			
DOH Randolph Co., Valley Head, Hqs. WV15, Spreader Shed, Bldg. No. 4139				X		320	$5,151				

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	X	X	X	X	X						
DOH Randolph Co., Pickens Hqs. CR45, Bldg No. 4204				X		1,891	$77,266	$30,000	$400,000	$1,100	5
DOH Randolph Co., Pickens Hqs. CR45, Gas House, Bldg No. 4220				X		256	$5,000	$5,300			
DOH Randolph Co., Pickens Hqs. CR45, Spreader Rack, - Bldg. No 4224				X		320	$5,151				
DOH Randolph Co., Pickens Hqs. CR45, Chemical Spreader - Bldg. No. 4284				X		2,500	$54,058	$20,000			
DOH Randolph Co., Mill Creek Hqs. US219 - Bldg. No. 4205				X		3,530	$159,986	$50,000	$700,000	$1,900	9
DOH Randolph Co., Mill Creek Hqs. US219 - Wash Bay, Bldg. No. 4207				X		960	$15,000	$2,000			

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	X	X	X	X	X						
DOH Randolph Co., Mill Creek Hqs. US219 - Spreader Shed - Bldg. No. 4214				X		240	$3,000				
DOH Randolph Co., Mill Creek Hqs. US219 - Gas House - Bldg. No. 4219				X		100	$3,091	$600			
DOH Randolph Co., Mill Creek Hqs. US219 - Spreader Rack - Bldg. No. 4223				X		320	$5,151				
DOH Randolph Co., Mill Creek Hqs. US210 - Salt Shed - Bldg. No. 4246				X		1,920	$63,000	$40,000			
WV State Police	X					9,450	$945,000	$225,000	$930,000	$2,500	31
Elkins City Police	X					N/A	N/A	$300,000	$675,000	$1,800	11
Randolph County 4-H Camp				X							
Roads	X					681,300	$2,077,000,000				
Railroads	X					817,420	$374,000,000				
Bridges	X					9,500	$225,000,000				

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	X	X	X	X	X						
Railway Facilities	X					15	$45,000,000				
Airport Facilities	X					1	$8,000,000				
Airport Runways	X					9,090	$56,000,000				
Beverly WTP	X					3,219	$321,900	$1,300,000	$320,000	$900	5
Beverly WWTP	X					1,450	$145,000	$440,000	$175,000	$500	3
Mill Creek WTP	X										
Huttonsville WWTP	X										
Coalton WTP	X										
Midland PSD	X					15,000	$180,000	$200,000	$755,000	$2,100	6
Norton Harding Jimtown Rt. 151 Pump Station	X					180	$30,642	$10,000			
City of Elkins Bldg. # 1 11th Street (Garage)	X					8,000	$172,933				
City of Elkins Bldg. # 1 11th Street (Storage Bldg.)	X					2,100	$31,424	$2,163			
Norton Harding Jimtown Cassity Rd. (Bldg. 3)	X					150	$21,662	$10,000			

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	X	X	X	X	X						
City of Elkins Bldg. # 3 Barron Avenue (WTP)	X						$627,628				
City of Elkins Bldg. # 3 Barron Avenue (Low Lift Bldg.)	X						$70,304				
City of Elkins Bldg. # 3 Barron Avenue (High Lift Bldg.)	X					1,514	$232,544				
City of Elkins Bldg. # 3 Barron Avenue (Chemical Bldg.)	X					2,504	$151,424				
City of Elkins Bldg. # 3 Barron Avenue (Lamella & Flocs)	X					609	$621,920				
City of Elkins Bldg. # 3 Barron Avenue (Lift Station)	X					10,000	$78,000				

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	X	X	X	X	X						
City of Elkins Bldg. # 4 Industrial Park Road (Control Bldg.)	X					3,229	$624,000	$135,200			
City of Elkins Bldg. # 4 Industrial Park Road (Generator Bldg)	X					180	$83,200				
City of Elkins Bldg. # 4 Industrial Park Road (Belt Press Bldg)	X						$617,760				
City of Elkins Bldg. # 4 Industrial Park Road (Sludge Shed Bldg)	X					2,504	$152,506				
City of Elkins Bldg. # 4 Industrial Park Road (Waste Sludge Bldg)	X					609	$156,000				

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	X	X	X	X	X						
City of Elkins Bldg. # 4 Industrial Park Road (Oxidation Ditch Bldg)	X					10,000	$865,280				
City of Elkins Bldg. # 4 Industrial Park Road (Clarifiers)	X					5,766	$468,000				
City of Elkins Bldg. # 4 Industrial Park Road (Screw Pumps Basin)	X					461	$102,752				
City of Elkins Bldg. # 4 Industrial Park Road (Post Airation Basin)	X					730	$43,264				
City of Elkins Bldg. # 4 Industrial Park Road (Decant Tank)	X					804	$70,304				

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	X	X	X	X	X						
City of Elkins Bldg. # 4 Industrial Park Road (Plant Lift Station)	X						$41,600				
City of Elkins Bldg. # 4 Industrial Park Road (Glendale Lift Station)	X						$108,160				
City of Elkins Bldg. # 4 Industrial Park Road (Pretreatment Plant)	X					275	$176,800				
City of Elkins Bldg. # 5 Rural Elkins (Landfill Bldg.)	X					1,344	$30,348	$5,408			
City of Elkins Bldg. # 5 Rural Elkins (Prefab Landfill Bldg.)	X					80	$3,245	$9,734			

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	X	X	X	X	X						
City of Elkins Bldg. # 6 Cherokee Street (lift station)	X						$78,000				
City of Elkins Bldg. # 7 Wilson Street (lift station)	X						$52,000				
City of Elkins Bldg. # 8 Mt. View Drive (lift station)	X						$52,000				
City of Elkins Bldg. # 9 Vector Avenue (lift station)	X						$52,000				
City of Elkins Bldg. # 10 Whiteman Avenue (lift station)	X						$52,000				
City of Elkins Bldg. # 11 15th Street (lift station)	X						$52,000				
City of Elkins+A222 Bldg. # 12 Teaberry Hills (lift station)	X						$52,000				

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	X	X	X	X	X						
City of Elkins Bldg. # 13 Flood Control Road (lift station)	X						$52,000				
City of Elkins Bldg. # 13 Flood Control Road (office)	X						$78,000	$26,000			
City of Elkins Bldg. # 13 Flood Control Road (storage bldg.)	X						$3,120	$3,120			
City of Elkins Bldg. # 13 Flood Control Road (digester bldg.)	X						$78,000				
City of Elkins Bldg. # 14 High Street (1.5 MG water tank)	X						$600,000				
City of Elkins Bldg. # 15 McQuain Street (1.0 MG water tank)	X						$400,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 16 Crystal Springs (2.0 MG Water Tank)	X						$750,000				
City of Elkins Bldg. # 17 Industrial Park Road (Limestone Silo)	X					113	$200,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Large Pavillion)	X					2,610	$100,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Lawn & Garden Bldg)	X					400	$10,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Small Pavilion)	X					800	$10,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Small Pavilion w/ Decking)	X					826	$18,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Restroom Facility)	X					1,244	$10,000				
City of Elkins Bldg. # 19 River Bend Park (Large Pavilion)	X					2,610	$10,000				
City of Elkins Bldg. # 19 River Bend Park (Small Pavilion)	X					600	$8,000				
City of Elkins Bldg. # 20 Bluegrass Park (Small Pavilion)	X					800	$10,000				
City of Elkins Bldg. # 21 Davis Street Park (Small Pavilion)	X					400	$8,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Harman Water Treatment Plant	X					960	$100,000	$3,500,000	$45,000	$100	2
National Guard Armory	X										
Blackman-Bosworth Store/Museum					X	3,926	$100,000	$1,500,000			
Crawford House/Store					X	3,042	$100,000	$500,000			2
Beverly 1808 Courthouse					X	2,354	$500,000				
Beverly Old Bank Bldg./Beverly Family Rearch Library					X	1,840	$500,000	$500,000			1
Collett House					X	3,000	$75,000				
Hill Building/Gift Shop					X	3,624	$100,000				1
Lemuel Chenoweth House/Antiques					X	2,500	$200,000	$500,000	$17,500		1
Baldwin/Chandle e Supply Company					X		$3,000,000				25
Davis Memorial Presbyterian Church					X		$4,000,000				5

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Downtown Elkins Historic Distirct					X	See Below	See Below				
W&M Train Depot					X	6,318	$631,800				
Old Channell Grocery					X	31,590	$3,159,000				
Delmonte Hotel					X	8,424	$842,400,				
Fill-in Building					X	1,053	$105,300				
316 (No Name)					X	1,872	$187,200				
American Legion					X	11,168	$1,116,000				
Black American Legion					X	3,000	$300,000				
Out Building					X	1,000	$100,000				
Old Bus Depot/Papa John's					X	12,096	$1,209,600				
Darden House					X	5,508	$550,800				
Old Brick Playhouse					X	28,620	$2,862,000				
Wilt Building					X	48,384	$4,838,400				
Davis Trust Company					X	30,600	$3,060,000				
Tricketts Hardware					X	8,550	$855,000				
Old Manos Theatre Building					X	20,892	$2,089,200				
Office Products Building(s)					X	36,056	$3,605,600				

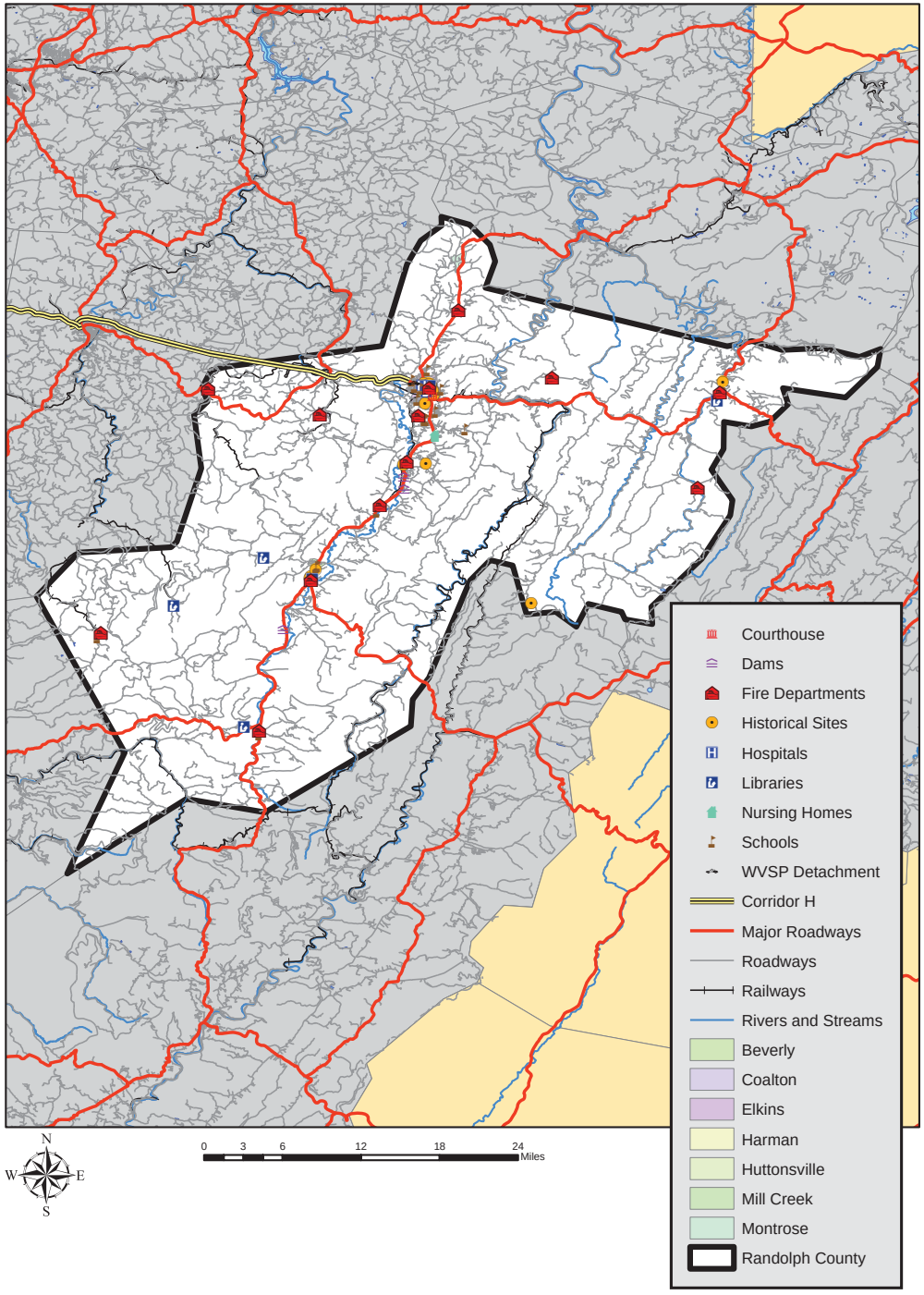
Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)	Occupancy or Capacity (#)
	X	X	X	X	X						
Moose Building					X	18,000	$1,800,000				
Jabberwock					X	7,020	$702,000				
Hidden Hamlet					X	3,510	$351,000				
Arbogast Barber Shop					X	3,510	$351,000				
Pionee Ins./Attic Treasures					X	15,066	$1,506,600				
Tygart Hotel					X	36,855	$3,685,555				
JC Penny/Old Bush Bldg.					X	15,066	$1,506,600				
Kipling Shoes					X	15,066	$1,506,600,00				
Old Murphy's Building					X	27,225	$2,722,500				
Beanders/Old Darden					X	24,750	$2,475,000				
Y.M.C.A.					X	51,840	$5,184,000				
First United Methodist Church					X	14,175	$1,417,500				
Old Family Drug Store Bldg.					X	33,000	$3,300,000				
Talbott's Paint and Glass					X	62,370	$6,237,000				
Old Streamline Grocery Store					X	62,370	$6,237,000				
Old Montgomery Ward Building					X	19,950	$1,995,000				
McManus					X	20,400	$2,040,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Old Grant Store Building					X	24,876	$2,487,600				
Governor H. Guy Kump House					X		$847,550				2
Dr. John C. Irons House					X	2,000	$200,000				1
Richard C. Kerens House "Pinecrest"					X		$2,000,000				
Talor-Condrey House					X	6,000	$480,000				
Warfield - Dye Residence					X		$600,000				2
WV Children's Home					X						
Day-Vandevander Mill					X						
Helvetia Historic District (3 buildings)					X			$2,500,000			
E.E. Hutton House					X			$450,000	$1,000,000	$2,700	
Tygarts Valley Church					X						
Cheat Summit Fort					X			$1,000,000			
Fred A. Perly House					X						

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
See-Ward House					X			$500,000			
Middle Mountain Cabins					X						
IOOF Lodge - Beverly, WV					X	4,870	$100,000				
Logan House - Beverly, WV					X	2,008	$100,000				
Goff House - Beverly, WV					X		$300,000	$1,000,000			2
C.C.Cunningham Museum - Pickens					X	200	$25,000	$50,000			
Grimes Enterprises LLC					X	9,840	$250,000	$5,000,000	$8,000	$0	87
Elkins-Randolph County Senior Citizens Center - Elkins					X	15,000	$1,500,000	$207,000	$224,000	$600	23
Elkins-Randolph County Senior Citizens Center - Gray-House, Elkins					X	3,274	$140,000	$26,000	$1,000,000	$2,700	52
Elkins-Randolph County Senior Citizens Center - Harman					X	4,100	$410,000	$40,000	$79,217	$200	6

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Elkins-Randolph County Senior Citizens Center - Mill Creek					X	4,000	$410,000	$40,000	$96,751	$300	7

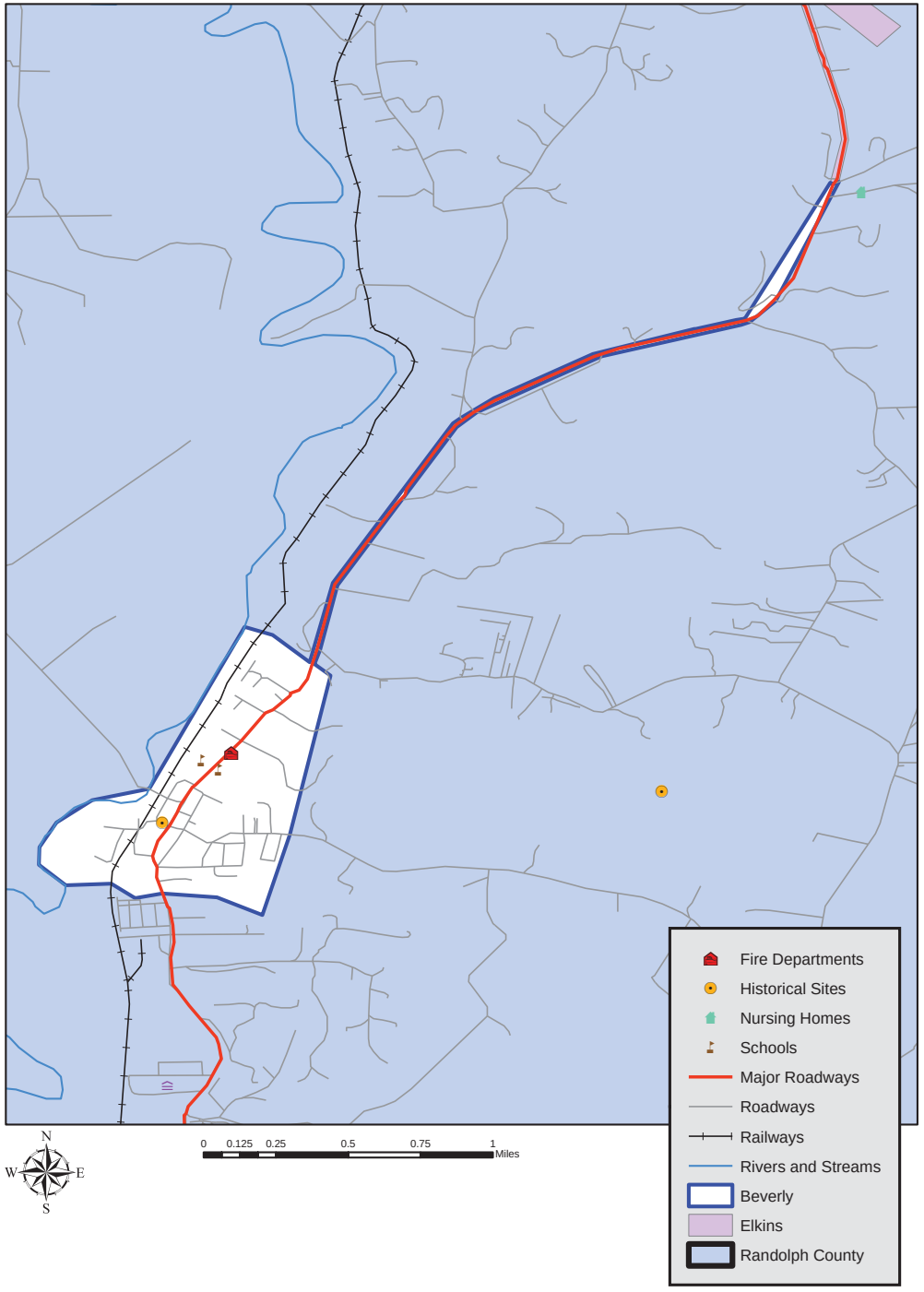
RANDOLPH COUNTY ASSET INVENTORY



Town of Beverly Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Beverly Town Hall			X			1,156	$115,634	$30,000	$30,000	$100	2
Beverly Vol. Fire Dept.	X					18,720	$2,500,000	$1,500,000	$173,000	$500	38
Beverly USPS			X			1,500	$140,000	$40,000	$185,000	$500	5
Beverly Elementary School	X					33,550	$4,193,750	$2,096,875			280
Beverly WTP	X					3,219	$321,900	$1,300,000	$320,000	$900	5
Beverly WWTP	X					1,450	$145,000	$440,000	$175,000	$500	3
Beverly 1808 Courthouse					X	2,354	$500,000				
Beverly Old Bank Bldg./Beverly Family Rearch Library					X	1,840	$500,000	$500,000			1
IOOF Lodge - Beverly, WV					X	4,870	$100,000				
Logan House - Beverly, WV					X	2,008	$100,000				
Goff House - Beverly, WV					X		$300,000	$1,000,000			2

BEVERLY ASSET INVENTORY

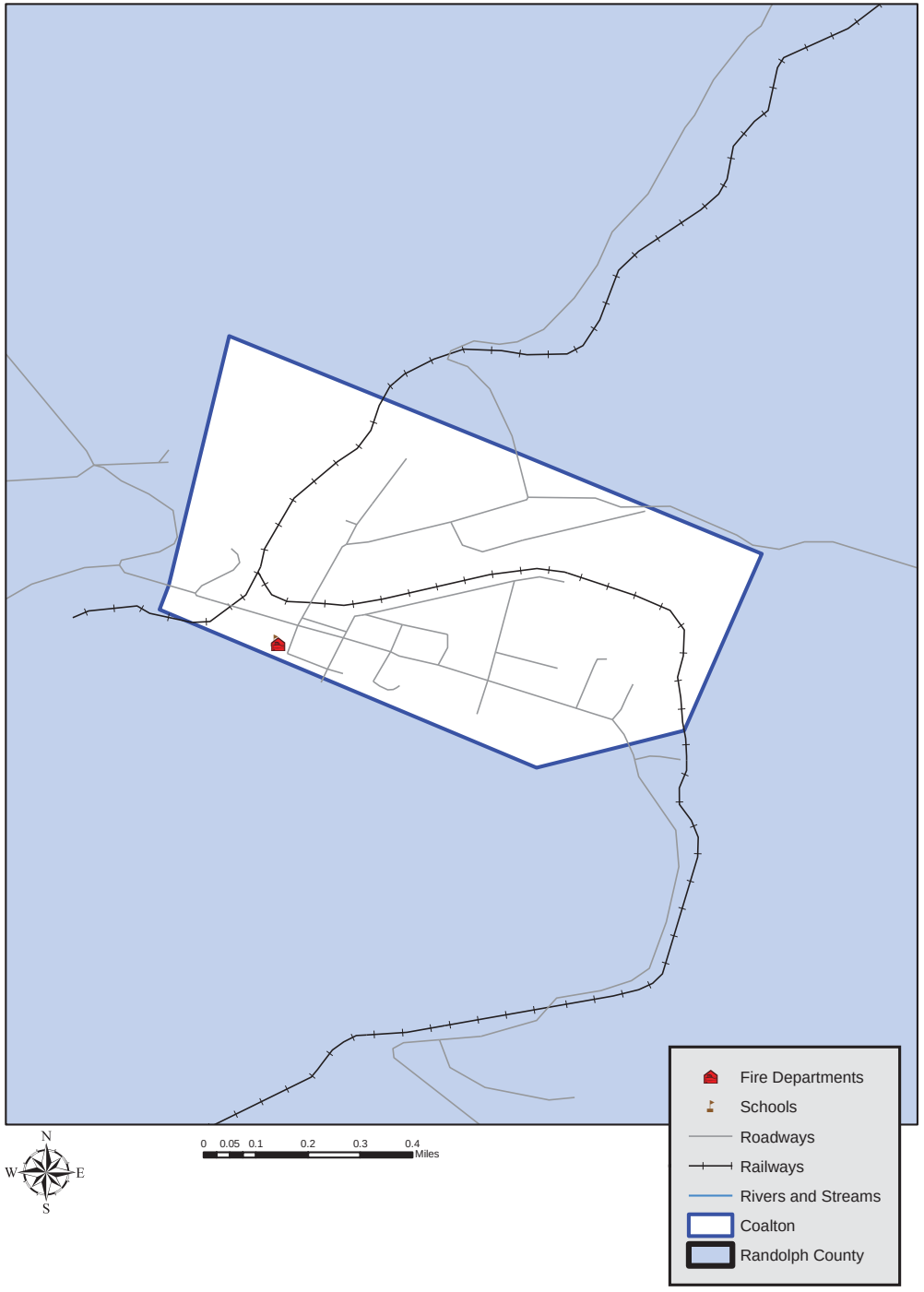


Town of Coalton Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Coalton Town Hall			X			3,024	$302,400.00	$25,000.00	$42,000.00	$100.00	2
Coalton Vol. Fire Dept.	X					5,500	$110,000.00	$639,500.00	$50,000.00	$100.00	16
Coalton USPS			X			928	$92,800.00	$5,000.00	$80,000.00	$200.00	2
Coalton Elementary School	X					44,660	$5,582,500.00	$2,779,125.00			203
DOH Randolph Co. Coalton Hqs. CR53 - Bldg. No. 4202				X		3,360	$154,000.00	$50,000.00	$700,000.00	$1,900.00	10
DOH Randolph Co., Coalton Hqs. CR53 Storage Bin - Bldg. No. 4211				X		480	$5,151.00	$500.00	N/A		N/A
DOH Randolph Co., Coalton Hqs. CR53 Gas House - Bldg. No. 4217				X		96	$10,749.00	$600.00	N/A		N/A
DOH Randolph Co., Coalton Hqs. CR53, Wash Bay, Bldg. No. 4222				X		1,024	$25,000.00	$2,000.00	N/A		N/A

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
DOH Randolph Co., Coalton Hqs. CR53, Spreader Rack, Bldg. No. 0425				X		320	$5,151.00	$0.00	N/A		N/A
DOH Randolph Co., Coalton Hqs. CR53, Salt Shed, Bldg. No. 4226				X		3,060	$69,511.00	$60,000.00	N/A		N/A
Coalton WTP	X										

COALTON ASSET INVENTORY



City of Elkins Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph Co., Courthouse			X			21,792	$8,000,000	$300,000	$32,000,000	$87,700	31
Randolph Co., CH Annex.			X			25,000	$1,500,000	$300,000	$1,900,000	$5,200	22
Randolph Co., Magistrate Annex.			X			12,000	$800,000	$200,000	$600,000	$1,600	17
Randolph Co., Jail	X					5,820	$2,500,000	$1,200,000	$395,000	$1,100	15
Randolph Co., EMS - Elkins	X					6,000	$450,000	$674,000	$1,043,600	$2,900	18
Elkins City Hall			X				$2,475,087	$282,095			
Elkins-Rand. Co. Library - Elkins (Main Building)			X			5,000	$424,500	$120,000	$139,000	$400	7
Elkins-Rand. Co., Library - Elkins (Storage Bldg.)			X			1,440	$40,000				
Elkins Vol. Fire Dept.	X					15,552	$137,081	$59,488			
Elkins USPS			X			23,697	$2,500,000	$150,000	$1,497,435	$4,100	23
W.D.N.E. Radio				X							
W.E.L.K. Radio				X		4,000	$200,000	$250,000	$850,000	$2,300	20

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph - Elkins Health Dept.	X					3,000	$250,000	$200,000	$1,243,426	$3,400	49
Davis Memorial Hospital	X					160,000	$40,000,000	$50,000,000	$100,000,000	$274,000	700
Davis Memorial Cancer Center	X					7,500	$1,500,000	$1,500,000	$1,000,000	$2,700	20
Davis Health Care Facilities	X					36,204	$5,430,600	$5,000,000	$2,000,000	$5,500	50
Davis Home Health Care	X					8,654	$900,000	$500,000	$1,800,000	$4,900	25
Davis Women's Health Care	X					6,000	$700,000	$500,000	$1,500,000	$4,100	20
Elkins Reg. Convalescent Center	X						$5,875,000		$3,500,000	$9,600	136
Colonial Place			X								
Nellie's Inc. Bldg. #1			X			34,000	$4,950,000	$600,000	$4,000.000.00	$10,900	80
Nellie's Inc. Bldg. #2			X			32,000	$4,750,000	$500,000	$3,000.000.00	$8,200	85
Randolph Co., Board Office - Elkins	X					9,304	$1,163,000	$581,500			48
Randolph Co., School Bus Garage - Elkins	X					13,560	$1,695,000	$847,500			62
Randolph Co., School - Gold Bldg. Elkins	X					5,400	$675,000	$337,500			30

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph Co., School - Blue Bldg. Elkins	X					60,000	$7,500,000	$3,750,000			0
Elkins Middle School	X					79,500	$9,937,500	$4,968,750			798
Elkins High School	X					167,000	$20,875,000	$10,437,500			929
Elkins Third Ward School	X					38,853	$4,856,625	$2,428,312			334
North Elementary School	X					30,458	$3,807,250	$1,903,625			286
Randolph Co., VoTech Center	X					57,800	$7,225,000	$3,612,500			35
Randolph Co., VoTech Center Modular #1	X					960	$120,000	$60,000			0
Randolph Co., VoTech Center Modular #2	X					960	$120,000	$60,000			0
Davis and Elkins College	X					See Below	See Below	See Below	$15,000,000	$41,100	182FT/126PT
D&E Albert Hall	X					27,860	$1,758,402	$65,267	See Above		See Above
D&E Allen Hall	X					23,830	$2,383,000	$500,000	See Above		See Above
D&E Benedum Hall	X					24,480	$1,859,759	$155,350	See Above		See Above
D&E Boiler House Theatre	X					4,739	$357,092	$42,067	See Above		See Above
D&E Booth Library	X					40,279	$7,000,200	$1,862,748	See Above		See Above
D&E Chapel	X					1,806	$580,000	$35,820	See Above		See Above

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
D&E Darby Hall	X					25,837	$2,423,178	$37,330	See Above		See Above
D&E Gate House	X					1,267	$76,950	$26,100	See Above		See Above
D&E Gate Towers	X					2,402	$150,000	$50,000	See Above		See Above
D&E Graceland	X					9,646	$4,000,000	$400,000	See Above		See Above
D&E Gribble Hall	X					23,876	$1,875,321	$36,153	See Above		See Above
D&E Gymnasium	X					28,767	$1,545,236	$83,650	See Above		See Above
D&E Halliehurst	X					18,000	$1,710,000	$259,150	See Above		See Above
D&E H Campus Center	X					77,600	$5,905,800	$517,650	See Above		See Above
D&E Ice House	X					1,592	$186,795	$2,610	See Above		See Above
D&E International Hall	X					24,480	$3,751,569	$26,100	See Above		See Above
D&E Liberal Arts Hall	X					28,920	$1,768,500	$477,400	See Above		See Above
D&E Maintenace Bldg.	X					7,200	$130,707	$47,250	See Above		See Above
D&E Presidential Hall	X					24,880	$2,582,100	$26,100	See Above		See Above
D&E Presidents Home	X					5,656	$574,200	$99,900	See Above		See Above
D&E Randolph Hall	X					14,580	$1,514,718	$670,700	See Above		See Above
D&E 05 Sycamore House	X					2,555	$102,600		See Above		See Above
D&E 311 H'town House	X					1,412	$102,150		See Above		See Above
D&E 315 H'town House	X					1,392	$102,150		See Above		See Above
D&E 319 H'town House	X					1,392	$102,150		See Above		See Above

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
D&E 323 H'town House	X					1,392	$102,150		See Above		See Above
D&E Ross House	X					2,429	$85,500		See Above		See Above
D&E Roxanna Booth Hall	X					30,906	$2,601,900	$79,950	See Above		See Above
D&E Science Center	X					60,778	$5,400,000	$550,950	See Above		See Above
D&E Upward Bound Center	X					3,950	$127,800	$31,150	See Above		See Above
DOH Dist. Hqs. Lot Storage - Bldg. No. 4242				X		100	$3,091	$3,000			
DOH Dist. Hqs. Tool Shed - Bldg. No. 4244				X		36	$2,500	$3,000			
DOH Dist. Hqs. Nuclear Storage Shed - Bldg. No. 4248				X		204	$15,000	$20,000			
DOH Dist. Hqs. Bldg #2, Bldg. No. 42101				X		13,256	$60,000	$60,000	$13,355,467	$36,600	61
DOH Dist. Hqs. - Dist Hqs.- Bldg No. 4285				X		9,344	$540,000	$390,000	$2,820,000	$7,700	27
DOH Dist. Hqs. - DM - Office & Storage - Bldg. No. 4292				X		4,704	$128,777	$100,000	$500,000	$1,400	14

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
DOH Dist. Hqs. Storage Bldg. - Bldg. No. 4250				X		1,728	$20,000	$20,000			
WV State Police	X					9,450	$945,000	$225,000	$930,000	$2,500	31
Elkins City Police	X					N/A	N/A	$300,000	$675,000	$1,800	11
City of Elkins Bldg. # 1 11th Street (Garage)	X					8,000	$172,933				
City of Elkins Bldg. # 1 11th Street (Storage Bldg.)	X					2,100	$31,424	$2,163			
Norton Harding Jimtown Cassity Rd. (Bldg. 3)											
City of Elkins Bldg. # 3 Barron Avenue (WTP)	X						$627,628				
City of Elkins Bldg. # 3 Barron Avenue (Low Lift Bldg.)	X						$70,304				
City of Elkins Bldg. # 3 Barron Avenue (High Lift Bldg.)	X					150	$21,662	$10,000			

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 3 Barron Avenue (Chemical Bldg.)	X					2,504	$151,424				
City of Elkins Bldg. # 3 Barron Avenue (Lamella & Flocs)	X					609	$621,920				
City of Elkins Bldg. # 3 Barron Avenue (Lift Station)	X					10,000	$78,000				
City of Elkins Bldg. # 4 Industrial Park Road (Control Bldg.)	X					3,229	$624,000	$135,200			
City of Elkins Bldg. # 4 Industrial Park Road (Generator Bldg)	X					180	$83,200				
City of Elkins Bldg. # 4 Industrial Park Road (Belt Press Bldg)	X						$617,760				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 4 Industrial Park Road (Sludge Shed Bldg)	X					2,504	$152,506				
City of Elkins Bldg. # 4 Industrial Park Road (Waste Sludge Bldg)	X					609	$156,000				
City of Elkins Bldg. # 4 Industrial Park Road (Oxidation Ditch Bldg)	X					10,000	$865,280				
City of Elkins Bldg. # 4 Industrial Park Road (Clarifiers)	X					5,766	$468,000				
City of Elkins Bldg. # 4 Industrial Park Road (Screw Pumps Basin)	X					461	$102,752				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 4 Industrial Park Road (Post Airation Basin)	X					730	$43,264				
City of Elkins Bldg. # 4 Industrial Park Road (Decant Tank)	X					804	$70,304				
City of Elkins Bldg. # 4 Industrial Park Road (Plant Lift Station)	X						$41,600				
City of Elkins Bldg. # 4 Industrial Park Road (Glendale Lift Station)	X						$108,160				
City of Elkins Bldg. # 4 Industrial Park Road (Pretreatment Plant)	X					275	$176,800				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 5 Rural Elkins (Landfill Bldg.)	X					1,344	$30,348	$5,408			
City of Elkins Bldg. # 5 Rural Elkins (Prefab Landfill Bldg.)	X					80	$3,245	$9,734			
City of Elkins Bldg. # 6 Cherokee Street (lift station)	X						$78,000				
City of Elkins Bldg. # 7 Wilson Street (lift station)	X						$52,000				
City of Elkins Bldg. # 8 Mt. View Drive (lift station)	X						$52,000				
City of Elkins Bldg. # 9 Vector Avenue (lift station)	X						$52,000				
City of Elkins Bldg. # 10 Whiteman Avenue (lift station)	X						$52,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 11 15th Street (lift station)	X						$52,000				
City of Elkins+A222 Bldg. # 12 Teaberry Hills (lift station)	X						$52,000				
City of Elkins Bldg. # 13 Flood Control Road (lift station)	X						$52,000				
City of Elkins Bldg. # 13 Flood Control Road (office)	X						$78,000	$26,000			
City of Elkins Bldg. # 13 Flood Control Road (storage bldg.)	X						$3,120	$3,120			
City of Elkins Bldg. # 13 Flood Control Road (digester bldg.)	X						$78,000				
City of Elkins Bldg. # 14 High Street (1.5 MG water tank)	X						$600,000				

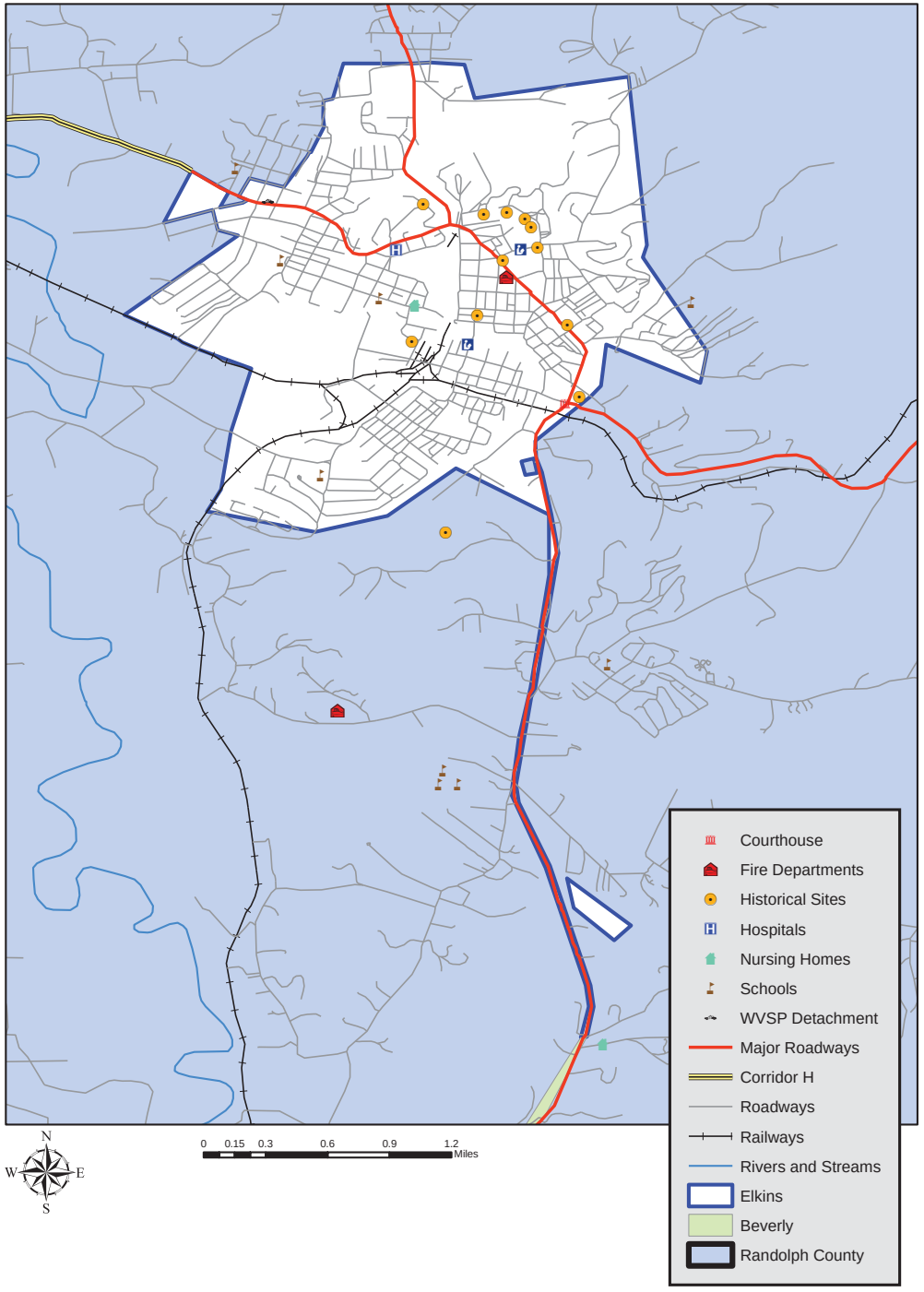
Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)	Occupancy or Capacity (#)
	X	X	X	X	X						
City of Elkins Bldg. # 15 McQuain Street (1.0 MG water tank)	X						$400,000				
City of Elkins Bldg. # 16 Crystal Springs (2.0 MG Water Tank)	X						$750,000				
City of Elkins Bldg. # 17 Industrial Park Road (Limestone Silo)	X					113	$200,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Large Pavillion)	X					2,610	$100,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Lawn & Garden Bldg)	X					400	$10,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Small Pavilion)	X					800	$10,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Small Pavilion w/ Decking)	X					826	$18,000				
City of Elkins Bldg. # 18 Sycamore & Buffalo Streets (Restroom Facility)	X					1,244	$10,000				
City of Elkins Bldg. # 19 River Bend Park (Large Pavilion)	X					2,610	$10,000				
City of Elkins Bldg. # 19 River Bend Park (Small Pavilion)	X					600	$8,000				
City of Elkins Bldg. # 20 Bluegrass Park (Small Pavilion)	X					800	$10,000				
City of Elkins Bldg. # 21 Davis Street Park (Small Pavilion)	X					400	$8,000				
Davis Memorial Presbyterian Church					X		$4,000,000				5

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Downtown Elkins Historic Distirct					X	See Below	See Below				
Delmonte Hotel					X	8,424	$842,400,				
American Legion					X	11,168	$1,116,000				
Black American Legion					X	3,000	$300,000				
Old Bus Depot/Papa John's					X	12,096	$1,209,600				
Old Brick Playhouse					X	28,620	$2,862,000				
Wilt Building					X	48,384	$4,838,400				
Davis Trust Company					X	30,600	$3,060,000				
Moose Building					X	18,000	$1,800,000				
Jabberwock					X	7,020	$702,000				
Arbogast Barber Shop					X	3,510	$351,000				
JC Penny/Old Bush Bldg.					X	15,066	$1,506,600				
Kipling Shoes					X	15,066	$1,506,600,00				
Old Murphy's Building					X	27,225	$2,722,500				
Beanders/Old Darden					X	24,750	$2,475,000				
Y.M.C.A.					X	51,840	$5,184,000				

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Old Montgomery Ward Building					X	19,950	$1,995,000				
E.E. Hutton House					X			$450,000	$1,000,000	$2,700	
Tygarts Valley Church					X						
Cheat Summit Fort					X	N/A		$1,000,000			
Fred A. Perly House					X						
Elkins-Randolph County Senior Citizens Center - Elkins					X	15,000	$1,500,000	$207,000	$224,000	$600	23
Elkins-Randolph County Senior Citizens Center - Gray-House, Elkins					X	3,274	$140,000	$26,000	$1,000,000	$2,700	52

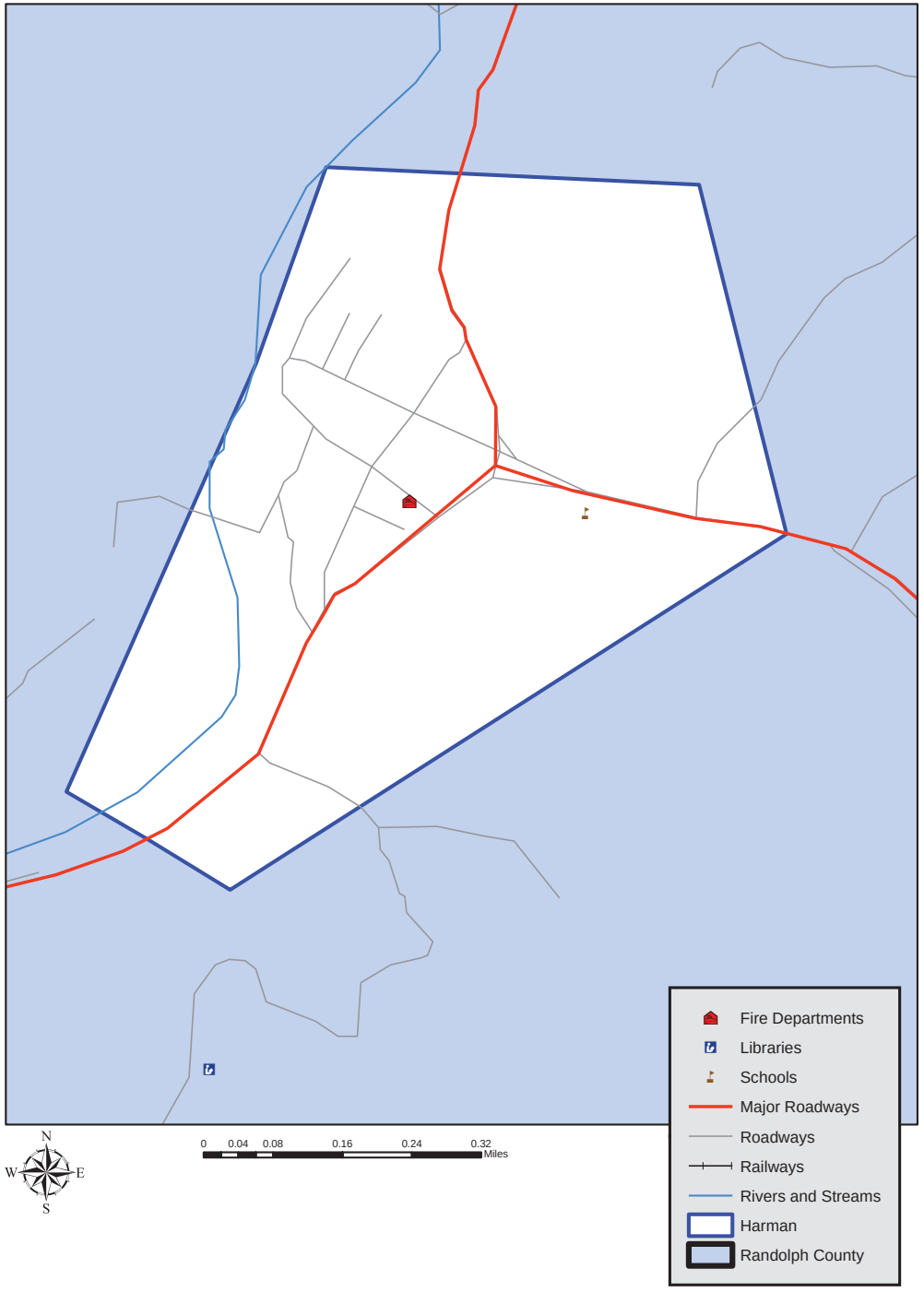
ELKINS ASSET INVENTORY



Town of Harman Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph Co., EMS - Harman	X					1,200	$120,000	$100,000	$5,000	$13	0
Harman Town Hall			X								
Pioneer Memorial Library - Harman			X			1,920	$86,000	$45,000	$28,000	$100	4
Harman Vol. Fire Dept.	X					3,200	$200,000	$660,000	$30,000	$100	20
Harman USPS			X			864	$65,000	$11,000	$60,000	$200	3
Harman Elementary/High School	X					24,460	$4,307,500	$2,153,750			250
DOH Dist. Hqs. Harman Maint. Hqs. Bldg. No. 4206				X		3,680	$133,928	$30,000	$600,000	$1,600	8
DOH Dist. Hqs. Harman Salt Shed _ Bldg. NO. 4241				X		2,460	$52,058	$20,000			
DOH Dist. Hqs. Harman Spreader Rack. Bldg. No. 4249				X		580	$3,000	N/A			

HARMAN ASSET INVENTORY



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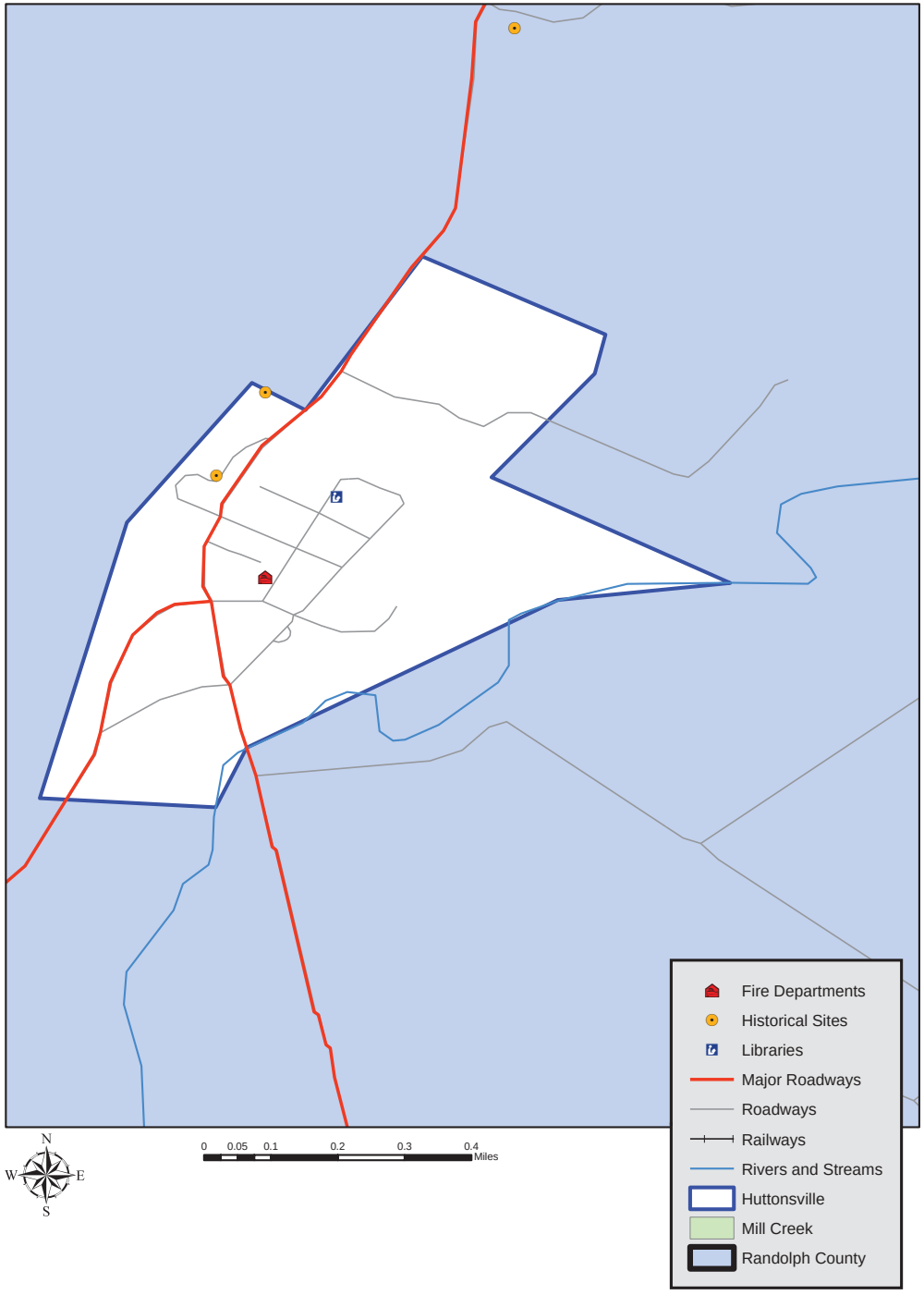
Town of Huttonsville Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Huttonsville Town Hall			X			4,000	$400,000	$350,000	$50,000	$100	2
Huttonsville VFD - Huttonsville	X					2,592	$120,000	$150,000	$50,000	$100	
Huttonsville USPS			X			720	$72,000	$10,000	$80,059	$200	2

HUTTONSVILLE ASSET INVENTORY



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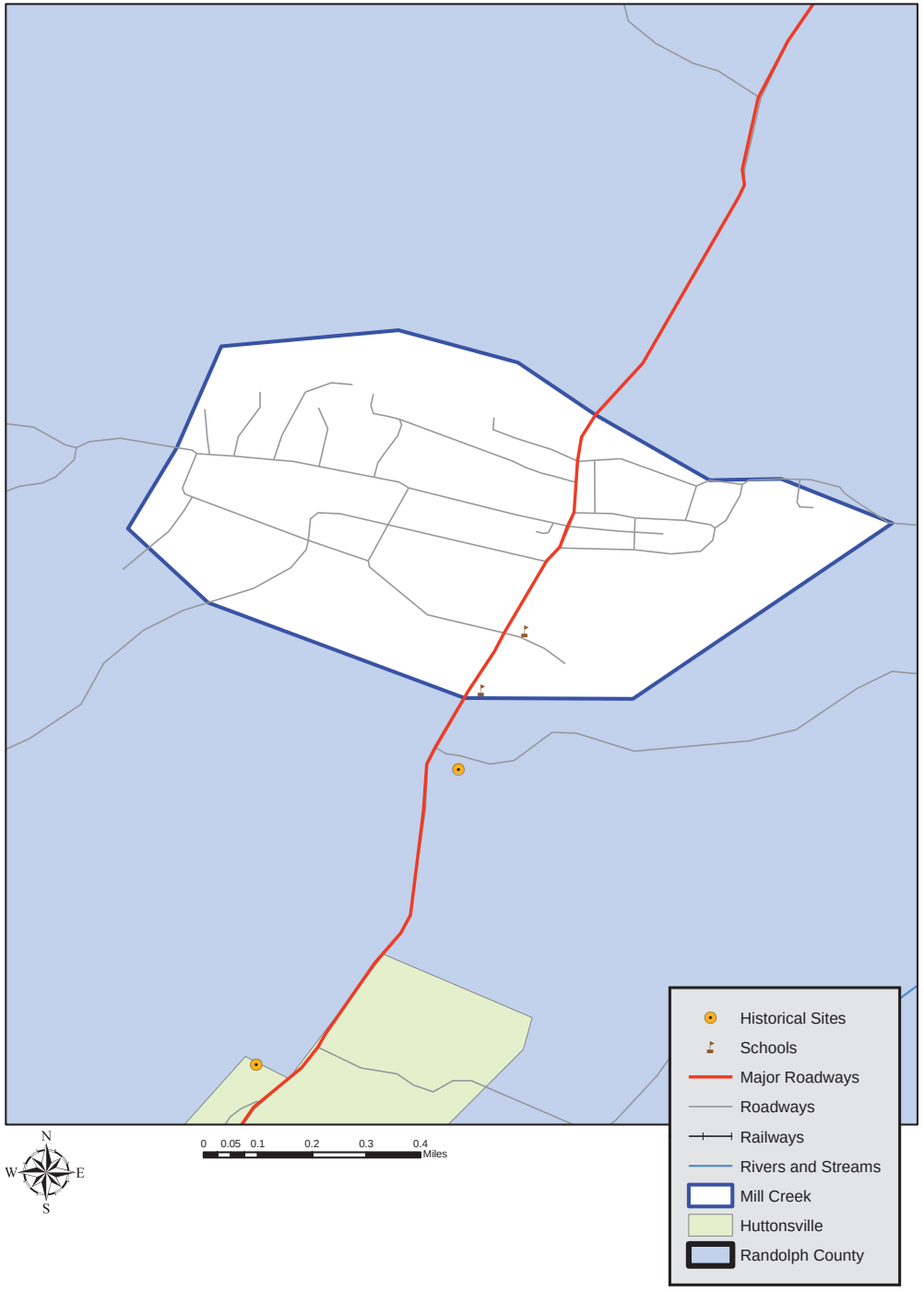
Town of Mill Creek Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Randolph Co., EMS - Mill Ck.	X					1,200	$120,000	$205,000	$75,000	$200	3
Mill Creek Town Hall			X								
Tygart Valley Library - Mill Creek			X			3,710	$325,000	$75,000	$35,000	$100	4
Huttonsville VFD - Mill Creek	X					4,800	$150,000	$280,000	$50,000	$100	39
Mill Creek USPS			X			3,049	$350,000	$50,000	$200,000	$500	4
Tygarts Valley Middle/High School	X					75,850	$9,481,250	$4,740,725			622
DOH Randolph Co., Mill Creek Hqs. US219 - Bldg. No. 4205				X		3,530	$159,986	$50,000	$700,000	$1,900	9
DOH Randolph Co., Mill Creek Hqs. US219 - Wash Bay, Bldg. No. 4207				X		960	$15,000	$2,000			

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
DOH Randolph Co., Mill Creek Hqs. US219 - Spreader Shed - Bldg. No. 4214				X		240	$3,000				
DOH Randolph Co., Mill Creek Hqs. US219 - Gas House - Bldg. No. 4219				X		100	$3,091	$600			
DOH Randolph Co., Mill Creek Hqs. US219 - Spreader Rack - Bldg. No. 4223				X		320	$5,151	N/A			
DOH Randolph Co., Mill Creek Hqs. US210 - Salt Shed - Bldg. No. 4246				X		1,920	$63,000	$40,000			
Mill Creek WTP	X										
Huttonsville WWTP	X										
Elkins-Randolph County Senior Citizens Center - Mill Creek					X	4,000	$410,000	$40,000	$96,751	$300	7

MILL CREEK ASSET INVENTORY



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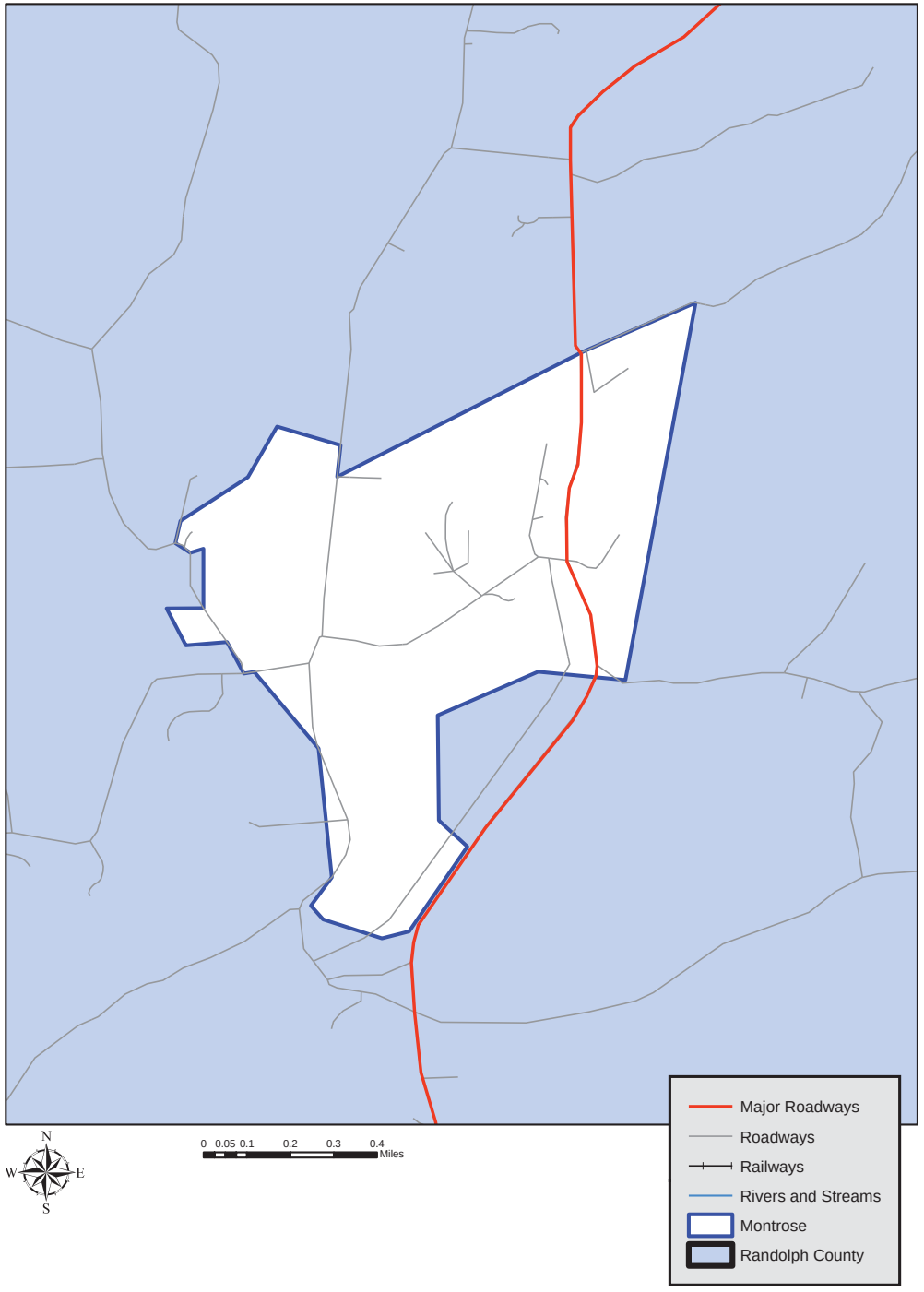
Town of Montrose Assets

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/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						
Montrose Town Hall			X			2,600	$120,000	$25,000	$12,000	$33	6
Montrose USPS			X			1,168	$116,800	$5,000	$126,000	$300	6

MONTROSE ASSET INVENTORY



TUCKER COUNTY ASSETS

Name of Description of Asset	Sources of Information				Size of Building (sq ft)	Replacement Value (S)	Contents Value (S)	Function Use Value (5)	Displacement Cost ($ per day)	Occupancy or Capacity (#)	Other Hazard Specific Information
Parsons Sewage Plan	Tax Records				N/A	$2,500,000	N/A	$2,500,000	N/A	2	None
Parsons Water Plant	Tax Records				N/A	$100,000	N/A	$100,000	N/A	2	None
Hamrick PSD	Tax Records				N/A	$100,000	N/A	$100,000	N/A	2	None
Shop N Save	Tax Records				19,340	$1,300,000	$1,000,000	$2,300,000	$7,500	15	None
Dollar Genera	Tax Records				8,000	$536,000	$50,000	$586,000	$2,000	6	None
Highlander	Tax Records				18,680	$1,200,000	$15,000	$1,250,000	$500	6	None
Wamstey Wood-working Inc.	Tax Records				18,220	$2,200,000	$1,000,000	$2,300,000	$17,000	15	None
Hinchcliff Lumber, Inc.	Tax Records				85,540	$10,300,000	$2,400,000	$10,900,000	$87,000	75	None
Tucker County Courthouse Complex	Tax Records				17,000	$2,210,000	$850,000	$612,000	$21,250	39	None
Parsons Depot	tax Records				1,000	$130,000	$50,000	$36,000	$1,250	5	None
Parsons City Hall	Tax Records				8,000	$1,040,000	$400,000	$288,000	$10,000	12	None
Sheetz	Tax Records				3,000	$375,000	$150,000	$108,000	$3,750	9	None
McDonalds	Tax Records				1,500	$195,000	$75,000	$54,000	$1,875	8	None
Napa	Tax Records				11,320	$1,471,600	$566,000	$408	$14,150	3	None
Lamberts Ambulance	Tax Records				8,200	$1,066,000	$410,000	$295,200	$10,250	10	None
Hospice Care	Tax Records				16,560	$1,473,840	$828,000	$596,160	$20,700	2	None
B. F. Long	Tax Records				1,300	$169,000	$65,000	$46,800	$1,625	1	None
Stevens Florist	Tax Records				3,900	$507,000	$195,000	$140,400	$4,875	10	None
Old Parsons Footwear	Tax Records				197,000	$25,610,000	$9,850,000	$7,092,000	$246	0	None
Coin Laundry	Tax Records				6,000	$780,000	$300,000	$216,000	$8	1	None
Darlerte's	Tax Records				1,000	$130	$50,000	$36,000	$1,250	3	None
Friends Family Chiropractic	Tax Records				14,000	$1,566,000	$700,000	$504,000	$17,500	2	None
Our Lady of Mercy	Tax Records				4,600	$519,800	$230,000	$165,600	$5,750	1	None
First Baptist Church	Tax Records				4,600	$519,800	$230,000	$165,600	$6	1	None
Parsons Presbyterian Church	Tax Records				14,000	$1,582,000	$700,000	$504,000	$17,500	1	None
St Paul's Methodist	Tax Records				16,000	$1,808,000	$800,000	$576,000	$20,000	1	None

Name of Description of Asset	Sources of Information			Size of Building (sq ft)	Replacement Value (S)	Contents Value (S)	Function Use Value (5)	Displacement Cost ($ per day)	Occupany or Capacity (#)	Other Hazard Specific Information
Parsons Volunteer Fire Department	Tax Records			6,72	$874	$336,000	$241,920	$8,400	30	None
Citizens National Bank	Tax Records			3,800	$494,000	$190,000	$136,800	$4,750	10	None
Nichols & Nichols Law Offices	Tax Records			3,20	$278,400	$160,000	$115	$4,000	3	None
Cooper, Preston & Douglas Law Offices	Tax Records			2,400	$208,800	$120,000	$86,400	$3,000	6	None
Frontier	Tax Records			2300	$299,000	$115,000	$82,800	$2,875	6	None
Barb & Greenlief Funeral Home	Tax Records			4400	$572,000	$220,000	$158,400	$5,500	3	None
Appalachian Mental Health	Tax Records			1,200	$134,400	$60,000	$43,200	$1,500	2	None
Performance Motors	Tax Records			7,200	$426,400	$360,000	$259,200	$9,000	25	None
DSW Truck Lines	Tax Records			19,400	$121,530	$970,000	$698,400	$24,250		None
CJ's Pizza	Tax Records			4,490	$583,700	$224,500	$161,640	$5,613	6	None
McDermott Woodworking	Tax Records			4,500	$585,000	$225,000	$162,000	$5,625	6	None
Tucker Well ness Center	Tax Records			1500	$195,000	$75,000	$54,000	$1,875	1	None
Penn. Ave. Wash	Tax Records			264	$34,320	$13,200	$9,504	$330	1	None
Swartz Building	Tax Records			7,400	$962,000	$370,000	$266,400	$9,250	3	None
BenbLSr, Business Services	Tax Records			800	$104,000	$40,000	$28,800	$1	1	None
Eye Building	Tax Records			3,600	$468,000	$180,000	$129,600	$4,500	10	None
Stevens Realty	Tax Records			780	$101,400	$39,000	$28,080	$975	3	None
Barbs Drug Store	Tax Records			3,000	$390,000	$150	$108,000	$4	0	None
Dollar General	Tax Records			9,600	$1,248,000	$480,000	$345,600	$12,000	3	None
Bonnets Body Shop	Tax Records			4,600	$354,200	$230,000	$165,600	$5,750	3	None
State Farm Insurance	Tax Records			1,500	$195,000	$75,000	$54,000	$1,875	3	None
Jimmy's Carpet	Tax Records			1,500	$115,500	$75,000	$54,000	$1,875	1	None
Andreas, Maureena L, DOS	Tax Records			1,500	$195,000	$75,000	$54,000	$1,875	2	None
McClain Printing	Tax Records			11,720	$1,523,600	$586	$421,920	$14,650	27	None
Tucker County EMS	Tax Records			3,600	$468,000	$180,000	$129,600	$4,500	28	None
Cinderellas	Tax Records			500	$65	$25,000	$18,000	$625	2	None
Thomas Wastewater Treatment	City Records			N/A	S1M	N/A	S1M	$500	1	None

Total

Total Projected losses from a major flood incident as tabulated from above.

Total projected building losses:	291,360 ft sq
Total Replacement Value lost:	$35,200,787
Total Value of Contents lost:	$14,514,161
Total Functional Use Value lost:	$11,025,979

Figure 2.3.1

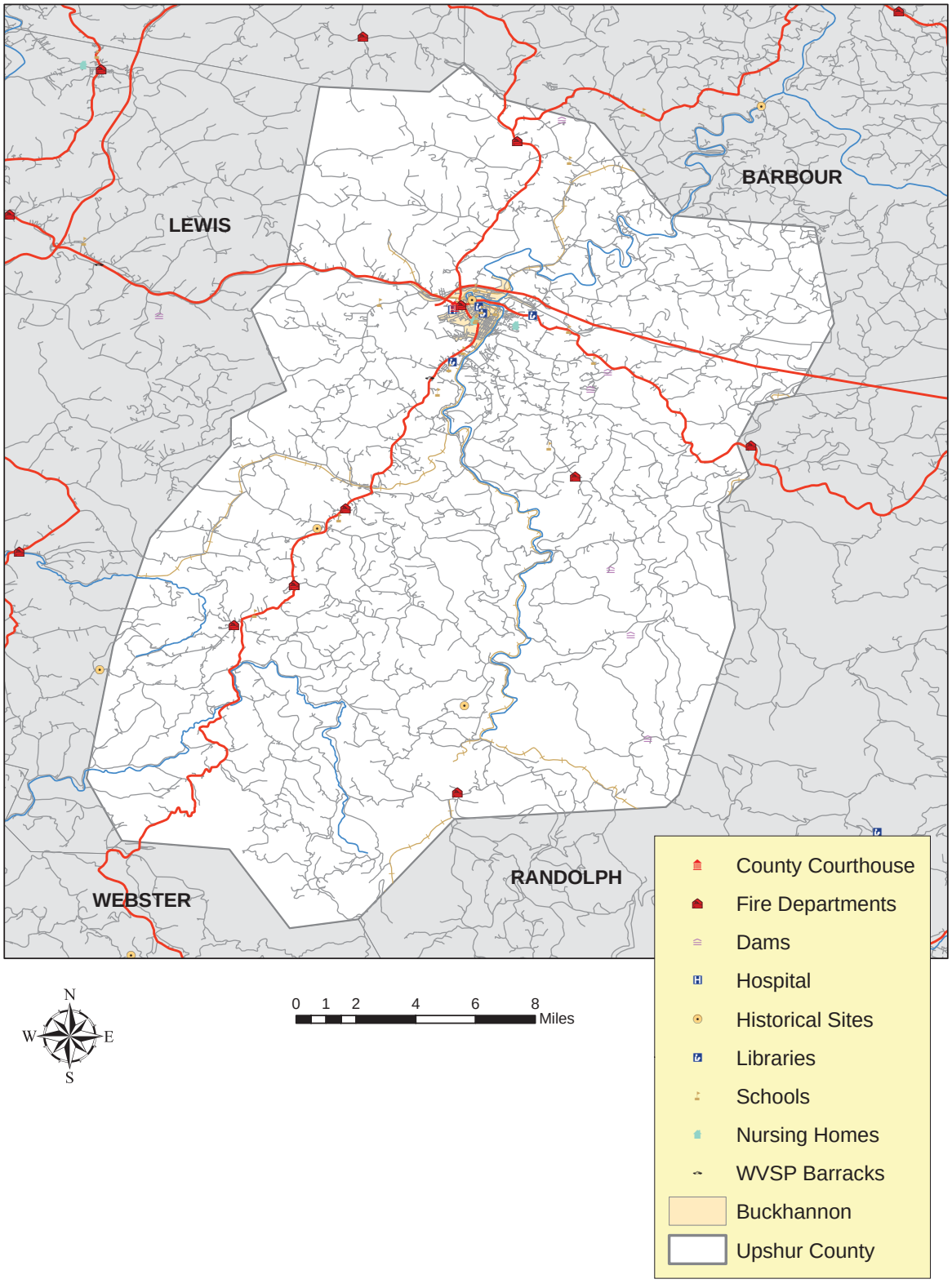
Upshur County Asset Inventory

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)
	X	X	X	X	X					
A.F. Wendling			X			35,000	$2,415,000	$2,000,000	$1,000,000	$2,740
Adrian VFD	X					4,800	$635,000	$635,000	$111,000	$304
AE, Inc.			X			174,240	$1,250,000	$1,250,000	$20,000,000	$54,795
Agnes Howard Hall					X	37,800	$2,518,477	$3,777,716	$1,500,000	$4,110
Airport	X					3,045	$28,000,000	$36,000,000	$6,300,000	$17,260
Allegheny Power	X					0	$0	$0	$0	$0
Appalachian Forest Products			X			0	$0	$0	$0	$0
Ashland Sales & Service	X					17,000	$150,000	$125,000	$1,472,500	$4,034
Banks District VFD	X					0	$0	$0	$0	$0
Bridges	X						$220,000,000	$220,000,000	$32,700,000	$89,589
Buckhannon Academy ES		X				0	$0	$0	$0	$0
Buckhannon FD	X					10,800	$1,404,000	$1,404,000	$245,000	$671
Buckhannon-Upshur HS		X				156,332	$12,000,000	$12,000,000	$770,000	$2,110
Buckhannon-Upshur MS		X				108,329	$7,285,000	$7,285,000	$295,000	$800
Chas W. Gibson Library				X		0	$0	$0	$0	$0
Chase Bank			X			17,034	$5,600,000	$5,600,000	$37,395,000	$102,452
City Hall	X					10,600	$930,000	$1,000,000	$200,000	$548
Cleveland Ave. Bridge				X		180	$900,000	$0	$25,000	$68
Coastal Lumber			X			2,700	$1,000,000	$1,000,000	$4,000,000	$10,959
Corhart Saint-Gobain			X			250,000	$20,000,000	$20,000,000	$15,000,000	$41,096

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)
	X	X	X	X	X					
County Courthouse/ Annex	X					48,000	$7,000,000	$7,000,000	$10,000,000	$27,397
Ed Arey & Sons, Inc.			X			0	$0	$0	$0	$0
Ellamore VFD	X					0	$0	$0	$0	$0
Fidler's Mill					X	0	$0	$0	$0	$0
First Central Bank			X			107,000	$638,945	$164,531	$50,000,000	$136,986
First Community Bank			X			21,360	$2,085,000	$500,000	$0	$0
Freedom Bank			X			3,000	$650,000	$325,000	$500,000	$1,370
French Creek ES		X				25,000	$1,835,000	$1,835,000	$30,000	$82
French Creek Presbyterian Church					X	0	$0	$0	$0	$0
Historical Society Museum					X	0	$0	$0	$0	$0
Hodgesville ES		X				17,057	$1,690,000	$1,690,000	$59,000	$162
J.D. Hinkle Memorial Bridge					X	200	$2,000,000	$0	$65,000	$178
J.F. Allen (Alcon)			X			62,000	$1,700,000	$2,000,000	$0	$0
James W. Curry Library				X		2,356	$406,230	$406,230	$140,000	$384
Poe Bridge				X		160	$1,200,000	$0	$38,000	$104
Progressive Bank			X			2,059	$559,371	$131,467	$370,000	$1,014
PW Eagle			X			250,000	$17,250,000	$6,000,000	$25,000,000	$68,493
Railroads	X					2,129,000	$154,000,000	$154,000,000	$85,500,000	$234,247
Residential				X		0	$792,400,000	$0	$0	$0
Roads	X					12,470,000	$984,000,000	$984,000,000	$1,000,000,000	$0
Rock Cave ES		X				18,644	$1,696,000	$1,696,000	$63,000	$173
S.W. Jack			X			46,000	$3,174,000	$150,000	$0	$0
Selbyville VFD	X						$200,000	$200,000	$35,000	$96
Sewage Treatment Plant	X					130,680	$9,230,000	$9,230,000	$45,000,000	$123,288

Name or Description of Asset	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historical/Other Considerations	Size of Bldg. (sq. ft.)	Replacement Value ($)	Contents Value ($)	Function Use or Value ($)	Displacement Cost ($)
	X	X	X	X	X					
St. Joseph's Hosp.	X					102,805	$14,906,725	$22,360,088	$4,472,018	$12,252
Stockert Youth Center		X				15,000	$400,000	$400,000	$125,000	$342
Superior Wells	X					8,864	$500,000	$125,000		$0
Tennerton ES		X				39,299	$1,970,000	$1,970,000	$71,000	$195
Trus Joist MacMillan-Weyerhaeuser			X			300,000	$24,000,000	$30,000,000	$250,000	$685
Union Drilling						0	$0	$0	$0	$0
Union ES		X				28,019	$1,835,000	$1,835,000	$100,000	$274
Upshur County Christian Academy		X				0	$0	$0	$0	$0
Upshur County EMS	X					3,100	$500,000	$500,000	$100,000	$274
Upshur County Public Library				X		23,000	$2,070,000	$2,070,000	$750,000	$2,055
USPFO				X		65,000	$19,000,000	$19,000,000	$30,000,000	$82,192
Wal-Mart			X			150,000	$11,000,000	$6,500,000	$36,500,000	$100,000
Warren District VFD	X					0	$0	$0	$0	$0
Washington District ES		X				19,000	$1,730,000	$1,730,000	$50,000	$137
Washington District VFD	X					4,500	$340,000	$340,000	$59,500	$163
Water Treatment Plant	X					13,000	$7,000,000	$2,000,000	$1,500,000	$4,110
William Post Mansion					X	0	$0	$0	$0	$0
Woody Forest Products			X			24,000	$1,663,000	$147,600	$0	$0
Woody Lumber			X			3,190	$220,000	$250,000	$3,000,000	$8,219
WV Split Rail			X			70,000	$4,830,000	$500,000	$5,000,000	$13,699
WV Wildlife Center				X		36,758	$1,338,000	$500,000	$500,000	$1,370
WVSP	X					1,800	$234,000	$351,000	$60,000	$164
WVWC				X		918,834	$68,756,821	$68,756,821	$35,200,000	$96,438

UPSHUR COUNTY
ASSET INVENTORY



Appendix IV

Loss Estimates

Region VII Loss Estimates

	Barbour	Braxton	Gilmer	Lewis	Randolph	Tucker	Upshur	Total
Flooding	$ 5,390,612	$ 2,795,256	$ 6,001,394	$ 1,925,000	$ 119,612,600	$ 60,740,927	$ 116,818,800	$ 313,284,589
Structures	$ 5,350,180		$ 5,703,400		$ 116,753,400	$ 35,200,787	$ 116,818,800	
Content	$ 10,200		$ 292,994		$ 2,169,200	$ 14,514,161	$ -	
Functional	$ 30,232		$ 5,000		$ 690,000	$ 11,025,979	$ -	
Winter Storm		$ 1,184,000	$ 18,036,512		$ 134,103,853		$ 30,990,818	$ 184,315,183
Structures	$ -		$ 15,979,759		$ 129,413,600		$ 30,986,543	
Content	$ -		$ 2,005,849		$ 4,072,200		$ -	
Functional	$ -		$ 50,904		$ 618,053		$ 4,275	
Drought								
Structures	$ -		$ -				$ -	
Content	$ -		$ -				$ -	
Functional	$ -		$ -				$ -	
Thunderstrorms		$ 505,000	$ 14,872,043	$ 15,000	$ 67,361,900		$ 65,369,316	$ 148,123,259
Structures	$ -		$ 12,919,580		$ 64,706,700		$ 48,961,911	
Content	$ -		$ 1,952,463		$ 2,037,100		$ 16,407,405	
Functional	$ -		$ -		$ 618,100		$ -	
Wind/Tornado	$ -	$ 6,000	$ 7,926,862		$ 134,103,900		$ 24,503,656	$ 166,540,418
Structures	$ -		$ 6,955,554		$ 129,413,600		$ 24,503,656	
Content	$ -		$ 971,308		$ 4,072,200		$ -	
Functional			$ -		$ 618,100		$ -	
Hailstorm	$ 41,090	$ 1,300,000	$ 367,271	$ 60,000	$ 333,270		$ 244,810	$ 2,346,441
Structures	$ 41,090		$ 320,814		$ 323,100		$ 244,810	
Content	$ -		$ 46,457		$ 10,170		$ -	
Functional	$ -		$ -				$ -	
Land Subsidence	$ 4,952,118		$ 12,091,819		$ 1,157,900		$ 148,922,774	$ 167,124,611
Structures	$ 4,348,388		$ 10,783,267		$ 870,200		$ 137,896,547	
Content	$ 492,277		$ 1,201,075		$ 259,300		$ 11,026,227	
Functional	$ 111,453		$ 107,477		$ 28,400		$ -	

Terrorism	$ 2,210,598	$ 17,086,427	$ 125,530,200	$ 8,947,092	$ 153,774,317
Structures	$ 1,979,355	$ 14,203,227	$ 119,442,000	$ 6,622,285	
Content	$ 194,092	$ 2,669,820	$ 3,616,000	$ 1,957,389	
Functional	$ 37,151	$ 213,380	$ 2,472,200	$ 367,418	
Hazmat	$ 8,570,032	$ 12,505,488	$ 67,361,900	$ 2,019,665	$ 90,457,085
Structures	$ 8,217,835	$ 11,040,724	$ 64,706,700	$ -	
Content	$ 257,592	$ 1,296,620	$ 2,037,100	$ 1,677,219	
Functional	$ 94,605	$ 168,144	$ 618,100	$ 342,446	
Urban Fire	$ 8,779,804	$ 8,405,206		$ 73,253,971	$ 90,438,981
Structures	$ 8,217,935	$ 7,053,113		$ 45,932,461	
Content	$ 386,789	$ 1,242,616		$ 5,654,809	
Functional	$ 175,080	$ 109,477		$ 21,666,701	
Wildfre			$ 67,979,900	$ 217,478,017	$ 285,457,917
Structures	$ -	$ -	$ 64,706,700	$ 212,760,979	
Content	$ -	$ -	$ 2,037,100	$ 4,665,823	
Functional	$ -	$ -	$ 1,236,100	$ 51,215	
Dam Failure					
Structures	$ -			$ 23,985,485	$ 23,985,485
Content	$ -			$ -	
Functional	$ -			$ -	
Earthquake					$ -
Structures	$ -	$ -		$ -	
Content	$ -	$ -		$ -	
Functional	$ -	$ -		$ -	
Utility Failure				$ 560,524	$ 560,524
Structures				$ -	
Content				$ -	
Functional				$ 560,524	

**data collected from FEMA approved County HMPs

Barbour, Braxton, Gilmer, Lewis, Upsur

Estimating the losses that may arise from a hazard event both educates local officials as to how to prioritize mitigation projects and speeds up the recovery process. Those community assets at risk of sustaining significant hazard-related losses will likely be higher priorities to protect with mitigation projects. Also, when disaster strikes, loss estimation data can be provided to recovery and damage assessment teams to help in categorizing the losses sustained and assistance needed.

The following figures are *loss **estimates*** and are only intended to guide the development and prioritization of mitigation strategies. These figures should not replace official damage assessments. Further, the figures are subject to change based on inflation, facility upgrades/additions, staff increases/reductions, etc.

METHODOLOGY
Appendix 1 contains loss estimates on a “per-hazard” basis. Loss estimates are depicted in Worksheet #4 from FEMA 386-2. The data from which loss estimates are derived is taken from the specific asset inventory listing. For instance, structural loss is a function of the total replacement value, contents loss a function of the total contents value, and so on. Loss estimates are calculated on an asset-by-asset basis and totaled for each hazard identified in 2.1.

Structural loss is determined by multiplying the structural replacement value of each community asset by an estimated percent damage. The damage estimate is based on historical hazard events (e.g. damage actually sustained by a facility or damage sustained by nearby facilities). The summation of the resulting loss to each structure represents the “worst-case scenario” total structural loss potential for that hazard on a countywide basis.

Contents loss is determined in much the same way as structural loss, i.e. the contents value figure for each asset is multiplied by an estimated damage percentage. Again, the resulting losses are totaled for a countywide loss estimate.

Structure use and function loss is the most detailed calculation completed during the loss estimate phase. The average daily operating costs are multiplied by the estimated number of days the facility could be inoperable and added to any costs incurred for relocation, etc. Again, loss figures for each of the community assets are totaled for a countywide, “worst-case” scenario structure use and function loss for each hazard.

The total hazard-related loss for each individual hazard is calculated by simply adding the structural, contents, and structure use/function losses. Worksheet #4 in Appendix 1 provides total hazard-related loss estimates for the entire county (and, if applicable, municipalities) as well as asset-by-asset.

Randolph County

Randolph County used GIS-based mapping, HAZUS, and interviews with local representatives, as well as Worksheet #4 from the Federal Emergency Management Agency's *State and Local Mitigation Planning How-to Guide: Understanding Your Risks* to estimate the potential dollar losses if the county was to experience the hazard events that are profiled above.

The information that was gathered in the asset inventory stage of the risk assessment was used to determine the estimated losses. For example, Worksheet #4 makes use of the replacement value, contents value, function use or value, displacement cost, and occupancy or capacity information from Worksheet #3b. Displacement time was estimated based on historical data of past hazard events. For example, historical data was reviewed to determine how long the average flooding event closes county schools.

Following, each hazard event is listed along with the countywide estimated losses if the hazard event were to occur. Please note that these are *estimates* for *potential* hazard events. The percentage of damage was determined on a "per hazard" basis depending also on the physical location of the asset. For example, assets in high hazard areas for winter storms received a higher damage percentage than assets in low hazard areas. The justification for such a determination is because winter storms are predicted to not only strike high hazard areas more frequently, but also be more severe (based on historical data). These dollar values do not represent actual losses from past hazard events.

Tucker

Risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from natural or man-made hazards. The results of this risk assessment assist Tucker County and its incorporated municipalities in identifying and understanding their risks from natural and man-made hazards. This information also serves as the foundation for the development of the mitigation plan and strategies to help reduce risks from future hazard events.

This risk assessment followed the methodology described in the FEMA publication 386-2 "Understanding Your Risks - Identifying Hazards and Estimating Losses" and was based on a four-step process: 1) Identify Hazards, 2) Profile Hazard Events, 3) Inventory Assets, and 4) Estimate Losses, Using FEMA guidance, as well as the Section 322 regulations which identify:

- The hazards to which the county and its communities are susceptible.
- The impact of these hazards on physical, social, and economic assets.
- The areas within the county most vulnerable to these hazards.
- The potential costs of damages or costs avoided through future mitigation Projects.

Appendix V

Repetitive Loss Inventory

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : BARBOUR COUNTY*

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	1	0	2	3
RL Buildings (Insured)	0	0	2	2
RL Losses (Total)	2	0	5	7
RL Losses (Insured)	0	0		5
RL Payments (Total)	$53,162.85	$.00	$55,047.50	$108,210.35
Building	$40,632.65	$.00	$53,345.58	$93,978.23
Contents	$12,530.20	$.00	$1,701.92	$14,232.12
RL Payments (Insured)	$.00	$.00	$55,047.50	$55,047.50
Building	$.00	$.00	$53,345.58	$53,345.58
Contents	$.00	$.00	$1,701.92	$1,701.92

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 0
Insured Buildings with 2-3 Losses > Building Value: 0
Total Target RL Buildings: 0

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : BRAXTON COUNTY *

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	3	0	2	5
RL Buildings (Insured)	0	0	1	1
RL Losses (Total)	9	0	4	13
RL Losses (Insured)	0	0		2
RL Payments (Total)	$61,932.72	$.00	$46,121.10	$108,053.82
Building	$47,791.51	$.00	$29,049.90	$76,841.41
Contents	$14,141.21	$.00	$17,071.20	$31,212.41
RL Payments (Insured)	$.00	$.00	$3,609.73	$3,609.73
Building	$.00	$.00	$3,609.73	$3,609.73
Contents	$.00	$.00	$.00	$.00

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 0
Insured Buildings with 2-3 Losses > Building Value: 0
Total Target RL Buildings: 0

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : GILMER COUNTY *

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	14	0	2	19
RL Buildings (Insured)	3	0	2	5
RL Losses (Total)	36	0	6	48
RL Losses (Insured)	8	0		14
RL Payments (Total)	$473,391.09	$.00	$545,811.13	$1,045,910.71
Building	$339,562.17	$.00	$143,252.81	$508,002.77
Contents	$133,828.92	$.00	$402,558.32	$537,907.94
RL Payments (Insured)	$185,213.32	$.00	$545,811.13	$731,024.45
Building	$103,558.16	$.00	$143,252.81	$246,810.97
Contents	$81,655.16	$.00	$402,558.32	$484,213.48

Post - FIRM SFHA RL Buildings:	0
Insured Buildings with 4 or More Losses:	2
Insured Buildings with 2-3 Losses > Building Value:	0
Total Target RL Buildings:	2

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : LEWIS COUNTY*

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	1	0	2	6
RL Buildings (Insured)	0	0	0	0
RL Losses (Total)	3	0	5	14
RL Losses (Insured)	0	0		0
RL Payments (Total)	$18,929.02	$.00	$26,305.72	$105,919.33
Building	$12,124.57	$.00	$17,805.06	$55,744.60
Contents	$6,804.45	$.00	$8,500.66	$50,174.73
RL Payments (Insured)	$.00	$.00	$.00	$.00
Building	$.00	$.00	$.00	$.00
Contents	$.00	$.00	$.00	$.00

Post - FIRM SFHA RL Buildings:	0
Insured Buildings with 4 or More Losses:	0
Insured Buildings with 2-3 Losses > Building Value:	0
Total Target RL Buildings:	0

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : RANDOLPH COUNTY *

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	22	0	2	34
RL Buildings (Insured)	5	0	2	7
RL Losses (Total)	64	0	4	88
RL Losses (Insured)	18	0		22
RL Payments (Total)	$949,159.65	$.00	$16,334.41	$1,266,862.56
Building	$705,058.25	$.00	$14,180.02	$949,475.58
Contents	$244,101.40	$.00	$2,154.39	$317,386.98
RL Payments (Insured)	$272,150.33	$.00	$16,334.41	$288,484.74
Building	$188,733.06	$.00	$14,180.02	$202,913.08
Contents	$83,417.27	$.00	$2,154.39	$85,571.66

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 1
Insured Buildings with 2-3 Losses > Building Value: 0
Total Target RL Buildings: 1

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : TUCKER COUNTY*

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	4	0	0	4
RL Buildings (Insured)	3	0	0	3
RL Losses (Total)	10	0	0	10
RL Losses (Insured)	8	0		8
RL Payments (Total)	$194,341.32	$.00	$.00	$194,341.32
Building	$148,037.30	$.00	$.00	$148,037.30
Contents	$46,304.02	$.00	$.00	$46,304.02
RL Payments (Insured)	$160,488.15	$.00	$.00	$160,488.15
Building	$131,337.30	$.00	$.00	$131,337.30
Contents	$29,150.85	$.00	$.00	$29,150.85

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 0
Insured Buildings with 2-3 Losses > Building Value: 0
Total Target RL Buildings: 0

Release 4.05.04.00, 03/31/2011 -- Build 045,

Community Repetitive Loss

COMMUNITY : UPSHUR COUNTY*

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	15	0	2	17
RL Buildings (Insured)	5	0	0	5
RL Losses (Total)	40	0	5	45
RL Losses (Insured)	13	0		13
RL Payments (Total)	$399,738.24	$.00	$12,575.42	$412,313.66
Building	$335,156.32	$.00	$9,777.04	$344,933.36
Contents	$64,581.92	$.00	$2,798.38	$67,380.30
RL Payments (Insured)	$119,282.30	$.00	$.00	$119,282.30
Building	$104,549.50	$.00	$.00	$104,549.50
Contents	$14,732.80	$.00	$.00	$14,732.80

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 1
Insured Buildings with 2-3 Losses > Building Value: 0
Total Target RL Buildings: 1

Appendix VI

HAZUS DATA

HAZUS-MH: Flood Event Report

Region Name: BarbourCounty

Flood Scenario: 10-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 341 square miles and contains 1,238 census blocks. The region contains over 6 thousand households and has a total population of 15,557 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,754 buildings in the region with a total building replacement value (excluding contents) of 1,013 million dollars (2006 dollars). Approximately 97.09% of the buildings (and 84.41% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,754 buildings in the region which have an aggregate total replacement value of 1,013 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	855,157	84.4%
Commercial	91,868	9.1%
Industrial	12,235	1.2%
Agricultural	3,083	0.3%
Religion	22,766	2.2%
Government	9,909	1.0%
Education	18,044	1.8%
Total	**1,013,062**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	366,073	85.0%
Commercial	42,602	9.9%
Industrial	8,367	1.9%
Agricultural	1,014	0.2%
Religion	4,355	1.0%
Government	4,065	0.9%
Education	4,417	1.0%
Total	**430,893**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 72 beds. There are 4 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BarbourCounty
Scenario Name:	10-YR
Return Period Analyzed:	10
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 58 buildings will be at least moderately damaged. This is over 25% of the total number of buildings in the scenario. There are an estimated 7 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	1	1.72	24	41.38	4	6.90	22	37.93	7	12.07
Total	**0**		**1**		**24**		**4**		**22**		**7**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00
Masonry	0	0.00	0	0.00	4	44.44	0	0.00	5	55.56	0	0.00
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	1	2.22	20	44.44	4	8.89	17	37.78	3	6.67

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	4	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 6,270 tons of debris will be generated. Of the total amount, Finishes comprises 30% of the total, Structure comprises 36% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 251 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 190 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 165 people (out of a total population of 15,557) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 24.97 million dollars, which represents 5.20 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 24.64 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 59.10% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	9.18	2.38	0.34	0.18	12.08
	Content	5.55	5.34	0.54	0.70	12.14
	Inventory	0.00	0.30	0.11	0.02	0.42
	Subtotal	**14.73**	**8.01**	**0.99**	**0.90**	**24.64**
Business Interruption						
	Income	0.00	0.02	0.00	0.00	0.02
	Relocation	0.01	0.01	0.00	0.00	0.02
	Rental Income	0.01	0.01	0.00	0.00	0.01
	Wage	0.01	0.02	0.00	0.08	0.11
	Subtotal	**0.02**	**0.06**	**0.00**	**0.09**	**0.17**
ALL	**Total**	**14.76**	**8.07**	**0.99**	**0.99**	**24.81**

Appendix A: County Listing for the Region

West Virginia
- Barbour

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Barbour	15,557	855,157	157,905	1,013,062
Total	**15,557**	**855,157**	**157,905**	**1,013,062**
Total Study Region	**15,557**	**855,157**	**157,905**	**1,013,062**

HAZUS-MH: Flood Event Report

Region Name: BarbourCounty

Flood Scenario: 25-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 341 square miles and contains 1,238 census blocks. The region contains over 6 thousand households and has a total population of 15,557 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,754 buildings in the region with a total building replacement value (excluding contents) of 1,013 million dollars (2006 dollars). Approximately 97.09% of the buildings (and 84.41% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,754 buildings in the region which have an aggregate total replacement value of 1,013 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	855,157	84.4%
Commercial	91,868	9.1%
Industrial	12,235	1.2%
Agricultural	3,083	0.3%
Religion	22,766	2.2%
Government	9,909	1.0%
Education	18,044	1.8%
Total	**1,013,062**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	402,478	84.7%
Commercial	45,690	9.6%
Industrial	8,951	1.9%
Agricultural	1,014	0.2%
Religion	7,188	1.5%
Government	5,465	1.1%
Education	4,661	1.0%
Total	**475,447**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 72 beds. There are 4 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BarbourCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 77 buildings will be at least moderately damaged. This is over 31% of the total number of buildings in the scenario. There are an estimated 9 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	3	4.00	34	45.33	3	4.00	26	34.67	9	12.00
Total	**0**		**5**		**34**		**3**		**26**		**9**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	4	100.00
Masonry	0	0.00	1	8.33	4	33.33	0	0.00	7	58.33	0	0.00
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	4	6.56	30	49.18	3	4.92	19	31.15	5	8.20

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	4	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 7,857 tons of debris will be generated. Of the total amount, Finishes comprises 32% of the total, Structure comprises 34% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 314 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 249 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 224 people (out of a total population of 15,557) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 37.53 million dollars, which represents 7.82 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 36.67 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 51.47% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	11.94	3.39	0.69	0.51	16.53
	Content	7.33	8.15	1.23	2.75	19.46
	Inventory	0.00	0.41	0.24	0.03	0.68
	Subtotal	**19.27**	**11.95**	**2.16**	**3.29**	**36.67**
Business Interruption						
	Income	0.01	0.04	0.00	0.01	0.06
	Relocation	0.02	0.02	0.00	0.00	0.04
	Rental Income	0.01	0.01	0.00	0.00	0.02
	Wage	0.02	0.05	0.00	0.33	0.39
	Subtotal	**0.05**	**0.13**	**0.00**	**0.34**	**0.51**
ALL	**Total**	**19.32**	**12.08**	**2.16**	**3.62**	**37.18**

Appendix A: County Listing for the Region

West Virginia
- Barbour

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Barbour	15,557	855,157	157,905	1,013,062
Total	**15,557**	**855,157**	**157,905**	**1,013,062**
Total Study Region	**15,557**	**855,157**	**157,905**	**1,013,062**

HAZUS-MH: Flood Event Report

Region Name: BarbourCounty

Flood Scenario: 50-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 341 square miles and contains 1,238 census blocks. The region contains over 6 thousand households and has a total population of 15,557 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,754 buildings in the region with a total building replacement value (excluding contents) of 1,013 million dollars (2006 dollars). Approximately 97.09% of the buildings (and 84.41% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,754 buildings in the region which have an aggregate total replacement value of 1,013 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	855,157	84.4%
Commercial	91,868	9.1%
Industrial	12,235	1.2%
Agricultural	3,083	0.3%
Religion	22,766	2.2%
Government	9,909	1.0%
Education	18,044	1.8%
Total	**1,013,062**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	405,561	84.2%
Commercial	47,307	9.8%
Industrial	8,951	1.9%
Agricultural	1,014	0.2%
Religion	8,332	1.7%
Government	6,110	1.3%
Education	4,661	1.0%
Total	**481,936**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 72 beds. There are 4 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BarbourCounty
Scenario Name:	50-YR
Return Period Analyzed:	50
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 115 buildings will be at least moderately damaged. This is over 45% of the total number of buildings in the scenario. There are an estimated 10 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	4	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	6	5.50	57	52.29	7	6.42	29	26.61	10	9.17
Total	**1**		**12**		**57**		**7**		**29**		**10**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100.00
Masonry	0	0.00	2	8.70	14	60.87	0	0.00	7	30.43	0	0.00
Steel	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	6	7.23	43	51.81	7	8.43	22	26.51	5	6.02

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	2	2	0	0
Schools	4	2	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 9,098 tons of debris will be generated. Of the total amount, Finishes comprises 36% of the total, Structure comprises 32% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 364 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 288 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 311 people (out of a total population of 15,557) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 60.08 million dollars, which represents 12.51 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 58.14 million dollars. 2% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 40.09% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	14.81	4.99	1.10	1.43	22.32
	Content	9.23	14.48	2.34	8.76	34.81
	Inventory	0.00	0.56	0.41	0.04	1.01
	Subtotal	**24.03**	**20.03**	**3.85**	**10.23**	**58.14**
Business Interruption						
	Income	0.01	0.07	0.00	0.02	0.09
	Relocation	0.02	0.03	0.00	0.00	0.05
	Rental Income	0.01	0.02	0.00	0.00	0.03
	Wage	0.02	0.08	0.00	1.00	1.09
	Subtotal	**0.06**	**0.19**	**0.00**	**1.02**	**1.26**
ALL	**Total**	**24.09**	**20.22**	**3.85**	**11.25**	**59.40**

Appendix A: County Listing for the Region

West Virginia
- Barbour

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Barbour	15,557	855,157	157,905	1,013,062
Total	**15,557**	**855,157**	**157,905**	**1,013,062**
Total Study Region	**15,557**	**855,157**	**157,905**	**1,013,062**

HAZUS-MH: Flood Event Report

Region Name: BarbourCounty

Flood Scenario: 100-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 341 square miles and contains 1,238 census blocks. The region contains over 6 thousand households and has a total population of 15,557 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,754 buildings in the region with a total building replacement value (excluding contents) of 1,013 million dollars (2006 dollars). Approximately 97.09% of the buildings (and 84.41% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,754 buildings in the region which have an aggregate total replacement value of 1,013 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	855,157	84.4%
Commercial	91,868	9.1%
Industrial	12,235	1.2%
Agricultural	3,083	0.3%
Religion	22,766	2.2%
Government	9,909	1.0%
Education	18,044	1.8%
Total	**1,013,062**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	421,567	79.2%
Commercial	71,806	13.5%
Industrial	10,118	1.9%
Agricultural	2,355	0.4%
Religion	13,333	2.5%
Government	7,119	1.3%
Education	6,134	1.2%
Total	**532,432**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 72 beds. There are 4 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BarbourCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 141 buildings will be at least moderately damaged. This is over 41% of the total number of buildings in the scenario. There are an estimated 15 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00
Religion	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	4	3.08	58	44.62	19	14.62	34	26.15	15	11.54
Total	**0**		**14**		**58**		**19**		**35**		**15**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8	100.00
Masonry	0	0.00	3	9.68	15	48.39	4	12.90	7	22.58	2	6.45
Steel	0	0.00	4	80.00	0	0.00	0	0.00	1	20.00	0	0.00
Wood	0	0.00	6	6.25	43	44.79	15	15.63	27	28.13	5	5.21

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	2	2	0	0
Schools	4	2	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 10,711 tons of debris will be generated. Of the total amount, Finishes comprises 37% of the total, Structure comprises 31% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 428 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 328 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 362 people (out of a total population of 15,557) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 70.36 million dollars, which represents 14.65 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 67.98 million dollars. 2% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 40.84% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	17.69	5.97	1.25	1.56	26.47
	Content	10.97	17.00	2.69	9.68	40.34
	Inventory	0.00	0.66	0.46	0.05	1.17
	Subtotal	**28.66**	**23.62**	**4.41**	**11.29**	**67.98**
Business Interruption						
	Income	0.01	0.09	0.00	0.03	0.12
	Relocation	0.03	0.04	0.00	0.01	0.07
	Rental Income	0.01	0.02	0.00	0.00	0.04
	Wage	0.02	0.10	0.00	1.18	1.31
	Subtotal	**0.07**	**0.25**	**0.00**	**1.21**	**1.53**
ALL	**Total**	**28.74**	**23.87**	**4.41**	**12.51**	**69.52**

Appendix A: County Listing for the Region

West Virginia
- Barbour

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Barbour	15,557	855,157	157,905	1,013,062
Total	**15,557**	**855,157**	**157,905**	**1,013,062**
Total Study Region	**15,557**	**855,157**	**157,905**	**1,013,062**

HAZUS-MH: Flood Event Report

Region Name: BraxtonCounty

Flood Scenario: 10-YR

Print Date: Monday, October 19, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 513 square miles and contains 1,100 census blocks. The region contains over 6 thousand households and has a total population of 14,702 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,165 buildings in the region with a total building replacement value (excluding contents) of 963 million dollars (2006 dollars). Approximately 95.26% of the buildings (and 78.10% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,165 buildings in the region which have an aggregate total replacement value of 963 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	751,930	78.1%
Commercial	131,397	13.6%
Industrial	39,725	4.1%
Agricultural	893	0.1%
Religion	14,224	1.5%
Government	14,713	1.5%
Education	9,907	1.0%
Total	**962,789**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	381,435	78.7%
Commercial	64,077	13.2%
Industrial	27,976	5.8%
Agricultural	570	0.1%
Religion	4,592	0.9%
Government	5,213	1.1%
Education	774	0.2%
Total	**484,637**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 25 beds. There are 5 schools, 2 fire stations, 4 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BraxtonCounty
Scenario Name:	10-YR
Return Period Analyzed:	10
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 132 buildings will be at least moderately damaged. This is over 8% of the total number of buildings in the scenario. There are an estimated 88 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	10	7.63	3	2.29	30	22.90	88	67.18
Total	**0**		**1**		**10**		**3**		**30**		**88**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	31	100.00
Masonry	0	0.00	0	0.00	2	7.69	0	0.00	8	30.77	16	61.54
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	8	10.81	3	4.05	22	29.73	41	55.41

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	4	0	0	0
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 17,905 tons of debris will be generated. Of the total amount, Finishes comprises 19% of the total, Structure comprises 39% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 716 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 256 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 312 people (out of a total population of 14,702) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 62.73 million dollars, which represents 12.09 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 61.94 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 47.98% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	19.46	5.96	3.60	1.00	30.01
	Content	10.61	11.47	6.98	1.75	30.81
	Inventory	0.00	0.32	0.78	0.02	1.12
	Subtotal	**30.07**	**17.74**	**11.36**	**2.77**	**61.94**
Business Interruption						
	Income	0.00	0.05	0.01	0.00	0.06
	Relocation	0.03	0.01	0.00	0.00	0.04
	Rental Income	0.00	0.01	0.00	0.00	0.01
	Wage	0.00	0.08	0.00	0.30	0.38
	Subtotal	**0.03**	**0.15**	**0.01**	**0.30**	**0.50**
ALL	**Total**	**30.10**	**17.90**	**11.37**	**3.07**	**62.44**

Appendix A: County Listing for the Region

West Virginia
- Braxton

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Braxton	14,702	751,930	210,859	962,789
Total	**14,702**	**751,930**	**210,859**	**962,789**
Total Study Region	**14,702**	**751,930**	**210,859**	**962,789**

HAZUS-MH: Flood Event Report

Region Name: BraxtonCounty

Flood Scenario: 25-YR

Print Date: Monday, October 19, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 513 square miles and contains 1,100 census blocks. The region contains over 6 thousand households and has a total population of 14,702 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,165 buildings in the region with a total building replacement value (excluding contents) of 963 million dollars (2006 dollars). Approximately 95.26% of the buildings (and 78.10% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,165 buildings in the region which have an aggregate total replacement value of 963 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	751,930	78.1%
Commercial	131,397	13.6%
Industrial	39,725	4.1%
Agricultural	893	0.1%
Religion	14,224	1.5%
Government	14,713	1.5%
Education	9,907	1.0%
Total	**962,789**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	406,722	77.8%
Commercial	69,594	13.3%
Industrial	28,654	5.5%
Agricultural	570	0.1%
Religion	5,203	1.0%
Government	9,789	1.9%
Education	2,576	0.5%
Total	**523,108**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 25 beds. There are 5 schools, 2 fire stations, 4 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BraxtonCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 152 buildings will be at least moderately damaged. This is over 6% of the total number of buildings in the scenario. There are an estimated 104 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	10	6.62	3	1.99	34	22.52	104	68.87
Total	**0**		**1**		**10**		**3**		**34**		**104**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	40	100.00
Masonry	0	0.00	0	0.00	2	7.41	0	0.00	8	29.63	17	62.96
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	8	9.52	3	3.57	26	30.95	47	55.95

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	4	2	0	0
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 18,623 tons of debris will be generated. Of the total amount, Finishes comprises 20% of the total, Structure comprises 38% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 745 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 285 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 348 people (out of a total population of 14,702) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 68.58 million dollars, which represents 13.22 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 67.46 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 48.16% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	21.39	6.33	3.91	1.05	32.68
	Content	11.60	12.30	7.63	1.97	33.51
	Inventory	0.00	0.34	0.90	0.03	1.26
	Subtotal	**32.99**	**18.97**	**12.44**	**3.05**	**67.46**
Business Interruption						
	Income	0.00	0.07	0.01	0.01	0.08
	Relocation	0.03	0.01	0.00	0.00	0.05
	Rental Income	0.01	0.01	0.00	0.00	0.02
	Wage	0.00	0.10	0.00	0.48	0.57
	Subtotal	**0.04**	**0.19**	**0.02**	**0.48**	**0.72**
ALL	**Total**	**33.03**	**19.16**	**12.46**	**3.53**	**68.17**

Appendix A: County Listing for the Region

West Virginia
- Braxton

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Braxton	14,702	751,930	210,859	962,789
Total	**14,702**	**751,930**	**210,859**	**962,789**
Total Study Region	**14,702**	**751,930**	**210,859**	**962,789**

HAZUS-MH: Flood Event Report

Region Name: BraxtonCounty

Flood Scenario: 50-YR

Print Date: Monday, October 19, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 513 square miles and contains 1,100 census blocks. The region contains over 6 thousand households and has a total population of 14,702 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,165 buildings in the region with a total building replacement value (excluding contents) of 963 million dollars (2006 dollars). Approximately 95.26% of the buildings (and 78.10% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,165 buildings in the region which have an aggregate total replacement value of 963 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	751,930	78.1%
Commercial	131,397	13.6%
Industrial	39,725	4.1%
Agricultural	893	0.1%
Religion	14,224	1.5%
Government	14,713	1.5%
Education	9,907	1.0%
Total	**962,789**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	412,896	77.3%
Commercial	74,476	13.9%
Industrial	28,840	5.4%
Agricultural	570	0.1%
Religion	5,203	1.0%
Government	9,789	1.8%
Education	2,576	0.5%
Total	**534,350**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 25 beds. There are 5 schools, 2 fire stations, 4 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BraxtonCounty
Scenario Name:	50-YR
Return Period Analyzed:	50
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 178 buildings will be at least moderately damaged. This is over 9% of the total number of buildings in the scenario. There are an estimated 119 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	17	9.60	4	2.26	37	20.90	119	67.23
Total	**0**		**1**		**17**		**4**		**37**		**119**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	45	100.00
Masonry	0	0.00	0	0.00	3	8.82	1	2.94	9	26.47	21	61.76
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	14	14.29	3	3.06	28	28.57	53	54.08

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	4	2	0	1
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 20,778 tons of debris will be generated. Of the total amount, Finishes comprises 21% of the total, Structure comprises 38% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 831 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 321 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 404 people (out of a total population of 14,702) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 78.04 million dollars, which represents 15.04 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 76.76 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 47.80% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	24.15	7.34	4.12	1.24	36.86
	Content	13.11	14.61	8.07	2.68	38.48
	Inventory	0.00	0.41	0.99	0.03	1.43
	Subtotal	**37.26**	**22.36**	**13.19**	**3.96**	**76.76**
Business Interruption						
	Income	0.00	0.07	0.01	0.01	0.09
	Relocation	0.04	0.02	0.00	0.00	0.06
	Rental Income	0.01	0.01	0.00	0.00	0.02
	Wage	0.00	0.11	0.00	0.54	0.65
	Subtotal	**0.04**	**0.21**	**0.02**	**0.55**	**0.82**
ALL	**Total**	**37.30**	**22.57**	**13.20**	**4.50**	**77.58**

Appendix A: County Listing for the Region

West Virginia
- Braxton

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Braxton	14,702	751,930	210,859	962,789
Total	**14,702**	**751,930**	**210,859**	**962,789**
Total Study Region	**14,702**	**751,930**	**210,859**	**962,789**

HAZUS-MH: Flood Event Report

Region Name: BraxtonCounty

Flood Scenario: 100-YR

Print Date: Monday, October 19, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 513 square miles and contains 1,100 census blocks. The region contains over 6 thousand households and has a total population of 14,702 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 8,165 buildings in the region with a total building replacement value (excluding contents) of 963 million dollars (2006 dollars). Approximately 95.26% of the buildings (and 78.10% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 8,165 buildings in the region which have an aggregate total replacement value of 963 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	751,930	78.1%
Commercial	131,397	13.6%
Industrial	39,725	4.1%
Agricultural	893	0.1%
Religion	14,224	1.5%
Government	14,713	1.5%
Education	9,907	1.0%
Total	**962,789**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	409,191	76.7%
Commercial	75,363	14.1%
Industrial	28,992	5.4%
Agricultural	570	0.1%
Religion	5,203	1.0%
Government	11,260	2.1%
Education	2,576	0.5%
Total	**533,155**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 25 beds. There are 5 schools, 2 fire stations, 4 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	BraxtonCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 200 buildings will be at least moderately damaged. This is over 9% of the total number of buildings in the scenario. There are an estimated 136 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	19	9.55	6	3.02	38	19.10	136	68.34
Total	**0**		**1**		**19**		**6**		**38**		**136**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	50	100.00
Masonry	0	0.00	0	0.00	5	13.51	0	0.00	8	21.62	24	64.86
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	14	12.50	6	5.36	30	26.79	62	55.36

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	1	0	0	0
Police Stations	4	1	0	0
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 22,445 tons of debris will be generated. Of the total amount, Finishes comprises 20% of the total, Structure comprises 39% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 898 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 328 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 439 people (out of a total population of 14,702) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 81.76 million dollars, which represents 15.76 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 80.54 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 47.73% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	25.30	8.27	4.15	1.37	39.08
	Content	13.68	15.77	8.10	2.46	40.01
	Inventory	0.00	0.44	0.97	0.03	1.45
	Subtotal	**38.98**	**24.48**	**13.23**	**3.86**	**80.54**
Business Interruption						
	Income	0.00	0.08	0.01	0.01	0.09
	Relocation	0.04	0.02	0.00	0.00	0.06
	Rental Income	0.01	0.01	0.00	0.00	0.02
	Wage	0.00	0.11	0.00	0.49	0.60
	Subtotal	**0.05**	**0.22**	**0.02**	**0.49**	**0.77**
ALL	**Total**	**39.02**	**24.70**	**13.24**	**4.35**	**81.31**

Appendix A: County Listing for the Region

West Virginia
- Braxton

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Braxton	14,702	751,930	210,859	962,789
Total	**14,702**	**751,930**	**210,859**	**962,789**
Total Study Region	**14,702**	**751,930**	**210,859**	**962,789**

HAZUS-MH: Flood Event Report

Region Name: GilmerCounty

Flood Scenario: 10-YR

Print Date: Tuesday, October 20, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 340 square miles and contains 553 census blocks. The region contains over 3 thousand households and has a total population of 7,160 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 4,069 buildings in the region with a total building replacement value (excluding contents) of 463 million dollars (2006 dollars). Approximately 96.07% of the buildings (and 83.51% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 4,069 buildings in the region which have an aggregate total replacement value of 463 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	386,829	83.5%
Commercial	41,460	9.0%
Industrial	14,382	3.1%
Agricultural	480	0.1%
Religion	5,979	1.3%
Government	4,062	0.9%
Education	9,995	2.2%
Total	**463,187**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	254,744	85.0%
Commercial	24,950	8.3%
Industrial	13,009	4.3%
Agricultural	480	0.2%
Religion	2,616	0.9%
Government	2,126	0.7%
Education	1,635	0.5%
Total	**299,560**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 4 schools, 1 fire station, 1 police station and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name: GilmerCounty

Scenario Name: 10-YR

Return Period Analyzed: 10

Analysis Options Analyzed: No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 47 buildings will be at least moderately damaged. This is over 6% of the total number of buildings in the scenario. There are an estimated 23 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	3	6.38	1	2.13	20	42.55	23	48.94
Total	**0**		**0**		**3**		**1**		**20**		**23**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7	100.00
Masonry	0	0.00	0	0.00	0	0.00	0	0.00	4	50.00	4	50.00
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	3	9.38	1	3.13	16	50.00	12	37.50

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	0	0	0	0
Police Stations	1	0	0	0
Schools	4	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 10,660 tons of debris will be generated. Of the total amount, Finishes comprises 22% of the total, Structure comprises 39% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 426 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 182 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 163 people (out of a total population of 7,160) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 28.94 million dollars, which represents 9.10 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 28.78 million dollars. 0% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 74.73% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	13.43	1.34	0.70	0.29	15.76
	Content	8.17	2.30	1.62	0.60	12.68
	Inventory	0.00	0.08	0.26	0.00	0.34
	Subtotal	**21.60**	**3.72**	**2.58**	**0.89**	**28.78**
Business Interruption						
	Income	0.00	0.02	0.00	0.00	0.02
	Relocation	0.01	0.00	0.00	0.00	0.02
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.01	0.01	0.00	0.03	0.05
	Subtotal	**0.03**	**0.04**	**0.00**	**0.03**	**0.09**
ALL	**Total**	**21.63**	**3.75**	**2.58**	**0.92**	**28.87**

Appendix A: County Listing for the Region

West Virginia
- Gilmer

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Gilmer	7,160	386,829	76,358	463,187
Total	**7,160**	**386,829**	**76,358**	**463,187**
Total Study Region	**7,160**	**386,829**	**76,358**	**463,187**

HAZUS-MH: Flood Event Report

Region Name: GilmerCounty

Flood Scenario: 25-YR

Print Date: Tuesday, October 20, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 340 square miles and contains 553 census blocks. The region contains over 3 thousand households and has a total population of 7,160 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 4,069 buildings in the region with a total building replacement value (excluding contents) of 463 million dollars (2006 dollars). Approximately 96.07% of the buildings (and 83.51% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 4,069 buildings in the region which have an aggregate total replacement value of 463 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	386,829	83.5%
Commercial	41,460	9.0%
Industrial	14,382	3.1%
Agricultural	480	0.1%
Religion	5,979	1.3%
Government	4,062	0.9%
Education	9,995	2.2%
Total	**463,187**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	256,426	85.7%
Commercial	24,316	8.1%
Industrial	12,314	4.1%
Agricultural	480	0.2%
Religion	2,616	0.9%
Government	1,284	0.4%
Education	1,635	0.5%
Total	**299,071**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 4 schools, 1 fire station, 1 police station and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	GilmerCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 52 buildings will be at least moderately damaged. This is over 9% of the total number of buildings in the scenario. There are an estimated 24 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	5	9.62	1	1.92	22	42.31	24	46.15
Total	**0**		**0**		**5**		**1**		**22**		**24**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	100.00
Masonry	0	0.00	0	0.00	0	0.00	0	0.00	5	50.00	5	50.00
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	5	13.89	1	2.78	17	47.22	13	36.11

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	0	0	0	0
Police Stations	1	0	0	0
Schools	4	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 11,351 tons of debris will be generated. Of the total amount, Finishes comprises 22% of the total, Structure comprises 38% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 454 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 194 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 173 people (out of a total population of 7,160) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 31.63 million dollars, which represents 9.94 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 31.46 million dollars. 0% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 73.41% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	14.45	1.28	1.07	0.29	17.08
	Content	8.74	2.27	2.26	0.63	13.89
	Inventory	0.00	0.09	0.40	0.00	0.49
	Subtotal	**23.19**	**3.63**	**3.73**	**0.91**	**31.46**
Business Interruption						
	Income	0.00	0.02	0.00	0.00	0.02
	Relocation	0.01	0.00	0.00	0.00	0.02
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.01	0.01	0.00	0.03	0.05
	Subtotal	**0.03**	**0.03**	**0.00**	**0.03**	**0.09**
ALL	**Total**	**23.22**	**3.67**	**3.73**	**0.95**	**31.55**

Appendix A: County Listing for the Region

West Virginia
- Gilmer

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Gilmer	7,160	386,829	76,358	463,187
Total	**7,160**	**386,829**	**76,358**	**463,187**
Total Study Region	**7,160**	**386,829**	**76,358**	**463,187**

HAZUS-MH: Flood Event Report

Region Name: GilmerCounty

Flood Scenario: 50-YR

Print Date: Tuesday, October 20, 2009

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 340 square miles and contains 553 census blocks. The region contains over 3 thousand households and has a total population of 7,160 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 4,069 buildings in the region with a total building replacement value (excluding contents) of 463 million dollars (2006 dollars). Approximately 96.07% of the buildings (and 83.51% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 4,069 buildings in the region which have an aggregate total replacement value of 463 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	386,829	83.5%
Commercial	41,460	9.0%
Industrial	14,382	3.1%
Agricultural	480	0.1%
Religion	5,979	1.3%
Government	4,062	0.9%
Education	9,995	2.2%
Total	**463,187**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	260,470	82.6%
Commercial	31,792	10.1%
Industrial	13,264	4.2%
Agricultural	480	0.2%
Religion	3,864	1.2%
Government	3,816	1.2%
Education	1,635	0.5%
Total	**315,321**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 4 schools, 1 fire station, 1 police station and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	GilmerCounty
Scenario Name:	50-YR
Return Period Analyzed:	50
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 68 buildings will be at least moderately damaged. This is over 8% of the total number of buildings in the scenario. There are an estimated 32 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	6	8.82	3	4.41	27	39.71	32	47.06
Total	**0**		**0**		**6**		**3**		**27**		**32**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	9	100.00
Masonry	0	0.00	0	0.00	0	0.00	0	0.00	7	58.33	5	41.67
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	6	12.77	3	6.38	20	42.55	18	38.30

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	0	0	0	0
Police Stations	1	0	0	0
Schools	4	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 12,746 tons of debris will be generated. Of the total amount, Finishes comprises 22% of the total, Structure comprises 38% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 510 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 212 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 194 people (out of a total population of 7,160) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 38.49 million dollars, which represents 12.10 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 38.18 million dollars. 0% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 68.46% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	16.47	1.92	1.18	0.44	20.01
	Content	9.84	4.06	2.46	1.27	17.63
	Inventory	0.00	0.13	0.41	0.00	0.54
	Subtotal	**26.32**	**6.11**	**4.04**	**1.71**	**38.18**
Business Interruption						
	Income	0.00	0.03	0.00	0.00	0.04
	Relocation	0.01	0.00	0.00	0.00	0.02
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.01	0.03	0.00	0.09	0.13
	Subtotal	**0.03**	**0.06**	**0.00**	**0.10**	**0.19**
ALL	**Total**	**26.35**	**6.17**	**4.04**	**1.81**	**38.37**

Appendix A: County Listing for the Region

West Virginia
- Gilmer

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Gilmer	7,160	386,829	76,358	463,187
Total	**7,160**	**386,829**	**76,358**	**463,187**
Total Study Region	**7,160**	**386,829**	**76,358**	**463,187**

HAZUS-MH: Flood Event Report

Region Name: GilmerCounty

Flood Scenario: 100-YR

Print Date: Tuesday, October 20, 2009

Disclaimer:

Totals 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

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General Description of the Region

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The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 340 square miles and contains 553 census blocks. The region contains over 3 thousand households and has a total population of 7,160 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 4,069 buildings in the region with a total building replacement value (excluding contents) of 463 million dollars (2006 dollars). Approximately 96.07% of the buildings (and 83.51% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 4,069 buildings in the region which have an aggregate total replacement value of 463 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	386,829	83.5%
Commercial	41,460	9.0%
Industrial	14,382	3.1%
Agricultural	480	0.1%
Religion	5,979	1.3%
Government	4,062	0.9%
Education	9,995	2.2%
Total	**463,187**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	275,947	82.8%
Commercial	34,340	10.3%
Industrial	13,264	4.0%
Agricultural	480	0.1%
Religion	3,864	1.2%
Government	3,816	1.1%
Education	1,635	0.5%
Total	**333,346**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 4 schools, 1 fire station, 1 police station and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	GilmerCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

Analysis has not been performed for this Scenario.

Table 3: Expected Building Damage by Occupancy

Occupancy	1-10 Count	1-10 (%)	11-20 Count	11-20 (%)	21-30 Count	21-30 (%)	31-40 Count	31-40 (%)	41-50 Count	41-50 (%)	Substantially Count	Substantially (%)
Analysis has not been performed for this Scenario.												

Table 4: Expected Building Damage by Building Type

Building Type	1-10 Count	1-10 (%)	11-20 Count	11-20 (%)	21-30 Count	21-30 (%)	31-40 Count	31-40 (%)	41-50 Count	41-50 (%)	Substantially Count	Substantially (%)
Analysis has not been performed for this Scenario.												

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities: At Least Moderate	# Facilities: At Least Substantial	# Facilities: Loss of Use
Fire Stations	1	0	0	0
Hospitals	0	0	0	0
Police Stations	1	0	0	0
Schools	4	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 13,550 tons of debris will be generated. Of the total amount, Finishes comprises 22% of the total, Structure comprises 38% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 542 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

Analysis has not been performed for this Scenario.

Economic Loss

Analysis has not been performed for this Scenario.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

Analysis has not been performed for this Scenario.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total

Analysis has not been performed for this Scenario.

Appendix A: County Listing for the Region

West Virginia
- Gilmer

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Gilmer	7,160	386,829	76,358	463,187
Total	**7,160**	**386,829**	**76,358**	**463,187**
Total Study Region	**7,160**	**386,829**	**76,358**	**463,187**

HAZUS-MH: Flood Event Report

Region Name: LewisCounty

Flood Scenario: 10-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 382 square miles and contains 880 census blocks. The region contains over 7 thousand households and has a total population of 16,919 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 9,127 buildings in the region with a total building replacement value (excluding contents) of 1,290 million dollars (2006 dollars). Approximately 94.46% of the buildings (and 74.76% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 9,127 buildings in the region which have an aggregate total replacement value of 1,290 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	964,250	74.8%
Commercial	166,783	12.9%
Industrial	77,368	6.0%
Agricultural	2,228	0.2%
Religion	18,088	1.4%
Government	15,078	1.2%
Education	46,040	3.6%
Total	**1,289,835**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	732,130	75.3%
Commercial	102,751	10.6%
Industrial	68,255	7.0%
Agricultural	1,615	0.2%
Religion	14,382	1.5%
Government	11,531	1.2%
Education	41,599	4.3%
Total	**972,263**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 220 beds. There are 8 schools, 4 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	LewisCounty
Scenario Name:	10-YR
Return Period Analyzed:	10
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 290 buildings will be at least moderately damaged. This is over 34% of the total number of buildings in the scenario. There are an estimated 23 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00
Religion	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	14	4.95	122	43.11	31	10.95	93	32.86	23	8.13
Total	**2**		**20**		**122**		**31**		**94**		**23**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8	100.00
Masonry	0	0.00	4	6.25	29	45.31	5	7.81	23	35.94	3	4.69
Steel	0	0.00	2	66.67	0	0.00	0	0.00	1	33.33	0	0.00
Wood	0	0.00	12	5.63	93	43.66	26	12.21	70	32.86	12	5.63

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 220 hospital beds are available in the region.

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 220 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	4	1	0	0
Hospitals	2	1	0	1
Police Stations	2	1	0	0
Schools	8	4	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.
(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 15,445 tons of debris will be generated. Of the total amount, Finishes comprises 41% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 618 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 638 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,023 people (out of a total population of 16,919) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 134.28 million dollars, which represents 13.53 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 127.86 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 38.30% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	31.68	6.60	3.58	4.92	46.77
	Content	19.66	20.50	7.51	31.15	78.81
	Inventory	0.00	0.53	1.71	0.04	2.27
	Subtotal	**51.33**	**27.63**	**12.79**	**36.10**	**127.86**
Business Interruption						
	Income	0.00	0.12	0.00	0.28	0.40
	Relocation	0.07	0.03	0.00	0.00	0.10
	Rental Income	0.02	0.01	0.00	0.00	0.03
	Wage	0.01	0.14	0.00	1.05	1.20
	Subtotal	**0.10**	**0.31**	**0.00**	**1.32**	**1.74**
ALL	**Total**	**51.44**	**27.93**	**12.80**	**37.42**	**129.59**

Appendix A: County Listing for the Region

West Virginia
- Lewis

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Lewis	16,919	964,250	325,585	1,289,835
Total	**16,919**	**964,250**	**325,585**	**1,289,835**
Total Study Region	**16,919**	**964,250**	**325,585**	**1,289,835**

HAZUS-MH: Flood Event Report

Region Name: LewisCounty

Flood Scenario: 25-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 382 square miles and contains 880 census blocks. The region contains over 7 thousand households and has a total population of 16,919 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 9,127 buildings in the region with a total building replacement value (excluding contents) of 1,290 million dollars (2006 dollars). Approximately 94.46% of the buildings (and 74.76% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 9,127 buildings in the region which have an aggregate total replacement value of 1,290 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	964,250	74.8%
Commercial	166,783	12.9%
Industrial	77,368	6.0%
Agricultural	2,228	0.2%
Religion	18,088	1.4%
Government	15,078	1.2%
Education	46,040	3.6%
Total	**1,289,835**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	747,951	75.6%
Commercial	103,588	10.5%
Industrial	68,895	7.0%
Agricultural	1,615	0.2%
Religion	14,781	1.5%
Government	11,531	1.2%
Education	41,599	4.2%
Total	**989,960**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 220 beds. There are 8 schools, 4 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	LewisCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 334 buildings will be at least moderately damaged. This is over 32% of the total number of buildings in the scenario. There are an estimated 31 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	5	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	11	3.34	136	41.34	42	12.77	109	33.13	31	9.42
Total	**1**		**16**		**136**		**42**		**109**		**31**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10	100.00
Masonry	0	0.00	3	3.85	31	39.74	11	14.10	29	37.18	4	5.13
Steel	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	9	3.72	105	43.39	31	12.81	80	33.06	17	7.02

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 220 hospital beds are available in the region.

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 220 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	4	1	0	0
Hospitals	2	1	0	1
Police Stations	2	1	0	0
Schools	8	5	0	1

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.
(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 18,166 tons of debris will be generated. Of the total amount, Finishes comprises 40% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 727 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 704 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,135 people (out of a total population of 16,919) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 150.02 million dollars, which represents 15.11 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 143.10 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 39.25% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	36.33	7.53	4.02	5.30	53.18
	Content	22.43	22.99	8.26	33.74	87.43
	Inventory	0.00	0.60	1.85	0.04	2.49
	Subtotal	**58.76**	**31.13**	**14.13**	**39.09**	**143.10**
Business Interruption						
	Income	0.00	0.13	0.00	0.30	0.43
	Relocation	0.08	0.03	0.00	0.00	0.12
	Rental Income	0.02	0.02	0.00	0.00	0.04
	Wage	0.01	0.15	0.00	1.12	1.29
	Subtotal	**0.12**	**0.34**	**0.00**	**1.42**	**1.88**
ALL	**Total**	**58.88**	**31.46**	**14.13**	**40.50**	**144.98**

Appendix A: County Listing for the Region

West Virginia
- Lewis

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Lewis	16,919	964,250	325,585	1,289,835
Total	**16,919**	**964,250**	**325,585**	**1,289,835**
Total Study Region	**16,919**	**964,250**	**325,585**	**1,289,835**

HAZUS-MH: Flood Event Report

Region Name: LewisCounty

Flood Scenario: 50-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 382 square miles and contains 880 census blocks. The region contains over 7 thousand households and has a total population of 16,919 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 9,127 buildings in the region with a total building replacement value (excluding contents) of 1,290 million dollars (2006 dollars). Approximately 94.46% of the buildings (and 74.76% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 9,127 buildings in the region which have an aggregate total replacement value of 1,290 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	964,250	74.8%
Commercial	166,783	12.9%
Industrial	77,368	6.0%
Agricultural	2,228	0.2%
Religion	18,088	1.4%
Government	15,078	1.2%
Education	46,040	3.6%
Total	**1,289,835**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	750,162	75.5%
Commercial	103,883	10.5%
Industrial	68,415	6.9%
Agricultural	1,615	0.2%
Religion	14,781	1.5%
Government	12,519	1.3%
Education	41,599	4.2%
Total	**992,974**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 220 beds. There are 8 schools, 4 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	LewisCounty
Scenario Name:	50-YR
Return Period Analyzed:	50
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 420 buildings will be at least moderately damaged. This is over 31% of the total number of buildings in the scenario. There are an estimated 47 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	6	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00
Religion	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	10	2.44	139	33.90	60	14.63	155	37.80	46	11.22
Total	**0**		**19**		**139**		**60**		**155**		**47**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	13	100.00
Masonry	0	0.00	4	4.00	32	32.00	14	14.00	45	45.00	5	5.00
Steel	0	0.00	3	75.00	0	0.00	0	0.00	0	0.00	1	25.00
Wood	0	0.00	8	2.68	107	35.79	46	15.38	110	36.79	28	9.36

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 220 hospital beds are available in the region.

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 70 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	4	1	0	0
Hospitals	2	1	0	0
Police Stations	2	1	0	0
Schools	8	5	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.
(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 22,048 tons of debris will be generated. Of the total amount, Finishes comprises 40% of the total, Structure comprises 30% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 882 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 743 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,263 people (out of a total population of 16,919) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 178.46 million dollars, which represents 17.98 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 170.67 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 40.06% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	44.26	9.01	4.45	7.63	65.33
	Content	27.10	27.34	9.14	39.11	102.69
	Inventory	0.00	0.64	1.96	0.04	2.64
	Subtotal	**71.36**	**36.98**	**15.55**	**46.78**	**170.67**
Business Interruption						
	Income	0.01	0.15	0.00	0.33	0.49
	Relocation	0.09	0.04	0.00	0.00	0.13
	Rental Income	0.02	0.03	0.00	0.00	0.05
	Wage	0.01	0.19	0.00	1.25	1.45
	Subtotal	**0.13**	**0.40**	**0.00**	**1.59**	**2.12**
ALL	**Total**	**71.49**	**37.38**	**15.55**	**48.37**	**172.79**

Appendix A: County Listing for the Region

West Virginia
- Lewis

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Lewis	16,919	964,250	325,585	1,289,835
Total	**16,919**	**964,250**	**325,585**	**1,289,835**
Total Study Region	**16,919**	**964,250**	**325,585**	**1,289,835**

HAZUS-MH: Flood Event Report

Region Name: LewisCounty

Flood Scenario: 100-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 382 square miles and contains 880 census blocks. The region contains over 7 thousand households and has a total population of 16,919 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 9,127 buildings in the region with a total building replacement value (excluding contents) of 1,290 million dollars (2006 dollars). Approximately 94.46% of the buildings (and 74.76% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 9,127 buildings in the region which have an aggregate total replacement value of 1,290 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	964,250	74.8%
Commercial	166,783	12.9%
Industrial	77,368	6.0%
Agricultural	2,228	0.2%
Religion	18,088	1.4%
Government	15,078	1.2%
Education	46,040	3.6%
Total	**1,289,835**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	769,145	75.7%
Commercial	106,466	10.5%
Industrial	69,040	6.8%
Agricultural	1,615	0.2%
Religion	15,340	1.5%
Government	12,519	1.2%
Education	41,599	4.1%
Total	**1,015,724**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 220 beds. There are 8 schools, 4 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	LewisCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 418 buildings will be at least moderately damaged. This is over 33% of the total number of buildings in the scenario. There are an estimated 42 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	8	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00
Religion	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	10	2.45	155	37.99	62	15.20	139	34.07	42	10.29
Total	**1**		**19**		**155**		**62**		**140**		**42**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	12	100.00
Masonry	0	0.00	1	0.97	43	41.75	17	16.50	35	33.98	7	6.80
Steel	0	0.00	3	75.00	0	0.00	0	0.00	1	25.00	0	0.00
Wood	0	0.00	10	3.40	112	38.10	45	15.31	104	35.37	23	7.82

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 70 hospital beds are available in the region.

Before the flood analyzed in this scenario, the region had 220 hospital beds available for use. On the day of the scenario flood event, the model estimates that 220 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	4	1	0	0
Hospitals	2	1	0	0
Police Stations	2	1	0	0
Schools	8	5	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.
(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 20,593 tons of debris will be generated. Of the total amount, Finishes comprises 42% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 824 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 770 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,278 people (out of a total population of 16,919) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 172.16 million dollars, which represents 17.34 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 164.81 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 40.66% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	43.32	9.35	4.14	5.91	62.71
	Content	26.55	28.10	8.48	36.33	99.46
	Inventory	0.00	0.70	1.89	0.05	2.65
	Subtotal	**69.87**	**38.15**	**14.50**	**42.29**	**164.81**
Business Interruption						
	Income	0.00	0.16	0.00	0.31	0.47
	Relocation	0.09	0.04	0.00	0.00	0.13
	Rental Income	0.02	0.02	0.00	0.00	0.05
	Wage	0.01	0.19	0.00	1.21	1.41
	Subtotal	**0.13**	**0.41**	**0.00**	**1.52**	**2.07**
ALL	**Total**	**70.01**	**38.56**	**14.51**	**43.81**	**166.88**

Appendix A: County Listing for the Region

West Virginia
- Lewis

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Lewis	16,919	964,250	325,585	1,289,835
Total	**16,919**	**964,250**	**325,585**	**1,289,835**
Total Study Region	**16,919**	**964,250**	**325,585**	**1,289,835**

HAZUS-MH: Flood Event Report

Region Name: RandolphCounty

Flood Scenario: 10-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 1,040 square miles and contains 1,640 census blocks. The region contains over 11 thousand households and has a total population of 28,262 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 15,561 buildings in the region with a total building replacement value (excluding contents) of 2,103 million dollars (2006 dollars). Approximately 95.43% of the buildings (and 79.56% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 15,561 buildings in the region which have an aggregate total replacement value of 2,103 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,673,125	79.6%
Commercial	256,103	12.2%
Industrial	57,283	2.7%
Agricultural	5,642	0.3%
Religion	56,583	2.7%
Government	27,831	1.3%
Education	26,357	1.3%
Total	**2,102,924**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	642,032	89.1%
Commercial	28,450	3.9%
Industrial	25,915	3.6%
Agricultural	1,665	0.2%
Religion	11,360	1.6%
Government	3,938	0.5%
Education	7,293	1.0%
Total	**720,653**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 90 beds. There are 18 schools, 7 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	RandolphCounty
Scenario Name:	10-YR
Return Period Analyzed:	10
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 195 buildings will be at least moderately damaged. This is over 34% of the total number of buildings in the scenario. There are an estimated 33 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	6	3.08	96	49.23	17	8.72	43	22.05	33	16.92
Total	**0**		**6**		**96**		**17**		**43**		**33**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	28	100.00
Masonry	0	0.00	1	2.94	19	55.88	4	11.76	9	26.47	1	2.94
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	5	3.76	77	57.89	13	9.77	34	25.56	4	3.01

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	7	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	18	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 9,469 tons of debris will be generated. Of the total amount, Finishes comprises 44% of the total, Structure comprises 23% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 379 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 493 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 583 people (out of a total population of 28,262) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 43.49 million dollars, which represents 5.59 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 43.05 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 86.15% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	23.56	0.62	0.41	0.23	24.82
	Content	13.85	1.62	1.07	1.38	17.92
	Inventory	0.00	0.03	0.27	0.00	0.30
	Subtotal	**37.41**	**2.27**	**1.74**	**1.62**	**43.05**
Business Interruption						
	Income	0.00	0.01	0.00	0.00	0.01
	Relocation	0.05	0.00	0.00	0.00	0.05
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.00	0.01	0.00	0.24	0.26
	Subtotal	**0.06**	**0.02**	**0.00**	**0.25**	**0.33**
ALL	**Total**	**37.47**	**2.30**	**1.74**	**1.86**	**43.37**

Appendix A: County Listing for the Region

West Virginia
- Randolph

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Randolph	28,262	1,673,125	429,799	2,102,924
Total	**28,262**	**1,673,125**	**429,799**	**2,102,924**
Total Study Region	**28,262**	**1,673,125**	**429,799**	**2,102,924**

HAZUS-MH: Flood Event Report

Region Name: RandolphCounty

Flood Scenario: 25-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 1,040 square miles and contains 1,640 census blocks. The region contains over 11 thousand households and has a total population of 28,262 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 15,561 buildings in the region with a total building replacement value (excluding contents) of 2,103 million dollars (2006 dollars). Approximately 95.43% of the buildings (and 79.56% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 15,561 buildings in the region which have an aggregate total replacement value of 2,103 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,673,125	79.6%
Commercial	256,103	12.2%
Industrial	57,283	2.7%
Agricultural	5,642	0.3%
Religion	56,583	2.7%
Government	27,831	1.3%
Education	26,357	1.3%
Total	**2,102,924**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	699,958	89.3%
Commercial	33,565	4.3%
Industrial	25,915	3.3%
Agricultural	1,665	0.2%
Religion	12,545	1.6%
Government	4,150	0.5%
Education	5,667	0.7%
Total	**783,465**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 90 beds. There are 18 schools, 7 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	RandolphCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 281 buildings will be at least moderately damaged. This is over 30% of the total number of buildings in the scenario. There are an estimated 63 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	7	2.49	113	40.21	23	8.19	75	26.69	63	22.42
Total	**0**		**7**		**113**		**23**		**75**		**63**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	39	100.00
Masonry	0	0.00	1	2.08	22	45.83	5	10.42	14	29.17	6	12.50
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	6	3.09	91	46.91	18	9.28	61	31.44	18	9.28

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	7	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	18	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 14,954 tons of debris will be generated. Of the total amount, Finishes comprises 37% of the total, Structure comprises 28% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 598 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 614 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 816 people (out of a total population of 28,262) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 59.91 million dollars, which represents 7.70 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 59.36 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 85.52% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	32.32	0.74	0.89	0.31	34.26
	Content	18.84	1.93	2.00	1.81	24.58
	Inventory	0.00	0.03	0.49	0.01	0.53
	Subtotal	**51.16**	**2.70**	**3.37**	**2.13**	**59.36**
Business Interruption						
	Income	0.00	0.01	0.00	0.00	0.01
	Relocation	0.06	0.00	0.00	0.00	0.06
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.00	0.01	0.00	0.30	0.31
	Subtotal	**0.07**	**0.03**	**0.00**	**0.30**	**0.40**
ALL	**Total**	**51.23**	**2.73**	**3.37**	**2.43**	**59.76**

Appendix A: County Listing for the Region

West Virginia
- Randolph

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Randolph	28,262	1,673,125	429,799	2,102,924
Total	**28,262**	**1,673,125**	**429,799**	**2,102,924**
Total Study Region	**28,262**	**1,673,125**	**429,799**	**2,102,924**

HAZUS-MH: Flood Event Report

Region Name: RandolphCounty

Flood Scenario: 50-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 1,040 square miles and contains 1,640 census blocks. The region contains over 11 thousand households and has a total population of 28,262 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 15,561 buildings in the region with a total building replacement value (excluding contents) of 2,103 million dollars (2006 dollars). Approximately 95.43% of the buildings (and 79.56% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 15,561 buildings in the region which have an aggregate total replacement value of 2,103 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,673,125	79.6%
Commercial	256,103	12.2%
Industrial	57,283	2.7%
Agricultural	5,642	0.3%
Religion	56,583	2.7%
Government	27,831	1.3%
Education	26,357	1.3%
Total	**2,102,924**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	716,551	89.5%
Commercial	33,851	4.2%
Industrial	25,915	3.2%
Agricultural	1,665	0.2%
Religion	12,545	1.6%
Government	4,150	0.5%
Education	5,667	0.7%
Total	**800,344**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 90 beds. There are 18 schools, 7 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	RandolphCounty
Scenario Name:	50-YR
Return Period Analyzed:	50
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 314 buildings will be at least moderately damaged. This is over 33% of the total number of buildings in the scenario. There are an estimated 59 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	12	3.82	132	42.04	33	10.51	78	24.84	59	18.79
Total	**0**		**12**		**132**		**33**		**78**		**59**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	49	100.00
Masonry	0	0.00	3	5.45	27	49.09	8	14.55	15	27.27	2	3.64
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	9	4.29	105	50.00	25	11.90	63	30.00	8	3.81

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	7	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	18	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 13,602 tons of debris will be generated. Of the total amount, Finishes comprises 43% of the total, Structure comprises 24% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 544 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 657 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 932 people (out of a total population of 28,262) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 62.21 million dollars, which represents 7.99 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 61.61 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 86.90% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	33.99	0.78	0.59	0.34	35.70
	Content	19.98	2.03	1.54	1.93	25.48
	Inventory	0.00	0.03	0.40	0.01	0.44
	Subtotal	**53.97**	**2.85**	**2.52**	**2.27**	**61.61**
Business Interruption						
	Income	0.00	0.01	0.00	0.00	0.02
	Relocation	0.07	0.00	0.00	0.00	0.07
	Rental Income	0.01	0.00	0.00	0.00	0.02
	Wage	0.01	0.01	0.00	0.31	0.33
	Subtotal	**0.09**	**0.03**	**0.00**	**0.32**	**0.43**
ALL	**Total**	**54.06**	**2.88**	**2.52**	**2.59**	**62.05**

Appendix A: County Listing for the Region

West Virginia
- Randolph

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Randolph	28,262	1,673,125	429,799	2,102,924
Total	**28,262**	**1,673,125**	**429,799**	**2,102,924**
Total Study Region	**28,262**	**1,673,125**	**429,799**	**2,102,924**

HAZUS-MH: Flood Event Report

Region Name: RandolphCounty

Flood Scenario: 100-YR

Print Date: Monday, January 25, 2010

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 1,040 square miles and contains 1,640 census blocks. The region contains over 11 thousand households and has a total population of 28,262 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 15,561 buildings in the region with a total building replacement value (excluding contents) of 2,103 million dollars (2006 dollars). Approximately 95.43% of the buildings (and 79.56% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 15,561 buildings in the region which have an aggregate total replacement value of 2,103 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,673,125	79.6%
Commercial	256,103	12.2%
Industrial	57,283	2.7%
Agricultural	5,642	0.3%
Religion	56,583	2.7%
Government	27,831	1.3%
Education	26,357	1.3%
Total	**2,102,924**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	728,331	90.0%
Commercial	31,811	3.9%
Industrial	25,915	3.2%
Agricultural	1,665	0.2%
Religion	11,516	1.4%
Government	4,150	0.5%
Education	5,667	0.7%
Total	**809,055**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 90 beds. There are 18 schools, 7 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	RandolphCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 339 buildings will be at least moderately damaged. This is over 29% of the total number of buildings in the scenario. There are an estimated 85 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	9	2.65	121	35.69	33	9.73	91	26.84	85	25.07
Total	**0**		**9**		**121**		**33**		**91**		**85**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	54	100.00
Masonry	0	0.00	3	5.17	25	43.10	6	10.34	17	29.31	7	12.07
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	6	2.64	96	42.29	27	11.89	74	32.60	24	10.57

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	7	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	18	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 18,167 tons of debris will be generated. Of the total amount, Finishes comprises 35% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 727 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 685 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 984 people (out of a total population of 28,262) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 69.68 million dollars, which represents 8.95 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 69.04 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 86.61% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	38.10	0.85	1.01	0.32	40.28
	Content	22.15	2.13	2.24	1.65	28.17
	Inventory	0.00	0.04	0.54	0.01	0.59
	Subtotal	**60.25**	**3.01**	**3.79**	**1.98**	**69.04**
Business Interruption						
	Income	0.00	0.01	0.00	0.00	0.02
	Relocation	0.08	0.00	0.00	0.00	0.08
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.00	0.02	0.00	0.32	0.35
	Subtotal	**0.10**	**0.03**	**0.00**	**0.33**	**0.46**
ALL	**Total**	**60.35**	**3.04**	**3.79**	**2.31**	**69.50**

Appendix A: County Listing for the Region

West Virginia
- Randolph

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Randolph	28,262	1,673,125	429,799	2,102,924
Total	**28,262**	**1,673,125**	**429,799**	**2,102,924**
Total Study Region	**28,262**	**1,673,125**	**429,799**	**2,102,924**

HAZUS-MH: Flood Event Report

Region Name: TuckerCounty

Flood Scenario: 10-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 419 square miles and contains 790 census blocks. The region contains over 3 thousand households and has a total population of 7,321 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 5,724 buildings in the region with a total building replacement value (excluding contents) of 704 million dollars (2006 dollars). Approximately 96.38% of the buildings (and 82.90% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 5,724 buildings in the region which have an aggregate total replacement value of 704 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	583,316	82.9%
Commercial	62,718	8.9%
Industrial	24,548	3.5%
Agricultural	951	0.1%
Religion	14,435	2.1%
Government	8,720	1.2%
Education	8,957	1.3%
Total	**703,645**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	295,253	89.3%
Commercial	15,238	4.6%
Industrial	12,151	3.7%
Agricultural	607	0.2%
Religion	4,017	1.2%
Government	2,857	0.9%
Education	437	0.1%
Total	**330,560**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 3 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	TuckerCounty
Scenario Name:	10-YR
Return Period Analyzed:	10
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 85 buildings will be at least moderately damaged. This is over 28% of the total number of buildings in the scenario. There are an estimated 17 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	1	1.19	28	33.33	13	15.48	25	29.76	17	20.24
Total	**0**		**2**		**28**		**13**		**25**		**17**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8	100.00
Masonry	0	0.00	0	0.00	6	33.33	2	11.11	7	38.89	3	16.67
Steel	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	1	1.72	22	37.93	11	18.97	18	31.03	6	10.34

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	0	0	0	0
Police Stations	2	0	0	0
Schools	3	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 5,783 tons of debris will be generated. Of the total amount, Finishes comprises 36% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 231 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 188 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 219 people (out of a total population of 7,321) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 28.25 million dollars, which represents 7.96 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 28.03 million dollars. 0% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 67.52% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	12.02	0.82	1.06	0.21	14.10
	Content	7.04	2.19	2.81	1.00	13.04
	Inventory	0.00	0.09	0.79	0.02	0.89
	Subtotal	**19.05**	**3.10**	**4.65**	**1.23**	**28.03**
Business Interruption						
	Income	0.00	0.01	0.00	0.00	0.02
	Relocation	0.02	0.00	0.00	0.00	0.02
	Rental Income	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.02	0.00	0.08	0.10
	Subtotal	**0.02**	**0.04**	**0.00**	**0.08**	**0.14**
ALL	**Total**	**19.07**	**3.14**	**4.66**	**1.30**	**28.17**

Appendix A: County Listing for the Region

West Virginia
- Tucker

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Tucker	7,321	583,316	120,329	703,645
Total	**7,321**	**583,316**	**120,329**	**703,645**
Total Study Region	**7,321**	**583,316**	**120,329**	**703,645**

HAZUS-MH: Flood Event Report

Region Name: TuckerCounty

Flood Scenario: 25-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 419 square miles and contains 790 census blocks. The region contains over 3 thousand households and has a total population of 7,321 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 5,724 buildings in the region with a total building replacement value (excluding contents) of 704 million dollars (2006 dollars). Approximately 96.38% of the buildings (and 82.90% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 5,724 buildings in the region which have an aggregate total replacement value of 704 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	583,316	82.9%
Commercial	62,718	8.9%
Industrial	24,548	3.5%
Agricultural	951	0.1%
Religion	14,435	2.1%
Government	8,720	1.2%
Education	8,957	1.3%
Total	**703,645**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	321,939	88.8%
Commercial	17,829	4.9%
Industrial	12,691	3.5%
Agricultural	607	0.2%
Religion	5,619	1.5%
Government	3,418	0.9%
Education	588	0.2%
Total	**362,691**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 3 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	TuckerCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 110 buildings will be at least moderately damaged. This is over 28% of the total number of buildings in the scenario. There are an estimated 14 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	1	0.92	40	36.70	14	12.84	40	36.70	14	12.84
Total	**0**		**2**		**40**		**14**		**40**		**14**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11	100.00
Masonry	0	0.00	0	0.00	7	35.00	3	15.00	10	50.00	0	0.00
Steel	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	1	1.28	33	42.31	11	14.10	30	38.46	3	3.85

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	0	0	0	0
Police Stations	2	0	0	0
Schools	3	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 6,599 tons of debris will be generated. Of the total amount, Finishes comprises 38% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 264 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 236 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 321 people (out of a total population of 7,321) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 34.67 million dollars, which represents 9.77 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 34.40 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 66.10% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	14.36	1.02	1.38	0.26	17.02
	Content	8.53	2.72	3.71	1.26	16.21
	Inventory	0.00	0.11	1.03	0.02	1.16
	Subtotal	**22.89**	**3.85**	**6.12**	**1.54**	**34.40**
Business Interruption						
	Income	0.00	0.02	0.00	0.00	0.02
	Relocation	0.03	0.00	0.00	0.00	0.03
	Rental Income	0.00	0.00	0.00	0.00	0.01
	Wage	0.00	0.02	0.00	0.10	0.12
	Subtotal	**0.03**	**0.05**	**0.00**	**0.10**	**0.18**
ALL	**Total**	**22.92**	**3.89**	**6.12**	**1.64**	**34.57**

Appendix A: County Listing for the Region

West Virginia
- Tucker

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Tucker	7,321	583,316	120,329	703,645
Total	**7,321**	**583,316**	**120,329**	**703,645**
Total Study Region	**7,321**	**583,316**	**120,329**	**703,645**

HAZUS-MH: Flood Event Report

Region Name: TuckerCounty

Flood Scenario: 50-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 419 square miles and contains 790 census blocks. The region contains over 3 thousand households and has a total population of 7,321 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 5,724 buildings in the region with a total building replacement value (excluding contents) of 704 million dollars (2006 dollars). Approximately 96.38% of the buildings (and 82.90% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 5,724 buildings in the region which have an aggregate total replacement value of 704 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	583,316	82.9%
Commercial	62,718	8.9%
Industrial	24,548	3.5%
Agricultural	951	0.1%
Religion	14,435	2.1%
Government	8,720	1.2%
Education	8,957	1.3%
Total	**703,645**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	325,255	88.8%
Commercial	17,829	4.9%
Industrial	12,691	3.5%
Agricultural	607	0.2%
Religion	5,619	1.5%
Government	3,418	0.9%
Education	938	0.3%
Total	**366,357**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 3 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name: TuckerCounty

Scenario Name: 50-YR

Return Period Analyzed: 50

Analysis Options Analyzed: No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 134 buildings will be at least moderately damaged. This is over 27% of the total number of buildings in the scenario. There are an estimated 20 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	3	2.26	41	30.83	15	11.28	54	40.60	20	15.04
Total	**0**		**4**		**41**		**15**		**54**		**20**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	15	100.00
Masonry	0	0.00	1	4.00	9	36.00	2	8.00	12	48.00	1	4.00
Steel	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	2	2.15	32	34.41	13	13.98	42	45.16	4	4.30

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	0	0	0	0
Police Stations	2	0	0	0
Schools	3	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 7,805 tons of debris will be generated. Of the total amount, Finishes comprises 36% of the total, Structure comprises 30% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 312 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 256 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 383 people (out of a total population of 7,321) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 40.17 million dollars, which represents 11.31 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 39.85 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 65.07% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	16.39	1.16	1.70	0.33	19.58
	Content	9.71	3.06	4.55	1.56	18.88
	Inventory	0.00	0.12	1.25	0.02	1.39
	Subtotal	**26.10**	**4.34**	**7.50**	**1.91**	**39.85**
Business Interruption						
	Income	0.00	0.02	0.00	0.00	0.02
	Relocation	0.03	0.00	0.00	0.00	0.04
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.00	0.02	0.00	0.12	0.14
	Subtotal	**0.04**	**0.05**	**0.00**	**0.12**	**0.21**
ALL	**Total**	**26.14**	**4.39**	**7.50**	**2.03**	**40.06**

Appendix A: County Listing for the Region

West Virginia
- Tucker

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Tucker	7,321	583,316	120,329	703,645
Total	**7,321**	**583,316**	**120,329**	**703,645**
Total Study Region	**7,321**	**583,316**	**120,329**	**703,645**

HAZUS-MH: Flood Event Report

Region Name: TuckerCounty

Flood Scenario: 100-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 419 square miles and contains 790 census blocks. The region contains over 3 thousand households and has a total population of 7,321 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 5,724 buildings in the region with a total building replacement value (excluding contents) of 704 million dollars (2006 dollars). Approximately 96.38% of the buildings (and 82.90% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 5,724 buildings in the region which have an aggregate total replacement value of 704 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	583,316	82.9%
Commercial	62,718	8.9%
Industrial	24,548	3.5%
Agricultural	951	0.1%
Religion	14,435	2.1%
Government	8,720	1.2%
Education	8,957	1.3%
Total	**703,645**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	319,386	88.6%
Commercial	18,256	5.1%
Industrial	12,691	3.5%
Agricultural	607	0.2%
Religion	5,225	1.4%
Government	3,418	0.9%
Education	938	0.3%
Total	**360,521**	**100.00%**

Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds. There are 3 schools, 2 fire stations, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	TuckerCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 149 buildings will be at least moderately damaged. This is over 23% of the total number of buildings in the scenario. There are an estimated 24 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	2	1.35	38	25.68	15	10.14	69	46.62	24	16.22
Total	**0**		**3**		**38**		**15**		**69**		**24**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	16	100.00
Masonry	0	0.00	0	0.00	11	32.35	4	11.76	19	55.88	0	0.00
Steel	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	2	2.04	27	27.55	11	11.22	50	51.02	8	8.16

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	2	0	0	0
Hospitals	0	0	0	0
Police Stations	2	0	0	0
Schools	3	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 9,266 tons of debris will be generated. Of the total amount, Finishes comprises 35% of the total, Structure comprises 30% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 371 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 287 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 435 people (out of a total population of 7,321) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 47.10 million dollars, which represents 13.27 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 46.69 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 64.72% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	19.12	1.36	1.86	0.48	22.82
	Content	11.33	3.67	4.94	2.43	22.36
	Inventory	0.00	0.14	1.35	0.02	1.51
	Subtotal	**30.45**	**5.17**	**8.15**	**2.92**	**46.69**
Business Interruption						
	Income	0.00	0.03	0.00	0.00	0.03
	Relocation	0.03	0.01	0.00	0.00	0.04
	Rental Income	0.01	0.00	0.00	0.00	0.01
	Wage	0.00	0.02	0.00	0.17	0.20
	Subtotal	**0.04**	**0.06**	**0.00**	**0.17**	**0.28**
ALL	**Total**	**30.49**	**5.23**	**8.15**	**3.10**	**46.97**

Appendix A: County Listing for the Region

West Virginia
- Tucker

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Tucker	7,321	583,316	120,329	703,645
Total	**7,321**	**583,316**	**120,329**	**703,645**
Total Study Region	**7,321**	**583,316**	**120,329**	**703,645**

HAZUS-MH: Flood Event Report

Region Name: UpshurCounty

Flood Scenario: 10-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 355 square miles and contains 1,131 census blocks. The region contains over 9 thousand households and has a total population of 23,404 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 11,987 buildings in the region with a total building replacement value (excluding contents) of 1,758 million dollars (2006 dollars). Approximately 95.06% of the buildings (and 78.66% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 11,987 buildings in the region which have an aggregate total replacement value of 1,758 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,382,761	78.7%
Commercial	216,975	12.3%
Industrial	87,916	5.0%
Agricultural	3,294	0.2%
Religion	28,230	1.6%
Government	16,283	0.9%
Education	22,452	1.3%
Total	**1,757,911**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	635,498	88.3%
Commercial	55,300	7.7%
Industrial	10,838	1.5%
Agricultural	833	0.1%
Religion	5,327	0.7%
Government	9,253	1.3%
Education	2,328	0.3%
Total	**719,377**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 95 beds. There are 5 schools, 1 fire station, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name: UpshurCounty

Scenario Name: 10-YR

Return Period Analyzed: 10

Analysis Options Analyzed: No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 147 buildings will be at least moderately damaged. This is over 33% of the total number of buildings in the scenario. There are an estimated 14 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	9	6.12	61	41.50	20	13.61	43	29.25	14	9.52
Total	**0**		**9**		**61**		**20**		**43**		**14**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11	100.00
Masonry	0	0.00	1	3.03	16	48.48	5	15.15	10	30.30	1	3.03
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	7	6.86	45	44.12	15	14.71	33	32.35	2	1.96

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 9,772 tons of debris will be generated. Of the total amount, Finishes comprises 39% of the total, Structure comprises 28% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 391 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 478 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 842 people (out of a total population of 23,404) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 50.89 million dollars, which represents 6.19 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 50.31 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 70.89% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	20.93	2.77	0.63	0.22	24.54
	Content	15.09	7.76	1.16	1.17	25.18
	Inventory	0.00	0.41	0.17	0.00	0.58
	Subtotal	**36.02**	**10.95**	**1.96**	**1.38**	**50.31**
Business Interruption						
	Income	0.00	0.02	0.00	0.00	0.03
	Relocation	0.04	0.01	0.00	0.00	0.05
	Rental Income	0.01	0.01	0.00	0.00	0.02
	Wage	0.00	0.05	0.00	0.22	0.27
	Subtotal	**0.05**	**0.09**	**0.00**	**0.22**	**0.37**
ALL	**Total**	**36.08**	**11.04**	**1.96**	**1.61**	**50.68**

Appendix A: County Listing for the Region

West Virginia
- Upshur

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Upshur	23,404	1,382,761	375,150	1,757,911
Total	**23,404**	**1,382,761**	**375,150**	**1,757,911**
Total Study Region	**23,404**	**1,382,761**	**375,150**	**1,757,911**

HAZUS-MH: Flood Event Report

Region Name: UpshurCounty

Flood Scenario: 25-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals 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

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 355 square miles and contains 1,131 census blocks. The region contains over 9 thousand households and has a total population of 23,404 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 11,987 buildings in the region with a total building replacement value (excluding contents) of 1,758 million dollars (2006 dollars). Approximately 95.06% of the buildings (and 78.66% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 11,987 buildings in the region which have an aggregate total replacement value of 1,758 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,382,761	78.7%
Commercial	216,975	12.3%
Industrial	87,916	5.0%
Agricultural	3,294	0.2%
Religion	28,230	1.6%
Government	16,283	0.9%
Education	22,452	1.3%
Total	**1,757,911**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	689,268	83.6%
Commercial	100,621	12.2%
Industrial	13,003	1.6%
Agricultural	833	0.1%
Religion	8,400	1.0%
Government	9,397	1.1%
Education	3,059	0.4%
Total	**824,581**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 95 beds. There are 5 schools, 1 fire station, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	UpshurCounty
Scenario Name:	25-YR
Return Period Analyzed:	25
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 193 buildings will be at least moderately damaged. This is over 31% of the total number of buildings in the scenario. There are an estimated 16 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	1	0.52	7	3.61	73	37.63	25	12.89	72	37.11	16	8.25
Total	**1**		**7**		**73**		**25**		**72**		**16**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	12	100.00
Masonry	0	0.00	2	4.17	21	43.75	6	12.50	19	39.58	0	0.00
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	4	3.03	52	39.39	19	14.39	53	40.15	4	3.03

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 12,381 tons of debris will be generated. Of the total amount, Finishes comprises 40% of the total, Structure comprises 28% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 495 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 555 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 971 people (out of a total population of 23,404) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 70.14 million dollars, which represents 8.53 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 69.26 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 66.45% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	26.39	4.07	0.99	0.44	31.89
	Content	20.15	11.44	2.24	2.65	36.48
	Inventory	0.00	0.58	0.31	0.01	0.89
	Subtotal	**46.54**	**16.09**	**3.54**	**3.10**	**69.26**
Business Interruption						
	Income	0.00	0.06	0.00	0.00	0.07
	Relocation	0.04	0.02	0.00	0.00	0.06
	Rental Income	0.02	0.02	0.00	0.00	0.03
	Wage	0.01	0.08	0.00	0.28	0.37
	Subtotal	**0.07**	**0.18**	**0.00**	**0.29**	**0.54**
ALL	**Total**	**46.61**	**16.27**	**3.54**	**3.38**	**69.80**

Appendix A: County Listing for the Region

West Virginia
- Upshur

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Upshur	23,404	1,382,761	375,150	1,757,911
Total	**23,404**	**1,382,761**	**375,150**	**1,757,911**
Total Study Region	**23,404**	**1,382,761**	**375,150**	**1,757,911**

HAZUS-MH: Flood Event Report

Region Name: UpshurCounty

Flood Scenario: 50-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

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General Description of the Region

HAZUS is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 355 square miles and contains 1,131 census blocks. The region contains over 9 thousand households and has a total population of 23,404 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 11,987 buildings in the region with a total building replacement value (excluding contents) of 1,758 million dollars (2006 dollars). Approximately 95.06% of the buildings (and 78.66% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 11,987 buildings in the region which have an aggregate total replacement value of 1,758 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,382,761	78.7%
Commercial	216,975	12.3%
Industrial	87,916	5.0%
Agricultural	3,294	0.2%
Religion	28,230	1.6%
Government	16,283	0.9%
Education	22,452	1.3%
Total	**1,757,911**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	692,655	83.6%
Commercial	101,026	12.2%
Industrial	12,938	1.6%
Agricultural	833	0.1%
Religion	8,400	1.0%
Government	9,397	1.1%
Education	3,059	0.4%
Total	**828,308**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 95 beds. There are 5 schools, 1 fire station, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name: UpshurCounty

Scenario Name: 50-YR

Return Period Analyzed: 50

Analysis Options Analyzed: No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 219 buildings will be at least moderately damaged. This is over 31% of the total number of buildings in the scenario. There are an estimated 25 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	1	0.45	8	3.64	74	33.64	34	15.45	78	35.45	25	11.36
Total	**1**		**8**		**74**		**34**		**78**		**25**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	14	100.00
Masonry	0	0.00	2	3.85	19	36.54	9	17.31	19	36.54	3	5.77
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	5	3.29	55	36.18	25	16.45	59	38.82	8	5.26

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	5	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 15,794 tons of debris will be generated. Of the total amount, Finishes comprises 36% of the total, Structure comprises 31% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 632 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 587 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,011 people (out of a total population of 23,404) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 79.26 million dollars, which represents 9.64 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 78.29 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 66.23% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	29.94	4.90	1.15	0.47	36.46
	Content	22.48	12.87	2.58	2.87	40.80
	Inventory	0.00	0.67	0.34	0.01	1.02
	Subtotal	**52.42**	**18.44**	**4.07**	**3.36**	**78.29**
Business Interruption						
	Income	0.00	0.06	0.00	0.01	0.07
	Relocation	0.05	0.02	0.00	0.00	0.07
	Rental Income	0.02	0.02	0.00	0.00	0.04
	Wage	0.01	0.09	0.00	0.32	0.42
	Subtotal	**0.08**	**0.20**	**0.00**	**0.32**	**0.60**
ALL	**Total**	**52.49**	**18.64**	**4.07**	**3.68**	**78.88**

Appendix A: County Listing for the Region

West Virginia
- Upshur

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
West Virginia				
Upshur	23,404	1,382,761	375,150	1,757,911
Total	**23,404**	**1,382,761**	**375,150**	**1,757,911**
Total Study Region	**23,404**	**1,382,761**	**375,150**	**1,757,911**

HAZUS-MH: Flood Event Report

Region Name: UpshurCounty

Flood Scenario: 100-YR

Print Date: Monday, March 01, 2010

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

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General Description of the Region

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The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- West Virginia

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 355 square miles and contains 1,131 census blocks. The region contains over 9 thousand households and has a total population of 23,404 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 11,987 buildings in the region with a total building replacement value (excluding contents) of 1,758 million dollars (2006 dollars). Approximately 95.06% of the buildings (and 78.66% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

HAZUS estimates that there are 11,987 buildings in the region which have an aggregate total replacement value of 1,758 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	1,382,761	78.7%
Commercial	216,975	12.3%
Industrial	87,916	5.0%
Agricultural	3,294	0.2%
Religion	28,230	1.6%
Government	16,283	0.9%
Education	22,452	1.3%
Total	**1,757,911**	**100.00%**

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	772,246	84.3%
Commercial	105,476	11.5%
Industrial	13,810	1.5%
Agricultural	950	0.1%
Religion	10,048	1.1%
Government	9,902	1.1%
Education	3,497	0.4%
Total	**915,929**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 1 hospitals in the region with a total bed capacity of 95 beds. There are 5 schools, 1 fire station, 2 police stations and no emergency operation centers.

Flood Scenario Parameters

HAZUS used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	UpshurCounty
Scenario Name:	100-YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Building Damage

General Building Stock Damage

HAZUS estimates that about 293 buildings will be at least moderately damaged. This is over 31% of the total number of buildings in the scenario. There are an estimated 34 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the HAZUS Flood technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	2	66.67	1	33.33	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	10	3.45	97	33.45	42	14.48	107	36.90	34	11.72
Total	**0**		**12**		**98**		**42**		**107**		**34**	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Concrete	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	17	100.00
Masonry	0	0.00	3	4.69	25	39.06	11	17.19	22	34.38	3	4.69
Steel	0	0.00	3	75.00	1	25.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	5	2.42	72	34.78	31	14.98	85	41.06	14	6.76

Essential Facility Damage

Before the flood analyzed in this scenario, the region had hospital beds available for use. On the day of the scenario flood event, the model estimates that hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	1	0	0	0
Hospitals	1	0	0	0
Police Stations	2	0	0	0
Schools	5	1	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

HAZUS estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 18,715 tons of debris will be generated. Of the total amount, Finishes comprises 39% of the total, Structure comprises 29% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 749 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

HAZUS estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 740 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,446 people (out of a total population of 23,404) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 102.89 million dollars, which represents 12.52 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 101.61 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 65.32% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	38.14	6.43	1.63	0.56	46.75
	Content	28.96	17.79	3.65	3.23	53.64
	Inventory	0.00	0.70	0.51	0.01	1.23
	Subtotal	**67.10**	**24.92**	**5.79**	**3.80**	**101.61**
Business Interruption						
	Income	0.01	0.10	0.00	0.01	0.11
	Relocation	0.07	0.03	0.00	0.00	0.10
	Rental Income	0.02	0.02	0.00	0.00	0.05
	Wage	0.02	0.13	0.00	0.38	0.52
	Subtotal	**0.11**	**0.28**	**0.00**	**0.38**	**0.77**
ALL	**Total**	**67.21**	**25.20**	**5.79**	**4.18**	**102.38**

Appendix A: County Listing for the Region

West Virginia
- Upshur

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
West Virginia				
Upshur	23,404	1,382,761	375,150	1,757,911
Total	**23,404**	**1,382,761**	**375,150**	**1,757,911**
Total Study Region	**23,404**	**1,382,761**	**375,150**	**1,757,911**

Local Government Resolutions

Jurisdiction NFIP & RHMP Resolution Status

Jurisdiction:	NFIP Status				RHMP Resolution?
	Yes	No	N/A	CRS Class	Yes
Barbour					✓
City of Belington	✓				✓
City of Philippi	✓			8	✓
Town of Junior	✓				✓
Braxton	✓				
Town of Burnsville	✓				✓
Town of Flatwoods	✓				✓
Town of Gassaway	✓				✓
Town of Sutton	✓				✓
Gilmer	✓				✓
City of Glenville	✓				✓
Town of Sand Fork	✓				✓
Lewis	✓				✓
City of Weston	✓				✓
Town of Jane Lew	✓				✓
Randolph	✓				
City of Elkins	✓				✓
Town of Beverly	✓				✓
Town of Coalton	✓				✓
Town of Harman	✓				✓
Town of Huttonsville	✓				✓
Town of Mill Creek	✓				✓
Town of Montrose	✓				✓
Tucker	✓				✓
City of Parsons	✓				✓
City of Thomas	✓				✓
Town of Davis	✓				✓
Town of Hambleton	✓				✓
Town of Hendricks	✓				✓
Upshur	✓				✓
City of Buckhannon	✓			**8**	✓

Region VII Planning and Development Council

99 EDMISTON WAY • SUITE 225 • BUCKHANNON, WV 26201
PHONE: (304) 472-6564 • FAX (304) 472-6590

WHEREAS, the Region VII Planning & Development Council recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted regional hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Region VII Planning & Development Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Region VII Planning & Development Council hereby adopts the Region VII Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this __25th__ day of _July__ 2011.

Region VII Planning & Development Council By:_____
Donnie R. Tenney, Chairman

ATTEST:_____
Rosemary Wagner, Executive Director

DEPUTIES:
PAM FOSTER
LESA COONTZ
DEBRA KITTLE
JANETTE PAYNE
COUNTY ADMINISTRATOR:
CHARLES W. FOLEY
PHONE 304-457-4339
FAX 304-457-5472
E-MAIL: barbour@bcnetmail.org

County Commission of Barbour County
MACEL L. AUVIL
8 NORTH MAIN ST.
PHILIPPI, WEST VIRGINIA 26416
TDD 911

COUNTY COMMISSIONERS:
STEVEN H. SINSEL
PRESIDENT
ROUTE 1, BOX 48G
PHILIPPI, WV 26416
TIMOTHY L. McDANIEL
ROUTE 2, BOX 71E
PHILIPPI, WV 26416
PHIL HART
RR03, 212 SERPELL AVE.
BELINGTON, WV 26250

WHEREAS, Barbour County Commission recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, Barbour County Commission participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Barbour County Commission hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 2nd day of May 2011.

Timothy McDaniel President
Timothy McDaniel
Barbour County Commission

ATTEST: Macel L. Auvil
Macel Auvil, County Clerk
Barbour County Commission

Historic / Progressive

THE CITY OF BELINGTON

P.O. Box 926
Belington, West Virginia 26250
(304) 823-1611 • Fax (304) 823-2307

WHEREAS, the City of Belington recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding; and

WHEREAS, the City of Belington's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the City of Belington's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 4th day of August 2011.

City of Belington By: Carlton Haller Mayor
Carlton Haller, Mayor

ATTEST: Susan Bradley City Clerk

"This is an Equal Opportunity Program. Discrimination is prohibited by Federal Law.
Complaints of discrimination may be filed with the Secretary of Agriculture, USDA, Washington, 20250-0700."

RESOLUTION

WHEREAS, the City of Philippi recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the Potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Philippi City Council, its Mayor and City Manager, plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Common Council of the City of Philippi hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 9th day of August, 2011.

CITY OF PHILIPPI

Tammy Stemple

Tammy Stemple, City Clerk

(SEAL)

WHEREAS, the Town of Junior recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Junior's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Junior's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 6th day of September 2011.

Town of Junior By: Gary A. Miller
Gary A. Miller, Mayor

ATTEST: Susan Straude

THE BRAXTON COUNTY COMMISSION

Gary T. Ellyson II, Commissioner
Teresa Frame, Commissioner
David L. Jack, Sr., Commissioner
TDD (304)765-7366
FAX (304)765-2883

Susan K. Lunceford, Clerk
FAX (304)765-2093

WHEREAS, the Braxton County Commission recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Braxton County Commission participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Braxton County Commission hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval. Read and adopted this 5th day of August, 2011.

Braxton County Commission By: David L Jack Sr
DAVID L. JACK, PRESIDENT

ATTEST: Susan K. Lunceford
SUSAN K. LUNCEFORD, COUNTY CLERK

TOWN OF BURNSVILLE

WHEREAS, the Town of Burnsville recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Burnsville Mayor and Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Burnsville Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 27th day of June 2011.

Town of Burnsville By: Paul W Briggs
Chief Elected Official

ATTEST: _____

Council Members:
Brenda Naye, Recorder
Lana Dancy, Treasurer
Allyson Beatty
Bryan Bukovesky
Kenneth Coombs
Marinda Kniceley
Mary Ann Rogers

Town of Flatwoods

652 Gauley Turnpike
PO Box 52
Flatwoods, WV 26621

C. Sue Marple, Mayor
Ed Cutlip, Chief of Police

Phone:
(304) 765-7235

Fax:
(304) 765-2072

WHEREAS, the Town of Flatwoods recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Flatwoods's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Flatwoods's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 15th day of July. 2011.

Town of Flatwoods By: Carolyn S Marple
Carolyn Sue Marple, Mayor

ATTEST:_____

WHEREAS, the Town of Gassaway recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Gassaway's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Gassaway's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 7th day of SEPTEMBER 2011.

Town of Gassaway By: _____
Richard Roach, Mayor

ATTEST: _____

Council Members:

Allen Bly
John Chidester
Francis Crites
Gabriel Hopen
Mary Redman

Town of Sutton

P.O. Box 366
Sutton, WV 26601

Phone: 304/765-5581
Fax: 304/765-7678

J.L. Campbell
Mayor

Joan Bias
Recorder

Anthony Campbell
Chief of Police

WHEREAS, Town of Sutton recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of fixture grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Sutton Mayor and Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Sutton, Mayor and Council hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.
Read and adopted this 24 day of March 2011

Town of Sutton, By : J.L. Campbell
Chief Elected Official

ATTEST: Joan Bias

GILMER COUNTY COMMISSION

Courthouse 10 Howard Street
Glenville, West Virginia 26351-1296

Charles D. Hess, President
Brian Kennedy, Member
Darrel Ramsey, Member

Jean Butcher, County Clerk

RESOLUTION

WHEREAS, Gilmer County recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Gilmer County Commission participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Gilmer County Commission hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 3rd day of May 2011.

GILMER COUNTY COMMISSION By: Charles D. Hess
Charles D. Hess, President
Gilmer County Commission

ATTEST: Jean Butcher
Jean Butcher, County Clerk

Telephone: (304) 462-7641 *Commission: (304) 462-7641* *Fax: (304) 462-8855* *TDD:(304) 462-7306*

REGIONAL HAZARD MITIGATION PLAN RESOLUTION
City of Glenville, WV

WHEREAS, the City of Glenville recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the City of Glenville's Mayor and Council plans to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the City of Glenville's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 4th day of April, 2011.

City of Glenville By: Tashua Hall
Chief Elected Official

ATTEST: Debra Starcher Johnson

TOWN OF SAND FORK
PO BOX 88
SAND FORK WV 26430

WHEREAS, the Town of Sand Fork recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Sand Fork's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Sand Fork's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 1 day of August 2011.

Town of Sand Fork By: _____
Franklin Tomblin, Mayor

ATTEST: COUNCIL MEMBERS: Sue Edwards, Judy Jones,
_____

LEWIS COUNTY COMMISSION
18 GARTON PLAZA
P O BOX 466
WESTON, WEST VIRGINIA 26452

PRESIDENT: AGNES QUEEN
COMMISSIONER: PATRICK BOYLE
COMMISSIONER: TOM FEALY

GRANTWRITER/ADMINISTRATOR:
LUCINDA WHETSELL
ADMINISTRATOR: PHYLLIS CORATHERS

WHEREAS, Lewis County recognizes the threat that natural and manmade hazards pose to people, property, and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding, and

WHEREAS, the Lewis County Commission, City of Weston and Town of Jane Lew participated jointly in the planning process with the other local with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Lewis County Commission , City of Weston and Town of Jane Lew, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency for final review and approval.

Read and adopted this 21st day of March, 2011.

Agnes Queen

Agnes Queen, President
Lewis County Commission

Attest: Mary Lou Myers
County Clerk, Lewis

An Equal Opportunity Employer

WHEREAS, the City of Weston recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the City of Weston's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the City of Weston's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 6th day of September 2011.

City of Weston By: _____
Julia Spielberg, Mayor

ATTEST: _____

TOWN OF JANE LEW
P.O. Box 50
Jane Lew, West Virginia 26378

WHEREAS, The Town of Jane Lew recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Jane Lew Mayor and Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Jane Lew Mayor and Council hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 21 day of March 2011.

TOWN OF JANE LEW By: Samuel J West
Chief Elected Official

ATTEST: Debbie Frazier, Recorder

Randolph County Commission

Commissioners

Michael M. Taylor **Chris See** **Joyce A. Johns**

RESOLUTION
REGION VII PLANNING AND DEVELOPMENT COUNCIL
HAZARD MITIGATION PLAN

WHEREAS, The Randolph County Commission recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, Randolph County participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Randolph County Commission, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

4 Randolph Avenue - Suite 102 - Elkins, West Virginia 26241 - Phone(304) 636-2057 - Fax (304) 630-1125
randolphcountycommissionwv.org

Read and adopted this 2nd. day of August, 2011.

Randolph County Commission: By: _____
Michael M. Taylor, President

_____
Chris See, Commissoner

_____
Joyce A. Johns, Commissioner

ATTEST: _____

CITY OF ELKINS

IN THE COMMON COUNCIL OF THE CITY OF ELKINS, WV

A RESOLUTION OF COMMON COUNCIL

(No. 271)
August 4, 2011

Authorizing adoption of a *Regional Hazard Mitigation Plan.*

WHEREAS, City of Elkins recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy and, additionally, it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding; and

WHEREAS, the mayor and council of Elkins plan to participate jointly in the planning process with the other local units of government within the Region to prepare a *Regional Hazard Mitigation Plan*; ***now, therefore, be it***

RESOLVED that Elkins Common Council hereby adopts the *Regional Hazard Mitigation Plan* as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit, on behalf of the participating municipalities and counties, the adopted *Regional Hazard Mitigation Plan* to State and Federal Emergency Management Agency officials for final review and approval.

Duke Talbott, Mayor

Attest:

Philip J. Graziani, City Clerk

401 Davis Avenue, Elkins, West Virginia 26241 Telephone: (304) 636-1414 - Fax: (304) 635-7973

WHEREAS, the Town of Beverly recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Beverly's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Beverly's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 11 day of July 2011.

Town of Beverly By: _____
David Harper, Mayor

ATTEST: _____

WHEREAS, the Town of Coalton recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Coalton's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Coalton's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 8 day of Sept. 2011.

Town of Coalton By: Jim Rossi, Mayor
Jim Rossi, Mayor

ATTEST: L R Wilson
Grace Wilson
Pat Rossi

Town of Harman

P. O. Box 125

Harman, West Virginia 26270

Whereas, Harman recognizes the threat that natural and manmade hazards pose to people, property, and the local economy; and

Whereas, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property, and economy, in addition it will save taxpayer dollars; and

Whereas, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

Whereas, a consolidation of approved local mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

Whereas, the Town of Harman Mayor and Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

Now, Therefore be it resolved that the Town of Harman Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

Be it further resolved that the Region VII Planning and Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 5th day of April 2011.

Town of Harman By: Jerry D. Teter, Chief Elected Official

Attest: Roger D Roy

WHEREAS, the Town of Huttonsville recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Huttonsville's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Huttonsville's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 2nd day of August 2011.

Town of Huttonsville By: _____ Mayor
Rodney McAtee, Mayor

ATTEST: _____

WHEREAS, the Town of Mill Creek recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Mill Creek's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Mill Creek's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 8th day of September 2011.

Town of Mill Creek By: William Brock

Bill Brock, Mayor

ATTEST: Carolyn B. Mendy, Recorder

WHEREAS, the Town of Montrose recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Montrose's Mayor and Council plan to participate jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Montrose's Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 2nd day of August 2011.

Town of Montrose By: Joseph G. Bennett, Mayor

ATTEST: Barbara Miller

Tucker County Commission
Commissioners:
James T. Carr, Michael W. Rosenau, C. Lowell Moore
Joel Goughnour, Grant Writer/Administrator
Sherry Simmons, Tucker County Clerk
213 First Street
Parsons, WV 26287
Phone: 304-478-2866 Fax: 304-478-2446

WHEREAS, Tucker County recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Tucker County Commission participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Tucker County Commission, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Agency officials for final review and approval.

Read and adopted this 23rd day of March, 2011.

TUCKER COUNTY COMMISSION By: _____

James T. 'Tom' Carr, President

ATTEST: Sherry Simmons

Sherry Simmons, County Clerk

REGIONAL HAZARD MITIGATON PLAN

~ RESOLUTION ~

WHEREAS, the Mayor and City Council of the City of Parsons, Tucker County, West Virginia recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Mayor and City Council of the City of Parsons, Tucker County, West Virginia plans to participate jointly in the planning process with the other local units of government within the region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Mayor and City Council of the City of Parsons, Tucker County, West Virginia hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

READ AND ADOPTED THIS 15TH DAY MARCH 2011.

ATTEST:

Connie R. Collins
Connie R. Collins, Recorder

APPROVED:

Dorothy L. Judy
Dorothy L. Judy, Mayor

City of Thomas
P.O. Box 248
307 Spruce St.
Thomas, WV 26292
304-463-4360

WHEREAS, (City of Thomas) recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the (City of Thomas) Mayor and Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the (City of Thomas) Mayor and Council , hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 13 day of July 2011.

(City of Thomas) By: Matt Quaglia
Mayor

ATTEST: Kathy Helmick

"City of Thomas is an Equal Opportunity Employer, Discrimination is prohibited by Federal Law, Complaints of discrimination may be filed with the secretary of Agriculture, USDA, Washington, 20250-0700."
"City of Thomas Supports Fair Housing Practices"

TOWN OF DAVIS

P.O. Box 207
505 William Ave.
Davis, WV 26260
Phone (304) 259-5302
Fax (304) 259-2265

RESOLUTION
SUPPORTING THE REGIONAL HAZARD MITIGATION PLANS

WHEREAS, The Town of Davis recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Davis' Mayor and Council participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the Town of Davis' Mayor and Council, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHUR RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 9th day of March 2011.

Town of Davis By: [signature], Mayor

ATTEST Jennie L. Helmick, Clerk

(COMMUNITY NAME or LETTERHEAD)

WHEREAS, (Community Name) recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the (Community Name) Mayor and Council (or County Commission) participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the (Community Name) Mayor and Council (or County Commission), hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 5 day of April 2011.

(COMMUNITY NAME) By: _____
Chief Elected Official

ATTEST: _____

Town of Hendricks
P.O. Box 122
Hendricks, West Virginia 26271

WHEREAS, The Town of Hendricks recognizes the threat that natural and manmade hazards pose to people, property and local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plan will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the Town of Hendricks Mayor and council participated jointly in the planning process with other local units of government within the region to prepare a Regional hazard Mitigation Plan;

NOW,THEREFORE BE IT RESOLVED that the Town of Hendricks Mayor and Council hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Agency officials for final review and approval.

Town of Hendricks
P.O. Box 122
Hendricks, West Virginia 26271

Read and adopted this 9th day of May 2011

Town of Hendricks by:

Frank Mullennex

Jane Smelley

~~Attest:~~

Ernest Turner

[illegible]

James J Corr

Kristina L. Wamsley

Regional Hazard Mitigation Plan Resolution
Upshur County Commission

Whereas, the Upshur County Commission recognizes the threat that natural and manmade hazards pose to people, property and the local economy, and

Whereas, undertaking hazard mitigation actions before disasters occur will reduce the potential harm to people, property and economy while saving taxpayer dollars; and

Whereas, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

Whereas, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet planning conditions of future mitigation funding; and

Whereas, the Upshur County Commission can and will participate jointly in the planning process with other units of local government within the area to prepare an implement the Regional Hazard Mitigation Plan;

Now, Therefore Be It Resolved, the Upshur County Commission hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

Be It Further Resolved that the Region VII Planning & Development Council will submit on behalf of the participating units of local government the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Adopted this 14TH day of APRIL, 2011.

Donnie R. Tenney, President

Creed G. Pletcher, Commissioner

JC Raffety, Commissioner

Attest: _____
Clerk of the County Commission

CITY OF BUCKHANNON
WEST VIRGINIA
26201

70 E. MAIN STREET
BUCKHANNON, WV 26201

TELEPHONE
(304) 472-1651
TDD # (304) 472-9550
FAX # (304) 472-4620

RESOLUTION 2011-02

WHEREAS, City of Buckhannon recognizes the threat that natural and manmade hazards pose to people, property and the local economy; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people, property and economy, in addition it will save taxpayer dollars; and

WHEREAS, an adopted local hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, a consolidation of approved local hazard mitigation plans will streamline the planning process and meet the planning conditions of future mitigation funding,

WHEREAS, the City of Buckhannon participated jointly in the planning process with the other local units of government within the Region to prepare a Regional Hazard Mitigation Plan;

NOW, THEREFORE BE IT RESOLVED that the City of Buckhannon, hereby adopts the Regional Hazard Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED that the Region VII Planning & Development Council will submit on behalf of the participating municipalities and counties the adopted Regional Hazard Mitigation Plan to State and Federal Emergency Management Agency officials for final review and approval.

Read and adopted this 17th day of March 2011.

Mayor Kenneth Davidson

City Recorder Richard Clemens

Buckhannon –The promise of tomorrow with the dignity of yesterday

Record of Participation

Region VII Planning and Development Council
99 EDMISTON WAY • SUITE 225 • BUCKHANNON, WV 26201
PHONE: (304) 472-6564 • FAX (304) 472-6590

March 4, 2011

RE: Regionalization of Local Hazard Mitigation Plans

Dear Council Members,

In order to stream line the Hazard Mitigation Planning process in West Virginia the Division of Homeland Security and Emergency Management has asked Regional Councils to consolidate county plans into comprehensive Regional Hazard Mitigation Plans. A requirement of the Regional Plan is documented support from local governments. To meet this condition a resolution from each unit of local government supporting the regionalized plan is needed. We are asking our County and Municipal Governments to pass such resolution and for your convenience a template is attached to this letter. A digital WORD document is also available on request from bjacobus@regionvii.com.

It is intended that a draft of the regionalized hazard mitigation plan will be made available for review in April 2011. Any input or additional projects for inclusion would be most welcome. Region VII Planning & Development staff plan to deliver the final plan to the Division of Homeland Security and Emergency Management early this summer. An approved Regional Hazard Mitigation Plan will keep your community eligible for FEMA recovery and relief programs.

To submit input or ask questions please contact Bob Jacobus @ 304-472-6564 or bjacobus@regionvii.com . Your help in this matter is invaluable.

Respectfully submitted,

Rosemary Wagner, Executive Director

Region VII Planning and Development Council
99 EDMISTON WAY • SUITE 225 • BUCKHANNON, WV 26201
PHONE: (304) 472-6564 • FAX (304) 472-6590

June 15, 2011

RE: Regionalization of Local Hazard Mitigation Plans

Dear Council Members,

A draft of the Region VII Regional Hazard Mitigation Plan is now available on Region VII's Website (http://www.regionvii.com/regionalnews/hazardmitigationplan.html). It is a very large document and we have broken it into sections for your review. This plan is necessary for some hazard mitigation projects to be awarded to our communities. Feel free to share this web link with your local stakeholders for their input.

Just a friendly reminder, a requirement of the Regional Hazard Mitigation Plan is documented support from local governments. To meet this condition a resolution from each unit of local government supporting and adopting the regionalized plan is needed. We are asking our County and Municipal Governments to pass such resolution and for your convenience a WORD template is available on the web link listed above. A digital WORD document is also available on request from bjacobus@regionvii.com. I have included a status list of local and county resolutions. Congratulations to Joe Drenning and the Town of Davis for being the first to respond with a local government resolution.

Any input, comments or additional projects for inclusion to the RHMP are most welcome for consideration. Staff members at Region VII Planning & Development Council anticipate submission of the final plan to the Division of Homeland Security and Emergency Management in September. An approved Regional Hazard Mitigation Plan will keep your community eligible for FEMA recovery and relief programs.

To submit input or ask questions please contact Bob Jacobus @ 304-472-6564 or bjacobus@regionvii.com . Your help in this matter is priceless.

Thank you in advance,

Robert J Jacobus, LEED GA
Community Development Specialist

Region VII Planning and Development Council
99 EDMISTON WAY • SUITE 225 • BUCKHANNON, WV 26201
PHONE: (304) 472-6564 • FAX (304) 472-6590

June 15, 2011

RE: Regionalization of Local Hazard Mitigation Plans

Dear Stakeholders,

A draft of the Region VII Regional Hazard Mitigation Plan is now available on Region VII's Website (http://www.regionvii.com/regionalnews/hazardmitigationplan.html). It is a very large document and we have broken it into sections for your review. This plan is necessary for some hazard mitigation projects to be awarded to our communities. Feel free to share this information with your colleagues for their input.

Any input, comments or additional projects for inclusion to the RHMP are most welcome for consideration. Staff members at Region VII Planning & Development Council anticipate submission of the final plan to the Division of Homeland Security and Emergency Management in September. An approved Regional Hazard Mitigation Plan will keep your community eligible for FEMA recovery and relief programs.

To submit input or ask questions please contact Bob Jacobus @ 304-472-6564 or bjacobus@regionvii.com . Your help in this matter is priceless.

Thank you in advance,

Robert J Jacobus, LEED GA
Community Development Specialist

Region VII Planning & Development Council

HOME & COUNCIL INFO
CEDS, FLYERS, BROCHURES
PROJECT NEWS
REGIONAL NEWS
STATE NEWS
OVERVIEW OF STIMULUS NEWS
PUBLIC NEWS & NOTICES
REGION VII AREA COLLEGES
EVENTS & PHOTOS
JOB OPPORTUNITIES
RESOURCES & LINKS
ARCHIVE
CONTACT US

Region VII
Regional Hazard Mitigation Plan

Barbour, Braxton, Gilmer, Lewis, Randolph, Tucker, Upshur West Virginia Counties and the municipalities therein.

Please click on the links below to access the sections of the Regio Mitigation Plan.

Order of Contents
Section 1-Chapter 1, Region VII Hazard Mitigation Plan
Section 2-Maps
Section 3-Record of Changes
Section 4-Chapter 2, Indentify Hazards Landscape
Section 5-Chapter 2, Profile Hazards
Section 6-Chapter 2, Assessing Vulnerability Landscape
Section 7-Chapter 2, Asset Inventory & Loss Estimates
Section 8-Chapter 2, Development Trends
Section 9-Chapter 3, Region VII Goals Prime Plus Hazard Strategies
Section 10-Chapter 3, Prioritizing Mitigation Strategies
Section 11-Chapter 4, Maintenance of the Regional Hazard Mitigation F
Section 12-Appendices

Bob Jacobus

From: Bob Jacobus
Sent: Monday, August 08, 2011 4:28 PM
To: 'barbour-oem@citynet.net'; 'mbaker101sta1@yahoo.com'; 'skirkpatrick@rtol.net'; 'gcoes1@rtol.net'; 'lcoem@lewisoem.com'; 'ranoem@verizon.net'; 'jonathanhicks@wvdhhr.org'; 'upshurcooem@hotmail.com'
Subject: Regional Hazard Mitigation Plans
Attachments: RVII HMP REVIEW DRAFT.pdf

Dear OEM Directors of Barbour, Braxton, Gilmer, Lewis, Randolph, Tucker and Upshur Counties

West Virginia Hazard Mitigation and FEMA planners have commissioned Regional Planning and Development Councils to combine and correlate County Hazard Mitigation plans into regional documents. The agencies feel it is more effective for them to review 11 plans instead of 55 in West Virginia. All of our counties have been updated in the recent past so we were able to combine all your information, add the most current storm data then speak to it from a regional perspective.

It was our intention to use all of the hard work you put into hazard mitigation planning and not change anything you do at the local level. The regional plan states that the planning done at the local level is viable and valid and our first goal is to support efforts at the local level.

I have attached the body of the Region VII Regional Hazard Mitigation Plan (RHMP) for your review and comment. We welcome and will consider any point you may want to make part of the RHMP. Appendices may be found at our website www.regionvii.com . You may call or e-mail me with any comments.

Sincerely,

Robert J Jacobus, LEED GA
Community Development Specialist
Region VII Planning & Development Council
99 Edmiston Way, Suite 225
Buckhannon, West Virginia 26201
304-472-6564

Bob Jacobus

From: Bob Jacobus
Sent: Tuesday, August 09, 2011 11:41 AM
To: 'Andrew Meador'; 'Bill Annon'; 'Bob Pingley'; 'Cindy Hart'; 'Don Harris'; 'Fred Thompson'; 'Greg Harris'; 'Howard Pritt'; 'John Hogan'; 'Leisa Dean'; 'Richard Clemens'; 'susanstrawder'; 'Teresa Self'
Subject: Regional Hazard Mitigation Plan
Attachments: RVII HMP REVIEW DRAFT.pdf

Dear Floodplain Managers of Barbour, Braxton, Gilmer, Lewis, Randolph, Tucker and Upshur Counties

West Virginia Hazard Mitigation and FEMA planners have commissioned Regional Planning and Development Councils to combine and correlate County Hazard Mitigation plans into regional documents. The agencies feel it is more effective to review 11 plans instead of 55 in West Virginia. All of our counties have been updated in the recent past so we were able to combine all the county information, add the most current storm data then speak to it from a regional perspective.

It was our intention to use all of the hard work you put into hazard mitigation planning and not change anything you do at the local level. The regional plan states that the planning done at the local level is viable and valid and our first goal is to support efforts at the local level.

I have attached the body of the Region VII Regional Hazard Mitigation Plan (RHMP) and invite your review and comment. We welcome and will consider any point you may want to make part of the RHMP. Appendices may be found at our website www.regionvii.com . You may call or e-mail me with any comments or information.

Additionally, a state mitigation planner requested that we include any dates of public meetings concerning your local floodplain ordinance. This will be used for those communities who want to pursue CRS. Any new hazard mitigation projects for the project list are also welcomed.

Buckhannon & Philippi are the only municipalities rated in our region at this time, a CRS rating can save significant dollars on flood insurance for our people. I understand that State Hazard Mitigation Office is going to fund Regional Councils to facilitate local CRS applications if you are interested. This is in the planning stages I will forward more information as we receive it.

Robert J Jacobus, LEED GA
Community Development Specialist
Region VII Planning & Development Council
99 Edmiston Way, Suite 225
Buckhannon, West Virginia 26201
304-472-6564
bjacobus@regionvii.com

You were included in this e-mail because you were listed on the WV Homeland Security webpage as a Floodplain Manager in Region VII

Bob Jacobus

From: Bob Jacobus
Sent: Wednesday, August 03, 2011 4:59 PM
To: 'jhall@regionvi.com'; 'leawolfe@regionvi.com'; 'jim.mylott@movrc.org'; 'tlively@regioneight.org'; 'wdsmith@reg4wv.org'; 'markfelton@region3.org'
Subject: Region VII Regional Hazard Mitigation Draft
Attachments: RVII HMP RESPONCE DRAFT.pdf

Dear Directors,

As part of the Regional Hazard Mitigation Plan (RHMP) review process the FEMA Crosswalk asks if and how the plan has been made available to adjoining jurisdictions for review and comment. Please find attached a draft of the body of the Region VII RHMP for review and comment to satisfy the planning process. Appendices may be found on the Region VII website.

Please feel free to call, e-mail, or hard mail any comments to me at our office.

Many thanks

Robert J Jacobus, LEED GA
Community Development Specialist
Region VII Planning & Development Council
99 Edmiston Way, Suite 225
Buckhannon, West Virginia 26201
304-472-6564
bjacobus@regionvii.com

1

Region VII OEM Directors

Larry Allen
barbour-oem@citynet.net

Barbour County Office of Emergency Management	457-5686

Mike Baker mbaker101sta1@yahoo.com

Braxton County Office of Emergency Services	765-3320

Susie Kirkpatrick skirkpatrick@rtol.net
Dee McCullough gcoes1@rtol.net

Gilmer County Office of Emergency Management	354-9244*

Bill Rowans lcoem@lewisoem.com

Lewis County Office of Emergency Services	269-8235

Marvin Hill
(Mohill38@yahoo.com) 636-1945

Randolph County Office of Emergency Services	636-0483

Jonathan Hicks
tuckeroem@gmail.com 478-3128

Tucker County Office of Emergency Services	478-3572

Jim Fairy
upshurcooem@hotmail.com

Upshur County Office of Emergency Management	472-4983

WV LOCAL FLOODPLAIN MANAGERS

County	Community	Name	Phone	Email
Barbour		Cindy Hart	457-5687	medichart@gmail.com
	Belington	Don Harris	823-1611	cob@3wlogic.net
	Junior		823-1829	susanstrawder@yahoo.com
	Philippi	Bill Annon	457-3700 x231	annon333@aol.com
Braxton		Fred Thompson	765-3320	bxoes@rtol.net
	Burnsville	Mayor	853-2605	
	Flatwoods	Sue Marple	765-7235	suemarple@yahoo.com
	Gassaway	Richard Rouch	364-5111	cityofgassaway@wvdsl.net
	Sutton	Wilda Skidmore	765-5581	morton@access.mountain.net
Gilmer		Leisa Dean	462-7731	lesadean@assessor.state.wv.us
	Glenville	Mayor	462-7411	cityofglenville@rtol.net
	Sand Fork (Layopolis)	Frank Tomblin	613-5566	pharmpharm1@aol.com
Lewis		Steve Moneypenny	269-6567 269-6579	LCfloodplain@gmail.com
	Jane Lew	Steve Moneypenny	884-7910	townofjanelew@juno.com
	Weston	John Hogan	269-6141	djhogan@westvirginia.com
Randolph		Marvin Hill	636-0483	ranoem@frontier.com
	Beverly	Howard Pritt	636-5360	beverlytownof@yahoo.com
	Coalton	Jim Rossi	636-3267	jandprossi@3wlogic.com
	Elkins	Bob Pingley	673-1414	publicworks@cityofelkins.com
	Harman	Jerry Teter	227-4131	threefan4ever@frontiernet.net
	Huttonsville	Mayor	335-2721	
	Mill Creek	Bill Brock	335-4795	
	Montrose	Marvin Hill	636-2114	ranom@frontier.net
Tucker		Andrew Meador	478-3727 x326	ameador@assessor.state.wv.us
	Davis	Joe Drenning	259-5302	davistownhall@frontiernet.net
	Hambleton	Linda Bates	478-4280	
	Hendricks			
	Parsons	Jason Myers	478-2311	cityofparsons@frontiernet.net
	Thomas	Matt Quattro	463-4360	
Upshur		Greg Harris	473-0308	gharris@upshurcounty.org
	Buckhannon	Richard Clemens	472-1651	rich.clemens@buckhannonwv.org

Record of Meetings

											Public Meetings	
County HMP Meetings										date not recorded in	CHMP -	dnr
Barbour	11.1.08	12.1.08	12 18.08									
Braxton	11.22.02	dnr	dnr	5.16.03	dnr	dnr	dnr	7.17.09				
Gilmer	dnr .08	12.2.08	12.16.08									
Lewis	11.22.02	dnr	dnr	5.16.03	dnr	dnr	6.15.06	12.6.06	5.7.07			
Randolph	7.14.09											
Tucker	5.12.08	6.9.08	7.14.08	8.11.08	9.8.08	10.14.08	11.10.08	12.8.08				
Upshur	10.30.08	10.31.08										
Region VII Planning & Developemnt Meetings												
	6.22.09	9.28.09	1.25.10	4.26.10	7.26.10	10.25.10	1.24.11	4.25.11	7.25.11			
Region VII Economic Ajustment Hazard Mitigation Strategies Meetings												
Barbour	9.28.10	11.3.10	1.21.11									
Braxton	11.19.10	12.3.10	1.21.11									
Gilmer	8.17.10	9.30.10	11.2.10	11.9.10	1.4.10							
Lewis	8.24.10	9.17.10	1.20.11									
Tucker	8.25.10	11.23.10	1.26.11									
Region VII Local CEDS Meetings												
Barbour	7.20.11											
Braxton	8.5.11											
Gilmer	8.2.11											
Lewis	6.28.11											
Randolph	7.20.11											
Tucker	7.13.11											
Upshur	7.7.11											

Joint CEDS/Hazard Mitigation Meetings by County

FY'12 CEDS

Barbour County

July 7, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- Philippi parking lot
- Public trans facility
- Laurel Dam – raw water supply
- Disaster alert system
- Anglin's Creek Storm Management (Philippi)

FY'12 CEDS

V. Input

A. Opportunities

- Philippi water treatment
- Raw water supply (Little Laurel) xxxx critical
- Marcellus gas production x - needs water (collaboration with production companies)
- Connect PSD Lines for water backup
- Infrastructure, especially water, development in unserved areas
- SCADA systems; lesson learned – use water tanks to increase wireless backbones
- Public Transit Building/facility
- Rental property/affordable housing
- Assisted living- baby boomers getting there
- Accessible parking
- Farmers Market – vouchers
- A-B growth brings institutional stability, good for community growth, goal to double enrollment – will mean local jobs to rebuild the College community –build new venues

FY'12 CEDS

B. **Opportunities:**

- **Workforce development**
- **Cell phone service important for education & workforce development**
- **Housing**
- **Airport –**
- **Helicopter relocation**
- **i il ir r in**
- **Could play role if Clarksburg is shut down for anything**
- **Philippi is set up for a broadband hub**
- **Philippi parking lot**
- **Philippi main Street**
- **Philippi owns all utilities – looking for better deals for community**

FY'12 CEDS

B. Opportunities:

- Develop global economy
  - Bauer
- Corridor H needs completionInformation GIS

FY'12 CEDS

B. **Constraints**

- **No Cell phone**
- **Infrastructure**
- **Lack of raw water**
- **Philippi broadband projects have drained all funds for future expansion of broadband.**
- **Slum landlords**
- **Affordable housing**
- **Upscale apartments - seniors**
- **Corridor H**
- **Port of Export (inlandport)**

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

- Aviation
- Education
- Information GIS
- Gas exploration production, transportation
- Energy

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates

B. CRS

Priority Projects for the Local Are

- Anglin's Creek

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Barbour County CEDS Meeting

DATE: 7-20-11

Name	Title	Email Address
1. Brenda Wilmoth	Director	[redacted]
2. Mike Masterman	President Extreme Endeavors	
3. ROSEMARY WAGNER	Exec Dir REG VII PDC	
4. DEAN SPRINGER	Philippi/Barbour Co Reg Arpt Authl. V.P.	
5. Mike Johnson	Philippi/Barbour Co Reg Airport - President	
6. Jerry S. Edens	Director/BCEDA	
7. ED LARRY	City Council Philippi	
8. Mike Hudkins	Freedom Bank - Private Sector	
9. John M. CoTright	Ass-ssor Barbour Co	
10. Tim McDaniel	Barbour County Comm.	
11. Charles Foley	Barbour County Adm.	
12. Phil Hart	Barbour Co Comm	
13. Dr SHARON HARSH	Exec Dir ADALAND	
14. RICK CREEHAN	PRESIDENT ALDERSON-BROADDUS	
15. Bob JACOBUS	REGION VII PDC	
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FY'12 CEDS

Braxton County

August 5, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions (n=27)

- Vernon Road xxxxxxxx
- Rt. 5 xx
- Orlando/Rt5 xxxx
- Herold Road x
- Exchange x

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- Vernon Rd water
- Orlando/Rt. 5
- Herold Rd water
- Exchange Water
- Central WV Aging new Braxton Office (Looking for property)
- Another Tech Building
- Broadband Development
- Sports Complex

FY'12 CEDS

V. Input

A. Opportunities

- Infrastructure
- Water xxxxxx
- Youth Development/activities
- Work together
- Develop Airport
- Make _lace for Bab_ Boomers to come home – need water infrastructure
- Can clean this place (speaking to drug activities) up with a little water (sic)
- Home/Cottage businesses
- Training for gas drilling (Marcellus) jobs
- Finish Corridor H most strategic from regional perspective

FY'12 CEDS

- Opportunities Cont.
  - Expand corrections
  - Exchange retirement community if water/sewer n=170
  - Housing
  - Holy Gray Park expansion – utilities(sewer) –Master plan

FY'12 CEDS

B. **Constraints**

- **residents can't get natural gas when a well / pipeline runs right by.**
- **Need specific workforce training**

FY'12 CEDS

- **Constraints Cont.**
  - Water infrastructure
    - Health
    - Jobs
    - Quality of life
  - Difficult project process- simplify language in process
  - Projects take so much time to implement - pay tap fees and still don't have water 30 years later
  - Don't know quality of well water
  - Community Development before economic development.
  - Lack of housing & public utilities
  - Water bound if water comes up.

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

- Correctional
- Retail
- Outdoor Recreation

b. Growth Areas

- Municipalities out
- Flatwoods interchange
- Holl Gra

Asset

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates
CRS

Priorit_ Pro_ects for the Local Are

Drought-infrastructure as mitigation
Water bound if water comes up

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Braxton County CEDS Meeting

DATE: 8-5-11

Name	Title	Email Address
1. Bob Jacobus	Com. Dave Speth	[redacted]
2. Gary Ellyson II	Braxton Co. Commissioner	
3. Craig Singleton	Orlando Water Ext.	
4. Edie Tichner	Administrative Asst. Co. Com	
5. Tommy Varney	Pres Exchange Waterline Assoc.	
6. Nancy Singleton	Orlando, WVA Water Ext	
7. Ernie Singleton	Orlando WVA	
8. Rev Lonnie Romney	Orlando WVA (Church)	
9. Evelyn Post	Chairman, BPUB	
10. Linda Dean	Board - BPUB	
11. Margret Ann Hilley	Orlando Exte	
12. Eric Veltre		
13. Eugene Bright	Vernon Rd.	
14. Michael Bright	Vernon Rd. Flatwoods WV	
15. Marlo Mats	VERNON Rd.	
16. Russell Mats	" "	
17. Darlene Brown	" "	
18. Kevin Lunsford	Vernon Rd - Flatwoods WV	
19. Patricia Lunsford	Vernon Rd - Flatwoods WV	
20. Heather Lunsford	" " " "	
21. David L Jack, Jr.	Braxton Co. Comm	
22. Curwanna Frame	Vernon Rd - Flatwoods WV -	
23. Howard Hoke	Vernon Rd - Flatwoods	
24. Sheba Kendy	Rt. 5/Orlando waterline	

	Name	Title	Email Address
25.	Freeda E. Devine	Community speaker for water line Ft. 5	[redacted]
26.	Susan K. Lunceford, County Clerk	Braxton County Clerk	[redacted]
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FY'12 CEDS

Gilmer County

August 2, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- Industrial shell building taken off?
- Airport Park
- More realistic projects on the list

FY'12 CEDS

B. **Opportunities:**

- **Airport Park creating opportunity**
- **Tourism A "create more reasons for people to come to Gilmer xxx**
- **Camping spaces at Rec. Center**
- **Downtown Glenville is sprucing up, capitalize on it**
- **Water & sewer needs in County in priority**
- **Grow on strength i.e. City, County College (sic)**
- **24/7 medical facility – low interest financing**
- **Angel organizations – existing businesses- don't want start-ups**

FY'12 CEDS

V. Input

A. Opportunities

- Region VII Revolving loan program
- Participate in On Track Program
- Promote Folk Festival
- Tag on culture & culinary- cook-offs
- Partnership with college
- Housing
- People
- More Retail
- Long storefront
- Manufacture new green decking for construction

FY'12 CEDS

B. Opportunities:

- Keep ball rolling
- Senior Center Asset
- EDA (Count)
- Involve the young people – HS & College
- Same people all the time
- Community service
- Utilize river
- Flex-E-Grant
  - Corridor H
  - Marcellus Gas
  - Workforce

FY'12 CEDS

B. Constraints

- State College job creation needs to be considered private sector for funding agencies
- Transportation routes
- Funding
- Attitude xx don't want change x complacency
- No Chamber no CVC no vehicle for community communication
- Willing but no follow-through on some projects
- Serious workforce
- Negative media

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

- Natural Gas Sector
- Outdoor services hunting fishing
- Education
- Timber

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates

B. CRS

Priority Projects for the Local Are

Glenville Buy out

Cost share water ponds

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Gilmer County CEDS Meeting

DATE: 8-2-11

Name	Title	Email Address
1. Daval Ramsey	County Commissioner	[redacted]
2. Connie Osentoski	County Administrator	
3. Tashua Allman	Mayor	
4. Pete, BARR	Glenville State College, President	
5. Anna James	EDA, Office Personnel	
6. LARRY CHAPMAN	EDA COORDINATOR	
7. DAVID B. MILLARD	EDA -	
8. Dot Underwood	Governor's Office	
9. Karl Duval	Entrepreneurial	
10. ROSEMARY WAGNER	REGION VII PDC	
11. Bob JACOBUS	REGION VII PDC	
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FY'12 CEDS

Lewis County

July 7, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- AML assessment NW Lewis County
- Public Water for Bloody Run off Hackers Creek
- Public Water for Laurel Lick near Berlin
- Public Water for Alum Fork Road Western Lewis County
- Southern Lewis County Water Projects deducts (Sugar Cam to Rock Cave included in NW IDC Projects
- Stonewall Resort Water? Currently the Resort operates own water source, would like to be served by Public Water.

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- Need for New Van for Comm. Action Section 5310 grant SAFETEA-LU
- DOT moving Head Quarters to Rt. 19 South of Weston. This project needs water sewer.
- Corridor H, finish it – important for local growth
- Water/sewer infrastructure to support Residential/Recreation Cottages @ Stonewall Resort
- Fr_n_i_r - Broadband now serving 1800 households in LC
- Frontier now running fiber to Schools
- Parking improvements at Harness Museum in Jane Lew TE

FY'12 CEDS

B. **Constraints**

- City Blight
- Need Industrial Sites
- Ability to respond to growth needs in a timely manner
- No Public Transportation
- Sky is the limit-we need to seize the moment –General Lewis County resistance to change needs to change.
- Finding land for development

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

- Natural Gas Sector – Drilling, pipelines, compressors, exploration, production
- Hospitality – Hotel/Motels, food, gas

b. Growth areas

- Gas Industry – Jane Lew I-79 intersection
- Corridor H-I-79 intersection for retail, hospitality need more hotel/motel rooms to service transient gas field workers.

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates

B. CRS

- Lewis County intends to apply for CRS Status, Steve Moneypenny – working on it

Priority Projects for the Local Are

- CRS

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Lewis County CEDS Meeting

DATE: 6-28-11

Name	Title	Email Address
1. Bob Jacobus	Com Dev Spec RVII	[redacted]
2. R. Wagner	Ex Director RVII	
3. [illegible]	WVDOH Realty Agent	
4. [illegible]	WVD.O.H. Investigator	
5. John Wickline	Inter Mountain	
6. Doug Parsons	LCEDA	
7. Sherry Lambert	Exec. Dir. LC Chamber of Commerce	
8. Mike Hager	Gen. Mgr. - Stonewall Resort	
9. Anthony Rome	Account Executive Frontier	
10. Cindy Whetsell	Administrator	
11. Pat Boyle	Co Com	
12. Mike Sims	GM Frontier	
13. Charlotte Heater	Program Coordinator Lewis Co	
14. Maxine Olson	Councilman - Jane Lew Town	
15. Susan Bentley	Democrat	
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FY'12 CEDS

Randolph County

July 28, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- FAA Project
- Corridor H
- Kump Education Center Projects
- Teacher Development Center

- **Got to have community development before you can have Economic Development**

FY'12 CEDS

V. Input

A. Opportunities

- Water/Sewer Norton- Coalton ex, water plant elk, Midland Kelly Mountain
- Elkins water project
- Railyard development
- Coal Mine Roaring Creek Coal
- Windmills
- Alternative jobs for Wood Sector unemployed
- Beverly-Daily waterline
- Finish Corridor H
- There are job opportunities –need to fill them
- Armor¸ develo¸ ment

FY'12 CEDS

B. **Opportunities:**

- **Education 3 private colleges & 1 state - need to have state funded post graduate certification/professional development programs (i.e. teacher education)**
- **Kump Education Center**

FY'12 CEDS

B. Constraints

- Wood Industry downturn
- Lack of Federal Budget
- Corridor not finished
- Workforce development
- Deer Problem
- Need Community Center

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

- Wood Sector
- Higher Education
- Tourism
- Energy
  - Coal
  - Wind
  - Gas
- Retail
- Medical

- Growth - area up the valley towards Beverly
- Huttonsville

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates

- CRS

Priority Projects for the Local Area

- Randolph Acquisition/Demolition
- Drought –infrastructure projects

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Randolph County CEDS Meeting

DATE: 7-28-11

Name	Title	Email Address
1. Bob Jacobus	Region VII	[redacted]
2. Donna Haddix	Admin. Assistant	
3. Joyce Johns	Commissioner	
4. Chris See	Commissioner	
5. Kaye Reed	ERCLC	
6. Heather R. Bjola	Kump Education Center	
7. Mike Taylor	R. C.C.	
8. Larry L. Gross	Randolph Co - Private	
9. ROSEMARY WAGNER	REGION VII PDC	
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FY'12 CEDS

Tucker County

July 13, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- Hendricks Hazard Mitigation Project
- Tucker County HM Project
- Tucker Airport
- Tucker Connect Project
- Farmers Market

FY'12 CEDS

V. Input

A. Opportunities

- Corridor H
- Rubinstein Center
- Install T1 Lines
- Marcellus
- Develop Ind. Park
- National Youth Science Center
- Affordable Housing
- County Pow Wow
- Promote livability of Tucker County
- Develop Parsons Hospitality Appeal
  - On trac & PRO working on this
  - Get signs changed to Blackwater Canaan

FY'12 CEDS

- Opportunities Cont.
  - Farm to School
    - Hi_h Tunnel food _roduction
    - Need Water

Farmers Market

FY'12 CEDS

B. Constraints

- Unfinished Corridor H xx
- Affordable Housing
- Infrastructure
- Marcellus
- Training for Rubenstein staff & other skills
  - Customer service training
  - Machinist
  - corrections
  - Gas field
  - CDL
- Health Care

FY'12 CEDS

- Constraints Cont.
- C H last on complete list because County is mostly federally owned

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

b. Growth Areas

Asset

The People

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates

CRS

Priority Projects for the Local Are

Hendricks Hazard Mitigation Project

Tucker County Hazard Mitigation Project

Parsons Elevation HM Project

Parsons HM Acquisition ??

Parsons CRS Project

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Tucker County CEDS Meeting

DATE: 7-13-11

Name	Title	Email Address
1. Jerry Stone	Parsons Advocate	[redacted]
2. Tom Carr	Tucker County Commission	
3. Lowell Moore	Tucker Co Commission	
4. Joel Coughnour	Tucker Co Commission	
5. CARMEN HOLMES	Recorder, Hendricks	
6. Solena Roberts	Mayor, Hendricks	
7. ROSEMARY WAGNER	REG III PDC Exec. Dir.	
8. Bob JACOBUS	" " " Com. Dev. Spec.	
9. Jennifer Poling	Tucker Co. WVU Extension	
10. Jason Myers	City Administrator (Parsons)	
11. Dorothy L [illegible]	Mayor of Parsons	
12. Anne Jones	Dir. TCDA	
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FY'12 CEDS

Upshur County

July 7, 2011

FY'12 CEDS

I. Welcome

II. CEDS Background

III. Participant Introductions

FY'12 CEDS

IV. Strategic Projects, Programs and Activities

A. Project List

- Farmers Market – com_letin__hase I. Pavilion/meetin_ room on Latham next. $200k
- Building rehabilitation – Buckhannon
- College Corridor
- Corridor H
- Park/Pool upgrades
- High Tech Building

FY'12 CEDS

V. Input

A. Opportunities

- Workforce development project
- Training programs in place
- Corridor H – very important for future growth
- College Corridor – Buckhannon
- County Development Plan
- High Tech Building
- Planned Communities
- Recycling – sustainability
- Compost facility
- Farm Sustainability

FY'12 CEDS

B. Constraints

- Workforce ethics
- Basic skill/ethics – read - work on Mondays and Fridays
- Lack of zoning
- Pork Factories (drt)
- Corridor H not finished

FY'12 CEDS

VI. Clusters

a. Region VII Clusters

- Mining
- Natural Gas sector
- Retail
- Higher Education
- Timber//lumber

b. Growth Areas

- Corridor H all along eastern end
- Brushy Fork Rd
- Rock Cave
- I79 x Corridor H

FY'12 CEDS

VII. Hazard Mitigation

A. Five Year Updates

B. CRS

Priority Projects for the Local Are

CRS

Elevations

Acquisition

Hodgesville Hydrology Study – floodplain issues

REGION VII PLANNING & DEVELOPMENT COUNCIL

SIGN-IN SHEET

Upshur County CEDS Meeting

DATE: 7-7-11

Name	Title	Email Address
1. Creed Pletcher	Co. Commissioner	
2. Bob Jenkins	Com. Dev. Specialist RUTI	[redacted]
3. Ron Wagner	Ex Director RUTI	
4. Willie Parker	County Administrator	
5. ~~Rosemary Wagner~~ R		
6. Allen Cook	Director - U. C. Senior Ctr	
7. Sam Nolte	Region VII	
8. Barry Pritts	WVWC VP for Admin & Finance	
9. Steve Foster	UCDA	
10. J.C. Raffety	UPSHUR CO. COMMISSION	
11. P.E. Tenney	Upshur Co Com	
12. John H. Cline	The Inter-Mountain	
13. Temijo Bennett	UCC	
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EDA Economic Adjustment Hazard Mitigation Meetings Sign –in by County

Appendix A | Meeting Sign In Sheets

Barbour County Meetings

Region VII Flood/Hazard Mitigation Study
3 November 2010 | Information Gathering Meeting
Barbour County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
LINDA WATSON	[redacted]	[redacted]	Community Resources
Brandy Ketchem	[redacted]	[redacted]	Community Resources
Geneva Mayle	[redacted]	[redacted]	Community Resource
DAVID BOYD	[redacted]	[redacted]	Community Resource
Stephanie Boyd	[redacted]	[redacted]	World Community Servants Resources
MARIA SWIDER	[redacted]	[redacted]	LCPA - LCSW
SHARON Guthrie	[redacted]	[redacted]	Community Member

Region VII Flood/Hazard Mitigation Study
3 November 2010 | Information Gathering Meeting
Barbour County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Patrick Barrett	[redacted]		web design belington.net
Glenn Sweet			Director Facilities Schools
Brad Shoulders			Safety Director FCG Sentinal mine
Scott Boylen			COAL MINING
Kirk Crites			COAL Plant
Delbert Weaver			
John Hawkins			Law Enforcement

Region VII Flood/Hazard Mitigation Study

3 November 2010 | Information Gathering Meeting

Barbour County

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Bob Taylor	[redacted]		
Doyle R Cutright			
Heather Hymes			
Mary Cox			
David Phillips			
Ellen Shedmore			
Tom Watson			

Region VII Flood/Hazard Mitigation Study

3 November 2010 | Information Gathering Meeting

Barbour County

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Wes Morrow	[redacted]		Project Engineer

Region VII Flood/Hazard Mitigation Study
21 January 2011 | Summary of the "Draft" Report
Barbour County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Doyle Cutright	[redacted]		
Larry Allen			
Bob Jacobs			
Lars Byrne			
Jeff Roy			
Keith Rowan			

Region VII Flood/Hazard Mitigation Study
21 January 2011 | Summary of the "Draft" Report
Barbour County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Marshall Reed	[redacted]	[redacted]	Councilman
Brad Robinson	[redacted]	[redacted]	
Jean Clark	[redacted]	[redacted]	mayor
Robert Smithson	[redacted]	[redacted]	Water Plant operator
Johnny Williams II	[redacted]	[redacted]	street Commissioner for City of Belington
Brad Anderson	[redacted]	[redacted]	wastewater

Region VII Flood/Hazard Mitigation Study
21 January 2011 | Summary of the "Draft" Report
Barbour County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Larry Duffield	[redacted]		STREET Department
Don Harris			Water/wastewater Building Permits
Wes Morrow			Project Engineer
J. R. SPENCER			CONSTRUCTION
Greg Spencer			Construction

Braxton County Meetings

Region VII Flood/Hazard Mitigation Study
3 December 2010 • Braxton County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Ted Elonis	[redacted]	[redacted]	Yes
Bob Jacobus	[redacted]	[redacted]	Funding Agency Rep
Mary Ann Jacobus	[redacted]	[redacted]	Education
Dan & Cathy Umanetz John Umanetz	[redacted]	[redacted]	Grant owners
J L Campbell	[redacted] 26601	[redacted]	Mayor

Region VII Flood/Hazard Mitigation Study
21 January 2011 | Summary of the "Draft" Report
Braxton County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Shirley Hyre	[redacted]		
Theran Hyre			
Ted Elonis			
Ronald Facemire			
May Facemire			
Mike Chapman			

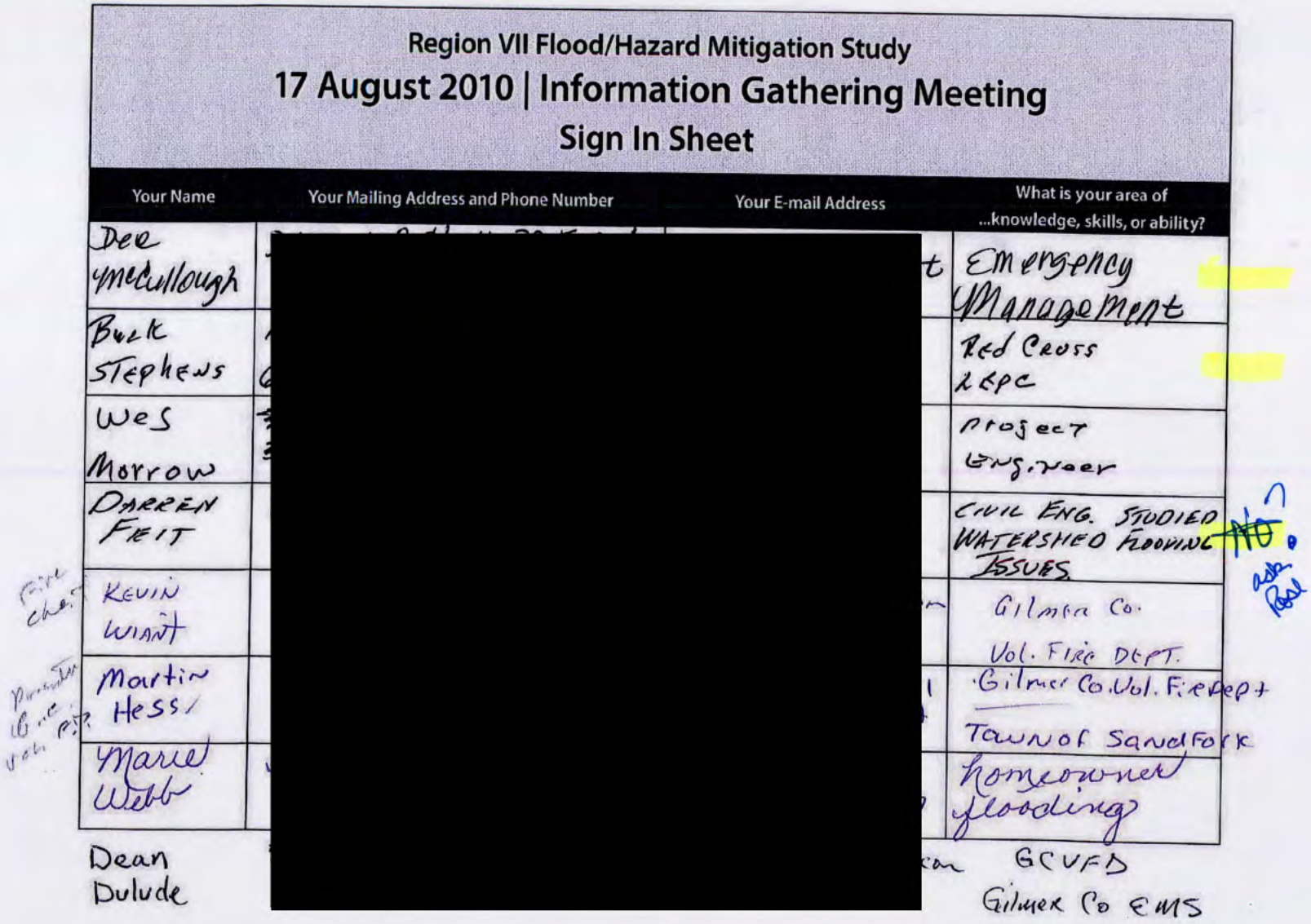
Region VII Flood/Hazard Mitigation Study
21 January 2011 | Summary of the "Draft" Report
Braxton County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
George Winemiller	[redacted]	[redacted]	Fire Dept Member
Bev and J.R. Keener	[redacted]	[redacted]	
Bill Carr	[redacted]	[redacted]	Fire Dept Member
[redacted]	[redacted]	[redacted]	
Bob Jacobs	[redacted]	[redacted]	[redacted]
Wes Morrow	[redacted]	[redacted]	

Region VII Flood/Hazard Mitigation Study
21 January 2011 | Summary of the "Draft" Report
Braxton County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Mary Chapman	[redacted]	[redacted]r.com	Director Brax Senior Cntr

Gilmer County Meetings



Region VII Flood/Hazard Mitigation Study

17 August 2010 | Information Gathering Meeting

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Dee mcCullough	[redacted]	[redacted]	Emergency Management
Buck Stephens	[redacted]	[redacted]	Red Cross LEPC
Wes Morrow	[redacted]	[redacted]	Project Engineer
DARREN FEIT	[redacted]	[redacted]	CIVIL ENG. STUDIED WATERSHED FLOODING ~~NO~~ ISSUES
KEVIN WIANT	[redacted]	[redacted]	Gilmer Co. Vol. Fire Dept.
Martin Hess	[redacted]	[redacted]	Gilmer Co. Vol. Fire Dept + Town of Sand Fork
Marie Webb	[redacted]	[redacted]	homeowner flooding
Dean Dulude	[redacted]	[redacted]	GCVFD Gilmer Co EMS

Region VII Flood/Hazard Mitigation Study
17 August 2010 | Information Gathering Meeting
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Lynn Moneypenny	[redacted]		whatever
Patty Thrasher		ail.com	Threat Preparedness Co.
CLIFF THRASHER			
[illegible]			
Jessica Montgomery			

Region VII Flood/Hazard Mitigation Study
30 September 2010 | Project Coordination Meeting
Gilmer County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your Email Address	What is your area of ...knowledge, skills, or ability?
Dee McCullough	[redacted]	[redacted]	emergency Mgmt.
Sherman McCullough	[redacted]	[redacted]	Gil. Co V. F. D. Lt. Sand Fork Station
Wes Morrow	[redacted]	[redacted]	Project Engineer
Molly Davis	[redacted]	[redacted]	
Buck Stephens	[redacted]	[redacted]	Red Cross ARC
WAYNE COTTRELL	[redacted]	[redacted]	Red CROSS
DARREL RAMSEY	[redacted]	[redacted]	Gilmer Vol. Fire Gilmer County Rec. Center Director

Region VII Flood/Hazard Mitigation Study
30 September 2010 | Project Coordination Meeting
Gilmer County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your Email Address	What is your area of ...knowledge, skills, or ability?
Patty Thrasher	[redacted]		Threat Preparedness Coodinator
CLIFF THRASHER			FARMER
Sean Presgraves			Glenville Democrat
DARREW FEIT			
Bob Jacobus			Region VII

Gilmer County

Local Emergency Planning Committee Meeting

Sign - In Sheet - Date: December 2, 2010

Name	Address	City/St/Zip	Phone	E-mail address
CLIFFORD THRASHER	[redacted]			
Patty Thrasher				SAFARI_MOM @hotmail.com
Buck Stephens				buc_stephens@yahoo.
Sherman McCullough				
DARREN FEIT				darrenfeit@ yahoo.com
Larry Gerwig				larrygerwig@yahoo. com.
John Moss				Johntopcop@hotmail.com
BOB CAMPBELL				BOBANDDEANNA1520 @MSN.COM
JACK Heater				
Tashua Allman				allman.tashua@ hotmail.com

Gilmer County

Local Emergency Planning Committee Meeting

Sign - In Sheet - Date: _____

Name	Address	City/St/Zip	Phone	E-mail address
Kim Harris	[redacted]			kimberly.harris@sunh.com
Jackie Howes	[redacted]			Jackie.howes@Sunh.Com
Martin Hess	[redacted]			ff614@shentel.net
[illegible]	[redacted]			[illegible]
Benton Huffman	[redacted]			deputy405@yahoo.com
Daniel Ramsey	[redacted]			dwramsey64@yahoo.com
Charley Gregory	[redacted]			———
Rob Smith	[redacted]			

Gilmer County

Local Emergency Planning Committee Meeting

Sign - In Sheet - Date: _____

Name	Address	City/St/Zip	Phone	E-mail address
Wes Morrow				
Tommy Hyde				
Cindy Pounds				

Region VII Flood/Hazard Mitigation Study
9 November 2010 | Project Update Meeting
Gilmer County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Bob Jacobus	[redacted]		
Dee McCullough			Emergency Management
Wes Morrow			
Cassandra Huff			News Editor
Susie Kirkpatrick			office emergency management
Brian Kennedy			EC
DAVE Hess			County Commissioner

Region VII Flood/Hazard Mitigation Study
9 November 2010 | Project Update Meeting
Gilmer County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
LARRY B CHAPMAN	[redacted]	[redacted]	County Commissioner
Beverly Marks	[redacted]	[redacted]	Gilmer County Clerk
Jean Butcher	[redacted]	[redacted]	Clerk Assistant
Dave Ramezan	[redacted]	[redacted]	Gilmer Free Press gilmerfreepress.net
Anna James Amy Allen MARSHA Arden	[redacted]	[redacted]	H+R Block franchise OWNER
Lisa Belknap	[redacted]	[redacted]	The Gilmer County Journal
Robert Thompson	[redacted]	[redacted]	Family

Region VII Flood/Hazard Mitigation Study
9 November 2010 | Project Update Meeting
Gilmer County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Michael R. Moody	[redacted]		Operation Manager Gilmer Co. EMS
Shane Steigleder			Gilmer EMS EMT.
Angela Moore			Co. Clerks Office
Casey Jones			Sheriff's Dept
Karen Elkin			Circuit Clerk
Jason Seabolt			Computer Tech Supreme Court
Debbie Allen			County Clerks office

Region VII Flood/Hazard Mitigation Study
9 November 2010 | Project Update Meeting
Gilmer County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Teresa Maxwell	[redacted]		Assessor's Office
			Assistant Prosecutors Office
			Assessor's Office
Tara Kennedy			Probation Officer
Kay Allen			Assessor's office
Lana Smith			

Region VII Flood/Hazard Mitigation Study
4 January 2011 | Alternatives Evaluation
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Dee McCullough	[redacted]		Emergency Management
Buck Stephens			Red Cross Lepc
Sherman McCullough			G + Lane Co. Fire department
Wes Morrow			Project Engineer
JoAnn McHenry			Gilmer Co. Senior Citizens
Sallie Mathess			Gilmer Co, Senior Citizens

Region VII Flood/Hazard Mitigation Study
4 January 2011 | Alternatives Evaluation
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Bob Jacobus	[redacted]	[redacted]	
August Beyer III			Retired public servant
Jim McVaney			Gilmer Co Fire Chief.
Nancy McVaney			teaching education
Patty Thrasher			
Glenda Miller			—

Region VII Flood/Hazard Mitigation Study
4 January 2011 | Alternatives Evaluation
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
[illegible] Kirkpatrick	[redacted]	[redacted]	
Cliff Thrasher			
Benton Huffman			
Larry Gerwig			
John Moss		[illegible] .com	Law Enforcement
DARREL RAMSEY			County Commission

Region VII Flood/Hazard Mitigation Study
4 January 2011 | Alternatives Evaluation
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
R.P. Smith	[redacted]		Law

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Denzil Hurff	[redacted]		
Martin Hess			22 years in Fire Dept.
Patsy Thrasher			
Cliff Thrasher			
Becki Reed			
Jerry Hess			
Betty Lawther			Support Group GCUFD
Harold Lawther			Vice Presd. fire fighter
DARREN FEIT			WATERSHED STUFF

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Dee McCullough	[redacted]		Emergency Management
Sherman McCullough			Lt. Fire Gil Co. Dept
~~[illegible]~~ Harold Louther			Fire Fighter & SAR
Parker Tallhamer			J.V. fire fighter
Herbert L. Frymyer			Fire Fighter
Virginia Lee Frymyer			Support Group

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Sheila Hamric	[redacted]		Store Manager
Buck Stephens			LEPC & Red Cross
Rick Lawson			Oil & GAS
Gary Radcliff			Fire Fighter Support Group
Connie Stewart			Fire fighter
Lloyd Stewart			" "

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Roger Lydick	[redacted]		Support group
Teresa Lydick			Support group
David Clegg			Support group
Charlotte Radcliff			Support Group GCVFD President
Melissa Hess			GCVFD Support Group
Michael Marshall			GCVFD support Group

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Sheila R. Ables	[redacted]		Fire Dept Volunteer Support Group
DARRELL RAMSEY			Gilmer COMMISSIONER
LEROY LONG			FIRE DEP.
Nancy E			FIRE. DEP.
Karl Dural		le.edu	Business owner. GSC student, Volunteer
Tashua Allman			Mayor / Floodplain Manager

Region VII Flood/Hazard Mitigation Study

20 January 2011 | Summary of the "Draft" Report

Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Bob Jacobs	[redacted]		
Wes Morrow			Project Engineer
Brenda K. McCartney			
Jack McCartney			
Kevin Wiant			
Mike Moore			

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Gilmer County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Michael R Moody	[redacted]	[redacted]	Operations Manager Gilmer Co EMS Paramedic
Larry Gerwig			Sheriff Dept.
Mike Wheeler			Sheriff's Dept.
Bob + Donna Moore			Fire Dept. EMS
Daniel + Tiffany Moore			Fire Dept.
Jess + Nancy McVaney			Chief Fire Dept
Brock McVaney			Fire dept
Susie Kirkpatrick	[redacted]	[redacted]	oes director

Lewis County Meetings

Region VII Flood/Hazard Mitigation Study
24 August 2010 | Information Gathering Meeting
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Steve Moneypenny	[redacted]	[redacted]	GIS....?
John Snyder	[redacted]	[redacted]	DOG
Randy Hawkins	[redacted]	[redacted]	Health Dept
[illegible] Kola	[redacted]	[redacted]	Director of Emergency Management -
James Gum	[redacted]	[redacted]	Emergency Management operations.
Bob Jacobus	[redacted]	[redacted]	Ruei PDC
Wes Morrow	[redacted]	[redacted]	Project Engineer

Region VII Flood/Hazard Mitigation Study

17 September 2010 | Project Coordination Meeting

Lewis County

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your Email Address	What is your area of ...knowledge, skills, or ability?
John Snyder	[redacted]	[redacted]	Animal control
Steve Moneypenny			Floodplain Mgr
Randy Hawkins			Health Dept.
William T. Rowan			OEM
James Gunn			OEM operations
David Whittaker			Health Dept.
JANN Whitehair			citizen

Region VII Flood/Hazard Mitigation Study
17 September 2010 | Project Coordination Meeting
Lewis County
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your Email Address	What is your area of ...knowledge, skills, or ability?
[redacted]	[redacted]	[redacted]	

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Lewis County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Lola Moneypenny	[redacted]		
Lynn Moneypenny			in what???
Steve Moneypenny			LC Floodplain Manager
David Whittaker			Health Dept
William Raven			OEM Director.
James Gum			OEM operations

Region VII Flood/Hazard Mitigation Study

20 January 2011 | Summary of the "Draft" Report

Lewis County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
John Snyder	[redacted]	[redacted]	Animal Control,
Steve Peters	[redacted]	[redacted]	Rad.?
Bob Jacobus	[redacted]	[redacted]	
Phyllis Corathers	[redacted]	[redacted]	.com
Cindy Whetsell	[redacted]	[redacted]	com
Dick Harrison	[redacted]	[redacted]	entertainment, private consulting, retired fed. gov.

Region VII Flood/Hazard Mitigation Study
20 January 2011 | Summary of the "Draft" Report
Lewis County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Kim Harrison	[redacted]		elderly/handicapped services, tourism
Jim Oldaker			City Govt.

Tucker County Meetings

Region VII Flood/Hazard Mitigation Study
25 August 2010 | Information Gathering Meeting
Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Wes Morrow	[redacted]		project Engineer
Lynda Gray			member of committee
Mike Rosenau			Tucker County Commission
Tom Carr			Tucker County Commission
Tiffany Auvil			LEPC
Kevin White			LEPC, PARSONS Vol Fire Dept + McClain Printing Co.
Roxanne Tuesing			Tucker Co. Sr. Citizens LEPC Hendricks flood plain land owner

Region VII Flood/Hazard Mitigation Study

25 August 2010 | Information Gathering Meeting

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Dorothy Judy	[redacted]		Mayor of Parsons
Jason Myers			Floodplain Manager City Administrator
Bob Jacobs			~~Comm~~ ity PLANning
Grace Snyder			—
Wayne Snyder Jr			—
Charles Lloyd			Parsons Vol. Fire Dept
JAMES PRICE			Tucker Co OEM

Region VII Flood/Hazard Mitigation Study

25 August 2010 | Information Gathering Meeting

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Kelly Stadelman	[redacted]		Newspaper

Region VII Flood/Hazard Mitigation Study

23 September 2010 | Project Coordination Meeting

Tucker County

Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your Email Address	What is your area of ...knowledge, skills, or ability?
Lynda Gray	[redacted]		LEPC, paramedic.
Andrew Meador			County Floodplain Manager, County Tax Mapper, GIS, Database Admin, etc..
Bob Jacobus			Community Development Environmental Review Project Development
RYAN GAUJOT			GEOLOGIST
Debbie Davis			Vol. Firefighter
Wes Morrow			

Region VII Flood/Hazard Mitigation Study
26 January 2011 | Summary of the "Draft" Report
Tucker County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Lynda Gray	[redacted]	[redacted]	organizational
Jim Propst	[redacted]	[redacted]	Tucker CBM
Chuck Marks	[redacted]	[redacted]	OEM / LEPC
Mary Moore	[redacted]	[redacted]	Private
PAT A Nichols	[redacted]	[redacted]	Lawyer.
Patrick Gray	[redacted]	[redacted]	ASS Office of Emergency Managment.

Region VII Flood/Hazard Mitigation Study
26 January 2011 | Summary of the "Draft" Report
Tucker County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Charles Lloyd	[redacted]		Fire chief P.V.F.D
Jason Myers			City of Parsons - Administration
Tom CARR			County Commissioner
Dorothy Jody		.com	Mayor of Parsons
Joel Goughnour			County Administrator
Howell Moore			County Commissioner

Region VII Flood/Hazard Mitigation Study

26 January 2011 | Summary of the "Draft" Report

Tucker County Sign In Sheet

Your Name	Your Mailing Address and Phone Number	Your E-mail Address	What is your area of ...knowledge, skills, or ability?
Donna Moore	[redacted]	[redacted]	net Barber
Kelly Stadelman	[redacted]	[redacted]	cdc.ca Newspaper
Bob Jackson	[redacted]	[redacted]	
[illegible]	[redacted]	[redacted]	

Appendix XI

Actions & Projects

Region VII Regional Hazard Mitigation Project List

The project lists in County Plans are very extensive. Many of those projects are operational in nature and are being resolved by responsible parties on an ongoing basis. For example, Allegheny Power has scheduled right-of-way (ROW) maintenance on their power distribution lines. In the summer of 2011 they are removing woody and at-risk danger trees from ROWs in southern Upshur County. Dams of a certain hazard class are required to be monitored by law. Even though ROW maintenance and dam inspection are legitimate best hazard mitigation practices (BHMPs) the general projects do not need to obscure other specific projects which local HM planners should concentrate on. A distinction between hazard mitigation actions and hazard mitigation projects should be considered in a project list. Only more specific projects are listed in the Region VII RHMP Project list.

Hazard Mitigation Actions are such activities as local regulations and codes, general public education/awareness, routine maintenance and ongoing land use planning.
Local actions are not included in this list. As a guide, projects have more defined outcomes that can be quantified and usually require external financial assistance in the form of a grant. There are some gray areas, for example a comprehensive county land use plan could be a project because it will have empirical inputs and outcomes.

Education is a prime BHMP for every hazard listed in this plan. For some hazards it is the only cost effective practice available. Most education can be accomplished by seizing opportunities as they present themselves.

Finally, most hazards that develop into disasters can take place and have impacts on general areas in Region VII. Only floods have a limited impact area in which most non-education Hazard Mitigation Projects can be effective and pass benefit/cost analysis. Two general impact area exceptions are 1) mitigation projects for droughts and 2) mitigation for a CBRN mass migration event.

Location	Project	Hazard Type	Cost	Status
Barbour				
	Storm Water Management activities	Flood	to be identified	new
	Repetitive Loss Acquisition Projects	Flood	to be identified	new
	Water Demand/Supply Studies	Drought	$250,000	complete
	Raw Water Impoundment - design	Drought	$550,000	funded
	Snow removal	Winter Storm	yearly variation	ongoing
	Gain CRS Status	Flood	$4,000-$10,000	new

Location	Project	Hazard Type	Cost	Status
Braxton				
	Storm Water Management activities	Flood	to be identified	new
	Repetitive Loss Acquisition, Relocation, Elevation Projects	Flood	to be identified	new
	Snow removal	Winter Storm	yearly variation	ongoing
	Early Warning System	Thunderstorms	to be identified	new
	Water Study	Drought	to be identified	new
	Develop Raw Water Supplies	Drought	to be identified	new
	Gain CRS Status	Flood	$4,000-$10,000	new
Gilmer				
	Repetitive Loss Acquisition, Relocation, Elevation Projects	Flood	to be identified	new
	Gain CRS Status	Flood	$3,000-$8,000	new
	GCI Water Protection		$25k-$100k	new
	NOAA Radios	all	--------	Complete
Lewis				
	Storm Water Management activities	Flood	to be identified	new
	Promote Flood Insurance Purchase (CRS)	Flood	$4,000-$10,000	new
	Repetitive Loss Acquisition, Relocation, Elevation Projects	Flood		new
	Flood proof Jane Lew Water Treatment Plant	Flood		new
	Snow Removal	Winter Storm	yearly variation	ongoing
	Correct Slippage in Weston's "Narrows" Area	Landslides	to be identified	new
	Buck Hill Water Drain	Landslides	to be identified	new
	Portable Bulk Water System	Drought	to be identified	new
	HAM Funding	all	to be identified	new

Location	Project	Hazard Type	Cost	Status
Randolph				
	Develop Alternate Water Sources	Drought	to be identified	new
	Construct Water Impoundment	Drought	$8,000,000	One complete
	Stockpile Vaccines for Epidemic	Epidemic	to be identified	new
	Repetitive Loss Acquisition, Relocation, Elevation Projects	Flood	to be identified	new
	Gain CRS Status	Flood	$4,000-$10,000	new
	Establish Trauma Centers	CBRN	to be identified	new
Tucker				
	Parsons CRS Project	Flood	$4,000-$10,000	new
	Parsons Repetitive Loss Acquisition, Relocation, Elevation Project	Flood	to be identified	new
	Hendricks Storm & Flood Water Management Project	Flood	to be identified	RFQ*
	Parsons / Hamrick PSD Water Mutual Aid Project	Water Failure	to be identified	new
	Repetitive Loss Acquisition, Relocation, Elevation Projects	Flood	to be identified	new
	Develop Alternate Water Sources	Drought	to be identified	new
	Acquire Emergency Generators	Power Failure	$100,000	complete
Upshur				
	Repetitive Loss Acquisition, Relocation, Elevation Projects	Flood	$70k per structure	new
	Storm Water Management activities	Flood	$5,000	new
	Install Rain Gauges	Flood	$1,000	new
	Upgrade, Extend Public Infrastructure	Drought	$1,500,000	new
	Gain CRS Status	Flood	$4,000-$10,000	new

*RFQ = Request for Qualifications – Architects & Engineers

Project Number	Mitigation Project	Priority
1.1.1	Continue to enforce and update the county and municipal flood ordinances.	**1**
1.1.2	Recommend revisions to requirements for development within the floodplain, where appropriate.	**3**
1.1.3	Monitor new stream gauges more effectively to allow more warning time to residents downstream of an impending flood.	**2**
1.2.1	Update floodplain data as it is made available following the revision of the State information.	**2**
1.2.2	Continue to apply for Federal Grants to buy repetitive loss properties and monitor development within floodplains.	**3**
1.2.3	Identify surface water drainage obstructions for all parts of Barbour County, including the municipalities.	**5**
1.2.4	Utilize the established framework of compiled data and continue to coordinate surface water management plans throughout the county.	**6**

Project Number	Mitigation Project	Priority
2.1.1	More effectively use strategies in place for debris management from severe storm events and continue to improve these strategies as problems arise within the county and municipalities.	**5**
2.1.2	Improve programs implemented to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe storms.	**4**
2.1.3	Continue developing and implementing programs to keep trees from threatening lives, property, and public infrastructure during severe storm events.	**5**
2.2.1	Use newspapers to help increase public awareness of severe storm mitigation activities.	**6**
2.2.2	Continue monitoring weather to attain earlier severe storm warnings.	**4**
2.2.3	Update maps and publicize locations around the county that have the highest incidences of extreme storms.	**5**
2.2.4	Encourage/recommend electrical utilities to use underground construction methods where possible to reduce power outages from severe storms.	**6**
2.2.5	Encourage/recommend improved building materials and techniques when rebuilding damaged property.	**6**
3.1.1	Continue improving information made available to increase public awareness of water supply concerns.	**3**
3.1.2	Continue current study to evaluate supply alternatives and feasibility.	**4**
3.1.3	After completion of current study develop emergency water supply protocol.	**3**
3.1.4	Coordinate water construction improvements within county in order to maintain adequate supply.	**4**
3.1.5	Maintain new facilities and continue progress on new construction projects	**2**
3.2.1	Use current study data to improve public water sources through supply sources such as river intakes, reservoirs, and aquifers.	**3**
4.1.1	Prioritize mitigation projects based upon inventories of buildings and investments.	**1**
4.1.2	Continue to pursue funding opportunities to develop and implement local and county mitigation activities.	**2**
4.1.3	Continue to maintain Hazard Mitigation Committee participation in HMP activities.	**2**
4.1.4	Identify, improve, and sustain collaborative programs focusing on the real estate and insurance industries, public and private sector organizations, and individuals to avoid activities that increase risk to hazards.	**3**
4.1.5	Develop public and private partnerships to foster hazard mitigation program coordination and collaboration within Barbour County.	**2**

Project Number	Mitigation Project	Priority
4.1.6	Integrate the goals and action items from the Barbour County Hazard Mitigation Plan into existing regulatory documents and programs where appropriate.	**2**
4.2.1	Strengthen emergency services preparedness and response by linking emergency services with hazard mitigation programs, and enhancing public education.	**1**
4.2.2	Develop, enhance, and implement education programs aimed at mitigating hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools.	**1**
4.2.3	Perform a Commodity Flow Study to identify where and how much potential hazardous materials enter the county.	**2**
4.3.1	Develop and maintain a list of possible funding sources to address multiple hazards.	**2**

Project Number	Previous Project Description	Coordinating Agencies	Status
Short-term Multi-Hazard #1	Integrate the goals and action items from the Barbour County Hazard Mitigation Plan into existing regulatory documents and programs where appropriate.	County Commission, Cities of Philippi, Belington, and Town of Junior	Completed
Short-term Multi-Hazard #2	Identify and pursue funding opportunities to develop and implement local and county mitigation activities.	County Commission, Cities of Philippi, Belington, and Town of Junior	Completed/On going
Short-term Multi-Hazard #3	Establish a formal role for the Barbour County Hazards Mitigation Steering Committee to develop a sustainable process for implementing, monitoring, and evaluating countywide mitigation activities.	County Commission, Barbour County OES	Completed/On going
Short-term Multi-Hazard #4	Identify, improve, and sustain collaborative programs focusing on the real estate and insurance industries, public and private sector organizations, and individuals to avoid activities that increase risk to hazards.	Economic Development Authority, Philippi Board of Trade, Chamber of Commerce	On going
Short-term Multi-Hazard #5	Develop public and private partnerships to foster hazard mitigation program coordination and collaboration within Barbour County.	County Commission	On going
Short-term Multi-Hazard #6	Prioritize mitigation projects based upon inventories of buildings and investments.	County Commission, Cities of Philippi, Belington, and Town of Junior	Not completed, re-prioritized in plan update
Long-term Multi-Hazard #1	Strengthen emergency services preparedness and response by linking emergency services with hazard mitigation programs, and enhancing public education.	Barbour County OES	On going
Long-term Multi-Hazard #2	Develop, enhance, and implement education programs aimed at mitigating hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools.	WVU Extension Service	On going
Short-term Severe Storm #1	Enhance strategies for debris management for severe storm events.	Barbour County OES	Completed/On going
Short-term Severe Storm #2	Develop and implement program to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe storms.	Barbour County Commission, Cities of Philippi, Belington and Town of Junior	Completed/On going
Short-term Severe Storm #3	Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during severe storm events.	Barbour County Commission, Cities of Philippi, Belington and Town of Junior	Completed/On going

Project Number	Previous Project Description	Coordinating Agencies	Status
Long-term Severe Storm #1	Increase public awareness of severe storm mitigation activities.	Barbour County Commission	Completed/On going
Long-term Severe Storm #2	Enhance weather monitoring to attain earlier severe storm warnings.	Barbour County OES, Barbour County Commission	Completed/On going
Long-term Severe Storm #3	Map and publicize locations around the county that have the highest incidence of extreme storms.	Barbour County OES, Barbour County Commission	Completed/On going updates required
Long-term Severe Storm #4	Support/encourage electrical utilities to use underground construction methods where possible to reduce power outages from severe storms.	Barbour County Commission, Cities of Philippi, Belington and Town of Junior	Not completed/Project in plan update
Long-term Severe Storm #5	Encourage/recommend improved building materials and techniques when rebuilding damaged property.	Barbour County Commission, Cities of Philippi, Belington and Town of Junior	Completed/On going process
Short-term Drought #1	Public awareness of water supply concerns. -Agricultural -Public Water Supply	WVU Extension Service, Barbour County Health Department	Completed/On going improvement needed
Short-term Drought #2	Public planning to evaluate supply alternatives and feasibility. -Agricultural - Public Water Supply	WVU Extension Service, Tygart Valley Conservation District, Barbour County Commission	In process of completion
Short-term Drought #3	Develop emergency water supply protocol. -Agricultural -Public Water Supply	Tygart Valley Conservation District, Barbour County Commission, Cities of Philippi and Belington	In process of completion
Short-term Drought #4	Coordinate water construction improvements within county in order to maintain adequate supply. -Agricultural -Public Water Supply	WVU Extension Service, US Department of Agriculture, Natural Resource Conservation Service, Barbour County Commission	Not completed/On going
Short-term Drought #5	Upgrade water treatment facilities. -Public Water Supply	Barbour County Commission, Cities of Philippi, Belington and Town of Junior	Completed in Belington/On going for Philippi
Short-term Drought #6	Emergency water delivery system. -Agricultural -Public Water Supply	Tygart Valley Conservation District, Barbour County OES, Barbour County Commission	Completed-mutual aid agreements in place

Project Number	Previous Project Description	Coordinating Agencies	Status
Long-term Drought #1	Improve public water source through supply sources such as river intake, reservoirs, and aquifers. -Public Water Supply	Barbour County Commission, Cities of Philippi, Belington and Town of Junior	In progress through water study project
Short-term Flood #1	Develop feasible mitigation options for each repetitive flood property in Barbour County, including the municipalities.	Hazard Mitigation Steering Committee	Completed/On going
Short-term Flood #2	Recommend revisions to requirements for development within the floodplain, where appropriate.	Hazard Mitigation Steering Committee	Completed- Flood plain ordinances adopted
Short-term Flood #3	Develop better flood warning systems.	Barbour County OES, Cities of Philippi and	Completed/On going- Stream monitors installed, continue monitoring
Long-term Flood #1	Enhance data and mapping for floodplain information within the County, and identify and map flood-prone areas outside of designated floodplains.	Barbour County Assessors office, Cities of Belington and Philippi	Not completed- awaiting State updates
Long-term Flood #2	Encourage development, acquisition and management strategies to preserve open space within floodplain for flood mitigation, fish habitat and water quality.	Hazard Mitigation Steering Committee	Completed/On going- 30 property buyouts in Philippi
Long-term Flood #3	Identify surface water drainage obstructions for all parts of Barbour County, including the municipalities.	Barbour County Sheriff, Cities of Philippi, Belington, and Town of Junior	Not completed- lack of funding and personnel, project in updated plan
Long-term Flood #4	Establish a framework to compile and coordinate surface water management plans and data throughout the county.	County Commission, Cities of Philippi, Belington, and Town of Junior	Completed/On going

Braxton Actions & Projects

All Jurisdictions	*Project 1.1.1*: Identify storm water back-up areas, determine costs to correct areas, find funding. *Project 1.2.1*: Determine funding requirements and seek funding to clear out blocked culverts and determine which culverts need to be re-designed to meet increased flood demands.
Braxton County	*Project 1.3.1*: Maintain a database of all at risk structures in floodway and floodplain and get homeowners and business information on the importance of purchasing flood insurance and flood-proofing techniques to protect their homes and business. *Project 1.3.2:* Establish an ongoing program of mitigation training for public officials and private business, as well as the citizens of

Braxton County. This training will include building inspectors, builders, developers, surveyors, and community CEO's.

Project 1.3.3: Continue to make informational pamphlets available to Braxton County citizens that promote buying flood insurance.

Project 1.4.1: Continue to make permitting necessary before any new construction is allowed. Permitting should be made to work with any/all flood plain ordinances.

Project 1.5.1: Provide opportunities for the leaders in Braxton County to participate in FEMA and other agency proactive program.

Project 1.6.1: Continue to apply for Hazard Mitigation Grant Program funds for acquisitions, elevations, or relocations of the identified at risk, repetitive loss, non-repetitive loss, or substantial damaged properties in Braxton County.

Project 1.7.1: Work with the WVDOH to design road construction to be at the 100 year base flood elevation or higher.

Project 2.1.1: Continue to enhance and upgrade current snow removal capabilities throughout the county.

Project 2.1.2: Develop and implement program to coordinate maintenance and mitigation activities to reduce risk to public infrastructure from severe storms.

Project 2.1.3: Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during severe storm events.

Project 2.2.1: Increase public awareness of severe storm mitigation activities.

Project 2.2.2: Enhance weather monitoring to attain earlier severe storm warnings.

Project 3.1.1: Develop and distribute an informational brochure describing the proper safety procedures to carry out during a severe thunderstorm.

Project 3.1.2: Support the development of and funding for an "Early Warning System" or WARN.

Project 3.1.3: Continue to coordinate with Charleston weather service on a daily basis to improve readiness for imminent severe weather.

Project 3.1.4: Coordinate any warning system with the Board of Education to enhance protection of students and faculty under threat of severe weather.

Project 4.1.1: Coordinate with the National Weather Service in Charleston, WV to warn residents of impending severe wind or tornado conditions.

Project 4.1.2: Continue to monitor countywide building codes, which will regulate the materials used in buildings that are constructed with respect to design wind speed.

Project 5.1.1: Continue to monitor countywide building permits, which will regulate land disturbances over one acre to include storm water management.

Project 6.1.1: Develop an informational brochure to provide opportunities for the citizens of Braxton County to better understand the probability of an earthquake happening and what to do to prepare for an earthquake.

Project 7.1.1: Implement a water study and analyze the data to better help citizens during periods of drought.

Project 7.1.2: Identify and maintain backup water supplies to make water available to citizens.

Project 8.1.1: Build partnerships with local media and providing technical assistance to help them better report, to the public, on how to protect themselves and their property against hailstorm.

Project 9.1.1: Distribute an informational brochure including information on the burning ban and the leading causes of wildfires, as well as steps the general public can take to avoid starting wildfire.

Project 10.1.1: Develop and distribute an informational brochure to all governmental, state, and critical facilities describing the proper policies and procedures to be conducted in the event of a terrorist

	threat. *Project 11.1.2:* Have commodity flow studies done to better analyze the types and quantities of materials could be present in the county. *Project 11.1.3:* Continue to coordinate with the Regional Response Team in order to provide a fast and effective response to an incident. *Project 13.1.1:* Coordinate with assets within the county to more effectively estimate losses from a disaster.
Town of Burnsville	*Project 12.1.1:* Develop a partnership with appropriate parties that are stakeholders in the monitoring and general condition of dams throughout Braxton County. Provide technical and manpower support to evaluate the status of these dams and report to the Core Planning Team on a yearly basis.
Town of Flatwoods	. *Project 11.1.1:* Make the public aware of hazardous materials, what they can do if they spill, and evacuation plans for citizens of Braxton County.
Town of Gassaway	*Project 12.1.1:* Develop a partnership with appropriate parties that are stakeholders in the monitoring and general condition of dams throughout Braxton County. Provide technical and manpower support to evaluate the status of these dams and report to the Core Planning Team on a yearly basis.
Town of Sutton	*Project 12.1.1:* Develop a partnership with appropriate parties that are stakeholders in the monitoring and general condition of dams throughout Braxton County. Provide technical and manpower support to evaluate the status of these dams and report to the Core Planning Team on a yearly basis.

Hazard	Previous Project Description	Coordinating Agency	Status
Flooding	1.1.1: Develop stringent storm water management codes for future development.	Municipal Council	Not completed removed
Flooding	1.1.2: Create small flood control check dams in the flood prone areas along tributaries of the Little Kanawha River	WVDEP	Removed, not feasible
Flooding	1.2.1: Strategically place several rain gauges throughout Gilmer County. Periodically check gauges and report results to county representatives	LKR Watershed Authority	Not completed, see project 1.1.5
Flooding	1.2.2: Assess the feasibility of conducting a hydrological study for Gilmer County.	County Commission	Completed assessment, no study required at this time
Flooding	1.2.3: Coordinate with ACOE and FEMA personnel to explain existing ACOE studies and FIRMS to civic organizations and the public in Gilmer County.	ACOE, FEMA, LEPC. Local Civic Groups	Completed
Flooding	1.3.1: Continue to enforce county floodplain development ordinance, which strictly regulates development in the floodplain.	County Commission	Completed, on-going
Flooding	1.3.2: Undertake acquisition and relocation projects throughout the county to remove structures located in the floodplain.	OES, LEPC	Completed, on-going
Flooding	1.3.3: Develop a means of regulating oil and gas wells being drilled in the floodplain.	WVDEP office of oil and gas, County Commission	Not completed, removed
Flooding	1.4.1: Supply schools, city hall, and other critical facilities with NOAA radios.	LEPC	Completed
Flooding	1.4.2: Create a local radio station in Gilmer County to broadcast warnings of storms and other newsworthy items.	OES	Removed, not feasible
Flooding	1.4.3: Broadcast advanced warning of impending floods on local radio.	Local Media (when created)	Removed, not feasible

Hazard	*Previous Project Description*	*Coordinating Agency*	*Status*
Flooding	1.4.4: Increase the publicity of emergency evacuation routes.	County Commission, LEPC	Completed, Integrated into project 3.1.1
Flooding	1.4.5: Place high water warnings signs along low flood-prone sections of highway.	WVDOH	Not completed, removed
Flooding	1.5.1: Work with the NRCS to facilitate studies in repeatedly flooded areas.	NRCS, OES, County Commission	Ongoing process project 1.1.1
Flooding	1.6.1: Coordinate county efforts to meet the requirements of becoming a participant in the CRS.	OES	Not completed, on-going
Flooding	1.7.1: Dredge the waterways to remove debris and prevent water from backing up and possible flooding.	USACOE	Removed, not feasible
Flooding	1.7.2: Assess the degree to which bridge construction practices lead to flooding conditions.	WVDOH	Completed
Flooding	1A.1.1: Partner with organizations such as Little Kanawha River Watershed Association to implement mitigation projects on the tributaries of the Little Kanawha River, which would include attendance at regular watershed association meetings.	Municipal Council	Not completed, removed
Flooding	1A.2.1: Continue acquisition relocation efforts that are currently underway within the City of Glenville's corporate limits.	OES, LEPC	Completed, on-going
Severe Winter Storm	2.1.1: Instate countywide building codes, which will regulate the number of buildings and the materials, used in buildings that are constructed	County Commission	Not completed, removed
Severe Winter Storm	2.1.2: Enforce existing building codes that are already in place.	County Commission, Sheriff's Dept., Municipal PDs	Completed
Severe Winter Storm	2.2.1: Research possibilities and initiate contracts for snow removal prior to the next major winter storm.	DOH	Completed, removed

Hazard	*Previous Project Description*	*Coordinating Agency*	*Status*
Severe Thunder-storms	3.1.1: Coordinate with the National Weather Service in Charleston, WV to warn residents of impending severe thunderstorm conditions.	NWS, OES	Completed
Severe Thunder-storms	3.1.2: Strategically place several rain gauges throughout Gilmer County. Periodically check gauges and report results to county representatives.	LKR Watershed Authority	Not completed see project 1.1.5
Severe Thunder-storms	3.2.1: Clear dying vegetation away from roadsides in an effort to keep roadways open, following a severe storm.	WVDOH	Not completed, removed, part of continuing maintenance by WVDOH
Hailstorms	4.1.1: Coordinate efforts with local media to post advance warnings of hailstorms.	OES. Local Media Outlets	Removed, broadcast media better suited for warning information
Severe Wind and Tornadoes	5.1.1: Coordinate with the National Weather Service in Charleston, WV to warn residents of impending severe wind or tornado conditions.	OES	Completed
Severe Wind and Tornadoes	5.2.1: Develop an informational brochure to distribute to local residents.	OES. LEPC, WVOES	On-going see project 3.1.1
Landslides	6.1.1: Instate countywide building codes, which will regulate the number of buildings and the materials, used in buildings that are constructed	County Commission	Removed
Landslides	6.1.2: Enforce existing building codes that are already in place.	County Commission, Sheriff's Dept., Municipal PDs	Completed
Landslides	6.2.1: Establish procedures to clean up materials from a landslide quickly, causing only minor disruption to traffic.	WVDOH	Completed
Landslides	6A.1.1: Coordinate with the WVDOH to correct landslide problems near intersection of Rt. 33 and Rt. 5.	WVDOH	Completed
Earth-quakes	7.1.1: Create an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information on the measures to take to safe-proof homes and other structures from the potential effects of earthquakes.	OES, LEPC, WVOES	Removed due to re-evaluation of threat

Hazard	*Previous Project Description*	*Coordinating Agency*	*Status*
Drought	8.1.1: Extend public water service to communities currently without service.	Gilmer County PSD	On-going
Drought	8.1.2: Develop plans and schedules to haul water to residents during drought conditions.	OES, Local VFDs	Completed
Wildfires	9.1.1: Distribute information concerning the leading causes of wildfires and steps the general public can take to avoid starting wildfires.	WVDNR, State Parks Commission	Completed
Wildfires	9.1.2: Decrease potential for wildfires by decreasing the amount of combustible materials around timbering sites.	Timbering Industry	Removed, timber companies have plans in place
Heat Wave	10.1.1: Develop an informational brochure to distribute to local residents.	OES, WVOES	Removed, lack of threat

The following list details the projects that will benefit each jurisdiction in Gilmer County. Projects contained in the “All Jurisdictions” section apply to all municipalities located within the county. Projects specific to a certain municipality are listed under the appropriate municipal section.

All Jurisdictions

Project 1.1.2: Re-evaluate repair costs compared to continuous rebuild/repair costs.

Project 1.1.5: Install rain gauges throughout the county to monitor rainfall.

Project 1.1.6: Coordinate county efforts to meet the requirements of becoming a participant in the CRS

Project 1.2.3: Continue to research and apply for grants to raise, modify, or remove structures located within flood plains.

Project 1.2.4: Continue to enforce/modify Floodplain Ordinances as deficiencies are identified.

Gilmer County	*Project 2.1.1*: Implement a research project to identify weaknesses in supply security. *Project 2.1.2:* Identify measures to prevent GCI water supply contamination. *Project 3.1.1*: Proactively redistribute information on how to better prepare for emergencies *Project 3.1.2*: Continue to inform the general public on the requirements and benefits of flood insurance
City of Glenville	*Project 3.2.1:* Work with the Dean of Glenville State College to promote preparedness.
Town of Sand Fork	*Project 1.1.1*: Research funding sources for identifying problem areas and how to implement projects

Project Number	Mitigation Project	Priority
1.1.1	*Project 1.1.1*: Research funding sources for identifying problem areas and how to implement projects.	**2**
1.1.2	*Project 1.1.2*: Re-evaluate repair costs compared to continuous rebuild/repair costs.	**1**
1.1.3	*Project 1.1.3:* Continue to research and apply for grants to raise, modify, or remove structures located within flood plains.	**1**
1.1.4	*Project 1.1.4:* Continue to enforce/modify Floodplain Ordinances as deficiencies are identified.	**2**
1.1.5	*Project 1.1.5:* Install rain gauges throughout the county to monitor rainfall.	**3**
1.1.6	*Project 1.1.6:* Coordinate county efforts to meet the requirements of becoming a participant in the CRS	**1**
2.1.1	*Project 2.1.1*: Implement a research project to identify weaknesses in supply security.	**2**
2.1.2	*Project 2.1.2:* Identify measures to prevent GCI water supply contamination.	**2**

Project Number	Mitigation Project	Priority
3.1.1	*Project 3.1.1*: Proactively redistribute information on how to better prepare for emergencies	**3**
3.1.2	*Project 3.1.2*: Continue to inform the general public on the requirements and benefits of flood insurance	**2**
3.2.1	*Project 3.2.1:* Work with the Dean of Glenville State College to promote preparedness.	**3**

Project 1.1.1: Identify storm water "back-up" areas, determine costs to correct areas, find funding.

Identifying these problem areas may lessen water damage to existing and new buildings in the problem areas. This type of project may also detect problems with infrastructure systems that need fixed, thus benefiting the overall system.

All Jurisdictions

Project 1.2.1: Meet with the WVDOH to develop and implement a regular culvert-clearing procedure and determine which culverts need to be re-designed to meet increased flood demands.

Implementing this project will potentially decrease flood damage to certain portions of the transportation infrastructure as well as lessen the number of flood-related road closures.

Project 1.2.2: Coordinate inspections of bridges and roadways that are at risk in the special flood hazard area. Develop a plan to protect this infrastructure.

This project may identify ways to protect the existing transportation infrastructure.

Project 1.3.2: Promote buying flood insurance to homeowners and business owners.

This strategy will assist citizens in recovery efforts.

Project 1.4.1: Establish an ongoing program of mitigation training for public officials and private business, as well as the citizens of Lewis County. A target audience should include building inspectors, builders, developers, surveyors, and community CEOs. This training should include the *"No Adverse Impact" Toolkit for Common Sense Floodplain Management*.

This strategy ideally builds a capability at the citizen level to protect existing and new business assets as well as residential structures from the flood hazard (to the extent possible).

Project 1.5.1: Review, update, comply, and enforce Lewis County's and its municipalities' floodplain management ordinances.

All Jurisdictions

If implemented, these ordinances will protect new and existing assets from the flood hazard.

Project 1.6.1: Enter into a Cooperating Partnership "CTP" with DHS/FEMA to help develop the Lewis County Digital Flood Insurance Rate Map (DFIRM), which will help in future floodplain development issues.

This project will provide local leaders the knowledge to protect new and existing assets from flooding, depending on their location.

Project 1.6.2: Support the findings of the West Virginia Flood Protection Task Force and help promote these findings to the leadership and citizenry of Lewis County. Provide local representation and support for the West Virginia State Floodplain Managers Association.

Representatives from each jurisdiction in Lewis County will be able to actively present the county's flooding problem in an effort to identify solutions to those problems.

Project 1.8.1: Seek funding to elevate existing at-risk roadways throughout the county.

This strategy will ultimately lessen the flood damage to roadways in flood-prone areas. All jurisdictions involved must coordinate closely to ensure that an elevated roadway does not cause additional flooding problems in nearby areas.

Project 2.1.1: Coordinate with the West Virginia Division of Highways to create more contracts for emergency snow removal so as to increase the amount of snow removal equipment on county routes to speed up the snow removal process.

The result of implementing this strategy may increase access to all jurisdictions during a winter storm, thereby decreasing economic losses.

All Jurisdictions

Project 3.1.1: Distribute public information to appropriate agencies and organizations throughout Lewis County.

All jurisdictions can benefit equally from educating their citizens.

Project 4.1.1: Provide information on what to do if severe winds or a tornado should occur in Lewis County. Make certain that this information is available at the public libraries for the citizens.

All jurisdictions can benefit equally from educating county citizens.

Project 4.1.2: Promote the NWS “Storm Ready Program”.

Promoting this program will work to make all jurisdictions better prepared for severe weather events.

Project 5.2.1: Develop a GIS-based database that will help identify the areas of potential land subsidence. Make this mapping product available for the Lewis County All Hazard Map. The map can be utilized to protect against improper development.

If this map is available, future development may be protected as it can be steered away from areas particularly prone to land subsidence.

Project 6.1.1: Develop an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information on measures to take to safe-proof homes and other structures from the potential effects of earthquakes. Provide this information at the public libraries for the public to view.

Public information is critical to gaining participation from the general public during response and recovery efforts.

Project 7.1.2: Coordinate with local fire departments to haul water upon request to county residents and facilities.

If this service is available, local residents could call their local fire department to obtain water if wells are dry.

All Jurisdictions

Project 8.1.1: Build partnerships with local media and provide technical assistance to help them better report, to the public, on how to protect themselves and their property.

Establishing partnerships with the media during pre-disaster conditions will improve the efficiency of public information dissemination as well as the accuracy of reporting during emergencies.

Project 9.1.1: Develop relationships with newspaper and TV outlets and have them report on this hazard (wildfire) during the fire season. Place similar literature in public libraries that will be available to the public.

Establishing partnerships with the media during pre-disaster conditions will improve the efficiency of public information dissemination as well as the accuracy of reporting during emergencies.

Project 10.1.1: Develop a database of at risk citizens with health problems (e.g. oxygen requirements) that need electricity. Coordinate access to existing databases maintained by power companies, if applicable. Further, coordinate with the local power company to service these at risk citizens first after a power outage.

If this database is created, emergency services can be more quickly provided to these citizens. See also 15.1.1.

Project 11.1.1: Seek funding to coordinate qualified HAM operators to assist in disasters.

HAM operators can provide as a backup form of communications during emergencies.

Project 11.1.2: Continually update communications contact information. Simultaneously ensure that individual agencies are maintaining communications systems.

All Jurisdictions

Resource procurement can be strengthened if updated information (including the status of equipment) is maintained.

Project 12.1.1: Develop and distribute an informational brochure to all governmental, state, and critical facilities (such as schools) describing the proper guidelines to be conducted in the event of a bomb threat.

Educational information is critical to gaining participation from critical facilities during hazard incidents.

Project 13.1.1: Coordinate with local officials and representatives from organizations holding tier II permits to produce a more detailed plan on how to handle spills and evacuation procedures.

Integrating facility-specific plans into emergency responder operating guidelines will increase efficiency during responses to tier II facilities.

All Jurisdictions	*Project 14.1.1*: Continue partnerships with appropriate parties in the monitoring and general condition of dams throughout Lewis County. Dams to be included are: Stonewall Jackson Dam, Weston Dam, Stonecoal Creek Dam and Reservoir, Bendale Dam, Jane Lew Dam, and Jackson's Mill Dam. These partnerships may mitigate hazard occurrences by identifying potential hazards before they become problematic. *Project 15.1.1*: Work with appropriate agencies (power companies, board of education, home health services, etc.) to compile a special needs inventory for Lewis County and the municipalities therein. Such a list may ensure that these individuals receive emergency services in a timelier manner.
Lewis County	*Project 1.3.3*: Coordinate with appropriate officials to develop a master plan for the 4-H property along Jesse's Run (because the property is in the floodplain). *Project 1.3.4*: Revise the county's floodplain ordinance to include updated floodplain development regulations. Be sure to include NFIP recommendations, such as the model ordinance, FIRM-designated floodplain areas, etc. *Project 1.3.5*: Continue to monitor development in flood prone areas by enforcing the county's floodplain ordinance. *Project 3.2.1*: Partner with federal, state, and local agencies and organizations to develop an early warning system for multi-hazards. *Project 5.1.5*: Work with the state Division of Forestry to coordinate efforts to promote re-seeding after extraction occurs in the timber industry. *Project 7.1.1*: Develop a portable bulk water system that can be moved where it is needed during severe drought conditions.

Lewis County	*Project 11.1.3*: Encourage county agencies to sign agreements with one another to ensure that if one department's radios are inoperable, they can utilize extra radios maintained by other county departments.
City of Weston	*Project 1.3.1*: Enforce building codes (municipalities) and educate citizens about hazards. *Project 1.7.1*: Seek funding to acquire repetitive loss properties in Weston. A total of 12 repetitive loss properties (see "Flooding" profile for a list) are located within the city. *Project 4.2.1*: Promote any new construction and/or roof remodeling at the municipal level to be designed to withstand 90 MPH winds. *Project 5.1.1*: Promote DEP storm water management permitting at the municipal level to regulate any land disturbance and development over one (1) acre to provide for land stabilization through storm water management techniques. *Project 5.1.2*: Work to correct slippage in the "Narrows" area of Weston. *Project 5.1.3*: Address a stream erosion problem along the West Fork River. *Project 5.1.4*: Stabilize the soil in the Buck Hill area that is saturated due to underground springs.
Town of Jane Lew	*Project 1.2.3*: Replace the wooden bridge in Jane Lew. *Project 1.2.4*: Repair the US Route 19 (Main Street) bridge structure and sidewalk in Jane Lew. *Project 1.3.1*: Enforce building codes (municipalities) and educate citizens about hazards. *Project 1.7.2*: The Jane Lew Water Commission Office and the water treatment plant are at risk and have had some flood damage in the past. Build a levee or develop another flood-proof method for the Jane Lew water treatment plant.

Project 1.7.3: Muskrats are creating bank erosion along Hackers Creek and traps are needed to catch the muskrats. Coordinate with local WVDNR officials to trap the muskrats.

Town of Jane Lew

Project 4.2.1: Promote any new construction and/or roof remodeling at the municipal level to be designed to withstand 90 MPH winds.

Project 5.1.1: Promote DEP storm water management permitting at the municipal level to regulate any land disturbance and development over one (1) acre to provide for land stabilization through storm water management techniques.

4.2 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 Section 3.0. Each project is listed with a coordinating agency in Section 3.0 that will be responsible for the overall implementation of the project. 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).

The projects generated by the core planning team were grouped into categories based on shared characteristics. These categories were ranked by the planning team based on such criteria as ease of implementation; cost effectiveness; social, political, and economic impacts; and overall positive impact. Each category of projects received a score of 1 to 5 for each of these criteria; the projects under category receiving the highest score each received the highest priority ranking of one (1).

Project Number	Mitigation Project	Priority
1.1.1	Identify storm water “back-up” areas, determine costs to correct areas, find funding.	**3**
1.2.1	Meet with the WVDOH to develop and implement a regular culvert-clearing procedure and determine which culverts need to be re-designed to meet increased flood demands.	**5**

1.2.2	Coordinate inspections of bridges and roadways that are at risk in the special flood hazard area. Develop a plan to protect this infrastructure.	**5**
1.2.3	Replace the wooden bridge in Jane Lew.	**9**
1.2.4	Repair the US Route 19 (Main Street) bridge structure and sidewalk in Jane Lew.	**9**
1.3.1	Enforce building codes (municipalities) and educate citizens about hazards.	**11**
1.3.2	Promote buying flood insurance to homeowners and business owners.	**4**
1.3.3	Coordinate with appropriate officials to develop a master plan for the 4-H property along Jesse's Run (because the property is in the floodplain).	**5**
1.3.4	Revise the county's floodplain ordinance to include updated floodplain development regulations. Be sure to include NFIP recommendations, such as the model ordinance, FIRM-designated floodplain areas, etc.	**1**
1.3.5	Continue to monitor development in flood prone areas by enforcing the county's floodplain ordinance.	**4**
1.4.1	Establish an ongoing program of mitigation training for public officials and private business, as well as the citizens of Lewis County. A target audience should include building inspectors, builders, developers, surveyors, and community CEOs. This training should include the *"No Adverse Impact" Toolkit for Common Sense Floodplain Management*.	**4**
1.5.1	Review, update, comply, and enforce Lewis County's and its municipalities' floodplain management ordinances.	**11**
1.6.1	Enter into a Cooperating Partnership with DHS/FEMA to help develop the Lewis County Digital Flood Insurance Rate Map (DFIRM), which will help in future floodplain development issues.	**5**
1.6.2	Support the findings of the West Virginia Flood Protection Task Force and help promote these findings to the leadership and citizenry of Lewis County. Provide local representation and support for the West Virginia State Floodplain Managers Association.	**5**
1.7.1	Seek funding to acquire repetitive loss properties in Weston. A total of 12 repetitive loss properties (see "Flooding" profile for a list) are located within the city.	**10**
1.7.2	The Jane Lew Water Commission Office and the water treatment plant are at risk and have had some flood damage in the past. Build a levee or develop another flood-proof method for the Jane Lew water treatment plant.	**9**
1.7.3	Muskrats are creating bank erosion along Hackers Creek and traps are needed to catch the muskrats. Coordinate with local WVDNR officials to trap the muskrats.	**5**
1.8.1	Seek funding to elevate existing at-risk roadways throughout the county.	**9**
2.1.1	Coordinate with the West Virginia Division of Highways to create more contracts for emergency snow removal so as to increase the	**5**

	amount of snow removal equipment on county routes to speed up the snow removal process.	
3.1.1	Distribute public information to appropriate agencies and organizations throughout Lewis County.	**4**
3.2.1	Partner with federal, state, and local agencies and organizations to develop an early warning system for multi-hazards.	**1**
4.1.1	Provide information on what to do if severe winds or a tornado should occur in Lewis County. Make certain that this information is available at the public libraries for the citizens.	**4**
4.1.2	Promote the NWS "Storm Ready Program".	**2**
4.2.1	Promote any new construction and/or roof remodeling at the municipal level to be designed to withstand 90 MPH winds.	**9**
5.1.1	Promote DEP storm water management permitting at the municipal level to regulate any land disturbance and development over one (1) acre to provide for land stabilization through storm water management techniques.	**11**
5.1.2	Work to correct slippage in the "Narrows" area of Weston.	**9**
5.1.3	Address a stream erosion problem along the West Fork River.	**9**
5.1.4	Stabilize the soil in the Buck Hill area that is saturated due to underground springs.	**9**
5.1.5	Work with the state Division of Forestry to coordinate efforts to promote re-seeding after extraction occurs in the timber industry.	**5**
5.2.1	Develop a GIS-based database that will help identify the areas of potential land subsidence. Make this mapping product available for the Lewis County All Hazard Map. The map can be utilized to protect against improper development.	**8**
6.1.1	Develop an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information on measures to take to safe-proof homes and other structures from the potential effects of earthquakes. Provide this information at the public libraries for the public to view.	**4**
7.1.1	Develop a portable bulk water system that can be moved where it is needed during severe drought conditions.	**5**
7.1.2	Coordinate with local fire departments to haul water upon request to county residents and facilities.	**5**
8.1.1	Build partnerships with local media and provide technical assistance to help them better report, to the public, on how to protect themselves and their property.	**5**
9.1.1	Develop relationships with newspaper and TV outlets and have them report on this hazard during the fire season. Place similar literature in public libraries that will be available to the public.	**5**
10.1.1	Develop a database of at risk citizens with health problems (e.g. oxygen requirements) that need electricity. Coordinate access to existing databases maintained by power companies, if applicable. Further, coordinate with local power companies to service these at risk citizens first after a power outage.	**7**
11.1.1	Seek funding to coordinate qualified HAM operators to assist in disasters.	**5**

11.1.2	Continually update communications contact information. Simultaneously ensure that individual agencies are maintaining communications systems.	**5**
11.1.3	Encourage county agencies to sign agreements with one another to ensure that if one department's radios are inoperable, they can utilize extra radios maintained by other county departments.	**5**
12.1.1	Develop and distribute an informational brochure to all governmental, state, and critical facilities (such as schools) describing the proper guidelines to be conducted in the event of a bomb threat.	**4**
13.1.1	Coordinate with local officials and representatives from organizations holding tier II permits to produce a more detailed plan on how to handle spills and evacuation procedures.	**6**
14.1.1	Continue partnerships with appropriate parties in the monitoring of the general condition of dams throughout Lewis County. Dams to be included are: Stonewall Jackson Dam, Weston Dam, Stonecoal Creek Dam and Reservoir, Bendale Dam, Jane Lew Dam, and Jackson's Mill Dam.	**5**
15.1.1	Work with appropriate agencies (power companies, board of education, home health services, etc.) to compile a special needs inventory for Lewis County and the municipalities therein.	**7**

Previous Project Description	*Coordinating Agency*	*Status*
1.1.1: Consider and identify alternate water sources.	Public Service Districts, Office of Emergency Management, LEPC	Not completed per funding availability, Re-prioritized
1.1.2: Identify a drought response official to monitor weather conditions	Office of Emergency Management, LEPC	Not completed per funding availability, Re-prioritized
1.1.3: Identify large water consumers and develop individual drought response plans	Office of Emergency Management, LEPC, Individual Facilities	Not completed per funding availability, Re-prioritized
1.1.4: Implement water conservation techniques early, using rationing only as a last resort	PSDs, Municipal Utilities	Completed, On-going
1.2.1: Provide information to the public regarding drought and drought response plans	USDA Natural Resource Conservation Service, Farm Bureau	Completed, On-going
1.2.2: Develop water conservation tips and distribute to the general public via utility statements, media releases, etc.	PSDs, Municipal Utilities, USDA Natural Resource Conservation Service	Not completed, Re-prioritized
1.3.1: Stress the importance of water conservation at all times, not just during drought conditions or when a drought is imminent.	PSDs, Municipal Utilities, Randolph-Elkins Health Department	Completed, On-going
1.3.2: Promote water-conserving devices for home and business construction.	PSDs, Municipal Utilities, Device Manufacturers	Completed, On-going
1.3.3: Construct a water impoundment in the county to act as a reservoir and secondary water supply.	USDA, US Army Corps of Engineers	Not completed per funding availability, Re-prioritized
2.1.1: Develop an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information on measures to take to safe-proof homes and other structures from the potential effects of earthquakes.	Office of Emergency Management, LEPC	Not completed, Re-prioritized

2.1.2: Review current building codes to ensure that critical facilities are being constructed to seismic strength.	County Commission, Municipal Councils, County Building Commission, County Planning Department	Completed, On-going
3.1.1: Publish public service announcements through local media (newspaper, radio, television) concerning an epidemic and what steps to take to eliminate it	Office of Emergency Management, LEPC, Local Media Outlets	Completed, On-going
3.2.1: Coordinate with county and state health officials to store necessary medications and supplies for either a naturally-spread epidemic or a deliberately-spread epidemic.	Randolph-Elkins Health Department, WVDHHR	Not completed, Re-prioritized
4.1.1: Develop zoning regulations and floodplain management regulations that will establish criteria for property construction in a floodplain	County Commission, Municipal Councils, County Building Commission, County Planning Commission	Completed, On-going
4.1.2: Enforce ordinances that are already in place.	County Commission	Completed, On-going
4.2.1: Continue to maintain areas in the county that are designated as open space as such.	Project Impact, County Commission	Completed, On-going
4.2.2: Designate additional areas as open space areas as a means of eliminating structures that could sustain flood damage. Designation of open space areas should take into consideration the following elements: potential for future development, benefits to wildlife, impact on storm water management, impact on the tax base, and impact of future flood damage.	Project Impact, County Commission, Municipal Councils, County Planning Commission	Not completed, Re-prioritized
4.2.3: Undertake acquisition and/or relocation projects in an effort to implement open space designations.	Project Impact, County Commission, Municipal Councils	Not completed, Re-prioritized
4.3.1: Develop stringent storm water management codes for future development sites.	Municipal Councils, County Commission	Not completed, Re-prioritized
4.4.1: Coordinate county efforts to meet the requirements of becoming a participant in the CRS.	County Planning Commission, County Commission	Completed, On-going

4.5.1: Install devices along roadways to measure the depths of flood waters, thus notifying individuals attempting to cross if the waters are too deep.	LEPC	Not completed, Re-prioritized
5.1.1: Coordinate efforts with local media to post advance warnings of hailstorms.	Office of Emergency Management, LEPC, Local Media Outlets	Completed, On-going
6.1.1: Develop an information brochure to distribute to local farmers and residents about possible infestations, such as gypsy moths, etc.	USDA, WVDNR, Farm Bureau	Removed, other agencies provide this information
7.1.1: Undertake efforts to map areas of subsidence and landslides and distribute such information to the public.	WVDEP, Project Impact	Not completed, Re-prioritized
7.1.2: Encourage residents living in landslide or subsidence-prone areas to be properly insured.	County Building Commission, Local Mortgage Lenders, Insurance Providers	Completed, On-going
7.2.1: Enforce existing building codes that are already in place.	County Building Commission, Municipal Councils	Completed, On-going
7.2.2: Evaluate building codes to see if any revisions can be made to protect residents from landslide or subsidence damage.	Office of Emergency Management, National Weather Service	Completed, On-going
8.1.1: Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe thunderstorm conditions.	National Weather Service	Completed, On-going
8.1.2: Exploit existing advance warning systems throughout the county.	Office of Emergency Management, LEPC	Completed, On-going
9.1.1: Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe wind or possible tornado conditions.	National Weather Service	Completed, On-going
9.1.2: Monitor NOAA Weather Radios for tornado watches and warnings, particularly in the spring and summer months.	Office of Emergency Management, LEPC	Completed, On-going

9.1.3: Encourage families, schools, and communities to prepare response plans for severe wind and/or tornado events.	Office of Emergency Management, LEPC, Board of Education, County Residents	Completed, On-going
9.2.1: Encourage residents and businesses to strengthen the most vulnerable spots in their structures, such as the roof, windows, and doors.	Office of Emergency Management, LEPC, Mortgage Lenders, Insurance Providers	Completed, On-going
10.1.1: Work to place power lines underground.	Electricity Providers	Removed, other agencies responsible for utilities
10.1.2: Maintain clear rights-of-way by cutting trees and other debris out of paths.	WVDOH	Removed, other agencies responsible for right of ways
10.2.1: Identify critical assets requiring continuous power and ensure that a sufficient number of generators are on-hand and operational.	Office of Emergency Management, LEPC, Asset Representatives	Not completed, Re-prioritized

11.1.1: Develop an informational brochure to distribute to local residents.	Office of Emergency Management, LEPC	Not completed, Re-prioritized
11.1.2: Educate local residents on the benefits of conserving water during a heat wave.	PSDs, Municipal Utilities	Completed
12.1.1: Encourage residents and businesses to create “safety zones” around their structures by mowing grass regularly, removing combustible materials, and removing dead branches that extend over roofs.	WVDNR, Office of Emergency Management	Completed, On-going
12.1.2: Enhance relationships between local fire officials and the US and WV Forest Services.	US Forest Service, WV Forest Service, Local Fire Departments	Completed, On-going
12.2.1: Encourage the use of flame retardant materials in new building construction.	County Building Commission, Municipal Councils	Not completed, Re-prioritized
13.1.1: Determine the risk and hazard area associated with the use of the chemicals currently used, stored, or transported into and through Randolph County.	Office of Emergency Management, LEPC	Completed, On-going
13.1.2: Update or conduct a commodity flow study for Randolph County to let emergency personnel know what the most likely routes of hazardous materials transportation in the county are.	Office of Emergency Management, LEPC, Asset Representatives	Completed, Study will need updated
13.1.3: Work with facilities that store hazardous chemicals to develop emergency action plans.	Office of Emergency Management, LEPC	Completed, On-going
13.2.1: Publicize evacuation plans.	FBI, WV State Police, Sheriff’s Department, Municipal Police Departments	Not completed, Re-prioritized
13.2.2: Facilitate the creation of safe zones as places where residents can go in the event of a hazardous materials incident. Further, publicize the location and access to these safe zones.	FBI, WV State Police, Sheriff’s Department, Municipal Police Departments	Not completed, Re-prioritized
14.1.1: Develop and/or enhance terrorist incident portions of the county Emergency Operations Plan.	Office of Emergency Management, LEPC	Completed, EOP will be updated regularly

14.1.2: Monitor suspected terrorist groups.	FBI, WV State Police, Sheriff's Department, Municipal Police Departments	Completed, On-going
14.1.3: Maintain a working relationship among local, state, and federal law enforcement agencies.	FBI, WV State Police, Sheriff's Department, Municipal Police Departments	Completed, On-going
14.1.4: Coordinate with local media to alert the public as to current threat status.	Office of Emergency Management, LEPC	Removed, other agencies responsible for utilities
14.2.1: Establish trauma centers to offer medical attention and counseling to affected populations in the event of a terrorist event.	Office of Emergency Management, American Red Cross	Completed, On-going, continue to maintain and update shelter lists

All Jurisdictions	*Project 3.1.1*: Publish public service announcements through local media (newspaper, radio, television) concerning an epidemic and what steps to take to eliminate it. *Project 3.2.1:* Coordinate with county and state health officials to store necessary medications and supplies for either a naturally-spread epidemic or a deliberately-spread epidemic. *Project 4.1.1*: Develop zoning regulations and floodplain management regulations that will establish criteria for property construction in a floodplain. *Project 4.1.2*: Enforce ordinances that are already in place.

All Jurisdictions (*continued*)	*Project 4.4.1*: Coordinate county efforts to meet the requirements of becoming a participant in the CRS. *Project 6.2.1*: Enforce existing building codes that are currently in place. *Project 6.2.2*: Evaluate building codes to see if any revisions can be made to protect residents from landslide or subsidence damage. *Project 7.1.2*: Continue to utilize existing advance warning systems throughout the county. *Project 8.1.1*: Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe wind or possible tornado conditions. *Project 8.1.2*: Monitor NOAA Weather Radios for tornado watches and warnings, particularly in the spring and summer months.
Randolph County	*Project 1.1.1*: Consider and identify alternate water sources. *Project 1.1.2*: Identify a drought response official to monitor weather conditions. *Project 1.1.3*: Identify large water consumers and develop individual drought response plans. *Project 1.1.4*: Implement water conservation techniques early, using rationing only as a last resort. *Project 1.2.1*: Provide information to the public regarding drought and drought response plans. *Project 1.2.2*: Develop water conservation tips and distribute to the general public via utility statements, media releases, etc. *Project 1.3.1*: Stress the importance of water conservation at all times, not just during drought conditions or when a drought is imminent. *Project 4.2.1*: Continue to maintain areas in the county that are designated as open space as such. *Project 4.2.2*: Designate additional areas as open space areas as a means of eliminating structures that could sustain flood damage.

Designation of open space areas should take into consideration the following elements: potential for future development, benefits to wildlife, impact on storm water management, impact on the tax base, and impact of future flood damage.

Project 4.2.3: Undertake acquisition and/or relocation projects for both RL and non-RL properties in an effort to implement open space designations.

Project 4.5.1: Install devices along roadways to measure the depths of flood waters, thus notifying individuals attempting to cross if the waters are too deep.

Project 5.1.1: Provide local residents with more advance warning of impending hailstorms.

Project 6.1.1: Undertake efforts to map areas of subsidence and landslides and distribute such information to the public.

Project 6.1.2: Encourage residents living in landslide or subsidence-prone areas to be properly insured.

Project 11.1.1: Determine the risk and hazard area associated with the use of the chemicals currently used, stored, or transported into and through Randolph County.

Project 11.1.2: Set up commodity flow studies for Randolph County on a 5 year update cycle to keep information current on types and quantities of hazardous materials are being transported through the county.

Project 11.2.1: Publicize evacuation plans

Project 12.1.4: Coordinate with local media to alert the public as to current threat status.

Project 11.1.3: Work with facilities that store hazardous chemicals to develop emergency action plans.

Project 11.2.2: Facilitate the creation of safe zones as places where residents can go in the event of a hazardous materials incident. Further, publicize the location and access to these safe zones.

Project 12.1.3: Maintain a working relationship among local, state,

	and federal law enforcement agencies. *Project 12.2.1*: Establish trauma centers to offer medical attention and counseling to affected populations in the event of a terrorist event.
Town of Beverly	*Project 8.1.3*: Encourage families, schools, and communities to prepare response plans for severe wind and/or tornado events. *Project 8.2.1*: Encourage residents and businesses to strengthen the most vulnerable spots in their structures, such as the roof, windows, and doors.
Town of Coalton	*Project 2.1.1*: Develop an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information on measures to take to safe-proof homes and other structures from the potential effects of earthquakes. *Project 2.1.2*: Review current building codes to ensure that critical facilities are being constructed to seismic strength.
City of Elkins	*Project 12.1.1*: Develop and/or enhance terrorist incident portions of the county Emergency Operations Plan. *Project 12.1.2*: Monitor suspected terrorist groups.
Town of Huttonsville	*Project 9.1.1*: Identify critical assets requiring continuous power and ensure that a sufficient number of generators are on-hand and operational. *Project 10.1.2*: Enhance relationships between local fire officials and the US and WV Forest Services
Town of Harman	*Project 7.1.1*: Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe thunderstorm conditions. *Project 10.1.1*: Encourage residents and businesses to create “safety zones” around their structures by mowing grass regularly, removing combustible materials, and removing dead branches that

	extend over roofs.
Town of Mill Creek	*Project 1.3.3*: Construct a water impoundment in the county to act as a reservoir and secondary water supply. *Project 4.3.1*: Develop stringent storm water management codes for future development sites.
Town of Montrose	*Project 10.2.1*: Encourage the use of flame retardant materials in new building construction. *Project 1.3.2*: Promote water-conserving devices for home and business construction.

Project Number	Mitigation Project	Priority
1.1.1	Consider and identify alternate water sources.	**9**
1.1.2	Identify a drought response official to monitor weather conditions.	**7**
1.1.3	Identify large water consumers and develop individual drought response plans.	**4**
1.1.4	Implement water conservation techniques early, using rationing only as a last resort.	**9**
1.2.1	Provide information to the public regarding drought and drought response plans.	**8**
1.2.2	Develop water conservation tips and distribute to the general public via utility statements, media releases, etc.	**8**

Project Number	Mitigation Project	Priority
1.3.1	Stress the importance of water conservation at all times, not just during drought conditions or when a drought is imminent.	**8**
1.3.2	Promote water-conserving devices for home and business construction.	**8**
1.3.3	Construct a water impoundment in the county to act as a reservoir and secondary water supply.	**5**
2.1.1	Develop an informational brochure explaining the potential for earthquakes, as well as the potential damages from those earthquakes. The brochure should include information on measures to take to safe-proof homes and other structures from the potential effects of earthquakes.	**8**
2.1.2	Review current building codes to ensure that critical facilities are being constructed to seismic strength.	**11**
3.1.1	Publish public service announcements through local media (newspaper, radio, television) concerning an epidemic and what steps to take to eliminate it.	**8**
3.2.1	Coordinate with county and state health officials to store necessary medications and supplies for either a naturally-spread epidemic or a deliberately-spread epidemic.	**1**
4.1.1	Develop zoning regulations and floodplain management regulations that will establish criteria for property construction in a floodplain.	**11**
4.1.2	Enforce ordinances that are already in place.	**6**
4.2.1	Continue to maintain areas in the county that are designated as open space as such.	**9**
4.2.2	Designate additional areas as open space areas as a means of eliminating structures that could sustain flood damage. Designation of open space areas should take into consideration the following elements: potential for future development, benefits to wildlife, impact on storm water management, impact on the tax base, and impact of future flood damage.	**9**
4.2.3	Undertake acquisition and/or relocation projects for both RL and non-RL properties in an effort to implement open space designations.	**1**
4.3.1	Develop stringent storm water management codes for future development sites.	**11**
4.4.1	Coordinate county efforts to meet the requirements of becoming a participant in the CRS.	**10**
4.5.1	Install devices along roadways to measure the depths of flood waters, thus notifying individuals attempting to cross if the waters are too deep.	**5**
5.1.1	Provide local residents with more advance warning of impending hailstorms.	**3**
6.1.1	Undertake efforts to map areas of subsidence and landslides and distribute such information to the public.	**4**
6.1.2	Encourage residents living in landslide or subsidence-prone areas to be properly insured.	**8**

Project Number	Mitigation Project	Priority
6.2.1	Enforce existing building codes that are currently in place.	6
6.2.2	Evaluate building codes to see if any revisions can be made to protect residents from landslide or subsidence damage.	11
7.1.1	Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe thunderstorm conditions.	7
7.1.2	Continue to utilize existing advance warning systems throughout the county.	2
8.1.1	Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe wind or possible tornado conditions.	7
8.1.2	Monitor NOAA Weather Radios for tornado watches and warnings, particularly in the spring and summer months.	8
8.1.3	Encourage families, schools, and communities to prepare response plans for severe wind and/or tornado events.	8
8.2.1	Encourage residents and businesses to strengthen the most vulnerable spots in their structures, such as the roof, windows, and doors.	8
9.1.1	Identify critical assets requiring continuous power and ensure that a sufficient number of generators are on-hand and operational.	4
10.1.1	Encourage residents and businesses to create “safety zones” around their structures by mowing grass regularly, removing combustible materials, and removing dead branches that extend over roofs.	8
10.1.2	Enhance relationships between local fire officials and the US and WV Forest Services.	7
10.2.1	Encourage the use of flame retardant materials in new building construction.	8
11.1.1	Determine the risk and hazard area associated with the use of the chemicals currently used, stored, or transported into and through Randolph County..	4
11.1.2	Set up commodity flow studies for Randolph County on a 5 year update cycle to keep information current on types and quantities of hazardous materials are being transported through the county.	10
11.1.3	Work with facilities that store hazardous chemicals to develop emergency action plans.	7
11.2.1	Publicize evacuation plans.	1
11.2.2	Facilitate the creation of safe zones as places where residents can go in the event of a hazardous materials incident. Further, publicize the location and access to these safe zones.	11
12.1.1	Develop and/or enhance terrorist incident portions of the county Emergency Operations Plan.	10
12.1.2	Monitor suspected terrorist groups.	10
12.1.3	Maintain a working relationship among local, state, and federal law enforcement agencies.	7

Project Number	Mitigation Project	Priority
12.1.4	Coordinate with local media to alert the public as to current threat status.	**8**
12.2.1	Establish trauma centers to offer medical attention and counseling to affected populations in the event of a terrorist event.	**11**

CITY OF PARSONS; MITIGATION GOALS, OBJECTIVES & STRATEGIES

Goal: Flooding
Objectives: Minimize the effects of flooding; protect lives and property.
Strategies: Work with the County OES Director, FEMA, City & County Governments, Dept. of Highways, National Weather Service, Fire & EMS Personnel, 9-1-1 Director, National Guards, Citizens/Residents, Electric & Phone Companies, and the County Humane Society. Improve City and County Building Codes & Flood Ordinances.

Goal: Drought
Objectives: Minimize the effects of Drought; protect lives and property.
Strategies: Work with the Department Highways, OES office etc. to haul potable water.

Goal: Hazardous Materials
Objectives: Minimize the effects of hazardous material spoils; protect lives and property.
Strategies: Work with Department of Environmental Protection, Land and Soil Conservation, Division of Natural Resources, U.S. National Forestry Service, Fire & EMS Personnel, 9-1-1 Director, County OES Director, Public Service Commission, and FEMA.

Goal: Wildfires
Objectives: Minimize the effects of wildfires; protect lives and property.
Strategies; Work with U.S. National Forestry Service, Division of Natural Resources, Fire & EMS Personnel, 9-1-1 Director, County OES Director, and FEMA,

Goal: Geological Hazards
Objectives: Minimize the effects of geological hazards; protect lives and property.
Strategies: Work with National Weather Service, County OES Director, FEMA, Deptartment of Highways, Electric & Phone Companies, Fire & EMS Personnel, 9-1-1 Director, and Citizens/Residents.

Goals: Radiological Hazards
Objectives: Minimize the effects of radiological hazards; protect lives and property.
Strategies: Work with County OES Director, Davis Health Systems, EMS Personnel, 9-1-1 Director, and Citizens/Residents.

Goals: Terrorism
Objectives: Minimize the effects of terrorist attacks; protect lives and property.
Strategies: FBI, Homeland Security (FEMA), State/County/Local Police, City & County Governments, County OES Director, Fire & EMS Personnel, National Guards and Citizens/Residents.

Goal: None to Little Risk of Land Subsidence.

Goal: Tornadoes & High Winds
Objectives: Minimize the effects of tornadoes and high winds; protect lives and property.
Strategies: Work with National Weather Service, County OES Director, FEMA, Electric & Phone Companies, Dept. of Highways, Fire & EMS Personnel, 9-1-1 Director, and Citizens/Residents.

Goal: Winter Storm
Objectives: Minimize the effects of the winter storm; protect lives and property.
Strategies: Work with the County OES Director, FEMA, City & County Governments, Dept. of Highways, National Weather Service, Fire & EMS Personnel, 9-1-1 Director, National Guards, Citizens/Residents, Electric & Phone Companies, and the County Humane Society. Improve City and County Building Codes.

CITY OF THOMAS; MITIGATION GOALS, OBJECTIVES & STRATEGIES

Goal: Flooding
Objectives: Protect structures in flood area. The City Sewage Treatment Plant is the only structure in the city limits that is prone to flooding. The safety of the people in and around this area. There are also problems with drainage systems, culverts, etc. They are outdated and cannot handle large amount of water, and many structures suffer water damage due to runoff that cannot be contained in times of heavy rainfall.
Strategies: Work with the city, county, state and federal officials to secure funding for design and construction of flood prevention systems to protect the structures. Establish plans for the evacuation of employee and other persons that may be in or around structure. Try to secure grants to segregate storm drains from line going to the plant to reduce overflow in times of flooding, heavy rains, etc. Work toward getting grant money to improve the drainage systems in the town, so as to accommodate water runoff when rainfall is heavy.

Goal: Drought
Objectives: Provide Needed Potable Water & Water For Fire Fighting.
Strategies: Work with the Department Highways, OES office etc. to haul potable water for emergency use. Protect the Thomas Dam that is designed as a backup for pumping water for fire fighting. Keep up maintenance of Dry Hydrants located along railroad grade.

Goal: Hazardous Materials
Objectives: Safety of Citizens, Emergency Shelter, Emergency Supplies, Food, and Environmental Clean- up.
Strategies: Contract the work with OSE, Department of Highways, Department of Public Safety & other Agencies trained in handling hazardous materials. Plan the evacuation of affected people. Identify as emergency shelters: Thomas Community Center, Thomas Senior Center and places in other areas that can be used further from the site of the emergency. Acquire an adequate food supply. Identify food pantries.

Goal: Wildfires, Thomas is Surrounded by Forests and Wildfires County Pose a threat.
Objectives: Safety of Population, Evacuation, Shelter, Food, and Fighting Fire.
Strategies: Work with local fire departments, OES & Department of Public Safety, to help in evacuations. Establish emergency shelters with adequate food supply in safe locations. Work with fire departments, forest service, and volunteers to fight the fire.

Goal: Geological Hazards
Objectives: Identify Potential Hazards, Prevention, Provide Safety, shelter and Cleanup After an Event.
Strategies: Thomas is located on a hillside and has the potential for slippage, mud slides, etc. Try to acquire monies to identify possible hazards, once identified, work with state and federal agencies to find solutions to the problem areas. If an event would take place work with OES, fire departments, community center, senior center, churches and other organizations to provide shelter and food for victims. We need to investigate the possibility of obtaining FEMA or other moneys from other organizations to provide shelter and food for victims.

Goal: Radiological Hazards, Material Transportation by Truck, or Potential of Natural Production of Radon.
Objectives: Protection in the event of an accident involving radiological waste.
Strategies: Be aware of the State Radiological Emergency Response Plan and determine a plan of action to work with OES and designated agencies to take proper action in the case of an accident. Provide in formation to individuals about the possibility of radon in their home and provide consultation from the State of West Virginia Bureau of Public Health. Work in conjunction with local board of health.

Goal: Terrorism
Objectives: Consider the risk for terrorism in our area. Create and follow policy.
Strategies: The risk from terrorism in the Thomas area is considered low. Terrorism is usually targeted at more highly populated areas. A terrorist act may come in the form of an act targeted at an individual or a group of individuals. Even with the low risk we should be prepared for an emergency. The local LEPC is working with officials and organization within the county to formulate a plan in case of an event. The City of Thomas should work with this group and keep its citizens aware of the plan.

Goal: Land Subsidence due to Mining
Objectives: Identify areas that are most susceptible to subsidence. Work on creating as close as possible accurate mapping of prone areas. Make citizens aware of these known areas. Encourage citizens to obtain mine subsidence insurance. Further the effort to fill voids under the town to help stop the subsidence.
Strategies: Work with the proper state agencies to crate a mapping of the town to show as close as possible the actual tunnels and voids created by previous mining and erosion. Inform the citizens of the community where these prone areas are located by holding public hearings and displaying the maps, etc. where people can view them. Inform the citizens of the availability of subsidence insurance that can be obtained as part of their homeowner policy. Encourage residents to obtain the coverage. Continue to work with the DEP, Department of Reclamation to finish the project in Thomas that will fill many of the voids and help to hinder the subsidence.

Goal: Tornadoes & High Winds
Objectives: Identify shelters for the citizens of Thomas.
Strategies: Work with National Weather Service, County OES Director, FEMA, Electric & Phone Companies, Dept. of Highways, Fire & EMS Personnel, 9-1-1 Director, and Citizens/Residents. Defining shelters such as the Thomas Community and Thomas Senior Center, find adequate food and a good source of potable water.

Goal: Winter Storms
Objectives: Obtain equipment sufficient to handle large amounts of snow, especially the heavy wet snow. Keep narrow streets open so that emergency equipment can get through when needed. Plan the evacuation of people when needed in events such as roof collapse, loss of utilities, etc. Additional help with snow removal when needed.
Strategies: Work to purchase snow removal equipment with the help of grants that are within the financial means of the city. Develop a plan with residents for removal of cars and working together to clear streets so that the snow can be removed efficiently. Work with fire departments, OES, and law enforcement to evacuate people who have emergencies such as structural damage, loss of utilities, or medical emergencies. Work with OES, and DOH to obtain additional help when an emergency arises to obtain additional equipment for snow removal.

TOWN OF DAVIS; MITIGATION GOALS, OBJECTIVES & STRATEGIES

Goal: Drought
Objectives: Provide Needed Potable Water & Water For Fire Fighting.
Strategies: Haul water from Blackwater River and Beaver Creek for toilets and fire prevention. Work with the Department of highways for Potable water.

Goal: Hazardous Materials
Objectives: Minimize the effects of hazardous material spoils; protect lives and property.
Strategies: Work with the Department of Highways, Tucker County Office of Emergency Services, Fire Departments and other agencies trained in hazardous materials. Getting shelters for families that have been evacuated (temporary Town Hall and Community Center). Getting a food supply for evacuated families, working with State OES.

Goal: Wildfires
Objectives: Minimize the effects of wildfires; protect lives and property.
Strategies: Work with the Forest Service. Fire Departments, Wildlife Refuge, State Police, Department of Highways and other agencies trained in helping evacuate homes. Getting shelters (emergency shelters, Town Hall, and the Community Center), food supply for evacuated families. Getting volunteers to help with digging a fire break where needed.

Goal: Geological Hazards
Objectives: Minimize the effects of geological hazards; protect lives and property.
Strategies: Work with the Fire Departments, State Police, Tucker County OES and other agencies trained in helping evacuate areas that are in danger from earthquakes and mud slides. Getting shelters for families that have been evacuated (temporary

shelters: Town Hall and Community shelter). Getting food supply for evacuated families, working with the state OES.

Goal: Terrorism
Objectives: Minimize the risk if a terrorist attack.
Strategies: Work with the Local Emergency Planning Commission and the officials of various organizations within the county to formulate a plan in the case of an event. Make the citizens aware of the plan and what to look for.

Goal: Tornados and High Winds
Objectives: Minimize the effects of tornadoes and high winds; protect lives and property.
Strategies: Work with the Fire Departments, DOH, State and other agencies trained in helping with evacuation. Getting a food supply for evacuated families. Getting shelters for families that have been evacuated (temporary shelters: Town Hall and Community Center.

Goal: Winter Storm
Objectives: Minimize the effects of the winter storm; protect lives and property.
Strategies: Work with the Department of Highways to see what roads will be taken care of first and getting materials. Continually remove snow by plowing. Work with fire departments for evacuation, State Police for traffic control. Get necessary resources or money to purchase equipment for snow removal (such as grants). Open shelters (temporary shelters; Town Hall and the Community Center) for families that have been evacuated (heave snow off roof, no heat or electricity, etc.) Getting shelter for animals that are in need. Getting food and water supply to families as needed.

TOWN OF HAMBLETON; MITIGATION GOALS, OBJECTIVES & STRATEGIES

Goal: Flooding
Objectives: Minimize the effects of flooding; protect lives and property.
Strategies: Work with the County OES Director, FEMA, City & County Governments, Dept. of Highways, National Weather Service, Fire & EMS Personnel, 9-1-1 Director, National Guards, Citizens/Residents, Electric & Phone Companies, and the County Humane Society. Improve City and County Building Codes & Flood Ordinances.

Goal: Drought
Objectives: Provide Needed Potable Water & Water For Fire Fighting. Strategies: Haul water from the Blackfork River and work with the Department of Highways for potable water.

Goal: Hazardous Materials
Objectives: Minimize the effects of hazardous material spoils; protect lives and property.
Strategies: Work with the Department of Environmental Protection, Land and Soil Conservation, Division of Natural Resources, U.S. National Forestry Service, Fire & EMS Personnel, 9-1-1 Director, County OES Director, Public Service Commission, and FEMA.

Goal:	Emergency Plan for Evacuation and Fighting and Approaching Forest Fire
Objectives:	Better Communication with associated government agencies and residents, provide a system of evacuation for those in danger, Identify special needs residents including elderly and disabled, Provide adequate shelter for those displaced, Provide method for dealing with special needs, Provide shelter for pets of displaced residents,
Strategies:	Develop a system of Radios and or cellular phones to improve direct communication with government agencies during normal communication system failure and develop a list of those agencies and contacts, Develop evacuation procedures for removing all endangered residents including elderly and disabled, Develop the shelter for a major or total evacuation to and supply it, Develop a method for dealing with pets by working with local Humane Society, Develop protocol for return to an evacuated structure, Educate the community on the Emergency Plan and who to contact for information, Work with Fire Departments and other communities to provide support during the emergency.
Goal:	Geological Hazards Emergency Plan for Notification and Recovery from an Earthquake.
Objectives:	Better Communication with associated government agencies and residents, provide a system of evacuation for those in danger, Identify special needs residents including elderly and disabled, Provide adequate shelter for those displaced, Provide method for dealing with special needs, Provide shelter for pets of displaced residents.
Strategies:	Develop a system of Radios and or cellular phones to improve direct communication with government agencies during normal communication system failure and develop a list of those agencies and contacts, Develop evacuation procedures for removing all endangered residents including elderly and disabled, Develop evacuation procedures for removing all endangered residents including elderly and disabled, Develop the shelter for a major or total evacuation to and supply it, Develop a method for dealing with pets by working with local Humane Society, Develop a measurement system for monitoring land suspected of slippage, Develop a communication system to notify residents of the approaching danger, Educate the community on the Emergency Plan and who to contact for information, Work with Fire Departments and other communities to provide support during the emergency, Develop a recovery strategy for search and rescue after the event, Determine providers of debris removal equipment to clear streets and provide access to damaged structures.
Goal:	Land Subsidence.
Objectives:	Better Communication with associated government agencies and residents, provide a system of evacuation for those in danger, Identify special needs residents including elderly and disabled, Provide adequate shelter for those displaced, Provide method for dealing with special needs, Provide shelter for pets of displaced residents.
Strategies:	Develop a system of Radios and or cellular phones to improve direct communication with government agencies during normal communication system failure and develop a list of those agencies and contacts, Develop evacuation procedures for removing all endangered residents including elderly and disabled, Develop a strategy for displaced residents to stay with relatives or motels to reduce the use of major or total evacuation shelters, Develop a method for dealing with pets by working with local Humane Society, Develop a measurement system for monitoring land suspected of slippage, Develop a communication system to notify residents of the approaching danger, Educate the community on the Emergency Plan and who to contact for information, Work with Fire Departments and other communities to provide support during the emergency, Develop a recovery strategy for search and rescue after the

event, Determine providers of debris removal equipment to clear streets and provide access to damaged structures.

Goal:	Emergency Plan for Survival and Recovery during High Winds or Tornados
Objectives:	Better Communication with associated government agencies and residents, provide a system of evacuation for those in danger, Identify special needs residents including elderly and disabled, Provide adequate shelter for those displaced, Provide method for dealing with special needs, Provide shelter for pets of displaced residents.
Strategies:	Develop a system of Radios and or cellular phones to improve direct communication with government agencies during normal communication failure and develop a list of those agencies and contacts, Develop evacuation procedures for removing all endangered residents including elderly and disabled, Develop a list of quick access shelters for a rapid transfer to safety (structures with basements), Develop a method for dealing with pets by working with local Humane Society, Develop a rapid communication system to notify residents of the approaching danger, Educate the community on the Emergency Plan and who to contact for information, Work with Fire Departments and other communities to provide support during the emergency, Develop a recovery strategy for search and rescue after the event, Determine providers of debris removal equipment to clear streets and provide access to damaged structures.

Goal:	Emergency Plan for Living with Severe Winter Storms (snowfall greater than 12")
Objectives:	Better Communication with all government agencies, Open the streets to provide access to residents, Provide a system of checking on the immediate needs of elderly and disabled including medicines and supplies, Obtain access to building roof snow removal equipment, Provide shelter for those in need, and Provide shelter for pets of displaced families.
Strategies:	Develop a system of Radios and or cellular phones to improve direct communication with government agencies during normal communication system failure and develop a list of those agencies and contacts, Contact local suppliers owning equipment that could supplement normal snow removal system, Establish and maintain a list of elderly and disabled to support a call chain or neighbor checking on elderly and disabled and communicating their needs to those to help. Purchase roof snow removal equipment in conjunction with other communities to be able to share the equipment to remove snow from roofs and establish a method for setting priorities for the use of that equipment, Identify the structures with flat roofs and rank them for hazards, Develop Building Codes to curtail future development using flat roofs, For collapsed homes, develop a strategy for displaced residents to stay with relatives or motels to reduce the use of major or total evacuation shelters, Develop a method for dealing with pets by working with local Humane Society, Develop and maintain through annual review a list of trained local emergency personnel to contact for advice during the snow emergency, Develop protocol for return to an evacuated structure, Educate the community on the Emergency Plan and who to contact for information.

TOWN OF HENDRICKS; MITIGATION GOALS, OBJECTIVES & STRATEGIES

Goal: Flooding
Objectives: Minimize the effects of flooding; protect lives and property.
Strategies: After water subsided, Fire Department, State Police, Department of Highways and other agencies were trained in rescue. Getting shelters for families in flooded areas. Getting a food supply for flooded families. Some kind of heat for warming of flooded families and/or to help dry out flooded homes and businesses.

Goal: Drought
Objectives: Provide Needed Potable Water & Water For Fire Fighting. Strategies: Haul water from the Dryfork and Blackwater Rivers, and work with the Department of Highways.

Goal: Hazardous Materials
Objectives: Evacuation, shelter, food and clean-up
Strategies: Work with the Department of Highways and other agencies trained in hazardous materials. Getting shelters for families that have been evacuated. Getting a food supply for evacuated families. Help with any evacuation of areas that are contaminated.

Goal: Wildfires
Objectives: Evacuation, shelter, food, digging a fire break
Strategies: Work with the Forest Service. Work with Fire Department, State Police, Department of Highways and other agencies trained in helping evacuate homes. Getting shelters for families that have been evacuated. Getting a food supply for evacuated families. Getting volunteers to help with digging a fire break where needed.

Goal: Geological Hazards
Objectives: Evacuation, shelter, food and clean-up
Strategies: Work with Fire Department, State Police and other agencies trained in helping evacuate areas that are in danger of Earthquakes and mud slides. Getting shelters for families that have been evacuated. Getting a food supply for evacuated families.

Goal: Tornadoes and High Winds
Objectives: Shelters, Evacuation, Food Supply
Strategies: Work with Fire Department, State and other agencies trained in helping with evacuation. Getting a food supply for evacuated families. Getting shelters for families that have been evacuated.

Goal: Winter Storms
Objectives: Equipment for snow removal, Evacuation of homes and animals, help with snow removal
Strategies: Work with Department of Highways to see what roads will be taken are of first and getting materials. Get necessary resources for money to purchase equipment for snow removal (such as grants). Get local support with businesses that have snow removal equipment. Getting shelters for families that have been evacuated (heavy snow on roof, no heat, no electric and etc). Getting shelters for animals that are in need. Getting a food supply for evacuated families and animals.

Goal 1: Reduce the negative effects of Flooding in Tucker County

Objective 1.1: Minimize the effects of flooding by protecting lives, businesses and property

Strategy 1.1.1. Buy-out repetitive loss property
Timeframe: 1 year
Funding: HMGP, the State and County
Coordinating Agency: County Commission, Council, Local Office of Emergency Services and the Flooding Plain Manager
Mitigation Type: Property acquisition
Action: Completed and Ongoing.
The county enacted a program to purchase properties within the flood plane. Should additional funding become available, more properties will be purchased.

Strategy 1.1.2. Enforcement of Flood Plain Ordinance by County and Municipalities.
Timeframe: 18 Months
Funding: No additional funding necessary
Coordinating Agency: County Commission and City Councilpersons
Mitigation Type: Property protection
Action: Completed and Ongoing
All building requests in flood prone areas are reviewed by the county for flood plane compliance.

Strategy 1.1.3. Adopt countywide building codes, which will regulate the number of structures and material used in construction of buildings
Timeframe: 1 year
Funding: No additional funding necessary
Coordinating Agency: County Commission, City Council, Local Planning Commission, Local Office of Emergency Services and the Local Emergency Planning Committee
Mitigation Type: Property protection
Action: Ongoing

Goal 2: Reduce the negative effects of Drought on Tucker County

Objective 2.1.1: Provide adequate water supply for public consumption
Strategy 2.1: Extend public water to outlying areas
Timeline: 5 to 10 years
Funding: Small Cities Block Grant, WV DWTRF Loan.
Coordinating Agency: County Commission and Hamrick Public Service District
Mitigation Type: Public Safety
Action: Deferred due to lack of Funding

Strategy 2.1.2: Provide potable drinking water
Timeline: 1 Month
Funding: State of West Virginia, County & City Government
Coordinating Agency: WV Office of Emergency Services, WV Department of Highways, Local Office of Emergency Services, County & City Council
Mitigation Type: Public Safety
Action: Deferred due to lack of Funding

Goal 3: Reduce the negative effects of Hazard Materials on Tucker County

Objective 3.1: Reduce clean-up time of hazardous materials

Strategy 3.1.1: Emergency Management Institute -training
Timeframe: 3 to 6 months
Funding: FEMA, WV Office of Emergency Services, Local funds
Coordinating Agency: Local Emergency Planning Council & Local Office of Emergency Services, Local Fire Companies, Emergency Services, Council and the County Commission.
Mitigation Type: Public Safety
Action: Ongoing
Hazardous materials were included in the LEPC Emergency Plan that was completed in 2005. A hazard analysis is ongoing with the help of 2008 HMEP grant funds. However, the Facility Outreach Program and the Public Information Program were deferred due to a lack of funding.

Goal 4: Minimize the negative effects of Wildfires on Tucker County

Objective 4.1: Reduce losses due to Wildfires
Strategy 4.1.1: Creation of Safety Zone around Structures
Timeframe: 1 or 2 years
Funding: Tucker County Commission
Coordinating Agency: Commission, Council and Local Emergency Planning Committee
Mitigation Type: Public Safety
Action: Ongoing
Each county municipal fire department received separate grants to purchase wildfire fire fighting equipment. Grants were available through the Fish and Wildlife Service and from the Forest Service.

Objective 4.2: Public Awareness Campaign

Strategy 4.2.1: Distribute Fliers and do Public Service Announcements
Timeframe: 2 months
Funding: No additional funding necessary
Coordinating Agency: Commission, Council, Local Planning Committee & Local Office of Emergency
Mitigation Type: Public Awareness
Action: Ongoing

Strategy 4.2.2: Construct out of Fire Retardant Materials
Timeframe: 6 months
Funding: No additional funding necessary
Coordinating Agency: Commission, Council, Local Planning Commission and Local Office of Emergency Services
Mitigation Type: Public Awareness
Action: Ongoing

Goal 5: Reduce the negative effects of Geological Hazards on Tucker County

Objective 5.1: Protect lives and property for the effects of an Earthquake.

Strategy 5.1.1: Public Education on how to protect your family in the even of an Earthquake.
Timeframe: 6 months
Funding: No additional funding necessary
Coordinating Agency: Commission, Council, Local Planning Commission and Local Office of Emergency Services
Mitigation Type: Public Awareness
Action: Ongoing

Strategy 5.1.2: Enforcement of Building Codes
Timeframe: 6 months
Funding: No additional funding necessary
Coordinating Agency: Commission, Council, Local Planning Commission and Local Office of Emergency Services
Mitigation Type: Public Awareness
Action: Pending adaptation of building codes.

Goal 6: Reduce the negative effects of Radiological Hazards on Tucker County

Objective 6.1: Public Awareness of what Radiological Hazards are.

Strategy 6.1.1: Public Service Announcements describing Radon Gas
Timeframe: 5 months
Funding: No additional funding necessary
Coordinating Agency: Commission, Council, Local Planning Commission and Local Office of Emergency Services
Mitigation Type: Public Awareness
Action: Ongoing

Strategy 6.1.2: Radon Testing
Timeframe: 1 month
Funding: No additional funding necessary
Coordinating Agency: Commission, Council, Local Planning Commission and Local Office of Emergency Services
Mitigation Type: Public Awareness
Action: Ongoing

Goal 7: Minimize the Effects of Terrorist Attacks on residents of Tucker County

Objective 7.1: Complete a Needs Assessment - identify Dams, Public Buildings

Strategy 7.1.1: Coordination of effort and information
Timeframe: 1 year
Funding: No additional funding required
Coordinating Agency: Federal, State, County, Council, Local State Police, Local Department of Highways, Local Office of Emergency Services and Local Emergency Planning Commission.
Mitigation Type: Public Safety and Property Protection
Action: Ongoing

A new 911 Center was built in Tucker County using NFPA 1221 standards. County schools added a lock and notification system. Fences were added to protect county water supplies and a mobile pet shelter was installed.

Goal 8: Minimize the effects of Land Subsidence in Tucker County

Objective 8.1: Reduce damage to property from Mine Subsidence

Strategy 8.1.1: Improve mapping of mined areas.
Timeframe: 1 year
Funding: State of West Virginia and Local
Coordinating Agency: Commission, Council, Local Planning Commission, Local Emergency Planning Commission and Local Office of Emergency Services
Mitigation Type: Public Safety and Property Protection
Action: Deferred due to lack of Funding

Goal 9: Minimize the effects of Tornadoes and High Winds in Tucker County

Objective 9.1: Reduce loss of life and structural Damage

Strategy 9.1.1: Public education and awareness campaign
Timeframe: 3 months
Funding: No additional funding required
Coordinating Agency: Commission, Council, Local Emergency Planning Council, Local Planning Commission and Local Emergency Services
Mitigation Type: Public Safety
Action: Ongoing

Strategy 9.1.2: Distribute NOAA Weather Radios
Timeframes: 6 months
Funding: West Virginia Office of Emergency Services and County
Coordinating Agency: Commission, Council, Local Emergency Planning Council, Local Planning Commission and Local Emergency Services
Mitigation Type: Public Awareness and Property Protection
Action: Ongoing
NOAA radios have been provided to the Tucker County Schools.

Goal 10: Minimize the effect of Winter Storms to the residents of Tucker County

Objective 10.1: Distribute radios to give early warning

Strategy 10.1.1: Distribute NOAA Weather Radios
Timeframes: 6 months
Funding: West Virginia Office of Emergency Services and County
Coordinating Agency: Commission, Council, Local Emergency Planning Council, Local Planning Commission and Local Emergency Services
Mitigation Type: Public Awareness and Property Protection
Action: Ongoing
NOAA radios have been provided to the Tucker County Schools.

Strategy 10.1.2: Identify Shelters and Enact Building Standards or weight restrictions on roofs.
Timeframe: 4 months
Funding: No additional funds needed
Coordinating Agency: Commission, Council, Local Emergency Planning Council, Local Planning Commission and Local Emergency Services
Mitigation Type: Public Awareness and Property Protection
Action: Ongoing
Pending adaptation of County Building Codes.

Previous Project Description	Coordinating Agency	Status
1.1.1: Continue acquisition and relocation efforts throughout the county.	UCOEM	Not completed per funding availability, Re-prioritized
1.2.1: Coordinate interagency cooperation to develop emergency routes and signage.	WVDOH, Local VFDs, UCOEM	Completed, On-going
1.3.1: Supply schools, city hall, and other critical facilities with NOAA radios or other early warning system.	LEPC, UCOEM	Completed, On-going
1.4.1: Coordinate with Soil Conservation Service to develop a map showing areas that would be affected by a dam failure.	Upshur County Commission, UCOEM	Not completed per incorrect responsible agency, Re-prioritized
1.4.2: Determine how and if dam failures in neighboring counties will affect Upshur County.	Upshur County Commission	Not completed, Re-prioritized (Coordinating agency re-assigned)
1.5.1: Study the practicality of building a dam in southern Upshur County along the Buckhannon River to allow for the removal of the existing dam located in the city limits in an effort to reduce flooding in the city.	Upshur County Commission, USDA, WVDEP	Rescinded – Existing dam is a drinking water reservoir, not a flood control structure, and does not adversely contribute to flooding.
1.6.1: Coordinate county efforts to meet the requirements of becoming a participant in the CRS.	UCOEM, City of Buckhannon	Not completed, Re-prioritized
1.7.1: Develop stringent storm water management codes for future development, possibly including a storm water utility.	Upshur County Commission, City of Buckhannon	Not completed, Re-prioritized (Re-worded for compatibility with city efforts through its 2015 planning process)

Previous Project Description	*Coordinating Agency*	*Status*
1.8.1: Dredge the waterways to remove debris and prevent water from backing up and possibly flooding.	USACOE	Not completed, Re-prioritized (Coordinating agency re-assigned)
1.9.1: Use municipal ordinances as models to develop a countywide permitting process to supplement the measures taken by lending institutions to monitor new construction in the floodplain.	Upshur County Commission	Not completed, Re-prioritized
1.9.2: Instate a countywide zoning ordinance to regulate the type of development that occurs in the floodplain.	Upshur County Commission	Rescinded – Going through the process of developing an ordinance was seen as a more logical first step
1A.1.1: Continue acquisition and relocation efforts throughout the city.	City of Buckhannon	Not completed per funding availability, Re-prioritized
2.1.1: Research possibilities and initiate contracts for snow removal prior to the next major winter storm.	WVDOH, Upshur County Commission, UCOEM	Completed per UCOEM resource manual
2.2.1: Instate countywide building codes, which will regulate the number of buildings and the materials used in buildings that are constructed.	Upshur County Commission	Not completed, Re-prioritized (and re-worded to suggestion countywide adoption of IBC)
2.2.2: Enforce existing building codes that are already in place.	Upshur County Commission	Rescinded – per absorption into IBC strategy
3.1.1: Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe thunderstorm conditions.	UCOEM, NWS	Completed, On-going
3.1.2: Install rain gauges at strategic points throughout the county. Check gauges periodically and report results to county representatives.	Upshur County Commission, NRCS	Completed, On-going (Coordinating agency re-assigned)

Previous Project Description	*Coordinating Agency*	*Status*
4.1.1: Coordinate efforts with local media to post advanced warning of hailstorms.	UCOEM, Local Media Outlets	Rescinded – Per absorption into a generalized public awareness strategy
5.1.1: Coordinate with the National Weather Service in Charleston, West Virginia to warn residents of impending severe wind or tornado conditions.	NWS, UCOEM	Completed, On-going
5.2.1: Develop an informational brochure to distribute to local residents.	LEPC, UCOEM, WVDHSEM	Completed, On-going
6.1.1: Establish procedures to clean up material from a landslide quickly, causing only a minor disruption to traffic.	WVDOH	Completed per UCOEM resource manual
6.2.1: Instate countywide building codes, which will regulate the number of buildings and the materials used in buildings that are constructed.	Upshur County Commission	Rescinded – per absorption into IBC strategy
6.2.2: Enforce existing building codes that are already in place.	Upshur County Commission	Rescinded – per absorption into IBC strategy
7.1.1: Continue to coordinate with dam safety officials and local residents to inspect impoundments in Upshur County.	WVDEP	Rescinded – Inventorying existing dams and determining with whom to coordinate are the first steps.
8.1.1: Create an informational brochure explaining the potential for earthquakes, as well as the potential damage from those earthquakes. The brochure should include information on measures to take to safe-proof homes and other structures from the potential effects of earthquakes.	UCOEM, WVDHSEM	Not completed, Re-prioritized (to more effectively address the actual quake risk in Upshur County)

Previous Project Description	*Coordinating Agency*	*Status*
9.1.1: Extend public water service to communities currently without service.	Upshur County Commission, Local PSDs	Completed, On-going
9.1.2: Develop plans and schedules to haul water to residents during drought conditions.	LEPC, Local VFDs	Completed (VFDs offer water hauling services)
10.1.1: Distribute information concerning the leading causes of wildfires and steps the general public can take to avoid starting wildfires.	WVDNR	Completed, On-going (Coordinating agency re-assigned)
11.1.1: Develop an informational brochure to distribute to local residents (RE: heat wave).	Public Safety Depts., LEPC, UCOEM, WVDHSEM	Rescinded per removal of hazard from plan
12.1.1: Install new or upgraded alarms at fire departments throughout the county, which sound a different tone for different hazard events. When sounded, these tones could instruct residents to check public service announcements for additional information.	UCOEM, Local VFDs	Not completed, Re-prioritized

All Jurisdictions	*Project 1.1.3*: Dredge waterways to remove debris and other materials to prevent water backing up and possibly flooding. *Project 1.2.1*: Coordinate interagency cooperation to develop emergency routes and signage. *Project 1.3.1*: Coordinate county efforts to meet the requirements of becoming a participant in the Community Rating System (CRS). *Project 3.1.1*: Coordinate with the National Weather Service (NWS) in Charleston to warn residents of impending severe thunderstorm conditions. *Project 4.1.1*: Encourage insurance providers – through public awareness campaigns – to discuss coverage options regarding hail damage with customers. *Project 5.1.1*: Develop an informational brochure to distribute to local residents. *Project 6.1.1*: Coordinate with the WVDOH to better clarify reporting procedures should landslides block roads.

All Jurisdictions (*continued*)

Project 7.1.1: Coordinate with the NRCS and/or dam owners to develop a detailed map showing areas that would be affected by a dam failure (to include identification of private impoundments).

Project 8.1.1: Develop an informational brochure explaining the minimal earthquake risk in Upshur County (to include what residents can expect should an earthquake occur).

Project 10.1.1: Cooperate with public awareness campaigns undertaken by state and other agencies aimed at forest fire prevention.

Project 10.1.2: Broaden public information campaigns to include an identification of the potential fire dangers surrounding abandoned houses. Consider targeting said campaigns at youth populations.

Project 11.1.1: Supply critical facilities with NOAA radios and/or other early warning systems.

Project 11.1.2: Install new or upgraded alarms at fire stations that sound different tones corresponding to different hazards.

Project 11.1.3: Research options regarding the purchase and installation of a “reverse 9-1-1” system.

Project 11.2.1: Update studies to continually monitor the changing hazardous material risk.

Project 11.2.2: Continue the “off-site” planning process with SARA-regulated facilities.

Project 11.3.1: Coordinate with well services and drilling companies to ensure that their efforts to do not, to the extent possible, impact the local water supply.

Project 11.3.2: Coordinate with well service companies to identify what types of hazardous materials are traveling through the area (for planning purposes).

Upshur County (*continued*)	*Project 2.1.1*: Consider developing a permitting process to make sure structures are built in accordance with the International Building Code (IBC) with respect to materials used, roof strengths, load bearing requirements, etc. *Project 3.1.2:* Install additional rain gauges at strategic points throughout the county. *Project 7.1.2*: Determine how and if dam failures in neighboring counties will affect Upshur County communities. *Project 7.1.3*: Coordinate with dam owners to update notification and response plans to be more compatible with the county's emergency operations plan. *Project 9.1.1*: Extend public water service into communities currently without service. *Project 10.1.3*: Coordinate with the appropriate agencies regarding improved ISO ratings throughout the county.
City of Buckhannon	*Project 1.1.2*: Continue acquisition and relocation efforts in the City of Buckhannon. *Project 1.3.2*: Monitor storm water management issues throughout the city.

Project Number	Mitigation Project	Priority
1.1.1	Continue acquisition and relocation efforts throughout the county.	**1**
1.1.2	Continue acquisition and relocation efforts in the City of Buckhannon.	**1**
1.1.3	Dredge waterways to remove debris and other materials to prevent water backing up and possibly flooding.	**8**
1.2.1	Coordinate interagency cooperation to develop emergency routes and signage.	**2**
1.3.1	Coordinate county efforts to meet the requirements of becoming a participant in the Community Rating System (CRS).	**4**
1.3.2	Monitor storm water management issues throughout the city.	**8**

Project Number	Mitigation Project	Priority
1.3.3	Use the municipal code as a model for developing a countywide permitting process to supplement the measures taken by lending institutions to monitor new construction in the floodplain.	**11**
2.1.1	Consider developing a permitting process to make sure structures are built in accordance with the International Building Code (IBC) with respect to materials used, roof strengths, load bearing requirements, etc.	**11**
3.1.1	Coordinate with the National Weather Service (NWS) in Charleston to warn residents of impending severe thunderstorm conditions.	**9**
3.1.2	Install additional rain gauges at strategic points throughout the county.	**5**
4.1.1	Encourage insurance providers – through public awareness campaigns – to discuss coverage options regarding hail damage with customers.	**7**
5.1.1	Develop an informational brochure to distribute to local residents.	**9**
6.1.1	Coordinate with the WVDOH to better clarify reporting procedures should landslides block roads.	**7**
7.1.1	Coordinate with the NRCS and/or dam owners to develop a detailed map showing areas that would be affected by a dam failure (to include identification of private impoundments).	**5**
7.1.2	Determine how and if dam failures in neighboring counties will affect Upshur County communities.	**5**
7.1.3	Coordinate with dam owners to update notification and response plans to be more compatible with the county's emergency operations plan.	**4**
8.1.1	Develop an informational brochure explaining the minimal earthquake risk in Upshur County (to include what residents can expect should an earthquake occur).	**9**
9.1.1	Extend public water service into communities currently without service.	**3**
10.1.1	Cooperate with public awareness campaigns undertaken by state and other agencies aimed at forest fire prevention.	**9**
10.1.2	Broaden public information campaigns to include an identification of the potential fire dangers surrounding abandoned houses. Consider targeting said campaigns at youth populations.	**9**
10.1.3	Coordinate with the appropriate agencies regarding improved ISO ratings throughout the county.	**6**
11.1.1	Supply critical facilities with NOAA radios and/or other early warning systems.	**10**
11.1.2	Install new or upgraded alarms at fire stations that sound different tones corresponding to different hazards.	**10**
11.1.3	Research options regarding the purchase and installation of a "reverse 9-1-1" system.	**10**

Project Number	Mitigation Project	Priority
11.2.1	Update studies to continually monitor the changing hazardous material risk.	**4**
11.2.2	Continue the "off-site" planning process with SARA-regulated facilities.	**4**
11.3.1	Coordinate with well services and drilling companies to ensure that their efforts to do not, to the extent possible, impact the local water supply.	**7**
11.3.2	Coordinate with well service companies to identify what types of hazardous materials are traveling through the area (for planning purposes).	**7**

Appendix X

Hazard & Disaster Related Programs Available In West Virginia

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
West Virginia Conservation Agency		
PL 566 Watershed Protection and Flood Prevention	Protecting watersheds from damage caused by erosion, flood waters, and sediment; to conserve and develop land and water resources.	Partners with USDA-NRCS to develop 34 water resource plans and install 180 measures: 75% federal/25% state or local for non-structural measures.
Emergency Watershed Protection Program	Recovery from sudden impairment caused by fire, flood or other natural disaster. Safeguard lives and property.	Partners with USDA-NRCS: 75% federal/25% state or local cost (NRCS pays 100% of technical assistance)
PL-106-472, Small Watershed Rehabilitation Amendments of 2000	Provide technical and financial assistance to rehabilitate dams constructed under PL 534, PL 566 and Resource Conservation and Development programs.	Partners with USDA-NRCS: 65% federal/35% state or local cost
West Virginia Dam Safety Program		
	Provides funds to repair dam deficiencies	Selection of loan recipients typically based on results of benefits
West Virginia Department of Environmental Protection		
Abandoned Mine Lands (AML)	Restores and rehabilitates abandoned mine areas.	AML could reduce the possibility of dam failure related flooding in specific areas by eliminating abandoned coal mine waste impoundments.

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
West Virginia Department of Health and Human Services		
Provides a variety of assistance programs including financial assistance, food counseling, medical assistance and rehabilitation of homes		
West Virginia Department of Homeland Security and Emergency Management		
Multiple programs	Provides state-level emergency response for large scale disasters affecting West Virginia	Authorized as the lead state agency responsible for management and administration of disaster relief in West Virginia
West Virginia Department of Transportation - Division of Highways		
Bridge Construction and Repairs	Provide and maintain a highway transportation system designed to have minimal negative impact on storm water runoff and other floodplain issues.	
Highway Construction and Repairs		

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
West Virginia Division of Forestry		
Stewardship Program	Provides technical assistance for forest resource management planning to protect and improve the timber, wildlife, soils, water, recreation and aesthetic values of forests.	Cost share assistance available
Forest Fire Suppression Program	Control all forest fires and limit acres burned in order to protect forest floor and habitat so as to reduce erosion, runoff, and protect the resource.	Southern West Virginia continues to be the highest occurrence area in the state involving 90 percent of the total acres burned.
Forest Legacy Program	Protect forest land from development through conservation easements between the state and the landowner.	Voluntary program.
Urban Forestry Program	Work with municipalities to increase greenspace for beautification, stormwater runoff, and air quality through tree planting projects.	Grant program available for cost-share assistance
Logging Sediment Control Act Program	Regulates the logging industry to reduce erosion and sedimentation into waters of the state.	Site inspections conducted randomly and through complaints.
Clements State Tree Nursery	Produces seedlings that can be utilized for reforestation, erosion control, wildlife and riparian buffers.	More than thirty different species at various prices and packages.

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
West Virginia Division of Natural Resources Public Lands Corporation		
Right of Entry Permit	Provide legal real estate entry to the streambed for any construction activity by obtaining a state authorized real estate right of entry permit.	A state-wide permit required for any streambed disturbance on a stream that: a. Flows at least six months per year, or; b. Is named on a USGS Topographic map, or; c. Is named on WV Division of Highways county road map, or; d. Has been locally recognized and named.
West Virginia Office of Emergency Services		
Integrated Flood Observing and Warning System (IFLOWS)	Provides real time data on precipitation.	Coverage has been expanded to almost all of West Virginia. Data is provided to county warning points and to the National Weather Service.
West Virginia State Emergency Response Commission Program		
	Grants to assist local communities in administering the Emergency Planning and Right-to-Know Act	Eligibility requirements outlined in grant application

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
Federal Emergency Management Agency		
National Flood Insurance Program	Provides assistance to communities in managing floodplain areas.	Provides education about developing special flood hazard areas to minimize risk to new and existing structures.
Hazard Mitigation Grant Programs	Relocates residents out of the floodway/ floodplain	Assists in buying residences in the floodway and relocating residents
	Provides grants to state and local governments to implement hazard mitigation measures after a major disaster declaration	Funds can also be used to support the development of local All Hazard Mitigation Plans
Flood Mitigation Assistance Program	Reduce repetitive flood claims	Develop a community rating system
Pre-disaster Mitigation Competitive Grant Program	Funds hazards mitigation planning prior to an event	Funds are awarded on a competitive basis
Emergency Management Performance Grants	Supports development of state and local emergency management capacities	Historically used to support annual budget of WVDHSEM
Disaster Preparedness Improvement Grant	Funds support maintenance of state and local government plans, facilities and training, including updating of disaster preparedness plans and activities	Targeted to state and local units of government
State and Local Assistance	Funds support maintenance of state and local plans and facilities	Targeted to state and local emergency services organizations
Superfund Program	Supports planning, mitigation and recovery activities	Primarily targeted to emergencies associated with hazardous chemicals

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
Disaster Housing and Home Repair Program	Provides temporary housing and home repair assistance	Requires a Presidential Declaration to initiate
Individual Family Grant Program	Grants for disaster-related expenses that cannot be met by other available disaster assistance programs	Federal and state cost share at 75% federal and 25% state
Public Assistance Program	Eligible funding activities include preliminary damage assessment, immediate needs funding	Federal share may be up to 50% of cost
Community Disaster Loans	Disaster-related expenses during the year of occurrence	Assistance can be provided for 3 years after disaster
FEMA Forest Fire Suppression Program	Assistance related to management and suppression of forest fires	Must meet eligibility requirements
FEMA Emergency Management Grants and Community Emergency Response Teams	Funds development and maintenance of state and local emergency management capabilities	Can also support efforts of local response teams
FEMA Increased Cost of Compliance Program	Provides funding to structures suffering more than 50% damage an additional $30,000 to raise the structure or complete other mitigation	This program is funded by insurance premiums
Federal Highway Administration		
Emergency Relief Program	Funds repair and reconstruction of federal aid highways	

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
National Weather Service		
StormReady	Provides communities with the skills and education to survive severe weather.	A voluntary program offered statewide. Very few communities have taken advantage of this program.
National Weather Service / NOAA Public Forecasts	Provides forecasts and warnings of hazardous weather	No application requirements
US Army Corps of Engineers		
Continuing Authority Program (CAP) - Section 205 - Small Flood Control Projects	Flood control	Nationwide program. Must be related to flood damages. Cost sharing: 65% federal / 35% state or local match for structural or non-structural projects.
General Investigations Program (GI Program)	Flood control, navigation, environmental restoration, hydropower, recreation or water supply.	Nationwide program. Must be related to flood damages. Cost sharing: 65% federal / 35% state or local match for structural or non-structural projects.

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
Section 22 - Planning Assistance to States	Planning studies only for flood control, water quality, water supply, floodplain management, environmental restoration, navigation, water conservation, etc.	Nationwide program. No event necessary. Cost sharing: 50% federal / 50% state or local match (100% of state or local match may be in-kind services).
Continuing Authorities Program - Section 206 Aquatic Ecosystem Restoration	Restoration of aquatic ecosystems to enhance the productivity and diversity of aquatic habitats including wetlands.	Nationwide program Non-federal sponsor initiated Cost sharing: 65% federal / 35% non-federal match.
Watershed Management, Restoration and Development	Planning and design only to restore water quality, control and remediate toxic sediments, restore degraded streams for flood control, erosion, sedimentation, protection and restoration of wetlands, non-structural measures for flood damage reduction.	Basin specific by legislative inclusion. (currently includes Cabin Creek Watershed). No event necessary Cost sharing: 50% federal / 50% state or local match.
USDA Farm Service Agency		
Emergency Conservation Program	Provides financial assistance to restore land, ponds, springs, fences and other agricultural developments impacted by disasters.	Cost sharing: 64% federal / 36% state or local match.

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
Emergency Loan Program	Financial assistance to farmers who suffered eligible physical or production losses.	Loans (at 3.75%) available to assist in disaster recovery.
Disaster Assistance Program	Focused on rehabilitation of eligible farmlands damaged by natural disaster	Authorizes USDA's Farm Service Agency to provide emergency loans; various additional USDA natural resources, food and nutrition, and crop disaster programs available
Drought Assistance	Provides assessment of drought damage and implements federal relief efforts	Requires a Presidential Declaration to initiate
Other Programs	Provide emergency assistance	Provide feed, technical assistance and information on an emergency basis.
USDA - Natural Resources Conservation Service		
PL 566 Watershed Protection and Flood Prevention	Protecting watersheds from damage caused by erosion, flood waters, and sediment, as well as to conserve and develop land and water resources.	Statewide NRCS has helped develop 34 water resource plans and installed 180 measures. NRCS pays 100% of technical assistance. 100% federal funded for structural measures. Cost sharing: 75% federal/25% state or local match for non-structural.

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
Emergency Watershed Protection Program	Recovery from sudden impairment caused by fire, flood or other natural disaster. Safeguard lives and property.	Cost sharing: 75% federal/25% state or local match. (NRCS pays 100% of technical assistance).
PL-106-472, Small Watershed Rehabilitation Amendments of 2000	Provide technical and financial assistance to rehabilitate dams constructed under PL-534, PL-566 and Resource Conservation and Development programs.	Cost sharing: 65% federal/35% state or local match.
USDA - Other Programs		
Emergency Watershed Protection	Provides technical assistance to plan and construct needed measures	Sponsoring organization must be not-for-profit entity
Watershed Protection Loans	Loans to meet local project sponsors cost-share requirements	Sponsoring organizations must no be for-profit entities
Rural Development Housing Repair Loans and Grants	Loans and grants to enable low and very low income rural homeowners to remove health and safety hazards from their homes	Must meet eligibility requirements

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
US Department of Commerce		
US Department of Commerce Fire Accident Analysis	Studies of previous uncontrolled fires to determine causes and ways of avoiding future serious fires	State or local officials can request assistance
US Department of Energy		
US Department of Energy Radiological Emergency Assistance	Assistance responding to incidents concerning radiological materials	Assistance provided to individuals, local and state governments as requested
US Department of Energy - Disaster Caused Power Outages	Implements emergency related functions caused by recognized disasters	Governed by the adopted Federal Response Plan
US Department of Health and Human Services		
USDHHS Contaminated Food and Drug Emergency Services	Technical assistance and personnel to assist in protecting public from unsafe food and drugs	Provided on an “as requested” basis
US Department of Homeland Security		
Grant Programs	Provides financial assistance to states to prepare for terrorist attacks using WMD’s	

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
US Department of Housing and Urban Development		
Comprehensive Planning Assistance	Grants to strengthen planning and decision-making, including activities related to disaster mitigation and recovery planning	Funding available to state, regional and local agencies
Housing Grants and Mortgage Insurance	Community Development Block Grants may be used for emergency response activities	State and local governments may apply
US Department of Transportation		
Hazardous Materials Emergency Preparedness Grant Program	Supports local government planning efforts and first responders' HAZMAT training	Planning and training grants
US Geological Survey		
National Streamflow Information Program	Fund gauges nationwide	This program would fund 56 stream gauges in West Virginia. This program has not been funded as of December 2001.
West Virginia River Gauge Program	Establishes flows at selected points on WV streams.	A network of 107 stream gauges in WV

Hazard and Disaster-Related Programs Available in West Virginia		
Program	**Objectives**	**Comments**
Crest-State Gauging Network	Provides data for improving flood-estimating equations for drainages smaller than 100 square miles.	Equations now in use were based on developed watershed drainages larger than 100 square miles.
Reservoir Management System	Real-time data on the level of water behind dams owned by partners of West Virginia Conservation Agency.	Under development.
US Small Business Administration		
Emergency Loans	Provides home disaster, business physical disaster and economic injury disaster loans	Must meet SBA eligibility requirements to qualify

Sources: West Virginia Regional Flood Protection Plan, 2002
West Virginia State All-Hazards Mitigation Plan, updated September 2007

Appendix XI

CRS Activity Worksheet

Community : _____

510 FLOODPLAIN MANAGEMENT PLANNING

511.a Floodplain Management Planning (FMP)

Credit Points: *Enter the section or page number in the plan where each credited item can be found.*

CRS Step	Section/Page	Score	Step Total
1. Organize to prepare the plan.			
a. Supervision or direction of a professional planner (2)			
b. Planning committee of department staff (6)			
c. Process formally created by the community's governing board (2)			
2. Involve the public.			
a. Planning process conducted through a planning committee (40)			
b. Public meetings held at the beginning of the planning process (15)			
c. Public meeting held on draft plan (15)			
d. Questionnaires ask the public for information (5)			
e. Recommendations are solicited from advisory groups, etc. (5)			
f . Other public information activities to encourage input (5)			
3. Coordinate with other agencies.			
a. Review of existing studies and plans (REQUIRED) (3)			
b. Invited neighboring communities and other agencies (REQUIRED) (1)			
c. Contacted communities and NFIP and EM agencies (4)			
d. NWS, ARC and others are asked how they can help community (4)			
e. Meetings are held with agencies on mitigation strategies (10)			
f. Draft action plan sent to agencies for comments (3)			
4. Assess the hazard.			
a. Plan includes an assessment of the flood hazard (REQUIRED) with:			
(1) A map of known flood hazards (5)			
(2) A description of known flood hazard (5)			
(3) A discussion of past floods (5)			
b. The plan describes other natural hazards (REQUIRED FOR DMA) (5)			

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Expires: August 31, 2010

Community : _____

CRS Step	Section/Page	Score	Total
5. Assess the problem.			
a. Summary of each hazard identified in the hazard assessment and their community impact (REQUIRED) (2)			
b. Description of the impact of the hazards on:			
(1) Life, safety, health, procedures for warning and evacuation (5)			
(2) Critical facilities and infrastructure (5)			
(3) The community's economy and tax base (5)			
c. Number and types of buildings subject to the hazards (5)			
d. Review of all flood insurance claims (4)			
e. Natural and beneficial functions (4)			
Development, redevelopment, and population trends (5)			
f.			
6. Set goals. (REQUIRED) (2)			
7. Review possible activities.			
a. Preventive activities (5)			
b. Property protection activities (5)			
c. Natural resource protection activities (5)			
d. Emergency services activities (5)			
e. Structural projects (5)			
f . Public information activities (5)			
8. Draft an action plan.			
Actions must be prioritized (REQUIRED)			
a. Recommendations for activities from two of the six categories (10)			
b. Recommendations for activities from three of the six categories (20)			
c. Recommendations for activities from four of the six categories (30)			
d. Recommendations for activities from five of the six categories (45)			
e. Post-disaster mitigation policies and procedures (10)			
f . Recommendations from Habitat Conservation Plan (10)			
g. Action items for mitigation of other hazards (5)			

Community : _____

CRS Step	Section/Page	Score	Total
9. Adopt the plan. (2)			
10. Implement, evaluate, and revise.			
a. Procedures to monitor and recommend revisions (REQUIRED) (2)			
b. Same planning committee or successor committee that qualifies under Section 511.a.2(a) does the evaluation (13)			
Add the totals for steps 1 through 10 above:			

514 Credit Documentation:

___ a. FMP: The completed CRS activity worksheet (AW-510-1−510-3) or the mitigation plan review crosswalk.

___ b. A copy of the floodplain management plan, hazard mitigation plan, and/or Habitat Conservation Plan.

___ c. Documentation showing how the public was involved in preparing or reviewing the plan, including a copy of the notice(s) advising residents about the public meeting(s) held pursuant to steps 2(b) and (c), and a record of the meeting(s).

___ d. Copies of correspondence, meeting notes, or other materials that document the coordination with other municipalities, agencies, and organizations credited under Sections 511.a.3(b) – (f).

___ e. Documentation showing that the plan was adopted by the community's governing board.

The following will be needed at the annual recertification:

___ g. An annual report on evaluating progress toward implementing the action plan's objectives.

The following will be needed at least every five years:

___ h. An update to the floodplain management or hazard mitigation plan.

Appendix XII

Region VII Identified Hazard Descriptions

Barbour County Hazards

Hazard	*How Identified*	*Why Identified*
Avalanche	• Internet research indicates that these jurisdictions are not susceptible to this hazard.	• The general contour of the land in the county is mountainous, but they are not steep enough to cause avalanche activity. • Further, the amount of snowfall the county receives is insufficient for any kind of avalanche.
Coastal Erosion	• Geographic research indicates that these jurisdictions are not susceptible to this hazard due to location.	• Coastal erosion is not a significant risk as the county is more than 450 miles from the Atlantic Ocean.
Coastal Storm	• Geographic research indicates that these jurisdictions are not susceptible to this hazard due to location. • See also "Thunderstorm/Lightning"	• Coastal storms are not a threat to the county as the county is more than 450 miles from the Atlantic Ocean. • The only hazard associated with this hazard that is experienced by the county is rain, which is addressed elsewhere.
Dam Failure	• WVDEP	• A dam failure may result in loss of life and property
Debris Flow	• Research indicates that these jurisdictions are not susceptible to this hazard. • See also "Land Subsidence"	• See "Land Subsidence"
Drought	• Research using the NCDC website indicates that there have been two (2) droughts during the period studied.	• Two (2) droughts have been recorded by the NCDC over the past 5 years.
Earthquake	• USGS • Internet research • FEMA	• USGS rates the county as having an 8 to 12%g Peak Ground Acceleration (PGA). • FEMA states that areas with 4 to 6%g PGAs have relatively low risks of earthquakes, but earthquakes should still be considered a natural hazard. • There are no historical records of an earthquake in Barbour County.
Expansive Soils	• Research of the USGS soil Survey indicates that these jurisdictions are not susceptible to this hazard. • See also "Land Subsidence"	• See "Land Subsidence"

Extreme Heat	• Research indicates that these jurisdictions are not susceptible to this hazard.	• Temperatures in the county seldom exceed 100 degrees. • If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote “extreme heat”.
Flooding	• Internet research • Interviews with local officials • Public response • NCDC • FIRMs • Searches of local media archives	• Based on mapping, both incorporated and unincorporated communities within the county contain 100-year floodplains. • Local officials have identified floods as the highest priority natural hazard in the county. • During the period studied, the NCDC reported 8 flooding and flash flooding events.
Hailstorm	• NCDC	• Barbour County has a documented history of hailstorms. • The entire county is at moderate risk of hailstorms. • The NCDC has reported 6 hail events since 2003.
Hazardous Materials Incident	• HAZUS database • Barbour County EOP • Interviews with local officials	• Technological hazards that can arise from manufacturing, transportation, storage, and/or use of hazardous materials are present in Barbour County. • There are at least 4 facilities that house hazardous materials. • Hazardous materials are transported on roadways and railways daily.
Hurricane	• Research indicates that these jurisdictions are not susceptible to this hazard. • See also “Thunderstorm/Lightning”	• The county does not experience the hurricane conditions of extremely high winds, rains, and hail. In some instances, the county may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere. • Barbour County was involved in a federal emergency declaration for West Virginia’s role in housing Hurricane Katrina evacuees.
Land Subsidence	• Internet research • Searches of local media archives • Interviews with local officials	• Barbour County is located in "high risk" area according to *USGS Landslide Overview Map.* • Local homes are slowly destroyed by landslide and slippage conditions. • Dangerous conditions exists also for pedestrians and other property
Landslide	• See “Land Subsidence”	• See “Land Subsidence”
Terrorism	• Internet research • Barbour County EOP	• Terrorism will be discussed generally in this plan due to its sensitive nature coupled with the fact that this plan will become public.
Thunderstorm/ Lightning	• NCDC • Searches of local media archives	• Based on historical evidence, it is assumed that all of Barbour County is equally at risk from severe thunderstorms. • The NCDC has reported 7 severe thunderstorms or high winds associated with thunderstorms since 2003.

Tsunami	• Geographical research via the Internet indicates that these jurisdictions are not susceptible to this hazard.	• The Atlantic Ocean is approximately 450 miles from the county. • The Appalachian Mountains will most likely protect the area from a tsunami affecting the US east coast.
Urban Fire	• Public response • Searches of local media archives	• Although there have been no high-profile fires recently, there have been fires in local municipalities. • Several representatives at community assets indicated a concern for fire events.
Volcano	• Geological research via the Internet indicates that these jurisdictions are not susceptible to this hazard.	• No volcanoes exist on the east coast.
Wildfire	• WV Division of Forestry	• Wildfire maps do not show the extent or range of where a wildfire will occur because wildfires are dependent on the fuel available, weather conditions, and wind speed and direction. • Due to the large amount of forested land in Barbour County, wildfires are a concern.
Wind Storm/Tornado	• National Weather Service • Internet research • NCDC • Public response	• Barbour County has a history of high wind and can expect wind-related problems in the future. • Risks from high winds are equally distributed throughout the county. • NCDC records indicate wind 2 events during the study period.
Winter Storm	• NCDC • Internet research • Interviews with local officials • Public response	• Data from NCDC shows few instances of severe winter storms. • During the last five year, a total of 17 winter storm or snow events are reported by the NCDC.

Braxton County Hazards

Hazard	*How Identified*	*Why Identified*
Avalanche	• Research using USGS websites and other weather related information indicates that these jurisdictions are not susceptible to this hazard.	• The general contour of the land in the county is mountainous, but they are not steep enough to cause avalanche activity. • Further, the amount of snowfall the county receives is insufficient for any kind of avalanche.
Coastal Erosion	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard.	• Coastal erosion is not a significant risk as the county is more than 450 miles from the Atlantic Ocean.
Coastal Storm	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard. • See also “Thunderstorm/Lightning”	• Coastal storms are not a threat to the county as the county is more than 450 miles from the Atlantic Ocean. • The only hazard associated with this hazard that is experienced by the county is rain, which is addressed elsewhere.
Dam Failure	• WVDEP	• A dam failure may result in loss of life and property
Debris Flow	• See also “Land Subsidence”	• See “Land Subsidence”
Drought	• Research indicates that there have been 8 recorded droughts during the period studied. • NCDC	• There were eight drought periods recorded by the NCDC over the past 10 years. There is the potential for future events to occur.
Earthquake	• USGS • Internet research • FEMA	• USGS rates the county as having an 8 to 12%g Peak Ground Acceleration (PGA). • FEMA states that areas with 4 to 6%g PGAs have relatively low risks of earthquakes, but earthquakes should still be considered a natural hazard. • There are no historical records of an earthquake in Braxton County.
Expansive Soils	• See also “Land Subsidence”	• See “Land Subsidence”
Extreme Heat	• NCDC	• Temperatures in the county seldom exceed 100 degrees. • If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote “extreme heat”.
Flooding	• Internet research • Interviews with local officials • Public response	• Based on mapping, both incorporated and unincorporated communities

	• NCDC • FIRMs • Searches of local media archives	within the county contain 100-year floodplains. • Local officials have identified floods as the highest priority natural hazard in the county. • During the period studied, the NCDC reported 21 flooding and flash flooding events.
Hailstorm	• NCDC	• Braxton County has a documented history of hailstorms. • The entire county is at moderate risk of hailstorms. • The NCDC has reported 15 hail events since 1998.
Hazardous Materials Incident	• HAZUS database • Braxton County EOP • Interviews with local officials	• Technological hazards that can arise from manufacturing, transportation, storage, and/or use of hazardous materials are present in Braxton County. • Hazardous materials are transported on roadways daily.
Hurricane	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard. • See also "Thunderstorm/Lightning"	• The county does not experience the hurricane conditions of extremely high winds, rains, and hail. In some instances, the county may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere.
Land Subsidence	• Public Comment • USGS • USGS Soil Survey • nationalatlas.gov • Public Comment	• Braxton County is located in both a "low risk" and a "high risk" area according to *USGS Landslide Overview Map.* • Local homes are slowly destroyed by landslide and slippage conditions. • Dangerous conditions exists also for pedestrians and other property
Landslide	• See "Land Subsidence"	• See "Land Subsidence"
Terrorism	• Internet research • Braxton County EOP • FEMA Website	• Terrorism will be discussed generally in this plan due to its sensitive nature coupled with the fact that this plan will become public.
Thunderstorm	• NCDC • Searches of local media archives	• Based on historical evidence, it is assumed that all of Braxton County is equally at risk from severe thunderstorms. • The NCDC has reported 39 severe thunderstorms with high winds since 1998.
Tsunami	• Geographic location and	• The Atlantic Ocean is

	Internet research indicates that these jurisdictions are not susceptible to this hazard.	approximately 450 miles from the county. • The Appalachian Mountains will most likely protect the area from a tsunami affecting the US east coast.
Urban Fire	• Public response • Search of local media archives	• High-profile fires have not occurred in local municipalities recently.
Utility Failure	• Public response • Search of local media archives	• Major utility failures have not occurred in recent history. • Minor outages of electric power have not been long in duration.
Volcano	• USGS	• No volcanoes exist on the east coast.
Wildfire	• WV Division of Forestry • NCDC • WFAS-MAPS • National Interagency Fire Center	• Wildfire maps do not show the extent or range of where a wildfire will occur because wildfires are dependant on the fuel available, weather conditions, and wind speed and direction. • Due to the large amount of forested land and inaccessible areas in Braxton County, wildfires are a concern.
Wind	• National Weather Service • Internet research • NCDC • Public response	• Braxton County has a history of high wind and can expect wind-related problems in the future. • Risks from high winds are equally distributed throughout the county. • NCDC records indicate wind events during the study period were generally accompanied by thunderstorms.
Winter Storm	• NCDC • Internet research • Interviews with local officials • Public response	• Data from NCDC shows few instances of severe winter storms. • During the last ten years, a total of 17 winter storm or snow events are reported by the NCDC.

Gilmer County Hazards

Hazard	*How Identified*	*Why Identified*
Avalanche	• Geographic research indicates that these jurisdictions are not susceptible to this hazard.	• The general contour of the land in the county is mountainous, but they are not steep enough to cause avalanche activity. • Further, the amount of snowfall the county receives is insufficient for any kind of avalanche.
Coastal Erosion	• Geographic Internet research indicates that these jurisdictions are not susceptible to this hazard.	• Coastal erosion is not a significant risk as the county is more than 450 miles from the Atlantic Ocean.
Coastal Storm	• Geographic Internet research indicates that these jurisdictions are not susceptible to this hazard. • See also "Thunderstorm/Lightning"	• Coastal storms are not a threat to the county as the county is more than 450 miles from the Atlantic Ocean. • The only hazard associated with this hazard that is experienced by the county is rain, which is addressed elsewhere.
Dam Failure	• WVDEP	• A dam failure may result in loss of life and property
Debris Flow	• USGS research indicates that these jurisdictions are not susceptible to this hazard. • See also "Land Subsidence"	• See "Land Subsidence"
Drought	• Geographic Internet research indicates that there have been no droughts during the period studies.	• Two (2) periods of drought have been recorded by the NCDC over the past 5 years.
Earthquake	• USGS • Internet research • FEMA	• USGS rates the county as having an 8 to 12%g Peak Ground Acceleration (PGA). • FEMA states that areas with 4 to 6%g PGAs have relatively low risks of earthquakes, but earthquakes should still be considered a natural hazard. • There are no historical records of an earthquake in Gilmer County.
Expansive Soils	• USGS research indicates that these jurisdictions are not susceptible to this hazard. • See also "Land Subsidence"	• See "Land Subsidence"

Extreme Heat	• NCDC research indicates that these jurisdictions are not susceptible to this hazard.	• Temperatures in the county seldom exceed 100 degrees. • If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote “extreme heat”.
Flooding	• Internet research • Interviews with local officials • Public response • NCDC • FIRMs • Searches of local media archives	• Based on mapping, both incorporated and unincorporated communities within the county contain 100-year floodplains. • Local officials have identified floods as the highest priority natural hazard in the county. • During the period studied, the NCDC reported 12 flooding and flash flooding events.
Hailstorm	• NCDC	• Gilmer County has a documented history of hailstorms. • The entire county is at moderate risk of hailstorms. • The NCDC has reported 12 hail events since 2003.
Hazardous Materials Incident	• HAZUS database • Gilmer County EOP • Interviews with local officials	• Technological hazards that can arise from manufacturing, transportation, storage, and/or use of hazardous materials are present in Gilmer County. • Hazardous materials are transported on roadways daily.
Hurricane	• Geographic Internet research indicates that these jurisdictions are not susceptible to this hazard. • See also “Thunderstorm/Lightning”	• The county does not experience the hurricane conditions of extremely high winds, rains, and hail. In some instances, the county may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere.
Land Subsidence	• Internet research • Searches of local media archives • Interviews with local officials • USGS	• Gilmer County is located in "high risk" area according to *USGS Landslide Overview Map.* • Local homes are slowly destroyed by landslide and slippage conditions. • Dangerous conditions exists also for pedestrians and other property
Landslide	• See “Land Subsidence”	• See “Land Subsidence”
Terrorism	• Internet research • Gilmer County EOP	• Terrorism will be discussed generally in this plan due to its sensitive nature coupled with the fact that this plan will become public.
Thunderstorm/ Lightning	• NCDC • Searches of local media archives	• Based on historical evidence, it is assumed that all of Gilmer County is equally at risk from severe thunderstorms. • The NCDC has reported 13 severe thunderstorms or high winds associated with thunderstorms since 2003.

Tsunami	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard.	• The Atlantic Ocean is approximately 450 miles from the county. • The Appalachian Mountains will most likely protect the area from a tsunami affecting the US east coast.
Urban Fire	• Public response • Searches of local media archives	• Although urban fires have not been reported the risk is still present.
Volcano	• Research indicates that these jurisdictions are not susceptible to this hazard. • USGS	• No volcanoes exist on the east coast.
Wildfire	• WV Division of Forestry	• Wildfire maps do not show the extent or range of where a wildfire will occur because wildfires are dependent on the fuel available, weather conditions, and wind speed and direction. • Due to the large amount of forested land in Gilmer County, wildfires are a concern.
Wind Storm/Tornado	• National Weather Service • Internet research • NCDC • Public response	• Gilmer County has a history of high wind and can expect wind-related problems in the future. • Risks from high winds are equally distributed throughout the county. • NCDC records indicate 13 wind events during the study period.
Winter Storm	• NCDC • Internet research • Interviews with local officials • Public response	• Data from NCDC shows few instances of severe winter storms. • During the study period, a total of 7 winter storm or snow events are reported by the NCDC.

Lewis County Hazards

Hazard	*How Identified*	*Why Identified*
Avalanche	• Research indicates that these jurisdictions are not susceptible to this hazard.	• The general contour of the land in the county is mostly hills which are not steep enough to cause avalanche activity. Further, the amount of snowfall the county receives is insufficient for any kind of avalanche.
Coastal Erosion	• Research indicates that these jurisdictions are not susceptible to this hazard.	• Coastal erosion is not a significant risk as the county is approximately 550 miles from the Atlantic Ocean.
Coastal Storm	• Research indicates that these jurisdictions are not susceptible to this hazard. • See also "Thunderstorm/Lightning"	• Coastal storms are not a threat to the county as the county is approximately 550 miles from the Atlantic Ocean. The only hazard associated with this hazard that is experienced by the county is rain, which is addressed elsewhere.
Dam Failure	• Interviews with local officials • USACOE	• The Stonewall Jackson Lake Dam, Stonecoal Lake Dam, and several smaller dams are located in Lewis County and would severely affect the City of Weston in the event of a dam failure.
Debris Flow	• Research indicates that these jurisdictions are not susceptible to this hazard. • See also "Land Subsidence"	• See "Land Subsidence"
Drought	• Palmer Drought Severity Index (PDSI)	• According to the PDSI, Lewis County has a moderate drought risk.
Earthquake	• USGS • Internet research • FEMA	• USGS rates the county as having a 3%g Peak Ground Acceleration (PGA). • FEMA states that areas with 3%g PGA have a relatively low risk of earthquakes, but earthquakes should still be considered a natural hazard. • There are no historical records of an earthquake in Lewis County.
Expansive Soils	• Research indicates that these jurisdictions are not susceptible to this hazard. • See also "Land Subsidence"	• See "Land Subsidence"
Extreme Heat	• Research indicates that these jurisdictions are not susceptible to this hazard.	• Temperatures in the county seldom exceed 100 degrees. If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote "extreme heat".

Flooding	• FEMA Q3 Floodplain Mapping • Internet Research • Interviews with local officials • USGS • NCDC • WVDEP • Searches of local media archives	• Based on mapping, both incorporated and unincorporated communities within the county contain 100-year floodplains. • Local officials have identified floods as the highest priority natural hazard in the county. • During the period studied, the NCDC reported 25 flood events.
Hailstorm	• NCDC • Internet Research	• Lewis County has a documented history of hailstorms. • The entire county is at moderate risk of hailstorms. • The NCDC reported one (1) hail event during a four (4)-year period.
Hazardous Materials Incident	• HAZUS Database • Lewis/Upshur LEPC Commodities Flow Study • Lewis County EOP	• Technological hazards that can arise from manufacturing, transportation, storage, and/or use of hazardous materials are present in Lewis County. • There are at least 14 facilities that house hazardous materials. • Hazardous materials are transported on roadways daily.
Hurricane	• Research indicates that these jurisdictions are not susceptible to this hazard. • See also "Thunderstorm/Lightning"	• The county does not experience the hurricane conditions of extremely high winds, rains, and hail. In some instances, the county may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere. • Lewis County was involved in a federal emergency declaration for West Virginia's role in housing Hurricane Katrina evacuees.
Land Subsidence	• Internet Research • Searches of local media archives	• Land subsidence can be man-made as in the instance of underground mining (withdrawal of subsurface fluids). Underground mining can also cause sink-holes. • Land subsidence can be caused by natural processes such as the dissolving of limestone underground, earthquakes, or volcanic activity. • The eastern section of Lewis County lies on geological formation of fractured limestone.
Landslide	• See "Land Subsidence"	• See "Land Subsidence"
Terrorism	• Internet Research • Lewis County EOP	• Terrorism will be discussed generally in this plan due to its sensitive nature coupled with the fact that this plan will become public.

Thunderstorm/ Lightning	• National Weather Service • NCDC • Lewis County EOP • Internet Research • Searches of local media archives	• Based on historical evidence, it is assumed that all of Lewis County is equally at risk from severe thunderstorms. • The NCDC reported 41 severe thunderstorms since 1958.
Tsunami	• Research indicates that these jurisdictions are not susceptible to this hazard.	• The Atlantic Ocean is approximately 550 miles from the county. • The Appalachian Mountains will most likely protect the area from a tsunami affecting the US east coast.
Urban Fire	• Interviews with local officials • Searches of local media archives	• For the few incorporated municipalities in the county, there is a moderate risk of urban fires. • Lewis County has had at least one urban fire event.
Volcano	• Research indicates that these jurisdictions are not susceptible to this hazard.	• No volcanoes exist on the east coast.
Wildfire	• Internet Research • WV Division of Forestry	• Wildfire maps do not show the extent or range of where a wildfire will occur because wildfires are dependant on the fuel available, weather conditions, and wind speed and direction.
Wind Storm/Tornado	• National Weather Service • Internet Research • NCDC	• Lewis County has a history of high wind and can expect wind-related problems in the future. • Risks from high winds are equally distributed throughout the county. • According to county records, there have been at least two (2) recorded tornado events in the county. • The two (2) tornado accounts are characterized as an F1 (moderate tornado) and F2 (significant) on the Fujita Tornado Measurement Scale.
Winter Storm	• NCDC • Internet Research • Lewis County EOP • Interviews with local officials	• Data from NCDC shows repeated instances of severe winter storms – an average of one (1) significant event per year. • Emergency management officials indicate that the southern portion of the county typically receives more snow than other areas.

Randolph County Hazards

Hazard	*How Identified*	*Why Identified*
Avalanche	• Research using USGS websites and other weather related information indicates that these jurisdictions are not susceptible to this hazard.	• The general contour of the land in the county is mountainous, but they are not steep enough to cause avalanche activity. • Further, the amount of snowfall the county receives is insufficient for any kind of avalanche.
Coastal Erosion	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard.	• Coastal erosion is not a significant risk as the county is more than 450 miles from the Atlantic Ocean.
Coastal Storm	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard. • See also “Thunderstorm/Lightning”	• Coastal storms are not a threat to the county as the county is more than 450 miles from the Atlantic Ocean. • The only hazard associated with this hazard that is experienced by the county is rain, which is addressed elsewhere.
Dam Failure	• WVDEP	• A dam failure may result in loss of life and property
Debris Flow	• See also “Land Subsidence”	• See “Land Subsidence”
Drought	• Research indicates that there have been 8 recorded droughts during the period studied. • NCDC	• There were eight drought periods recorded by the NCDC over the past 10 years. There is the potential for future events to occur.
Earthquake	• USGS • Internet research • FEMA	• USGS rates the county as having an 8 to 12%g Peak Ground Acceleration (PGA). • FEMA states that areas with 4 to 6%g PGAs have relatively low risks of earthquakes, but earthquakes should still be considered a natural hazard. • There are no historical records of an earthquake in Randolph County.
Expansive Soils	• See also “Land Subsidence”	• See “Land Subsidence”
Extreme Heat	• NCDC	• Temperatures in the county seldom exceed 100 degrees. • If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote “extreme heat”.
Flooding	• Internet research • Interviews with local officials • Public response	• Based on mapping, both incorporated and unincorporated communities

	• NCDC • FIRMs • Searches of local media archives	within the county contain 100-year floodplains. • Local officials have identified floods as the highest priority natural hazard in the county. • During the period studied, the NCDC reported 22 flooding and flash flooding events.
Hailstorm	• NCDC	• Randolph County has a documented history of hailstorms. • The entire county is at moderate risk of hailstorms. • The NCDC has reported 15 hail events since 1998.
Hazardous Materials Incident	• HAZUS database • Randolph County EOP • Interviews with local officials	• Technological hazards that can arise from manufacturing, transportation, storage, and/or use of hazardous materials are present in Randolph County. • Hazardous materials are transported on roadways daily.
Hurricane	• Geographic location research indicates that these jurisdictions are not susceptible to this hazard. • See also "Thunderstorm/Lightning"	• The county does not experience the hurricane conditions of extremely high winds, rains, and hail. In some instances, the county may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere.
Land Subsidence	• Internet research • NRCS Soil Survey • Interviews with local officials	• Randolph County is located in both a "low risk" and a "high risk" area according to *USGS Landslide Overview Map.* • Local homes are slowly destroyed by landslide and slippage conditions. • Dangerous conditions exists also for pedestrians and other property
Landslide	• See "Land Subsidence"	• See "Land Subsidence"
Terrorism	• Internet research • Randolph County EOP	• Terrorism will be discussed generally in this plan due to its sensitive nature coupled with the fact that this plan will become public.
Thunderstorm	• NCDC • Searches of local media archives	• Based on historical evidence, it is assumed that all of Randolph County is equally at risk from severe thunderstorms. • The NCDC has reported 39 severe thunderstorms with high winds since 1998.
Tsunami	• Geographic location and	• The Atlantic Ocean is

	Internet research indicates that these jurisdictions are not susceptible to this hazard.	approximately 450 miles from the county. • The Appalachian Mountains will most likely protect the area from a tsunami affecting the US east coast.
Urban Fire	• Public response • Searches of local media archives	• High-profile fires have not occurred in local municipalities recently.
Utility Failure	• Public response • Search of local media archives	• Major utility failures have not occurred in recent history. • Minor outages of electric power have not been long in duration.
Volcano	• USGS	• No volcanoes exist on the east coast.
Wildfire	• WV Division of Forestry • NCDC • WFAS-MAPS • National Interagency Fire Center	• Wildfire maps do not show the extent or range of where a wildfire will occur because wildfires are dependant on the fuel available, weather conditions, and wind speed and direction. • Due to the large amount of forested land and inaccessible areas in Randolph County, wildfires are a concern.
Wind	• National Weather Service • Internet research • NCDC • Public response	• Randolph County has a history of high wind and can expect wind-related problems in the future. • Risks from high winds are equally distributed throughout the county. • NCDC records indicate wind events during the study period were generally accompanied by thunderstorms.
Winter Storm	• NCDC • Internet research • Interviews with local officials • Public response	• Data from NCDC shows few instances of severe winter storms. • During the last ten years, a total of 59 winter storm or snow events are reported by the NCDC.

Tucker County

Hazard Identification

The first step in the risk assessment process was to identify each of the hazards that can occur within Tucker County and its incorporated municipalities. This hazard identification process began with a review of previous hazard events based on historical data provided by the Tucker County Emergency Manager, and the Tucker County Planning Commission, Flood Plain Manager. The plan includes a review of existing resources, plans, and reports provided by FEMA, Tucker County, and other sources to understand the nature and extent of natural and man-made hazards in the county. In addition to these resources the plan includes conducted hazard identification and prioritization exercises with the members of the Core Planning Team and the members of the Tucker County Planning Commission. The findings from these steps were utilized to determine the priority hazards for Tucker County and its municipalities, which will become the focus of the mitigation strategies developed in the remainder of this plan.

Hazard History

Past occurrences of hazard events are likely predictors of future events. A review of the hazard history of Tucker County, therefore, helps to provide a better understanding of what hazards the county is susceptible to. Detailed descriptions of the historic hazard events, including information on losses of life and property, as well as estimated damages are included in the Appendix. Below are summaries of the major events by hazard type based on information that was available during the development of this plan. Unless otherwise indicated, the listed hazards affect both the county and the included municipalities equally.

1. Flood

Although flooding is a problem for Tucker County, floodplain lands are valuable community assets. The natural resources contained in flood prone lands and their natural functions can increase the community's overall quality of life. Substantial gains can be made by transforming stream and river floodplains from problem areas to value-added community assets. Parks, bike paths, open spaces, wildlife areas, and aesthetic features are important quality-of-life issues to our residents and visitors. These assets, rather than those of flooded out buildings and homes in a floodplain, make Tucker County more appealing to potential employers, investors, homeowners and tourists. When portions of floodplain' are left in or restored to a nearly natural state, not only do they reduce the number and severity of floods, but they also can help handle storm water runoff and minimize pollution. The natural functions of floodplains are listed below:

Floodplains limit flooding naturally, by temporarily storing flood waters
Floodplains maintain water quality by filtering sediments, nutrients, and impurities
Floodplains preserve and recharge groundwater supply
Floodplains support natural vegetation
Floodplains provide fish and wildlife habitat
Floodplains provide many kinds of recreations opportunities
Floodplains provide places for outdoor education and scientific study areas

2. Other Hazards Within Tucker County

Drought

The Farm Service Agency for flood and drought declarations in Tucker County declared droughts in Tucker County in 1999, 2005 and 2007.

Winter Storm

The worst winter storms of record in Tucker County have also occurred within the last decade. Severe winter storms are common in this part of the state due to its extreme northeastern location and proximity to higher elevations.

Tornado

Tucker County has experienced two recorded incidences of tornado touchdowns.

Windstorm

Tucker County has also experienced high windstorms not associated with tornado events.

Technological Hazards

Tucker County has not experienced any recent technological hazard event involving the transportation of hazardous materials.

The historical hazard information provided insight into some of the high priority hazards that should be included in the plan; however, it did not capture all of the possible hazard risks in the county and municipalities. An additional review of possible hazard risks was conducted using the resources provided in "Understanding Your Risks - Identifying Hazards and Estimating Losses" (FEMA 386-2). Based on this review earthquake, landslides, land subsidence, and wildfires were identified as potential threats in Tucker County. The rationale for selecting these hazards is described in greater detail below.

Additional hazards were also identified and prioritized through an exercise that was conducted with the RAMP-C. In both exercises the participants were asked to identify natural and man-made hazards that occur in Tucker County and rank the selected hazards from highest to lowest priority. The table below provides a summary of how the priority hazards were determined using a combination of historical occurrences, public perception of hazard risk, and the probability of future occurrence based on other technical resources.

Upshur County Hazards

Hazard	*How Identified*	*Why Identified*
Avalanche	• USGS Topographic Maps • NOAA	• The general contour of the land in the county is mountainous, but they are not steep enough to cause avalanche activity. • Further, the amount of snowfall the county receives is insufficient for any kind of avalanche.
Coastal Erosion	• MapQuest	• Coastal erosion is not a significant risk as the county is more than 450 miles from the Atlantic Ocean.
Coastal Storm	• See also “Thunderstorm”	• Coastal storms are not a threat to the county as the county is more than 450 miles from the Atlantic Ocean.
Dam Failure	• WVDEP • Review of Local Response Plan	• Upshur County contains one (1) Class I dam and four (4) Class IV dams, according to the WVDEP.
Debris Flow	• See also “Land Subsidence”	• See “Land Subsidence”
Drought	• NCDC Event Records • USDA Census of Agriculture	• Eight (8) droughts have been recorded by the NCDC since 1999. • The USDA indicates that there are 480 farms in Upshur County.
Earthquake	• USGS Website • FEMA Website	• USGS rates the county as having a 2.5%g Peak Ground Acceleration (PGA). • FEMA recommends that areas with PGAs similar to Upshur County’s consider earthquakes in risk analyses.
Expansive Soils	• See also “Land Subsidence”	• See “Land Subsidence”
Extreme Heat	• NCDC Event Records	• Temperatures in the county seldom exceed 100 degrees. • If the temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote “extreme heat”.
Flooding	• Public Comment • NCDC Event Records • FIRMs • FEMA Repetitive Loss List • Searches of local media archives	• Based on mapping, both incorporated and unincorporated communities within the county contain 100-year floodplains. • The NCDC recorded 29 floods in Upshur County between 1994 and 2008.
Hailstorm	• NCDC Event Records	• The NCDC has reported 29 hail events since 1975.

Hazardous Material Incident	• Public Comment • Lewis-Upshur LEPC Commodity Flow Study • Lewis-Upshur LEPC Risk/Vulnerability Analysis • Upshur County EOP	• The commodity flow study recorded over 60 types of hazardous materials on US 33. • Upshur County contains 17 SARA-regulated facilities.
Hurricane	• See also “Thunderstorm”	• The county does not experience the hurricane conditions of extremely high winds, rains, and hail. In some instances, the county may be affected by rainfall brought about by the remnants of a hurricane, which are addressed elsewhere.
Land Subsidence	• Public Comment • USGS • nationalatlast.gov	• Many areas in northern Upshur County have been undermined. • Local insurance agents report regular claims resulting from subsidence damage.
Landslide	• See “Land Subsidence”	• See “Land Subsidence”
Terrorism	• Upshur County EOP • Lewis-Upshur LEPC Risk/Vulnerability Analysis • FEMA Website	• Upshur County contains sites that could be potential targets.
Thunderstorm	• Public Comment • NCDC Event Records	• The NCDC has reported 52 thunderstorm/high wind events since 1957.
Tsunami	• MapQuest	• The Atlantic Ocean is approximately 450 miles from the county. • The Appalachian Mountains will most likely protect the area from a tsunami affecting the US east coast.
Urban Fire	• Public Comment • Searches of local media archives	• According to the Buckhannon Fire Department, a high-profile fire occurred on Main Street in the late 1970s.
Utility Failure	• Public Comment	• As much as 80% of the public water in the county is provided by the City of Buckhannon. • If water runs low in the river and there is no water behind the reservoir dam in Buckhannon, the county has approximately two months of available water.
Volcano	• USGS	• No volcanoes exist on the east coast.

Wildfire	• Public Comment • WV Division of Forestry • NCDC Event Records • WFAS-MAPS • National Interagency Fire Center	• The local forestry agent indicates that Upshur County could be at risk from wildfires given dry conditions and the types of fuel available.
Wind	• Public Comment • National Weather Service • NCDC Event Records	• The NCDC has reported 52 thunderstorm/high wind events since 1957.
Winter Storm	• Public Comment • NCDC Event Records	• 58 snow and ice events have been reported by the NCDC since 1993.

Hazard Impacts by Jurisdiction

Barbour

Hazard	*Belington*	*Junior*	*Philippi*
Dam Failure	<	>	<
Drought	=	=	=
Earthquake	=	=	=
Flooding	>	>	>
Hailstorm	=	=	=
Hazardous Materials Incident	>	>	>
Land Subsidence	<	<	<
Terrorism	<	<	>
Thunderstorm/Lightning	=	=	=
Urban Fire	>	>	>
Wildfire	<	<	<
Wind Storm/Tornado	=	=	=
Winter Storm	=	=	=

Key
= : Municipality affected by hazard same as county
> : Municipality affected by hazard more than county
< : Municipality affected by hazard less than county

Braxton

Hazard	*Burnsville*	*Flatwoods*	*Gassaway*	*Sutton*
Dam Failure	>	=	>	>
Drought	=	=	=	=
Earthquake	=	=	=	=
Flooding	=	=	=	>
Hailstorm	=	=	=	=
Hazardous Materials Incident	>	>	>	>
Land Subsidence	=	=	=	=
Terrorism	>	>	>	>
Thunderstorm/Lightning	=	=	=	=
Urban Fire	>	>	>	>
Wildfire	<	<	<	<
Wind Storm/Tornado	=	=	=	=
Winter Storm	=	=	=	=

Gilmer

Hazard	*Glenville*	*Sand Fork*
Dam Failure	=	=
Drought	=	=
Earthquake	=	=
Flooding	>	>
Hailstorm	=	=
Hazardous Materials Incident	>	>
Land Subsidence	=	=
Terrorism	=	=
Thunderstorm/Lightning	=	=
Urban Fire	>	>
Wildfire	=	=
Wind Storm/Tornado	=	=
Winter Storm	=	=

Key
= : Municipality affected by hazard same as county
> : Municipality affected by hazard more than county
< : Municipality affected by hazard less than county

Lewis

Hazard	*Weston*	*Jane Lew*
Dam Failure	>	=
Drought	<	=
Earthquake	=	=
Flooding	=	=
Hailstorm	=	=
Hazardous Materials Incident	=	>
Land Subsidence	=	=
Terrorism	>	>
Thunderstorm/Lightning	=	=
Urban Fire	>	>
Wildfire	<	<
Wind Storm/Tornado	=	=
Winter Storm	=	=

Key
= : Municipality affected by hazard same as county
> : Municipality affected by hazard more than county
< : Municipality affected by hazard less than county

Randolph

Hazard	*Beverly*	*Coalton*	*Elkins*	*Harman*	*Huttonsville*	*Mill Creek*	*Montrose*
Drought	=	=	=	=	=	=	=
Earthquake	=	=	=	=	=	=	=
Epidemic	>	>	>	>	>	>	>
Flooding	>	=	>	=	>	>	=
Hailstorm	=	=	=	=	=	=	=
Hazardous Materials Incident	=	<	>	>	>	>	=
Land Subsidence	=	=	=	<	=	=	=
Terrorism	=	=	>	=	>	=	=
Thunderstorm/Lightning	=	=	=	=	=	=	=
Wildfire	<	<	<	<	<	<	<
Wind Storm/Tornado	=	=	=	=	=	=	=
Winter Storm	=	=	=	=	=	=	=

Tucker

Hazard	*Davis*	*Hambleton*	*Hendricks*	*Parsons*	*Thomas*
Dam Failure	<	>	>	>	<
Drought	=	=	=	=	=
Earthquake	=	=	=	=	=
Flooding	>	>	>	>	>
Hailstorm	=	=	=	=	=
Hazardous Materials Incident	>	<	<	>	=
Land Subsidence	<	<	<	>	>
Terrorism	>	=	=	>	>
Thunderstorm/Lightning	=	=	=	=	=
Urban Fire	>	>	>	>	>
Wildfire	<	<	<	<	<
Wind Storm/Tornado	=	<	<	=	=
Winter Storm	>	=	=	=	=

Key
= : Municipality affected by hazard same as county
> : Municipality affected by hazard more than county
< : Municipality affected by hazard less than county

Upshur

Hazard	Dam Failure	Drought	Earthquake	Flooding	Hailstorm	Hazmat Incident	Land Subsidence	Terrorism	Thunderstorm	Urban Fire	Wildfire	Wind	Winter Storm
City of Buckhannon	<	=	=	>	=	>	=	>	=	>	=	=	=

Key
= : Municipality affected by hazard same as county
> : Municipality affected by hazard more than county
< : Municipality affected by hazard less than county

Barbour Probability

Hazard	*Probability of Occurrence*	*Public Perception of Occurrence*	*Evidence of Historical Occurrences*	*References*
Dam Failure		H	Y	RHMP
Drought	M	H	Y	RHMP
Earthquake	M	L	Y	RHMP
Flooding	H	H	Y	RHMP
Hailstorm	M	L	Y	RHMP
Hazardous Materials Incident	L	L	Y	RHMP
Land Subsidence	H	L	Y	RHMP
Terrorism	L	L	N	RHMP
Thunderstorm/Lightning	H	L	Y	RHMP
Urban Fire	L	L	N	RHMP
Wildfire	L	L	N	RHMP
Wind Storm/Tornado	M	H	Y	RHMP
Winter Storm	M	H	Y	RHMP
KEY: L = low, M = moderate, H = high, OEM = Office of Emergency Management, ACOE = Army Corps of Engineers, WVCA = WV Conservation Agency, NOAA = National Oceanic and Atmospheric Administration, USGS = US Geological Survey, MHA = Multi-Hazard Atlas, FEMA = Federal Emergency Management Agency, WVDHSEM = WV Division of Homeland Security and Emergency Management, LEPC = Local Emergency Planning Committee				

Braxton Probability

Hazard	*Probability of Occurrence*	*Public Perception of Occurrence*	*Evidence of Historical Occurrences*	*References*
Dam Failure	L	L	Y	RHMP
Drought	M	M	Y	RHMP
Earthquake	L	M	N	RHMP
Flooding	H	H	Y	RHMP
Hailstorm	M	M	Y	RHMP
Hazardous Materials Incident	M	M	N	RHMP
Land Subsidence	L	M	N	RHMP
Terrorism	L	L	N	RHMP
Thunderstorm/Lightning	H	H	Y	RHMP
Urban Fire	L	L	N	RHMP
Wildfire	L	M	N	RHMP
Wind Storm/Tornado	M	H	Y	RHMP
Winter Storm	M	H	Y	RHMP

KEY: L = low, M = moderate, H = high, OEM = Office of Emergency Management, ACOE = Army Corps of Engineers, WVCA = WV Conservation Agency, NOAA = National Oceanic and Atmospheric Administration, USGS = US Geological Survey, MHA = Multi-Hazard Atlas, FEMA = Federal Emergency Management Agency, WVDHSEM = WV Division of Homeland Security and Emergency Management, LEPC = Local Emergency Planning Committee

Gilmer Probability

Hazard	*Probability of Occurrence*	*Public Perception of Occurrence*	*Evidence of Historical Occurrences*	*References*
Dam Failure	L	L	N	RHMP
Drought	M	L	Y	RHMP
Earthquake	L	L	N	RHMP
Flooding	H	H	Y	RHMP
Hailstorm	M	L	Y	RHMP
Hazardous Materials Incident	L	L	N	RHMP
Land Subsidence	H	L	Y	RHMP
Terrorism	L	H	N	RHMP
Thunderstorm/Lightning	H	L	Y	RHMP
Urban Fire	L	L	N	RHMP
Wildfire	L	L	N	RHMP
Wind Storm/Tornado	M	L	Y	RHMP
Winter Storm	M	L	Y	RHMP

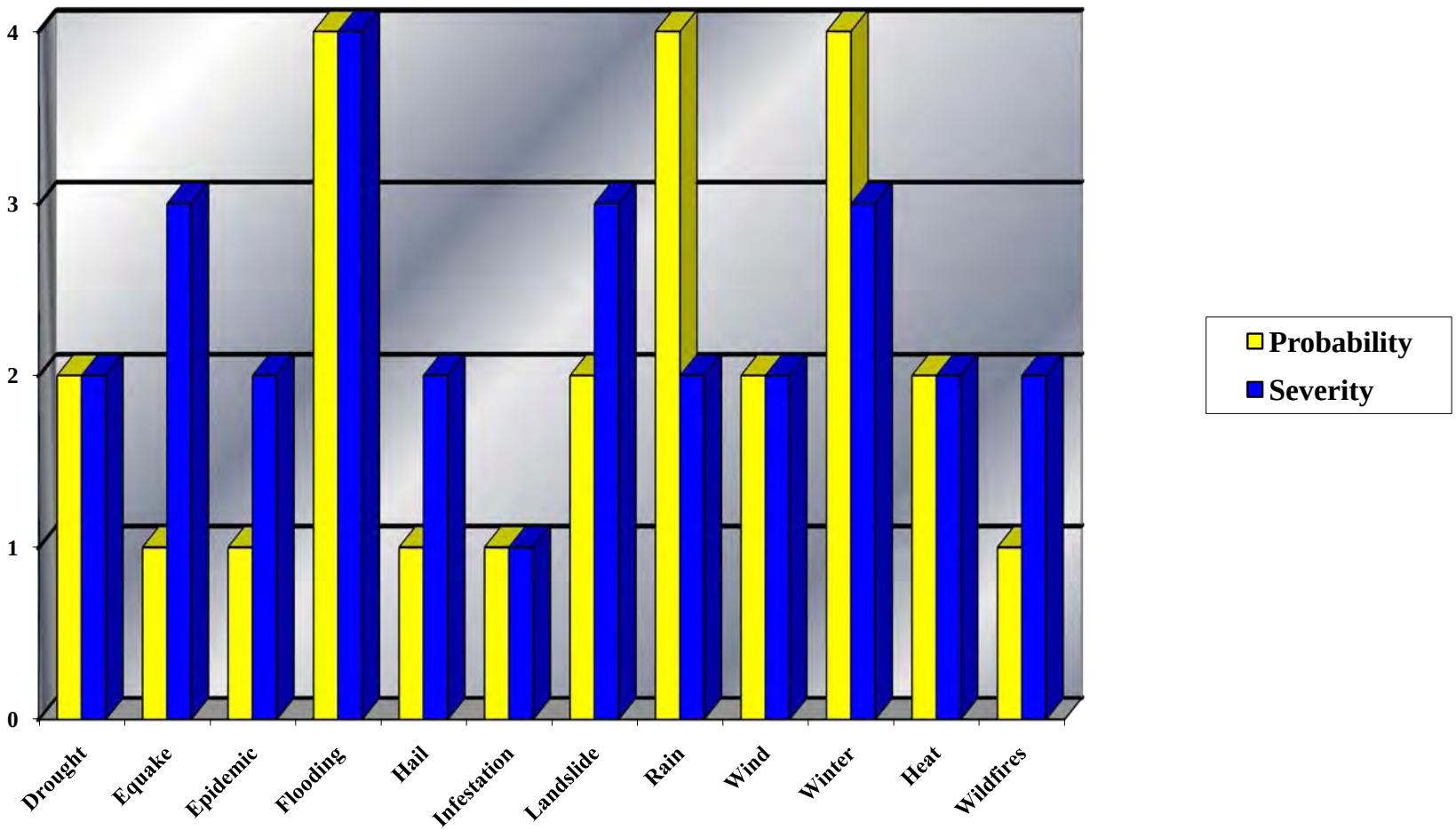
KEY: L = low, M = moderate, H = high, OEM = Office of Emergency Management, ACOE = Army Corps of Engineers, WVCA = WV Conservation Agency, NOAA = National Oceanic and Atmospheric Administration, USGS = US Geological Survey, MHA = Multi-Hazard Atlas, FEMA = Federal Emergency Management Agency, WVDHSEM = WV Division of Homeland Security and Emergency Management, LEPC = Local Emergency Planning Committee

Lewis Probability

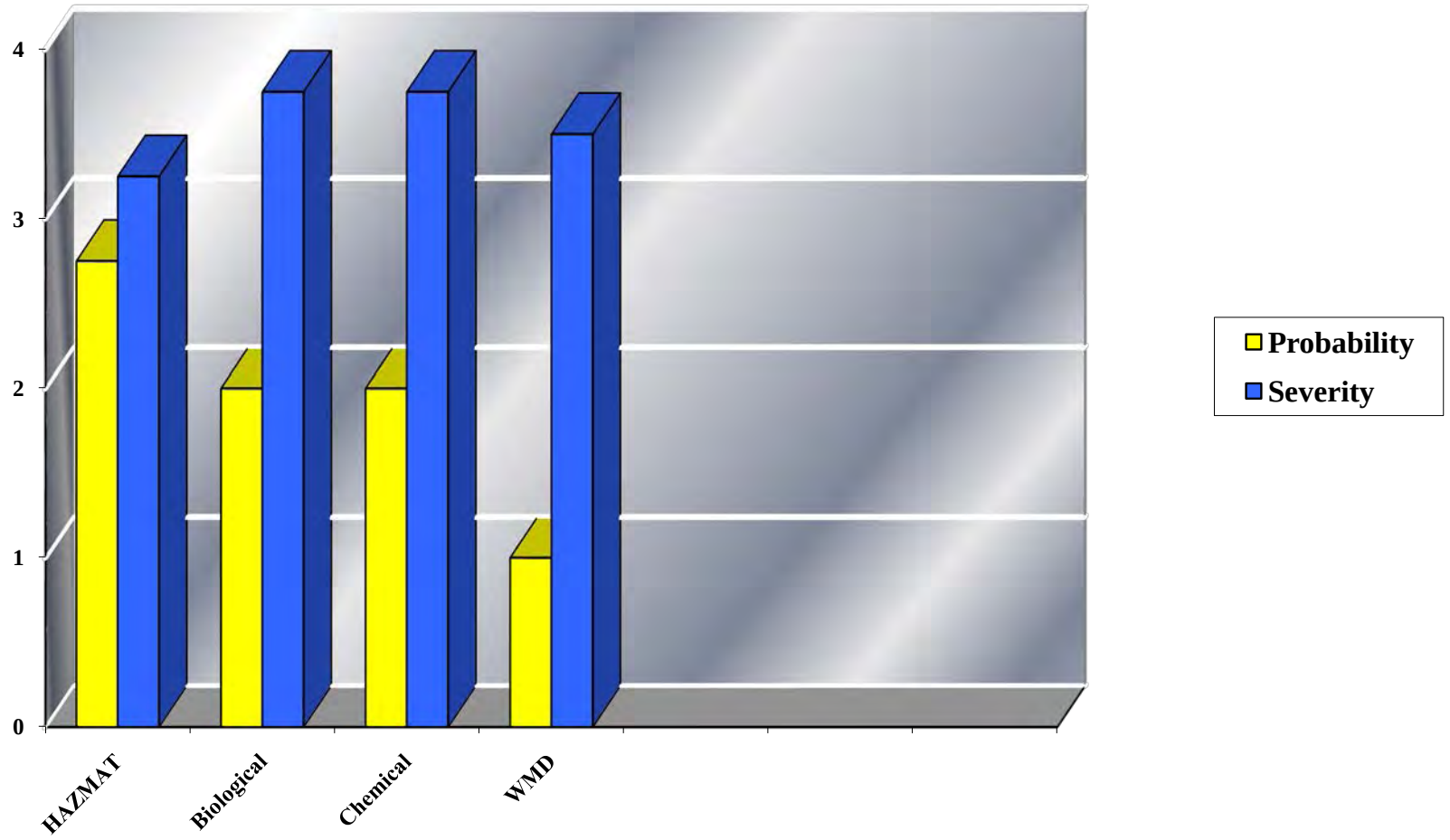
Hazard	*Probability of Occurrence*	*Public Perception of Occurrence*	*Evidence of Historical Occurrences*	*References*
Dam Failure	L	H	N	OEM, ACOE
Drought	M	L	Y	WVCA, NOAA
Earthquake	M	L	N	OEM, USGS, MHA
Flooding	H	H	Y	FEMA, WVDHSEM, NOAA, OEM
Hailstorm	L	L	Y	OEM, NOAA
Hazardous Materials Incident	M	M	Y	OEM, LEPC
Land Subsidence	M	M	Y	OEM, MHA
Terrorism	L	H	N	OEM, DHS
Thunderstorm/Lightning	H	H	Y	OEM, NOAA
Urban Fire	M	M	Y	OEM
Wildfire	L	M	N	OEM
Wind Storm/Tornado	H	H	Y	OEM, MHA, NOAA
Winter Storm	H	H	Y	FEMA, WVDHSEM, NOAA, OEM

KEY: L = low, M = moderate, H = high, OEM = Office of Emergency Management, ACOE = Army Corps of Engineers, WVCA = WV Conservation Agency, NOAA = National Oceanic and Atmospheric Administration, USGS = US Geological Survey, MHA = Multi-Hazard Atlas, FEMA = Federal Emergency Management Agency, WVDHSEM = WV Division of Homeland Security and Emergency Management, LEPC = Local Emergency Planning Committee

Randolph Probability



Randolph Continued



Tucker Probability

Hazard Type	Extent of Previous Damage	Number of Previous Occurrences	Probability of Future Events	Source of Information
Flood	Up to Severe	17	Significant	OES
Drought	Moderate	3	Moderate	OES, FSA
Severe Winter Storm	Moderate	2	Moderate	OES, NWS
Tornado	None	2	Slight	NWS
Wildfire	None	0	Slight	OES, USFS
Hazardous Materials	None	0	Slight	OES
Earthquakes	None	0	Minimal	OES, USGS
Radiological Hazards	None	0	Minimal	OES, EPA
Terrorism	None	0	Minimal	OES
Land Subsidence	None	0	Minimal	OES

Upshur Probability

Hazard	*Probability of Occurrence*	*Public Perception of Occurrence*	*Evidence of Historical Occurrences*	*References*
Dam Failure	L	L	N	RHMP
Drought	M	M	Y	RHMP
Earthquake	L	L	N	RHMP
Flooding	H	H	Y	RHMP
Hailstorm	L	H	Y	RHMP
Hazardous Materials Incident	M	L	N	RHMP
Land Subsidence	L	L	N	RHMP
Terrorism	L	L	N	RHMP
Thunderstorm/Lightning	M	H	Y	RHMP
Urban Fire	L	L	Y	RHMP
Wildfire	M	L	N	RHMP
Wind Storm/Tornado	M	M	Y	RHMP
Winter Storm	H	H	Y	RHMP

KEY: L = low, M = moderate, H = high, OEM = Office of Emergency Management, ACOE = Army Corps of Engineers, WVCA = WV Conservation Agency, NOAA = National Oceanic and Atmospheric Administration, USGS = US Geological Survey, MHA = Multi-Hazard Atlas, FEMA = Federal Emergency Management Agency, WVDHSEM = WV Division of Homeland Security and Emergency Management, LEPC = Local Emergency Planning Committee

Appendix XIII

CrossWalk

LOCAL MITIGATION PLAN REVIEW CROSSWALK

INSTRUCTIONS FOR USING THE PLAN REVIEW CROSSWALK FOR REVIEW OF LOCAL MITIGATION PLANS

Attached is a Plan Review Crosswalk based on the ***Local Multi-Hazard Mitigation Planning Guidance***, published by FEMA in July, 2008. This Plan Review Crosswalk is consistent with the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act), as amended by Section 322 of the *Disaster Mitigation Act of 2000* (P.L. 106-390), the *National Flood Insurance Act of 1968,* as amended by the *National Flood Insurance Reform Act of 2004* (P.L. 108-264) and *44 Code of Federal Regulations (CFR) Part 201 – Mitigation Planning,* inclusive of all amendments through October 31, 2007.

SCORING SYSTEM
N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.
S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Each requirement includes separate elements. All elements of a requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a summary score of "Satisfactory." A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing.

When reviewing single jurisdiction plans, reviewers may want to put an N/A in the boxes for multi-jurisdictional plan requirements. When reviewing multi-jurisdictional plans, however, all elements apply. States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements. Optional matrices for assisting in the review of sections on profiling hazards, assessing vulnerability, and identifying and analyzing mitigation actions are found at the end of the Plan Review Crosswalk.

The example below illustrates how to fill in the Plan Review Crosswalk.:

Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): *[The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include an **overall summary** description of the jurisdiction's **vulnerability** to each hazard?	Section II, pp. 4-10	The plan describes the types of assets that are located within geographically defined hazard areas as well as those that would be affected by winter storms.		□
B. Does the **new or updated** plan address the **impact** of each hazard on the jurisdiction?	Section II, pp. 10-20	The plan does not address the impact of two of the five hazards addressed in the plan. **Required Revisions:** • Include a description of the impact of floods and earthquakes on the assets. **Recommended Revisions:** This information can be presented in terms of dollar value or percentages of damage.	□	
		SUMMARY SCORE	□	

LOCAL MITIGATION PLAN REVIEW CROSSWALK

LOCAL MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted. Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a **"Needs Improvement"** score.

Prerequisite(s) (Check Applicable Box)	**NOT MET**	**MET**
1. Adoption by the Local Governing Body: §201.6(c)(5) OR		X
2. Multi-Jurisdictional Plan Adoption: §201.6(c)(5) **AND**		X
3. Multi-Jurisdictional Planning Participation: §201.6(a)(3)		X

Planning Process	**N**	**S**
4. Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)		X

Risk Assessment	**N**	**S**
5. Identifying Hazards: §201.6(c)(2)(i)		X
6. Profiling Hazards: §201.6(c)(2)(i)		X
7. Assessing Vulnerability: Overview: §201.6(c)(2)(ii)		X
8. Assessing Vulnerability: Addressing Repetitive Loss Properties. §201.6(c)(2)(ii)		X
9. Assessing Vulnerability: Identifying Structures, Infrastructure, and Critical Facilities: §201.6(c)(2)(ii)(B)		X
10. Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)		X
11. Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)		X
12. Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)		X

*States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements.

SCORING SYSTEM

Please check one of the following for each requirement.

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.

S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Mitigation Strategy	**N**	**S**
13. Local Hazard Mitigation Goals: §201.6(c)(3)(i)		X
14. Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)		X
15. Identification and Analysis of Mitigation Actions: NFIP Compliance. §201.6(c)(3)(ii)		X
16. Implementation of Mitigation Actions: §201.6(c)(3)(iii)		X
17. Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)		X

Plan Maintenance Process	**N**	**S**
18. Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(ii)		X
19. Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)		X
20. Continued Public Involvement: §201.6(c)(4)(iii)		X

Additional State Requirements*	**N**	**S**
Insert State Requirement		
Insert State Requirement		
Insert State Requirement		

LOCAL MITIGATION PLAN APPROVAL STATUS

PLAN NOT APPROVED	
See Reviewer's Comments	
PLAN APPROVED	

LOCAL MITIGATION PLAN REVIEW CROSSWALK

Local Mitigation Plan Review and Approval Status

Jurisdiction:	Title of Plan:	Date of Plan:
Region VII Planning & Development Council	Region VII Regional Hazard Mitigation Plan	7.25.2011

Local Point of Contact:	Address:
Robert J Jacobus, LEED GA	Region VII Planning & Development Council 99 Edmiston Way, Suite 225 Buckhannon, West Virginia
Title: Community Development Specialist	
Agency: Region VII Planning & Development Council	
Phone Number: 304-472-6564	**E-Mail:** bjacobus@regionvii.com

State Reviewer:	Title:	Date:

FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region [Insert #]		
Plan Not Approved		
Plan Approved		
Date Approved		

Jurisdiction:	NFIP Status*			
	Y	N	N/A	CRS Class
1. Barbour	X			
2. Belington	x			
3. Junior	x			
4. Philippi	x			8
5. [ATTACH PAGE(S) WITH ADDITIONAL JURISDICTIONS]				

*** Notes:** **Y = Participating** **N = Not Participating** **N/A = Not Mapped**

Jurisdiction:	NFIP Status			
	Y	N	N/A	CRS Class
Braxton	✓			
Town of Burnsville	✓			
Town of Flatwoods	✓			
Town of Gassaway	✓			
Town of Junior	✓			
Gilmer	✓			
City of Glenville	✓			
Town of Sand Fork	✓			
Lewis	✓			
City of Weston	✓			
Town of Jane Lew	✓			
Randolph	✓			
City of Elkins	✓			
Town of Beverly	✓			
Town of Coalton	✓			
Town of Harman	✓			
Town of Huttonsville	✓			
Town of Mill Creek	✓			
Town of Montrose	✓			
Tucker	✓			
City of Parsons	✓			
City of Thomas	✓			
Town of Davis	✓			
Town of Hambleton	✓			
Town of Hendricks	✓			
Upshur	✓			
City of Buckhannon	✓			**8**

Y = Participating N = Not Participating N/A = Not Mapped

LOCAL MITIGATION PLAN REVIEW CROSSWALK

PREREQUISITE(S)

1. Adoption by the Local Governing Body

***Requirement §201.6(c)(5)*:** *[The local hazard mitigation plan **shall** include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Has the local governing body adopted **new or updated** plan?	p. 312			x
B. Is supporting documentation, such as a resolution, included?	p.312			x
		SUMMARY SCORE		

2. Multi-Jurisdictional Plan Adoption

***Requirement §201.6(c)(5)*:** *For multi-jurisdictional plans, each jurisdiction requesting approval of the plan **must** document that it has been formally adopted.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the **new or updated** plan indicate the specific jurisdictions represented in the plan?	p. 1			x
B. For each jurisdiction, has the local governing body adopted the **new or updated** plan?	Appendix VII p, 310			x
C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?	Appendix VII p. 310			x
		SUMMARY SCORE		

3. Multi-Jurisdictional Planning Participation

***Requirement §201.6(a)(3)*:** *Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process … Statewide plans will not be accepted as multi-jurisdictional plans.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the **new or updated** plan describe **how** each jurisdiction participated in the plan's development?	p.2			x
B. Does the updated plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?	p.1			x
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

PLANNING PROCESS: *§201.6(b): An open public involvement process is essential to the development of an effective plan.*

4. Documentation of the Planning Process

Requirement §201.6(b): *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:*
(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Requirement §201.6(c)(1): *[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.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan provide a narrative description of the process followed to prepare the **new or updated** plan?	p.2			x
B. Does the **new or updated** plan indicate who was involved in the **current** planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, *etc*.?)	**Appendix VIII p. 346**			x
C. Does the **new or updated** plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)	**Appendix VIII p.346**			x
D. **Does the new or updated plan discuss the** opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?	**p.2**			x
E. Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?	**p.2, 7**			x
F. Does the updated plan document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?	**p.7**			x
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

RISK ASSESSMENT: *§201.6(c)(2): The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.*

5. Identifying Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment **shall** include a] description of the type … of all natural hazards that can affect the jurisdiction.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include **a description** of the types of **all natural hazards** that affect the jurisdiction?	Appendix I p.44 p. 8-11			x
		SUMMARY SCORE		

6. Profiling Hazards

Requirement §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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the risk assessment identify the **location** (*i.e.*, geographic area affected) of each natural hazard addressed in the **new or updated** plan?	p. 5,8,11			x
B. Does the risk assessment identify the **extent** (*i.e.*, magnitude or severity) of each hazard addressed in the **new or updated** plan?	p. 10			x
C. Does the plan provide information on **previous occurrences** of each hazard addressed in the **new or updated** plan?	p. 11, 12			x
D. Does the plan include the **probability of future events** (*i.e.*, chance of occurrence) for each hazard addressed in the **new or updated** plan?	Appendix XII p.10			x
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

7. Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): *[The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include an **overall summary** description of the jurisdiction's **vulnerability** to each hazard?	p. 3,8,9,10			x
B. Does the **new or updated** plan address the **impact** of each hazard on the jurisdiction?	p.10			x
		SUMMARY SCORE		

8. Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): *[The risk assessment] **must** also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged floods.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe vulnerability in terms of the types and numbers of *repetitive loss properties* located in the identified hazard areas?	p. 150	***Note: This requirement becomes effective for all local plans approved after October 1, 2008.***		x
		SUMMARY SCORE		

9. Assessing Vulnerability: Identifying Structures

Requirement §201.6(c)(2)(ii)(A): *The plan **should** describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area … .*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan describe vulnerability in terms of the **types and numbers** of **existing** buildings, infrastructure, and critical facilities located in the identified hazard areas?	p. 51	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the **new or updated** plan describe vulnerability in terms of the **types and numbers** of **future** buildings, infrastructure, and critical facilities located in the identified hazard areas?	p.25	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

10. Assessing Vulnerability: Estimating Potential Losses

Requirement §201.6(c)(2)(ii)(B): *[The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate … .*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan estimate **potential dollar losses** to vulnerable structures?	p. 145	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		x
B. Does the **new or updated** plan describe the **methodology** used to prepare the estimate?	Appendix IV p. 148	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		x
		SUMMARY SCORE		

11. Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2)(ii)(C): *[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan describe land uses and development trends?	p. 17-24	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		x
		SUMMARY SCORE		

12. Multi-Jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): *For multi-jurisdictional plans, the risk assessment **must** assess each jurisdiction's risks where they vary from the risks facing the entire planning area.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?	p. 5			x
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

MITIGATION STRATEGY: *§201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

13. Local Hazard Mitigation Goals

Requirement §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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the **new or updated** plan include a description of mitigation **goals** to reduce or avoid long-term vulnerabilities to the identified hazards?	p.25-35			x
		SUMMARY SCORE		

14. Identification and Analysis of Mitigation Actions

Requirement §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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan identify and analyze a **comprehensive range** of specific mitigation actions and projects for each hazard?	p.26 36 Appendix I&II			x
B Do the identified actions and projects address reducing the effects of hazards on **new** buildings and infrastructure?	**p.26-36**			x
C. Do the identified actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure?	**p.26-36**			x
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

15. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): *[The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the new or updated plan describe the jurisdiction (s) participation in the NFIP?	**p. 598**	***Note: This requirement becomes effective for all local mitigation plans approved after October 1, 2008.***		**x**
B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?	**p. 26-36**	***Note: This requirement becomes effective for all local mitigation plans approved after October 1, 2008.***		**x**
		SUMMARY SCORE		

16. Implementation of Mitigation Actions

Requirement: §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.*

Element	**Location in the Plan** (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** mitigation strategy include how the actions are **prioritized**? (For example, is there a discussion of the process and criteria used?)	**p. 38-39**			**x**
B. Does the **new or updated** mitigation strategy address how the actions will be implemented and administered, including the responsible department , existing and potential resources and the timeframe to complete each action?	**p. 26-28, 40**			**x**
C. Does the **new or updated** prioritization process include an emphasis on the use of a **cost-benefit review** to maximize benefits?	**p. 37**			**x**
D. Does the **updated** plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (*i.e.*, deferred), does the updated plan describe why no changes occurred?	**Appendix IX p. 346**			**x**
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

17. Multi-Jurisdictional Mitigation Actions

Requirement §201.6(c)(3)(iv): *For multi-jurisdictional plans, there **must** be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the **new or updated** plan include identifiable **action items** for each jurisdiction requesting FEMA approval of the plan?	Appendix IX p. 468			x
B. Does the **updated** plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (*i.e.*, deferred), does the updated plan describe why no changes occurred?	**Appendix IX**			x
		SUMMARY SCORE		

PLAN MAINTENANCE PROCESS

18. Monitoring, Evaluating, and Updating the Plan

Requirement §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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan describe the method and schedule for **monitoring** the plan, including the responsible department?	**p, 40**			x
B. Does the **new or updated** plan describe the method and schedule for **evaluating** the plan, including how, when and by whom (*i.e.* the responsible department)?	**p. 40**			x
C. Does the **new or updated** plan describe the method and schedule for **updating** the plan within the five-year cycle?	**p. 40**			x
		SUMMARY SCORE		

LOCAL MITIGATION PLAN REVIEW CROSSWALK

19. Incorporation into Existing Planning Mechanisms

Requirement §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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?	p. 40			x
B. Does the **new or updated** plan include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (*e.g.*, risk assessment) into other planning mechanisms, when appropriate?	p. 40			x
C. Does the **updated** plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (*e.g.*, risk assessment) into other planning mechanisms, when appropriate?	p. 2			x
		SUMMARY SCORE		

Continued Public Involvement

Requirement §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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the **new or updated** plan explain how **continued public participation** will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)	p, 40 Chapter 1			x
		SUMMARY SCORE		