Hazard Mitigation Plan
2022 Update
Region 10

Marshall, Ohio and Wetzel Counties
in West Virginia



Prepared by
Belomar Regional Council
Wheeling, WV
August 2022



Photo Credit: Jim Benner

Marshall, Ohio and Wetzel Counties
Regional Hazard Mitigation Plan (2022 Update)

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Introduction

The Disaster Mitigation Act (DMA) 2000 (Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for State and local governments as a condition of mitigation grant assistance. The DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state and local entities to closely coordinate mitigation planning and implementation efforts. The requirement of a state-level mitigation plan is obligatory, as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state-level through the establishment of requirements for two different levels of state plans. The DMA 2000 also established a new requirement for local mitigation plans and authorized up to 7% of Hazard Mitigation Grant Program (HMGP) funds available to a State for the development of State and local mitigation plans.

This plan is the regional plan for all local jurisdictions in the region comprising of Marshall, Ohio and Wetzel Counties. This region is also known as Region X (Region 10) and is one of eleven Regional Planning and Development Councils in the State of West Virginia. Belomar Regional Council is the designated planning and development agency for Region X.

The first Regional Hazard Mitigation Plan for Region X was prepared by JHC Consulting of Buckhannon, West Virginia. This plan served its purpose and expired in December of 2016. An update to the plan is required every five years. The first update was completed in 2017 and expires in September of 2022. Prior to initiating the 2022 update for the Regional Hazard Mitigation Plan, a meeting of Emergency Management Agency directors for each county was arranged by the Belomar Regional Council to discuss the overall approach. As with the 2017 update, it was decided that the 2022 update should be developed locally with input from local stakeholders and community members.

The Regional Hazard Mitigation Plan 2022 Update is developed using a transparent planning process involving all stakeholders, including leaders from local cities, villages, county governments, emergency management personnel, other community members and interested parties. The purpose of this plan is to identify potential hazards that may threaten the region; increase awareness and preparedness; and develop strategies to mitigate the effects of each hazard. The Regional Hazard Mitigation Plan 2022 Update was initiated with a review of the two previous plans. Recommendations for the future improvement from the previous plans were addressed. In addition, several documents were reviewed in preparation for this update.

The planning process provided multiple opportunities for input in the plan development, starting with the opportunity for early participation. The planning effort was guided by a steering committee, consisting of the Emergency Management Agency directors from each county, a

representative from each County Commission, leaders from several municipalities and economic development and transportation planning professionals. All stakeholders were invited to participate in the process and input was received from local jurisdictions. All local jurisdictions participated in this plan update by meeting with the planning staff at Belomar, providing input, completing surveys/assessment forms and reviewing the material for different phases of the plan and the draft document.

The Regional Hazard Mitigation Plan 2022 Update for Marshall, Ohio and Wetzel Counties is organized in seven chapters, starting with the documentation of the planning process.

Chapter 1.0 The Planning Process

The planning process used for the Regional Hazard Mitigation Plan 2022 Update for Region X was transparent, participatory and inclusive. Several opportunities for input and comments were provided at various stages of the plan development for stakeholders and for the general public. Prior to the plan's initiation, Emergency Management Agency (EMA) directors from all three counties in Region X were invited for a meeting with Belomar staff. The purpose of this meeting was to determine the path forward for the plan update. As with the previous plan update, the EMA directors once again were in favor of a locally developed plan with local ownership. This was considered preferable to hiring consultants, as local ownership could facilitate the plan maintenance and future revisions and updates.

The plan development phase began with a virtual kick-off meeting with EMA directors, county and municipal leaders and other stakeholders. The complete list of stakeholders invited can be found in Appendix A, as well as the participating jurisdictions. This meeting explained: 1) the importance of completing the 2022 Regional Hazard Mitigation Plan update for Marshall, Ohio and Wetzel Counties; 2) the planning process time line; and 3) expectations from steering committee members (see Appendix A for more information regarding the kick off meeting). The steering committee consisted of those stakeholders directly involved in hazard mitigation for the region, which included the Emergency Management Agency Directors for Marshall, Ohio and Wetzel Counties, a representative from each of the County Commissions, a representative from the largest cities in each county and the Fire Chief, Police Chief and GIS Coordinator from the region's largest city (City of Wheeling). The EMA directors recommended that the Belomar staff involved in economic development and transportation planning also serve on the steering committee with them. A list of the steering committee membership is included in Appendix A.

A total of four steering committee meetings were held during the planning period. The first meeting included a general discussion of natural and man-made hazards that have occurred, since the last plan update as well as the goals and objectives for the 2022 update. The second meeting was a topic meeting regarding the recent COVID-19 pandemic and discussed what measures are needed to ensure future pandemics can be handled effectively. In addition to the regular steering committee members, officials from the three county health departments also attended. The third meeting discussed flooding, which is the greatest natural hazard for the region. Floodplain managers from several municipalities also attended this meeting to share how major flooding events over the past five years have affected their communities. The fourth meeting discussed all other hazards that the region is susceptible to. Steering committee members were asked to begin reviewing the draft Regional Hazard Mitigation Plan 2022 update. Presentations from each steering committee meeting, as well as an invitation email and a list of attendees, can be found in Appendix A. Once the draft Regional Hazard Mitigation Plan 2022 update was completed, an email was sent to the mayors of every municipality in Region X,

inviting them and their staff to review the document and make suggestions, which can be found in Appendix A.

During the planning period, individual meetings with the mayors and/or other community leaders (i.e., city managers, planners, floodplain managers) from each municipality in the region were held. During these meetings, a community-specific hazard mitigation survey developed by Belomar staff was completed, as well as two other assessment forms (NFIP Guide and R3_Community Capability Assessment Worksheet) regarding hazard mitigation. A sample of these forms can be found in Appendix A. The West Virginia Flood Tool was utilized to gain a better understanding of where flooding is occurring in each community and if there are additional areas of frequent flooding that are not designated by the 100-Year Flood determination.

Lastly, progress on projects/objectives stated in the last plan update were discussed to examine what has been completed and what obstacles prevented communities from completing their projects/objectives. The mayors (or other community leader) also identified future goals/projects for their communities. Belomar staff gave copies of the completed forms to the mayors (or other community leader) (see Appendix A) and requested the information to be shared with their city council to obtain additional input. Belomar staff also provided the Chain of Command flow chart in case of a disaster to the mayors (or other community leader) and requested it be shared with their community's residents.

Belomar has a planning process that is generally followed for all planning activities. The process relies on providing opportunities for participation in the process and for review and comments on the documentation of key phases of the plan. Comments are also solicited on the preliminary and final draft document. A multi-media approach including print media, social media, and internet presence, are used to publicize this. Input can be provided on-line, by email, snail mail, in person or by phone. This process relies on providing opportunities for input and participation. Success is measured in opportunities provided.

Additionally, other agencies and organizations also are consulted during the planning process, when applicable. For the update of this plan, conversations took place with other West Virginia Regional Planning and Development Councils, who were in the process of updating their Hazard Mitigation Plans. Best practices and public outreach methods were discussed and ideas/approaches were shared.

The planning process was initiated by a literature review of previous Hazard Mitigation Plans for Region X, existing local comprehensive plans, the West Virginia Statewide Hazard Mitigation Plan and hazard mitigation plans of neighboring jurisdictions.

1.1 Literature Review

The Hazard Mitigation Plan adopted in the year 2012 and 2017, along with the recommendations for the future, were reviewed. Available HMPs from neighboring jurisdictions were obtained. Other material on the subject was researched on the worldwide web. This included papers, articles and data sources.

Key documents, which guided the 2022 update are presented below:

- "The 2018 West Virginia Statewide Standard Hazard Mitigation Plan Update"; West Virginia Emergency Management (WVEMD)
- "2016 Hazard Mitigation Plan for the Mid-Ohio Valley"; Mid-Ohio Valley Regional Council (MOVRC)
- "Belmont County Multi-Jurisdictional Hazard Mitigation Plan 2013-2018"; Belmont County, Ohio; Michael Baker, Jr., Inc.
- "Brooke, Hancock and Jefferson Counties Hazard Mitigation Plan"; JHC Consulting
- "Long Range Transportation Plan for 2045"; Belomar Regional Council
- "Comprehensive Economic Development Strategy (CEDS); Belomar Regional Council
- "Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Plan"; JHC Consulting
- "Local Mitigation Plan Review Guide", FEMA
- "Envision Wheeling 2014 Comprehensive Plan", Compass Point Printing, Cincinnati, Ohio
- "Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures", FEMA Publication

These documents were utilized for developing the content of this plan, for coordination and consistency with neighboring jurisdictions, and the statewide plan. Belomar Regional Council's Transportation Plan for 2045 and Comprehensive Economic Development Strategy (CEDS) for 2019 – 2023 were utilized for identifying roadway infrastructure and economic development opportunities and strategies in West Virginia's Region X.

1.2 Early Participation

The plan update began with a public participation survey. The purpose of the survey was to seek public input for hazard identification, mitigation, awareness and community preparedness. A public notice for early participation and announcing the survey was placed in the local newspaper for each of the three counties. All stakeholders were sent an email announcing this survey, opportunity to participate in the planning process and invited to share the survey with their communities. A copy of this email is included in Appendix A.

The online survey, which was developed using Survey Monkey, was posted on Belomar's website and shared on social media by Belomar staff. Hard copies of this survey and a survey drop box were also placed in the three county libraries and at the Marshall, Ohio and Wetzel County Buildings. Local jurisdictions were encouraged to share this survey opportunity with their residents. The copy of the survey and display advertisement are included in Appendix A. The display advertisement is also presented on the next page.

Early Participation Display Advertisement

PUBLIC NOTICE

Belomar Regional Council is in the process of updating the Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan. Hazard mitigation plans are required by the Disaster Mitigation Act of 2000. (DMA 2000: Public Law (PL) 106-390). The law reinforced the importance of mitigation planning, emphasizing the planning before disasters occur. The purpose of the 5-year plan update is to identify potential hazards, associated risks and actions for mitigation. As part of planning process, we are seeking your input. Please complete a brief online survey to let us know your opinions on natural hazards and mitigations by October 29, 2021. To complete the survey, please go to https://www.surveymonkey.com/r/HMPSurvey2022
In addition, a paper copy of the survey can be found and completed at the following locations:
Ohio County Public Library, 52 16th Street Wheeling, WV 26003
Ohio County Courthouse, 1500 Chapline Street Room #215 Wheeling, WV 26003
Moundsville-Marshall County Public Library, 700 5th Street Moundsville, WV 26041
Marshall County Courthouse, 600 7th Street Moundsville, WV 26041
New Martinsville Library, 160 Washington Street New Martinsville, WV 26155
Wetzel County Courthouse, 200 Main Street New Martinsville, WV 26155

1.3 Process for Goals and Objectives

Goals and objectives for the current plan were reviewed by the steering committee at the first steering committee meeting. General consensus was, since these were developed after public input from the last plan update and are still relevant, they should be used with the 2022 plan update. Once again, the strategy was to adopt a regional format that fosters multi-jurisdictional cooperation to achieve a common goal. Minor modifications of the goals and objectives were necessary to include Pandemics, a new hazard for Region X.

1.4 Process for Hazard Identification, Mitigation and Project Prioritization

The previous two plans included a list of all hazards and then pursued the relevant candidate hazards for further analysis. The steering committee decided to use this list in the 2022 plan update, with the addition of "Pandemics" as a new hazard for the region. The previous hazard "Hydraulic Fracturing (Fracking) in the 2017 plan has been renamed "Oil and Gas Drilling/Hazardous Incident" and includes all potential hazardous incidents related to the Oil and Gas Industry (ex. well fires, chemical spills, ground water contamination, gas well water impoundments issues, gas truck transportation accidents, etc.).

The previous category "Land Subsidence" was split into two categories for this document: "Land Subsidence" and "Landslides". The previous Regional Hazard Mitigation Plans (2012 and 2017) only discussed land subsidence due to the lack of availability of data regarding landslides; however in February of 2022, the West Virginia GIS Technical Center published an extensive report regarding landslide susceptibility for the State of West Virginia, including Region 10. After reading this report and several meetings with the West Virginia GIS Technical Center, Belomar staff decided to add the additional category of landslides. This category was not included as a

separate category in the public outreach survey, as the report from the West Virginia Technical Center was not available to the public until after Belomar's public outreach survey was completed.

The frequency of hazards in the list is updated to reflect the latest available data. Only the relevant candidate hazards were further analyzed. The public participation survey gave residents the opportunity to identify any new hazards that were not previously stated in the 2012 or 2017 Hazard Mitigation Plans. The survey also allowed planning staff to better understand the community's perceptions of the hazards listed and if concern for these hazards has increased or decreased from the last plan update. The public participation survey revealed that flooding and weather-related events remain of utmost concern locally.

At the individual meetings with local jurisdictions, leaders were asked to review the mitigation strategies and projects they had in the adopted 2017 plan. They provided the status of existing projects; identified new projects; and provided strategies for these new projects. Local jurisdictions were also asked to prioritize their projects. The mitigation strategies, projects and project priorities included in the plan are provided by the local jurisdictions and can be found in Chapters 5 and 6.

1.5 Draft Hazard Mitigation Plan Review

A draft document was prepared by Belomar staff and reviewed by the steering committee. Input from the steering committee has been incorporated in the draft plan. This draft document was made available for public review and comment on Belomar's website and paper copies were placed in the three county libraries. In addition, open houses were held in each county. A public notice (see Appendix A) was published in the Wheeling Intelligencer, Wheeling News Register, Moundsville Echo and Wetzel Chronicle inviting the public to review the document online or attend an open house. Sign-in sheets as well as the poster presented at the open houses can be found in Appendix A. An email was also sent to the mayors, county commissioners and other stakeholders inviting them to review the document and offer their comments (see Appendix A).

During the public comment period, no comments were received; however, the draft plan received 39 hits on Belomar's website and 20 "206 Hits". (206 Hits are defined as Partial Content (Code: 206) hits within the 2xx class - Successful. These are successful hits. The partial content success code is issued when the server fulfills a partial GET request. This happens when a client is downloading a multi-part document or part of a larger file.) The Marshall County and Ohio County Open Houses were attended by a few attendees. The Wetzel County Open House had the greatest attendance. It was located in the lobby of the Wetzel County Courthouse and a Belomar staff member was able to engage with visitors to the courthouse. All open houses for future plans will be held in the lobbies of the court houses, if possible, as this location provided the most interaction with the public. The draft plan was also available to neighboring jurisdictions.

In addition, the draft document will be provided to the funding agencies for their review and comments. All comments received will be addressed in the final draft. If the comments from the funding agencies are substantial, a revised final draft document will go through the public comment process again. Comments received will be addressed in the final draft document, which then will be provided to the local jurisdictions in Region X for adoption.

1.6 Plan Implementation and Maintenance

The final draft of this plan was sent was sent to West Virginia Emergency Management and FEMA for approval. Upon approval, local jurisdictions adopted the plan by resolution of their governing body. The adoption of the plan signifies ownership and ongoing implementation. This plan recognizes that most local jurisdictions need the resources and expertise of the county EMA offices to facilitate plan implementation and maintenance. In recognition of this fact, the countywide mitigation strategies in this plan are also the mitigation strategies of local jurisdictions, when applicable.

During this plan update, each local jurisdiction did provide several mitigation strategies specific to their community; additionally, EMA directors listed countywide strategies. Countywide strategies are all encompassing and apply to local jurisdictions in the absence of a locally identified strategy for mitigation. If a jurisdiction adopts a new strategy or modifies an existing strategy, this document will be revised by Belomar planning staff and the local jurisdiction in consultation with the EMA director. All revisions are discussed and approved by the governing body of each jurisdiction. The governing body meetings are open to the public.

Mitigation funds for projects can be sought by each local jurisdiction or cooperatively with other jurisdictions or countywide by supporting the county's funding initiatives. This plan will be evaluated after each hazard event and at least once per year by Belomar planning staff and EMA directors. Local jurisdictions will be asked to evaluate this plan periodically. The five-year update will be a regional effort to include all jurisdictions, EMA offices, Belomar planning staff and additional stakeholders.

As part of implementation, this plan should be integrated in other planning activities in the area, such as comprehensive plans, economic development and transportation plans. The objective of this integration should be to minimize vulnerability and related losses of existing and future developments in case of a hazard event. Integration also ensures readiness by timely inclusion of physical changes into the EOP plans of the community and the county.

1.7 Regional Profile

West Virginia has eleven Regional Planning and Development Councils. These "regional councils" were formed pursuant to West Virginia Code Chapter 8, Article 25, which states that "problems of growth and development so transcend the boundary lines of governmental units that no single unit can plan for the solution of these problems without affecting other units of government; that intergovernmental cooperation on a regional basis is an effective method to approach common planning and development problems and to seek more efficient and economical solutions to common problems of local government."

Natural hazards and catastrophic events transcend local jurisdictional boundaries and require a regional approach for planning and resource utilization. The planning area for the Region X Planning and Development Council consists of Ohio, Marshall and Wetzel Counties, and a regional planning approach is used for this plan.

The planning area consists of 19 local jurisdictions, as listed in Table 1.7.1 and shown in Figure 1.7.2. There are 16 municipalities within the three counties. Two of the three counties (Ohio and Marshall) are located in the Northern Panhandle of West Virginia (located between the states of Ohio and Pennsylvania) and although the third county (Wetzel) is not technically in the Northern Panhandle, it shares similar economic and social characteristics and is often informally considered to be part of the Northern Panhandle. All three counties share similar geographic characteristics, including a topography of rugged Appalachian foothills with narrow valleys covered in eastern deciduous forest with many creeks and streams. The Ohio River forms the western border for all three counties. The land on the eastern side of Region X consists of sparsely developed rural areas, while the western side consists of more populated urban areas along the Ohio River.



Figure 1.7.1: The Ohio River forms the western border for all three counties in Region X. Photo Credit: Natalie Hamilton

Table 1.7.1

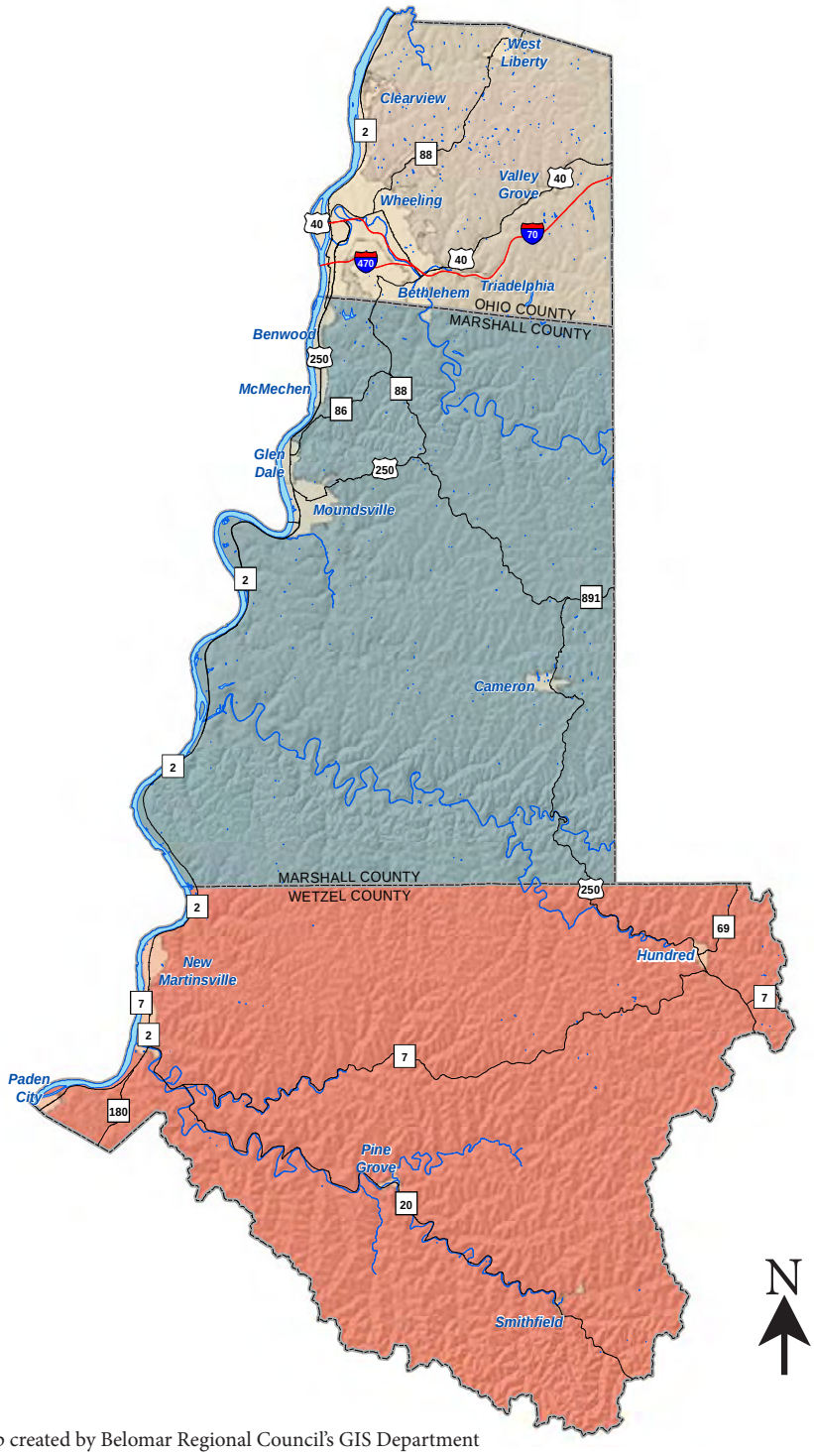
List of Local Governments

Name	2020 Population	Jurisdiction Type	County
Benwood	1,252	City	Marshall
Bethlehem	2,605	Village	Ohio
Cameron	861	City	Marshall
Clearview	472	Village	Ohio
Glen Dale	1,496	City	Marshall
Hundred	255	Town	Wetzel
Marshall County	30,591	County	Marshall
McMechen	1,697	City	Marshall
Moundsville	8,093	City	Marshall
New Martinsville	5,204	City	Wetzel
Ohio County	42,425	County	Ohio
Paden City	1,708	City	Wetzel/Tyler
Pine Grove	363	Town	Wetzel
Smithfield	103	Town	Wetzel
Triadelphia	669	Town	Ohio
Valley Grove	275	Village	Ohio
West Liberty	1,454	Town	Ohio
Wetzel County	14,442	County	Wetzel
Wheeling	27,052	City	Ohio/Marshall

Source: 2020 Census State Redistricting Data (Public Law 94-171) Summary File Prepared by the U.S. Census Bureau, 2021

Figure 1.7.2

Map of Marshall, Ohio and Wetzel Counties



Map created by Belomar Regional Council's GIS Department

Transportation

The transportation network in the area includes four (4)-lane divided highways, two-lane roadways, and single-lane roadways. In addition to the roadways, the area's transportation network includes transit systems, an intermodal facility, an active railroad line, the navigable Ohio River, and small public and private airports. The roadway network is consistent with the mountainous terrain, meaning many roads are winding and include steep grades. The primary transportation routes in the planning area are as follows:

- Interstate 70
- Interstate 470
- U.S. Route 40
- U.S. Route 250
- West Virginia Route 2 (WV 2)

The secondary routes in the area are as follows:

- WV 7
- WV 20
- WV 86
- WV 88
- WV 180
- WV 891

Interstates 70 and 470 run east-west through Ohio County, with I-470 serving as a Wheeling Bypass. I-70 runs through the City of Wheeling and passes through a tunnel that is reduced to one-lane in each direction. U.S. Routes 40 and 250 are mainly categorized as principal arterials and provide access mostly in the east-west direction through the planning area. U.S. 40 (National Road) bisects Ohio County, running from the Ohio River to the Pennsylvania border. U.S. 250 runs southeastward from Moundsville to Marion County. WV Route 2 runs parallel to the Ohio River through the area and varies from two to four lanes. It runs through all three county seats; New Martinsville, Moundsville, and Wheeling. WV 2 and the interstates see the highest traffic volumes, including trucks carrying hazardous materials. Due to the intense hydraulic fracturing activity, the volume of hazmat vehicles have also increased on local roads.

Economy

In all three counties, the economy is driven by government, trade, transportation and utilities. Other trends are somewhat more difficult to determine. The region's growing natural gas industry and continued coal mining account for the natural resource extraction in the area. This activity is most intense in Marshall County. The high rank of education and health services in Ohio County is not surprising, given the fact that Wheeling University, West Virginia Northern Community College, and West Liberty University are all located here. The trade, transportation and utilities industry includes retail trade, transportation and warehousing. Ohio County has a major retail service and warehousing development named "The Highlands". All three counties have experienced growth in the transportation industry, due to intense natural gas extraction

activity. Table 1.7.2 shows the top four industries of each county, along with the number of individuals employed.

Table 1.7.2

Top Industries by County

County	Industry #1 (Employment)	Industry #2 (Employment)	Industry #3 (Employment)	Industry #4 (Employment)
Marshall	Government (1,881)	Education and Health Services (1,632)	Natural Resources and Mining (1,497)	Trade, Transportation and Utilities (1,443)
Ohio	Education and Health Services (6,064)	Trade, Transportation and Utilities (5,470)	Professional and Business Services (3,427)	Government (3,336)
Wetzel	Trade, Transportation and Utilities (1,005)	Government (972)	Education and Health Services (623)	Leisure and Hospitality (505)

Source: WorkForce West Virginia 4th Quarter 2020

The three counties all have some room for development, see "Analyzing Development Trends" in this chapter. All counties have Economic Development Authorities (EDAs) that work to bring development and jobs to the area. The top employers, by jurisdiction, are as follows:

- Marshall County
    1. Marshall County Board of Education
    2. American Consolidated Natural Resources, Inc.
    3. WVU Medicine
    4. Westlake Chemical
    5. Walmart, Inc.
- Ohio County
    1. WVU Medicine
    2. Ohio County Board of Education
    3. Cabela's Wholesale, LLC
    4. Williams Lea, Inc.
    5. WesBanco Bank, Inc.

- Wetzel County

    1. Wetzel County Board of Education
    2. Walmart, Inc.
    3. American Consolidated Natural Resources, Inc.
    4. WVU Medicine
    5. Sunbridge Mountain Care Management, Inc.

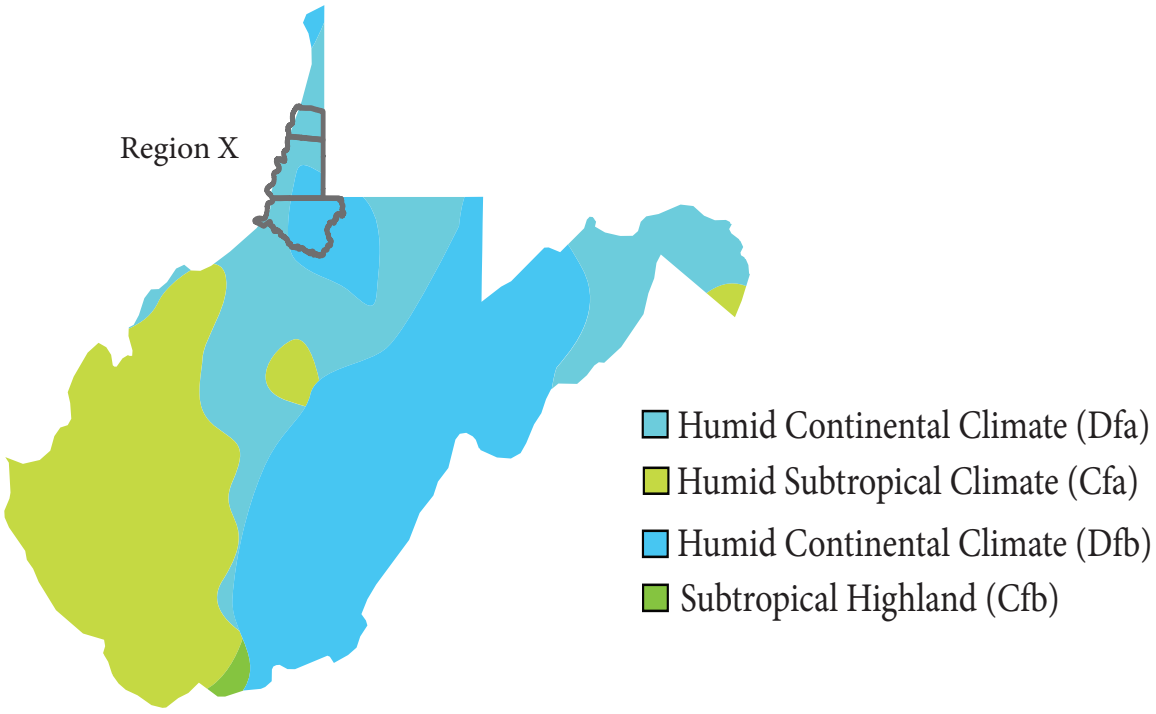
Source: WV Bureau of Employment Programs

Climate

The climate of the planning area is generally a hot humid continental climate that is influenced by air that has crossed over central United States. The region falls in the Dfa Köppen climate classification (Figure 1.7.3), which is a humid continental climate (Dfa and Dfb). Summers are warm to hot and winters are cold, but not severe (Table 1.7.3). The plant hardiness zones, which are determined by the U.S. Department of Agriculture, range from 5b in some western sections of Wetzel County to 6b along western Ohio County, with the majority of the three (3) counties being in zone 6a. These zones (Figure 1.7.4) are based on the average minimum winter temperatures, and the planning area zones range from -15° F to 0° F.

Figure 1.7.3

Map of Köppen Climate Classification for West Virginia



Source: https://upload.wikimedia.org/wikipedia/commons/d/da/West_Virginia_map_of_K%C3%B6ppen_climate_classification.svg

Table 1.7.3

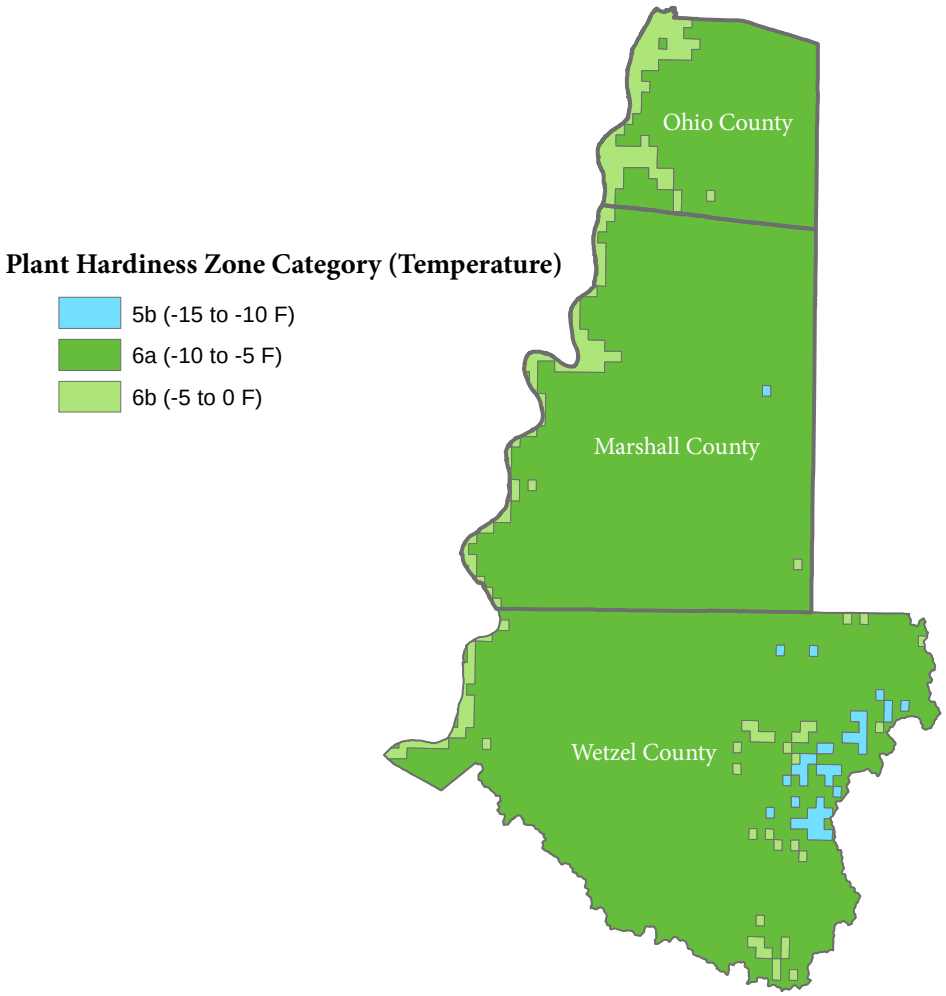
Average Summer High Temperatures and Average Winter Low Temperatures from 2016 to 2021 per County

County	Summer Highs (June - August)	Winter Lows (December - February)
Marshall	82.9° F	25.5° F
Ohio	82.9° F	25.3° F
Wetzel	83.3° F	26.2° F

Source: National Oceanic and Atmospheric Administration; https://www.ncdc.noaa.gov/cag/; county/time-series/WV-069; Date Accessed: 6/7/2022

Figure 1.7.4

Map of Plant Hardiness Zones for Marshall, Ohio and Wetzel Counties



Source: Northwest Alliance for Computational Science and Engineering; https://prism.oregonstate.edu/projects/plant_hardiness_zones.php; Date Retrieved: 6/6/2022

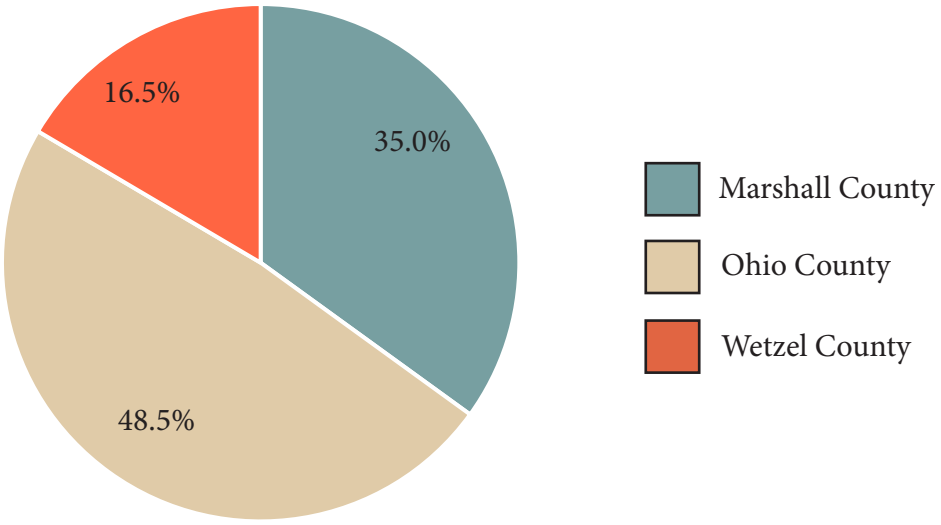
Population

The population of Region X is 87,458 (2020 Census State Redistricting Data).Figure 1.7.5 and Table 1.7.4 show the breakdown by county. The majority of the population tends to be located on the western portions of the region, along the Ohio River. This is not surprising given the flatter, more developable land along the Ohio River and the opportunities for waterborne commerce.

A majority of the population lives within a municipality, which accounts for 61.2% (53,559) of the total population. Also, a significant portion of Ohio County's population, 71%, lives along the river in the City of Wheeling and the Villages of Clearview and Bethlehem. Almost half of the population (48.5%) of Region X resides in Ohio County, which makes sense as Wheeling is the largest city in the area.

Figure 1.7.5

Percentage of Population by County of Total Regional Population



Source: 2020 Census State Redistricting Data (Public Law 94-171) Summary File Prepared by the U.S. Census Bureau, 2021

Table 1.7.4

2020 Population by County

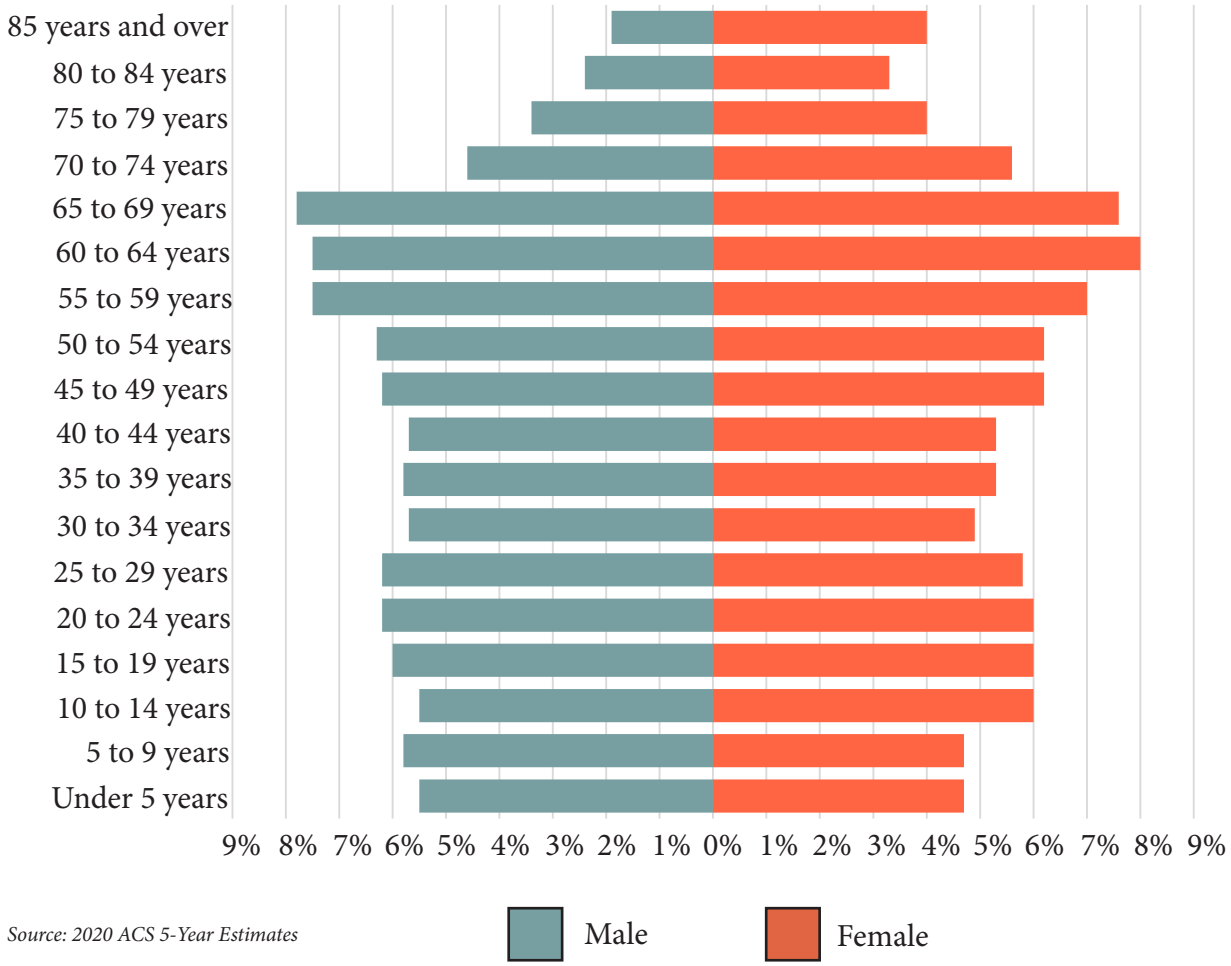
County	2020 Population
Marshall	30,591
Ohio	42,425
Wetzel	14,442
Total Population	87,458

Source: 2020 Census State Redistricting Data (Public Law 94-171) Summary File Prepared by the U.S. Census Bureau, 2021

The composition of the population, broken down by age and sex, is shown in Figure 1.7.6 below. The overall population is 48.7% male and 51.3% female. As can be seen, a large portion of the population is in the 55 to 69 years age range, with 22.7% of the population. For comparison, the State of West Virginia has 21.1% and the United States has 18.2% in the 55 to 69 years age range. The region's aging population presents new challenges and opportunities for the area.

Figure 1.7.6

2020 Population by Age and Sex



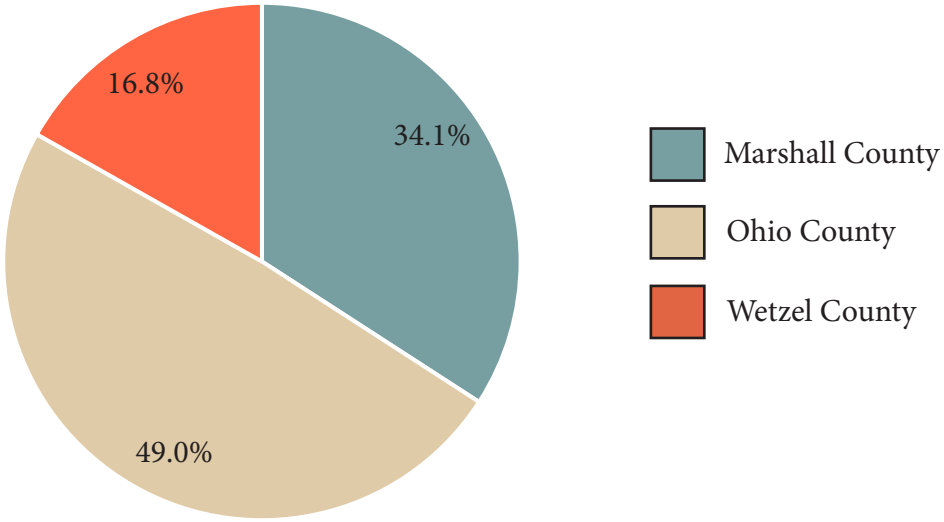
Source: 2020 ACS 5-Year Estimates

Housing

As expected, the number of housing units closely matches the population distribution of the planning area. Overall, there are 35,626 housing units in the area, with 26,525 being owner-occupied units, meaning that the majority (74.5%) of residents own their homes. The average median housing value for the region is $111,700. Figure 1.7.7 shows the distribution of housing in the region, it can be seen that this figure is nearly identical to the population distribution figure on the previous page. Table 1.7.5 offers a more detailed breakdown of the planning area's housing units.

Figure 1.7.7

Percentage of Housing Distribution by County



Source: 2020 Census State Redistricting Data (Public Law 94-171) Summary File Prepared by the U.S. Census Bureau, 2021

Table 1.7.5

Housing Characteristics by County

Housing Characteristic	Marshall	Ohio	Wetzel
Housing Units	12,350	17,254	6,022
Owner Occupied	9,976	11,657	4,892
Renter Occupied	2,374	5,597	1,130
Ownership Rate	80.8%	67.6%	81.2%
Median Value	$111,000	$127,000	$97,000

Source: 2020 ACS 5-Year Estimates

Utilities

Utilities in the planning area are provided by several different companies. Electricity is provided by FirstEnergy's Monongahela Power (Mon Power) in Wetzel County; and Appalachian Electric Power (AEP) in Marshall and Ohio Counties. Internet, Phone and TV services are provided by Comcast, Frontier Communications, StratusWave (no TV service), Lumos Networks, and Suddenlink (parts of Wetzel County). Cell phone service is provided by Verizon, AT&T, Sprint, US Cellular, etc. Gas is primarily provided by Mountaineer Gas Company.

Water and wastewater services are provided in a few different ways. Most municipalities provide water service which is supplemented, primarily in unincorporated areas, by Public Service Districts (PSDs). PSDs are public corporations that help extend water and sewage services to rural areas. However, many residents still rely on private water wells and septic tanks throughout the region. Public sewer service is generally provided through the larger municipalities in the area.

1.8 Analyzing Development Trends: Current and Future Land Use

The rugged terrain of the planning area has resulted in most development being in the valleys along the Ohio River, WV Route 2, and U.S. 40. Following the national trend, developments have been moving away from the Central Business Districts (CBDs) and fanning out to the suburbs. This move is best seen through the continued growth of The Highlands on I-70 in Ohio County. The commercial area surrounding the outdoor store, Cabela's, which was built in 2004, has grown rapidly in the years and since then continues to see the most opportunity for growth in the area. Due to topographical constraints, many new developments have occurred along ridge tops and on moderate slopes.

Most of the industrial developments have occurred along WV 2 and the Ohio River. However, in recent years some power plants have been shut down, due to environmental regulations and the coal industry continues to decline. Generally, denser residential development is likely to continue to occur near municipalities and along roadways. The Wheeling CBD has begun a resurgence with the addition of new housing for young professionals and relocation of a major health insurance provider.

There are a number of recreational opportunities in the planning area. Marshall County has extensively developed Grand Vue Park, and Ohio County has Oglebay Park, which includes a resort, golf courses, Good Zoo, and the popular winter attraction, the Festival of Lights. The retired West Virginia State Penitentiary in Marshall County and the nearby Grave Creek Mound and Museum serve as tourist attractions. All three counties have an annual County Fair, which is a great summer and fall attraction. Multiple events are held at the Heritage Port in the City of Wheeling.

The local jurisdictions do not have land use plans, although two municipalities have Comprehensive Plans (Cities of Wheeling and Moundsville). Belomar Regional Council staff have initiated the development of a land use shapefile, which can be used within a Geographic Information System (GIS). Local municipalities will be encouraged to complete land use and/or comprehensive plans for their communities.

The following is a brief breakdown of areas targeted for development throughout the planning area.

Marshall County:

Marshall County's Ohio River waterfront will probably continue to be an attraction for industrial development. Companies such as Westlake Chemical, Blue Racer Midstream and Covestro show the potential for industrial facilities along the Ohio River, and the area could see new companies and possibly the expansion of existing companies. Representatives from existing industries serve on the Marshall County Local Emergency Planning Committee, which allows company and community officials to share information as it pertains to the potential hazards those facilities may face. The northern portions of the county should also benefit from the continued growth of the Wheeling area.

Ohio County:

The Highlands along I-70 just east of Wheeling is the primary location targeted for development. It would primarily be susceptible to hazardous material incidents, winter storms, severe wind and possible land subsidence. The Highlands can benefit from a new interchange on I-70. This will provide an additional egress and exit point from this development. Downtown Wheeling is also a possible location for future development. Since the last plan update, a major health insurer, The Health Plan, constructed their new headquarter building in downtown Wheeling. Older buildings are being converted into apartments in an effort to draw more people to live downtown, which could bring businesses to the downtown area. The City of Wheeling is constructing/rehabilitating buildings for new Fire and Police headquarters. Wheeling Heritage Corporation has worked to provide a much-needed uplift to the downtown area and continues to bring economic development and revitalization efforts to the city.

Wetzel County:

The recently awarded $10 million DOT Infrastructure for Rebuilding America grant will allow for the widening and realignment of Route 2 in Wetzel County between the unincorporated areas of Proctor and Kent. This project will provide more open space along the Ohio River for economic development, which will benefit Wetzel's County's largest city, New Martinsville.

The natural gas and oil industry has grown rapidly across West Virginia, and the Northern Panhandle and Wetzel County. This activity is bringing new development not only in gas extraction infrastructure, but also in hotels and restaurants. All three counties are witnessing significant growth in gas infrastructure in the more rural eastern portions of the counties. These areas are not only remote, but the roads serving the infrastructure systems were not designed to carry the amount of heavy truck traffic associated with the gas industry. The topography in these rural areas is rugged, with steep grades and winding roads. Accessing many of these areas can be difficult, especially during the winter or bad weather. There are concerns about the hydraulic fracturing process that include foul smell, ground water contamination, air pollution, orphaned wells, increased truck traffic and road deterioration, well fires, fracking waste disposal and potential for earthquakes.

Vulnerability of New Developments

Undeveloped land without any structures is the least vulnerable to loss of property or life. As land is developed, its vulnerability also increases. A planned development can ensure mitigation strategies to reduce the vulnerability of new developments. All developments/ improvements in floodplains are regulated by floodplain ordinances of local jurisdictions. Development in other areas, such as in the City of Wheeling are regulated by building codes and are no more vulnerable than existing developments. Developments elsewhere in the region are also no more vulnerable than the existing developments.

Activities associated with the natural gas extraction using hydraulic fracturing, increase the vulnerability of all property and life in the vicinity. This activity adheres to the environmental regulations. Although vulnerability due to this activity is relatively higher than other hazards, it is also mitigated by environmental regulations.

In general, the region experiences far less development than other areas of the United States, due to the continued population loss that afflicts the State of West Virginia; however, that is not to say that new development does not occur. A major challenge for this area, however, is that as the region's communities strive to revitalize their historic, walkable downtowns, they face the challenge of these locations lying in the floodplain of the Ohio River and/or in the floodplains of the many creeks and streams that drain into the Ohio River.

Chapter 2.0 Hazard Identification and Risk Assessment

A hazard is an event or physical condition that has the potential to cause property damage, loss of life, injuries, disruption of mobility and businesses, damage to infrastructure, crops and environment or inflicts property damage or loss of life in some other way. The first step is to identify the hazards an area may be exposed to. Next, an understanding of the area's vulnerability to each hazard is needed before potential risk from each hazard is determined.

2.1 Hazard Identification

All potential natural and man-made hazards are identified in Table 2.1.1. This table was prepared for the 2012 Regional Hazard Mitigation Plan and was also used for the 2017 update. The table includes: 1) hazard type, 2) how each hazard was identified, 3) why the hazard was identified and 4) if the hazard is a candidate for further analysis. In addition, information on local disaster declarations from 2012 through 2021 was obtained. These disaster declarations, which are listed in Table 2.1.2, are initiated at the request of the governor and issued by the President after damage assessment by FEMA, State and local agencies. The declarations provide a synopsis of prevalent local hazards, including frequency, recurrence and damage. After reviewing Table 2.1.1 and Table 2.1.2, a public outreach survey was prepared and released to the community to gain better insight on the hazards affecting Region X, perceived frequency of these hazards and local preparedness for each hazard. The survey also requested the public to identify any additional hazards that affect the region that have not been identified previously.



Figure 2.1.1: Flooding, as seen here on Wheeling Island in Ohio County, is a frequent hazard in Region X.
Photo Credit: Philip Stahl

Table 2.1.1

Potential Hazards

Hazard	How Identified	Why Identified	Candidate for Further Analysis
Avalanche	• Avalanche.org • Terrain with slopes > 30° • Frequent snowfall of 1 foot or more	• The general contour of the land in the region is mountainous, but they are not steep enough to cause avalanche activity. • Further, the amount of snowfall the region receives is insufficient for any kind of avalanche.	No
Coastal Erosion	• Google Maps	• Coastal erosion is not a significant risk as Region X is more than 400 miles from the nearest ocean (Atlantic).	No
Coastal Storm	• Google Maps	• Coastal storm is not a significant risk, as Region X is more than 400 miles from the nearest ocean (Atlantic).	No
Dam Failure	• WV Department of Environmental Protection (WVDEP) Dam Safety • Interviews with Local Officials • US Army Corps of Engineers Dam Safety	• The Benwood flood wall is in need of mitigation efforts. • Ohio County contains the Pike Island Locks and Dam facility. • Wetzel County contains the Hannibal Locks and Dam facility. • There are numerous smaller dams throughout the region.	Yes
Debris Flow	• See “Landslide”	• See “Landslide”	No
Drought	• National Oceanic and Atmospheric Administration (NOAA) Event Records	• NOAA reports two drought events for each county since 1995.	Yes
Earthquake	• US Geological Survey (USGS) • Internet Research (www.earthquake.gov)	• USGS rates the planning area as having a 1%g to 3%g Peak Ground Acceleration (PGA) and FEMA recommends analyzing hazards in areas with these PGA values. • The increased construction for the gas hydraulic fracturing industry and usage of injection wells in Region X has the potential to increase the number of earthquakes.	Yes

Hazard	How Identified	Why Identified	Candidate for Further Analysis
Expansive Soils	• See "Land Subsidence"	• See "Land Subsidence"	No
Extreme Heat	• National Oceanic and Atmospheric Administration (NOAA) Event Records	• Temperatures in the region seldom exceed 100 degrees. • If temperature meets or exceeds 100 degrees, it has not been hot enough for the amount of time appropriate to denote "extreme heat".	No
Flooding	• National Oceanic and Atmospheric Administration (NOAA) Event Records • Public Outreach	• NOAA reports 144 flooding for Region X since 1995 • Local officials unanimously indicated that flooding was the most probable hazard in all jurisdictions. • Local officials indicate debris flow during flood events.	Yes
Hailstorm	• National Oceanic and Atmospheric Administration (NOAA) Event Records	• NOAA reports 58 hailstorm events for Region X since 1995	Yes
Hazardous Materials (Hazmat) Incident	• Local Knowledge • Transportation Plan for 2045 • Interviews with Local Officials • PHMSA: Incidence Report Database	• State Route 2 experiences a high volume of hazardous material traffic. • Interstate 70 and Interstate 470 experience high volumes of hazardous materials traffic. • All three counties could be impacted by an emergency at industrial facilities along the Ohio River • Natural gas extraction operations in Region X have increased the amounts of hazardous materials, such as hydrochloric acid and liquid nitrogen on roadways. • PHMSA reports 76 hazmat events for Region X since 1995	Yes
Landslide	• West Virginia GIS Technical Center	• The West Virginia GIS Technical Center reports that all three counties in Region X have high and moderate areas of landslide susceptibility. • Landslides are a frequent occurrence long Route 2 in Marshall County.	Yes

Hazard	How Identified	Why Identified	Candidate for Further Analysis
Land Subsidence	• Coal mining maps for the three counties	• The long history of coal mining in Region X has the potential to create land subsidence.	Yes
Oil and Gas/ Drilling Hazardous Incident	• Local knowledge • West Virginia Geological & Economic Survey Website	• Region X has experienced continued natural gas exploration and hydraulic fracturing, as well as the construction of extensive gas line infrastructure.	Yes
Pandemic	• Recent COVID-19 Pandemic • Interviews with county health departments and EMA directors	• West Virginia DHHR states that as of May 23, 2022, Region X has had the following incidents of COVID-19: 18,191 confirmed cases 6,904 probable cases 410 deaths.	Yes
Terrorism	• Interviews with Local Officials	• Although Region X has never experienced a terrorism-related event, these types of events can occur at any moment without warning.	Yes
Thunderstorm (Severe)	• National Oceanic and Atmospheric Administration (NOAA) Event Records	• NOAA reports 232 severe thunderstorm events for Region X since 1995. • NOAA reports an increase in annual precipitation for Region X from 1952 to 2021.	Yes
Tsunami	• Google Maps	• A tsunami is not a significant risk, as Region X is more than 400 miles away from the nearest ocean (Atlantic).	No
Volcano	• US Geological Survey (USGS)	• No volcanoes exist in Region X or the vicinity.	No
Wildfire	• Interviews with Local Officials	• Local firefighters respond to a number of "brush fires" in any given year. • Well fires from the increase in natural gas wells in Region X could spark wildfires.	Yes
Wind (Severe)	• National Oceanic and Atmospheric Administration (NOAA) Event Records	• NOAA reports 42 severe wind events for Region X since 1995. • EMA Directors report an increase in tornado watches and warnings • "Tornado Alley" has shifted east to include parts of Region X.	Yes

Hazard	How Identified	Why Identified	Candidate for Further Analysis
Winter Storm	• National Oceanic and Atmospheric Administration (NOAA) Event Records	• NOAA reports 106 winter events for Region X.	Yes

The hazard identification list facilitates vulnerability assessment at each jurisdiction level. Its purpose is to identify all potential hazards that could affect the region; assess the extent of each hazard and prioritize risks for developing mitigation strategies and projects. From the above "Potential Hazard" list and disaster declaration table, the following hazards were chosen for further analysis in the 2022 update of the Regional Hazard Mitigation Plan, as these hazards were regarded most likely to occur in Region X: Dam Failure, Drought, Earthquake, Flooding, Hailstorm, Hazmat Incident, Landslide, Land Subsidence, Oil and Gas/Drilling Hazardous Incident, Pandemic, Terrorism, Severe Thunderstorm, Wildfire, Severe Wind and Winter Storm.

Since the implementation of the first Hazard Mitigation Plan in 2012, there have been 25 major disaster declarations (See Table 2.1.2) in the region. Marshall and Wetzel Counties had 9 declarations each, while Ohio County had 7 declarations. Weather related and flooding events made up 76% of all declarations and the remaining declarations (24%) were for the COVID-19 pandemic.

Table 2.1.2

Major Disaster Declarations 2012 - 2022

County	Disaster Type	Declaration Number	Declaration Date
Marshall	Severe Storms	EM-3345	6/30/12
Marshal	Severe Storms and Straight-line Winds	DR-4071-WV	7/23/12
Marshall	Hurricane Sandy	EM-3358-WV	10/29/12
Marshall	Severe Winter Storm, Flooding, Landslides and Mudslides	DR-4210-WV	3/31/15
Marshall	Severe Storms, Flooding, Landslides and Mudslides	DR-4220-WV	5/18/15
Marshall	Severe Storms, Flooding Landslides and Mudslides	DR-4331-WV	8/18/17
Marshall	Severe Storms, Flooding Landslides and Mudslides	DR-4359-WV	4/17/18
Marshall	COVID-19	EM-3450-WV	3/13/20
Marshall	COVID-19 Pandemic	DR-4517-WV	4/3/20
Ohio	Severe Storms	EM-3345-WV	6/30/12
Ohio	Hurricane Sandy	EM-3358-WV	10/29/12
Ohio	Severe Storms, Flooding, Landslides and Mudslides	DR-4220-WV	5/18/12
Ohio	Severe Storms, Flooding, Landslides and Mudslides	DR-4331-WV	8/18/17
Ohio	Severe Storms, Flooding, Landslides and Mudslides	DR-4359-WV	4/17/18
Ohio	COVID-19	EM-3450-WV	3/13/2020
Ohio	COVID-19 Pandemic	DR-4517-WV	4/3/2020
Wetzel	Severe Storms	EM-3345-WV	6/30/2020
Wetzel	Severe Storms and Straight-line Winds	DR-4071-WV	7/23/2012
Wetzel	Hurricane Sandy	EM-3358-WV	10/29/2012
Wetzel	Severe Winter Storm, Flooding, Landslides and Mudslides	DR-4210-WV	3/31/2015
Wetzel	Severe Storms, Flooding, Landslides and Mudslides	DR-4220-WV	5/18/2017
Wetzel	Severe Storms, Flooding, Landslides and Mudslides	DR-4331-WV	8/18/2017
Wetzel	Severe Winter Storm, Flooding, Landslides and Mudslides	DR-4359-WV	4/17/2018
Wetzel	COVID-19	EM-3450-WV	3/13/2020
Wetzel	COVID-19 Pandemic	DR-4517-WV	4/3/2020

Source: https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2; Date accessed: 4/27/2022

As previously stated, all hazards to which the region is most vulnerable were identified and included in a public outreach survey conducted by the Belomar Regional Council. A copy of this survey is included in Appendix A. The approach, results and summary of the survey are presented below and in Figure 2.1.2, Figure 2.1.4, Figure 2.1.5 and Figure 2.1.6.

Public Outreach Survey

The public outreach survey for the Hazard Mitigation Plan Update was one of the first steps and the most crucial community engagement element. Although the steering committee guided the plan update, it was first necessary to gather public input on what hazards and the severity of these hazards the region has experienced since the last plan update, which occurred five years ago. As the earth's climate continues to change, the frequency and severity of natural hazards will change, as well. The USGS's website article, "How Can Climate Change Affect Natural Disaster" states that "with increasing global surface temperatures the possibility of more droughts and increased intensity of storms will likely occur. As more water vapor is evaporated into the atmosphere it becomes fuel for more powerful storms to develop." A comparison of survey results from the 2012 and 2017 plan also provides insight to how natural and man-made hazards and their frequency and severity have changed over the years and how they will likely change in the future for Region X.

The public outreach survey process (see Appendix A) began with publishing a public notice announcing the survey and its purpose in each county's newspaper of record (Marshall County's Moundsville Echo, Ohio County's Wheeling Intelligencer/News-Register and Wetzel County's The Wetzel Chronicle) during the last week of September 2021 and once again a week later. The URL link was provided in the public notice to take the survey via the Survey Monkey website. In addition, the public notice listed six locations (Marshall County Courthouse, Moundsville-Marshall County Public Library, Ohio County Courthouse, Ohio County Public Library, Wetzel County Courthouse and New Martinsville Library), where a paper copy of the survey could be completed. In addition, a link to the survey was published on Belomar Regional Council's website and communities were encouraged to publish the link on their city's website, as well. The survey link was emailed to members of Belomar Regional Council's board and shared on private social media pages of Belomar staff members. Both the online survey and paper survey were available to the public to complete for approximately one month.

The Regional Hazard Mitigation Plan 2022 Update Survey received a total of 65 responses. According to the results, the top five natural or man-made hazards that Survey Respondents are most concerned with, are: 1) Flooding, 2) Severe Thunderstorm, 3) Winter Storm, 4) Pandemic and 5) Oil and Gas/Drilling Hazardous Incident (see Figure 2.1.2, on the following page). Survey Respondents are least concerned with Drought, Wildfire, Dam Failure and Earthquake. These results are similar to the survey results of the 2017 update, with the exception of the Pandemic and Oil and Gas Drilling/ Hazardous Incident, as they were not part of the 2017 survey.

Figure 2.1.2

Percentage of Survey Respondents Concerned with Hazards that could affect Region X

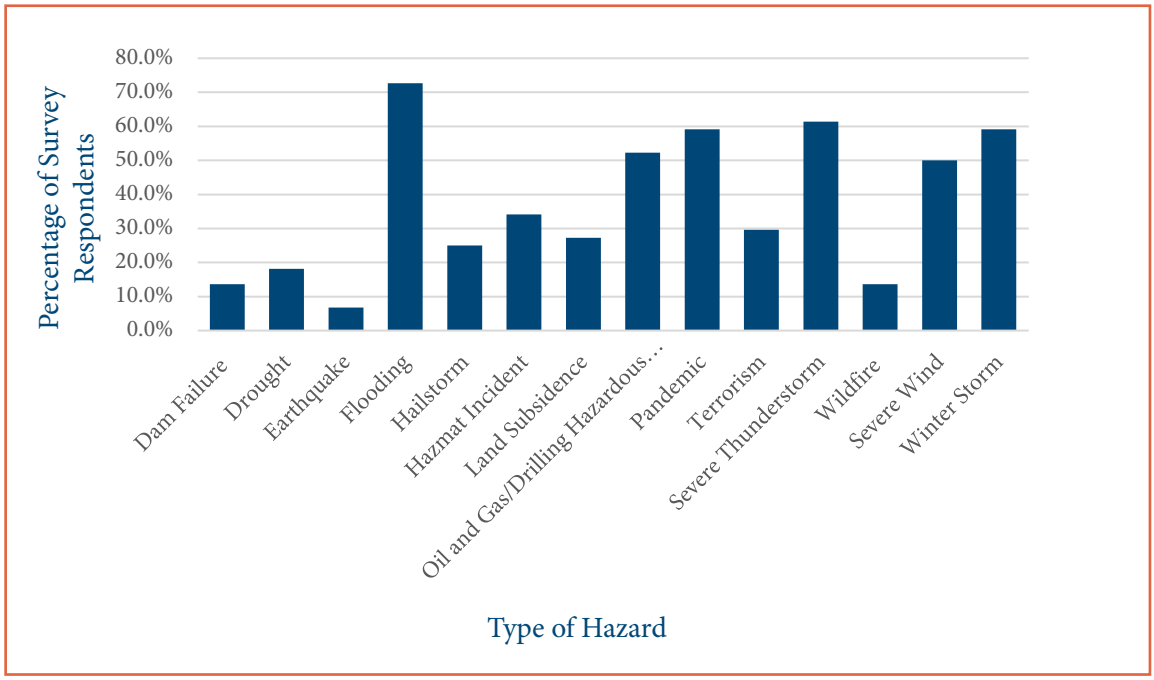


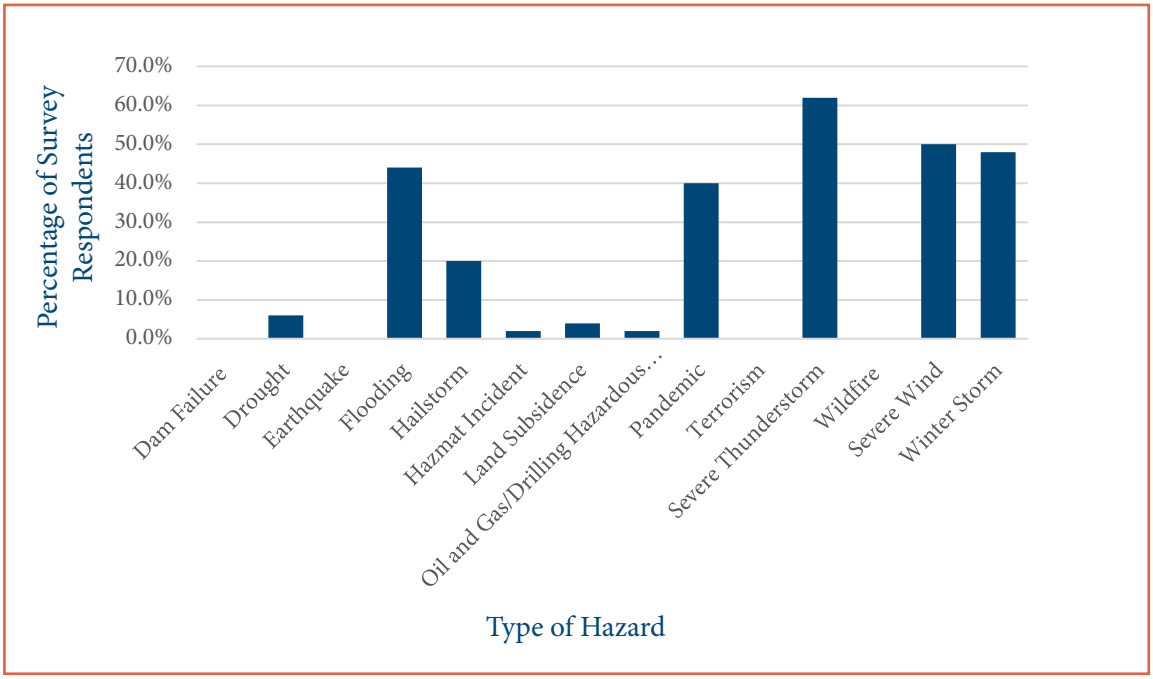


Figure 2.1.3 Weather-related events, like winter storms are the most concerning hazards for residents of Region X. Photo Credit: Philip Stahl

Most Survey Respondents are concerned with weather-related events because they have experienced these events, directly. This is important because weather-related events are occurring more frequently and are more widespread. The top three disasters (see Figure 2.1.4) that Survey Respondents personally experienced are: 1) Severe Thunderstorm (62%); 2) Severe Wind (50%); and 3) Winter Storm (48%). The fourth most experienced disaster was Flooding (44%), which can result from severe thunderstorms and winter storms.

Figure 2.1.4

Percentage of Survey Respondents, who have personally experienced Hazards that affect Region X



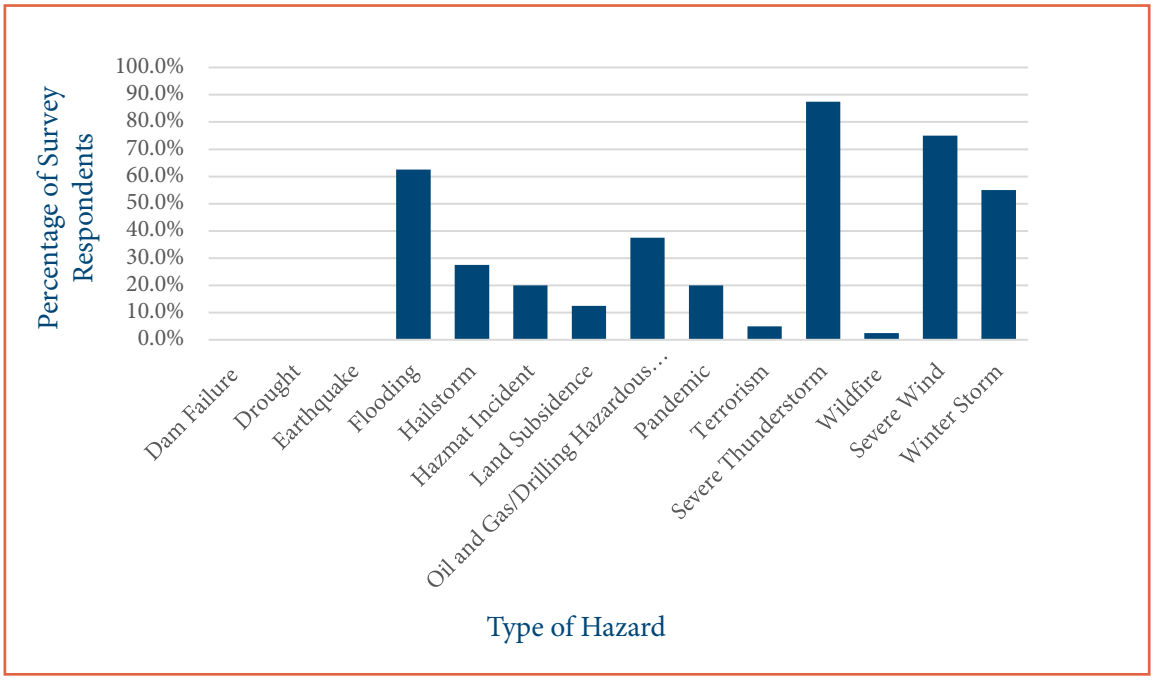
It is not surprising that most Survey Respondents believe weather related events are likely to happen in the future, since these are the natural hazards that they personally have experienced the most frequently. Approximately 87% believe that Severe Thunderstorms will occur 3 or more times over the next five years. The second more likely hazard Survey Respondents believe will occur is Severe Wind, with 75% believing that this type of disaster will occur 3 or more times over the next five years. Flooding was the third most likely disaster event believed will occur, with 62.5% of respondents believing this will occur three or more times before the next plan update in 2027 (see Figure 2.1.5, on the following page).

The hazards that were least likely to be experienced by Survey Respondents were Drought (6.0%), Land Subsidence (4.0%), Hazmat Incident (2.0%) and Oil and Gas Drilling/Hazardous Incident (2.0%). No Survey Respondents reported experiencing any of the following disasters: Earthquake, Wildfire, Terrorism and Dam Failure. These results closely resemble Survey Respondent's viewpoints with how likely these events will occur in the future. Nearly 88% believe

that an earthquake will not occur in the region over the next five years. Approximately 80% of Survey Respondents believe that both Dam Failure and a Wildfire will not occur over the next five years. When residents have not directly experienced a disaster event, they appear to be less concerned with this event occurring in the future.

Figure 2.1.5

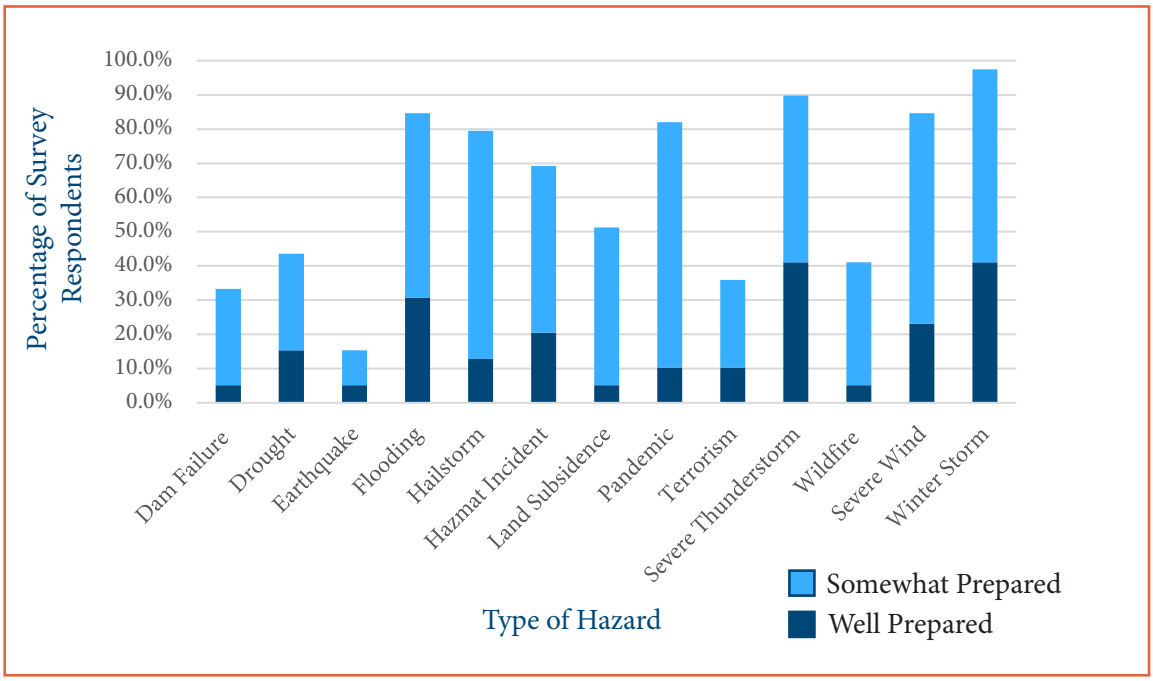
Percentage of Survey Respondents, who believe Hazard will occur in the Next Five Years



Survey Respondents believe that their community is well prepared or somewhat prepared for the hazards that occur more frequently and less prepared for hazards that occur less frequently (see Figure 2.1.6, on the following page). Survey Respondents believe their communities are most prepared for winter storms, with 97.4% of residents stating that their community is either "Well Prepared" or "Somewhat Prepared". Survey Respondents consider their communities to be "Well Prepared" or "Somewhat Prepared" for severe thunderstorm (89.8%), flooding (84.6%), severe wind (84.6%). Naturally, with the hazards that occur less frequently in Region X, residents felt their communities are less prepared. Only 15.4% felt their community was either "Well Prepared" or "Somewhat Prepared" for earthquakes, 33.3% for dam failure and 35.9% for terrorism.

Figure 2.1.6

Percentage of Survey Respondents, who believe their Communities are "Well Prepared" or "Somewhat Prepared" for the Hazards affecting Region X



In addition to Survey Respondents reporting how well they believe their communities are prepared for disaster events, the survey also questioned how well survey respondents and their families are prepared. Nearly 57% of Survey Respondents reported that they have "talked with members in [their] household about what to do in case of an emergency" and nearly 3% said that although they have not done this, that they plan to in the near future. Approximately 41% reported that they have "developed a Household/Family Emergency Plan" to decide what family members would do in a disaster event" and nearly 13% reported that they plan to complete this in the near future. Nearly 85% of survey respondents have prepared their home with a smoke detector on each level and nearly 8% reported that they plan to do this in the future.

Community-Specific Meetings

Community-specific meetings were held with the mayors (and/or city manager, city planner, other representative) for each of Region X's sixteen communities. The purpose of these meetings was to:

1) understand what hazards those in charge believe are the greatest threat to their communities
2) assess if those in charge believe their community has adequate resources to address these hazards
3) examine the West Virginia Flood Tool's FEMA-designated flood zones to see if there are additional areas of frequent flooding that do not appear in the flood zone

4) discuss the progress or lack of progress on mitigation projects stated in the 2017 Regional Hazard Mitigation Plan
5) discuss what new projects should be listed in the 2022 update.

Three assessment forms were completed during these meetings. The first form, "Community-Specific Assessment Form" was created by Belomar staff and the second and third forms, "NFIP_Guide_7.17.20" and "Region III Community Capability Assessment Worksheet" were provided by FEMA. A copy of these forms can be found in Appendix A. In addition, a Chain of Command flow chart for when hazards occur was given to the mayor (or other representative) and it was requested that they share this with their staff and residents (see Appendix A for each county's Chain of Command Flow Chart). Belomar staff requested that mayors share the forms completed during the meeting with their city councils to seek their input, as well.

Table 2.1.3

Top Three Hazard Concerns for Mayors (or other representatives) of Region X

Community	#1 Hazard Threat	#2 Hazard Threat	#3 Hazard Threat
Benwood	Flooding	Winter Storm	Severe Thunderstorm
Bethlehem	Severe Thunderstorm	Winter Storm	Land Subsidence
Cameron	Flooding	Severe Thunderstorm	Oil and Gas/Drilling Hazardous Incident
Clearview	Severe Wind	Winter Storm	Hailstorm and Severe Thunderstorm
Glen Dale	Flooding	Hazardous Materials Incident	Severe Thunderstorm
Hundred	Flooding	Severe Thunderstorm	Winter Storm
McMechen	Flooding	Severe Thunderstorm	Land Subsidence
Moundsville	Flooding	Severe Thunderstorm	Land Subsidence
New Martinsville	Dam Failure	Severe Thunderstorm	Flooding
Paden City	Severe Thunderstorm	Hazardous Materials Incident	Oil and Gas/Drilling Hazardous Incident
Pine Grove	Flooding	Dam Failure	Oil and Gas/Drilling Incident
Smithfield	Flooding	Winter Storm	Severe Thunderstorm
Triadelphia	Flooding	Winter Storm	Severe Thunderstorm
Valley Grove	Flooding	Severe Wind	Winter Storm
West Liberty	Oil and Gas/Drilling Hazardous Incident	Severe Thunderstorm	Winter Storm
Wheeling	Flooding	Land Subsidence	Severe Thunderstorm

As to be expected, Flooding is the top concern for mayors (or other representative) of Region X, with 69% ranking this hazard as their community's greatest threat (see Table 2.1.3). Two mayors ranked Severe Thunderstorm as their greatest threat, while Severe Wind, Dam Failure and Oil and Gas Drilling/Hazardous Incident were ranked by one mayor each, as their greatest threat. The most common second and third greatest threats were weather-related hazards, including Severe Thunderstorm and Winter Storm. Land Subsidence and Oil and Gas Drilling/ Hazardous Incident were also mentioned and speak to the concern of the continued natural gas infrastructure development throughout Region X. Several mayors mentioned their concern of gas industry trucks traveling the rural roads. Two mayors also ranked Hazardous Materials Incident as their 2nd greatest concern, due to the railway that runs along the edge of their communities, transporting chemicals to and from the several chemical plants in southern Marshall County.

During the meeting, the mayor (or other representative) also was asked what was the greatest natural or man-made hazard that had ever affected their community (either historically or during their term). The majority of mayors (75%) stated that Flooding was the greatest hazard that had ever affected their community. The following hazards were reported by one mayor each, as the greatest hazard that had affected their community: Ice Storm, Derecho (strong wind event), Hazardous Materials Incident and an Oil and Gas Drilling/Hazardous Incident.

In addition, mayors were asked if they believe their community has adequate resources (whether financial and manpower) to address the hazards affecting their community. More than half (56.3%) of the mayors reported "no, regardless of the hazard type and duration, that their community does not have adequate resources". 31.2% of mayors stated "yes, in the short-term, their community has adequate resources" and 1.25% stated that it "depends on the type of disaster, as to whether their community has adequate resources". From these results, it can be observed that the smaller communities were more likely to answer they did not have adequate resources, while the larger communities were more confident that they at least had adequate resources in the short-term.

The Region III Community Capability Assessment Worksheet also was completed during the community-specific meetings. This worksheet provided insight into what resources each community has and how these resources relate to hazard mitigation. Many of the communities in Region X are small, run by volunteers and lack the resources and capacity to have the items listed in the assessment worksheet. A summary of the worksheet can be found in Table 2.1.4.

During the community-specific meetings, potential mitigation projects and strategies that should be included in the Regional Hazard Mitigation Plan update for 2022 were also discussed. The most frequent project/strategy mentioned was the need to dredge streams and creeks within the communities to prevent floods during heavy rain events. Many of the mayors mentioned that dredging would be the most effective strategy to mitigate flooding. Many mayors noted that streams and creeks that were once deep enough to swim in are much more shallow, due to buildup of sediment over the years. They further stated that obtaining permits to dredge have been difficult or impossible, due to environmental concerns over disrupting the aquatic habitat.

Table 2.1.4

Summary of FEMA Region III Community Capability Assessment Worksheet

	Benwood	Bethlehem	Cameron	Clearview	Glen Dale	Hundred	McMechen	Moundsville	New Martinsville	Paden City	Pine Grove	Smithfield	Triadelphia	Valley Grove	West Liberty	Wheeling
Comprehensive Plan/ Master Land Use Plan	N	N	N	N	Y	N	N	Y	N	N	N	N	N	N	N	Y
Climate Change Adaption Plan	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Emergency Operations Plan	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*
Streambank Buffer Protection Program	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
Building Code	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y
Floodplain Mgmt. Ordinance/NFIP Compliance	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Engineering Dept.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
Code Enforcement Dept.	Y	Y**	Y	N	Y	Y	Y**	Y	Y	Y**	N	Y**	Y	Y	N	Y
Chief Building Officer	Y	Y	Y	N	Y	Y	Y	Y	Y	Y**	Y**	N	Y**	Y	N	Y
Civil Engineer - Construction Project Mgmt.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
Grant Administrator	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y
Grant Writer	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y***	Y
Capital Improvements Program	N	N	N	N	Y	N	N	Y	Y	N	N	N	N	N	N	Y
Funding Programs (Non-FEMA)	Y	N	Y	N	N	Y	Y	N	Y	Y	Y	N	N	N	Y	Y
Utility Fees for Stormwater, Water, Sewer, Gas or Electric Services	Y	N	Y	N	Y	N	Y	Y	Y	Y	Y	N	N	N	N	Y
Stormready Certification	N	N	N	N	Y	N	N	N	N	N	N	Y	N	N	N	Y
Seasonal Emergency Management and Mitigation Outreach	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	Y

* Use County's Plan
** No official Department but use Mayor, Police Department, Fire Department or County for this service
*** Use Belomar Regional Council for this service

Lastly, the Total Exposure in Floodplain (TEIF) and Total Exposure Area Landslide (TEAL) data, provided by the WV GIS Technical Center was shared with the mayors (or other community representative) via the West Virginia Flood Tool website. This website provides interactive maps that allow the user to examine locations in their communities that lie within floodplains or landslide susceptibility areas. Belomar planning staff asked each mayor if the felt these floodplain and landslide designations were accurate. All mayors felt the landslide data was accurate; however, several mayors disagreed with the floodplain designations for their community (there are areas that are designated to be in the floodplain that have never or rarely flood and there are areas that should be included in the floodplain that are not currently designated as a floodplain). This information was recorded and is kept in each community's Hazard Mitigation Plan file at Belomar's office.

2.2 Risk Assessment

The three counties in Region X cover 770 square miles. The terrain includes the rugged foothills of the Appalachian Mountains and narrow valleys, with many creeks and streams flowing through the region. Most of the built environment in Region X has occurred within the flat land adjacent to the Ohio River and along Historic National Road (U.S. Route 40). As this land reached its development capacity, new developments occurred on the ridge tops and into the eastern side of the counties.

The communities of Benwood, Glen Dale, McMechen, Moundsville, New Martinsville, Paden City and Wheeling can be considered "river communities", as they are adjacent to the Ohio River. The communities of Bethlehem, Clearview and West Liberty can be considered "ridge top communities", since they sit at the top of the Appalachian foothills. The communities of Cameron, Hundred, Pine Grove, Smithfield, Triadelphia, and Valley Grove can be considered "valley communities", as they are nestled within the narrow valleys created by the foothills. Due to the varied terrain of each community, the vulnerability to hazards also varies, with the "river communities" and "valley communities" being more prone to flooding and the "ridge top communities being more prone to high winds and more severe winter storms.

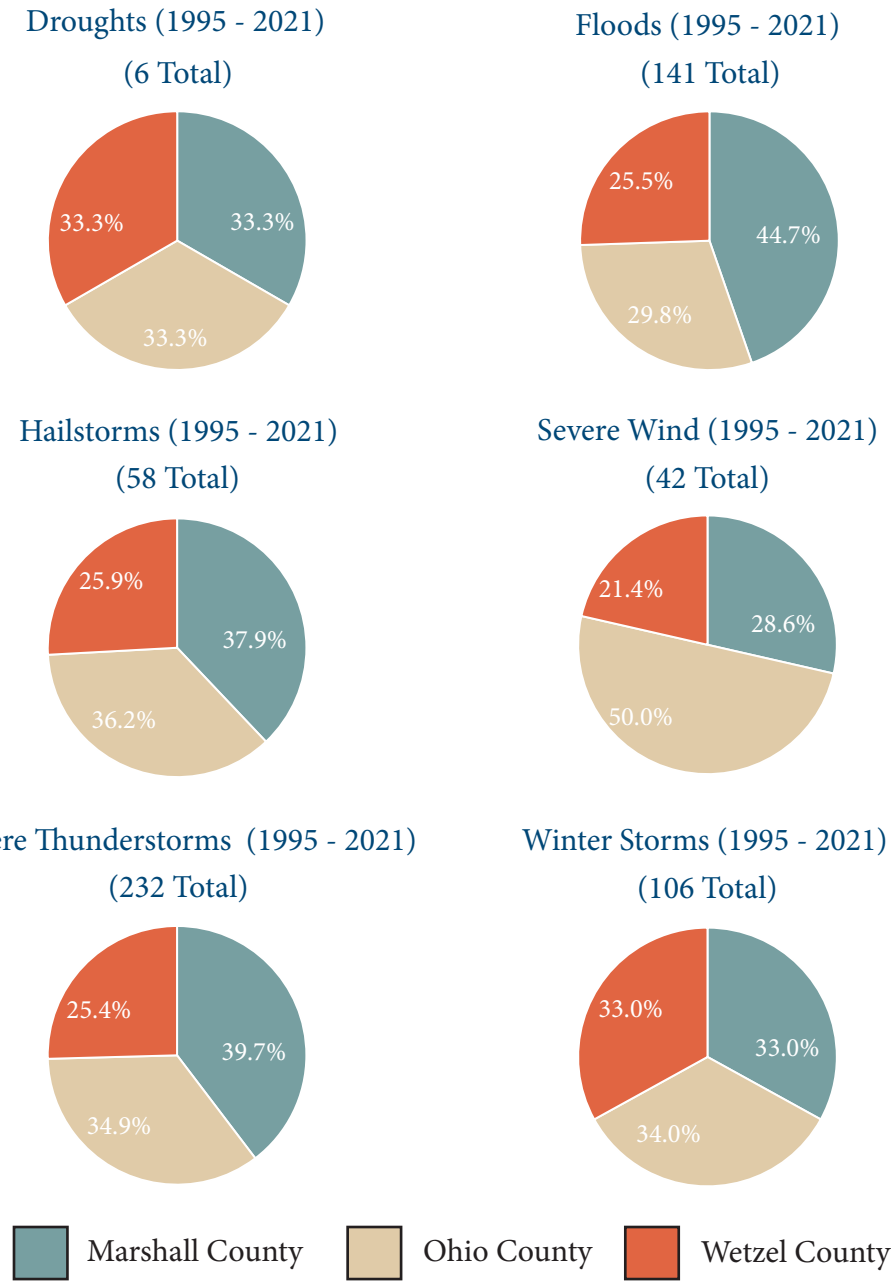
The population densities also vary significantly within the three counties. Ohio County has the highest population density with 389 persons per square mile, Marshall County has 98 persons per square mile and Wetzel County has the lowest population density, with 40 persons per square mile. Population density also impacts an area's risk to hazards, with more densely populated areas seeing more destruction of property and loss of life or injury when a hazard occurs than less densely populated areas.

The relative risk of each county may also vary. The event records from the National Oceanic and Atmospheric Administration (NOAA) are used to gauge the relative risk of each county. If the number of events for a hazard in each county do not have a large variation, the risk is considered to be the same for each county. If the variation is significant, then the risk is higher or lower from the mean. The percentage of events in each county is used to develop a relative risk hazard. The percentage of hazard events for each county is shown in Figure 2.2.1. This graphic shows all hazards that are included in the National Oceanic Atmospheric Administration's Storm Events Database, which include droughts, floods, hailstorms, severe wind events, thunderstorms and winter storms for the years of 1995 through 2021.

As Figure 2.2.1 demonstrates, the relative risk for droughts and winter storms for the past twenty-five years have been similar for all three counties. For floods, however, Marshall County experiences nearly double the amount of flooding events that Ohio and Wetzel Counties experience. The relative risk of hailstorms and severe thunderstorms are similar for Marshall and Ohio Counties, with Wetzel County experiencing about 10% less than the other two counties for these two hazard types. Ohio County faces nearly double the amount of severe wind events when compared to Marshall and Wetzel Counties. The relative risk for winter storms is similar for all three counties. Although there is variation among the relative risk for some hazards, the variation is not extreme, except for perhaps the relative risk for severe wind events in Ohio County.

Figure 2.2.1

Natural Hazard Events
(NOAA Records)



*When calculating total number of events, if a storm event was listed more than once in the same day in the same county in the NOAA Storm Event Database, it was counted as one event and not multiple events.

Source: National Oceanic and Atmospheric Administration's Storm Events Database; https://www.ncdc.noaa.gov/stormevents/; Date Retrieved: 5/25/2022

Over an area as large as the lower Northern Panhandle, it seems intuitively obvious that the hazards listed in Table 2.1.1 would not affect the entire planning area in the same manner. For instance, the western portions of the county are much more populated, so hazards could be more devastating in these areas. The response to hazards in the eastern portions of the planning area, though, could be difficult, due to their remote, rural locations, which could add to the magnitude of "cascading" hazard effects. Further, the western side of the planning area runs parallel to the Ohio River, increasing the likelihood for riverine flooding, while flash flooding or small-stream flooding is more likely in the east.

To further illustrate this concept, Table 2.2.1 depicts the participating county jurisdictions' relative hazard risk in relation to each other. The baseline hazard risk is a generalized average in each county. If a county appears to be more or less affected by a particular hazard, evidence was sought through research. The variances in risk are discussed in Section 3.

Table 2.2.1

Relative Hazard Risk by County

County	Dam Failure	Drought	Earthquake	Flooding	Hailstorm	Hazmat Incident	Landslide	Land Subsidence	Oil and Gas Drilling/ Hazardous Incident	Pandemic	Terrorism	Thunderstorm	Wildfire	Wind	Winter Storm
Marshall	=	=	=	>	>	=	=*	>**	>***	=	=	>	=	<	=
Ohio	=	=	=	<	>	>	>*	>**	<***	=	=	>	=	>	=
Wetzel	=	=	=	<	<	<	<*	<**	<***	=	=	<	=	<	=

Key: "=" Equal Risk ">" Higher Risk "<" Lower Risk

* Incident frequency data was not available for the hazard category, "Landslide", but relative risk was determined from West Virginia GIS Technical Center's study, "West Virgina Landslide Risk Assessment: Region 10 - Ohio, Marshall and Wetzel Counties".

** Incident frequency data was not available for the hazard category, "Land Subsidence" but relative risk was determined from coal mining maps of the three counties. An assumption was made that those counties with larger areas of underground mining were more susceptible to land subsidence.

*** Incident frequency data was not available for the hazard category, Oil and Gas Drilling/Hazardous Incident; therefore, the average number of gas wells per square mile for the three counties was determined and then each county was compared against this average. If the county's number of gas wells per square mile was greater than the three-county average, an assumption was made it would be at higher risk for an Oil and Gas Drilling/Hazardous Incident (ex. well fires, gas line infrastructure issues, gas truck accidents, etc.).

Probability and Severity of Hazards

Even though it is hard to foresee when and where the next disaster will hit, it is imperative to prepare for the most frequent and likely hazards. It is important to review the past event data to discern what events have occurred more frequently and have caused the most damage. Based on archived event data, reasonable assumptions can be made regarding the vulnerability to hazards and the potential severity of each hazard. Based on probability and severity, hazards can be prioritized and resources can be allocated to mitigate the effects of the most probable and severe events.

The first regional hazard mitigation plan for Region X was completed in the year 2011. The process used to develop the probability and severity matrix in the 2011 plan was used in the 2017 update and this plan update, as well. The relative probability of each county in the Region X is computed from the historical event data. A regional average for each hazard was computed from the events for each county. The sum of regional averages was then divided by the number of events (as shown in Table 2.2.2) to determine the average of total hazards in the region. This average (20) was used as the median to determine probability.

Table 2.2.2

Regional Hazard Average

Dam Failure	Drought	Earthquake	Flooding	Hailstorm	Hazmat Incident	Landslide	Land Subsidence	Oil and Gas/Drilling Hazardous Incident	Pandemic	Terrorism	Thunderstorm	Wildfire	Wind	Winter Storm
0	2	0	47	19	25	N/A	N/A	N/A	1	0	77	0	14	35
Average (Sum of Hazard Incident Averages/11):														20

(The following hazard categories were not included in this calculation, as incident frequency data was unavailable: Landslide, Land Subsidence, Oil and Gas/Drilling Hazardous Incident.)

Generally, the higher the frequency of an event, the higher the probability for future reoccurrence. The mean and the distance from the mean as a percentage were used for probability calculation. The following percentages were used for probability classification (see Table 2.2.3).

Table 2.2.3

Percentages Used for Probability Classification

Percent	Classification
0 -20%	Improbable
21% - 40%	Remote
41% - 60%	Occasional
61% - 80%	Probable
81% - 100%	Frequent

The probability classifications are generally stratified as shown below in Table 2.2.4. As with the 2017 plan update, the hazard category, Dam Failure was moved from "Improbable" to "Remote" classification, after the probability classifications were calculated. Once again, this was necessary as the earthen dams in the region are either past their design lifespan or are approaching the end of their lifespan and have not been restored or reinforced since the last plan update in 2017. The Locks and Dams along the Ohio River are aging, as well.

Table 2.2.4

Hazard Probability Classifications

Class	Probability	Frequency
Frequent	Likely to occur frequently	Continuously experienced
Probable	Will occur several times in the life of an item	Experienced several times
Occasional	Likely to occur sometime in the life of an item	Experienced
Remote	Unlikely, but possible to occur in the life of an item	Unlikely that is has been experienced
Improbable	So unlikely that it can be assumed occurrence may not be experienced	Not experienced

In addition to probability, the severity of an event also affects the allocation of resources for mitigation actions. The severity depends upon 1) the extent or how widespread an event is 2) primary impact of the event and 3) the cascading or secondary impact of the event. The primary impact of a flood would be the loss of life and property damage due to rising water. One of the secondary impacts would be the restricted access due to submerged or washed-out roads. Severity can also be determined from the damage caused by each event in the past. However, the damage data is not readily available for each event. Previous mitigation plans are used in determining the severity. Based on the review of available data, it was decided to use the severity classifications from the previous plan. Percentages used for hazard severity classifications are shown in Table 2.2.5, while the severity classifcation is shown in Table 2.2.6. Local knowledge and input was also used in the severity classification process.

Table 2.2.5

Percentage used for Hazard Severity Classifications

Percent	Classification
0 -20%	Negligible
26% - 50%	Marginal
51% - 75%	Critical
76% - 100%	Catastrophic

Table 2.2.6

Hazard Severity Classifications

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

A risk assessment matrix of probability and severity is developed based on the classifications listed above. The purpose of this matrix is to facilitate local decision making for resource allocation and mitigation actions. This matrix is presented below in Figure 2.2.2. A graphic presentation of this matrix is presented in Figure 2.2.3. This graphic is based on a probability scale of 1 to 5, where 1 is very unlikely (improbable) and 5 is highly probable (frequent). The severity scale of 1 to 4 is used where 1 is negligible severity and 4 is a catastrophic event.

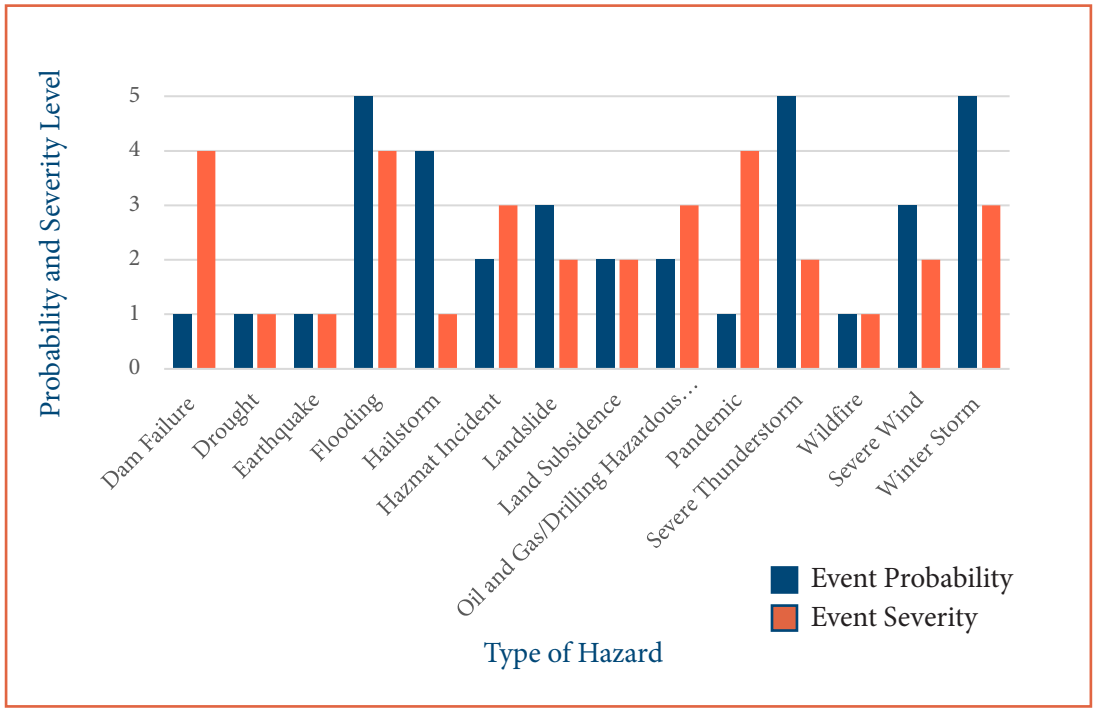
Figure 2.2.2

Risk Assessment Matrix

Hazard Severity	Hazard Probability				
	Frequent	**Probable**	**Occasional**	**Remote**	**Improbable**
Catastrophic	Flooding			Dam Failure	Pandemic
Critical	Winter Storm			Hazmat Incident Oil and Gas Incident	
Marginal	Severe Thunderstorm		Landslide Severe Wind	Land Subsidence	
Negligible		Hailstorm			Drought Earthquake Wildfire

Figure 2.2.3

Event Probability and Severity



When compared to the 2017 Regional Hazard Mitigation Plan, the Risk Assessment Matrix has resulted in some changes. Severe Thunderstorm has moved from the "negligible" severity category to the "marginal" category, due to the recent increased intensity of thunderstorms in Region X, since the last plan update. Recent thunderstorms have produced stronger winds, which have resulted in an increase of downed trees and power lines, as well as damage to structures. Pandemic has been added as a new hazard category and was rated as "improbable" and "catastrophic", since global pandemics on average appear to occur once every 100 years, but when they do occur, they often cause a high death and hospitalization rate and long-lasting economic impacts. Incident data for Landslide and Land Subsidence was unavailable, but Belomar staff ranked these hazard categories on research conducted throughout the preparation of this document.

Severe weather-related events pose the greatest risk to Region X. While man-made events like terrorism and hazardous material incidents cannot be ignored, the area is more prone to damage from natural hazards such as floods, severe thunderstorms and winter storms. Preparing for these hazards should be prioritized and mitigation projects and strategies that help to mitigate the effects of these hazards should be completed first.

Chapter 3.0 Hazard Profiles

Hazard profile and regional context of each hazard previously identified is presented in this section. Loss estimates for each hazard can be found in Appendix B.

3.1 Dam Failure

A dam failure is when downstream flooding occurs as the result of complete or partial inundation of an impoundment. Dam failure results in rapid discharge of water with little or no notice. Region X has many dams including two high profile dams on the navigable Ohio River. While a dam failure in the region is improbable, its severity would be catastrophic.

Regional Context

Table 3.1.1

Regional Context for Dam Failure

Period of Occurrence	At any time
Number of events from January 1995 to December 2021	0
Number of events since last plan update (2017)	0
Probability of Events	Remote: Dams that fail typically have some deficiency that causes the failure that should be detected by regular inspections and subsequently repaired. Heavy rains or moderate earthquakes may trigger a dam failure.
Warning Time	Minimal: Depends on frequency of inspection
Potential Impacts	Potential loss of human life, economic loss, environmental damage and disruption of lifeline facilities.
Causes of Injury or Death	Injury and risk of multiple deaths.
Potential Facility Shutdown	30 days or more

Hazard Effects

The primary effect of dam failure is the rapid and unpredictable flooding of downstream areas in the immediate vicinity of the dam. It used to be impossible to know exactly how and where the water will flow, due to sudden failure of a dam; however, new technologies now can be

used to identify at risk areas. Raster GIS applications, along with Digital Elevation Models, can be utilized to identify inundation areas. For major dams on the Ohio River, the US Army Corps of Engineers has the responsibility and expertise for maintenance and flood damage reduction.

As per the Federal Emergency Management Agency (FEMA), dam failure is often caused by the following reasons:

- over-topping caused by floods that exceed the capacity of the dam;
- deliberate acts of sabotage;
- structural failure of materials used in dam construction;
- movement and/or failure of the foundation supporting the dam;
- settlement and cracking of concrete or embankment dams;
- piping and internal erosion of soil in the embankment dams;
- inadequate maintenance and upkeep.

Dam failures generally result from a complex interrelationship of several failure modes. Uncontrolled seepage may weaken the soils and lead to a piping failure. Surface erosion may lead to structural or piping failures. The West Virginia Dam and Control Safety Act classifies dams into four categories, as show below:

- Class 1 (High Hazard): Dams located where failure may cause major damage to dwellings, commercial or industrial buildings, main railroads, important public utilities, or where a high-risk highway may be affected or damaged.

- Class 2 (Significant Hazard): Dams located where failure may cause minor damage to dwellings, commercial or industrial buildings, main railroads, important public utilities, or where a high-risk highway may be affected or damaged. Loss of human life from a failure of Class 2 dam is unlikely.

- Class 3 (Low Hazard): Dams located in rural or agricultural areas where failure may cause minor damage to non-residential and normally unoccupied buildings, or rural or agricultural land. Failure of Class 3 dam would cause only a loss of dam itself and loss of property use, such as related roads, with little additional damage to adjacent property.

- Class 4 (Negligible Hazard): Dams where failure is expected to have no potential for loss of human life, no potential for property damage and no potential for significant harm to the environment.

High Hazard Potential Dams pose the greatest risk for communities and Region X contains 24 dams classified as "High Hazard Potential Dams". According to FEMA's document, "Rehabilitation of High Hazard Potential Dams Grant Program Guidance", the following definitions describe the type of risk these dams present to the public:

- Incremental Risk: The risk (likelihood and consequences) to the pool area and downstream floodplain occupants that can be attributed to the presence of the dam should the dam breach prior or subsequent to overtopping, or undergo component malfuction or misoperation, where the consequences considered are over and above those that would occur without dam breach. The consequences typically are due to downstream inundation, but loss of the pool can result in significant consequences in the pool area upstream of the dam.

- Non-breach Risk: The risk in the reservoir pool area and affected downstream floodplain due to "norma" dam operation of the dam (e.g., large spillway flows within the design capacity that exceed channgel capacity) or "overtopping of the dam without breaching" scenarios.

- Residual Risk: The risk that remains after all mitigation actions and risk reduction actions have been completed. With respect to dams, FEMA defines residual risk as "risk remaining at any time". It is the risk that remains after decisions related to a specific dam safety issue are made and prudent actions have been taken to address the risk. It is the remote risk associated with a condition that was judged to not be a credible dam safety issue.

Regional Profile

Region X contains numerous dam facilities, some of which are more high profile than others. Ohio and Wetzel County contain US Army Corps of Engineers (USACE) lock and dam facilities on the Ohio River. The Pike Island facility is located in Ohio County and the Hannibal facility is located in Wetzel County. Failures of these facilities would disrupt the region's economy, as well as impact downstream communities via flooding.

Other dam facilities are not as high profile. The West Virginia Department of Environmental Protection (WVDEP) has four classes of dams. Class I dams post significant hazard and may result in major damage to structures and life. Class IV dams have negligible

hazard and would have negligible damage to property, life and environment. WVDEP also identifies deficient dams.

As per WVDEP Dam Safety Rule, a "deficient dam" means a non coal-related dam that exhibits one or more design, maintenance, or operational problems that may adversely affect the performance of the dam over a period of time or during a major storm or other inclement weather that may cause loss of life or property; or a non coal-related dam that otherwise fails to meet the requirements of the Act or this rule.

In addition to dams that retain water, there are also three coal slurry impoundments and multiple fracking wastewater ponds in Region X. More information on these types of dams can be found in Section 3.9: Oil and Gas Drilling/Hazardous Incident.

Dams identified by the US Army Corps of Engineers are listed in Table 3.1.2. This table also contains the NDID, the owner, primary purpose, hazard potential, storage capacity, and deficiency status. See Figures 3.1.1, 3.1.2 and 3.1.3 for dam locations in each county.

Table 3.1.2

Inventory of Dams in Region X

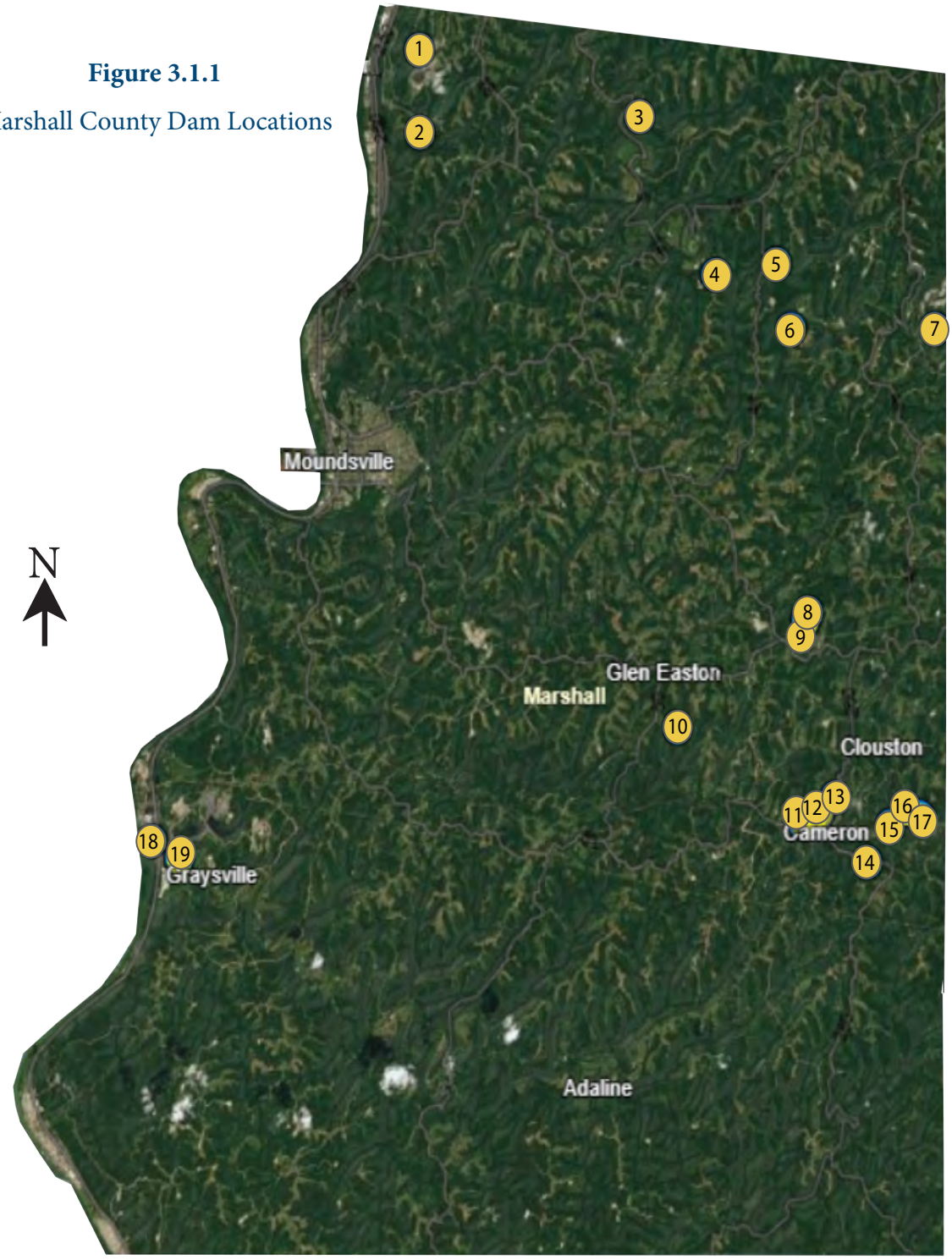
County	Number on Map (Figures 3.1.2, 3.1.3 and 3.1.4)	Dam Name	NIDID	Owner	Primary Purpose	Hazard Potential	Storage Capacity (Acre Ft)	Deficiency Status
Marshall County	1	Browns Run Impoundment	WV05123	Ohio County Coal Company	Tailings	High	2,880.00	Not Available
	2	Cunningham Hollow Slurry Impoundment	WV06913	Consolidation Coal Company	Other	High	2,037.00	Not Rated
	3	Wheeling Creek No. 18	WV05112	SCS-Wheeling Creek	Flood Control	High	1,230.00	Satisfactory
	4	Kaliya Ghat Dam	WV05119	New Vrindaban Community	Recreation	Significant	25.00	Not Rated
	5	Wheeling Creek No. 23 (Wolfe Run Dam)	WV05118	Wheeling Creek Watershed Commission	Flood Control	High	2,391.00	Fair
	6	Wheeling Creek No. 25	WV05117	SCS-Wheeling Creek	Flood Control	High	4,670.00	Fair
	7	Wheeling Creek No. 3	WV05120	Wheeling Creek Watershed Commission	Flood Control	High	18,993.00	Satisfactory
	8	Christopher Lower Multipurpose Pond	WV05115	COE-Pittsburgh District	Other	High	38.50	Not Rated
	9	Christoper Upper Multipurpose Pond	WV05116	COE-Pittsburgh District	Other	High	28.12	Not Rated
	10	Lucey Pond Dam	WV05113	Trans Energy, Inc.	Recreation	Low	47.42	Not Rated

County	Number on Map (Figures 3.1.2, 3.1.3 and 3.1.4)	Dam Name	NIDID	Owner	Primary Purpose	Hazard Potential	Storage Capacity (Acre Ft)	Deficiency Status
Marshall County	11	Upper Grave Creek No. 1	WV05104	City of Cameron	Flood Control	High	284.00	Satisfactory
	12	Upper Grave Creek No. 3	WV05105	City of Cameron	Flood Control	High	44.00	Satisfactory
	13	Upper Grave Creek No. 4	WV05106	City of Cameron	Flood Control	High	83.00	Satisfactory
	14	Upper Grave Creek No. 5	WV05107	City of Cameron	Flood Control	High	74.00	Satisfactory
	15	Upper Grave Creek No. 9	WV05111	City of Cameron	Flood Control	High	152.00	Satisfactory
	16	Upper Grave Creek No. 7	WV05109	City of Cameron	Flood Control	High	97.00	Satisfactory
	17	Upper Grave Creek No. 8	WV05110	City of Cameron	Flood Control	High	58.00	Satisfactory
	18	Mitchell Bottom Ash Ponds	WV05108	American Electric Power	Tailings	Significant	46.00	Satisfactory
	19	Conner Run Refuse Impoundment	WV05102	American Electric Power	Tailings	High	15,750.00	Satisfactory
Ohio County	20	Pike Island Locks and Dam	WV6908	USACE-Pittsburgh District	Navigation	Significant	89,300.00	Not Available
	21	Tunnel Ridge Slurry Cell A	WV6907	Alliance Resource Partners LP	Tailings	High	1,050.00	Not Available
	22	Schenk Lake	WV0911	Wheeling Park Commission	Recreation	High	29.00	Satisfactory
	23	Millcrest Farm Pond	WV06910	Victor and Jenna Wood	Recreation	High	105.00	Not Rated
	24	Bear Rocks Lake No. 3	WV06903	WVDNR, Wildlife Resources	Recreation	High	48.00	Poor
	25	Bear Rocks Lake No. 2	WV06902	WVDNR, Wildlife Resources	Recreation	High	173.00	Poor
	26	Bear Rocks Lake No. 1	WV6901	WVDNR, Wildlife Resources	Recreation	High	52.00	Poor
	27	Wheeling Creek No. 7	WV06912	Wheeling Creek Watershed Commission	Flood Control	High	6,462.00	Satisfactory
Wetzel County	28	Hannibal Locks and Dam	WV10301	USACE-Pittsburgh District	Navigation	Significant	130,000.00	Not Available
	29	Ronnie Wade Dam	WV10303	Chesapeake Energy	Water Supply	High	11.37	Not Rated

Source: US Army Corps of Engineers National Inventory of Dams; https://nid.usace.army.mil/#/; Date Accessed: 7/6/2022

Figure 3.1.1

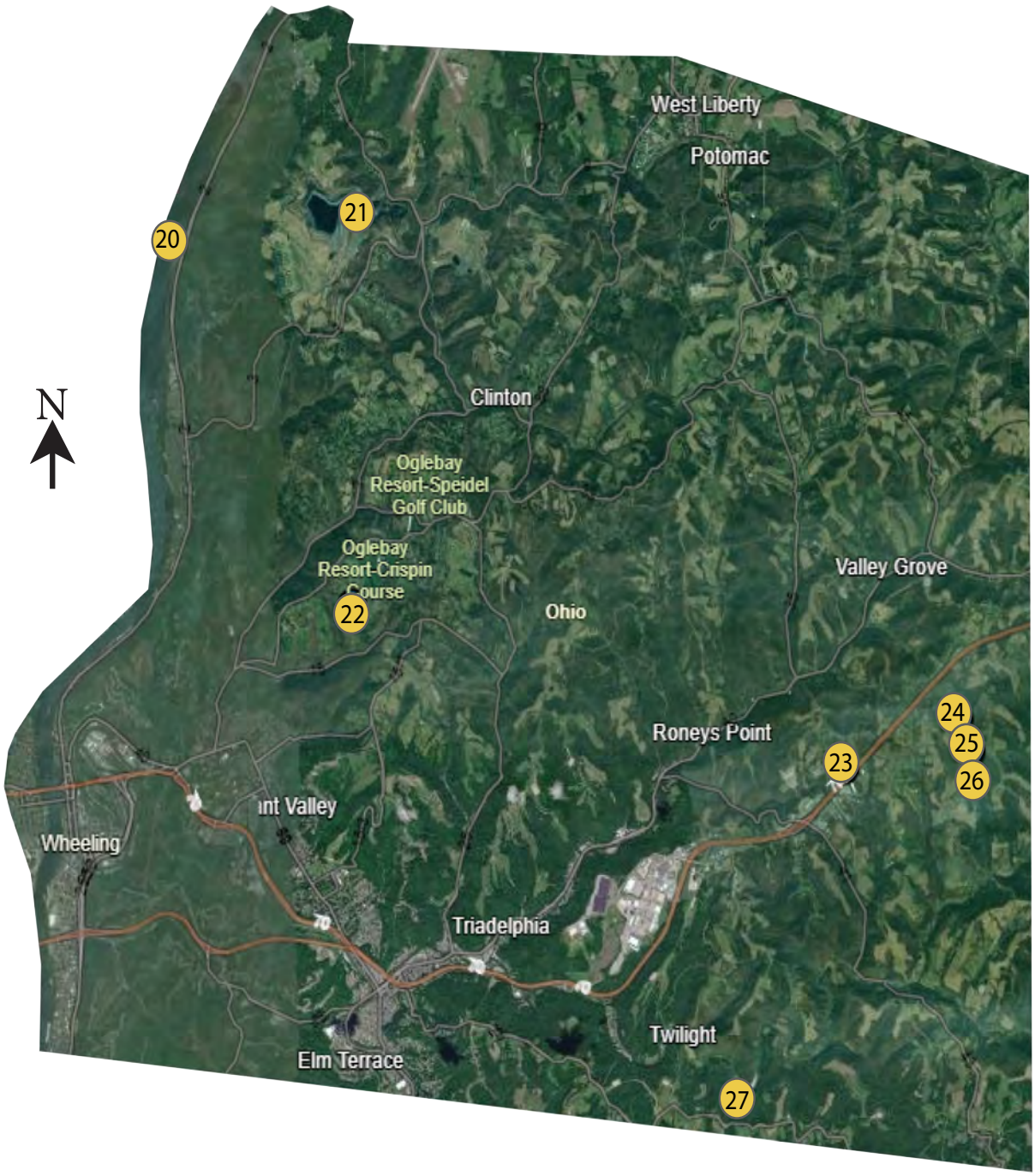
Marshall County Dam Locations



Source: US Army Corps of Engineers National Inventory of Dams; https://nid.usace.army.mil/#/; Date Accessed: 7/6/2022

Figure 3.1.2

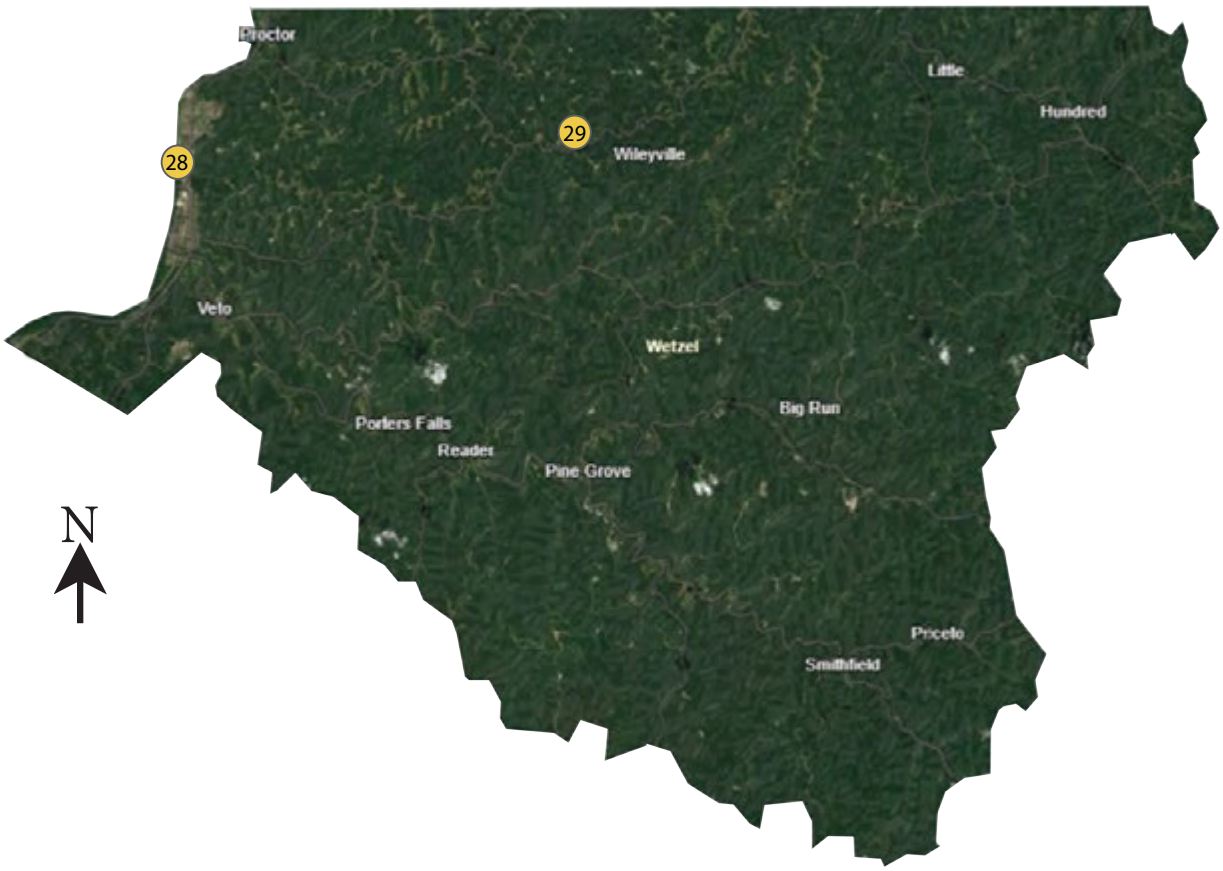
Ohio County Dam Locations



Source: US Army Corps of Engineers National Inventory of Dams; https://nid.usace.army.mil/#/; Date Accessed: 7/6/2022

Figure 3.1.3

Wetzel County Dam Locations



Source: US Army Corps of Engineers National Inventory of Dams; https://nid.usace.army.mil/#/; Date Accessed: 7/6/2022

Dam facilities in the planning area also include flood control structures for communities along the Ohio River. For example, portions of the City of Benwood are located "below" the level of the Ohio River and are protected by a flood wall. In 2010, the City of Benwood completed various improvements to the flood wall levy and pump stations. Improvements consisted of the replacement of concrete top slabs with hatch and ventilation pipes, electrical improvements and replacements, VFD Pumps, level sensor and controller upgrades, installation of standby generator and site fencing at the existing Fifth Street Pump Station and the Sixth Street Pump Station. If the dam were to fail, portions of Benwood would be severely impacted. During recent discussions with Benwood officials, the flood wall is in need of additional maintenance, including the removal of trees and other brush that has grown on the flood wall, which city workers are unable to maintain.

The cascading effects of serious rainfall and landslides can result in breaching of a single dam and multiple downstream dams. This may results in multi-peak flood. Although such an event is rare and is not seen in the region, it needs appropriate modeling along with assessment of resources and warning systems. This is a subject for a planning study beyond the scope of this plan.

Additionally, the failure of dams outside of the region could impact participating counties. While there are USACE facilities in two of the three participating counties, it should be noted that the facilities are also located upstream from the planning area and these could cause devastating impacts if failure occurred. These facilities include: New Cumberland Locks and Dam (New Cumberland, WV), Montgomery Locks and Dam (Monaca, PA), Dashields Locks and Dams (Coraopolis, PA) and Emsworth Locks and Dam (Pittsburgh, PA). While moderate dam failure hazards exist elsewhere in the planning area (as described above), the primary risk areas for dam failure are those along the Ohio Rivers, including the communities of Wheeling, McMechen, Benwood, Glen Dale, Moundsville, New Martinsville, and Paden City.



Figure 3.1.4: Pike Island Locks and Dam is one of twenty dams along the Ohio River, managed by the Army Corps of Engineers. Photo Credit: Natalie Hamilton

Vulnerable Structures

The number of structures located within the vulnerable area (shown in Figure 3.1.5) of all dams in Region X are presented in Table 3.1.3. These numbers were determined using the ArcGIS overlay function.

Table 3.1.3

Structures Vulnerable to Dam Failure

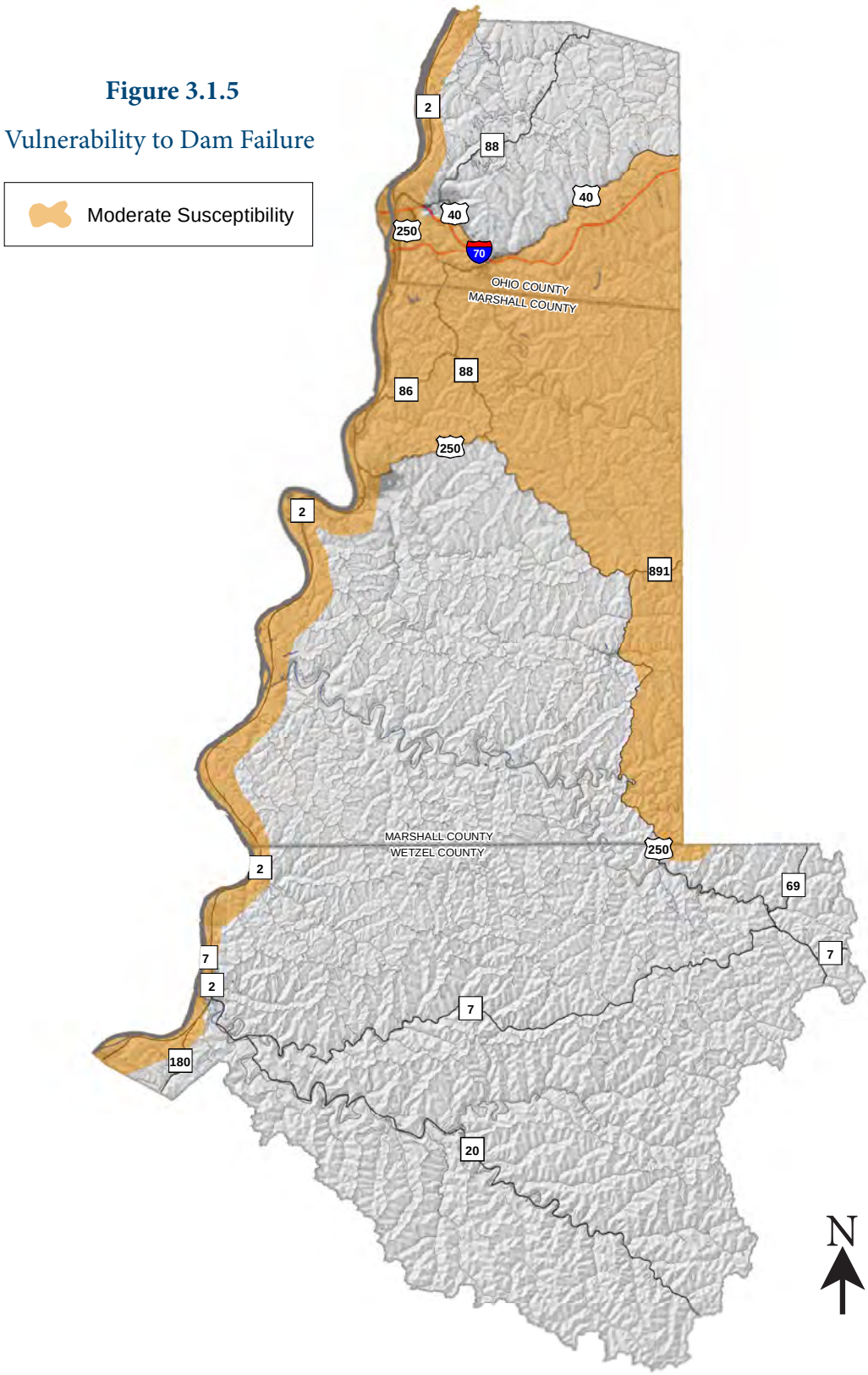
County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	695	29	76	95	9,762	158	10,815
Ohio	1,352	36	39	85	10,688	132	12,332
Wetzel	507	9	12	44	3,299	63	3,934
Total	2,554	74	127	224	23,749	353	27,081

Loss Estimates

In an effort to assist jurisdictional understanding of risks and implementation of strategies, loss estimates were prepared for each county in the event of a dam failure. If a worst-case scenario dam failure event would occur in Marshall County, it would result in $935,475,310 in losses; in Ohio County, it would result in $2,668,238,563 in losses; and in Wetzel County, it would result in $645,902,877 in losses.

Figure 3.1.5

Vulnerability to Dam Failure



Map created by Belomar Regional Council GIS Department

High Hazard Potential Dams

As previously stated, "High Hazard Potential Dams" are those dams in locations, where failure may cause major damage to dwellings, commercial or industrial buildings, main railroads, important public utilities, or where a high-risk highway may be affected or damaged. Region X contains 24 High Hazard Potential Dams (as shown in Table 3.1.2). Early in the planning process, a list of dams located in Region X's three counties was provided by the West Virginia Department of Environmental Protection (WVDEP). All high hazard dams, as well as other types of dams are shown in Figures 3.1.1, 3.1.2, 3.1.3. These dams are owned by various entities, including local jurisdictions, utility companies, coal companies, watershed commissions and private owners. EMA directors also work closely with the WVDEP Dam Services and are aware of issues pertaining to dam failure hazard and safety. Local jurisdictions and EMA directors were actively engaged in this planning process. Other dam owners had opportunity to provide input through early participation surveys and open houses arranged by Belomar. Additional stakeholders will be included in the next plan update.

Of the 24 High Hazard Potential Dams located in Region X, inundation modeling data was available for five of these dams, as well as a dam located in Washington, PA, which would have significant impact on Region X if failure occurred. The inundation maps for the six dams can be found in Appendix C and were provided by US Army Corps of Engineers Pittsburgh District. These dams are located on Big Wheeling Creek and Middle Wheeling Creek and bisect the Region X's largest city (City of Wheeling) and a smaller town (Town of Triadelphia). Many homes and businesses are in proximity to both creeks and failure of these dams would have a devastating economic, environmental, and social impacts on the local community. Table 3.1.4 shows the population of the areas that would be inundated, if each dam were to fail.

Table 3.1.4

High Hazard Dam Failure and Approximate Number of Residents Affected

High Hazard Dam	Approximate Number of Residents Affected if Dam Failure Occured
Washington County, PA	15,913
Wheeling Creek #18	6,376
Wheeling Creek #23	6,097
Wheeling Creek #25	11,962
Wheeling Creek #3	9,661
Wheeling Creek #7	6,090

Source: U.S. Census Bureau, 2020 Census Redistricting Data (Public Law 94-171)

Using the inundation spatial and aspatial datasets in ArcGIS, the following community assets/structures are indentified in the affected area, if dam failure occured: Touchstone Labs, Riesbeck's Grocery Store, Elm Grove Business District, Wheeling University, National Road/ Bethany Pike Business District, Kroger Grocery Store, Linsly School, Middle Creek Elementary School, Elm Grove Elementary School, parts of the Downtown Wheeling Business District,

several churches and many homes. Additionally, if the dam in Washington County, PA were to fail the Majorsville Gas Processing Plant would be affected, which could result in substantial financial losses and devastating environmental impacts.

3.2 Drought

A drought is a period of below-average precipitation in a given region, resulting in prolonged shortages in its water supply, whether atmospheric, surface water or ground water. A drought can last for months or years, or may be declared after as few as 15 days. According to the National Oceanic and Atmospheric Administration (NOAA) weather event incident data, droughts are infrequent for Region X, having occurred only twice in each county since 1995; therefore, drought can be considered an improbable event with negligible severity. Region X is adjacent to the Ohio River, which could provide relief in drought situations. Although the Ohio River dropped two inches below navigable depth in 1908, due to severe drought conditions, the lock and dam system that has been constructed since then, ensures a steady flow of water will remain unless severe drought conditions would occur.

Regional Context

Table 3.2.1

Regional Context for Drought

Period of Occurrence	Summer months with extended periods with no precipitation.
Number of events from January 1995 to December 2021	6
Number of events since last plan update (2017)	0
Probability of Events	Improbable: Small-scale droughts occur frequently but events causing major disruption and economic loss are infrequent.
Warning Time	Weeks
Potential Impacts	Activities that rely heavily on high water usage may be impacted significantly, including agriculture, tourism, wildlife protection, municipal water usage, commerce, recreation, electric power generation and water quality deterioration. Droughts can lead to economic losses, such as unemployment, decreased land values, agribusiness losses and inability to extract oil and natural gas.
Causes of Injury or Death	None
Potential Facility Shutdown	None

The U.S. Drought Monitor website was an additional data source used to determine drought frequency and severity for Region X. This data ource provides a weekly drought category from January 2000 to the current date for thethree counties. The drought categories are as follows:

"None" (no drought); "D0" (Abnormally Dry); "D1" (Moderate Drought); "D2" (Severe Drought); "D3" (Extreme Drought) and "D4" (Exceptional Drought). The data demonstrates that none of the counties in Region X reported a drought higher than the "D1 (Moderate Drought)" level from 2000 through 2021. Data from both NOAA and the US Drought Monitor indicate that drought is not a frequent or severe hazard for Region X.

Hazard Effects

A drought is a natural, yet unpredictable occurrence that can vary widely in progression, duration, severity, and local impact. A drought is a persistent and extended period of below normal precipitation causing abnormal moisture deficiency that results in adverse impacts on vegetation, animals and/or people. Drought has the following stages:

- Meteorological Drought: This drought stage is often defined by a period of substantially diminished precipitation for a duration and/or intensity that persists long enough to produce a significant hydrological imbalance. The commonly-used definition of meteorological drought is an interval of time, generally on the order of months or years, during which the actual moisture supply at a given place consistently falls below the climatologically appropriate moisture supply.
- Agricultural Drought: This drought stage occurs when there is inadequate precipitation and/or soil moisture to sustain crop or forage production systems. The water deficit results in serious damage and economic loss to plant or animal agriculture. Agricultural drought usually begins after meteorological drought, but before hydrological drought, and can also affect livestock and other agricultural operations.
- Hydrological Drought: This drought stage is a result of deficiencies in surface and subsurface water supplies. It is measured as stream flow, and as lake, reservoir and ground water levels. There is usually a time lag between a lack of rain or snow and lower water levels in streams, lakes and reservoirs.
- Socio-economic Drought: This drought stage occurs when physical water shortages start to affect the health, well-being and quality of human life, or when the drought starts to affect the supply and demand of an economic product.

Hazard Profile

Although farms in Region X are considerably smaller than the national average, with the average farm in Region X consisting of 130 acres compared to the national average of 444 acres (according to the USDA Farms and Land in Farms 2019 Summary), a drought still could have significant impact to the economy of Region X and affect food security for local farmers. According to the 2017 Agricultural Census, Marshall County sees the most farming, with 638 working farms, while Ohio and Wetzel Counties see less farming, with 208 and 261 farms respectively. Table 3.2.2 summarizes the number of farms in each county, as well as market value of crops sold. It also shows the total acres of harvested cropland, which indicates how much of the

land dedicated for food production could be affected in Region X, if a severe long-term drought would occur.

Table 3.2.2

2017 Agricultural Census: Farm Characteristics for Region X

County	Number of Farms	Market Value of Crops	Total Acres of Harvested Cropland
Marshall	638	$3,806,000	535
Ohio	208	$2,706,000	185
Wetzel	261	$1,292,000	195
Total	1,107	$7,804,000	915

Source: 2017 Agricultural Census; United States Department of Agriculture: National Agricultural Statistics Service; https://www.nass.usda.gov/Publications/AgCensus/2017/; Date Accessed: 5/24/2022

A prolonged drought could also have an effect on the local water supply. Many rural residents in Marshall, Ohio and Wetzel Counties rely on private wells. Also, the Public Service Districts (PSDs) that provide water in the counties could be impacted if their water source is lessened. Those PSDs that purchase water from larger municipalities, such as Wheeling and Moundsville, could be impacted if those municipalities chose to keep their allotment of water for their primary area. In the past 20 years, Marshall County farmers have had to purchase and haul water for farm use from the PSDs, as their water source (wells, springs, etc.) has disappeared, due land subsidence caused by longwall mining. The natural gas fracking industry also requires large quantities of water for the gas extraction process, leading to increased competition for water between the agricultural industry and the oil and gas industry.

Loss Estimates

The historical drought events are presented in Table 3.2.3. Due to a lack of available data, loss estimates for this hazard are not calculated. In a worst-case scenario, if all crops are lost, the total estimated loss would be $7,804,000. Drought is a regional event that affects the three counties. Although the degree of impact may vary marginally from county to county, the entire region is vulnerable to this hazard. A regional vulnerability map is included as Figure 3.2.1, which indicates where active farms are located.

Table 3.2.3

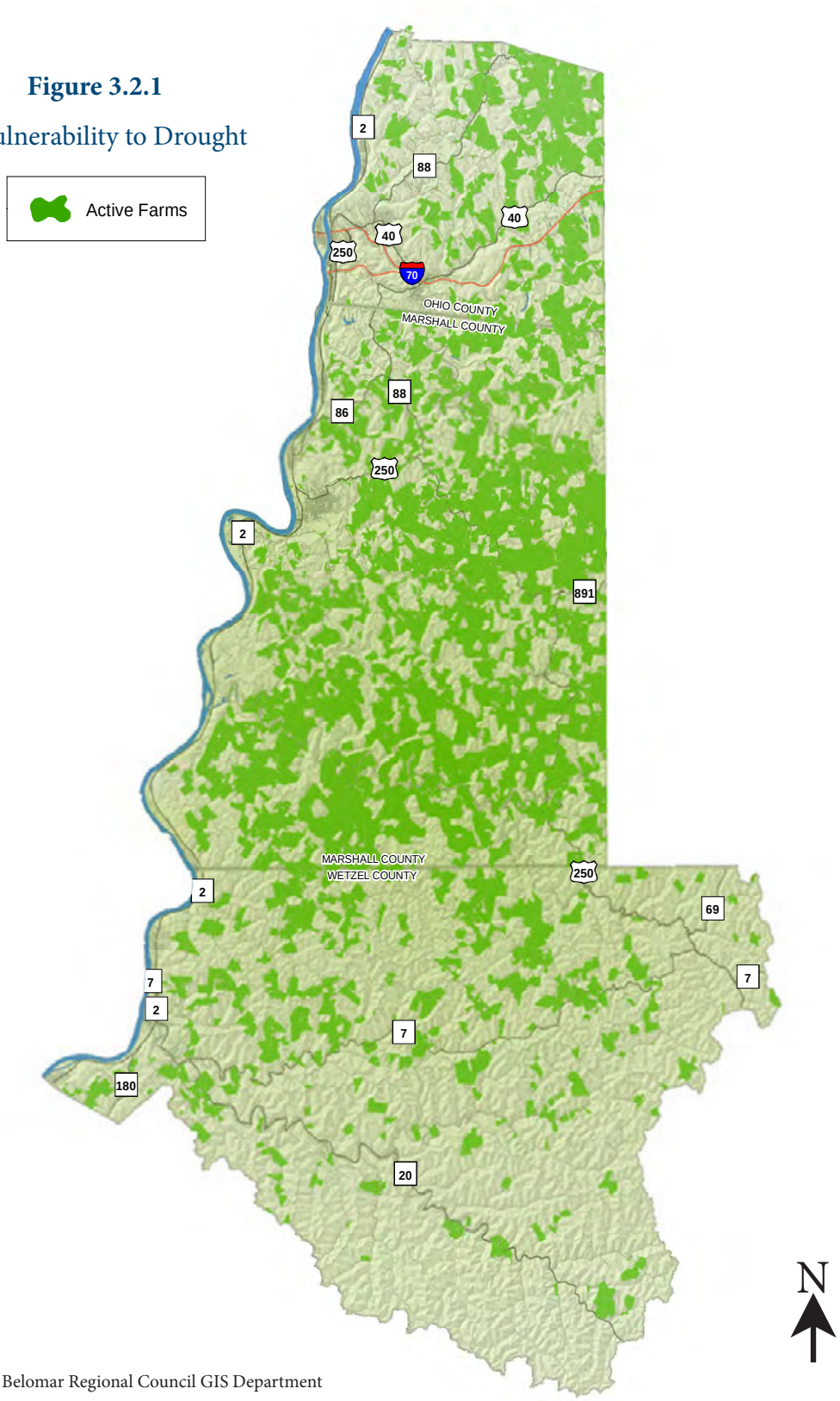
Drought Events and Losses for Region X from 1995 to 2021

County	Number of Droughts	Total Drought Losses
Marshall	2	N/A
Ohio	2	N/A
Wetzel	2	N/A
Total	6	N/A

Source: National Oceanic and Atmospheric Administration Storm Event Database

Figure 3.2.1

Vulnerability to Drought



Map created by Belomar Regional Council GIS Department

3.3 Earthquake

An earthquake (also known as a quake, tremor or temblor) is the perceptible shaking of the surface of the Earth, resulting from the sudden release of energy in the Earth's crust that creates seismic waves. Earthquakes have a wide range of intensity, with violent earthquakes destroying entire cities and mild earthquakes going unnoticed. The seismicity or seismic activity of an area refers to the frequency, type and size of earthquakes experienced over a period of time. Based on historical data, earthquake is an improbable event for Region X.

Seismic waves as vibrations from earthquakes are recorded on seismographs. The magnitude of an earthquake measured from the wave of amplitude recorded by seismographs. The scale used to measure the earthquake magnitude is known as Richter scale, which is a logarithmic scale. Richter scale has been replaced by a scale called, Moment Magnitude Scale, which is considered to be a more accurate measure of earthquake size.

Regional Context

Table 3.3.1

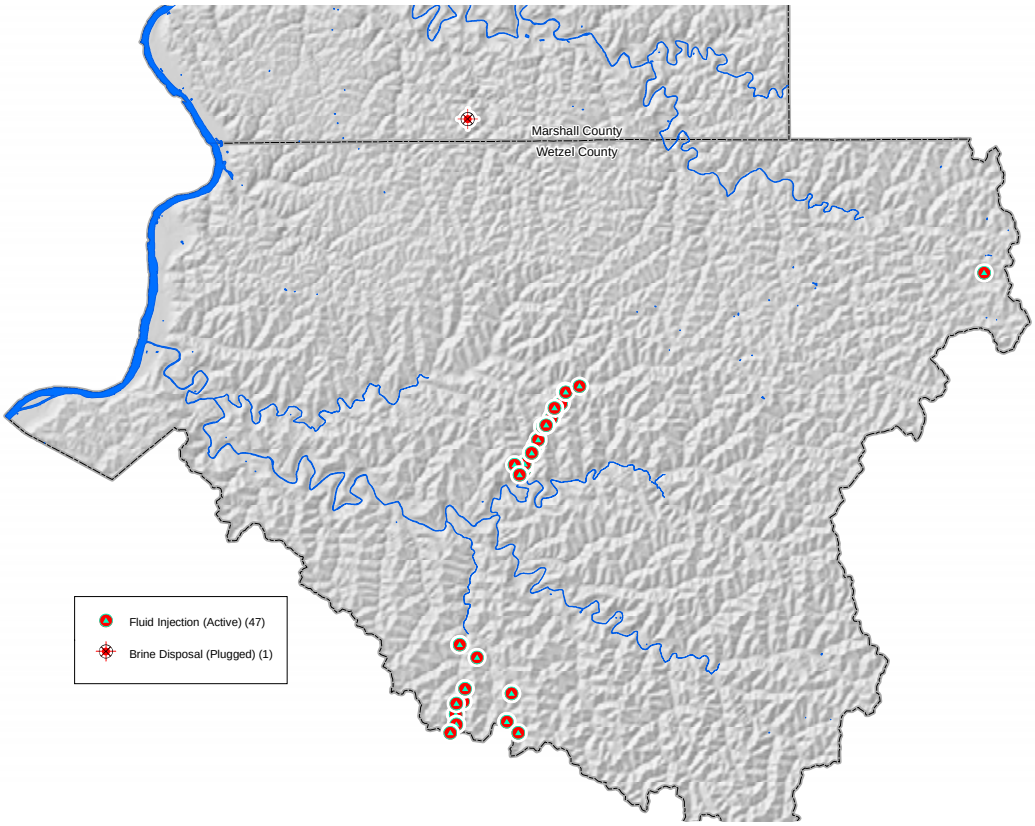
Regional Context for Earthquake

Period of Occurrence	At any time
Number of events from January 1995 to December 2021	0 Epicenters
Number of Events since last plan update (2017)	0 Epicenters
Probability of Events	Improbable
Warning Time	None
Potential Impacts	According to FEMA, areas with a Peak Ground Acceleration (PGA) of 3 to 5 (0.03 to 0.05) will incur little to no damage with no function loss. More severe earthquakes will cause damage to structures and roads.
Causes of Injury or Death	Minor risk of injury
Potential Facility Shutdown	None

A severe earthquake is improbable in the region; however, due to the intense hydraulic fracturing (also known as fracking) for extraction of natural gas, Region X is slightly more susceptible to earthquakes now than in the past. Marshall County contains one injection well for the natural gas sector. Wetzel County contains over forty injection wells that were constructed during the last century for the oil industry (see Figure 3.3.1); however, these wells are no longer active. Injections wells are used to pump by-products back into the ground, so that it can be stored deep below the earth's surface indefinitely, and have been linked to localized earthquakes in other states, like Oklahoma, where hydraulic fracking is common.

Figure 3.3.1

Injection Well Locations in Region X (Southern Marshall County and Wetzel County)



Source: West Virginia Department of Environmental Protection

Since the fracking process is relatively new in Region X, there is no historical data to determine probability and severity of injection well-induced tremors. However, Region X will continue to be vulnerable to this hazard as long as there are injections wells in the area and to a lesser extent, hydraulic fracturing wells, as they too have the potential to cause earthquakes. Folger and Tieman state in their article "Human-Induced Earthquakes from Deep-Well Injection: A Brief Overview" that "the potential for damaging earthquakes caused by injection of fluids for hydraulic fracturing operations, as opposed to deep-well injection of wastewater from fracking and other oil and natural gas production, appears to be much smaller."

Although "fracking" wells are much less likely to cause earthquakes than "injection" wells, Folger and Tieman further explain, however that human-caused changes in the ground alter "the amount of stress in Earth's crust, and the forces that prevent faults from slipping become unequal. Once those forces are out of equilibrium, the fault ceases to be locked and the fault slips, sending shock waves out from the fault that potentially reach the surface and are strong enough to be felt or cause damage." Wetzel County and southern Marshall County are at the highest risk for human-induced earthquakes, since they contain injection wells; however all three counties in

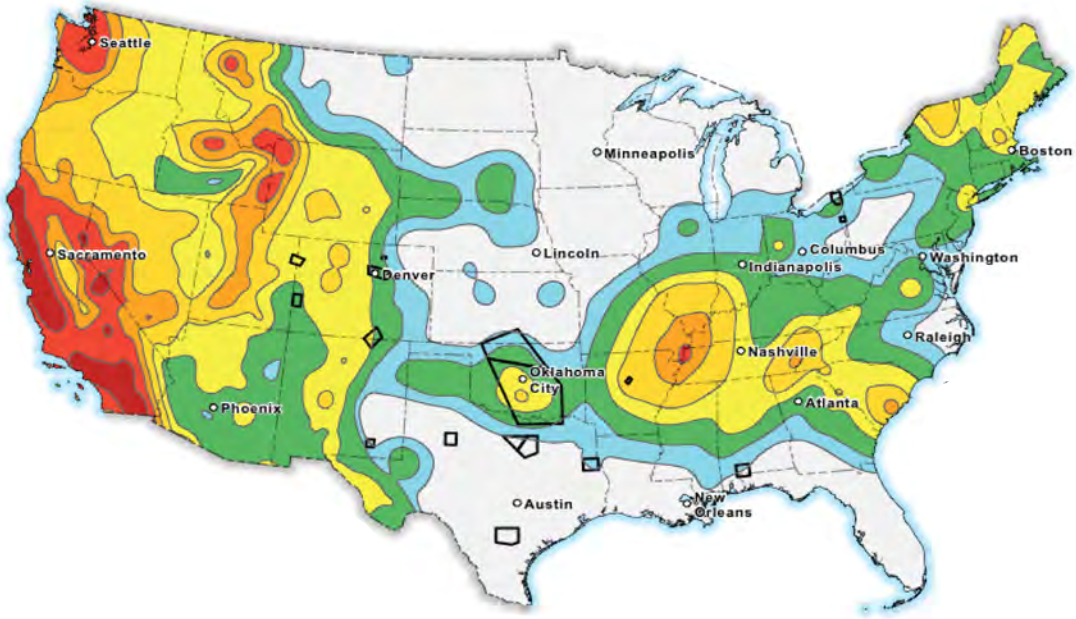
Region X should be aware of the earthquake potential due to the presence of injection and fracking wells.

Hazard Effects

Earthquake hazards include any physical phenomenon associated with an earthquake that may produce adverse effects on human activities. Hazards are the natural phenomena that might impact a region, regardless of whether there is anyone around to experience them or not, while risk can usually be measured in dollars or fatalities. Hazard is generally measured in more physical units: energy, shaking strength, depth of water inundation, etc. The map prepared by the USGS (Figure 3.3.2) shows earthquake ground acceleration having a 10% probability of being exceeded in the next 50 years for a firm rock site condition.

Figure 3.3.2

Frequency of Damaging Earthquake Shaking Around the U.S.



Expected number of occurrences of damaging earthquake shaking in 10,000 years

>250	10 - 20
100 - 250	4 - 10
50 - 100	2 - 4
20 - 50	< 2

Areas where suspected nontechtonic earthquakes are not included

Source: https://www.usgs.gov/media/images/frequency-damaging-earthquake-shaking-around-us USGS; Date accessed: 6/8/22

Primary earthquake hazards are:

- ground shaking
- landslides
- liquefaction
- surface rupture

Secondary earthquake hazards are those caused by the primary hazards, and may often be more catastrophic:

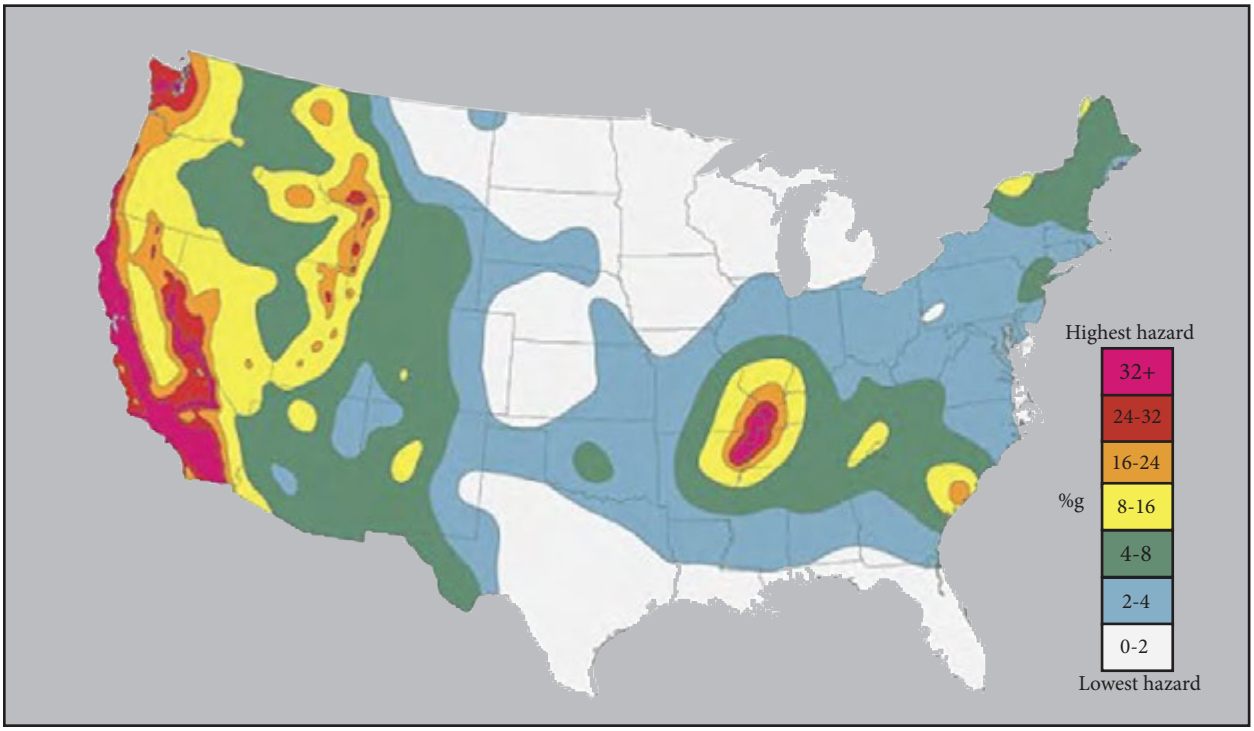
- tsunami
- seiche
- flooding
- fire

Hazard Profile

A map prepared by the USGS, shown as Figure 3.3.3, depicts the peak ground acceleration PGA values for the area with 10% chance of exceedance in 50 years. West Virginia does have a low earthquake risk with the majority of the state located in the 2%g to 4%g area and parts of southern West Virginia located in the 4%g to 8%g area; however, Region X is located entirely within the 2%g to 4%g, a low hazard area. A regional vulnerability map is included as Figure 3.3.4.

Figure 3.3.3

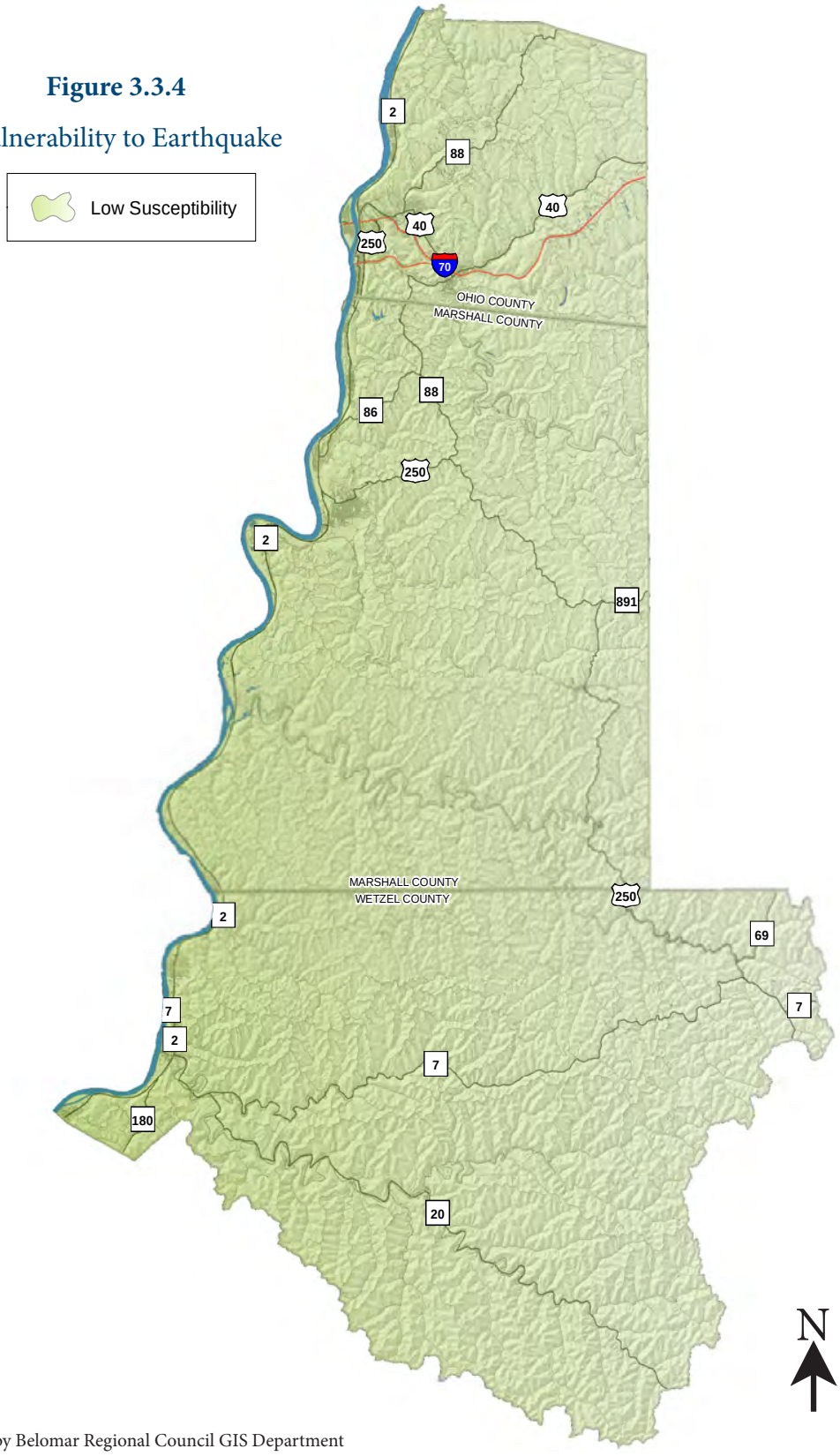
Peak Ground Acceleration (PGA) Map for the United States



Source: USGS; https://www.usgs.gov/; Date Accessed: 6/8/22

Figure 3.3.4

Vulnerability to Earthquake



Map created by Belomar Regional Council GIS Department

Vulnerable Structures

Since the entire region has earthquake vulnerability, structures are considered to be vulnerable. The most populated city (Wheeling) in Region X follows 2000 international building codes (IBC 2000). These codes have minimum design requirements for earthquakes. However, a vast majority of structures predate these codes and the data regarding year of construction is not readily available. Although most jurisdictions in Region X have building codes, smaller jurisdictions lack the resources to have an official code enforcement department/chief building officer. These jurisdictions rely on police or fire departments to inspect structures and enforce codes, and due to this lack of resources, it is difficult to determine which structures are built to a standard to withstand an earthquake that could strike Region X. All structures are therefore, considered to be vulnerable for a severe earthquake and are shown in Table 3.3.2.

Table 3.3.2

Structures Vulnerable to Earthquakes

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	876	69	106	147	15,741	316	17,255
Ohio	1,817	129	51	131	17,051	186	19,365
Wetzel	850	19	24	122	8,714	211	9,940
Total	3,543	217	181	400	41,506	713	46,560

Loss Estimates

The random historical occurrence of earthquakes indicates that all structures in the planning area are equally at risk from earthquakes. The severity of naturally occurring earthquakes in the local area is expected to be negligible. All three counties estimate earthquake losses to be from negligible to marginal. Human-induced earthquakes, however, from the construction and usage of injection wells for the storage of oil and gas industry by-products may occur in the future. These wells are concentrated in the southern section of Region X, which potentially places structures and residents at a greater risk for earthquake damage than the rest of the region.

3.4 Flooding

A flood is an overflow of water that submerges land, which is usually dry. Flooding may occur as an overflow of water from water bodies, such as a river, lake, or ocean, in which the water over tops or breaks levees, resulting in some of that water escaping its usual boundaries, or it may occur due to an accumulation of rainwater on saturated ground in an aerial flood. While the size of a lake or other body of water will vary with seasonal changes in precipitation and snow melt, these changes in size are unlikely to be considered significant, unless they flood property or drown domestic animals.

Floods can also occur in rivers, when the flow rate exceeds the capacity of the river channel, particularly at bends or meanders in the waterway. Floods often cause damage to homes and businesses, if they are in the natural flood plains of rivers. While riverine flood damage can be eliminated by moving away from rivers and other bodies of water, humans have traditionally settled and established towns and cities along waterways, because the land is usually flat and fertile. In addition, waterways provide a source of water for drinking and agriculture and provide a mode of transportation for industry and commerce.

Some floods develop slowly, while others such as flash floods, can develop in just a few minutes and without visible signs of rain. Additionally, floods can be local, impacting a neighborhood or community, or very large affecting entire river basins. Flooding is a frequent hazard for Region X, often causing catastrophic damage.



Figure 3.4.1: Region X contains many creeks and streams, which have the potential to flood after heavy rains. Pictured above is Big Wheeling Creek with high water after a heavy rain. This creek begins in Pennsylvania and flows through the City of Wheeling before it empties into the Ohio River. Photo Credit: Natalie Hamilton

Regional Context

Table 3.4.1

Regional Context for Flooding

Period of Occurrence	Flash Floods can be common from January through May from snow melt and heavy rains. Flood as a result from Dam Failure can occur at any time.
Number of events from January 1995 to December 2021	141
Number of events since last plan update (2017)	27
Probability of Events	Frequent
Warning Time	River Flood - 3 to 5 days Flash Flood - minutes to hours Dam Failure - none
Potential Impacts	Impacts to human life, health and public safety. Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, fire, damaged or destroyed critical facilities and hazardous material releases. Can lead to economic losses, such as unemployment, decreased land values and agribusiness losses. Floodwaters are a public safety issue due to contaminants and pollutants.
Causes of Injury or Death	Injury and moderate risk of death
Potential Facility Shutdown	Days to weeks

Hazard Effects

The three counties are susceptible to flooding largely due to physical geography, which includes the Ohio River and several creeks, many streams, as well as a varied topography. The most severe floods usually occur when a river overflows its banks. Periodic floods occur naturally on most rivers, forming an area known as a "floodplain". With enough rainfall, the rivers and creeks will rise up to and over the floodplain, thus causing a flood. Flash flooding is also a common concern throughout the planning area. Historical occurrences can indicate where flash flooding will strike, but it is somewhat more unpredictable than riverine flooding. Flash flooding can be a result of an overloaded storm water management system, a washed out creek bed, water rushing off a hill or mountain, etc. In some cases, flash floods result in great damage because areas that are not in identified floodplains are generally less prepared than areas in known floodplains and flash flooding often occurs without much notice.

Hazard Profile

Flooding is considered the greatest hazard for Region X, especially for those communities along the Ohio River and those adjacent to the many creeks and streams that flow through the valleys. Increased rainfall and more intense thunderstorms, which have become more frequent in Region X over the past ten to fifteen years, have resulted in higher levels of water flowing through the region's waterways. Often these waterways cannot handle the excess water as in the past, due to sediment buildup over the years. The difficulty in obtaining a permit to dredge the waterways leaves the excess water flowing beyond the banks, often onto the road and into nearby houses and other structures. Figure 3.4.2 shows an increase in the number of flooding and flash flooding warnings, watches and advisories that have been issued for the three counties in Region X, with a large spike occurring in 2018 and 2021.

Figure 3.4.2

Flooding/Flash Flooding Warnings, Watches and Advisories Issued in Region X from 1989 through 2021



Source: Iowa State University - Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/vtec/search.php#byugc/WVC051; Date Accessed: 4/27/2022

During the third steering committee meeting, which in addition to the steering committee members, was attended by floodplain managers, there was great concern of how floods and flash floods have affected Region X, since the last Hazard Mitigation Plan update in 2017. The Town of Hundred reported that in 2017, a serious flash flood occurred in the Town in the middle of the night, without any warning. The Town's City Building was inundated with six feet of water and many records and computers were destroyed. The two creeks that run through Hundred could not handle the amount of water from an intense rain event, which left many residents traumatized. General consensus was that the creeks have changed over time and have become full of not only natural debris (logs, mud, etc.) but also man-made debris (propane tanks, tires, etc.), that dislodge and float during flooding events. Figures 3.4.3 through 3.4.6 show the devastating effects of the 2017 flood in the Town of Hundred.

Many floodplain managers and steering committee members stated the need to keep creeks and streams clean by securing loose objects (like propane tanks) to the ground in yards, as they can easily get washed away during flooding events. This could be achieved through local ordinances. They also stated that dredging of the waterways would help accommodate excess water during the more intense rain events, that Region X is experiencing. Not only do these intense rain events bring water, but also mud, which requires intensive labor to clean up from streets and houses. Unfortunately, obtaining a permit to dredge waterways has become extremely difficult and could take several years.

The City of McMechen also experienced a flash flood during the same time as the Town of Hundred. Members of the steering committee expressed their concern about the condition of culverts throughout Region X. There are several instances where there is dispute about ownership and culvert maintenance. Lack of maintenance on culverts can lead to flash flooding, as water cannot be properly channelized. The separation of combined sewer overflows could also lessen the damage of flooding events. Many communities in Region X have begun this process, but it is a costly endeavor.

The Emergency Management Directors explained that rain events now are occurring in intense bursts in small areas, as opposed to steady storms over a large area. These are hard to prepare for, as it is difficult to determine where the micro-cells will hit. A neighborhood might suffer an intense rain storm, causing severe flooding, while a neighborhood a mile or two away, might experience minimal rain or none at all. Even if Region X implements mitigation strategies for flooding, several of the creeks, like Big Wheeling Creek, begin outside of Region X in the State of Pennsylvania; therefore, coordinated efforts in watersheds are needed to control flooding.



Figure 3.4.3: The Town of Hundred has two creeks (West Virginia Fork Fish Creek and Church Fork Creek) that flow through its boundaries. In 2017, an intense storm caused both creeks to overflow, which inundated the downtown area with six feet of water. Photo Credit: Google Maps



Figure 3.4.4: Flooding of the athletic field in the Town of Hundred. Photo Credit: Sherry Hayes



Figure 3.4.5: Flooding of a home and camper in the Town of Hundred after an intense storm in 2017. Photo Credit: Sherry Hayes



Figure 3.4.6: Flood waters inundating a home in the Town of Hundred during the intense storm in 2017. Photo Credit: Sherry Hayes

Vulnerable Structures

Structures that are susceptible to flooding are identified in Table 3.4.2. Maps showing flood zones within each county can be found in Figure 3.4.8 (Marshall County), Figure 3.4.9 (Ohio County) and Figure 3.4.10 (Wetzel County). Maps showing the number of structures that would be effected by flood levels under three feet and above three feet for each county can be found in Figure 3.4.11 (Marshall County), Figure 3.4.12 (Ohio County) and Figure 3.4.13 (Wetzel County).

A software tool Total Exposure in Floodplain (TEIF), which was developed by FEMA was utilized to profile type of impact a flooding event could have. Loss estimates of structures located in the 100-year floodplain for Marshall, Ohio and Wetzel Counties were calculated by the West

Viriginia University GIS Technical Center (WVGISTC). The WVGISTC uses assessed values for 2021 and insurance data (for those structures that did not have an assessed value) to calculate at risk built areas and applies replacement values for structures. These values can be found under the secion "Loss Estimates". The WVGISTC also developed the "WV Flood Tool", which allows users to view areas and structures in both the 100-year and 500-year floodplains via maps and satellite images. The floodplain areas and the structure replacement values provided by the WVGISTC are used in this plan.

Table 3.4.2

Structures Vulnerable to Flooding

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	154	5	40	23	1,342	0	1,564
Ohio	488	17	26	36	2,870	0	3,437
Wetzel	255	8	30	41	1,613	0	1,947
Total	897	30	96	100	5,825	0	6,948

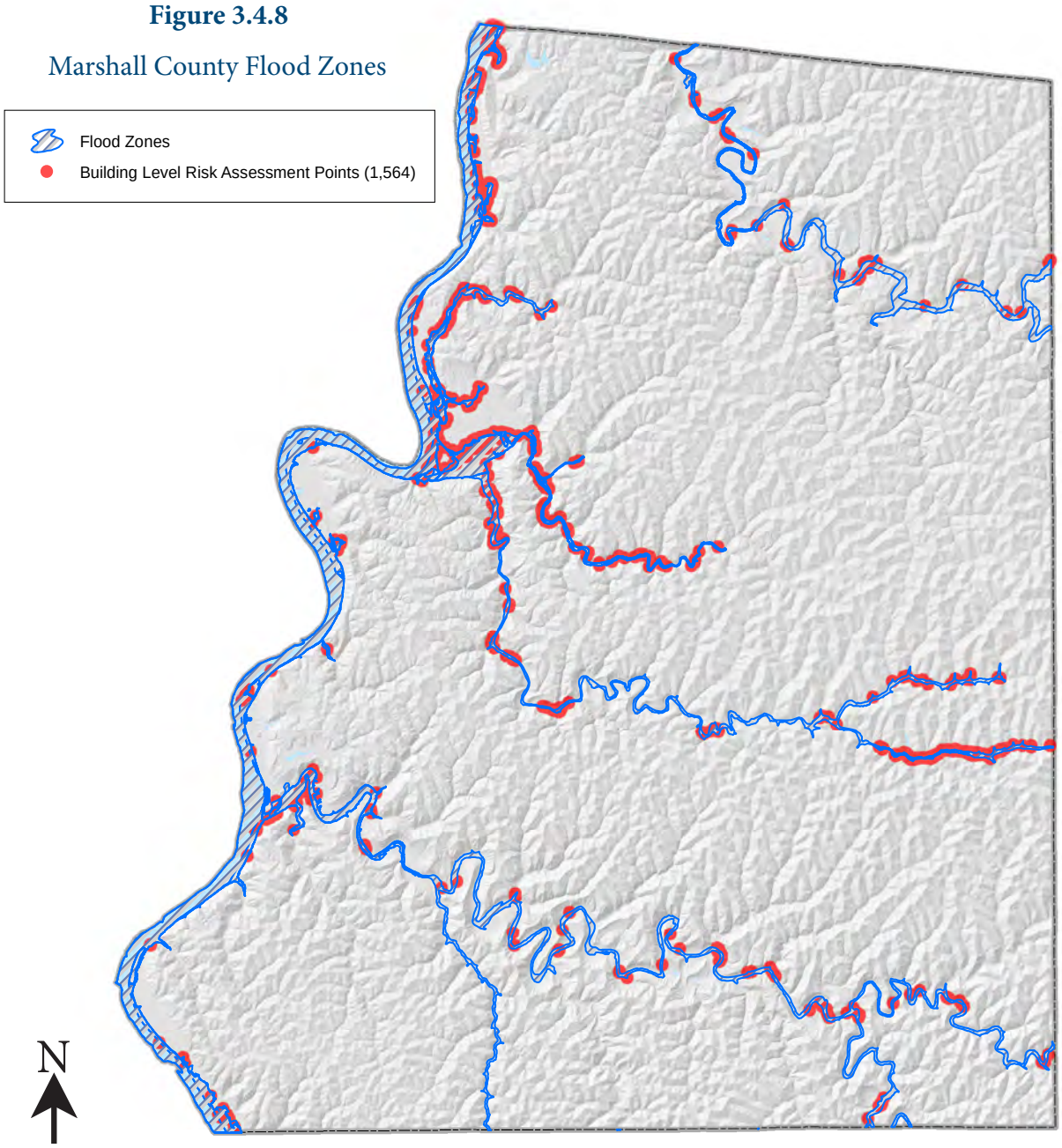
* Includes structures located in census blocks that are partially (area greater than or equal to 5%) in the flood zone.



Figure 3.4.7: Flood waters overtaking the backyards of houses in Marshall County. Photo Credit: Tom Hart

Figure 3.4.8

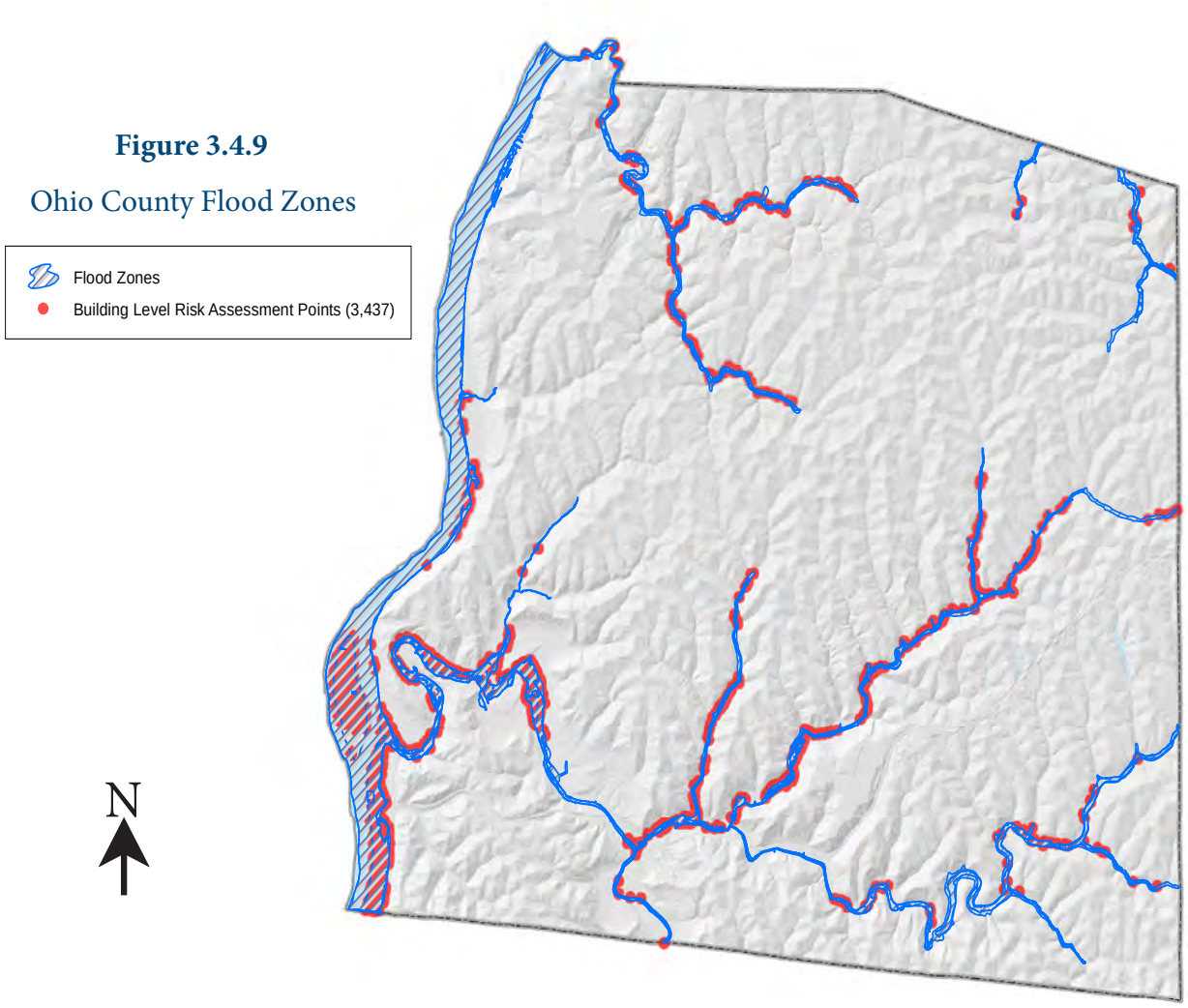
Marshall County Flood Zones



Map created by Belomar Regional Council GIS Department

Figure 3.4.9

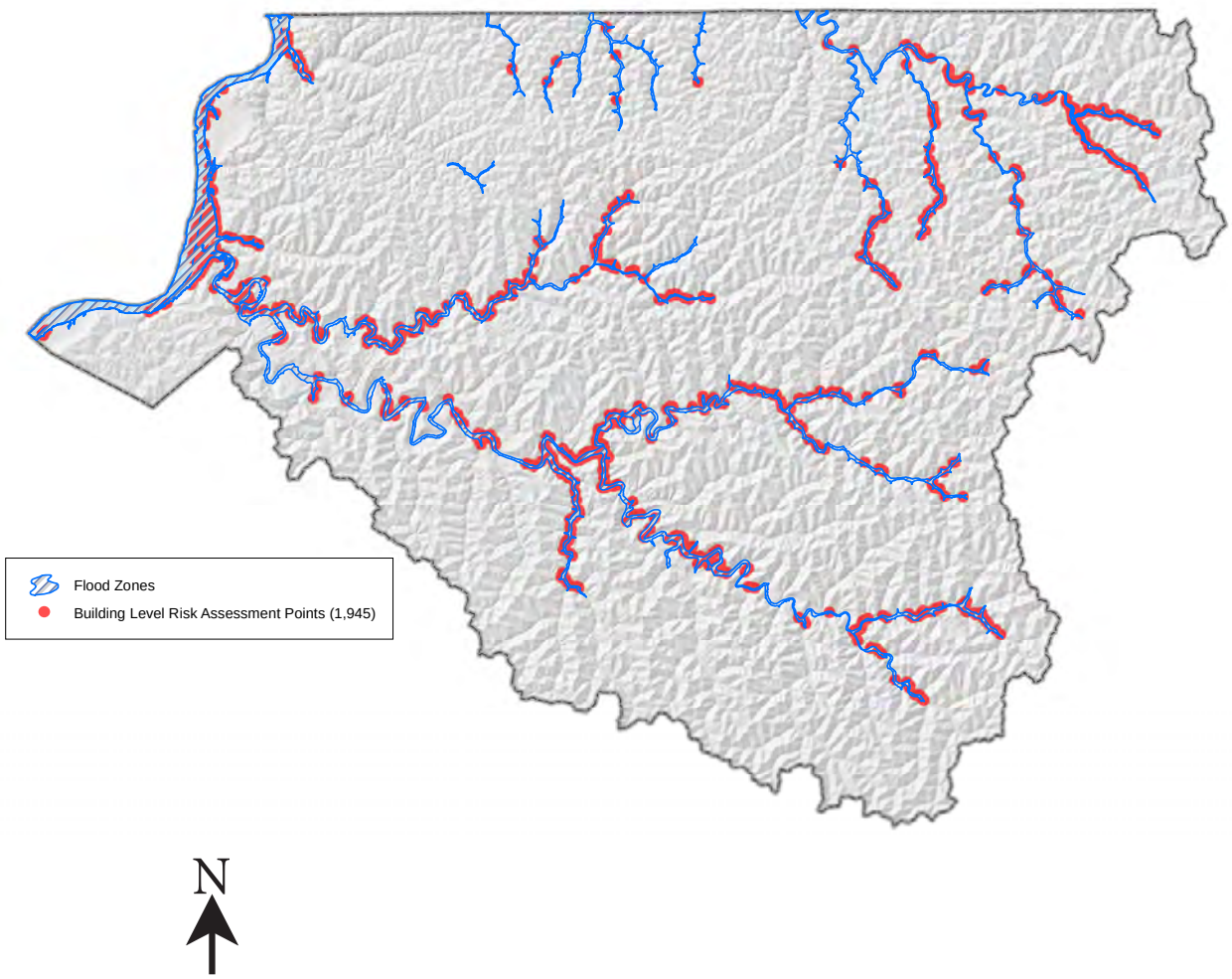
Ohio County Flood Zones



Map created by Belomar Regional Council GIS Department

Figure 3.4.10

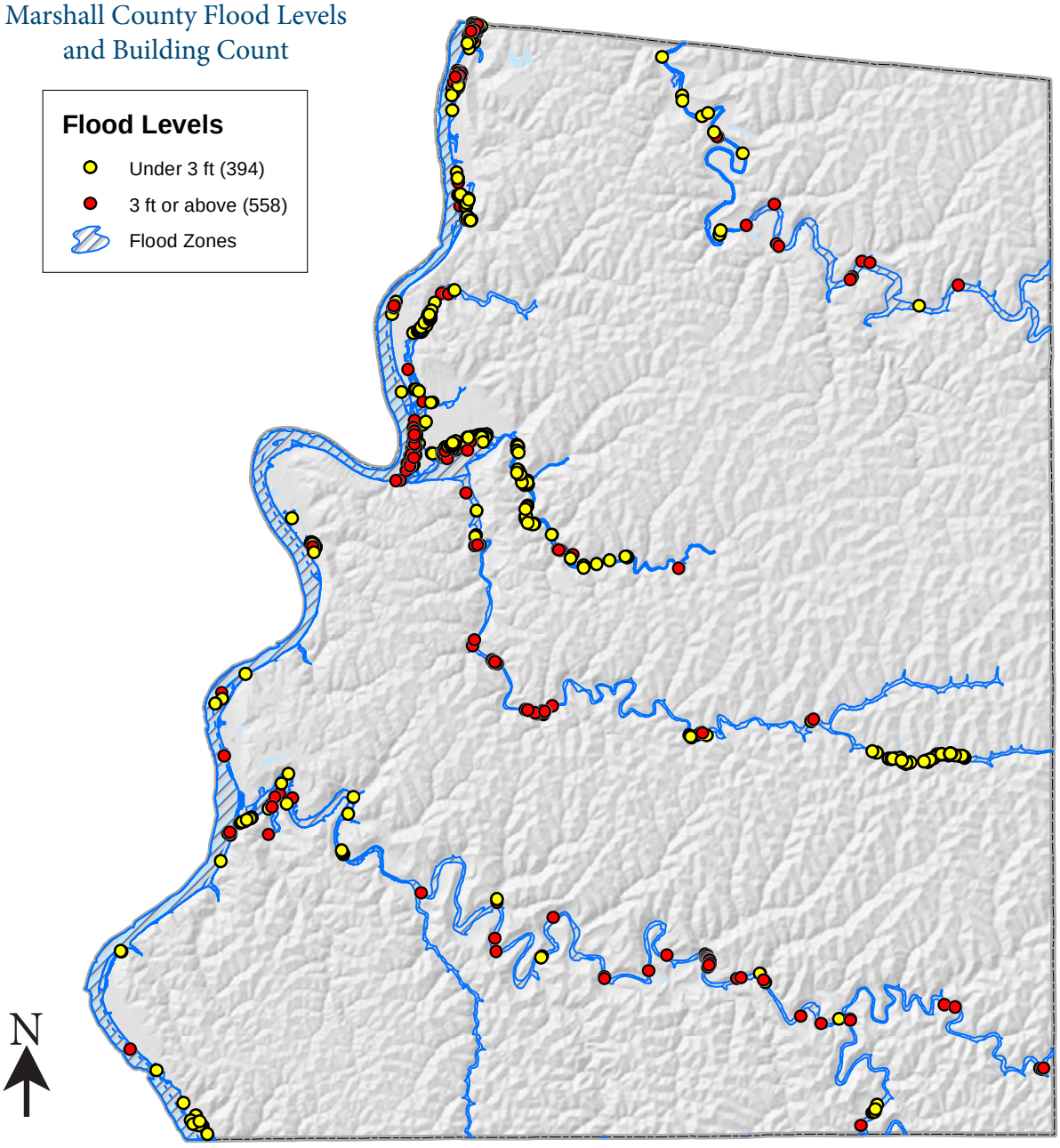
Wetzel County Flood Zones



Map created by Belomar Regional Council GIS Department

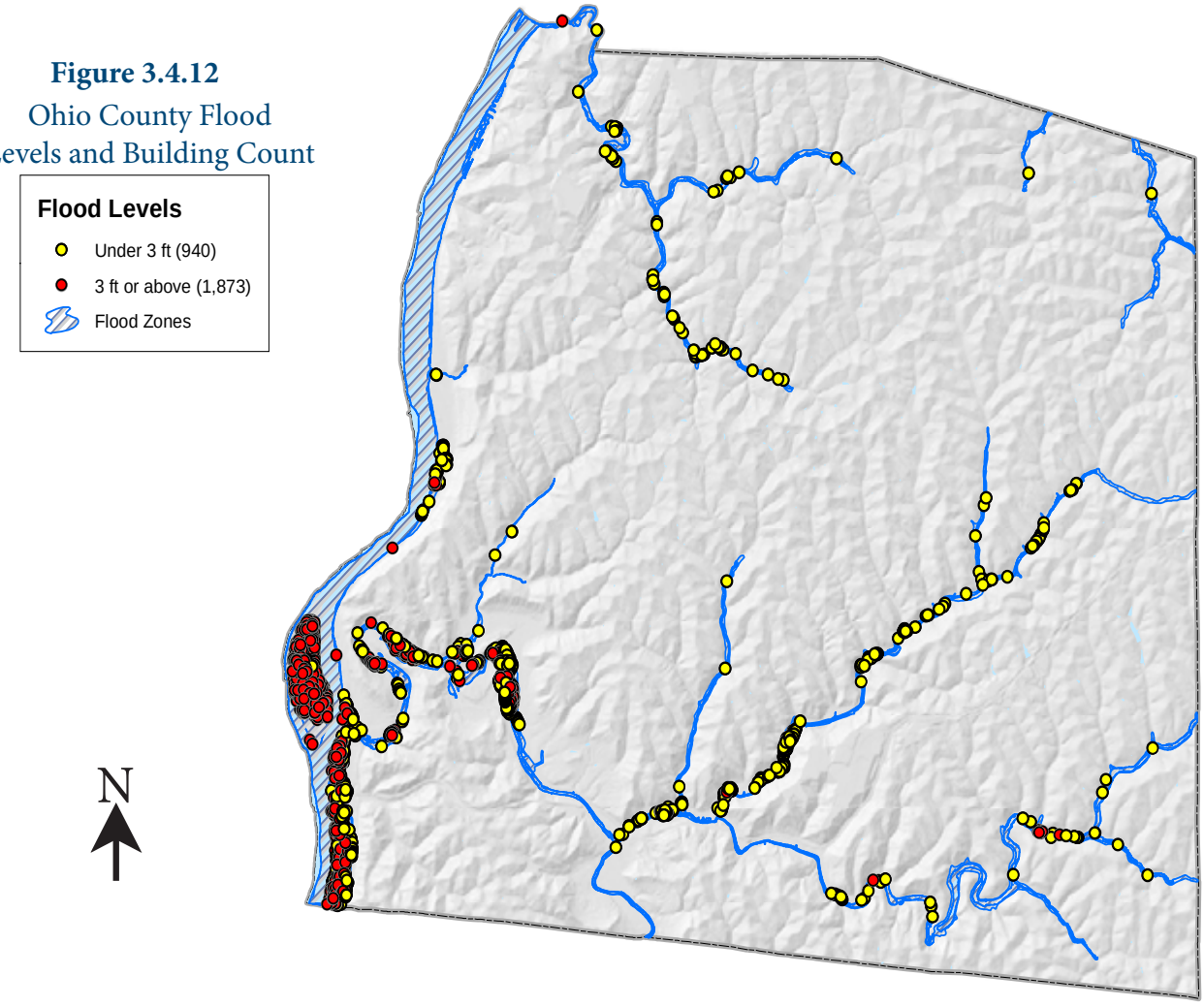
Figure 3.4.11

Marshall County Flood Levels and Building Count



Map created by Belomar Regional Council GIS Department

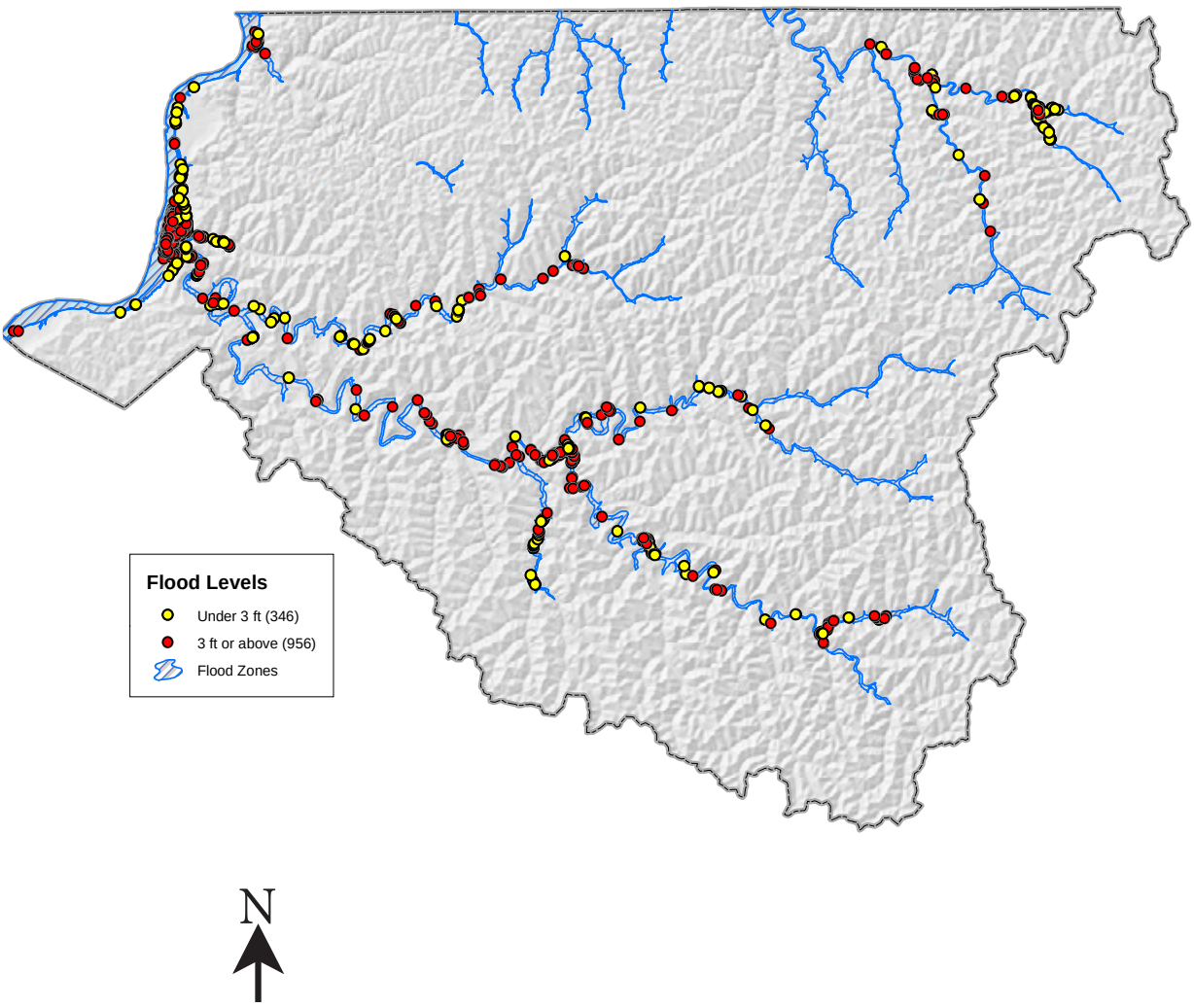
Figure 3.4.12
Ohio County Flood Levels and Building Count



Map created by Belomar Regional Council GIS Department

Figure 3.4.13

Wetzel County Flood
Levels and Building Count



Map created by Belomar Regional Council GIS Department

Loss Estimates

Losses from floods are unpredictable. They are a function of hazard severity and cascading effects. Damages will also vary from event to event. Table 3.4.3 shows the number of flooding events and the amount of property damage caused by these events from 1995 through 2021. The replacement values for all structures located in areas susceptible to flooding events are as follows: $232,709,214 for Marshall County, $387,961,660 for Ohio County and $214,932,249 for Wetzel County. If a Worse Case Scenario event were to occur in Region X, it would cost $853,603,123 to replace all structures located within the FEMA-designated flood zone. A table of replacement structure category and value for the three counties in Region X can be found in Appendix D.

Table 3.4.3

Flooding Events and Property Damage for Region X from 1995 to 2021

County	Number of Flooding Events	Amount of Property Damage
Marshall	63	$13,523,550
Ohio	42	$50,000,850
Wetzel	36	$23,017,000
Total	141	$86,541,400

Repetitive Flood Damage

The West Virginia 2018 Hazard Mitigation Plan (HMP) includes the following definition for Repetitive Loss (RL) properties:

- A property that is currently insured for which two or more NFIP losses (occurring more than ten days apart) or at least $1,000 each have paid within any 10-year period since 1978 is defined as a "repetitive loss property" in the NFIP program.

and for Severe Repetitive Loss (SRL) properties:

- Residential SRL properties are single-family structures consisting of one to four residences with flood insurance that have:
  1) incurred flood related damages on four or more separate occasions with the amount of each claim exceeding $5,000 and the cumulative amount of the total claims paid exceeding $20,000; or
  2) have a cumulative amount of the claims that exceeds the value of the property, when at least two separate claim payments have been made.
- At least two losses must have occurred within a 10-year time span; claims must be more than 10 days apart.

Table 3.4.4 shows the repetitive loss and severe repetitive loss properties for each county and the communities within those counties from 1980 to June 2022. Since 2013, former mitigation assistance programs, Flood Mitigation Assistance (FMA), Repetitive Flood Claims

and Severe Repetitive Loss (SRL) programs were merged into program, the Flood Mitigation Assistance Program.

Table 3.4.4

Repetitive Loss and Severe Repetitive Loss Properties
by County and Community (as of 6/6/2022)

						Type of Structure		
County	Community Name	Total Payments	Average Payment	Losses	Properties	Residential	Business	Other
Marshall County	Benwood	$757,495.37	$20,380.70	33	14	11	1	2
	Cameron	$63,967.51	$31,983.76	2	1	1	0	0
	Glen Dale	$140,034.22	$7,950.27	17	6	6	0	0
	McMechen	$80,070.76	$9,698.54	9	3	3	0	0
	Moundsville	$559,470.22	$20,570.21	30	12	9	0	3
	Marshall County	$527,850.64	$6,105.24	70	27	23	3	1
Ohio County	Triadelphia	$46,335.46	$4,988.61	9	4	4	0	0
	West Liberty	$13,521.33	$6,760.67	2	1	1	0	0
	Wheeling	$17,709,236.25	$13,758.34	1,339	512	463	7	42
	Ohio County	$176,189.36	$6,582.47	27	13	13	0	0
Wetzel County	Hundred	$26,783.89	$13,391.95	2	1	0	0	1
	New Martinsville	$1,631,319.17	$17,526.98	92	39	28	3	8
	Pine Grove	$105,597.72	$7,419.55	15	6	5	0	1
	Smithfield	$50,560.01	$16,853.34	3	1	0	0	1
	Wetzel County	$633,528.06	$13,679.65	44	17	16	1	0
Region X		$22,521,959.97	$12,353.14	1,694	657	583	15	59

Source: Department of Homeland Security Federal Emergency Management Agency: Repetitive Loss Data

National Flood Insurance Program (NFIP) Compliance

The FEMA website states "The NFIP provides flood insurance to property owners, renters and businesses, and having this coverage helps them recover faster when floodwaters recede. The NFIP works with communities required to adopt and enforce floodplain management regulations that help mitigate flooding effects." All communities in Region X are members of the National Flood Insurance Program. Table 3.4.5 shows the date which the community joined the program.

Each community has a designated "NFIP Coordinator", sometimes referred to as the "Floodplain Manager". This individual maintains the jurisdiction's floodplain ordinance and ensures that development is compliant with that ordinance (and, consequently, the NFIP). The operations of the floodplain offices throughout the planning area are similar from jurisdiction to jurisdiction. Generally, all provide three (3) basic services: floodplain identification, floodplain management, and outreach.

Table 3.4.5

Community Membership in the National Flood Insurance Program (NFIP) and Date Joined

County	Community	Program Join Date
Marshall County	Benwood	May 1980
	Cameron	September 2009
	Glen Dale	June 1974
	McMechen	September 2009
	Moundsville	March 1974
Ohio County	Bethlehem	July 2006
	Clearview	July 2006
	Triadelphia	January 1984
	Valley Grove	September 1979
	West Liberty	July 2006
	Wheeling	February 1981
Wetzel County	Hundred	April 1988
	New Martinsville	September 1982
	Paden City	March 1989
	Pine Grove	April 1988
	Smithfield	April 1988

Source: FEMA Website; https://www.fema.gov/cis/WV.html;
Date Accessed: 6/29/2022

The "NFIP Guide 7.7.20" assessment form was completed by all jurisdictions during the individual community meetings held with mayors (or other officials). These forms can be found in the Appendix. The majority of communities answered the questions on the assessment form in a similar fashion. Overall, however floodplain training for floodplain managers in Region X would be helpful, especially for the smaller, more rural communities.

Floodplain Identification

Throughout Region X, the floodplain managers are the primary local contact for floodplain mapping. In many cases, they are responsible for using these maps to determine whether structures or proposed structures/developments are either in or out of the floodplain. Floodplain managers work with surveyors and engineers to assist the public with elevation certificates. Floodplain managers may also serve as a liaison with the Federal Emergency Management Agency (FEMA) by collecting and submitting completed certificates.

Floodplain managers review updates to the flood maps themselves on an as-needed basis. All three counties currently use D-FIRM data. Most small jurisdictions do not have resources to house and maintain a Geographic Information System (GIS). Each county has its own GIS and county-wide resources for the use of GIS for spatial updates and mapping. Floodplain

coordinators work with their governing body to review and update the floodplain ordinances. The WV Flood Tool is another helpful resource that floodplain managers use to determine the location of the floodplain(s) in a community, so that they can make informed decisions regarding properties in or in proximity to the various floodplain designations.

Floodplain Management

All floodplain managers work closely with their governing bodies to ensure that the floodplain ordinance is current and viable. Floodplain managers are responsible for enforcing the floodplain ordinance. Floodplain managers also keep records of all maps and certificates for their jurisdictions.

The coordinators for the three counties also often provide support to municipal floodplain managers. Floodplain coordinators often support a peer group for advice and technical assistance. Many local jurisdictions throughout the region are small with part-time or volunteer staff. County coordinators also support efforts of small jurisdictions. The local jurisdictions, however, are responsible for providing "ultimate say" for cases within their jurisdiction, and are also responsible for the building permit process.

Outreach

The floodplain coordinators serve as the Points of Contact (POCs) for their jurisdiction's residents regarding floodplain questions and regulations. Coordinators also maintain the appropriate forms, contact lists for local surveyors and engineers, and Flood Insurance Rate Map (FIRM) or D-FIRM information. In addition, They also advocate the importance and value of having flood insurance.

3.5 Hailstorm

Hail is a form of solid precipitation. It consists of balls or irregular lumps of ice, each of which is called a hailstone. Unlike graupel, which is made of rime, and ice pellets, which are smaller and translucent, hailstones consist mostly of water ice and measure between 5 millimeters (0.2 in) and 15 centimeters (6 in) in diameter.

Regional Context

Table 3.5.1

Regional Context for Hailstorm

Period of Occurrence	At any time
Number of events from January 1995 to December 2021	58
Number of events since last plan update (2017)	9
Probability of Events	Probable
Warning Time	Minutes to hours
Potential Impacts	Large hail can damage property (facility) minimally, as well as crops
Causes of Injury or Death	Injury
Potential Facility Shutdown	Minimal

The entire region is vulnerable to hailstorms. Rarely the hailstorms have been larger than a marble. It is a minor hazard and is not associated with catastrophic damage.

Hazard Effects

The severity of hail events range based on size of hail, winds, and structures in the path of a hailstorm. Storms that produce high winds in addition to hail are most damaging and can result in numerous broken windows and damaged siding. Hailstorms can cause extensive property damage affecting both urban and rural landscapes. Fortunately, most hailstorms produce marble-size or smaller hailstones. These can cause damage to crops, but they normally do not damage buildings or automobiles. Larger hailstones can destroy crops, livestock and wildlife and can cause extensive damage to buildings, including roofs, windows and outside walls. Vehicles can be total losses. When hail breaks windows, water damage from accompanying rains can also be significant.

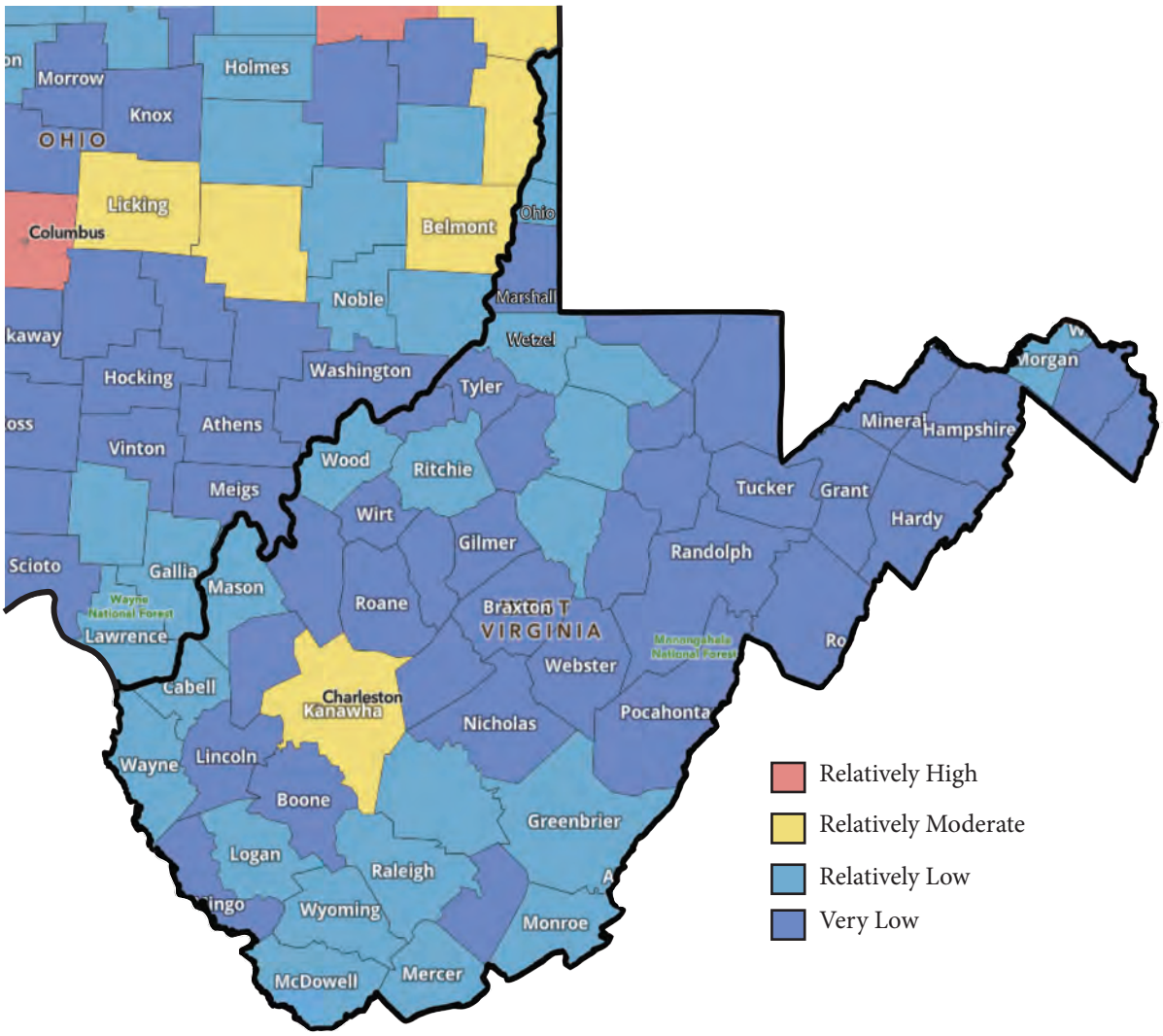
Hazard Profile

Although Figure 3.5.1 shows that the three counties in Region X have either a “relatively low” or “very low” risk for hailstorms, Region X is adjacent to several counties in Ohio that have

a "relatively moderate" risk for hailstorms. This is important because weather patterns and intensities can change quickly. Region X could become more susceptile to hailstorms in the near future. As shown in Figure 3.5.2, the entire region is susceptible to hailstorms.

Figure 3.5.1

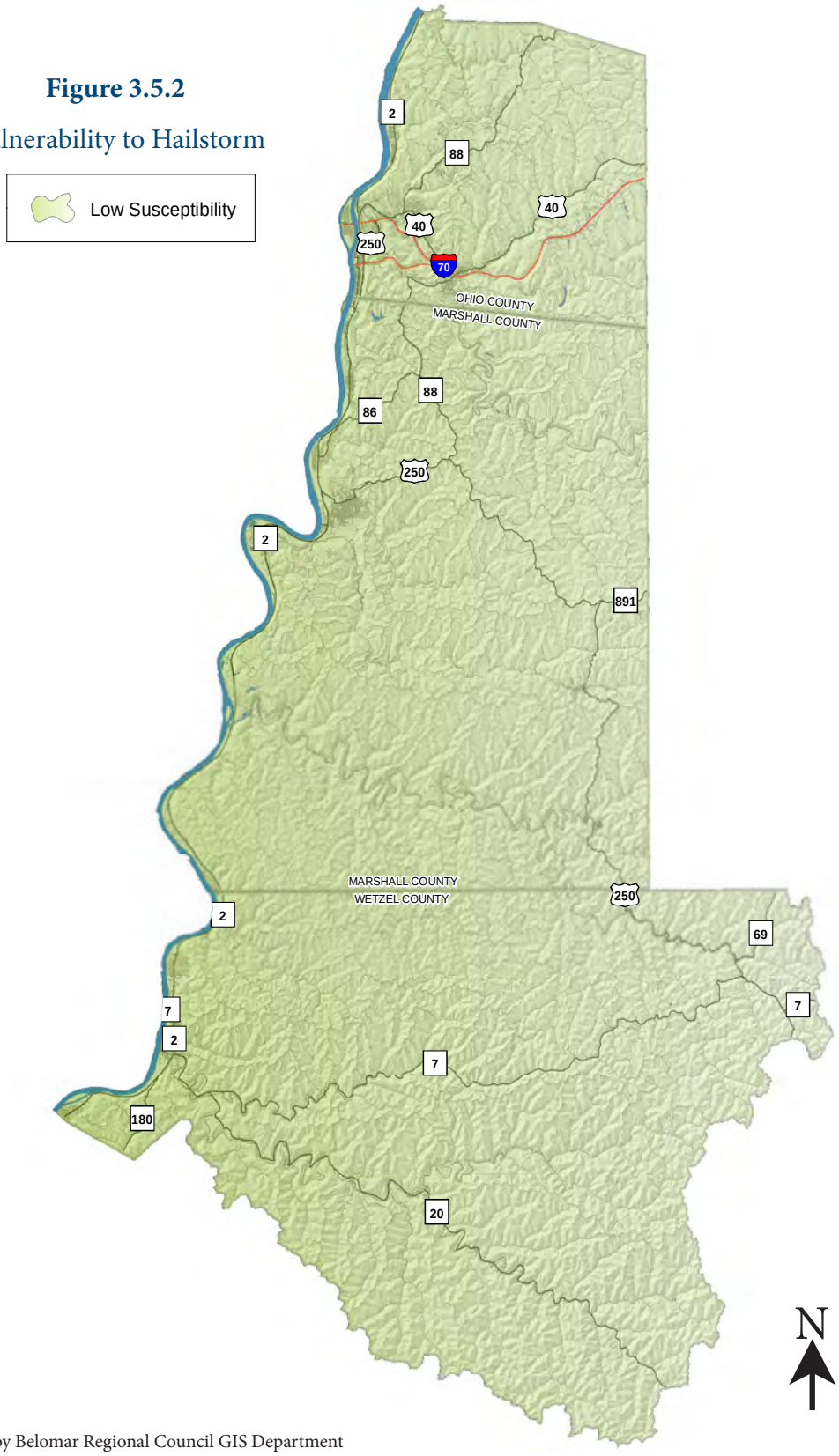
FEMA National Risk Index for Hailstorms for West Virginia and southeastern Ohio



Source: FEMA National Risk Index; https://hazards.fema.gov/nri/map; Date Accessed: May 18, 2022

Figure 3.5.2

Vulnerability to Hailstorm



Map created by Belomar Regional Council GIS Department

Vulnerable Structures

Since the entire region is vulnerable to hailstorm damage, all structures in Region X are included in Table 3.5.2.

Table 3.5.2

Structures Vulnerable to Hailstorms

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	876	69	106	147	15,741	316	17,255
Ohio	1,817	129	51	131	17,051	186	19,365
Wetzel	850	19	24	122	8,714	211	9,940
Total	3,543	217	181	400	41,506	713	46,560

Loss Estimates

As a result of this minor hazard, potential losses are small, even though all structures in the region can be at risk for hail damage. The average losses per worst-case scenario hail event could total $1,547,132,717. If all counties were damaged to the "worst-case scenario" level, losses could be as much as $4,641,398,150. However, hailstorms are infrequent and rarely affect all three counties at once.

3.6 Hazardous Materials (Hazmat) Incident

Hazardous materials are the chemicals/substances that have the potential to harm a person or the environment upon contact. Areas most prone to this hazard are in the vicinity of industries associated with production and processing of hazardous chemicals and the transportation networks, such as highways, railways and waterways, used for distribution and delivery.

Regional Context

Table 3.6.1

Regional Context for Hazardous Materials (Hazmat) Incident

Period of Occurrence	At any time
Number of events from January 1995 to December 2021	76
Number of Events since last plan update (2017)	14
Probability of Events	Remote
Warning Time	None
Potential Impacts	Potential loss of human life, economic loss, environmental damage.
Causes of Injury or Death	Injury and risk of multiple deaths
Potential Facility Shutdown	Days to weeks

The local area also faces vulnerability to hazardous materials incidents associated with hydraulic fracturing for the extraction of natural gas and liquid reserves; however, hazards associated with this sector will be discussed under the hazard category, "Oil and Gas Drilling/ Hazardous Incident".

Hazard Effects

Chemicals are found everywhere. They purify drinking water, increase crop production and simplify household chores, but chemicals also can be hazardous to humans or the environment, if used or released improperly. Hazards can occur during production, storage, transportation, use or disposal. Communities are at risk if chemicals are used unsafely or released in harmful amounts into the environment. Hazardous materials in various forms can cause death, serious injury, long-lasting health effects and damage to buildings, homes and other property. Many products containing hazardous chemicals are used and stored in homes routinely. These products are also shipped daily on the nation's highways, railroads, waterways and pipelines. Chemical manufacturers are one source of hazardous materials, but there are many others, including service stations, hospitals and hazardous materials waste sites. Transportation networks, such as roadways, waterways and pipelines are also at risk for hazardous material incidents.

Hazard Profile

Region X is home to several large chemical plants, as well as an extensive transportation network, including Interstate 70, several state routes, a railway, and the Ohio River. The chemical production, processing and storage facilities can have events where chemicals escape in the environment and affect surrounding developments. An incidence on a road, railway or river can also affect surrounding populations. The location of fixed assets and knowledge of associated chemicals can be used in determining the potential at risk population and assets. Multiple scenarios can be developed based on plume disbursement models. Based on the buffering concept in GIS, effects of spills can also be discerned. Plume dispersion and buffering can also be developed to identify at risk areas.

The three-county region has over 40 fixed facilities and several miles of roadway and pipeline. A hazardous material incidence can happen at any point location. The map of fixed facilities is not included in this plan, due to security concerns. A map showing a one-mile buffer around major highways in the region is included as Figure 3.6.1. The freight flow studies done within the region indicate that the flammable liquids are the most frequently transported material followed closely by flammable/non-flammable gases and corrosive materials. In addition to the multiple roadways, Region X is home to a CSX railroad. This railway begins in the City of Benwood and travels south through Marshall and Wetzel Counties, along the Ohio River. There is an additional track that branches from a point in New Martinsville and heads in a southeast direction through Wetzel County. A map showing a one-mile buffer around both segments of this railroad is included as Figure 3.6.2.

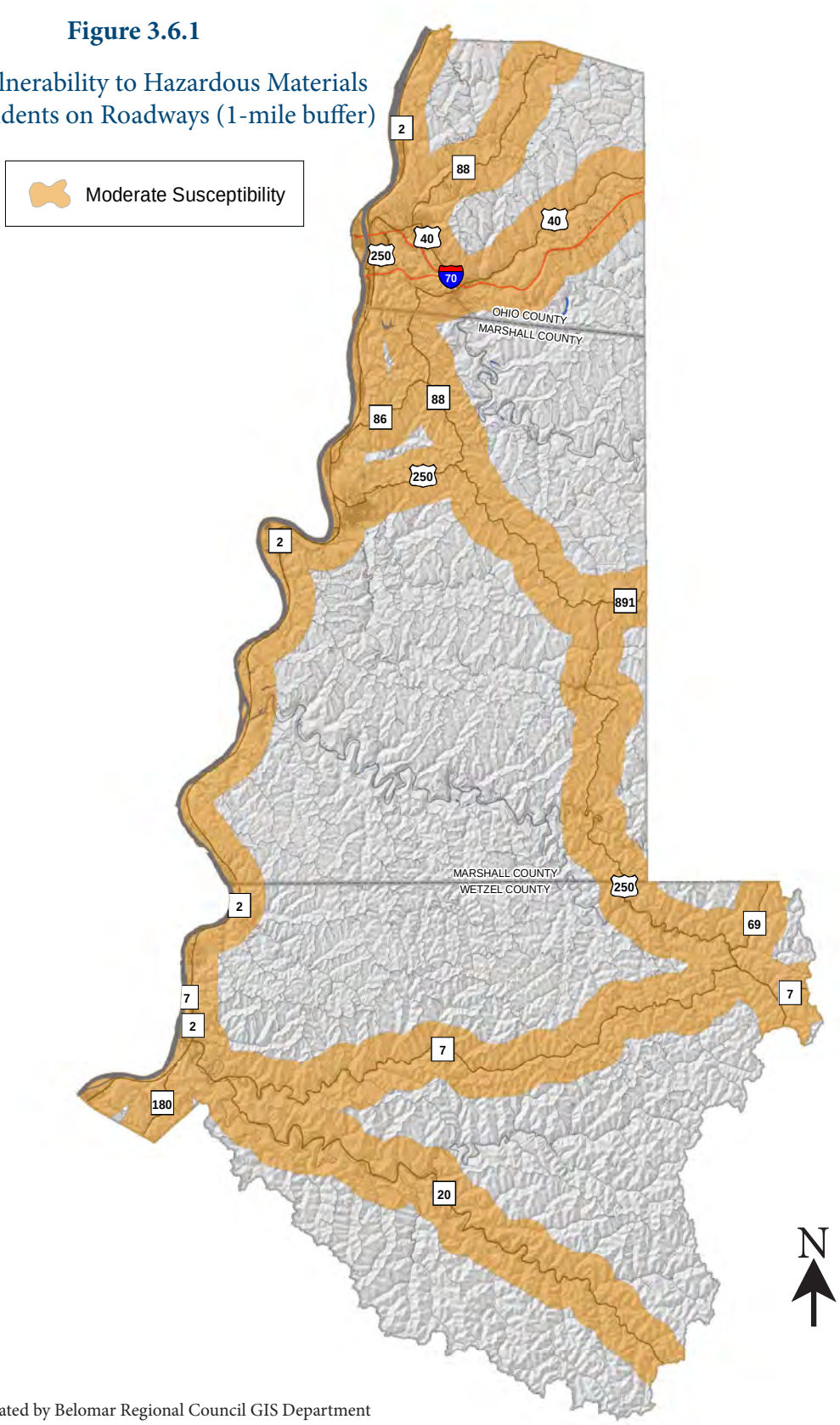
Barges carrying hazardous materials on the Ohio River can be another location where accidents can occur. Almost 11% of all freight on the Ohio River traversing through the region is hazardous. Pipeline transport of shale product is rapidly increasing. Extensive network of pipelines is being developed to move product from the well site to processing locations throughout the region and locations elsewhere in the country. The pipeline growth also increases the vulnerability to hazardous material incidence. The three county EMAs plan to colloaborate and complete a “commodity flow study” over the next couple of years to examine the type, quantity, volume and spatial distribution of hazardous materials traveling on highways, roadways, railways and on the Ohio River in Region X.

Vulnerable Structures

The number of structures that potentially can be affected by hazardous material (HAZMAT) incidence that could occur on roadways are shown in Table 3.6.2. These are structures within a one-mile buffer of selected roadways. Generally, most fixed properties (chemical plants) are also located along the river served by WV Route 2. These are also included in the roadway buffer of Figure 3.6.1. The number of structures that potentially could be affected by hazardous material (HAZMAT) incidence on railways are shown in Table 3.6.3. These are structures within a one-mile buffer of the CSX railways in Region X.

Figure 3.6.1

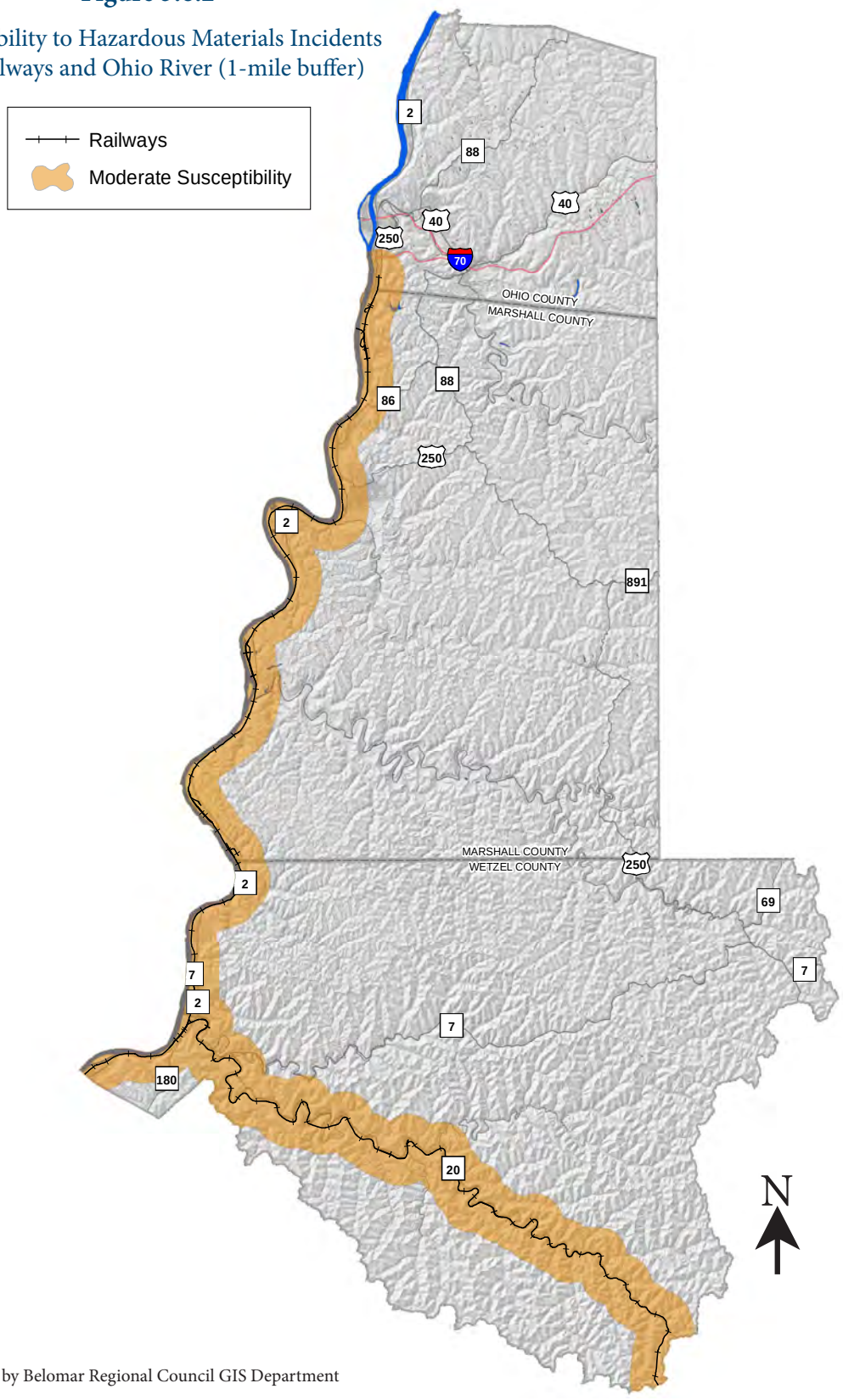
Vulnerability to Hazardous Materials Incidents on Roadways (1-mile buffer)



Map created by Belomar Regional Council GIS Department

Figure 3.6.2

Vulnerability to Hazardous Materials Incidents on Railways and Ohio River (1-mile buffer)



Map created by Belomar Regional Council GIS Department

Table 3.6.2

Structures Vulnerable to Roadway Hazardous Materials Incidents

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	785	65	69	93	11,573	191	12,776
Ohio	1,774	128	42	120	15,404	165	17,633
Wetzel	784	18	17	97	6,897	160	7,973
Total	3,343	211	128	310	33,874	516	38,382

Table 3.6.3

Structures Vulnerable to Railway Hazardous Materials Incidents

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	603	21	57	55	6,324	78	7,138
Ohio	191	4	7	13	1,264	17	1,496
Wetzel	679	14	16	77	5,536	125	6,447
Total	1,473	39	80	145	13,124	220	15,081

Loss Estimates

In general, due to the higher number of covered facilities, large network of pipelines and the presence of major thoroughfares, each county in Region X is said to have a moderate susceptibility to hazmat incidents. In an effort to assist jurisdictional understanding of risks and implementation strategies, the following estimates were prepared for each county using the roadway and railway buffer: Marshall County Roadway, $1,061,587,477 and Marshall County Railway, $652,027,700; Ohio County Roadway, $2,489,699,596 and Ohio County Railway, $89,474,850; Wetzel County Roadway, $566,025,381 and Wetzel County Railway, $499,739,744.

3.7 Landslide

Landslides are movement of rocks and soil down a slope. Rugged, steep slopes can be found in all three counties, which causes Region X to be susceptible to landslides. Landslides are more common where slopes have been disturbed, such as slope cuts for roadway facilities and/or cut and fill operations for land development.

The West Virginia Emergency Management Division (WVEMD) and Federal Emergency Management Agency (FEMA) facilitated a Landslide Risk Assessment Study for the State of West Virginia. The West Virginia GIS Technical Center (WVGISTC) conducted this study for each of the eleven regions in the State. Region X falls in the Central Allegheny Plateau, and based on the Light Detection and Ranging (LIDAR) data collected for this study, it suggests that landslide abundance is greater in the Central Allegheny Plateau than anywhere else in the State. LIDAR is a remote-sensing method that combined with other aerial data generates precise three-dimensional information about the shape of the earth and surface characteristics. From this data, Digital Elevation Models (DEMs) are generated that are used for generating slopes.

The landslide section in this plan borrows heavily from the WVGISTC study. As per this study, slides and slumps are the most common landslide in the three counties. They tend to develop with increase in soil moisture and pore pressure that is most problematic with prolonged wet periods during late winter and early spring. Numerous slips are observed affecting roadways during these seasons.

Regional Context

Table 3.7.1

Regional Context for Landslides

Period of Occurrence	Occurs mostly in late winter and early spring, due to heavy rains
Number of events	1,709 points identified by WVGIS TC Study
Probability of Events	Probable
Warning Time	Occurs quickly without warning; often in conjuction with storms and prolonged rain events.
Potential Impacts	Generally, occurs along roadways; causes traffic delays, detours and road closures. Heavy debris can affect homes.
Causes of Injury or Death	Injury
Potential Facility Shutdown	Days to weeks

Hazard Effects

Landslides occur due to movement of rocks and soil down a slope. Rocks, soil and debris impacts and covers roadways and ground where it lands. Landslides are spot events, that do not usually affect large expanses of land. Principle causes of landslides are slope cuts, cut and fill operations, hillside tree removal and extended periods of heavy rains.

Hazard Profile

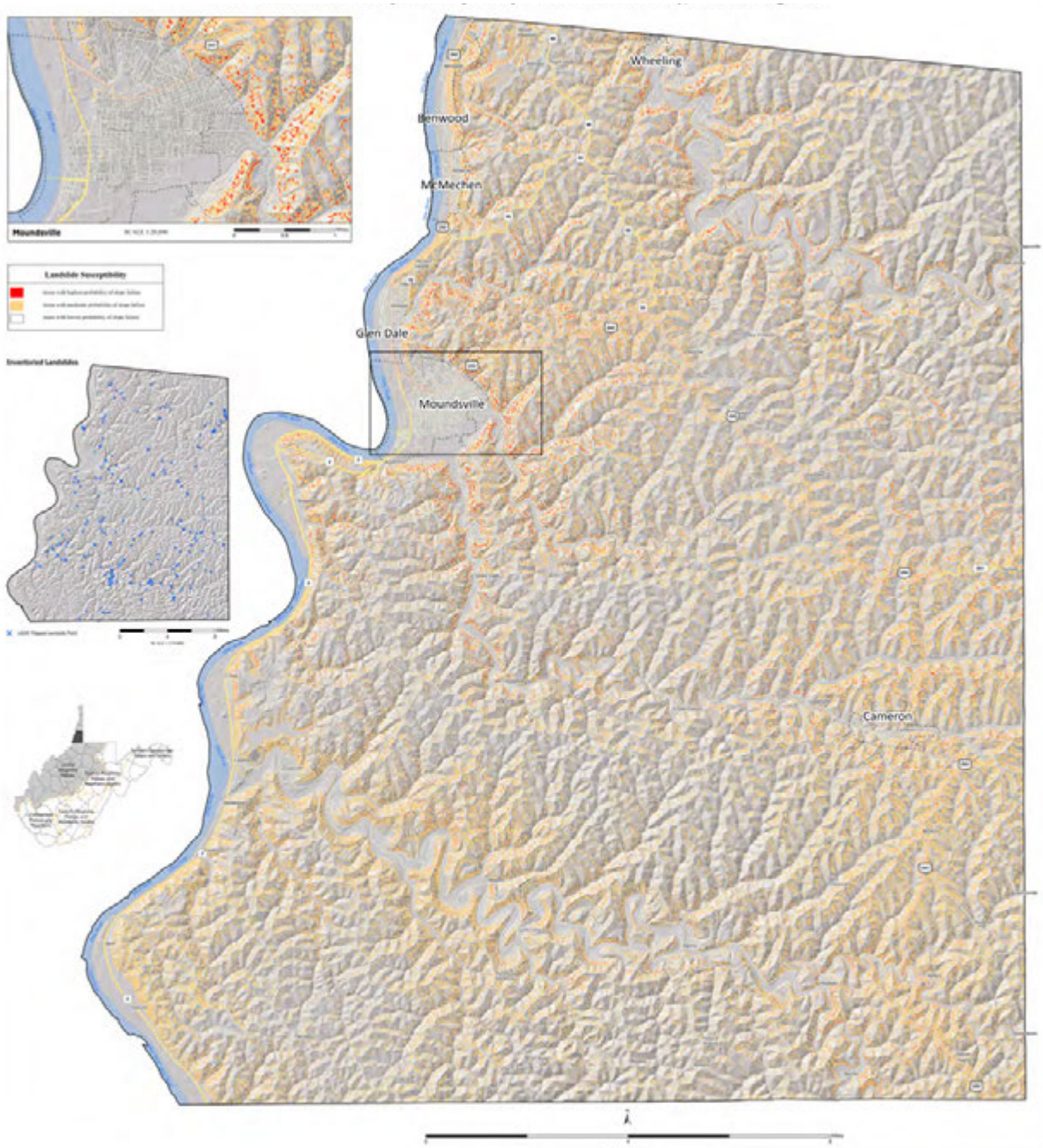
All three counties are in the Central Allegheny Plateau, as defined by the National Resources Conservation Service. Within the state, landslide occurrences are greater in the Central Allegheny Plateau. Several landslides affect local roads during the rainy season starting with late winter and early spring. These spot events rarely cause injury or death. The county-level data on landslides in generally not available. The WVGIS TC has identified 1,709 points from LIDAR and other data sources. Most of these points are based upon professional interpretation of available or generated data sets. The year the landslide occurred is unable to be determined through the type of data available.

The susceptibility risk cells for the county maps are generated from the raster processing of several stacked layers that include geology, soils, slopes, known landslide locations and additional characteristics. Using raster modeling, a landslide susceptibility grid is generated. The susceptibility of the three counties is shown in Figure 3.7.1 (Marshall County), Figure 3.7.2 (Ohio County) and Figure 3.7.3 (Wetzel County).

The following tables are from the WVGIS TC's West Virginia Landslide Risk Assessment: Region 10 - Ohio, Marshall and Wetzel Counties. The first two tables (Table 3.7.2 and Table 3.7.3) show roadway type and length susceptible to high and medium risk landslides in each county. The last two tables (Table 3.7.4 and Table 3.7.5) show the type of structure and their dollar value that are susceptible to high and medium risk landslides in each county.

Figure 3.7.1

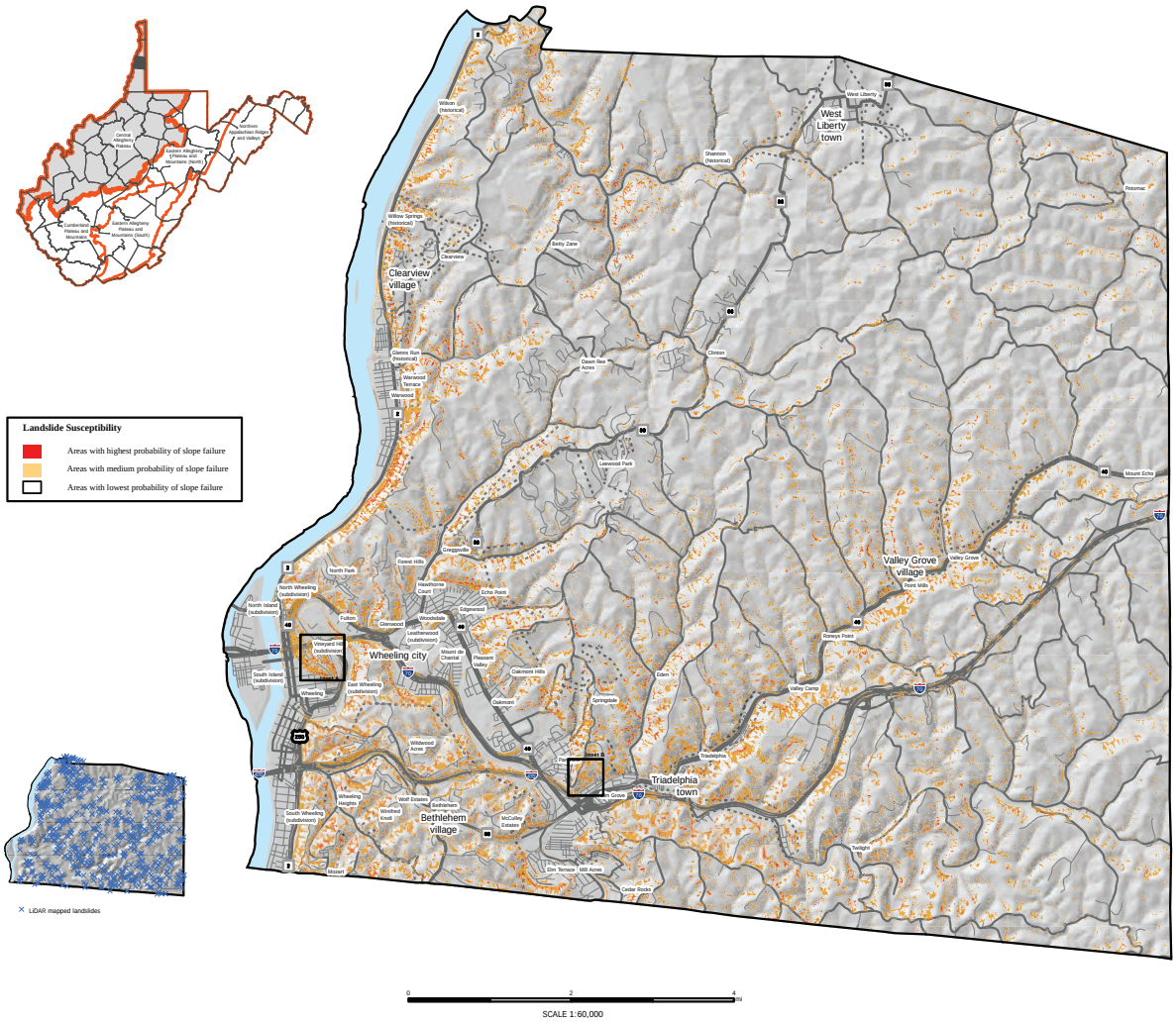
Landslide Susceptibility Map for Marshall County



Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Figure 3.7.2

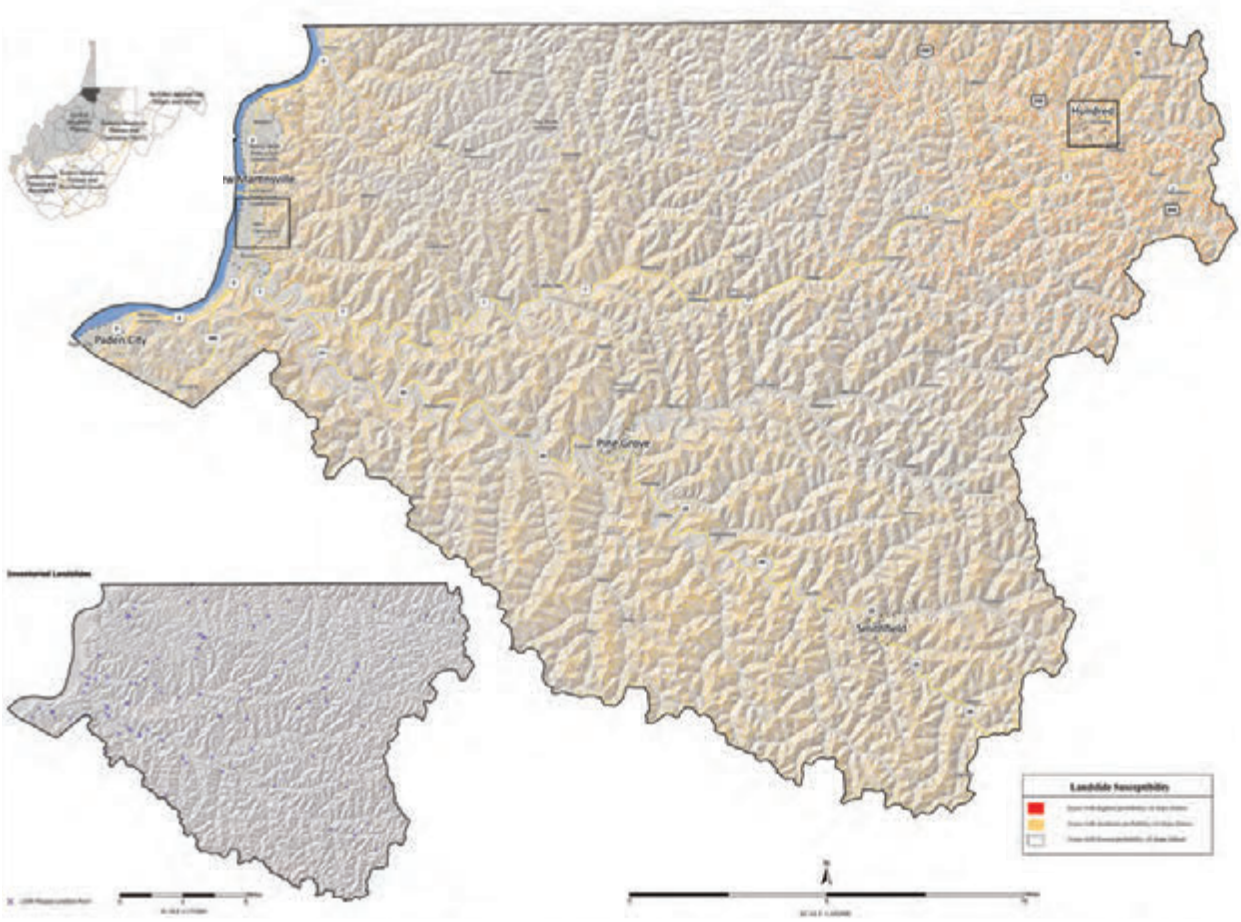
Landslide Susceptibility Map for Ohio County

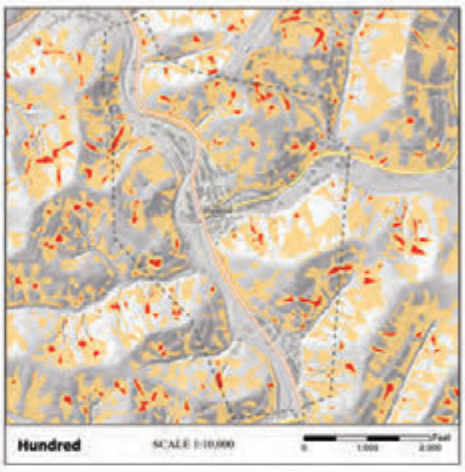


Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Figure 3.7.3

Landslide Susceptibility Map for Wetzel County







Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Vulnerable Roadways/Structures

The following tables are from the WVGIS TC's West Virginia Landslide Risk Assessment: Region 10 - Ohio, Marshall and Wetzel Counties. The first two tables (Table 3.7.2 and Table 3.7.3) show roadway type and length susceptible to high and medium risk landslides in each county. The last two tables (Table 3.7.4 and Table 3.7.5) show the type of structure and their dollar value that are susceptible to high and medium risk landslides in each county.

Table 3.7.2

Road length susceptible to High/Medium Risk of Landslide

Community Name	County	Roads Total (miles)	Roads Total (miles)-High/Medium Risk	Rank[1]
Benwood	MARSHALL	11.6	0.5	68
Cameron	MARSHALL	9.4	2.1	21
Glen Dale	MARSHALL	5.1	0.1	155
Marshall County*	MARSHALL	575.8	98	17
Mcmechen	MARSHALL	5.2	0	189
Moundsville	MARSHALL	12.4	0.1	155
Wheeling**	MARSHALL	1.1	0	2**
	MARSHALL	**620.6**	**100.8**	**18**
Bethlehem	OHIO	11.1	1.5	29
Clearview	OHIO	2.3	0.1	155
Ohio County*	OHIO	201.9	12	54
Triadelphia	OHIO	8.6	0.1	155
Valley Grove	OHIO	7.8	0.1	155
West Liberty	OHIO	4.6	0.2	127
Wheeling**	OHIO	90.8	8.4	2**
	OHIO	**327.1**	**22.4**	**50**
Hundred	WETZEL	3.1	0.5	68
New Martinsville	WETZEL	15.6	0.1	155
Paden City**	WETZEL	1.5	0.2	127**
Pine Grove	WETZEL	3	0.1	155
Smithfield	WETZEL	2.9	0.2	127
Wetzel County*	WETZEL	618.1	104	14
	WETZEL	**644.2**	**105.1**	**14**

2** & 127**: Parts of Wheeling and Paden City in each county represented separately, ranking is based on the sum of values in the city:

Paden City**	TYLER & WETZEL	2.8	0.2	127
Wheeling**	MARSHALL & OHIO	91.9	8.4	2

* Unincorporated

** Split Community

Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Table 3.7.3

Different road type and length susceptible to High/Medium Risk of Landslide

Community Name	County	Roads Total (miles)	Roads Total (miles)- High/Medium Risk	Interstate Roads High/Medium Risk	US Roads High/Medium Risk	State Roads High/Medium Risk	Other Roads
Benwood	MARSHALL	11.6	0.5	0	0.3	0	0.2
Cameron	MARSHALL	9.4	2.1	0	0.7	0	1.4
Glen Dale	MARSHALL	5.1	0.1	0	0	0	0.1
Marshall County*	MARSHALL	575.8	98	0	18.6	4.9	74.4
McMechen	MARSHALL	5.2	0	0	0	0	0
Moundsville	MARSHALL	12.4	0.1	0	0	0.1	0
Wheeling**	MARSHALL	1.1	0	0	0	0	0
	MARSHALL	**620.6**	**100.8**	**0**	**19.6**	**5**	**76.1**
Bethlehem	OHIO	11.1	1.5	0.1	0	0.4	1
Clearview	OHIO	2.3	0.1	0	0	0	0.1
Ohio County*	OHIO	201.9	12	0.8	0	0.4	10.8
Triadelphia	OHIO	8.6	0.1	0.1	0	0	0
Valley Grove	OHIO	7.8	0.1	0	0	0	0.1
West Liberty	OHIO	4.6	0.2	0	0	0.1	0
Wheeling**	OHIO	90.8	8.4	2.4	1.8	0.7	3.5
	OHIO	**327.1**	**22.4**	**3.4**	**1.8**	**1.6**	**15.5**
Hundred	WETZEL	3.1	0.5	0	0.5	0	0
New Martinsville	WETZEL	15.6	0.1	0	0	0.1	0.1
Paden City**	WETZEL	1.5	0.2	0	0	0	0.1
Pine Grove	WETZEL	3	0.1	0	0	0	0
Smithfield	WETZEL	2.9	0.2	0	0	0.1	0.1
Wetzel County*	WETZEL	618.1	104	0	6.3	12.4	85.4
	WETZEL	**644.2**	**105.1**	**0**	**6.8**	**12.6**	**85.7**

Paden City**	TYLER & WETZEL	2.8	0.2	0	0	0	0.1
Wheeling**	MARSHALL & OHIO	91.9	8.4	2.4	1.8	0.7	3.5

* Unincorporated

** Split Community

Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Table 3.7.4

Structures with High/Medium Risk Landslide Susceptibility

Community Name	County	Total Count	Total Value	Ranking(Count)[1]	Ranking(Value)[1]
Marshall County*	MARSHALL	391	$19,161,248	14	17
Benwood	MARSHALL	18	$590,900	66	68
Glen Dale	MARSHALL	1	$267,300	178	95
Mcmechen	MARSHALL	20	$368,750	57	87
Moundsville	MARSHALL	3	$102,200	151	139
Cameron	MARSHALL	88	$1,917,350	20	34
Wheeling**	MARSHALL	10	$448,600	3**	7**
	MARSHALL	**531**	**$22,856,348**	**13**	**17**
Ohio County*	OHIO	164	$60,015,778	43	4
Clearview	OHIO	5	$179,700	129	112
West Liberty	OHIO	18	$160,125	66	118
Triadelphia	OHIO	24	$185,900	53	110
Valley Grove	OHIO	6	$202,000	123	108
Wheeling**	OHIO	621	$26,901,977	3**	7**
Bethlehem	OHIO	49	$3,096,900	32	23
	OHIO	**887**	**$90,742,380**	**7**	**4**
Wetzel County*	WETZEL	190	$4,073,217	37	42
Paden City**	WETZEL	5	$146,000	129**	122**
New Martinsville	WETZEL	16	$889,195	73	51
Pine Grove	WETZEL	7	$168,050	118	115
Hundred	WETZEL	14	$315,500	78	92
Smithfield	WETZEL	0	$0	195	191
	WETZEL	**232**	**$5,591,962**	**41**	**44**

3**,7**,129**,122**: Parts of Wheeling and Paden City in each county represented separately, ranking is based on the sum of values in the city:

Paden City**	WETZEL & TYLER	5	$146,000	129	122
Wheeling**	MARSHALL & OHIO	631	$27,350,577	3	7

* Unincorporated

** Split Community

[1] Group Rank on Community Type: County, Unincorporated, Incorporated

Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Table 3.7.5

Types of Structures with High/Medium Risk Landslide Susceptibility

Community Name	County	RESIDENTIAL OCCUPANCY CLASS		COMMERCIAL OCCUPANCY CLASS		OTHER OCCUPANCY CLASS	
		High/Medium Susceptibility		High/Medium Susceptibility		High/Medium Susceptibility	
		Residential count	Residential-value	Commercial count	Commercial value	Other count	Other value***
Marshall County*	MARSHALL	271	$14,874,953	8	$498,062	112	$3,788,233
Benwood	MARSHALL	17	$578,200	0	$0	1	$12,700
Glen Dale	MARSHALL	1	$267,300	0	$0	0	$0
Mcmechen	MARSHALL	19	$368,750	0	$0	1	$0
Moundsville	MARSHALL	3	$102,200	0	$0	0	$0
Cameron	MARSHALL	79	$1,873,800	3	$30,850	6	$12,700
Wheeling**	MARSHALL	10	$448,600	0	$0	0	$0
	MARSHALL	**400**	**$18,513,803**	**11**	**$528,912**	**120**	**$3,813,633**
Ohio County*	OHIO	122	$13,400,847	24	$45,938,464	18	$676,467
Clearview	OHIO	5	$179,700	0	$0	0	$0
West Liberty	OHIO	18	$160,125	0	$0	0	$0
Triadelphia	OHIO	15	$185,900	0	$0	9	$0
Valley Grove	OHIO	5	$167,000	0	$0	1	$35,000
Wheeling**	OHIO	557	$26,152,790	12	$432,337	52	$316,850
Bethlehem	OHIO	38	$2,956,500	3	$140,400	8	$0
	OHIO	**760**	**$43,202,862**	**39**	**$46,511,201**	**88**	**$1,028,317**
Wetzel County*	WETZEL	86	$2,210,042	5	$29,267	99	$1,833,908
Paden City**	WETZEL	4	$146,000	0	$0	1	$0
New Martinsville	WETZEL	12	$773,729	0	$0	4	$115,467
Pine Grove	WETZEL	6	$166,950	0	$0	1	$1,100
Hundred	WETZEL	11	$315,500	1	$0	2	$0
Smithfield	WETZEL	0	$0	0	$0	0	$0
	WETZEL	**119**	**$3,612,220**	**6**	**$29,267**	**107**	**$1,950,475**
Paden City**	WETZEL & TYLER	4	$146,000	0	$0	1	$0
Wheeling**	MARSHALL & OHIO	567	$26,601,390	12	$432,337	52	$316,850

* Unincorporated

** Split Community

***Other occupancy class value is underreported as assessment value may be absent in assessment database.

Source: West Virginia GIS Technical Center; West Virginia Landslide Risk Assessment Region 10 - Ohio, Marshall & Wetzel Counties; https://data.wvgis.wvu.edu/pub/RA/State/CL/Landslide/Reports/Landslide_Risk_Assessment_Report_Region_10.pdf; Date Accessed: May 19, 2022

Loss Estimates

According to the WVGIS TC landslide study, Marshall County has 530 structures that are susceptible to landslides with a total replacement cost of $22,856,348. Ohio County has 887 structures that are susceptible to landslides with a total replacement cost of $90,742,380. Wetzel County 232 structures susceptible to landslides with a total replacement cost of $5,591,962.

3.8 Land Subsidence

Land subsidence is the gradual settling or sudden sinking of the Earth's surface owing to subsurface movement of earth materials. Rich in coal and natural gas deposits, Region X has seen extensive underground mining, since the 1800s and recently, hydraulic fracturing for natural gas, both which have disrupted the subsurface environment. Ohio and Marshall Counties have several active or abandoned coal mines, which increase the region's susceptibility to land subsidence.

Regional Context

Table 3.8.1

Regional Context for Land Subsidence

Period of Occurence	At any time: Chance of occurrence increases following long periods of heavy rain, snowmelt or near construction activity.
Number of events from January 1995 to December 2021	Data unavailable, although one incident has been confirmed.
Number of Events since last plan update (2017)	Data unavailable, although one incident has been confirmed.
Probability of Events	Improbable
Warning Time	Weeks to months: Some instances of land subsidence can occur quickly without warning, but often in the context of other storm events.
Potential Impacts	Economic losses such as decreased land values, agribusinesses losses, disruption of utility and transportation systems and costs of any litigation. May cause geological movement, causing infrastructure damages ranging from minimal to severe.
Causes of Injury or Death	Injury
Potential Facility Shutdown	Days to weeks

Hazard Effects

Land subsidence occurs when large amounts of groundwater have been withdrawn from certain types of rocks, such as fine-grained sediments. The rock compacts because the water is partly responsible for holding the ground up. When the water is withdrawn, the rock falls in on itself. Land subsidence may go unnoticed when it occurs over large areas rather than in a small spot. The principal causes are aquifer-system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost.

Hazard Profiles

All three counties lie on the geological formation containing evaporated rock, such as salt and gypsum and two of the three counties (Ohio and Marshall) have seen extensive mining, which can lead to additional subsidence. As a result, Region X is susceptible to land subsidence, but it should be noted that the type and severity of subsidence can vary.

Region X has not reported significant numbers of historical land subsidence events; however, beginning in 2019, substantial sections of Interstate 70 in Ohio County (near the West Virginia/Pennsylvannia State Line) have subsided due to longwall mining beneath the highway. This has caused signifcant damage to the roadway requiring costly repairs, traffic and traffic-related motor vehicle accidents. In addition to the highway damage, the West Virginia Visitor Center, located along Interstate 70, was also structurally impaired due to subsidence caused by longwall mining.

Vulnerable Structures

The structures located on active or abandoned mines are considered to be vulnerable and shown in Table 3.8.2. A map showing mines in the region is included as Figure 3.8.1.

Table 3.8.2

Structures Vulnerable to Land Subsidence

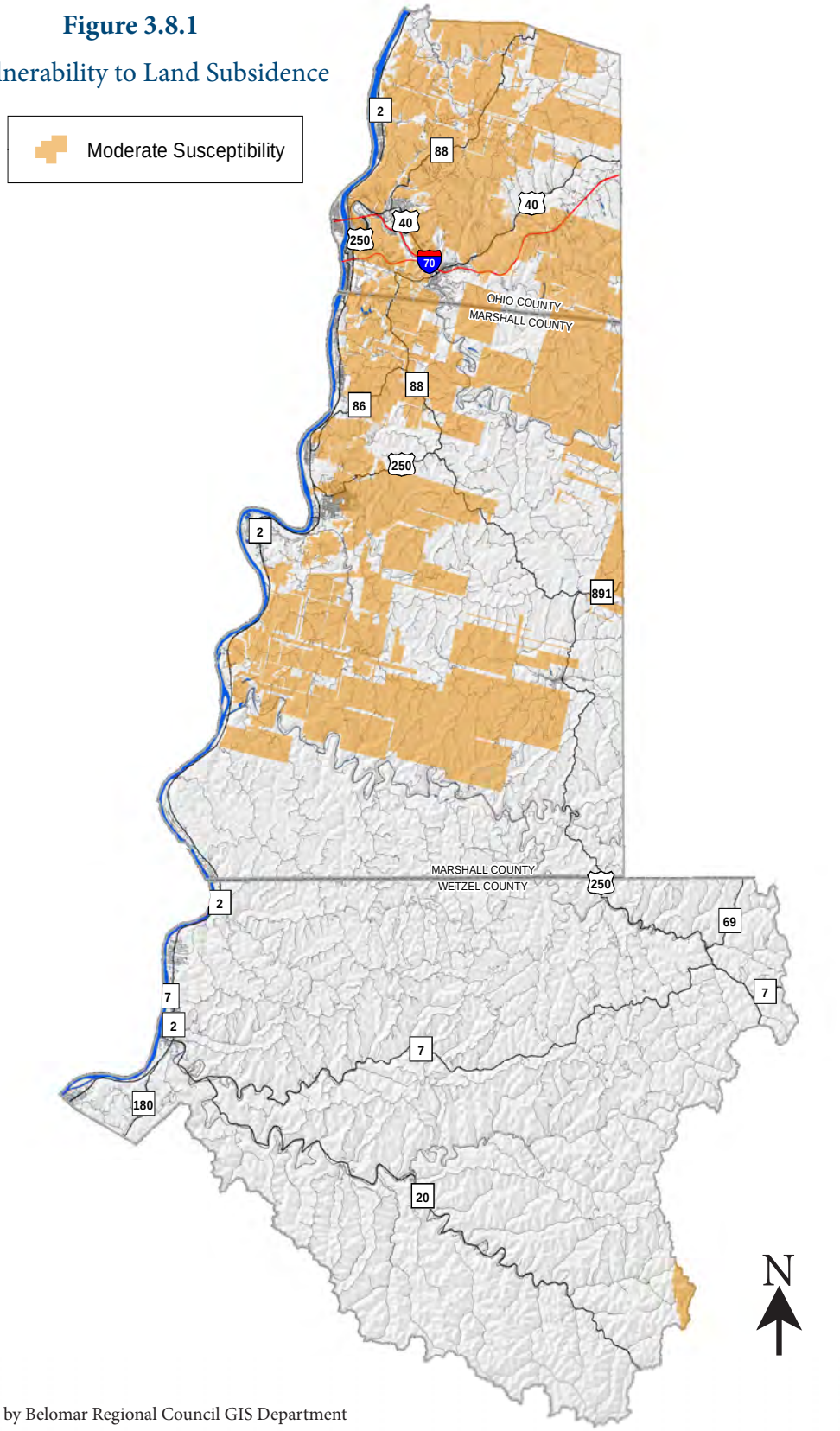
County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	178	13	26	33	6,644	94	6,988
Ohio	501	35	13	40	6,502	70	7,161
Wetzel	0	0	0	0	13	0	13
Total	679	48	39	73	13,159	164	14,162

Loss Estimates

Land subsidence can be a gradually occurring hazard or it can occur rapidly. In either case, repairing damages, as a result of subsidence can be costly. Structural foundations, roadways and utilities can be severely damaged. A "worst-case scenario" event for each county would result in the following amount of damages: $560,834,386 for Marshall County; $1,195,307,831 for Ohio County and $229,700 for Wetzel County.

Figure 3.8.1

Vulnerability to Land Subsidence



Map created by Belomar Regional Council GIS Department

3.9 Oil and Gas Drilling/Hazardous Incident

The Oil and Gas Industry sector has seen a significant increase in production over the last 20 years in Region X, due to the abundance of shale deposits (Marcellus and Utica) and the method of hydraulic fracturing. Hydraulic fracturing, also known as "fracking" is a technique in which a liquid is injected under high pressure into a well, which creates tiny fissures in the rock deep beneath the surface of the earth. This allows gas and oil to flow into the well. Although the oil and gas industry has been a beneficial economic activity for Region X, it is not without its risks, including well fires, chemical spills, earthquakes and ground water contamination.

Regional Context

Table 3.9.1

Oil and Gas Drilling/Hazardous Incident

Period of Occurrence	Fracking
Number of events from January 1995 to December 2021	Unknown
Number of Events since last plan update (2017)	Unknown
Probability of Events	Remote
Warning Time	Minimal to none
Potential Impacts	Well fires; air pollution; health hazards; water contamination; spot low-intensity earthquakes
Causes of Injury or Death	Injury
Potential Facility Shutdown	A well fire can take more than a week to burn out.

Hazard Effects

Region X has numerous active natural gas wells and many more permitted wells, yet to be drilled. Several well fires have occurred and they can burn for several days, which results in air pollution and other environmental hazards. Natural gas wells that use the "fracking" method also require "fracking ponds". These ponds are a type of retention pond that stores massive amounts of water and other fluids that are necessary in the fracking process. Although these ponds are lined with a thick plastic to prevent spills, the plastic barrier does not always prevent this hazard.

Additionally Region X has one injection well in southern Marshall County. Injection wells are used to dispose of byproducts produced during fracking. Although no detectable earthquakes have occurred in Region X due to the injection well, earthquakes have increased in the State of Oklahoma for this reason. Extensive pipeline infrastructure has also been constructed in Region X, especially in southern Marshall County. Pipelines and the truck transport of natural gas and chemicals required for the industry increase the vulnerability of Region X to chemical spills. Truck traffic from the natural gas industry is a great concern to residents of Region X, as these trucks are bulky, often crossing over the double line, as they are too wide for the lane. The region's

rural roadways have seen significant damage because they were not designed to carry truck traffic of this weight.

Region X is also home to three large coal slurry impoundments (one in Ohio County and two in Marshall County). These impoundments (see Figure 3.9.1) consist of solid and liquid wastes that are a byproduct of the coal mining and preparation process. There have been no hazardous incidents associated with these impoundments; however, they do contain a number of chemicals, which would be devastating to the environment if the impoundment collapsed, or if chemicals infiltrated into the water table.

Hazard Profile

All counties in the region have active wells and permitted wells. Each well produces brine water as the byproduct of this natural gas and oil extraction activity. Fracking regulations prevent this activity in and around the high density residential areas. The environment in the immediate vicinity of the well site is affected during the drilling phase and in case of a mishap, such as well fire. The injection well area of influence, in case of an earthquake, will be much larger. A map showing the location of active and permitted wells with two-mile radius around each well is included as Figure 3.9.1. The population within the two-mile radius is more vulnerable to environmental hazards, due to this activity. The two-mile radius is used to identify structures and population in the immediate vicinity of each well. The two-mile radius is used because generally, the horizontal fracking process occurs with two-mile radius of the well core.

Since 2010, the Marshall County EMA reports that there have been several well pad fires, which can take up to eight days to extinguish and several pipeline ruptures in Marshall County. The Wetzel County EMA stated that there are plans to build three new compressor stations within Wetzel County. As the natural gas industry continues to grow, so does the vulnerability to hazards associated with oil and gas extraction and transportation.

Figure 3.9.1

Coal Slurry Impoundment located in Ohio County



Source: Goolgle Maps Image: Date Accessed: 7/5/2022

The coal slurry impoundments and fracking wastewater ponds impound large quantities of water and are not strictly regulated. In addition, many of these facilities are earthen structures, subject to erosion and a number of other natural phenomena. Fortunately, each of the three emergency management agencies in Region X work diligently with the mine and natural gas companies to strengthen preparedness.

Belomar staff has mapped fracking wastewater ponds and coal slurry impoundment locations throughout Region X. An example of these maps can be found in the Appendix E and contain the following information: operator, landowner, municipal boundaries and major roadways. Belomar staff, periodically will use Google Earth to update the database with new fracking pond locations. As per the webpage article, "Chemicals in Natural Gas Operations" on the Southern Illinoisians Against Fracturing our Environment website, "Many of the chemicals found in drilling and evaporation pits are considered hazardous wastes by the Superfund Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Upon closure, every pit has the potential to become a superfund site." These impoundments are regulated by the West Virginia Department of Environmental Protection (WVDEP). Failure of these impoundments can cause significant damage in the vicinity of the impoundment.

Vulnerable Structures/Populations

The vulnerable structures and population in the immediate vicinity of each well is shown in Table 3.9.2.

Table 3.9.2

Structures and Population in the Vicinity of Wells

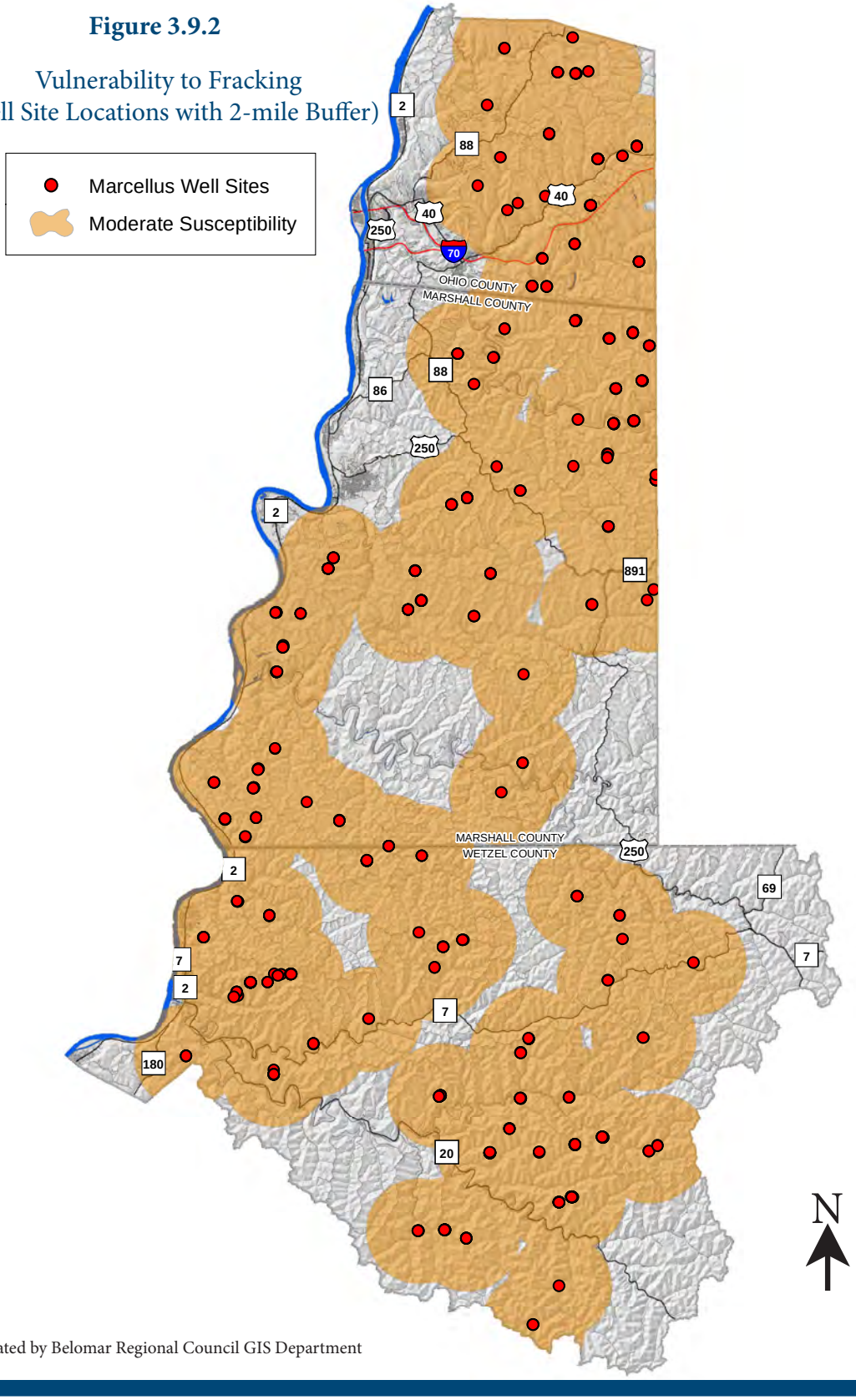
County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total	Number of Persons	
								In Hazard	Percentage in Hazard
Marshall	194	10	64	67	5,817	170	6,322	30,591	13,651
Ohio	568	56	17	35	5,219	70	5,219	42,425	15,125
Wetzel	539	10	18	67	5,596	122	6,352	14,442	10,286
Total	1,301	76	99	169	16,632	362	17,893	87,458	39,062

Loss Estimates

The loss due to this hazard is environmental. It affects the health and well-being of people living near the wells. It is not known to directly cause loss of life or property damage. In Region X, more than 40,000 residents are at risk due to a well mishap. As the Oil and Gas Industry grows, many more will be susceptible to well fires and chemical spills.

Figure 3.9.2

Vulnerability to Fracking
(Well Site Locations with 2-mile Buffer)



Map created by Belomar Regional Council GIS Department

3.10 Pandemic

A pandemic is a disease that occurs over a large geographical area and frequently spreads world-wide. Often beginning as an epidemic in one location, it spreads rather quickly to other localities, especially in modern times due to globalization and the efficiency of contemporary travel. Pandemic diseases also propagate rapidly, because they often are caused by novel viruses or bacteria, for which humans have little or no pre-existing immunity.

Although this hazard profile is new to the Marshall-Ohio-Wetzel County Hazard Mitigation Plan, pandemics have occurred since ancient times and have occurred in Region X previously, with the Spanish Flu occurring approximately 100 years ago. For the past three years, the region has experienced the devastating effects of the COVID-19 pandemic, which has affected nearly every region in the world. The World Health Organization states, as of Spring 2022, 6.1 million deaths and 480 million confirmed cases have been documented globally (https://covid19.who.int/).

Despite Marshall, Ohio and Wetzel Counties being relatively rural and far from large population centers, the region was significantly impacted by the COVID-19 pandemic, suffering from a fairly high number of cases and deaths, strain on the local health care systems, and school closures. In addition, the required shutdown of businesses and services has had a long-lasting economic impact, especially to lower income residents. Unlike the other natural and man-made hazard events that affect Region X more frequently, the pandemic was a novel event for elected officials and medical staff; therefore, they had no previous personal experience on how to manage the disaster.

When the next global pandemic will occur is difficult to predict, but scientists believe global pandemics will occur more frequently in the future due to the following: 1) rapid urbanization, 2) increased global trade and travel and 3) deforestation and human expansion into the rural fringe. According to Dr. Carl-Johan Neiderud (2015), "urbanization leads to many challenges for global health and the epidemiology of infectious diseases. New mega-cities can be incubators for new epidemics, and zoonotic diseases can spread in a more rapid manner and become worldwide threats". He also states in his article, "How urbanization affects the epidemiology of emerging infectious diseases" that "rapid urbanization has also interfered in previously untouched ecosystems. These new settlements create new and closer encounters with wildlife, which can be a potential source of zoonotic diseases."

Regional Context

Table 3.10.1

Regional Context for Pandemic

Period of Occurrence	At any time
Number of events from January 1995 to December 2021	1
Number of events since last plan update (2017)	1
Probability of Events	Improbable: Global pandemics tend to occur once every 100 years
Warning Time	Weeks to months
Potential Impacts	Sickness, hospitalization, death. Closure of schools, businesses and other facilities, which can have long lasting economic impacts. Strain on healthcare system and healthcare employees.
Causes of Injury or Death	Hospitalizations and death
Potential Facility Shutdown	Weeks to months

Hazard Effects

Pandemics have a wide range of hazard effects, depending on how easily the disease is transmitted and the severity of symptoms. As seen with the COVID-19 pandemic, the severity of symptoms varied greatly among individuals. The majority of infected persons had little to no symptoms, while others experienced severe respiratory symptoms, which required hospitalization, the use of ventilators to breathe and occasionally resulted in death. Pandemics, like COVID-19 can have long-term effects on individuals as well, meaning they still suffer symptoms long after the infection has cleared, as is the case with "long-haul" COVID. This puts additional strain on the healthcare system and the economy if a significant portion of the working population either cannot work or misses more days than usual from work due to long-term health complications caused by pandemics.

Hazard effects from pandemics not only cause health concerns, but economic and educational concerns, as well. During pandemics, it is sometimes necessary to close schools, facilities and businesses to stop the spread of the disease. The Governor of West Virginia issued a State of Emergency on March 16, 2020 that required the following types of businesses to close or have limited occupancy: casinos, restaurants, bars, fitness centers, gymnasiums, recreation centers, barber shops, nail salons, hair salons and state park lodges. All West Virginia schools (kindergarten through 12th grade) were also closed in March 2020 and utilized remote learning. Mask mandates were also in place for public places.

The closure of businesses impacted the local economy and disrupted the supply chain. The closure of schools had long-lasting educational impacts for many students, especially those who

who did not have high-speed internet at home to access their online classrooms. Food security became another issue, especially for lower income populations, who worked at businesses that were required to close and may not have received a paycheck for an extended period of time.

Hazard Profile

The State of West Virginia was the last state in the nation to report its first positive case of COVID-19, which happened on March 17, 2020. The first COVID-19 related death in West Virginia was reported on March 29, 2020. Table 3.10.2 and Table 3.10.3 summarize the number of COVID-19 cases and vaccination rates for each county in Region X.

Table 3.10.2

COVID-19 Statistics for Region X as of May 23, 2022

County	Confirmed Cases	Probable Cases	Confirmatory Lab Test	Deaths
Marshall	6,777	2,411	97,400	155
Ohio	8,895	2,615	160,626	169
Wetzel	2,519	1,878	41,898	86
Total	18,191	6,904	299,924	410

Table 3.10.3

COVID-19 Vaccine Rate Statistics for Region X as of May 23, 2022

County	Vaccine - One Dose (Age 5 and over)	Percentage of eligible Population (Age 5 and over) with One Dose	Percentage of eligible Population (Age 18 and over) with One Dose	Vaccine - Two Doses (Age 5 and over)	Percentage of eligible Population (Age 5 and over) with Two Doses	Percentage of eligible Population (Age 18 and over) with Two Doses	Vaccine - Two Doses + One Booster (Age 12 and over)	Percentage of eligible Population with Vaccine - Two Doses + One Booster (Age 12 and over)
Marshall	15,092	51.9%	57.6%	13,493	46.4%	51.5%	7,433	25.6%
Ohio	28,197	71.7%	77.2%	25,137	63.9%	68.7%	14,479	36.8%
Wetzel	8,666	60.6%	67.1%	7,769	54.4%	60.3%	4,385	30.7%
Total	51,955	59.7%	55.4%	46,399	53.3%	49.4%	26,297	30.2%

Since the COVID-19 pandemic was a novel event for elected officials, medical staff and for many if not all residents, it presented many challenges for Region X. These challenges must be examined and rectified before the next pandemic occurs to prevent severe illness, hospitalizations, death and economic distress. During a steering committee meeting, health department officials, emergency management directors and local leaders reported the following concerns:

- a disconnect between the State and County on how to handle a pandemic. Counties in Region X had pandemic plans, but were unable to implement them.
- one vaccine site per county was not enough.
- difficulties with vaccine registration system.
- lack of communication between hospitals and county health departments.
- lack of communication between state health department and county health departments.
- hospitals were over capacity.
- hospitals each have their own registration systems, so there was a lack of communication between hospitals to check bed availability.
- county health departments could not easily check bed availability at local hospitals.
- inadequate radio communication between EMS/Police Department/Fire Department.
- information was unable to be distributed to all residents, especially the elderly in county due to lack of broadband and cell service in certain areas.
- children fell behind when school went remote, due to lack of broadband or slow internet speeds.
- medical staff, health department officials, elected officials, volunteers and teachers experienced "burnout", due to working long hours with no days off for an extended period of time.
- low vaccination rates, especially in Wetzel County and among children.
- poor communication with neighboring states (States of Ohio and Pennsylvania); information not freely shared.
- when First Responders delivered patients to hospitals, they were required to stay with the patient until patient was able to get a bed; First Responders unable to go on other calls because they had to remain with the patient.

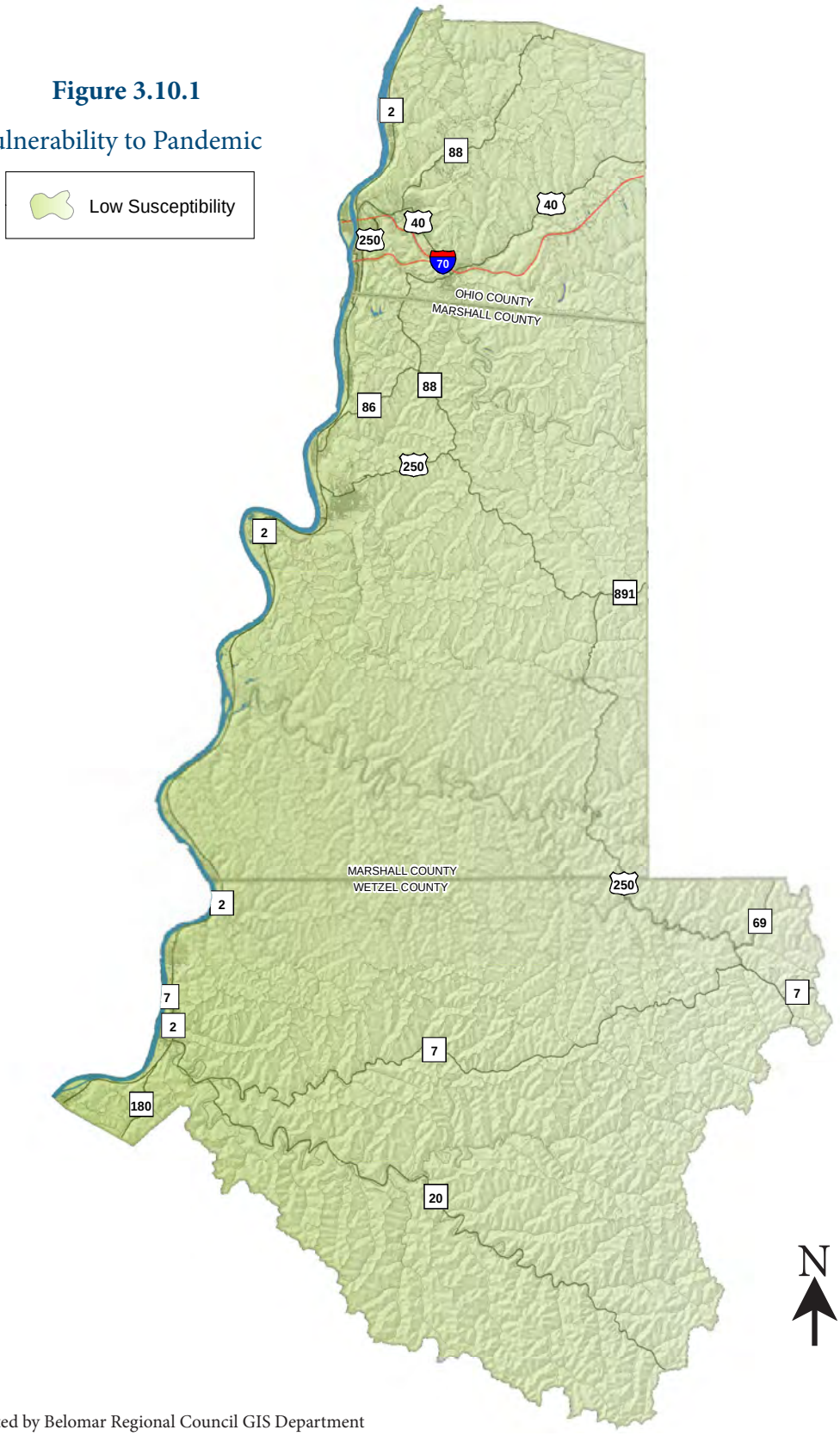
Emergency Management Agency Directors and County officials expressed that there was an excellent turnout from volunteers in their communities. The robust volunteer network played a crucial role in COVID-19 testing and vaccine administration. Continued support from volunteers will be necessary for future pandemics. Better communication between the State of West Virginia Health Department and county-level health departments is essential for any future pandemics.

Loss Estimates

Loss estimates for this type of hazard are not calculated in structures, but in lives lost and businesses closed. As of May 23, 2022, there have been 410 deaths from the COVID-19 pandemic in Region X. In addition, numerous businesses have closed, which has led to job loss and economic hardship for many residents of Region X. As Figure 3.10.1 demostrates, the entire Region is susceptible to pandemics, although urban areas will be more susceptible because of a higher population density, especially with respiratory transmitted diseases.

Figure 3.10.1

Vulnerability to Pandemic



Map created by Belomar Regional Council GIS Department

3.11 Terrorism

Terrorism can be generally defined for the purpose of this plan as acts of violence or use of force against people and property for intimidation and achieving political gains. Following is the description of terrorism in the U.S. Code:

> 18 U.S.C. § 2331 defines "international terrorism" and "domestic terrorism" for purposes of Chapter 113B of the U.S. Code, entitled "Terrorism." International terrorism occurs primarily outside the territorial jurisdiction of the U.S., or transcend national boundaries in terms of the means by which they are accomplished. International terrorism is beyond the scope to this plan and is not addressed here.

"Domestic terrorism" means activities with the following three characteristics:

- Involve acts dangerous to human life that violate federal or state law;
- Intend to: 1) intimidate or coerce a civilian population; 2) influence the policy of a government by intimidation or coercion; or 3) affect the conduct of a government by mass destruction, assassination or kidnapping;
- Occur primarily within the territorial jurisdiction of the U.S.

Acts of terrorism include public mass shooting, hijacking, kidnapping, bombings, use of chemical, biological or radioactive weapons and cyber attacks. Previously only governmental assets, high profile facilities and events were considered to be potential terrorist targets. However, recent incidents have shown kindergartens, shopping center, cinemas, religious buildings, bars, cafes all have been the targets. In light of these incidents it is almost impossible to isolate potential areas or structures that may be vulnerable to terrorism.

Hazard Effects

Table 3.11.1

Regional Context for Terrorism

Period of Occurrence	At any time
Number of events from January 1995 to December 2021	0
Number of Events since last plan update (2017)	0
Probability of Events	Infrequent
Warning Time	Minimal: Depends on the presence of a threat
Potential Impacts	Potential loss of human life, economic loss, environmental damage, disruption of lifeline facilities
Causes of Injury or Death	Injury and risk of multiple deaths
Potential Facility Shutdown	Days to weeks or more

Hazard Effects

Terrorism is a random act of violence that can happen at any place at any time. It causes loss of life and property and has a long, lasting impact on people and communities. Its purpose is to intimidate to achieve political gains or advance a cause. The impact of a terrorist act is felt far beyond the location, where it occurs. It draws national and international sympathy and attention.

Hazard Profile

All three counties are vulnerable to this hazard. Even though it is hard to predict where an act of terrorism may occur, it is reasonable to assume areas where people congregate frequently and densely developed areas are more vulnerable than rural, sparsely-populated areas. Also, all high-profile structures and infrastructure, such as transportation and utilities, may also be more vulnerable. A terrorist act affects a community's sense of security and erodes confidence in the ability of government to protect its citizens.

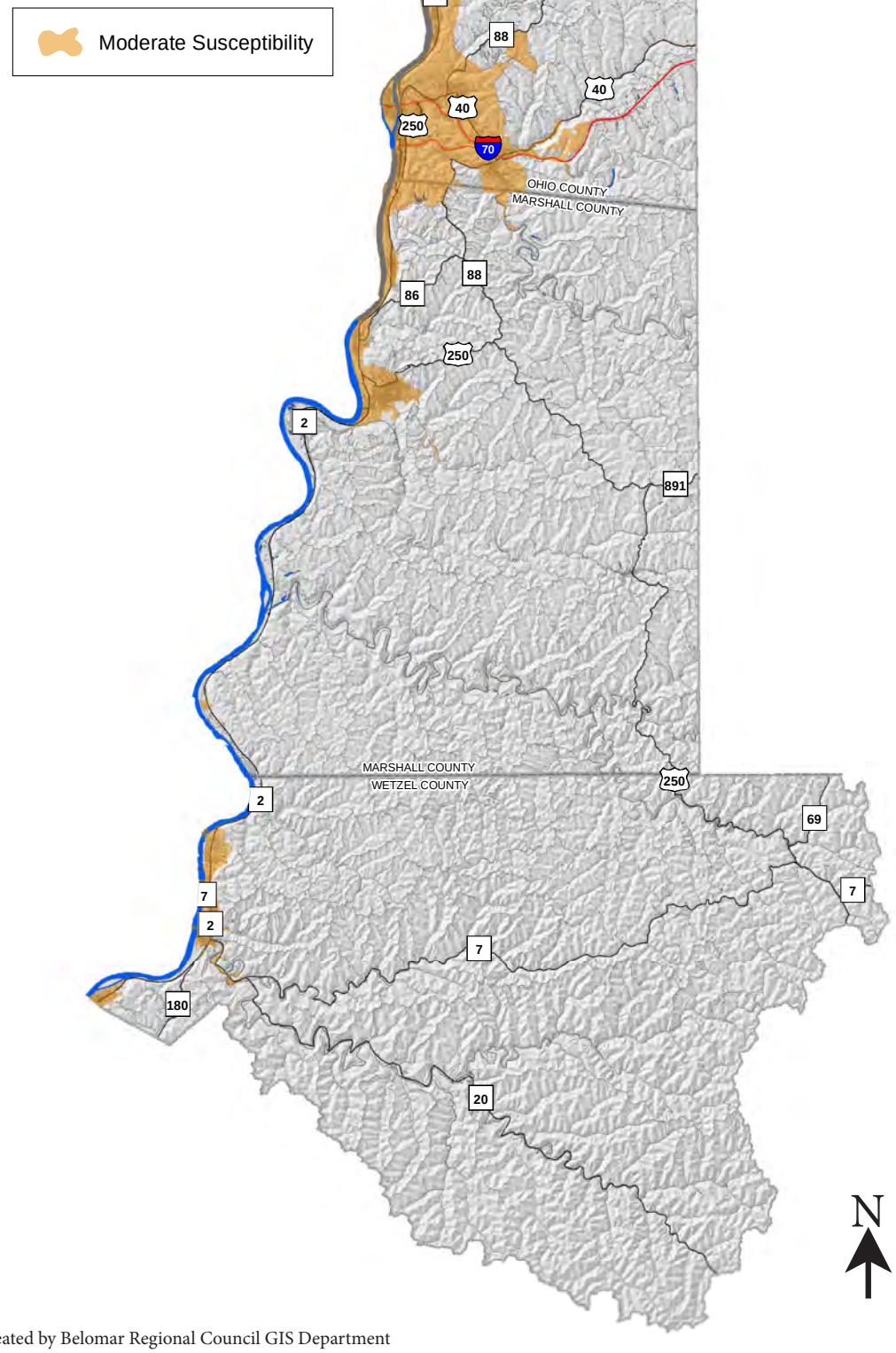
Urbanized areas, due to the density of development (e.g. central business districts, large residential buildings, etc.) and existence of essential structures (e.g. government buildings, religious buildings, hospitals, schools etc.), are more prone to terrorist acts. Urban areas in the three-county region are shown in the map included as Figure 3.11.2, and are considered to be more vulnerable. In addition, southern Marshall County and northern Wetzel County contain several chemical plants along the Ohio River. These plants could be targeted, due to the devastation they could bring to surrounding communities, if attacked. Although Region X has not been susceptible to terrorism in the past, all three county EMAs recently have increased their training on terrorism, so that they will be prepared if a terrorism event occurs. The agencies also have been attending "ALICE Training", which teaches active shooter preparedness, due to the high number of mass shooting events throughout the country.



Figure 3.11.1: Urbanized areas in Region X, like downtown Wheeling (shown above) are more susceptible to terrorism than rural areas of Region X. Photo Credit: Natalie Hamilton

Figure 3.11.2

Vulnerability to Terrorism



Map created by Belomar Regional Council GIS Department

Vulnerable Structures

All commercial and educational structures and government buildings are considered to be potential targets. In addition, local events, like summer festivals and concerts can be at risk. Generally, urban areas, due to the density of development, are more vulnerable and structures in these areas are shown in Table 3.11.2.

Table 3.11.2

Structures Vulnerable to Terrorism

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	599	25	34	59	7,585	84	8,386
Ohio	1,478	74	34	101	12,971	130	14,788
Wetzel	530	10	10	47	3,756	67	4,420
Total	2,607	109	78	207	24,312	281	27,594

Loss Estimates

Loss estimates are prepared from the recent assessed property values obtained from the county assessors. With terrorism, it is assumed that structures in urban areas is more susceptible than structures in rural areas. The loss estimates contain the value of all structures located in the urban portions of each county and the worst-case scenario for each county is as follows:

- Marshall County: $622,602,922
- Ohio County: $2,116,745,433
- Wetzel County: $382,175,962

3.12 Thunderstorm (Severe)

A severe thunderstorm consists of thunder, lightning and typically heavy rain or hail. As per the National Weather Service (NWS), a severe thunderstorm can produce a tornado, winds of at least 58 mph (~93 km/h), and/or hail at least 1" in diameter. Structural wind damage may imply the occurrence of a severe thunderstorm. A thunderstorm wind equal to or greater than 40 mph (~64 km/h) and/or hail of at least ½" is defined as approaching severe.

Regional Context

Table 3.12.1

Regional Context for Severe Thunderstorms

Period of Occurrence	Spring, summer and fall
Number of events from January 1995 to December 2021	232
Number of events since last plan update (2017)	36
Probability of Events	Frequent
Warning Time	Minutes to hours
Potential Impacts	Utility damage and outages, infrastructure damage (transportation and communication systems). Impacts human life, health and public safety.
Causes of Injury or Death	Injury
Potential Facility Shutdown	Days

Hazard Effects

All thunderstorms can produce severe turbulence, low level wind shear, low ceilings and visibilities, hail and lightning. Each of these hazards can be difficult to cope with; if all these conditions arrive at once, it can be disastrous. Understanding basic thunderstorm formation and structure can help you make safe decisions. Thunderstorms are formed by a process called convection, defined as the transport of heat energy. Because the atmosphere is heated unevenly, an imbalance can occur which thunderstorms attempt to correct. Three things are needed for convection to be a significant hazard to flight safety: moisture, lift and instability. Severe thunderstorms can produce tornadoes with little or no advance warning and have caused catastrophic damages in the region.

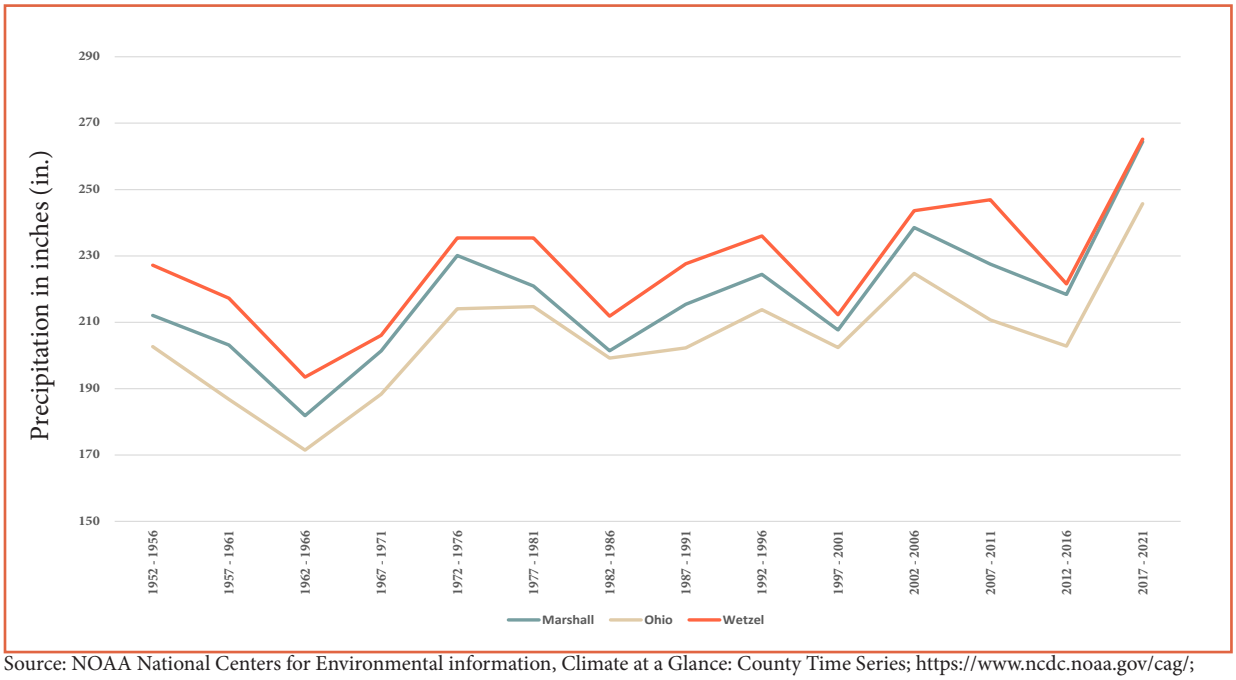
Hazard Profile

Thunderstorms and severe thunderstorms are the most frequently-occurring hazard throughout the region. Storms are common throughout the spring and summer months, however a thunderstorm can occur in any season. Thunderstorms cause substantial damage to homes and

buildings and cause downed trees and power lines. Thunderstorms in Region X have become more intense over the past 10 to 15 years, producing heavy downpours, which often lead to flash floods. Figure 3.12.1 shows precipitation levels in inches for each county in five-year increments. This graph demonstrates a noticeable increase in precipitation from 1952 to 2021 for Region X. Another observable trend in thunderstorms since the last plan update is the increase in "micro-cells" of weather, where small areas will receive a large amount of rainfall, while an area only a few miles away, might receive little to no rain at all during a thunderstorm event. These micro-cells are challenging to prepare for, as it is difficult to determine where they might strike.

Figure 3.12.1

Precipitation levels for Marshall, Ohio and Wetzel Counties from 1952 to 2021

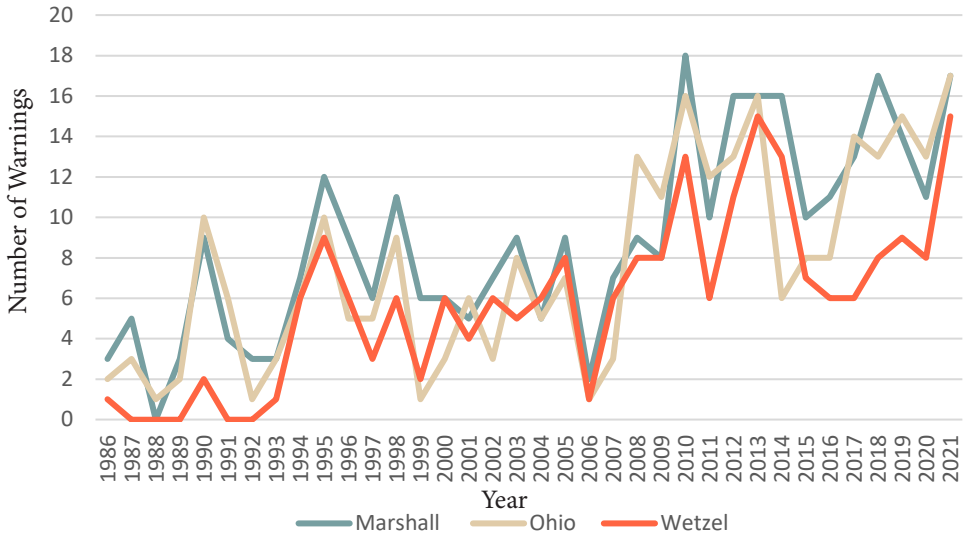


Source: NOAA National Centers for Environmental information, Climate at a Glance: County Time Series; https://www.ncdc.noaa.gov/cag/; Date retrieved: 5/12/2022

As temperatures have increased around the earth, the intensity and severity of severe thunderstorms have also increased. Figure 3.12.2 shows an increase in the number of thunderstorm warnings that have been issued in each of the three counties from 1986 through 2021. During the first five years (1986 through 1990) of this time period, there was on average 8 thunderstorm warnings issued per year; however during the last five years (2017 through 2021) of this time period there was on average 38 thunderstorm warnings issued per year. The website Climate Signals states : climate change affects many of the factors that can result in greater storm intensity. It leads to additional latent heat available in warmer air, and an increase in the meridonal (or poleward) temperature gradient, which increases available potential energy. (Climate Signals). Figure 3.12.3 shows the devastating wind damage that can occur along with severe thunderstorms.

Figure 3.12.2

Severe Thunderstorm Warnings Issued in Region X from 1986 through 2021



Source: Iowa State University - Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/vtec/search.php#byugc/WVC051; Date Accessed: 4/27/2022



Figure 3.12.3 Damage to several trees from a severe thunderstorm that swept through the Town of Triadelphia. Recent severe thunderstorms in Region X have been accompanied by intense winds that have been strong enough to uproot trees and snap tree trunks. Photo Credit: Jessica Hornyak

Vulnerable Structures

Thunderstorms can affect the entire area or be focused on a small area. It is hard to predict what areas within the region are more prone to this hazard. For a worst-case scenario, the entire region can be affected by a thunderstorm and Table 3.12.2 shows the structures in each county. All three counties in Region X are moderately susceptible, as indicated in Figure 3.12.4.

Table 3.12.2

Structures Vulnerable to Severe Thunderstorms

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	876	69	106	147	15,741	316	17,255
Ohio	1,817	129	51	131	17,051	186	19,365
Wetzel	850	19	24	122	8,714	211	9,940
Total	3,543	217	181	400	41,506	713	46,560

Loss Estimates

Thunderstorm is another hazard that can be said to affect the entire area equally (i.e., all structures in the planning area are at risk). According to assessor's data, the average county-level worst-case scenario event could total $1,547,132,717 in losses. An area-wide "worst-case scenario" event could total as much as $4,641,398,150. In many ways, the cascading effects of thunderstorms are more damaging than the storm itself. For example, as mentioned above, lightning strikes may cause power surges that result in damage. Thunderstorm winds may down trees that fall onto personal property. Tracking these types of damages is difficult as many people may not turn such claims into their insurance. Table 3.12.3 shows the number of events

Table 3.12.3

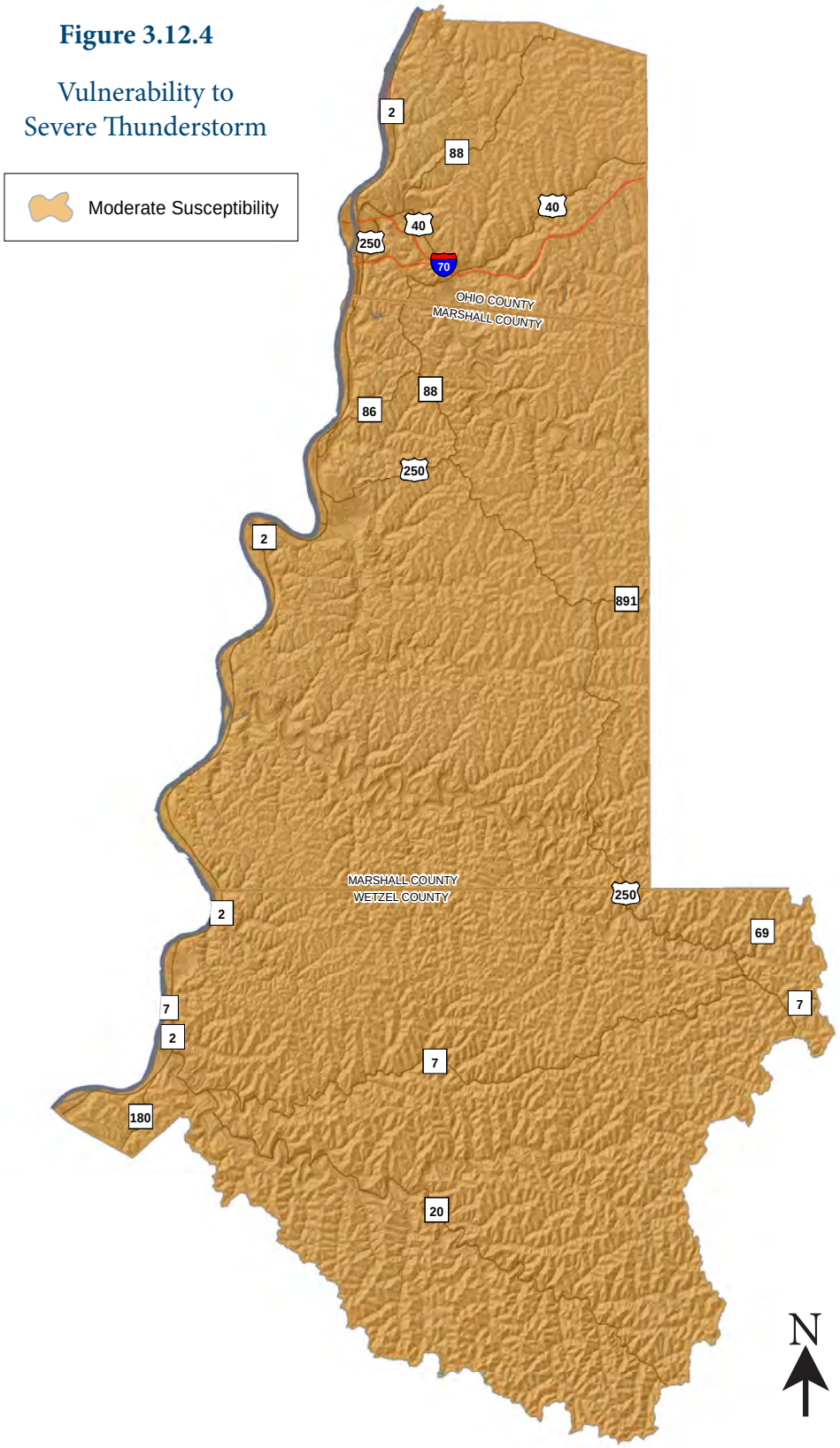
Severe Thunderstorm Events from 1995 through 2021 and the Amount of Property Damage

County	Number of Events	Amount of Property Damage
Marshall	92	$1,341,150
Ohio	81	$1,071,850
Wetzel	59	$709,000
Total	232	$3,122,000

Source: National Oceanic and Atmospheric Administration Storm Events Database; https://www.ncdc.noaa.gov/stormevents/; Date Accessed: 6/15/2022

Figure 3.12.4

Vulnerability to Severe Thunderstorm



Map created by Belomar Regional Council GIS Department

3.13 Wildfire

A wildfire or wildland fire is a fire in an area of combustible vegetation that occurs in the countryside or rural area. Depending on the type of vegetation where it occurs, a wildfire can also be classified more specifically as a brush fire, bush fire, desert fire, forest fire, grass fire, hill fire, peat fire, vegetation fire, or veld fire.

Regional Context

Table 3.13.1

Regional Context for Wildfire

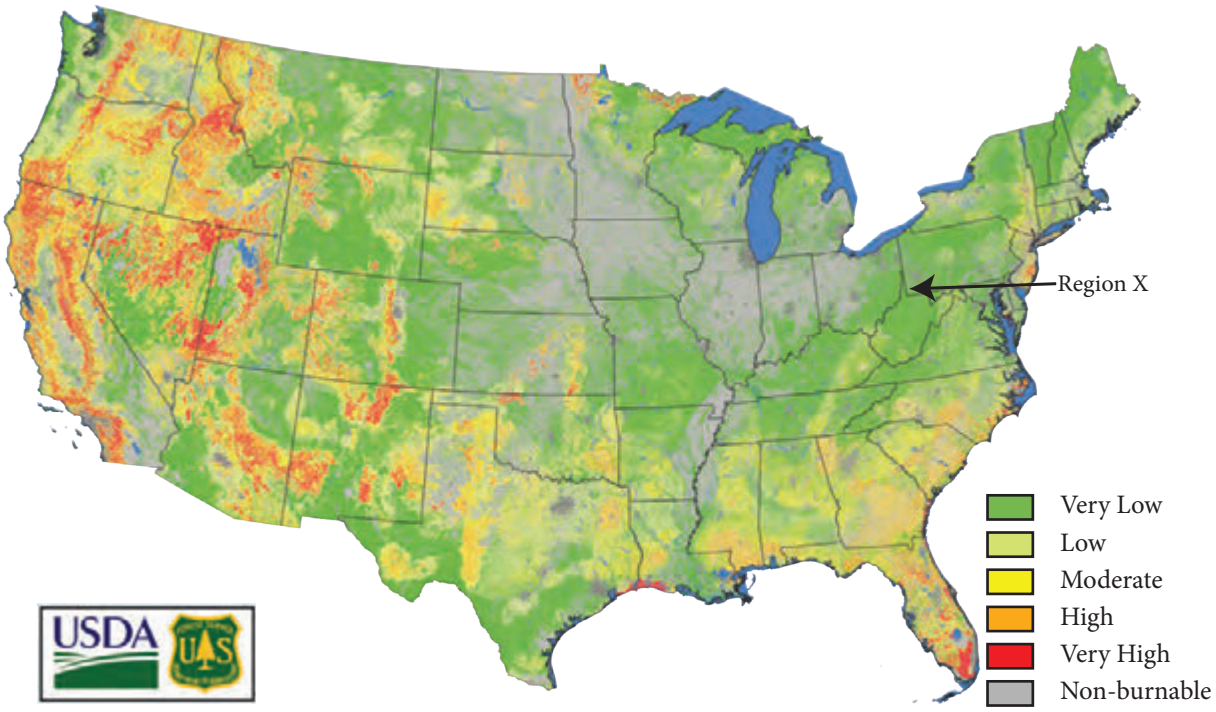
Period of Occurence	At any time (primarily summer)
Number of events from January 1995 to December 2021	0
Number of Events since last plan update (2017)	0
Probability of Events	Improbable
Warning Time	Minimal
Potential Impacts	Impacts human life, health and public safety. Loss of wildlife habitat, increased soil erosion degraded water quality. Utility damage and outages, infrastructure damage (transportation and communication systems) and damaged or destroyed cirtical facilities.
Causes of Injury or Death	Injury and risk of multiple deaths
Potential Facility Shutdown	Days to weeks or more

Hazard Effects

Wildfires often begin unnoticed and spread quickly. They are usually signaled by dense smoke that fills the area for miles around. Grasses, bushes, trees, and other vegetation supply fuel for the wildfire. The size of a wildfire is contingent on the amount of fuel available, weather conditions, and wind speed and direction. In a map from the USDA Forest Service (Figure 3.13.1), the majority of West Virginia, including all of Region X is labeled as “very low” risk for wildfires. There are some areas of southwestern West Virginia that do have a slightly higher risk for wildfires; however, counties in both Ohio and Pennsylvannia, adjacent to Region X are labeled “very low” risk. Wildfires will become a greater risk for Region X during periods of drought, as the vegetaion becomes drier and more flammable.

Figure 3.13.1

USDA Forest Service Wildfire Hazard Potential Version 2020



Source: U.S. Department of Agriculture Forest Service Fire Lab; https://www.firelab.org/project/wildfire-hazard-potential;
Date Accessed: 6/25/2022

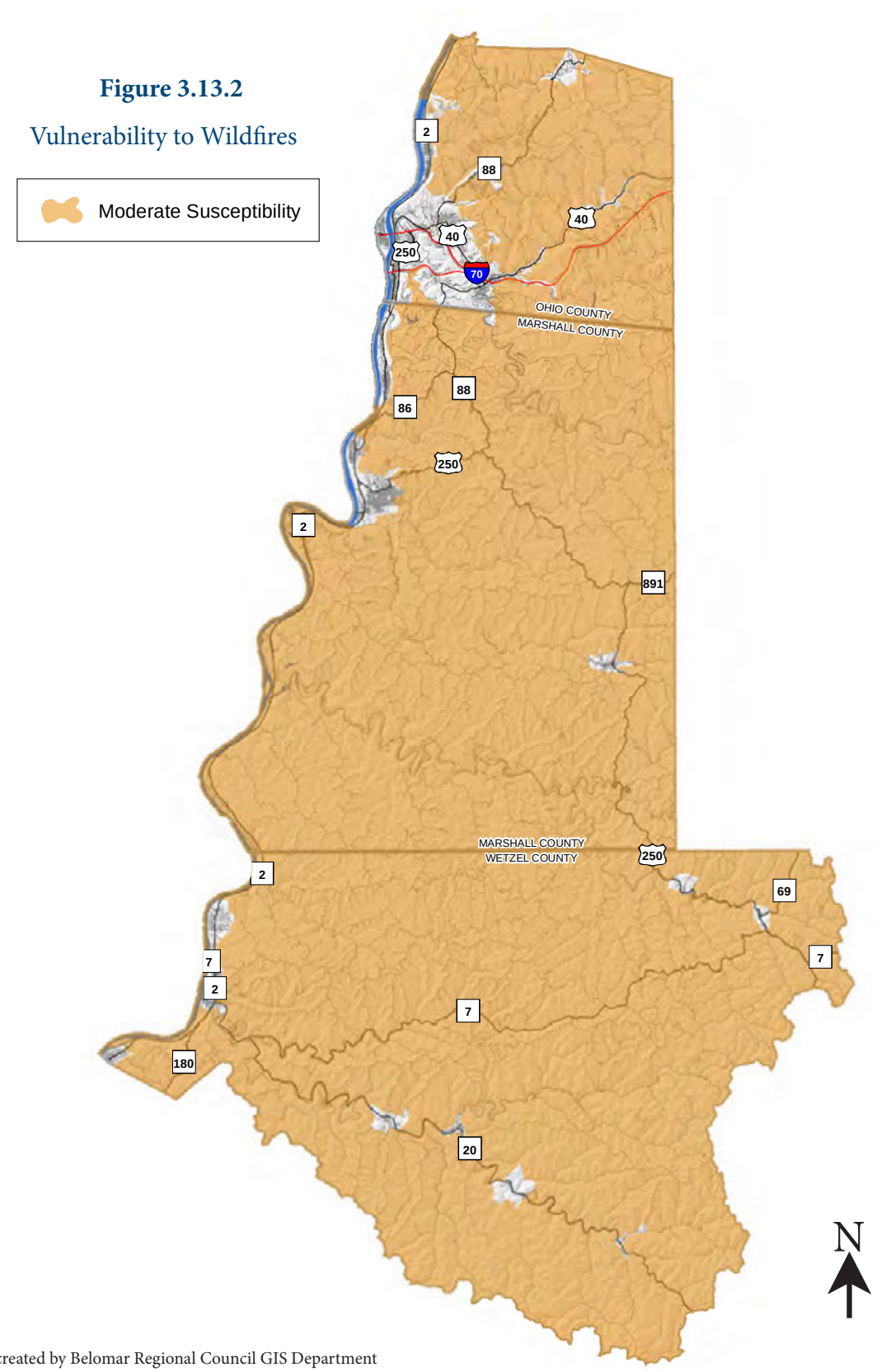
Hazard Profiles

Although Region X has a very low risk for wildfires, one should not assume that vegetation fires do not occur. Representatives from local fire departments throughout the area confirm that brush fires, ranging in size from a single acre to several acres occur each year. Several muncipalities have reported small brush fires along railways that travel through their communities, which have been caused by sparks due to friction bewtween the train and rails. Most of these fires are extinguished before becoming a major problem.

Additionally, the booming natural gas industry throughout the region has the potential to increase wildfire risk. Natural gas wells are located predominatnly in rural areas and several well fires have been reported. If well fires escape beyond the well pad, they could cause catastrophic damage to adjacent forested areas. The three counties is Region X consist mostly of rural, forested terrain, which could allow wildfires to spread quickly. Risk for wilfires increases during the drier months of late summer and early fall. As Figure 3.13.2 demonstrates, around 95% of each county could be considered rural. These areas would be at a more moderate risk for a wildfire than the low risk urabnized areas.

Figure 3.13.2

Vulnerability to Wildfires



Map created by Belomar Regional Council GIS Department

Vulnerable Structures

Structures in non-urbanized portions of the region are considered to be more vulnerable for this hazard and are shown in Table 3.13.2.

Table 3.13.2

Structures Vulnerable to Wildfires

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	217	25	80	82	8,801	239	9,444
Ohio	464	1	20	29	4,485	63	5,062
Wetzel	211	6	16	51	4,236	107	4,627
Total	892	32	116	162	17,522	409	19,133

Loss Estimates

Individual county loss estimates were calculated on the assumption that a wildfire would occur in the non-urbanized portions of the region. The loss estiamtes contain the value of all structues located in the rural portions of each county and the "worst-case scenario" event for each county is as follows:

- Marshall County: $778,574,442
- Ohio County: $783,759,135
- Wetzel County: $228,202,582

3.14 Wind (Severe)

Wind storms are destructive wind events that occur with or without the presence of other storm events, such as severe thunderstorms or tornadoes. There are several types of wind events that can occur in Region X: windstorms, derechos, funnel clouds and tornadoes. In the hazard probability calculation for Region X, only "severe wind" events listed in the National Oceanic Atmospheric Administration Storm Event Database were counted (funnel clouds, derechos and tornadoes were not included); however, due to the increased frequency and severity of these additional wind events, they have been included in this hazard profile and will be considered in probability calculations for future Hazard Mitigation Plans for Region X.

Table 3.14.1

Regional Context for Wind (Severe)

Period of Occurrence	At any time: Primarily during March through August.
Number of events from January 1995 to December 2021	42 windstorms 2 funnel clouds 1 derecho 2 tornadoes
Number of events since last plan update (2017)	6 wind 1 derecho
Probability of Events	Remote
Warning Time	Minutes to hours
Potential Impacts	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage and damaged or destroyed critical facilities. Impacts human life, health and public safety.
Causes of Injury or Death	Injury and risk of multiple deaths
Potential Facility Shutdown	Days to weeks or more

Wind Type: Wind Storm

A windstorm is a severe weather condition indicated by high winds and with little or no rain. Localized geographical conditions can exacerbate the damages from high winds and cause and increase in intensity. The National Severe Storms Laboratory states:

> "Damaging winds are often called "straight-line" winds to differentiate the damage they cause from tornado damage. Strong thunderstorm winds can come from a number of different processes. Most thunderstorm winds that cause damage at the ground are a result of outflow generated by a thunderstorm downdraft. Damaging winds are classified as those exceeding 50-60 mph".
>
> Source: https://www.nssl.noaa.gov/education/svrwx101/wind/

Hazard Effects

Wind storms can cause extensive damage. Damage from severe thunderstorm winds account for half of all severe reports in the lower 48 states and is more common than damage from tornadoes. Wind speeds can reach up to 100 mph and can produce a damage path extending for hundreds of miles. Since Region X is prone to thunderstorms, it is also at risk for wind damage.

Hazard Profile

Since 1995, there have been 42 severe windstorms in Region X. Table 3.14.2 illustrates the severe wind events in Region X and the amount of damage reported.

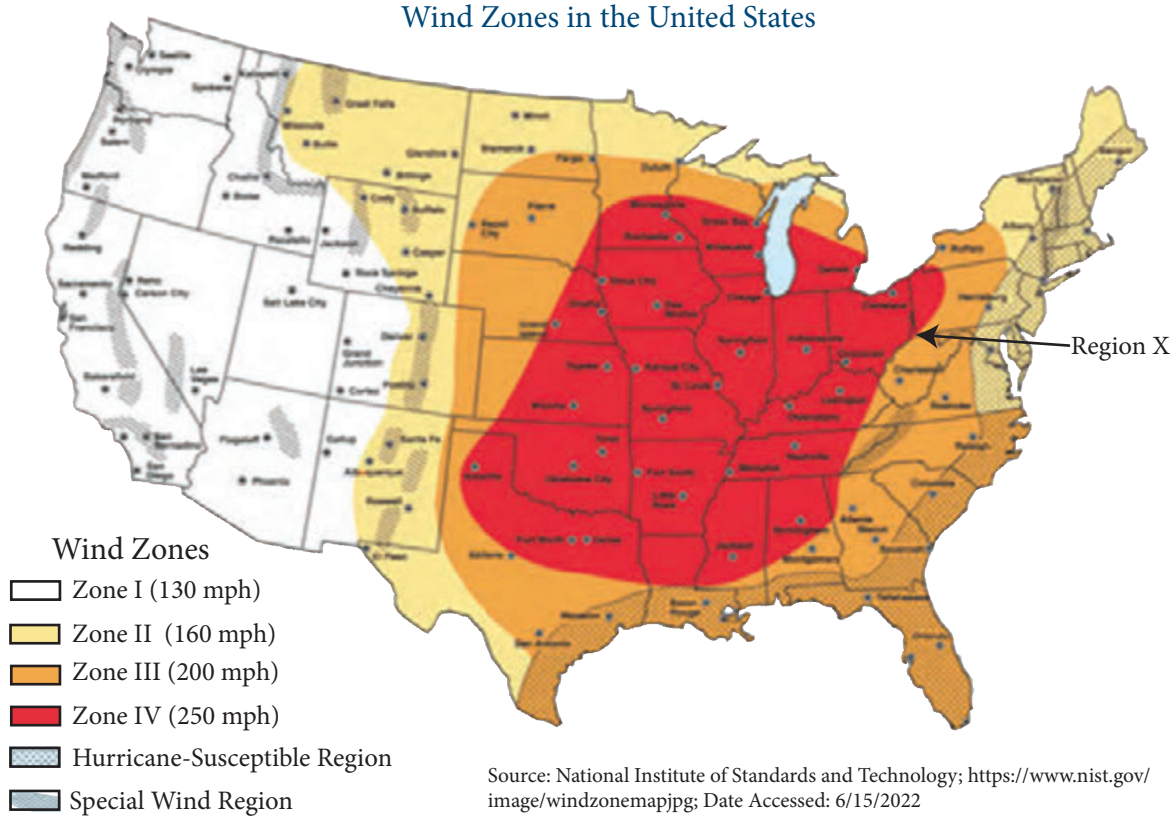
Table 3.14.2

Severe Wind Events from 1995 through 2021 and the Amount of Property Damage

County	Number of Events	Amount of Property Damage
Marshall	12	$262,000
Ohio	21	$557,000
Wetzel	9	$295,000
Total	42	$1,114,000

Figure 3.14.1

Wind Zones in the United States



Source: National Institute of Standards and Technology; https://www.nist.gov/image/windzonemapjpg; Date Accessed: 6/15/2022

Figure 3.14.1 is a wind zone map of the continental United States, which shows how the frequency and strength of extreme windstorms can vary across the country. Region X contains two wind zones. The southern portion of the region (Wetzel County) is located in Wind Zone III, which can have winds up to 200 mph (321.9 km/h), while the northern portion (Ohio and Marshall Counties) can have wind speeds up to 250 mph (402.3 km/h).

Wind Type: Derecho

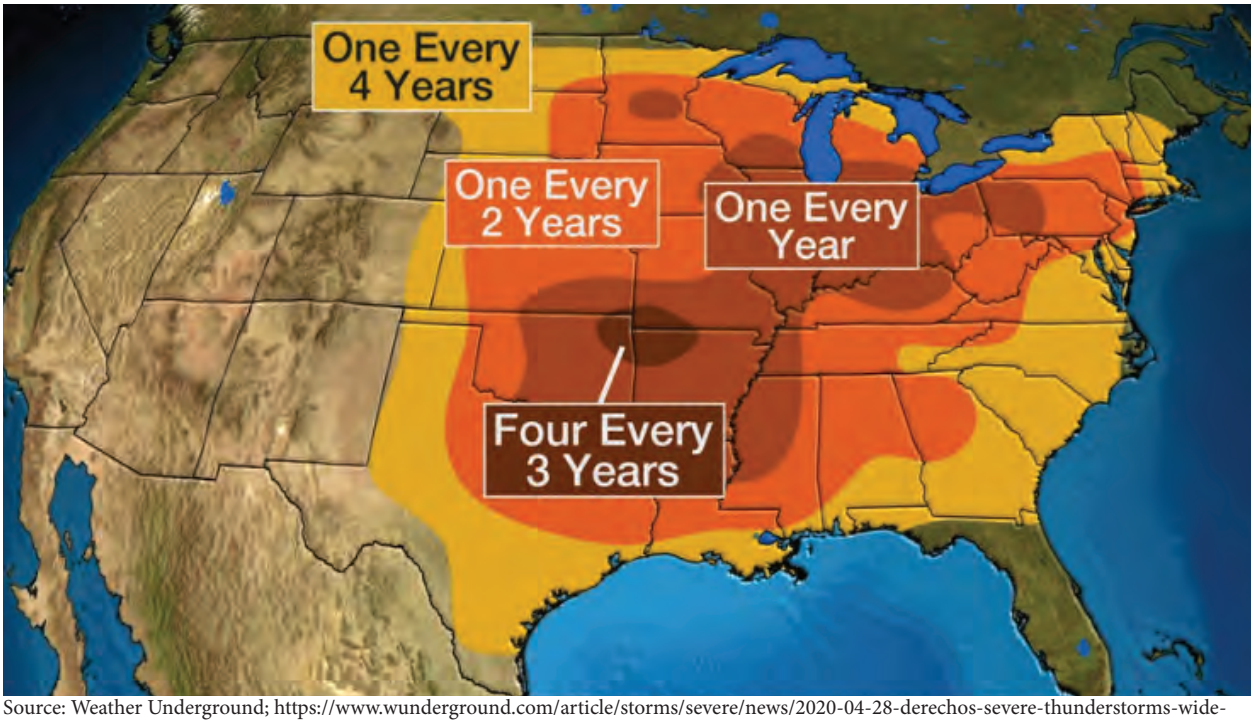
The National Weather Service states that a derecho is a "widespread, long-lived wind storm that is associated with a band of rapidly moving showers or thunderstorms. Although a derecho can produce destruction similar to the strength of tornadoes, the damage typically is directed in one direction along a relatively straight swath." To be officially classified as a derecho, the wind damage swath must be more than 240 miles wide and include wind gusts of at least 58 mph (93 km/h).

Hazard Effects

Like windstorms, derechos can cause severe damage to both structures, trees and electric lines. This type of storm is associated with bands of heavy rains and thunderstorms, which can also lead to flooding. Storms of this intensity can cause long-term power outages due to damage to electric lines, which can impact the local economy and cause disruption in the lives of residents.

Figure 3.14.2

Derecho Frequency in the United States



Source: Weather Underground; https://www.wunderground.com/article/storms/severe/news/2020-04-28-derechos-severe-thunderstorms-wide-spread-damaging-winds-explained; Date Accessed: 6/15/2022

Hazard Profile

Figure 3.14.2 shows the frequency of derechos in the United States. Region X falls within the "one every 2 years" category. Although derechos occur infrequently in Region X, they could be considered the most catastrophic hazard (along with flooding) for the area. Two major derechos have swept through Region X in the past 15 years and caused significant destruction. The pictures below (Figure 3.14.3 and Figure 3.14.4) demonstrate the strength of a recent double derecho that occurred in June 2022 and its ability to snap trees in half and uproot trees out of the ground. This double derecho damaged approximately 20 houses and also caused power outages, due to damaged electric lines (see Figure 3.14.5) for approximately 65% of homes and businesses in Ohio County, which left many residents without electric for up to seven days.



Figure 3.14.3: A recent derecho that swept through the City of Wheeling was strong enough to snap tree trunks in half. Photo Credit: Philip Stahl



Figure 3.14.4: The same derecho also uprooted trees in Wheeling Park, located in the City of Wheeling. When the ground becomes saturated from the heavy rains that can accompany derechos, trees can be uprooted by the substantial wind speed. Photo Credit: Philip Stahl



Figure 3.14.5: Damaged power lines along National Road in the City of Wheeling from the June 2022 derecho left many residents without power for almost a week.

Wind Type: Funnel Clouds/Tornadoes

A funnel cloud is a condensation funnel extending from the base of a towering cumulus, associated with a rotating column of air that is not in contact with the ground. If the rotating column of air touches the ground, it is classified as a tornado. The Enhanced Fujita (EF) Scale is used to classify the intensity of a tornado based on wind speeds and related damage. The lowest rating on the Enhanced Fujita Scale rating is "0", with wind speeds between 65 to 85 mph (104.6 to 136.8 kph). The highest rating on EF Scale is "5", with wind speeds over 200 mph (321.9 kph).

Hazard Effects

Depending on their intensity, tornadoes can be devastating, destroying homes and buildings, ripping trees from the ground, sending vehicles and other large objects through the air and causing multiple injuries and fatalities. Although tornadoes can cause significant damage to the land where they touch down, this type of natural disaster is usually confined to a relatively small area.

Hazard Profile

Funnel clouds and tornadoes are a rare occurrence in Region X. Table 3.14.3 (based on event data from the National Oceanic and Atmospheric Administration Storm Events Database) summarizes funnel cloud and tornado activity for Region X.

Table 3.14.3

Funnel Cloud and Tornado Events in Region X

Date	County	Event Type	Rating (if applicable)
4/25/1961	Ohio	Tornado	F1
7/24/1977	Ohio	Tornado	F1
4/15/1996	Marshall	Funnel Cloud	
6/14/1996	Marshall	Funnel Cloud	
7/30/1996	Wetzel	Tornado	F1
1/9/1998	Marshall	Tornado	F1
4/28/2002	Marshall	Tornado	F1

Although funnel clouds and tornadoes have been a rare occurrence for Region X, Gensini and Brooks explain in their article "Spatial Trends in United States Tornado Frequency" that "negative tendencies of tornado occurrence have been noted in the central and southern Great Plains, while robust positive trends have been documented in portions of the Midwest and Southeast United States." This suggests that "Tornado Alley" is shifting eastward and that Region X could be at higher risk for tornadoes in the future. Figure 3.14.6, on the next page, demonstrates the increased tornado frequency in the Midwest and East, while a decreased frequency in the area traditionally labeled "Tornado Alley".

Since 2006, Region X has seen an increase in tornado advisories, watches and warnings. The breakdown for these is summarized in Table 3.14.4. Tornadoes have become such a concern for the area that the City of Wheeling plans to construct a tornado shelter in their new fire department headquarters. Many of the houses in Region X contain basements, which offer some protection in severe wind events; however, mobile homes, which are a common housing type in the area, provide little or no protection against wind-related hazards.

Table 3.14.4

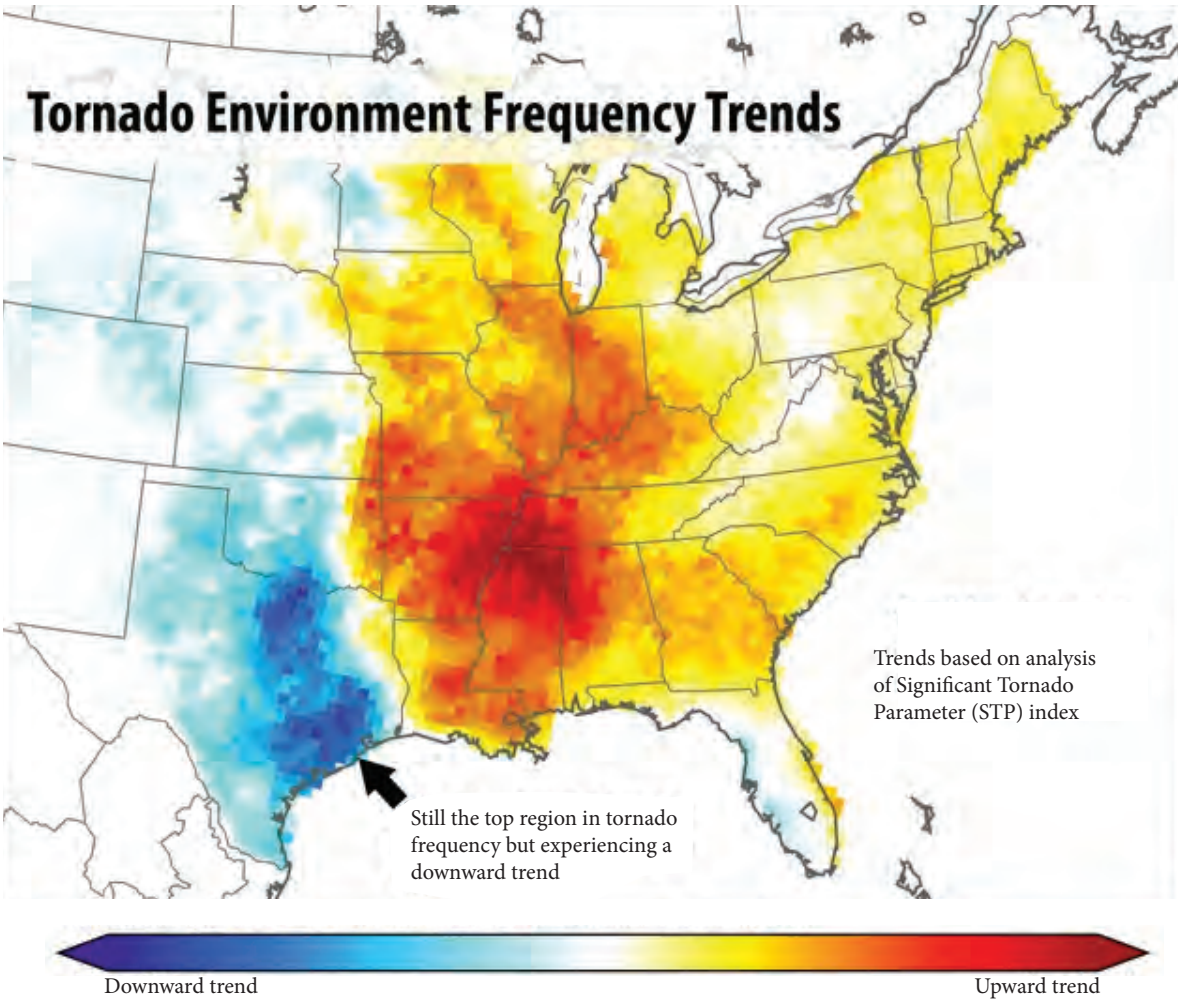
Tornado Advisories, Watches and Warnings issued for Region X from 2006 to 2021

County	Advisory	Watch	Warning
Marshall	1	16	13
Ohio	0	20	9
Wetzel	0	15	8

Source: Iowa State University - Iowa Environmental Mesonet; https://mesonet.agron.iastate.edu/vtec/search.php#byugc/WVC05; Date Accessed: 4/27/2022

Figure 3.14.6

Tornado Environment Frequency Trends



Source: Adapted by Northern Illinois University From Npj Climate and Atmoshperic Science, Genseni/Brooks 2018

Vulnerable Structures

Severe wind events can affect the entire area or be focused on a small area. It is hard to predict what areas within the region are more prone to this hazard. For a worst-case scenario, the entire region can be affected by severe wind events and Table 3.14.5 shows the structures in each county. All three counties in Region X have low susceptibility to wind-related events as indicated in Figure 3.14.7.

Table 3.14.5

Structures Vulnerable to Severe Wind

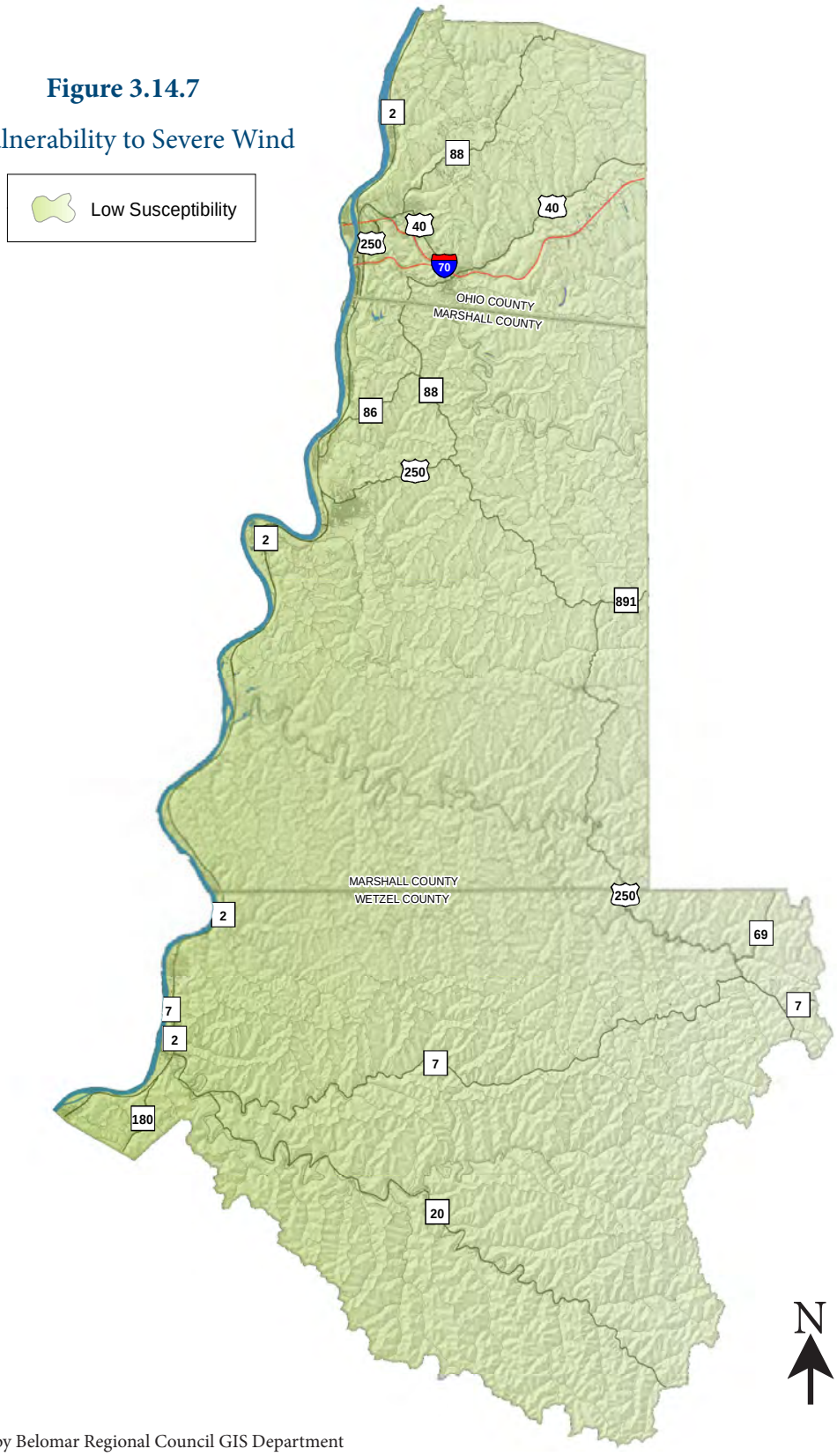
County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	876	69	106	147	15,741	316	17,255
Ohio	1,817	129	51	131	17,051	186	19,365
Wetzel	850	19	24	122	8,714	211	9,940
Total	3,543	217	181	400	41,506	713	46,560

Loss Estimates

A severe wind events is another hazard that can be said to affect the entire area equally (i.e., all structures in the planning area are at risk). According to assessor's data, the average county-level worst-case scenario event could total $1,547,132,717 in losses. An area-wide "worst-case scenario" event could total as much as $4,641,398,150.

Figure 3.14.7

Vulnerability to Severe Wind



Map created by Belomar Regional Council GIS Department

3.15 Winter Storm

An event in which the varieties of precipitation are formed that only occur at low temperatures such as snow or sleet, or a rainstorm where ground temperatures are low enough to allow ice to form.

Regional Context

Table 3.15.1

Regional Context for Winter Storm

Period of Occurrence	Winter
Number of events from January 1995 to December 2021	106
Number of events since last plan update (2017)	37
Probability of Events	Probable
Warning Time	Snow - days Ice - minutes to hours
Potential Impacts	Utility damage and outages, infrastructure damage (transportation and communication systems), structural damage, damaged critical facilities. Can cause severe transportation problems and make travel extremely dangerous. Power outages, which results in loss of electrical power and potentially loss of heat. Extreme cold temperatures may lead to frozen water mains and pipes, damaged car engines and prolonged exposure to cold resulting in frostbite.
Causes of Injury or Death	Injury
Potential Facility Shutdown	Days

Hazard Effects

Winter storms can occur anywhere and bring freezing rain, ice, snow, high winds or a combination of all these conditions. They can cause power outages that last for days or weeks; making it hard to keep warm and making travel very dangerous. Winter storms vary in size and strength and can be accompanied by strong winds that create blizzard conditions and dangerous wind chill. There are three categories of winter storms:

- **Blizzard:** A blizzard is the most dangerous of all winter storms. It combines low temperatures, heavy snowfall and winds of at least 35 miles per hour (mph), reducing visibility to only a few yards.

- **Heavy Snowstorms:** A heavy snowstorm is one that drops four or more inches of snow in a 12-hour period.
- **Ice Storm:** An ice storm occurs when moisture falls and freezes immediately upon impact. Often ice will accumulate on roadways, structures and trees. Accumulation of ice on trees can increase the weight of tree branches by 30 times or more. This leads to the branches falling from the tree. Branches can fall on power lines leading to a loss of electricity or on roadways, requiring days to weeks of clean up. Figures 3.15.1 and 3.15.2 show how accumulation of ice on tree branches can cause extensive damage to trees and cause blockage on roadways.

Hazard Profile

Like other weather-related events, winter storms are a frequent occurrence in Region X. Winter storms can occur at any time from late autumn to early spring in our region and bring ice, heavy snowfall and extremely cold temperatures. The elevation of Region X varies from approximately 600 to 700 feet along the Ohio River and in the valleys to around 1,600 feet along the ridge tops; therefore, "ridge top communities" like the Villages of Bethlehem and Clearview often experience greater snowfalls and more intense winter events than other communities at lower elevations in Region X.

Figure 3.15.3 shows 3-day snowfall accumulation records for all counties in West Virginia from 1950 to 2022. In Region X, the greatest 3-day snowfall accumulation was 35 inches, which was recorded on November 26, 1950 in Wetzel County. Ohio County's record 3-day snowfall was 29 inches and was recorded on November 27, 1950, while Marshall County's record 3-day snowfall was 21.4 inches on February 7, 2010.



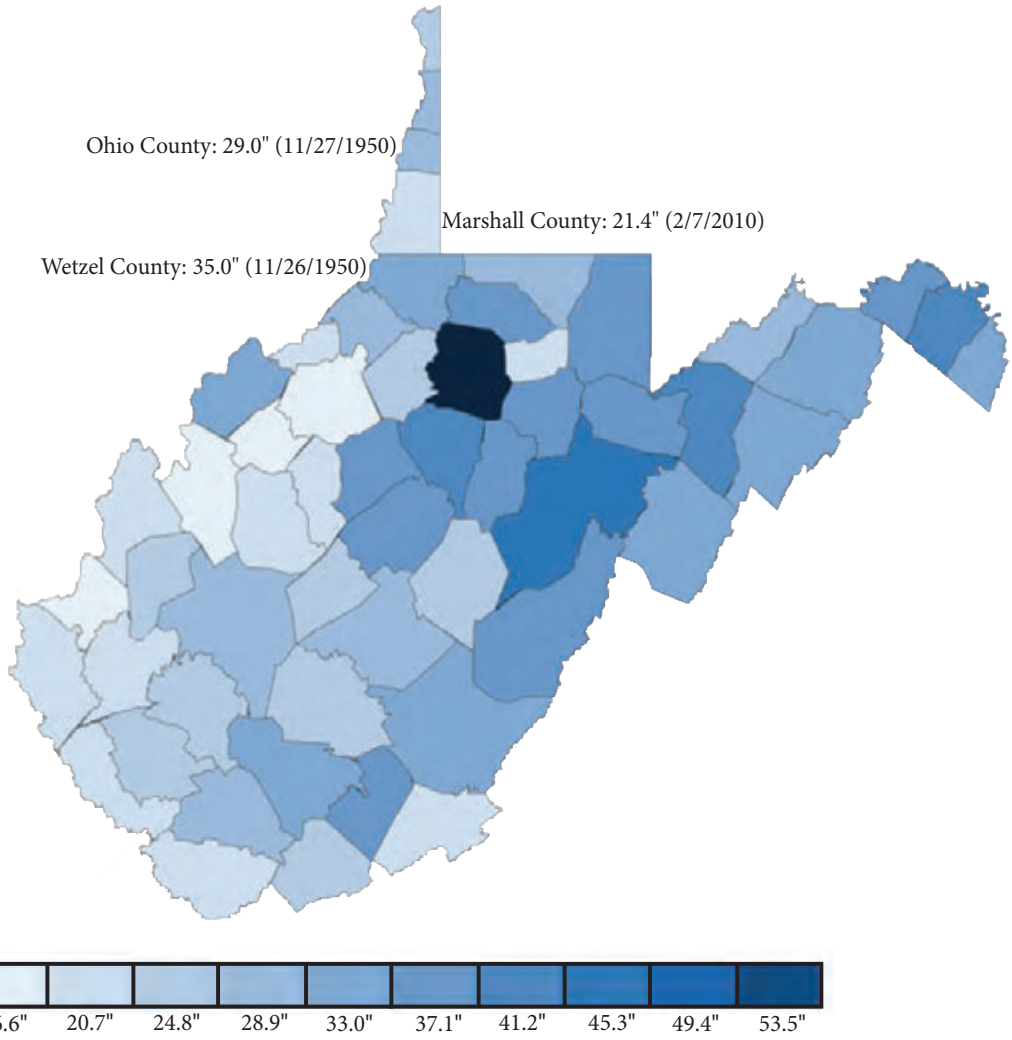
Figure 3.15.1: An ice storm in Region X in Winter 2022 caused branches from trees to break off and tree trunks to split, causing extensive damage throughout the three counties. Photo Credit: Philip Stahl



Figure 3.15.2: The weight of ice accumulation on trees can cause trees to fall over. This becomes a major hazard when trees fall into roadways and electric wires and onto houses. Photo Credit: Philip Stahl

Figure 3.15.3

3-day Snowfall Maximums for West Virginia Counties from 1950 to 2022



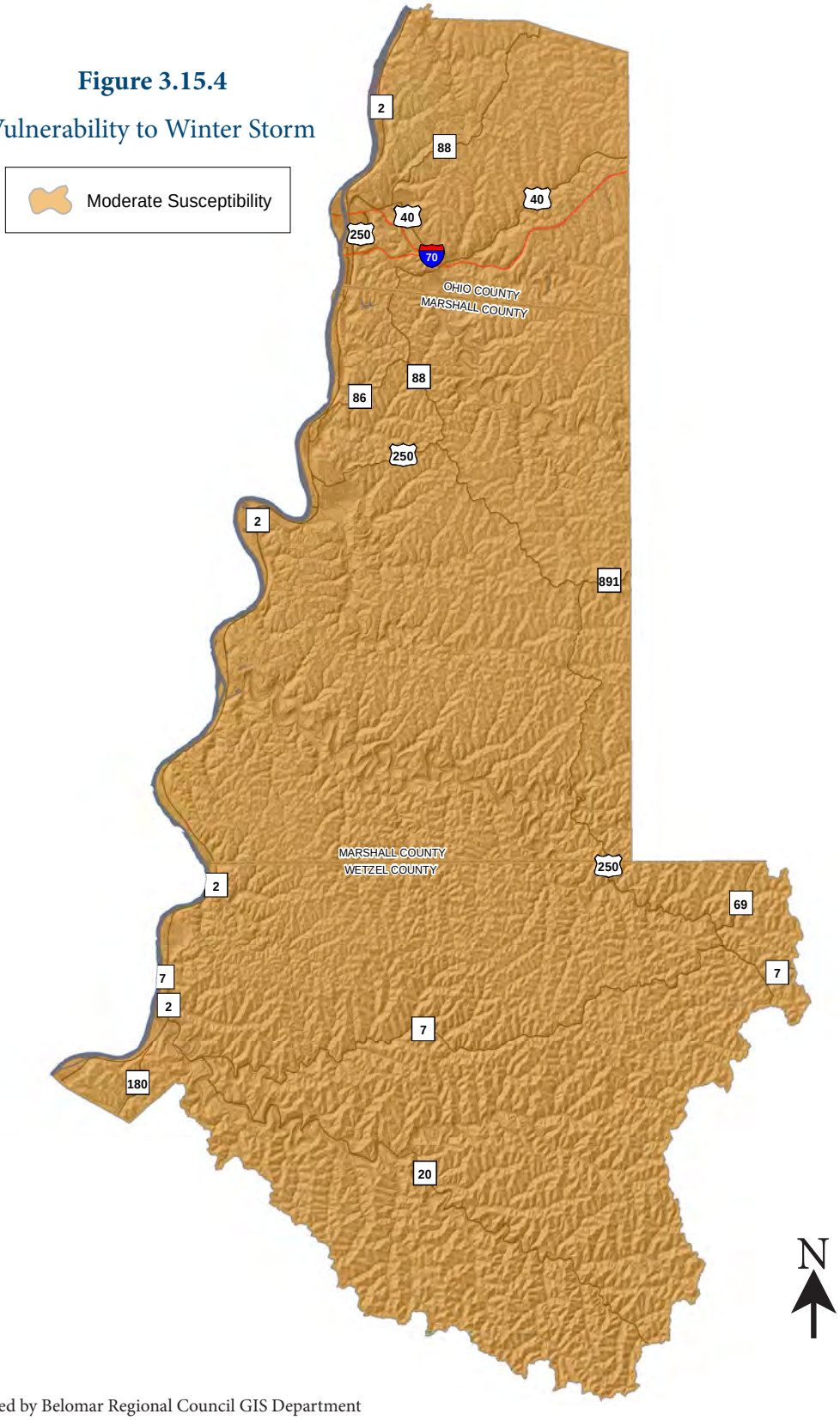
Source: National Centers for Environmental Information; https://www.ncdc.noaa.gov/snow-and-ice/snowfall-extremes/WV/3; Date Accessed: 6/28/22

Vulnerable Structures

It is hard to predict how widespread a winter event would be. All three counties are vulnerable to this hazard are shown in a regional map included as Figure 3.15.4. Structures at higher elevations in Region X potentially may see more damage than structures at lower elevations; however, Table 3.15.2 contains all structures in Region X.

Figure 3.15.4

Vulnerability to Winter Storm



Map created by Belomar Regional Council GIS Department

Table 3.15.2

Structures Vulnerable to Winter Storms

County	Commercial/ Services/Utilities	Education	Industrial	Institution	Residential	Unspecified/Unknown	Total
Marshall	876	69	106	147	15,741	316	17,255
Ohio	1,817	129	51	131	17,051	186	19,365
Wetzel	850	19	24	122	8,714	211	9,940
Total	3,543	217	181	400	41,506	713	46,560

Loss Estimates

The number of winter storm events from 1996 through 2021 and the amount of property damage (in dollars) associated with the storms is presented in Table 3.15.3.

Table 3.15.3

Winter Storm Events from 1995 through 2021
and Amount of Property Damage

County	Number of Events	Amount of Property Damage
Marshall	7	$35,000
Ohio	8	$15,000
Wetzel	4	$15,000
Total	19	$65,000

Source: National Oceanic and Atmospheric Administration Storm Events Database; https://www.ncdc.noaa.gov/stormevents/; Date Accessed: 6/15/2022

Although it is difficult to predict the extent and severity of winter storm damage, the average county-level worst-case scenario could total $1,547,132,717. An area-wide "worst-case scenario" event according to the county assessor's data, could total as much as $4,641,398,150.

3.16 Summary of Hazard Implications

Hazard profiles presented in this report show that some hazards have regional implications while others are spot or corridor type of hazards with localized damages. Some hazards such as hazardous material incidence can be spot hazards if it involves a spill on a roadway or a corridor type of hazard affecting locations in the vicinity of a roadway if a plume is involved. Some hazards can happen anywhere in the region such as a thunderstorm or winter storm. Areas in the flood zones can be vulnerable to riverine floods and flash flooding can happen in the hollows with or without a creek.

Area is most vulnerable to recurring floods that have caused substantial property damages in the past. Flash flooding along creeks although affects properties in its path but can also cause riverine flooding as water causing the flash floods flows in the Ohio River. A failure of any dam structure in the region can also cause flooding. The age of dam structures on the Ohio River is also a concern locally.

Small communities prone to flooding in Region X have limited mitigation resources. These communities rely on county EMA and seem assistance for grant applications. The grant applications that require a local match are problematic, due to limited local revenue sources. Most communities recognize the need for storm sewer separation and the burying of utlities underground, such as electric but lack the resources to undertake these very expensive projects. Large communities, like the City of Wheeling are working to complete storm sewer separation. Due to the increase and severity of thunderstorms, landslides also pose a risk to structures that were not otherwise at risk. Landslide mitigation also raises concerns about mitigation responsibility.

Ohio County is home to a major east west travel corridor from Baltimore to near I-15 in Utah. It carries heavy truck traffic and hazardous materials are transported on this interstate. In addition, petroleum and chemical products move on the Ohio River. Area is also home to chemical and power plants. Power plants and chemical plants are located on West Virginia route 2. Any incidence at a plant or on route 2 will greatly affect travel in this corridor. Route 2 is used for the north-south travel in the region. Recently many natural gas wells and injection wells have been introduced to the local landscape. While all these facilities are vital for the local economy and regional vibrancy they do have associated risks.

A large-scale disaster event can easily cross multiple jurisdictions. The unpredictability of an event requires a dynamic plan that can change instantaneously with the type and scale of the event. Local plans are expected to address, among other things, the logistics of service delivery, inventory of local resources, critical supply chains and locations for dispensing essential goods. The Emergency Management Agency in each county prepares such a plan. In addition to EMA offices, a Northern Ohio River Industrial Mutual Aid Council also exist in the area. This council is responsible for any evacuation related to events at plants along the Ohio River. These plans are part of hazard mitigation efforts.

Chapter 4.0 Goals and Objectives

Goals and objectives for this plan are developed in consultation with the Emergency Management Agency of each county and other stakeholders. All local jurisdictions were invited to provide input in the goals and objectives for this plan. The goals and objectives from the previous plan were used to initiate the process for developing goals and objectives that are current and address the local needs. Goals and objectives of the previous plan were revised based on the input received from the steering committee and local jurisdictions. The goals and objectives of this plan are presented below.

Goal 1: Reduce the negative effects of weather-related hazards.

Objectives:

1.1: Minimize future damage by coordinating with other agencies and reassessing future development in the floodplain.

1.2: Minimize future flood damage in local jurisdictions through effective storm water management.

1.3: Develop and distribute public awareness/readiness materials about natural hazard risks, preparedness, and mitigation.

1.4: Evaluate and update existing floodplain ordinances to meet or exceed the NFIP standards.

1.5: Encourage participation in the National Flood Insurance Program.

1.6: Update flood hazard mapping.

1.7: Update warning capabilities.

1.8: Increasing pubic awareness.

1.9: Periodically review emergency operations plans (EOPs) for adequacy of resources to mitigate effects of weather-related events.

Goal 2: Reduce the effects of land subsidence and landslides.

Objectives:

2.1: Minimize potential subsidence by monitoring development and construction activities.

2.2: Develop database of underground mines and fracking wells.

2.3: Monitor and implement engineering techniques to hillsides susceptible to landslides.

Goal 3: Reduce the potential effects of earthquakes.

Objectives:

3.1: Educate the public as to the potential for earthquakes in West Virginia and the region.

3.2: Monitor areas in the vicinity of injection wells for seismic activity.

Goal 4: Protect the citizens and forests from wildfires.

Objectives:

4.1: Educate the public on wildfire safety.

Goal 5: Protect the general public from hazardous material (hazmat) incidents and oil and gas drilling/hazardous incidents.

Objectives:

5.1: Collect/obtain data on hazardous materials traveling on roadways.

5.2: Collect/obtain data on hazardous material production/storage facilities in the region.

5.3: Obtain a necessary training for mitigating a hazardous event.

5.4: Obtain a necessary training for mitigating natural gas well fires and hazardous material incidents related to the oil and gas industry.

5.5: Prepare database of collection, separation and fractionation facilities in the region.

Goal 6: Protect the general public from the potential terrorist acts.

Objectives:

6.1: Increase preparedness for terrorist attacks.

Goal 7: Mitigate the effects of dam failures.

Objectives:

7.1: Assess and monitor the risk of dam failures.

7.2: Work with the WVDEP and U.S. Army Corps of Engineers, develop early warning capabilities.

7.3: Identify potential areas of inundation and properties in Region X.

Goal 8: Mitigate miscellaneous hazards as they emerge.

Objectives:

8.1: Work with community partners to educate residents about general public safety issues.

8.2: Monitor emergence of potential hazards.

8.3: Periodically review emergency operation plans (EOPs) to assess readiness for emerging hazards.

Goal 9: Prepare the general public, healthcare and school systems for future pandemics.

Objectives:

9.1: Ensure that all schools and students are equipped with appropriate technological resources if remote learning is required.

9.2: Certify open lines of communication between county health departments and hospitals and medical facilities in Region X.

9.3: Create stockpile of PPE products in each county in case of future pandemics.

9.4: Train volunteer network to support medical staff in case of future pandemic, including disease testing, vaccine distribution and administration and information dissemination via websites and telephone.

9.5: Coordinate with food pantries and soup kitchens to ensure adequate food supply and distribution at the beginning of any future pandemic.

Chapter 5.0 Mitigation Strategies and Actions

This document guides the mitigation efforts in the region. During the update cycle of this plan, many opportunities were provided to the public at large and local jurisdictions to shape this update. Each local jurisdiction was asked to review previously identified projects, priorities and status of each project within their jurisdiction. They were also asked to identify any new action/project needed in the foreseeable future. Potential funding sources for the projects are identified in consultation with the EMA directors. It should be noted that among other things, service related actions such as provision of emergency shelters, basic supplies, getting people to shelters, etc., are considered to be a part of the collaborative planning by EMA directors and first responders. The mitigation projects /actions presented in the tables below are the culmination of local outreach efforts conducted by Belomar Regional Council. These included a visit to local jurisdictions and several telephone conversations.

The strategies/actions presented are consistent with the goals and objectives of this plan. These generally fall in the following seven categories:

1) Prevention
2) Property Protection
3) Natural Resource Protection
4) Structural Projects
5) Emergency Services
6) Public Education and Awareness
7) Mitigation Reconstruction

It should be noted that the local jurisdictions have been involved with the hazard mitigation prior to the preparation of Regional Hazard Mitigation Plans. The regional plans have provided opportunities for a comprehensive approach to planning, resource allocation, equipment acquisitions, compatible communications and movement of resources among jurisdictions with minimal delay.

This plan is an update of the multi-jurisdictional plan approved in September 2017. In addition to local projects, it includes the regional actions to facilitate the plan implementation and assist local jurisdiction with project development and implementation. These actions are:

- Explore potential funding sources for the plan implementation and assisting smaller jurisdictions with their mitigation project development and implementation.
- Identify potential funding sources for the plan implementation and assisting small jurisdictions with their mitigation project development and implementation.
- Inform local jurisdictions of available funding.

All projects at the County level are unique, however most of the projects also apply to the municipalities within the County. It was the discretion of the municipality, based on the needs, to identify applicable projects. In most cases, municipalities found that the countywide projects also address their needs. Thus, most of the projects selected and prioritized by the municipalities are repeat projects from the countywide project list. However, the priority of each project within the municipality is different from the countywide priority.

The following table shows locally selected mitigation projects/actions. Each project can address multiple goals and objectives. Goals and objectives addressed by each project are included in this table. Also included are potential performance measures that may be used in measuring the progress towards achieving the goals and objectives.

Table 5.1

2017 and 2022 Hazard Mitigation Plan Projects for Jurisdictions in Region X

Marshall County 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 1: Attempt to instate a countrywide permitting process through the planning commissions and assessor's office, which will require residents and/or developers to file a permit with the county before beginning any new construction in the floodplain.	1, 7	1.1, 1.2, 1.4, 1.5, 1.7	Progress towards a county-wide building permit process.	Ongoing progress.
MAR – 2: Review additional permitting processes used in other counties to determine if wording regarding the use of certain building materials is appropriate in the county floodplain ordinance.	1, 7	1.1, 1.2, 1.4, 1.5, 1.7	Periodic review of floodplain ordinance.	Ongoing progress.
MAR – 3: Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	1, 7	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 7.1, 7.2, 7.3	Progress towards initiating a study.	Ongoing progress.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 4: Continue to undertake stream cleaning and stream bank restoration projects throughout the county as a means of lessening flood damage to personal property and roadways.	1, 7	1.1, 1.2	Steam cleaning/bank restoration actions.	Ongoing progress.
MAR – 5: Form a community watershed group to look at stream bank restoration in the Cameron area.	1, 7	1.1, 1.2, 1.8	A functioning watershed group.	Ongoing progress.
MAR – 6: Form a community watershed group to look at stream bank restoration in the Jim's Run area of McMechen.	1,7	1.1, 1.2, 1.8	A functioning watershed group.	Ongoing progress.
MAR – 7: Form a community watershed group to look at stream bank restoration in the Little Grave Creek Watershed.	1, 7	1.1, 1.2, 1.8	A functioning watershed group.	Ongoing progress.
MAR – 8: Coordinate county efforts to meet the requirements of becoming a participant in the CRS.	1, 7	1.1, 1.2	Participation in CRS user group.	Ongoing progress.
MAR - 9: Continue projects to upgrade the flood wall in the City of Benwood.	1, 7	1.1, 1.2	A well-maintained flood wall.	Ongoing progress.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 10: Develop early warning and public notification capabilities through the use of such items as "Reverse 911" and AM radio stations.	1, 3, 4, 6, 7	1.3, 1.7, 3.1, 4.1, 6.1, 7.2	Status of early warning systems.	Mass notification system (WENS) is in place; AM radio station no longer in service.
MAR – 11: Continue to coordinate with the National Weather Service in Pittsburgh, Pennsylvania to warn residents of impending severe thunderstorm conditions.	1, 2	1.7, 1.8, 2.1	Level of coordination.	NWS Pittsburgh can be contacted via emergency communication radio systems.
MAR – 12: Continue coordinating efforts with local media to post advance warnings of hailstorms.	1	1.7, 1.8	Coordination with media.	Ongoing progress.
MAR – 13: Ensure inclusion of wind hazards in public information campaigns.	1, 4	1.3, 1.8, 4.1	Public awareness material/ events.	Ongoing progress.
MAR – 14: In coordination with monitoring floodplain development, continue to encourage the general public to use materials that can withstand moderate land subsidence during construction.	1, 2	1.1, 1.2, 1.3, 1.5, 1.8, 2.1	Public awareness outreach.	Ongoing progress.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 15: Educate the public as to the earthquake risk in West Virginia. Dissemination of information can be via elementary school distribution.	2, 3	2.1, 2.2, 3.1, 3.2	Public awareness outreach.	Ongoing progress.
MAR – 16: Distribute informational brochures developed by the NRCS to local farmers and residents.	1, 3, 4, 6, 8	1.3, 1.8, 3.1, 3.2, 4.1, 6.1, 8.1	Public awareness outreach.	Ongoing progress.
MAR – 17: Educate local residents on the benefits of conserving water.	1, 3, 5, 6, 8	1.2, 1.8, 3.1, 6.1, 8.1	Public awareness outreach.	Ongoing progress.
MAR – 18: Distribute information concerning the leading causes of wildfires, steps the general public can take to avoid starting wildfires, and instructions for controlled burns.	4	4.1	Public awareness outreach.	Ongoing progress.
MAR – 19: Produce public awareness campaigns through local media.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 6.1, 8.1	Public awareness outreach.	Public awareness campaigns are presented at county-wide community events and functions.
MAR – 20: Continue pandemic flu planning efforts.	8	8.1, 8.2, 8.3	Preparedness for mitigation.	Ongoing process with the Marshall County Health Department.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 21: Strengthen existing landline communication networks.	1, 2, 3, 4, 5, 6, 7, 8	1.3, 1.7, 1.8, 3.1, 3.2, 4.1, 6.1, 7.2, 8.1, 8.2	Functioning communication network.	Ongoing progress.
MAR – 22: Continue efforts to construct towers to facilitate better cellular and wireless communications.	1, 2, 3, 4, 5, 6, 7, 8	1.3, 1.7, 1.8, 3.1, 3.2, 4.1, 6.1, 7.2, 8.1, 8.2	Functioning communication network.	Ongoing progress.
MAR – 23: Once towers are constructed, negotiate with owners to use towers during emergency situations.	1, 2, 3, 4, 5, 6, 7, 8	1.3, 1.7, 1.8, 3.1, 3.2, 4.1, 6.1, 7.2, 8.1, 8.2	Functioning communication network.	Ongoing progress.
MAR – 24: Undertake a public education campaign regarding proper generator usage.	1, 2, 3, 4, 5, 6, 7, 8	1.1, 1.2, 1.3, 1.5, 1.8, 2.1	Public awareness outreach.	Ongoing progress.
MAR – 25: Encourage local gas companies to undertake a public education campaign regarding resident and company rights surrounding gas-line rights-of-way.	1, 2, 3, 4, 5, 6, 7, 8	1.1, 1.2, 1.3, 1.5, 1.8, 2.1	Public awareness outreach.	Ongoing progress.
MAR – 26: Work with sheltering agencies to ensure that those facilities identified as shelters have back-up power capabilities.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 6.1, 8.3	Emergency shelter readiness.	Ongoing progress.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 27: Coordinate with AEP to ensure adequate coverage for emergency call-outs in the event of a downed electric line.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 6.1, 8.3	Adequate resources for restoring power.	Ongoing progress.
MAR – 28: Coordinate with law enforcement providers and appropriate event organizers to ensure that adequate security is available during large of high-profile events.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 6.1, 8.3	Adequate staffing for events.	Ongoing progress.
MAR - 29: Update the commodity flow study for Marshall County.	5	5.1, 5.2, 5.3	A list of hazardous materials transported in-out and through the region.	This is completed every 4 to 6 years. Region X EMAs plan to complete this in the next couple of years.
MAR – 30: Ensure measures and tips for evacuations are included in ongoing public education efforts.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Periodic review of EMS plans.	This would be annual updates of the County EOP & not EMS plans.
MAR – 31: Facilitate the creation of safe zones as places where residents can go in the in the event of a hazardous materials incident. Further, publicize the location and access to these safe zones.	5	5.3, 5.5	Existence of safe zones within EMS plans.	This would be part of the County EOP & not EMS plans.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 32: Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	5, 6, 8	5.5, 6.1, 8.3	Existence of EMS and COOP plans.	This would be part of the County EOP & not EMS plans.
MAR – 33: Increase the knowledge of the general public concerning preparedness through the preparation of informational brochures, town meetings, training seminars, etc.	1, 2, 3, 4, 5, 6, 7, 8	1.3, 1.8, 3.1, 3.2, 4.1, 6.1, 8.1, 8.2	Public awareness outreach.	Ongoing progress.
MAR – 34: Coordinate with local media to alert the public as to current threat status.	1, 2, 3, 4, 5, 6, 7, 8	1.3, 1.8, 3.1, 3.2, 4.1, 6.1, 8.1, 8.2	Emergency announcements.	Ongoing progress.
MAR – 35: Establish trauma centers to offer medical attention and counseling to affected populations in the event of a terrorist event.	5, 6, 8	5.5, 6.1, 8.3	Preparedness for a large-scale emergency event.	Coordination through regional hospital working group.
MAR – 36: Coordinate with first responders for interagency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6	1.9, 5.5, 8.3	Periodic review of EMS plans.	Annual updates of County EOP.
MAR – 37: Continue education and training efforts of first responders and emergency personnel.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Training opportunities for first responders.	Ongoing progress.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 38: Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Existence of SNS as per EMS plans and health plans.	Coordination with Health Department.
MAR – 39: Continue to encourage schools to update procedural and evacuation plans in the event of a bomb threat.	6, 8	1.9, 5.5, 9.3	Existence of school evacuation and lock down plans.	Ongoing progress.
MAR – 40: Encourage high value assets to create and/or update procedural and evacuation plans in the event of a bomb threat.	6.8	1.9, 5.5, 9.3	EMS plans addressing bomb threat.	Annual updates of County EOP.
MAR – 41: Evaluate dams and locks that play an integral role in water transportation and/or flood control.	7	7.1, 7.2, 7.3	Working relationship with U.S. Corp. of Engineers.	Ongoing progress.
MAR – 42: Encourage drilling companies to educate the general public about natural gas safety, community outreach efforts, etc.	5	5.4, 5.5	Outreach efforts by energy corporations.	Ongoing progress.

Marshall County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MAR – 43: County will continue to seek out opportunities to apply for Hazard Mitigation Assistance (HMA) funds for mitigation reconstruction, elevations, relocations or acquisitions of identified at risk, repetitive loss, non-repetitive loss, substantial damaged, partially or completely demolished or destroyed properties within Marshall County. If mitigation reconstruction is chosen, properties identified as partially or completely demolished, outside of the regulatory floodway, as identified by available flood hazard data, will be reconstructed in accordance with the standards established in the local floodplain ordinance and in accordance with the same conditions as an elevated structure. Marshall County will comply with all acquisition, elevation, relocation and mitigation reconstruction requirements, as per the HMA Guidance.	1, 7	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 7.1, 7.2, 7.3	Solicitation of HMA funds; identification/acquisition of properties; reconstruction as per flood plain ordinance.	Ongoing progress.

Marshall County 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
MAR - 44: Wire all pump houses and pump stations for the ability to connect to a generator at all Public Service Districts (PSDs) in the Marshall County.	1, 2, 3, 4, 5, 6, 7, 8, 9	6.1, 8.2	Number of pump houses and pump stations wired to connect to generators.
MAR - 45: Apply for mitigation funding for generators to be installed at pump houses and pump stations at all Public Service Districts (PSDs) in Marshall County.	1, 2, 3, 4, 5, 6, 7, 8, 9	6.1, 8.2	Number of generators acquired.

City of Benwood 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
BEN – 1: Continue projects to maintain upgrade the flood wall in the City of Benwood.	1, 7	1.1, 1.2	A well-maintained flood wall.	Maintenance has been performed, including tree trimming and removal.
BEN – 2: Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.	During pandemic, Benwood was in constant contact with Marshall County EMA office to obtain most recent guidelines.
BEN – 3: Support health department planning for Strategic National Stockpile distributions during bioterrorist or other incidents.	5, 6, 8	5.3, 6.1, 8.2, 8.3	Necessary stockpile for mitigation.	Benwood coordinated with Marshall County Health Department during pandemic: 1) had testing center at Fire Department; 2) distributed PPE to Police Department; 3) answered calls from residents concerning pandemic and redirected to health department.

City of Benwood 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
BEN – 4: Continue with flood wall improvements, including but not limited to: 1) increase flood wall height by four feet so that it is eligible for accreditation; 2) install SCADA system; 3) continue debris removal and maintenance; and 4) replace pumps.	1, 7	1.1, 1.2	A well-maintained flood wall.
BEN – 5: Continue separation of combined sewer overflows (CSOs) in Center and North Benwood.	1	1.2	The number of CSOs separated.
BEN – 6: Maintain "Subway Tunnel", a culvert that runs under Route 2 and North Benwood from Boggs Run area.	1	1.2	Less flooding events in the North Benwood area.
BEN - 7: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

City of Cameron 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
CAM – 1: Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	1	1.1, 1.4, 1.5, 1.6, 1.9	Study recommendations for action.	NRCS has visited but no mitigation strategies are implemented because NRCS requires creeks/ streams need to be 90% blocked before they will permit dredging.
CAM – 2: Form a community watershed group to look at stream bank restoration in the Cameron area.	1	1.1, 1.2	Actions for stream bank restoration.	No progress.
CAM - 3: Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	6, 8	6.1, 8.1, 8.2, 8.3	COOP plans for Cameron.	No progress, but do work closely with Marshall County EMA.
CAM – 4: Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meetings/ communication with other jurisdictions; current plans.	Have mutual aid agreements with surrounding communities.
CAM – 5: Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	5, 6, 8	5.3, 6.1, 8.2, 8.3	Necessary stockpile.	Follow Marshall County's policy.

City of Cameron 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
CAM – 6: Dredge and remove debris from streams and creeks (Upper Grave Creek Tributary) within Cameron.	1	1.2	Actions for stream and creek dredging.
CAM - 7: Coordinate with Marshall County to dredge and remove debris from streams and creeks outside Cameron that cause flooding within Cameron.	1	1.2	Actions for stream and creek dredging.
CAM - 8: Implement engineering techniques to prevent creek bank erosion along Upper Grave Creek Tributary within Cameron.	1	1.1, 1.2, 1.8	Actions for stream bank restoration.
CAM - 9: Create a community volunteer group to help remove litter in creek and around edges of creek to help prevent flooding.	1, 8	1.2, 1.3, 1.8, 8.1	Number of community volunteer clean-up events.
CAM - 10: Purchase more equipment and hire more city employees to maintain land along creeks in City.	1	1.2	Actions to maintain land along creeks.
CAM -11: Replace deteriorated storm sewers.	1	1.2	Number of sewers replaced.
CAM - 12: Separate combined storm sewer overflows (CSOs).	1	1.2	Number of sewers separated.

City of Cameron 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
CAM - 13: Create an emergency shelter stocked with food and emergency supplies at First Christian Church (7th Avenue), as this is one of the few churches out of the floodplain.	1, 8, 9	1.8, 8.1, 9.5	Actions to create emergency shelter.
CAM - 14: Create a floodplain and storm ready educational outreach program for residents for better preparation during storm events.	1, 8	1.8, 8.1	Number of outreach events held.
CAM - 15: Coordinate an emergency plan with gas companies in the vicinity to mitigate trick accidents on road and notify residents of hazardous incidents at well sites.	5, 8	5.1, 5.4, 5.5	Actions to create emergency plan.
CAM - 16: Coordinate with Marshall County Health Department to have more frequent testing abilities within Cameron during pandemics.	9	9.4	Number of pandemic testing events.
CAM - 17: Continued coordination with first responders for interagency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

City of Cameron 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
CAM – 18: Apply for mitigation funding for a generator to be installed at Cameron's Water Treatment Plan.	1, 2, 3, 4, 5, 6, 7, 8, 9	6.1, 8.2	Generator installed.

City of Glen Dale 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
GLE – 1: Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	1	1.1, 1.4, 1.5, 1.6, 1.9	Study recommendations for action.	Have had discussions with NRCS about dredging Little Grave Creek.
GLE – 2: Form a community watershed group to look at stream bank restoration in the Little Grave Creek Watershed.	1	1.1, 1.2	Actions for stream bank restoration.	Residents did repair portions of Little Grave Creek.
GLE – 3: Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meetings/ communication with other jurisdictions; current plans.	Glen Dale first responders have a well-coordinated mutual aid plans with surrounding communities, including Moundsville, Washington Lands, McMechen and Benwood.
GLE – 4: Support healthy department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	5, 6, 8	5.3, 6.1, 8.2, 8.3	Necessary stockpile.	No progress.

City of Glen Dale 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
GLE - 5: Dredge Little Grave Creek and remove debris to prevent flooding within the city limits of Glen Dale.	1	1.2	Actions for stream and creek dredging.
GLE - 6: Coordinate with Marshall County to dredge and remove debris in Little Grave Creek in Marshall County.	1	1.2	Actions for stream and creek dredging.
GLE - 7: Implement engineering techniques to prevent creek bank erosion along Little Grave Creek.	1	1.1, 1.2, 1.8	Actions for stream bank restoration.
GLE - 8: Replace deteriorated storm sewers.	1	1.2	Number of storm sewers replaced.
GLE - 9: Install back-up generators at Water Treatment Plant and Jefferson Avenue Pump Station.	8	8.2	Number of generators installed.
GLE - 10: Implement engineering techniques to prevent erosion along the banks of the Ohio River within Glen Dale.	1	1.2	Actions for river bank erosion.
GLE - 11: Coordinate with Marshall County to prevent stormwater runoff from housing developments in Marshall County into Glen Dale	1, 87	1.2, 1.8, 81	Corrective actions to fix stormwater issues at current developments and educational outreach to prevent issues at future developments.

City of Glen Dale 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
GLE - 12: Coordinate with B&O Railway to prevent hazmat incidents, as Glen Dale water treatment plant is within 40 feet of railway.	5, 8	5.2, 5.3, 5.5, 8.1, 8.2	Communication efforts with B&O Railway.
GLE - 13: Construct a protective barrier/wall that separates B&O Railway from houses in Glen Dale to mitigate potential hazmat incidents.	5, 8	5.3, 8.1	Actions to construct protective barrier.
GLE - 14: Construct web page on the City of Glen Dale's website to inform residents of current emergencies and disasters and how to prepare for emergencies and disasters.	8	8.1, 8.2, 8.3	Creation of web page and number of updates.
GLE - 15: Implement educational classes on the Wireless Emergency Notification System (WENS) to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	1, 8	1.3, 8.1, 8.2, 8.3	Number of classes held and phone numbers obtained.

City of Glen Dale 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
GLE - 16: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

City of McMechen 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MCM – 1: Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	1	1.1, 1.4, 1.5, 1.6, 1.9	Study recommendations for action.	No progress.
MCM – 2: Form a community watershed group to look at stream bank restoration in the Jim's Run area of McMechen.	1	1.1, 1.2	Actions for stream bank restoration.	No progress.
MCM – 3: Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	6, 8	6.1, 8.1, 8.2, 8.3	COOP plans for McMechen.	Have increased security through cameras and lighting at water treatment plant, holding tanks, wells and park.
MCM – 4: Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meetings/ communication with other jurisdictions; current plans.	Fire Department has had yearly meetings with Marshall County EMS Director, Tom Hart.
MCM – 5: Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	5, 6, 8	5.3, 6.1, 8.2, 8.3	Necessary stockpile.	No progress.

City of McMechen 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
MCM - 6: Dredge and remove debris from the three streams (2nd Street Run, Snell's Run and Jim's Run) that are within McMechen and cause flooding.	1	1.2	Actions for stream and creek dredging.
MCM - 7: Educational outreach to residents to teach them of the flooding-related consequences of illegal dumping into streams/ creeks and inform residents on McMechen's program that takes unwanted items (appliances, couches, etc.) to the landfill for a small fee.	1, 8	1.2, 1.8, 8.1	Educational outreach events held.
MCM - 8: Separate combined sewer overflows (CSOs), as no CSOs have been separated.	1	1.2	Number of sewers separated.
MCM - 9: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.
MCM - 10: Repair and replace culverts and improve stormwater drainage systems. throughout the city.	1	1.2	Number of culverts replaced/ repaired and number of improvements made to stormwater drainage system.

City of Moundsville 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
MDS – 1: Coordinate with law enforcement providers and appropriate even organizers to ensure that adequate security is available during large or high-profile events.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 6.1, 8.3	Adequate staffing for events.	City has coordinated with law enforcement for large events, like block parties, etc.
MDS – 2: Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	6, 8	6.1, 8.1, 8.2, 8.3	COOP plans for Moundsville.	No progress.
MDS – 3: Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meetings/ communication with other jurisdictions; current plans.	Have mutual aid agreements with Fire and Police Departments of surrounding communities.
MDS – 4: Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	5, 6, 8	5.3, 6.1, 8.2, 8.3	Necessary stockpile for mitigation.	During COVID-19 pandemic, City worked with Health Department for vaccine distribution.
MDS – 5: Law enforcement to work to develop a plan for oil, natural gas and chemical safety training.	2, 3, 5, 6, 8	5.3, 6.1, 8.3	Training opportunities provided.	Police Department has worked with Hazmat Team.

City of Moundsville 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
MDS - 6: Implement more training for natural hazard events (especially for flooding and extreme weather events) for first responders and volunteers.	1,3,4,5,6,,8,9	1.3, 3.1, 4.1, 5.3, 5.4, 6.1, 8.1, 9.4	Number of training events and number of volunteers recruited.
MDS - 7: Continue storm sewer maintenance and repairs.	1	1.2	Number of sewers maintained.
MDS - 8: Dredge and remove debris from streams and creeks within Moundsville.	1	1.2	Actions for stream and creek dredging.
MDS - 9: Continued coordination with first responders for cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Ohio County 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 1: Create displays for use at public events (health fair, public awareness day, county fair).	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Completed.
OHI – 2: Create materials that are targeted towards tourist population.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	N/A
OHI – 3: Utilize the media for the distribution and publication of hazard information.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Completed.
OHI – 4: Create a public speaking series on hazard related topics.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Completed.
OHI – 5: Ensure that the Red Cross citizen's disaster course is held on a frequent basis.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	N/A, no local American Red Cross office.
OHI – 6: Update the WOCEMA website to provide hazard related information that is easily accessible.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing progress.
OHI – 7: Continue to work with the Ohio County school system to promote hazard mitigation education and awareness and discuss ways to better integrate mitigation into the curriculum.	6,8	1.9, 5.5, 8.3	Existence of school evacuation and lock down plans.	Ongoing progress.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 8: Continue to work with non-governmental organizations (youth, service, professional, religious) to promote mitigation education and awareness.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing progress.
OHI – 9: Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	N/A
OHI – 10: Distribute letters to all property owners in the county regarding potential flood hazards as required for participation in the Community Rating System (CRS).	1, 7	1.1, 1.2	Participation in the CRS user group.	The county does not have enough floodplain policies to make joining the CRS viable at this time.
OHI – 11: Establish all-hazard resource centers to be located in the main office of the county and cities. The centers will act as a repository for information on local hazard identification, preparedness, and mitigation strategies for use by citizens, realtors, and lenders.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Completed.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 12: Continue to hold local course on National Flood Insurance Program (NFIP) for realtors, bankers, and insurers.	1	1.3, 1.4, 1.5, 1.8	Course offering.	FEMA and WV State Floodplain Office is planning to provide courses in 2023.
OHI – 13: Ensure that all shelters have adequate emergency power resources.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Emergency shelter readiness.	Completed.
OHI – 14: Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Coordination MOU's.	N/A
OHI – 15: Develop adequate emergency shelter and evacuation plans for animals (domestic pets, livestock, and wildlife).	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	EMS Plans.	Ongoing progress.
OHI – 16: Teach Community Emergency Response Team (CERT) classes in Ohio County.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	Taught as needed.
OHI – 17: Increase the number of trained citizen emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Ongoing progress; Working with VFDs on Recruitment and Retention.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 18: Conduct annual tabletop disaster exercises with local law enforcement, emergency managers, city and county officials, and other disaster response agencies.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Conducted monthly in EOC and quarterly in commnity.
OHI – 19: Provide information about local, regional, state, and federal training opportunities to fire departments, EMS, ambulance services, and other emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Completed Available on website.
OHI – 20: Continue to conduct National Weather Service Storm Spotter classes.	1	1.9	Course offering.	Conducted bi-annually.
OHI – 21: Work with the municipalities to update all floodplain ordinances adopted prior to 1987.	1	1.4	Updated ordinances.	Updating per state template.
OHI – 22: Provide additional training to county and municipal development officials on NFIP requirements.	1	1.4, 1.5	Participation in NFIP.	FEMA and the WV State Floodplain Office are planning to return to providing courses in 2023.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 23: Review the existing Wheeling-Ohio County EOP and update where necessary based on the recommendations of the Ohio County Hazard Mitigation Plan.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Periodic review of EOP plan.	Reviewed quarterly.
OHI – 24: Ensure that the county and all municipalities adopt the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	Completed.
OHI – 25: Expand the mission and membership of the Wheeling-Ohio County Local Emergency Planning Committee (LEPC) to act as a county-wide disaster task force.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	MOU of Cooperation.	Updating per state template.
OHI – 26: Assist in the development of the Ohio Co. Enterprise Geographical Information System (GIS) and assist with the implementation of the E911 Center's Computer Aided Dispatch system (CAD).	1, 2, 3, 4, 5, 6, 7, 8	1.6, 2.1, 2.2, 3.2, 5.1, 5.2, 5.4	Current GIS and functioning CAD.	Ongoing progress.
OHI – 27: Conduct outreach efforts to educate municipalities about the NFIP and its requirements.	1	1.4, 1.5	Participation in NFIP.	Ongoing progress.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 28: Obtain update information on the number of NFIP policyholders in Ohio County and its municipalities.	1	1.4, 1.5	Database of NFIP policy holder.	Ongoing progress.
OHI – 29: Collect updated information of the number and location of all repetitive loss properties throughout the county and the municipalities.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	Ongoing progress.
OHI – 30: Develop a database of information on all repetitive loss properties including maps.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	Ongoing progress.
OHI – 31: Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	1	1.1, 1.2, 1.6	A database of repetitive property owners.	Ongoing progress.
OHI – 32: Establish a formal process for the city and the county to coordinate disaster related efforts, which will include defining boundaries and establishing responsibilities.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	MOU's of coordination.	N/A
OHI – 33: Conduct a survey of all historic sites that are located in hazard areas.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 2.1, 2.2	A survey of historic sites.	No progress.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 34: Develop mitigation strategies to protect any at-risk historic properties.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Mitigation strategies in EOP and regional plans.	No progress.
OHI – 35: Work with FEMA and WVEMD on the Map Modernization Program to improve FIRMS.	1	1.4, 1.6	Updated Firms.	Updated Firms. FEMA is in the process of updating FIRMS.
OHI – 36: Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	1	1.1, 1.6, 1.9	Coordination efforts.	N/A
OHI – 37: Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials in Ohio County.	5	5.1, 5.2, 5.5	A database of storage sites.	Established by the state in Tier II Submit. Completed.
OHI – 38: Update the WOCEMA GIS system annually with current maps to be utilized in its Critical Infrastructure Program, Hazard Mitigation Program, LEPC, Evacuation and Transportation Routes, and Hazard Vulnerability Plans.	1, 3, 5, 6, 8	1.1, 1.2, 1.4, 1.6, 3.2, 5.2, 5.4, 6.1, 7.1, 7.3, 8.2	Progress towards obtaining aerial imagery.	Ongoing progress.

Ohio County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
OHI – 39: County will continue to seek out opportunities to apply for Hazard Mitigation Assistance (HMA) funds for mitigation reconstruction, elevations, relocations or acquisitions of identified at risk, repetitive loss, non-repetitive loss, substantial damaged, partially or completely demolished or destroyed properties within Ohio County. If mitigation reconstruction is chosen, properties identified as partially or completely demolished, outside of the regulatory floodway, as identified by available flood hazard data, will be reconstructed in accordance with the standards established in the local floodplain ordinance and in accordance with the same conditions as an elevated structure. Ohio County will comply with all acquisition, elevation, relocation and mitigation reconstruction requirements, as per the HMA Guidance.	1, 7	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 7.1, 7.2, 7.3	Solicitation of HMA funds; identification/acquisition of properties; reconstruction as per flood plain ordinance.	Ohio County has a Mitigation Grant in process.

Ohio County 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
OHI - 40: Work with the Ohio County Public Safety District to upgrade fire hydrants and to upgrade pump stations with Emergency Electrical Transfer Switches.	4, 6, 8	6.1	Number of upgraded fire hydrants and pump stations.

Village of Bethlehem 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
BET – 1: Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Water billing system can act as a way to distribute information. Bethlehem also piggybacks off of Ohio County's WENS System, so residents can be alerted about disasters via email, text, and by phone call.
BET – 2: Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Coordination MOU's.	N/A, as no homeless are believed to be living in Bethlehem.
BET – 3: Teach Community Emergency Response Team (CERT) classes.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	Fire Department has taught some classes.
BET – 4: Increase the number of trained citizen emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Have seen an increase in the number of volunteers at Volunteer Fire Department.
BET – 5: Continue to participate in National Weather Service Storm Spotter classes.	1	1.9	Course offering.	No progress.
BET – 6: Ensure that the Village adopt the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	Completed.

City of Bethlehem 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
BET – 7: Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	1	1.1, 1.2, 1.6	A database of repetitive property owners.	N/A, as there are no repetitive loss structures in Bethlehem, due to its hilltop location.
BET – 8: Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	1	1.1, 1.6, 1.9	Coordination efforts.	There is a continued effort between Bethlehem and State of WV DOH to clean catch basins to prevent flooding on state roads within Bethlehem.
BET – 9: Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials.	5	5.1, 5.2, 5.5	A database of storage sites.	No progress.

Village of Bethlehem 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
BET - 10: Implement educational outreach classes on the Wireless Emergency Notification System (WENS) to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	1, 8	1.3, 8.1, 8.2, 8.3	Number of classes held and phone numbers obtained.
BET - 11: Provide CPR and basic safety training classes to Bethlehem's street maintenance crew (6 people),so that they can assist in emergencies, if needed.	1, 4, 5, 6, 8, 9	1.3, 1.8, 3.1, 4.1, 5.3, 5.4, 8.1, 9.4	Number of training classes held.
BET - 12: Shore up vulnerable hillsides with gabion baskets to prevent landslides, especially in the Mt. Lebanon area and on Community Park Road.	2	2.3	Number of vulnerable hillsides stabilized.
BET - 13: Continue to work with State and improve communication and timeliness of debris removal from catch basins along state roads in Bethlehem.	1, 8	1.2, 8.2	Timeliness of debris removal.
BET - 14: Implement strategies and increase funding to monitor oil and gas truck traffic by Police Department to ensure safety on Route 88 in Bethlehem.	5, 8	5.4, 8.2	Police Department hours and funding dedicated to the monitoring oil and gas truck traffic.

Village of Bethlehem 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
BET - 15: Implement strategies/ coordination plans for better organization between Bethlehem Police Department, City of Wheeling Police Department and Ohio County Deputies, when there is an accident on I-470 within Bethlehem.	8	8.1, 8.2, 8.3	Number of meetings to discuss strategies and coordination plans between the three departments.
BET - 16: Increase way finding signage for oil and gas truck drivers through Bethlehem.	5, 8	5.4, 8.1, 8.2	Number of way finding signs posted.
BET - 17: Construct a culvert and catch basin at the end of Cedar Lane to prevent flooding on road, which turns to ice during winter.	1	1.2	Actions for constructing culvert and catch basin.
BET - 18: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Village of Clearview 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
CLE – 1: Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Clearview has set up a Facebook page for where emergency information can be shared.
CLE – 2: Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Coordination MOU's.	Volunteer Fire Department has a verbal agreement that they will share information and that fire station can be used as an emergency shelter.
CLE – 3: Teach Community Emergency Response Team (CERT) classes.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	No progress.
CLE – 4: Increase the number of trained citizen emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Volunteer Fire Department has increased its size to 18 volunteers. There are also 4 paid police officers.
CLE – 5: Continue to participate in National Weather Service Storm Spotter classes.	1	1.9	Course offering.	No progress.
CLE – 6: Ensure that the Village adopt the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	No progress.

Village of Clearview 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
CLE – 7: Develop a database of information on all repetitive loss properties including maps.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	N/A, as there are no repetitive loss structures in Bethlehem, due to its hilltop location.
CLE – 8: Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	1	1.1, 1.6, 1.9	Coordination efforts.	Work in progress.
CLE – 9: Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials.	5	5.1, 5.2, 5.5	A database of storage sites.	Not yet, but need to complete this soon, as oil and gas trucks will be traveling through Clearview to a new well pad.

Village of Clearview 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
CLE - 10: Create and implement a written disaster plan.	1,2, 3, 4, 5, 6, 7, 8, 9	1.8, 1.9, 2.2, 3.1, 4.1, 5.3, 5.4, 6.1, 7.1, 8.1, 8.2, 9.4	Completed plan.
CLE - 11: Continue to identify strategies to mitigate risks from the transportation and/or storage of hazardous materials, due to construction of new well pad near Clearview.	5, 8	5.3, 5.4, 8.2	Database of well pad locations near Clearview and monitoring of oil and gas truck traffic.
CLE - 12: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Town of Triadelphia 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
TRI – 1: Distribute letters to all property owners in the Town regarding potential flood hazards, as required for participation in the Community Rating System (CRS).	1, 7	1.1, 1.2	Participation in the CRS user group.	Yes, letters have been distributed.
TRI – 2: Establish all-hazard resource centers to be located in the main office of the county and cities. The centers will act as a repository for information on local hazard identification, preparedness, and mitigation strategies for use by citizens, realtors, and lenders.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Town Hall has been established as an all-hazard resource center and the community is aware of this.
TRI – 3: Continue to hold local course on National Flood Insurance Program (NFIP) for realtors, bankers, and insurers.	1	1.3, 1.4, 1.5, 1.8	Course offering.	Mayor of Triadelphia attends seminars on NFIP.
TRI – 4: Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Coordination MOU's.	Town of Triadelphia is in constant communication with WOCEMA.

Town of Triadelphia 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
TRI – 5: Develop adequate emergency shelter and evacuation plans for animals (domestic pets, livestock, and wildlife).	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	EMS Plans.	Domestic pets are allowed in Town Hall. Ohio County EMA director is working on plan for livestock.
TRI – 6: Teach Community Emergency Response Team (CERT) classes.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	Triadelphia Volunteer Fire Department teaches these classes.
TRI – 7: Increase the number of trained citizen emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Volunteer Fire Department has seen increase in volunteers.
TRI – 8: Continue to participate in National Weather Service Storm Spotter classes.	1	1.9	Course offering.	No progress.
TRI – 9: Work with the municipalities to update all floodplain ordinances adopted prior to 1987.	1	1.4	Updated ordinances.	N/A
TRI – 10: Provide additional training to municipal development officials on NFIP requirements.	1	1.4, 1.5	Participation in NFIP.	State of West Virginia provides trainings on NFIP and are attended by elected officials.
TRI – 11: Ensure that the Town adopt the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	Adopted.

Town of Triadelphia 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
TRI – 12: Conduct outreach efforts to educate town residents about the NFIP and its requirements.	1	1.4, 1.5	Participation in NFIP.	N/A, as the Town of Triadelphia defers this to banks and lending institutions.
TRI – 13: Obtain updated information on the number of NFIP policyholders in the Town.	1	1.4, 1.5	Database of NFIP policy holder.	No progress.
TRI – 14: Collect updated information of the number and location of all repetitive loss properties.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	The Mayor of Triadelphia and the Ohio County GIS coordinator are aware of where these properties are located.
TRI – 15: Develop a database of information on all repetitive loss properties, including maps.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	These properties are located on village maps.
TRI – 16: Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	1	1.1, 1.2, 1.6	A database of repetitive property owners.	After 2004 Flood, the Mayor and FEMA discussed acquisition with property owners but most were not responsive to acquisition.
TRI – 17: Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	1	1.1, 1.6, 1.9	Coordination efforts.	Ohio County has identified these roads.

Town of Triadelphia 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
TRI – 18: Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials.	5	5.1, 5.2, 5.5	A database of storage sites.	Fuel (to gas stations) is the only hazard transported through town.

Village of Triadelphia 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
TRI - 19: Dredge and remove debris from streams and creeks (Little Wheeling Creek and Middle Creek) within Triadelphia.	1	1.2	Actions for stream and creek dredging.
TRI - 20: Update and improve storm water sewer system to prevent flooding.	1, 8	1.2, 8.2	Number of improvements made.
TRI - 21: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Village of Valley Grove 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
VAL - 1: Ensure that the Village adopt the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	Completed.

Village of Valley Grove 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
VAL - 2: Implement engineering techniques to prevent further creek bank erosion and restore damaged banks along National Road (from Eagle Den's Bar to Valley Motel) to mitigate flooding.	1	1.1, 1.2, 1.8	Actions for stream bank restoration.
VAL - 3: Dredge and remove debris from streams and creeks within Valley Grove.	1	1.2	Actions for stream and creek dredging.
VAL - 4: Initiate an engineering study for storm sewers and drainage development to help prevent flooding and mitigate damage	1	1.2	Hire engineering firm to complete study.
VAL - 5: Implement training classes for Valley Grove Fire Department's members on natural disaster rescue, especially for flooding.	1, 4, 5, 6, 8, 9	1.3, 1.8, 3.1, 4.1, 5.3, 5.4, 8.1, 9.4	Number of training classes held.
VAL - 6: Implement a flood insurance training program for Valley Grove staff and residents.	1	1.1, 1.3, 1.5, 1.8	Number of training classes held and number of residents enrolled in NFIP.
VAL - 7: Set up an informational booth in Valley Grove Town Hall regarding NFIP.	1	1.3, 1.5, 1.8	Actions for creation of booth with educational material.

Village of Valley Grove 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
VAL - 8: Stabilize hillsides, where there have been slips, especially slips into resident's back yards.	2	2.3	Number of vulnerable hillsides fixed.
VAL - 9: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Town of Valley Grove 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WES – 1: Ensure that the Town adopt the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	Completed.

Town of West Liberty 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
WES - 2: Implement engineering techniques to prevent creek bank erosion and restore damaged banks along Short Creek.	1	1.1, 1.2, 1.8	Actions for stream bank restoration.
WES – 3: Dredge and remove debris from Short Creek and other streams/creeks within West Liberty.	1	1.2	Actions for stream and creek dredging.
WES - 4: Remove debris and dredge creeks/streams outside West Liberty that cause flooding within West Liberty.	1	1.2	Actions for stream and creek dredging.
WES - 5: Replace culverts and inlets in storm sewers throughout town to prevent storm sewer issues.	1	1.2	Actions for replacing damaged culverts and inlets.
WES - 6: Maintain (including proper drainage) 1.5 miles of previous State roads (Liberty Street, Richards Road, Sterling Street, etc.), that are now owned by the Town of West Liberty to ensure residents have a means of egress in case of a natural or man-made disaster.	1, 8	1.2, 8.1	Number of roads maintained.

Town of West Liberty 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
WES - 7: Stabilize land around roads that is susceptible to hill slides.	2	2.3	Number of vulnerable hillsides stabilized.
WES - 8: Maintain main roads (Route 88, Apple Pie Ridge Road, Girty's Point Road, Harvey Road, Weidman Run Road, North Fork Road, etc.) in to and out of West Liberty to ensure residents can safely exit and first responders can enter in case of natural or man-made disaster.	1, 2, 3, 4, 5, 6, 8	1.2, 2.3, 3.1, 4.1, 5.1, 6.1, 8.1	Number of roads maintained and condition of roads.
WES - 9: Develop and implement an Emergency/Pandemic Plan with West Liberty University that ensures proper communication between Town of West Liberty Officials and Police Department and West Liberty University Officials and Police Department to protect both residents and students in case of a natural disaster or other emergency.	1, 2, 3, 4, 5, 6, 8, 9	1.2, 2.3, 3.1, 4.1, 5.1, 6.1, 8.1, 9.1, 9.2, 9.3	Implemented plan.

Town of West Liberty 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
WES - 10: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

City of Wheeling 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 1: Create displays for use at public events (health fair, public awareness day, county fair, city events).	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Storm sewer educational outreach has been implemented.
WHE – 2: Create materials that are targeted towards tourist population.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	No progress.
WHE – 3: Utilize the media for the distribution and publication of hazard information.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Hazard information distributed via City's Facebook page.
WHE – 4: Create a public speaking series on hazard related topics.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Fire Department speaks to students/residents regarding hazard topics.
WHE – 5: Ensure that the Red Cross citizen's disaster course is held on a frequent basis.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	Ongoing Progress.
WHE – 6: Update the WOCEMA website to provide hazard related information that is easily accessible.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing Progress.
WHE – 7: Continue to work with the Ohio County school system to promote hazard mitigation education and awareness and discuss ways to better integrate mitigation into the curriculum.	6.8	1.9, 5.5, 8.3	Existence of school evacuation and lock down plans.	Ongoing Progress.

City of Wheeling 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 8: Continue to work with non-governmental organizations (youth, service, professional, religious) to promote mitigation education and awareness.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing Progress.
WHE – 9: Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing Progress.
WHE – 10: Distribute letters to all property owners in the City regarding potential flood hazards as required for participation in the Community Rating System (CRS).	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing Progress.
WHE – 11: Establish all-hazard resource centers to be located in the main office of the City. The centers will act as a repository for information on local hazard identification, preparedness, and mitigation strategies for use by citizens, realtors, and lenders.	1, 7	1.1, 1.2	Participation in the CRS user group.	Information available through the Wheeling Ohio County Emergency Management Association.

City of Wheeling 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 12: Continue to hold local course on National Flood Insurance Program (NFIP) for realtors, bankers, and insurers.	1, 2, 3, 4, 5, 6, 7, 8	1.8, 3.1, 4.1, 5.5, 6.1, 8.1	Public awareness outreach.	Ongoing Progress.
WHE – 13: Ensure that all shelters have adequate emergency power resources.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Emergency shelter readiness.	Ongoing Progress.
WHE – 14: Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	Coordination MOU's.	Ongoing Progress.
WHE – 15: Develop adequate emergency shelter and evacuation plans for animals (domestic pets, livestock, and wildlife).	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 6.1, 8.3	EMS Plans.	Ohio County Emergency Management Director is working on this.
WHE – 16: Teach Community Emergency Response Team (CERT) classes.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 6.1, 7.2, 8.3	Course offering.	Ongoing Progress.
WHE – 17: Increase the number of trained citizen emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	There is now a swift-water rescue team, NAV units and Explorer Programs, who provide volunteers when disasters happen.

City of Wheeling 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 18: Conduct annual tabletop disaster exercises with local law enforcement, emergency managers, city and county officials, and other disaster response agencies.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Ongoing Progress.
WHE – 19: Provide information about local, regional, state, and federal training opportunities to fire departments, EMS, ambulance services, and other emergency responders.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 5.5, 8.3	Implementation of EMS Plan.	Ongoing Progress.
WHE – 20: Continue to conduction National Weather Service Storm Spotter classes.	1	1.9	Course offering.	Ongoing Progress.
WHE – 21: Work with other municipalities to update all floodplain ordinances adopted prior to 1987.	1	1.4	Updated ordinances.	Ohio County EMA oversees all municipalities with floodplain ordinances.
WHE – 22: Provide additional training to county and municipal development officials on NFIP requirements.	1	1.4, 1.5	Participation in NFIP.	Ongoing Progress.

City of Wheeling 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 23: Review the existing Wheeling-Ohio County EOP and update where necessary based on the recommendations of the Regional Hazard Mitigation Plan.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Periodic review of EOP plan.	Ongoing Progress.
WHE – 24: Ensure that the City adopts the revised EOP.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adopted EOP.	EOP has been adopted.
WHE – 25: Expand the mission and membership of the Wheeling-Ohio County Local Emergency Planning Committee (LEPC) to act as a county-wide disaster task force.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	MOU of Cooperation.	Ongoing Progress.
WHE – 26: Assist in the development of the Ohio Co. Enterprise Geographical Information System (GIS) and assist with the implementation of the E911 Center's Computer Aided Dispatch system (CAD).	1, 2, 3, 4, 5, 6, 7, 8	1.6, 2.1, 2.2, 3.2, 5.1, 5.2, 5.4	Current GIS and functioning CAD.	Ongoing Progress.
WHE – 27: Conduct outreach efforts to educate municipalities about the NFIP and its requirements.	1	1.4, 1.5	Participation in NFIP.	Information regarding NFIP requirements is available at the city building.

City of Wheeling 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 28: Obtain updated information on the number of NFIP policyholders in City.	1	1.4, 1.5	Database of NFIP policy holder.	Ongoing Progress.
WHE – 29: Collect updated information of the number and location of all repetitive loss properties throughout the City.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	FEMA sends this information to the City.
WHE – 30: Develop a database of information on all repetitive loss properties including maps.	1	1.1, 1.2, 1.6	Database of repetitive loss properties.	Ongoing progress.
WHE – 31: Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	1	1.1, 1.2, 1.6	A database of repetitive property owners.	Ongoing progress.
WHE – 32: Establish a formal process for the city and the county to coordinate disaster related efforts, which will include defining boundaries and establishing responsibilities.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	MOU's of coordination.	Ongoing progress.
WHE – 33: Conduct a survey of all historic sites that are located in hazard areas.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 2.1, 2.2	A survey of historic sites.	State of West Virginia has completed this.

City of Wheeling 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WHE – 34: Develop mitigation strategies to protect any at-risk historic properties.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Mitigation strategies in EOP and regional plans.	Ongoing progress.
WHE – 35: Work with FEMA and WVEMD on the Map Modernization Program to improve FIRMS.	1	1.4, 1.6	Updated Firms.	City provides this information and Fire Department shares information.
WHE – 36: Work with WV Department of Highway to identify areas of frequent roadway flooding and develop mitigation strategies.	1	1.1, 1.6, 1.9	Coordination efforts.	Yes, Fire and Police Departments work with WOCEMA to develop mitigation strategies.
WHE – 37: Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials in City and County.	5	5.1, 5.2, 5.5	A database of storage sites.	Yes, there are plans for the Oil and Gas Industry and other local companies that transport hazardous materials, including Ziegenfelder's, Hapchuk Disposal Services and Liquid Assets Disposal.
WHE - 38: Continue separation of combined sewer overflows (CSOs).	1	1.2	Number of sewers separated.	Ongoing progress.

City of Wheeling 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
WHE - 39: Dredge and remove debris from streams and creeks (Big Wheeling Creek and Middle Wheeling Creek).	1	1.2	Actions for stream and creek dredging.
WHE - 40: Establish property owner assistance fund to assist homeowners living in floodplain with mitigation improvements.	1	1.5, 1.8	Establishment and use of fund.
WHE - 41: Educate residents on City's program that will pick up appliances, couches, etc. and transport them to landfill for free to prevent illegal dumping along creek banks.	1, 8	1.3, 8.1	Number of outreach events conducted and number of residents aware of program.
WHE - 42: Establish capital improvement fund that assists the Public Works Department, so that funds are available for stream and creek maintenance.	1	1.2	Number of streams and creeks maintained.
WHE - 43: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.
WHE - 44: Construct tornado shelter in new Fire Department Headquarters.	1, 8	1.9, 8.3	Completed construction of tornado shelter.

Wetzel County 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WET – 1: Update the plan to monitor and clean storm water drainage systems within municipalities.	1	1.2	Updated plan.	Ongoing progress.
WET – 2: Construct floodwalls in flood prone areas and where feasible.	1	1.1, 1.2	Potential sites for flood wall.	Ongoing progress.
WET – 3: Create flood control dams in flood prone areas.	1, 7	1.1, 7.1, 7.2, 7.3	Potential sites for dam.	Ongoing progress.
WET – 4: Coordinate with the WVDOH to conduct culvert inspections throughout the county.	1	1.1, 1.2	Outcome of coordinated effort.	Ongoing progress.
WET – 5: Strategically place several rain gauges throughout Wetzel County. Periodically check gauges and report results to county representatives.	1	1.3, 1.4, 1.6, 1.8	A database of rainfall readings.	Ongoing progress.
WET – 6: Instate a county-wide permitting process which will require residents and/or developers to file a permit with the county before beginning any new construction as a means of regulating floodplain development.	1	1.1, 1.2, 1.4, 1.5, 1.6	Progress towards a county-wide permitting process.	Ongoing progress.

Wetzel County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WET – 7: Instate county-wide building codes, which will regulate the number of buildings and the materials used in buildings that are constructed in a floodplain.	1	1.1, 1.2, 1.3, 1.4	Progress towards county-wide building code.	Ongoing progress.
WET – 8: Continue to apply for Federal funding to raise or move at risk structures (both RL and non-RL properties) within floodplains.	1	1.1, 1.2, 1.3	Federal funding application(s).	Ongoing progress.
WET – 9: Continue to apply for funding for projects that will increase the county's CRS.	1, 7	1.1, 1.2	Participation in CRS user group.	Ongoing progress.
WET – 10: Coordinate with local fire departments to designate alternative routes with signage.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	An evacuation plan with signage funding alternatives.	Ongoing progress.
WET – 11: Coordinate with the West Virginia DOH to create more contracts for emergency snow removal.	1	1.9	Coordination with WVDOT.	Ongoing progress.
WET – 12: Increase the amount of snow removal equipment on county routes to speed up snow removal process.	1	1.9	Acquisition of equipment.	Ongoing progress.

Wetzel County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WET – 13: Update and distribute an informational brochure describing the proper safety procedures to carry out during a severe thunderstorm.	1	1.8	Updated brochure.	Ongoing progress.
WET – 14: Coordinate efforts with local media to provide earlier warning to residents of impending hailstorms.	1	1.8	Coordination with local media.	Ongoing progress.
WET – 15: Coordinate with the National Weather Service in Pittsburgh, Pennsylvania to warn residents of impending sever wind or tornado conditions.	1	1.8	Coordination efforts.	Ongoing progress.
WET – 16: Enforce county-wide building codes that model the statewide 90 mph wind load rating.	1	1.4	Enforcement actions.	Ongoing progress.
WET – 17: Instate county-wide building codes which will regulate the number of buildings and the material used in buildings that are constructed.	1	1.1, 1.2, 1.4, 1.5	Progress towards county-wide building code and prescriptive building materials.	Ongoing progress.

Wetzel County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WET – 18: Reduce amount of landslide occurrences in Wetzel County by monitoring clear cutting operations.	1, 2	2.1	A year to year comparison of number of landslides/land subsidence.	Ongoing progress.
WET – 19: Develop and 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.	3	3.1	Informational brochure.	Ongoing progress.
WET – 20: Coordinate with local public service districts to expand system capabilities.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adequate water supply for service during hazard event.	Ongoing progress.
WET – 21: Develop an informational brochure to distribute to local farmers and residents.	1, 3, 4, 6, 8	1.3, 1.8, 3.1, 3.2, 4.1, 6.1, 8.1, 8.2	Public awareness.	Ongoing progress.
WET – 22: Publicize locations where residents can obtain water during severe drought conditions.	1, 2, 3, 4, 5, 6, 7, 8	1.3, 1.8, 3.1, 3.2, 4.1, 6.1, 8.1, 8.2	Public awareness.	Ongoing progress.

Wetzel County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WET – 23: Distribute information concerning the leading causes of wildfires and steps the general public can take to avoid starting wildfires.	4	4.1	Information media.	Ongoing progress.
WET – 24: Coordinate with the power company to clear trees and other debris from electric lines throughout the county.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Coordination as per EOP and regional plan.	Ongoing progress.
WET – 25: Update terrorist annexes in county Emergency Operations Plans (EOPs).	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Updated plans.	Ongoing progress.
WET – 26: Make the public aware of how to prepare for a bomb threat and who to contact if there is a threat.	6	6.1	Informational material dissemination.	Ongoing progress.
WET – 27: Perform commodity flow studies to further assess when, where, and what hazardous materials can pass through and into the county.	5	5.1, 5.2, 5.3, 5.4	A commodity flow study.	Ongoing progress.
WET – 28: Increase public education and awareness regarding hazardous materials (HAZMAT) incidents.	5	5.5	Number of pamphlets or events that educate public distributed/ held.	Ongoing progress.

Wetzel County 2017 Plan Projects (Continued)

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
WET – 29: County will continue to seek out opportunities to apply for Hazard Mitigation Assistance (HMA) funds for mitigation reconstruction, elevations, relocations or acquisitions of identified at risk, repetitive loss, non-repetitive loss, substantial damaged, partially or completely demolished or destroyed properties within Wetzel County. If mitigation reconstruction is chosen, properties identified as partially or completely demolished, outside of the regulatory floodway, as identified by available flood hazard data, will be reconstructed in accordance with the standards established in the local floodplain ordinance and in accordance with the same conditions as an elevated structure. Wetzel County will comply with all acquisition, elevation, relocation and mitigation reconstruction requirements, as per the HMA Guidance.	1.7	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 7.1, 7.2, 7.3	Solicitation of HMA funds; identification/acquisition of properties; reconstruction as per flood plain ordinance.	Ongoing progress.

Town of Hundred 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
HUN – 1: Coordinate with local fire departments to designate alternative routes with signage.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	An evacuation plan with signage funding alternatives.	No Progress.
HUN – 2: Reduce the amount of landslide occurrences in Wetzel County by monitoring clear cutting operations.	1, 2	2.1	A year to year comparison of number of landslides/land subsidence.	Ongoing Progress.

Town of Hundred 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
HUN - 3: Map stormwater drainage system.	1	1.2	Completed stormwater map.
HUN - 4: Repair and upgrade stormwater drainage system.	1	1.2	Actions for improvements to stormwater drainage system.
HUN - 5: Dredge and remove debris from streams and creeks within and outside of Hundred.	1	1.2	Actions for stream and creek dredging.
HUN - 6: Implement engineering techniques to prevent and repair stream bank erosion.	1	1.1, 1.2, 1.8	Actions for stream bank restoration.
HUN - 7: Improve communication between the Town of Hundred and Wetzel County Health Department during pandemics.	9	9.2	Actions for pandemic communication plan/ emergency plan between the Town of Hundred and Wetzel County Health Department.
HUN - 8: Create a testing/ vaccine distribution site during pandemics.	8, 9	8.1, 9.2, 9.3, 9.4	Designated site within the Town of Hundred.
HUN - 9: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

City of New Martinsville 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
NEW – 1: Update the plan to monitor and clean storm water drainage systems within municipalities.	1	1.2	Updated plan.	Ongoing progress.
NEW – 2: Construct floodwalls in flood prone areas and where feasible.	1	1.1, 1.2	Potential sites for flood wall.	No progress.
NEW – 3: Create flood control dams in flood prone areas.	1, 7	1.1, 7.1, 7.2, 7.3	Potential sites for dam.	No progress.
NEW – 4: Continue to apply or Federal funding to raise or move at risk structures (both RL and non-RL properties) within floodplains.	1	1.1, 1.2, 1.3	Federal funding application(s).	Currently, applying for funding to relocate New Martinsville Fire Department out of floodplain, but will need additional funding.
NEW – 5: Coordinate with local fire departments to designate alternative routes with signage.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	An evacuation plan with signage funding alternatives.	No progress.

City of New Martinsville 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
NEW - 6: Relocate New Martinsville Fire Department out of floodplain.	1	1.1, 1.2, 1.3	New Fire Department not located in floodplain.
NEW - 7: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

City of Paden City 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
PAD – 1: Construct flood walls in flood prone areas and where feasible.	1	1.1, 1.2	Potential sites for flood wall.	No progress.
PAD – 2: Create flood control dams in flood prone areas.	1, 7	1.1, 7.1, 7.2, 7.3	Potential sites for dam.	No progress.
PAD – 3: Continue to apply for Federal funding to raise or move at risk structures (both RL and non-RL properties) within floodplains.	1	1.1, 1.2, 1.3	Federal funding application(s).	No progress.
PAD – 4: Coordinate with local fire departments to designate alternative routes with signage.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	An evacuation plan with signage funding alternatives.	N/A for Route 2, as that is the only main route in and out of the City; however, smaller county roads could be used and should be explored.

City of Paden City 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
PAD - 5: Dredge and remove debris from Ingram Creek within Paden City.	1	1.2	Actions for stream and creek dredging.
PAD - 6: Coordinate with Wetzel County to dredge Ingram Creek outside of Paden City.	1	1.2	Actions for stream and creek dredging.
PAD - 7: Repair and improve storm sewer systems.	1	1.2	Actions for storm sewer improvements.
PAD - 8: Implement educational outreach classes on the WEN system to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	1, 8	1.3, 8.1, 8.2, 8.3	Number of classes held and phone numbers obtained.
PAD - 9: Construct a protective barrier/wall that separates CSX Railway from houses and City Park to mitigate potential hazmat incidents.	5, 8	5.3, 8.1	Actions to construct protective barrier.
PAD - 10: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Town of Pine Grove 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
PIN – 1: Coordinate with local fire departments to designate alternative routes with signage.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	An evacuation plan with signage funding alternatives.	No progress.
PIN – 2: Coordinate with local public service districts to expand systems capabilities.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	Adequate water supply for service during hazard event.	A system is now in place, "Red Line", that notifies all Wetzel County residents of emergencies.

Town of Pine Grove 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
PIN – 3: Dredge and remove debris from streams and creeks within Pine Grove.	1	1.2	Actions for stream and creek dredging.
PIN - 4: Create an emergency shelter that is located outside the floodplain.	1, 8	8.1, 8.2	New shelter constructed outside of floodplain.
PIN - 5: Create and implement a communication plan between the Town of Pine Grove and gas companies working in the vicinity to track when accidents happen on the road.	5, 8	5.3, 5.4, 8.1, 8.2	Implemented communication plan.
PIN - 6: Implement a mutual aid agreement between Town of Pine Grove Police and Fire Departments for backup, when needed.	1,2,3,4,5,6,7,8,9	1.9, 8.2, 8.3	Implemented mutual aid agreement.
PIN - 7: Educate and train residents on flood and natural disaster preparation.	1, 2, 3, 4, 5, 6, 7, 8, 9	1.8, 3.1, 4.1, 5.4, 6.1, 8.1, 9.2	Number of training classes held.
PIN - 8: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Town of Smithfield 2017 Plan Projects

2017 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure	Progress Made Since 2017
SMI – 1: Coordinate with local fire departments to designate alternative routes with signage.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.5, 8.3	An evacuation plan with signage funding alternatives.	No progress.
SMI – 2: Update and distribute an information brochure describing the proper safety procedures to carry out during a severe thunderstorm.	1	1.8	Updated brochure.	FEMA pamphlets about flooding and storm readiness have been distributed.

Town of Smithfield 2022 Plan Projects

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
SMI - 3: Dredge and remove debris from streams and creeks within Smithfield.	1	1.2	Actions for stream and creek dredging.
SMI - 4: Implement engineering techniques to prevent and repair stream and creek bank erosion.	1	1.1, 1.2, 1.8	Actions for stream bank restoration.
SMI - 5: Create an emergency shelter that is located outside the floodplain.	1, 8	8.1, 8.2	New shelter constructed outside of floodplain.
SMI - 6: Establish and implement a coordinated emergency plan with surrounding fire, police departments and emergency services, as the Town of Smithfield does not have any of these services.	1,2,3,4,5,6,7,8,9	1.9, 8.2, 8.3	A coordinated emergency plan with surrounding communities.
SMI - 7: Construct an emergency exit road out of the Town of Smithfield, as severe flooding covers current roads leading out of town (Old Route 20 could be used for this).	1,2,3,4,5,6,7,8,9	1.3, 1.8, 8.1	A rehabilitated former Route 20 road that can be used as an emergency exit out of town.
SMI - 8: Implement educational training programs/classes for residents on flooding /severe thunderstorm preparedness.	1, 8	1.8, 8.1	Number of training programs/ classes held.

Town of Smithfield 2022 Plan Projects (Continued)

2022 Plan Project Number	Applies to Goal	Applies to Objective	Performance Measure
SMI - 9: Attend educational trainings/classes floodplain management.	1	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7	Number of trainings/classes attended by floodplain manager and elected officials.
SMI - 10: Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meeting/ communication with other jurisdictions, current plans.

Chapter 6.0 Implementation of Mitigation Strategies/Actions

Each local jurisdiction was asked to review previously identified projects, priorities and status of each project within their jurisdiction. They were also asked to identify any new action/project needed in the foreseeable future. All identified mitigation projects and actions are presented in Chapter 5.0. Implementation of these projects/actions is the focus of this chapter. All projects and actions mitigate the effects of fifteen hazards identified for Region X. In order to optimize resource allocation for implementation, it was necessary to prioritize the identified project/actions.

All local jurisdictions were asked to prioritize projects within their jurisdiction based on the criteria that roughly resembles the STAPLEE method, which uses seven criteria to evaluate a mitigation action. The criteria are as follows:

Social Impacts: Consider whether the public would support implementation of the project. If so, priority likely rises.

Technical Feasibility: Consider whether the project can be done and if it will yield the intended outcomes. If yes, priority would likely rise.

Administrative Requirements: Consider the staffing, funding, and maintenance requirements of the project. If current capabilities can successfully manage and sustain the project, priority would be strengthened.

Political Impacts: Consider the acceptability of the project from the political frame. If it is likely to cause political upheaval, it would receive a lower priority.

Legal Ramifications: Consider whether the project can be lawfully implemented. If not, the project cannot be listed.

Environmental Impacts: Consider whether there would be negative consequences to environmental assets, should the project be implemented. If assets are impact, priority would be likely to fall.

Economic Impacts/Cost Benefit: A brief "benefit cost review" per Federal Emergency Management Agency (FEMA) Publication 386-5: Using Benefit Cost Review in Mitigation Planning was conducted for each project to determine the "pros" and "cons" of each project as it related to project prioritization. Maximizing the use of available funds would positively affect a project's priority.

Local jurisdictions prioritized the projects based on the qualitative application of the above criterion. The Mayors, County Commissions, law enforcement, fire chiefs and Belomar staff were involved in this process. EMA directors also participated in the prioritization process of the county-wide projects. Actions to mitigate flooding are among the top project priorities, as this is a frequent and devastating hazard that affects Region X. The project priority list by jurisdiction is presented on the next page.

Table 6.1

2022 Project Priorities for Jurisdictions in Region X

2022 Plan Project Number	Description	Priority
Marshall County		
MAR - 43	Wire all pump houses and pump stations for the ability to connect to a generator at all Public Service Districts (PSDs) in the Marshall County.	1
MAR - 44	Apply for mitigation funding for generators to be installed at pump houses and pump stations at all Public Service Districts (PSDs) in Marshall County.	1
Benwood		
BEN – 4	Continue with flood wall improvements, including but not limited to: 1) increase flood wall height by four feet so that it is eligible for accreditation; 2) install SCADA system; 3) continue debris removal and maintenance; and 4) replace pumps.	1
BEN – 5	Continue separation of combined sewer overflows (CSOs) in Center and North Benwood.	2
BEN – 6	Maintain "Subway Tunnel", a culvert that runs under Route 2 and North Benwood from Boggs Run area.	2
BEN – 7	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Cameron		
CAM – 6	Dredge and remove debris from streams and creeks (Upper Grave Creek Tributary) within Cameron.	1
CAM – 7	Coordinate with Marshall County to dredge and remove debris from streams and creeks outside Cameron that cause flooding within Cameron.	1
CAM – 8	Implement engineering techniques to prevent creek bank erosion along Upper Grave Creek Tributary within Cameron.	2

2022 Plan Project Number	Description	Priority
CAM – 9	Create a community volunteer group to help remove litter in creek and around edges of creek to help prevent flooding.	3
CAM – 10	Purchase more equipment and hire more city employees to maintain land along creeks in City.	4
CAM – 11	Replace deteriorated storm sewers.	2
CAM – 12	Separate combined storm sewer overflows (CSOs).	1
CAM – 13	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
CAM – 14	Apply for mitigation funding for a generator to be installed at Cameron's Water Treatment Plan.	6
Glen Dale		
GLE - 5	Dredge Little Grave Creek and remove debris to prevent flooding within the city limits of Glen Dale.	1
GLE - 6	Coordinate with Marshall County to dredge and remove debris from Little Grave Creek in Marshall County.	1
GLE - 7	Implement engineering techniques to prevent creek bank erosion along Little Grave Creek.	2
GLE - 8	Replace deteriorated storm sewers.	3
GLE - 9	Install back-up generators at Water Treatment Plant and Jefferson Avenue Pump Station.	3
GLE - 10	Implement engineering techniques to prevent erosion along the banks of the Ohio River within Glen Dale.	2
GLE - 11	Coordinate with Marshall County to prevent stormwater runoff from housing developments in Marshall County into Glen Dale	4
GLE - 12	Coordinate with B&O Railway to prevent hazmat incidents, as Glen Dale water treatment plant is within 40 feet of railway.	2
GLE - 13	Construct a protective barrier/wall that separates B&O Railway from houses in Glen Dale to mitigate potential hazmat incidents.	5

2022 Plan Project Number	Description	Priority
GLE - 14	Construct web page on the City of Glen Dale's website to inform residents of current emergencies and disasters and how to prepare for emergencies and disasters.	2
GLE - 15	Implement educational outreach classes on the Wireless Emergency Notification System "WENS" to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	2
GLE - 16	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
McMechen		
MCM - 6	Dredge and remove debris from the three streams (2nd Street Run, Snell's Run and Jim's Run) that are within McMechen and cause flooding.	1
MCM - 7	Educational outreach to residents to teach them of the flooding-related consequences of illegal dumping into streams/creeks and inform residents on McMechen's program that takes unwanted items (appliances, couches, etc.) to the landfill for a small fee.	3
MCM - 8	Separate combined sewer overflows (CSOs), as no CSOs have been separated.	2
MCM - 9	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
MCM - 10	Repair and replace culverts and improve stormwater drainage systems throughout the city.	1
Moundsville		
MDS - 6	Implement training for natural hazard events (especially for flooding and extreme weather events) for first responders and volunteers.	2
MDS - 7	Continue storm sewer maintenance and repairs.	2
MDS - 8	Dredge and remove debris from streams and creeks within Moundsville.	1
MDS - 9	Continued coordination with first responders for cooperation to assist in collaborative planning.	1

2022 Plan Project Number	Description	Priority
Ohio County		
OHI- 40	Work with the Ohio County Public Safety District to upgrade fire hydrants and to upgrade pump stations with Emergency Electrical Transfer Switches.	1
Bethlehem		
BET - 10	Implement educational outreach classes on the Wireless Emergency Notification System (WENS) to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	1
BET - 11	Provide CPR and basic safety training classes to Bethlehem's street maintenance crew (6 people),so that they can assist in emergencies, if needed.	3
BET - 12	Shore up vulnerable hillsides with gabion baskets to prevent landslides, especially in the Mt. Lebanon area and on Community Park Road.	2
BET - 13	Continue to work with State and improve communication and timeliness of debris removal from catch basins along state roads in Bethlehem.	4
BET - 14	Implement strategies and increase funding to monitor oil and gas truck traffic by Police Department to ensure safety on Route 88 in Bethlehem.	5
BET - 15	Implement strategies/coordination plans for better organization between Bethlehem Police Department, City of Wheeling Police Department and Ohio County Deputies, when there is an accident on I-470 within Bethlehem.	4
BET - 16	Increase way finding signage for oil and gas truck drivers through Bethlehem.	5
BET - 17	Construct a culvert and catch basin at the end of Cedar Lane to prevent flooding on road, which turns to ice during winter.	6

2022 Plan Project Number	Description	Priority
BET - 18	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Clearview		
CLE - 10	Create and implement a written disaster plan.	1
CLE - 11	Continue to identify strategies to mitigate risks from the transportation and/or storage of hazardous materials, due to construction of new well pad near Clearview.	2
CLE - 12	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Triadelphia		
TRI - 19	Dredge and remove debris from streams and creeks (Little Wheeling Creek and Middle Creek) within Triadelphia.	1
TRI - 20	Update and improve storm water sewer system to prevent flooding.	2
TRI - 21	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Valley Grove		
VAL - 2	Implement engineering techniques to prevent further creek bank erosion and restore damaged banks along National Road (from Eagle Den's Bar to Valley Motel) to mitigate flooding.	2
VAL - 3	Dredge and remove debris from streams and creeks within Valley Grove.	1
VAL - 4	Initiate an engineering study for storm sewers and drainage development to help prevent flooding and mitigate damage	3
VAL - 5	Implement training classes for Valley Grove Fire Department's members on natural disaster rescue, especially for flooding.	3
VAL - 6	Implement a flood insurance training program for Valley Grove staff and residents.	4
VAL - 7	Set up an informational booth in Valley Grove Town Hall regarding NFIP.	2

2022 Plan Project Number	Description	Priority
VAL - 8	Stabilize hillsides, where there have been slips, especially slips into resident's back yards.	2
VAL - 9	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
West Liberty		
WES - 2	Implement engineering techniques to prevent creek bank erosion and restore damaged banks along Short Creek.	2
WES - 3	Dredge and remove from Short Creek and other streams/creeks within West Liberty.	1
WES - 4	Coordinate with Ohio County to dredge and remove debris creeks/streams outside West Liberty that cause flooding within West Liberty.	1
WES - 5	Replace culverts and inlets in storm sewers throughout town to prevent storm sewer issues.	3
WES - 6	Maintain (including proper drainage) 1.5 miles of previous State roads (Liberty Street, Richards Road, Sterling Street, etc.), that are now owned by the Town of West Liberty to ensure residents have a means of egress in case of a natural or man-made disaster.	3
WES - 7	Stabilize land around roads that is susceptible to hill slides.	2
WES - 8	Maintain main roads (Route 88, Apple Pie Ridge Road, Girty's Point Road, Harvey Road, Weidman Run Road, North Fork Road, etc.) in to and out of West Liberty to ensure residents can safely exit and first responders can enter in case of natural or man-made disaster.	2
WES - 9	Develop and implement an Emergency/Pandemic Plan with West Liberty University that ensures proper communication between Town of West Liberty Officials and Police Department and West Liberty University Officials and Police Department to protect both residents and students in case of a natural disaster or other emergency.	2

2022 Plan Project Number	Description	Priority
WES - 10	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Wheeling		
WHE - 39	Dredge and remove debris from streams and creeks (Big Wheeling Creek and Middle Wheeling Creek).	1
WHE - 40	Establish property owner assistance fund to assist homeowners living in floodplain with mitigation improvements.	3
WHE - 41	Educate residents on City's program that will pick up appliances, couches, etc. and transport them to landfill for free to prevent illegal dumping along creek banks.	3
WHE - 42	Establish capital improvement fund that assists the Public Works Department, so that funds are available for stream and creek maintenance.	3
WHE - 43	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
WHE - 44	Construct tornado shelter in new Fire Department Headquarters.	1

2022 Plan Project Number	Description	Priority
Wetzel County		
	No new projects for Wetzel County.	
Hundred		
HUN - 3	Map stormwater drainage system.	3
HUN - 4	Repair and upgrade stormwater drainage system.	3
HUN - 5	Dredge and remove debris from streams and creeks within and outside of Hundred.	1
HUN - 6	Implement engineering techniques to prevent and repair stream bank erosion.	2
HUN - 7	Improve communication and coordination between the Town of Hundred and Wetzel County Health Department during pandemics.	4
HUN - 8	Create a testing/vaccine distribution site during pandemics.	4
HUN - 9	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
New Martinsville		
NEW - 6	Relocate New Martinsville Fire Department out of floodplain.	1
NEW - 7	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Paden City		
PAD – 5	Dredge and remove debris from Ingram Creek within Paden City.	1
PAD – 6	Coordinate with Wetzel County to dredge and remove debris from Ingram County outside of Paden City.	1
PAD – 7	Upgrade storm sewers.	2
PAD – 8	Continue with combined sewer overflow (CSO) separation.	2
PAD - 9	Perform community outreach to educate and sign- up residents for Wireless Emergency Notification System (WENS).	2

2022 Plan Project Number	Description	Priority
PAD - 10	Construct a protective barrier/wall that separates CSX Railway from houses and City Park to mitigate potential hazmat incidents.	3
PAD - 11	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Pine Grove		
PIN – 3	Dredge and remove debris from streams and creeks within Pine Grove.	1
PIN – 4	Create an emergency shelter that is located outside the floodplain.	2
PIN – 5	Create and implement a communication plan between the Town of Pine Grove and gas companies working in the vicinity to track when accidents happen on the road.	3
PIN – 6	Implement a mutual aid agreement between Town of Pine Grove Police and Fire Departments for backup, when needed.	2
PIN - 7	Educate and train residents on flood and natural disaster preparation.	2
PIN – 8	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1
Smithfield		
SMI - 3	Dredge and remove debris from streams and creeks within Smithfield.	1
SMI - 4	Implement engineering techniques to prevent and repair stream and creek bank erosion.	2
SMI - 5	Create an emergency shelter that is located outside the floodplain.	2
SMI - 6	Establish and implement a coordinated emergency plan with surrounding fire, police departments and emergency services, as the Town of Smithfield does not have any of these services.	1
SMI - 7	Construct an emergency exit road out of the Town of Smithfield, as severe flooding covers current roads leading out of town (Old Route 20 could be used for this).	3

2022 Plan Project Number	Description	Priority
SMI - 8	Implement educational training programs/classes for residents on flooding /severe thunderstorm preparedness.	3
SMI - 9	Attend educational trainings/classes on floodplain management.	3
SMI - 10	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	1

Project Status and Implementation

For each prioritized project, its status and anticipated time frame for completion is included after consultation with the involved agencies. Although in many instances project delivery may depend on the joint efforts of more than one agency, a lead coordinating agency is identified for each project. Each project may also be eligible for multiple funding sources. Table 6.2 showing project specific implementation is included here.

Table 6.2

2017 and 2022 Project Implementation for Jurisdictions in Region X

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Marshall County						
MAR – 1 (2017)	Attempt to instate a countrywide permitting process through the planning commissions and assessor's office, which will require residents and/or developers to file a permit with the county before beginning any new construction in the floodplain.	Ongoing progress	5 yrs.	Local	Floodplain Coordinator; Assessor; Planning Commission	Prevention
MAR – 2 (2017)	Review additional permitting processes used in other counties to determine if wording regarding the use of certain building materials is appropriate in the county floodplain ordinance.	Ongoing progress	Ongoing	Local	Planning Commission	Prevention
MAR – 3 (2017)	Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	Ongoing progress	Ongoing	NRCS; Local	NRCS	Natural Resource Protection
MAR – 4 (2017)	Continue to undertake stream cleaning and stream bank restoration projects throughout the county as a means of lessening flood damage to personal property and roadways.	Ongoing progress	Ongoing	NRCS; Local	NRCS	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 5 (2017)	Form a community watershed group to look at stream bank restoration in the Cameron area.	Ongoing progress	5 yrs.	N/A	NRCS;Cameron	Natural Resource Protection
MAR – 6 (2017)	Form a community watershed group to look at stream bank restoration in the Jim's Run area of McMechen.	Ongoing progress	5 yrs.	N/A	NRCS; McMechen	Natural Resource Protection
MAR – 7 (2017)	Form a community watershed group to look at stream bank restoration in the Little Grave Creek Watershed.	Ongoing progress	5 yrs.	N/A	NRCS; Glen Dale	Natural Resource Protection
MAR – 8 (2017)	Coordinate county efforts to meet the requirements of becoming a participant in the CRS.	Ongoing progress	5 yrs.	N/A	NRCS; Glen Dale	Natural Resource Protection
MAR - 9 (2017)	Continue projects to upgrade the flood wall in the City of Benwood.	Ongoing progress	5 yrs.	USACE; WVDEP; HMGP	USACE; WVDEP; City of Benwood	Structural Projects
MAR – 10 (2017)	10: Develop early warning and public notification capabilities through the use of such items as "Reverse 911" and AM radio stations.	Mass notification system (WENS) is in place.	Complet-ed	Local; WVEMD	Marshall County EMA	Public Awareness
MAR – 11 (2017)	Continue to coordinate with the National Weather Service in Pittsburgh, Pennsylvania to warn residents of impending severe thunderstorm conditions.	NWS Pittsburgh can be contacted via emergency communication radio systems.	Ongoing	N/A	911; EMA; NOAA	Public Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 12 (2017)	Continue coordinating efforts with local media to post advance warnings of hailstorms.	Ongoing progress	Ongoing	N/A	911; EMA; NOAA	Public Awareness
MAR – 13 (2017)	Ensure inclusion of wind hazards in public information campaigns.	Ongoing progress	Ongoing	Local	Marshall County EMA	Public Awareness
MAR – 14 (2017)	In coordination with monitoring floodplain development, continue to encourage the general public to use materials that can withstand moderate land subsidence during construction.	Ongoing progress	Ongoing	N/A	Planning commission	Prevention
MAR – 15 (2017)	Educate the public as to the earthquake risk in West Virginia. Dissemination of information can be via elementary school distribution.	Ongoing progress	Ongoing	Local	EMA; Schools	Public Awareness
MAR – 16 (2017)	Distribute informational brochures developed by the NRCS to local farmers and residents.	Ongoing progress	Ongoing	WVU	WVU Extension Farm Bureau	Public Awareness
MAR – 17 (2017)	Educate local residents on the benefits of conserving water.	Ongoing progress	Ongoing	Local	PSD's; Health Dept.	Public Awareness
MAR – 18 (2017)	Distribute information concerning the leading causes of wildfires, steps the general public can take to avoid starting wildfires, and instructions for controlled burns	Ongoing progress	Ongoing	WVDF	Division of Forestry	Public Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 19 (2017)	Produce public awareness campaigns through local media.	Public awareness campaigns are presented at county-wide events and functions.	Ongoing	Local; DHHR	Health Dept.; Reynolds Memorial Hospital; Marshall County EMA	Public Awareness
MAR – 20 (2017)	Continue pandemic flu planning efforts.	Ongoing progress with Marshall County Health Department	Ongoing	Local DHHR	Health Dept.	Emergency Services
MAR – 21 (2017)	Strengthen existing landline communication networks.	Ongoing progress	5 yrs.	Telcos	Telcos	Prevention
MAR – 22 (2017)	Continue efforts to construct towers to facilitate better cellular and wireless communications.	Ongoing progress	Maintenance Ongoing	Telcos	Telcos; 911; Marshall County EMA	Structural Projects
MAR – 23 (2017)	Once towers are constructed, negotiate with owners to use towers during emergency situations.	Ongoing progress	Ongoing Access	N/A	911; Marshall County EMA	Emergency Services
MAR – 24 (2017)	Undertake a public education campaign regarding proper generator usage.	Ongoing progress	Ongoing	Local	EMA; AEP	Public Awareness
MAR – 25 (2017)	Encourage local gas companies to undertake a public education campaign regarding resident and company rights surrounding gas-line rights-of-way.	Ongoing progress	Ongoing	N/A	Mountaineer Gas	Public Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 26 (2017)	Work with sheltering agencies to ensure that those facilities identified as shelters have back-up power capabilities.	Ongoing progress	Ongoing	N/A	Marshall County EMA	Emergency Services
MAR – 27 (2017)	Coordinate with AEP to ensure adequate coverage for emergency call-outs in the event of a downed electric line.	Ongoing progress	Ongoing	N/A	Marshall County EMA; AEP	Emergency Services
MAR – 28 (2017)	Coordinate with law enforcement providers and appropriate event organizers to ensure that adequate security is available during large of high-profile events.	Ongoing progress	Ongoing	N/A	Law Enforcement; Event Organizer	Emergency Services
MAR - 29 (2017)	Update the commodity flow study for Marshall County.	This is completed every 4 to 6 years. Region X EMAs plan to complete this in the next couple of years.	Ongoing; Cyclic	Local; HMGP	Planning Commission; Law Enforcement	Emergency Services
MAR – 30 (2017)	Ensure measures and tips for evacuations are included in ongoing public education efforts.	This would be annual updated of the County EOP and not EMS plans.	Ongoing	Local; SERC	Marshall County EMA; Planning Commission; Law Enforcement	Public Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 31 (2017)	Facilitate the creation of safe zones as places where residents can go in the in the event of a hazardous materials incident. Further, publicize the location and access to these safe zones.	This would be part of the County EOP and not EMS plans.	Ongoing	N/A	Planning Commission; Law Enforcement; LEPC	Emergency Services
MAR – 32 (2017)	Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	This would be part of the County EOP and not EMS plans.	Ongoing Plan Updates	Local; EMPG; SHSP	EMA; LEPC; Law Enforcement; Fire Department; Health Department; 911	Emergency Services
MAR – 33 (2017)	Increase the knowledge of the general public concerning preparedness through the preparation of informational brochures, town meetings, training seminars, etc.	Ongoing progress	Ongoing	Local; EMPG; SHSP	EMA; Health Department; Law Enforcement; Fire Department	Emergency Services
MAR – 34 (2017)	Coordinate with local media to alert the public as to current threat status.	Ongoing progress	Ongoing	N/A	EMA; LEPC; Law Enforcement; Fire Department; Health Department; 911	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 35 (2017)	Establish trauma centers to offer medical attention and counseling to affected populations in the event of a terrorist event.	Coordination through regional hospital working group.	Ongoing	N/A	EMA; Reynolds Memorial Hospital	Emergency Services
MAR – 36 (2017)	Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	Annual updates of the EOP.	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC	Emergency Services
MAR – 37 (2017)	Continue education and training efforts of first responders and emergency personnel.	Ongoing progress	Ongoing	Local; EMPG; SHSP; DHHR	EMA; Health Department; Other	Emergency Services
MAR – 38 (2017)	Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents	Coordination with Health Department	Ongoing	N/A	Health Department	Emergency Services
MAR – 39 (2017)	Continue to encourage schools to update procedural and evacuation plans in the event of a bomb threat.	Ongoing progress	Ongoing	N/A	County Schools; Marshall County EMA	Emergency Services
MAR – 40 (2017)	Encourage high value assets to create and/or update procedural and evacuation plans in the event of a bomb threat.	Annual updates of the County EOP.	Ongoing	N/A	Marshall County EMA	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 41 (2017)	Evaluate dams and locks that play an integral role in water transportation and/or flood control.	Ongoing progress	Ongoing	BRIC	USACE; NRCS	Prevention
MAR – 42 (2017)	Encourage drilling companies to educate the general public about natural gas safety, community outreach efforts, etc.	Ongoing progress	Ongoing	N/A	Marshall County EMA; Drilling Companies; LEPC	Public Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR – 43 (2017)	County will continue to seek out opportunities to apply for Hazard Mitigation Assistance (HMA) funds for mitigation reconstruction, elevations, relocations or acquisitions of identified at risk, repetitive loss, non-repetitive loss, substantial damaged, partially or completely demolished or destroyed properties within Marshall County. If mitigation reconstruction is chosen, properties identified as partially or completely demolished, outside of the regulatory floodway, as identified by available flood hazard data, will be reconstructed in accordance with the standards established in the local floodplain ordinance and in accordance with the same conditions as an elevated structure. Marshall County will comply with all acquisition, elevation, relocation and mitigation reconstruction requirements, as per the HMA Guidance.	Ongoing progress	Ongoing	HMA	County Commission	Structural Projects

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MAR - 44 (2022)	Wire all pump houses and pump stations for the ability to connect to a generator at all Public Service Districts (PSDs) in the Marshall County.	New project	5 yrs.	Local	Marshall County	Prevention
MAR - 45 (2022)	Apply for mitigation funding for generators to be installed at pump houses and pump stations at all Public Service Districts (PSDs) in Marshall County.	New project	5 yrs.	FEMA	FEMA	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Benwood						
BEN – 1 (2017)	Continue projects to maintain upgrade the flood wall in the City of Benwood.	Maintenance has been performed, including tree trimming and removal.	5 yrs.	USACE; WVDEP; HMGP	USACE; WVDEP; City of Benwood	Structural Projects
BEN – 2 (2017)	Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	During pandemic, Benwood was in constant contact with Marshall County EMA office to obtain most recent guidelines.	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; City of Benwood	Emergency Services
BEN – 3 (2017)	Support health department planning for Strategic National Stockpile distributions during bioterrorist or other incidents.	Benwood coordinated with Marshall County Health Department during pandemic: 1) had testing center at Fire Department; 2) distributed PPE to Police Department; 3) answered calls from residents concerning pandemic and redirected to health department.	Ongoing	N/A	Health Department; City of Benwood	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
BEN – 4 (2022)	Continue with flood wall improvements, including but not limited to: 1) increase flood wall height by four feet so that it is eligible for accreditation; 2) install SCADA system; 3) continue debris removal and maintenance; and 4) replace pumps.	New project	5 yrs.	USACE; WVDEP; HMGP	USACE; WVDEP; City of Benwood	Structural Projects
BEN – 5 (2022)	Continue separation of combined sewer overflows (CSOs) in Center and North Benwood.	New project	5 yrs.	CDBG; ARC; CWSRF; WDAEEG; HMGP	WVDOH; City of Benwood	Natural Resource Protection
BEN – 6 (2022)	Maintain "Subway Tunnel", a culvert that runs under Route 2 and North Benwood from Boggs Run area.	New project	5 yrs.	CDBG; ARC; CWSRF; WDAEEG; HMGP	WVDOH; City of Benwood	Natural Resource Protection
BEN - 7 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, City of Benwood	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Cameron						
CAM – 1 (2017)	Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	NRCS has visited but no mitigation strategies are implemented because NRCS requires creeks/ streams to be 90% blocked before they will permit dredging.	Ongoing; City of Cameron	NRCS/Local; FMA	NRCS; City of Cameron	Natural Resource Protection
CAM – 2 (2017)	Form a community watershed group to look at stream bank restoration in the Cameron area.	No progress.	5 yrs.	N/A	NRCS; City of Cameron	Natural Resource Protection
CAM - 3 (2017)	Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	No progress, but do work closely with Marshall County EMA.	Ongoing Plan Updates	Local; EMPG; SHSP	EMA; LEPC; Law Enforcement; Fire Department; Health Department; 911; City of Cameron	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
CAM – 4 (2017)	Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	Have mutual aid agreements with surrounding communities.	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC City of Cameron	Emergency Services
CAM – 5 (2017)	Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	Follow Marshall County's policy.	Ongoing	N/A	Health Department City of Cameron	Emergency Services
CAM – 6 (2022)	Dredge and remove debris from streams and creeks (Upper Grave Creek Tributary) within Cameron.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Cameron	Prevention
CAM - 7 (2022)	Coordinate with Marshall County to dredge and remove debris from streams and creeks outside Cameron that cause flooding within Cameron.	New project	5yrs.	NRCS	NRCS; WVDEP; Marshall County	Prevention
CAM - 8 (2022)	Implement engineering techniques to prevent creek bank erosion along Upper Grave Creek Tributary within Cameron.	New project	5 yrs.	NRCS; HMGP	NRCS; WVDEP; City of Cameron	Prevention; Structural Project

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
CAM - 9 (2022)	Create a community volunteer group to help remove litter in creek and around edges of creek to help prevent flooding.	New project	5 yrs.	N/A	City of Cameron	Public Awareness
CAM - 10 (2022)	Purchase more equipment and hire more city employees to maintain land along creeks in City.	New project	5 yrs.	N/A	City of Cameron	Natural Resource Protection
CAM -11 (2022)	Replace deteriorated storm sewers.	New project	5 yrs.	WVDOH; CDBG; City of Cameron	WVDOH; City of Cameron	Prevention; Structural Project
CAM - 12 (2022)	Separate combined storm sewer overflows (CSOs).	New project	5 yrs.	CDBG; City of Cameron; HMGP	WVDOH; City of Cameron	Natural Resource Protection
CAM - 13 (2022)	Create an emergency shelter stocked with food and emergency supplies at First Christian Church (7th Avenue), as this is one of the few churches out of the floodplain.	New project	5 yrs.	City of Cameron	City of Cameron; Marshall County Health Department	Emergency Services
CAM - 14 (2022)	Create a floodplain and storm ready educational outreach program for residents for better preparation during storm events.	New project	Ongoing	City of Cameron; NFIP	City of Cameron; NFIP	Public Awareness; Public Education
CAM - 15 (2022)	Coordinate an emergency plan with gas companies in the vicinity to mitigate trick accidents on road and notify residents of hazardous incidents at well sites.	New project	Ongoing	WVGHSP; WVDOT	WVGHSP; WVDOT; City of Cameron	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
CAM - 16 (2022)	Coordinate with Marshall County Health Department to have more frequent testing abilities within Cameron during pandemics.	New project	Ongoing	N/A	Health Department; City of Cameron	Emergency Services
CAM - 17 (2022)	Continued coordination with first responders for interagency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; City of Cameron	Emergency Services
CAM - 18 (2022)	Apply for mitigation funding for a generator to be installed at Cameron's Water Treatment Plan.	New project	5 yrs.	FEMA	FEMA; City of Cameron	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Glen Dale						
GLE – 1 (2017)	Continues to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	Have had discussion with NRCS about dredging Little Grave Creek.	Ongoing	NRCS/Local	NRCS City of Glen Dale	Natural Resource Protection
GLE – 2 (2017)	Form a community watershed group to look at stream bank restoration in the Little Grave Creek Watershed.	Residents did repair portions of Little Grave Creek.	5 yrs.	N/A	NRCS City of Glen Dale	Natural Resource Protection
GLE – 3 (2017)	Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	Glen Dale first responders have a well-coordinated mutual aid plans with surrounding communities, including Moundsville, Washington Lands, McMechen and Benwood.	Ongoing	Local; EMPG; SHSP; DHHR	EMA Health Department City of Glen Dale	Emergency Services
GLE – 4 (2017)	Support healthy department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	No progress	Ongoing	N/A	Health Department; City of Glen Dale	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
GLE - 5 (2022)	Dredge Little Grave Creek and remove debris to prevent flooding within the city limits of Glen Dale.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Glen Dale	Natural Resource Protection
GLE - 6 (2022)	Coordinate with Marshall County to dredge and remove debris in Little Grave Creek in Marshall County.	New project	5 yrs.	NRCS	NRCS; WVDEP; Marshall County	Natural Resource Protection
GLE - 7 (2022)	Implement engineering techniques to prevent creek bank erosion along Little Grave Creek.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Glen Dale	Natural Resource Protection; Structural Project
GLE - 8 (2022)	Replace deteriorated storm sewers.	New project	5 yrs.	WVDOH; CDBG; City of Glen Dale	WVDOH; City of Glen Dale	Prevention; Structural Project
GLE - 9 (2022)	Install back-up generators at Water Treatment Plant and Jefferson Avenue Pump Station.	New project	5 yrs.	FEMA	FEMA; City of Glen Dale	Prevention
GLE - 10 (2022)	Implement engineering techniques to prevent erosion along the banks of the Ohio River within Glen Dale.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Glen Dale	Prevention; Structural Project
GLE - 11 (2022)	Coordinate with Marshall County to prevent stormwater runoff from housing developments in Marshall County into Glen Dale	New project	Ongoing	N/A	Marshall County; City of Glen Dale; Developers	Prevention
GLE - 12 (2022)	Coordinate with B&O Railway to prevent hazmat incidents on railway.	New project	Ongoing	N/A	City of Glen Dale; B&O Rail	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
GLE - 13 (2022)	Construct a protective barrier/wall that separates B&O Railway from houses in Glen Dale to mitigate potential hazmat incidents.	New project	5 yrs.	City of Glen Dale	B&O Rail; City of Glen Dale	Prevention
GLE - 14 (2022)	Construct web page on the City of Glen Dale's website to inform residents of current emergencies and disasters and how to prepare for emergencies and disasters.	New project	Ongoing	N/A	City of Glen Dale; Marshall County EMA	Prevention
GLE - 15 (2022)	Implement educational classes on the Wireless Emergency Notification System (WENS) to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	New project	Ongoing	N/A	City of Glen Dale; Marshall County EMA	Prevention
GLE - 16 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, City of Glen Dale	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
McMechen						
MCM – 1 (2017)	Continue to work with the Natural Resource Conservation Service (NRCS) to facilitate studies in repeatedly flooded areas.	No progress	Ongoing	NRCS; Local	NRCS; City of McMechen	Natural Resource Protection
MCM – 2 (2017)	Form a community watershed group to look at stream bank restoration in the Jim's Run area of McMechen	No progress	5 yrs.	N/A	NRCS; City of McMechen	Natural Resource Protection
MCM – 3 (2017)	Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	Have increased security through cameras and lighting at water treatment plant, holding tanks, wells and park.	Ongoing Plan Updates	Local; EMPG; SHSP	Marshall County EMA; LEPC; Law Enforcement; Fire Department; Health Department; 911; City of McMechen	Emergency Services
MCM – 4 (2017)	Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	Fire Department has had yearly meetings with Marshall County EMS Director, Tom Hart.	Ongoing	N/A	Marshall County EMA; Health Department; City of McMechen	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MCM – 5 (2017)	Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	No progress.	Ongoing	N/A	Health Department; City of McMechen	Emergency Services
MCM - 6 (2022)	Dredge and remove debris from the three streams (2nd Street Run, Snell's Run and Jim's Run) that are within McMechen and cause flooding.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of McMechen	Natural Resource Protection
MCM - 7 (2022)	Educational outreach to residents to teach them of the flooding-related consequences of illegal dumping into streams/creeks and inform residents on McMechen's program that takes unwanted items (appliances, couches, etc.) to the landfill for a small fee.	New project	Ongoing	N/A	City of McMechen; WVDEP	Natural Resource Protection
MCM - 8 (2022)	Separate combined sewer overflows (CSOs), as no CSOs have been separated.	New project	5 yrs.	CDBG; City of McMechen	WVDOH; City of McMechen	Natural Resource Protection
MCM - 9 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, City of Glen Dale	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MCM -10	Repair and replace culverts and improve stormwater drainage systems throughout the city.	New project	5 yrs.	CDBG; FEMA; IJDC; CWSRF	City of McMechen; IJDC	Prevention; Structural Project

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Moundsville						
MDS – 1 (2017)	Coordinate with law enforcement providers and appropriate even organizers to ensure that adequate security is available during large or high-profile events.	City has coordinated with law enforcement for large events, like block parties, etc.	Ongoing	N/A	Law Enforcement Event Organizer; City of Moundsville	Emergency Services
MDS – 2 (2017)	Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	No progress.	Ongoing	Local; EMPG; SHSP	EMA; LEPC; Law Enforcement; Fire Department; Health Department; 911; City of Moundsville	Emergency Services
MDS – 3 (2017)	Coordinate with first responders for inter-agency cooperation to assist in collaborative planning.	Have mutual aid agreements with Fire and Police Departments of surrounding communities	Ongoing	Local; EMPG; SHSP; DHHR	EMA; Health Department; City of Moundsville	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
MDS – 4 (2017)	Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	During COVID-19 pandemic, City worked with Health Department for vaccine distribution.	Ongoing	N/A	Health Department; City of Moundsville	Emergency Services
MDS – 5 (2017)	Law enforcement to work to develop a plan for oil, natural gas and chemical safety training.	Police Department has worked with Hazmat Team.	3 yrs.	Local; Gas Companies	OEPC; City of Moundsville	Emergency Services
MDS - 6 (2022)	Implement more training for natural hazard events (especially for flooding and extreme weather events) for first responders and volunteers.	New project	Ongoing	City of Moundsville; FEMA	City of Moundsville	Emergency Services; Prevention
MDS - 7: (2022)	Continue storm sewer maintenance and repairs.	New project	5 yrs.	City of Moundsville; CDBG	City of Moundsville; CDBG	Structural Project
MDS - 8 (2022)	Dredge and debris removal from streams and creeks within Moundsville.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Moundsville	Prevention
MDS - 9 (2022)	Continued coordination with first responders for cooperation to assist in collaborative planning	New project	5 yrs.	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, City of Moundsville	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Ohio County						
OHI – 1 (2017)	Create displays for use at public events (health fair, public awareness day, county fair).	Completed	Ongoing	WVU; Local	WOCEMA; WVU Extension Service	Public Education and Public Awareness
OHI – 2 (2017)	Create materials that are targeted towards tourist population.	N/A	N/A	N/A	N/A	N/A
OHI – 3 (2017)	Utilize the media for the distribution and publication of hazard information.	Completed	Ongoing	N/A	Ohio County Commission; City of Wheeling	Public Education and Public Awareness
OHI – 4 (2017)	Create a public speaking series on hazard related topics.	Completed	Ongoing	N/A	WOCEMA	Public Education and Public Awareness
OHI – 5 (2017)	Ensure that the Red Cross citizen's disaster course is held on a frequent basis.	N/A, no local American Red Cross office.	N/A	N/A	N/A	N/A
OHI – 6 (2017)	Update the WOCEMA website to provide hazard related information that is easily accessible.	Ongoing Progress	Ongoing	N/A	WOCEMA	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 7 (2017)	Continue to work with the Ohio County school system to promote hazard mitigation education and awareness and discuss ways to better integrate mitigation into the curriculum.	Ongoing progress	Ongoing	FEMA	WOCEMA; Wheeling Fire Dept.; Ohio County Schools	Public Education Public and Awareness
OHI – 8 (2017)	Continue to work with non-governmental organizations (youth, service, professional, religious) to promote mitigation education and awareness.	Ongoing progress	Ongoing	FEMA	WOCEMA	Public Education and Public Awareness
OHI – 9 (2017)	Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	N/A	N/A	N/A	N/A	N/A
OHI – 10 (2017)	Distribute letters to all property owners in the county regarding potential flood hazards as required for participation in the Community Rating System (CRS).	The county does not have enough floodplain policies to make joining the CRS viable at this time.	N/A	N/A	N/A	N/A

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 11 (2017)	Establish all-hazard resource centers to be located in the main office of the county and cities. The centers will act as a repository for information on local hazard identification, preparedness, and mitigation strategies for use by citizens, realtors, and lenders.	Completed	Ongoing	WOCEMA	Ohio County; City of Wheeling; Town of Triadelphia	Public Education and Public Awareness
OHI – 12 (2017)	Continue to hold local course on National Flood Insurance Program (NFIP) for realtors, bankers, and insurers.	FEMA and WV State Floodplain Office is planning to provide courses in 2023.	Ongoing	WVEMD; NFIP	WVEMD	Emergency Services
OHI – 13 (2017)	Ensure that all shelters have adequate emergency power resources.	Completed	Monitoring ongoing	N/A	WOCEMA	Emergency Services
OHI – 14 (2017)	Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	N/A	N/A	N/A	N/A	N/A
OHI – 15 (2017)	Develop adequate emergency shelter and evacuation plans for animals (domestic pets, livestock, and wildlife).	Ongoing progress	Ongoing	N/A	Animal Control; WV Extension Service; Society for the Prevention of Cruelty to Animals	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 16 (2017)	Teach Community Emergency Response Team (CERT) classes in Ohio County.	Taught as needed.	Ongoing	Citizen Corps	WOCEMA	Emergency Services
OHI – 17 (2017)	Increase the number of trained citizen emergency responders.	Ongoing progress; Working with VFDs on Recruit-ment and Retention	Ongoing	Citizen Corps	WOCEMA	Emergency Services
OHI – 18 (2017)	Conduct annual tabletop disaster exercises with local law enforcement, emergency managers, city and county officials, and other disaster response agencies.	Conducted monthly in EOC and quarterly in commnity.	Ongoing	HMGP/ EMPG	WOCEMA	Emergency Services
OHI – 19 (2017)	Provide information about local, regional, state, and federal training opportunities to fire departments, EMS, ambulance services, and other emergency responders.	Completed Available on website.	Ongoing	RESA	RESA	Emergency Services
OHI – 20 (2017)	Continue to conduct National Weather Service Storm Spotter classes.	Conducted bi-annually.	Ongoing	National Weather Service	National Weather Service	Emergency Services
OHI – 21 (2017)	Work to update all floodplain ordinances.	Updating per state template.	Ongoing	WVEMD	WVEMD	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 22 (2017)	Provide additional training to county and municipal development officials on NFIP requirements.	FEMA and the WV State Floodplain Office are planning to return to providing courses in 2023.	Ongoing	WVEMD	WVEMD	Prevention
OHI – 23 (2017)	Review the existing Wheeling-Ohio County EOP and update where necessary based on the recommendations of the Ohio County Hazard Mitigation Plan.	Reviewed quarterly.	Ongoing	WOCEMA	WOCEMA	Emergency Services
OHI – 24 (2017)	Ensure that the county and all municipalities adopt the revised EOP.	Completed	Ongoing adoption of updates	N/A	WOCEMA	Emergency Services
OHI – 25 (2017)	Expand the mission and membership of the Wheeling-Ohio County Local Emergency Planning Committee (LEPC) to act as a countywide disaster task force.	Updating per state template	Ongoing	N/A	WOCEMA	Emergency Services
OHI – 26 (2017)	Assist in the development of the Ohio Co. Enterprise Geographical Information System (GIS) and assist with the implementation of the E911 Center's Computer Aided Dispatch system (CAD).	Ongoing progress	Ongoing	Assessor's Office; Police Deptartment; 911; County Commission	WOCEMA	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 27 (2017)	Conduct outreach efforts to educate municipalities about the NFIP and its requirements.	Ongoing progress	Ongoing	WVEMD; FEMA	WOCEMA	Prevention
OHI – 28 (2017)	Obtain updated information on the number of NFIP policyholders in Ohio County and its municipalities.	Ongoing progress	Ongoing	N/A	WOCEMA; WVEMD	Prevention
OHI – 29 (2017)	Collect updated information of the number and location of all repetitive loss properties throughout the county and the municipalities.	Ongoing progress	Ongoing	N/A	WOCEMA; WVEMD	Prevention
OHI – 30 (2017)	Develop a database of information on all repetitive loss properties including maps.	Ongoing progress	Ongoing	Assessor's Office, 911	WOCEMA; WVEMD	Prevention
OHI – 31 (2017)	Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	Ongoing progress	Ongoing	Assessor's Office, 911	WVEMD	Structural Projects
OHI – 32 (2017)	Establish a formal process for the city and the county to coordinate disaster related efforts, which will include defining boundaries and establishing responsibilities.	N/A	N/A	N/A	N/A	N/A
OHI – 33 (2017)	Conduct a survey of all historic sites that are located in hazard areas.	No progress	5 yrs.	National Historical Events	Wheeling Historical Society	Prevention
OHI – 34 (2017)	Develop mitigation strategies to protect any at-risk historic properties.	No progress	Ongoing	National Historical Events	Wheeling Historical Society; WOCEMA	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 35 (2017)	Work with FEMA and WVEMD on the Map Modernization Program to improve FIRMS.	Updated Firms. FEMA is in the process of updating FIRMS.	Ongoing	FEMA	WOCEMA	Prevention
OHI – 36 (2017)	Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	N/A	N/A	N/A	N/A	N/A
OHI – 37 (2017)	Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials in Ohio County.	Established by the state in Tier II Submit. Completed	Ongoing updates	HMGP	LEPC	Emergency Services
OHI - 38 (2017)	Update the WOCEMA GIS system annually with current maps to be utilized in its Critical Infrastructure Program, Hazard Mitigation Program, LEPC, Evacuation and Transportation Routes, and Hazard Vulnerability Plans.	Ongoing progress	Ongoing	WOCEMA	WOCEMA; County Commission	Prevention/ Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI – 39 (2017)	County will continue to seek out opportunities to apply for Hazard Mitigation Assistance (HMA) funds for mitigation reconstruction, elevations, relocations or acquisitions of identified at risk, repetitive loss, non-repetitive loss, substantial damaged, partially or completely demolished or destroyed properties within Ohio County. If mitigation reconstruction is chosen, properties identified as partially or completely demolished, outside of the regulatory floodway, as identified by available flood hazard data, will be reconstructed in accordance with the standards established in the local floodplain ordinance and in accordance with the same conditions as an elevated structure. Ohio County will comply with all acquisition, elevation, relocation and mitigation reconstruction requirements, as per the HMA Guidance.	Ohio County has a Mitigation Grant in process.	Ongoing	HMA	Ohio County; City of Wheeling	Structural Projects

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
OHI - 40 (2022)	Work with the Ohio County Public Safety District to upgrade fire hydrants and to upgrade pump stations with Emergency Electrical Transfer Switches.	New project	Ongoing	Ohio County Public Safey District	Ohio County Public Safety District	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Bethlehem						
BET – 1 (2017)	Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	Water billing system can act as a way to distribute information. Bethlehem also piggybacks off of Ohio County's WENS System, so residents can be alerted about disasters via email, text, and by phone call.	Complet-ed	WOCEMA	Village of Bethlehem	Public Education; Public Awareness
BET – 2 (2017)	Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	N/A, as no homeless are believed to be living in Bethlehem.	Info Sharing Ongoing	N/A	Ohio County Commission; Village of Bethlehem	Emergency Services
BET – 3 (2017)	Teach Community Emergency Response Team (CERT) classes.	Fire Department has taught some classes.	Ongoing	Citizen Corps	WOCEMA; Village of Bethlehem	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
BET – 4 (2017)	Increase the number of trained citizen emergency responders.	Have seen an increase in the number of volunteers at Volunteer Fire Department.	Ongoing	Citizen Corps	Village of Bethlehem	Emergency Services
BET – 5 (2017)	Continue to participate in National Weather Service Storm Spotter classes.	No progress.	Ongoing Classes	National Weather Service	National Weather Service; Village of Bethlehem	Emergency Services
BET – 6 (2017)	Ensure that the Village adopt the revised EOP.	Completed	Ongoing Adoption of Updates	N/A	WOCEMA; Village of Bethlehem	Emergency Services
BET – 7 (2017)	Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	N/A, as there are no repetitive loss structures in Bethlehem, due to its hilltop location.	Ongoing	Assessor's Office; 911; NFIP	WVEMD; Village of Bethlehem	Structural Projects
BET – 8 (2017)	Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	There is a continued effort between Bethlehem and State of WVDOT to clean catch basins to prevent flooding on state roads within Bethlehem.	Ongoing	WVDOT; FEMA	WOCEMA; WVDOT; Village of Bethlehem	Structural Projects

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
BET – 9 (2017)	Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials.	No progress	Ongoing	HMGP	LEPC; Village of Bethlehem	Emergency Services
BET - 10 (2022)	Implement educational outreach classes on the Wireless Emergency Notification System (WENS) to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	New project	Ongoing	N/A	OCEMA	Emergency Services
BET - 11 (2022)	Provide CPR and basic safety training classes to Bethlehem's street maintenance crew (6 people),so that they can assist in emergencies, if needed.	New project	Ongoing	N/A	OCEMA; Health Department; Health Institutions	Emergency Services
BET - 12 (2022)	Shore up vulnerable hillsides with gabion baskets to prevent landslides, especially in the Mt. Lebanon area and on Community Park Road.	New project	5 yrs.	Village of Bethlehem; Discretion-ary Grants; HMGP	Village of Bethlehem; WVDOT	Emergency Services
BET - 13 (2022)	Continue to work with State and improve communication and timeliness of debris removal from catch basins along state roads in Bethlehem.	New project	Ongoing	Village of Bethlehem; WVDOT	Village of Bethlehem; WVDOT	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
BET - 14 (2022)	Implement strategies and increase funding to monitor oil and gas truck traffic by Police Department to ensure safety on Route 88 in Bethlehem.	New project	Ongoing	WVGHSP	WVGHSP; Village of Bethlehem	Prevention
BET - 15 (2022)	Implement strategies/coordination plans for better organization between Bethlehem Police Department, City of Wheeling Police Department and Ohio County Deputies, when there is an accident on I-470 within Bethlehem.	New project	Ongoing	N/A	Village of Bethlehem; City of Wheeling; Ohio County	Prevention; Emergency Services
BET - 16 (2022)	Increase way finding signage for oil and gas truck drivers through Bethlehem.	New project	5 yrs.	Discretionary Grants	Village of Bethlehem	Prevention; Public Awareness
BET - 17 (2022)	Construct culvert/catch basin at the end of Cedar Lane to prevent flooding on road.	New project	5 yrs.	Village of Bethlehem	Village of Bethlehem	Structural Project
BET - 18 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	Village of Bethlehem;	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, Village of Bethlehem	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Clearview						
CLE – 1 (2017)	Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	Clearview has set up a Facebook page for where emergency information can be shared.	Ongoing	Village of Clearview	WOCEMA	Public Education and Awareness
CLE – 2 (2017)	Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	Volunteer Fire Department has a verbal agreement that they will share information and that fire station can be used as an emergency shelter.	Ongoing	N/A	Ohio County; Village of Clearview	Emergency Services
CLE – 3 (2017)	Teach Community Emergency Response Team (CERT) classes.	Ongoing	Ongoing	Citizen Corps	WOCEMA; Village of Clearview	Emergency Services
CLE – 4 (2017)	Increase the number of trained citizen emergency responders.	Volunteer Fire Department has increased its size to 18 volunteers. There are also 4 paid police officers.	Ongoing	Citizen Corps	Village of Clearview	Emergency Services
CLE – 5 (2017)	Continue to participate in National Weather Service Storm Spotter classes.	No progress	Ongoing	National Weather Service	National Weather Service; Village of Clearview	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
CLE – 6 (2017)	Ensure that the Village adopt the revised EOP.	Complete	Ongoing Adoption of Up-dates	N/A	WOCEMA; Village of Clearview	Emergency Services
CLE – 7 (2017)	Develop a database of information on all repetitive loss properties including maps.	N/A, as there are no repetitive loss structures in Bethlehem, due to its hilltop location.	N/A	NFIP	N/A	N/A
CLE – 8 (2017)	Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	Ongoing	Ongoing	WVDOT	WOCEMA; WVDOH; Village of Clearview	Prevention
CLE – 9 (2017)	Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials.	Not yet, but need to complete this soon, as oil and gas trucks will be traveling through Clearview to a new well pad.	Ongoing	HMGP	LEPC	Emergency Services
CLE - 10 (2022)	Create and implement a written disaster plan for Clearview.	New project	5 yrs.	Local	WOCEMA	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
CLE - 11 (2022)	Continue to identify strategies to mitigate risks from the transportation and/or storage of hazardous materials, due to construction of new well pad near Clearview.	New project	Ongoing	WVGHSP; WVDOT; HMGP	WVGHSP; WVDOT; Village of Clearview	Mitigation
CLE - 12 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, Village of Clearview	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Triadelphia						
TRI – 1 (2017)	Distribute letters to all property owners in the Town regarding potential flood hazards, as required for participation in the Community Rating System (CRS).	Completed. Letters have been distributed.	Ongoing	Local	Ohio County; Town of Triadelphia	Public Education and Awareness
TRI – 2 (2017)	Establish all-hazard resource centers to be located in the main office of the county and cities. The centers will act as a repository for information on local hazard identification, preparedness, and mitigation strategies for use by citizens, realtors, and lenders.	Completed. Town Hall has been established as an all-hazard resource center and the community is aware of this.	Ongoing	WOCEMA	Ohio County; City of Wheeling; Town of Triadelphia	Public Education and Awareness
TRI – 3 (2017)	Continue to hold local course on National Flood Insurance Program (NFIP) for realtors, bankers, and insurers.	Mayor of Triadelphia attends seminars on NFIP.	Ongoing	WVEMD; NFIP	WVEMD; Town of Triadelphia	Emergency Services
TRI – 4 (2017)	Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	Completed. Town of Triadelphia is in constant communication with WOCEMA.	Ongoing	N/A	Ohio County; Town of Triadelphia	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
TRI – 5 (2017)	Develop adequate emergency shelter and evacuation plans for animals (domestic pets, livestock, and wildlife).	Domestic pets are allowed in Town Hall. Ohio County EMA director is working on plan for livestock.	Ongoing	N/A	County Animal Control; WV Extension Service; Society for the Prevention of Cruelty to Animals Town of Triadelphia	Emergency Services
TRI – 6 (2017)	Teach Community Emergency Response Team (CERT) classes.	Triadelphia Volunteer Fire Department teaches these classes.	Ongoing	Citizen Corps	WOCEMA; Town of Triadelphia	Emergency Services
TRI – 7 (2017)	Increase the number of trained citizen emergency responders.	Volunteer Fire Department has seen increase in volunteers.	Ongoing	Citizen Corps	Town of Triadelphia	Emergency Services
TRI – 8 (2017)	Continue to participate in National Weather Service Storm Spotter classes.	No progress	Ongoing	National Weather Service	WOCEMA; WVEMD; Town of Triadelphia	Prevention
TRI – 9 (2017)	Work with the municipalities to update all floodplain ordinances adopted prior to 1987.	N/A	N/A	N/A	N/A	N/A

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
TRI – 10 (2017)	Provide additional training to municipal development officials on NFIP requirements.	State of West Virginia provides trainings on NFIP and are attended by elected officials.	Ongoing	WVEMD	WVEMD; Town of Triadelphia	Prevention
TRI – 11 (2017)	Ensure that the Town adopt the revised EOP.	Completed.	Ongoing adoption of up-dates.	N/A	WOCEMA; Town of Triadelphia	Emergency Services
TRI – 12 (2017)	Conduct outreach efforts to educate town residents about the NFIP and its requirements.	N/A, as the Town of Triadelphia defers this to banks and lending institutions.	N/A	NFIP	N/A	N/A
TRI – 13 (2017)	Obtain updated information on the number of NFIP policyholders in the Town.	No progress	Ongoing	N/A	WOCEMA; WVEMD; Town of Triadelphia	Prevention
TRI – 14 (2017)	Collect updated information of the number and location of all repetitive loss properties.	The Mayor of Triadelphia and the Ohio County GIS coordinator are aware of where these properties are located.	Ongoing	NFIP	WOCEMA; WVEMD; Town of Triadelphia	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
TRI – 15 (2017)	Develop a database of information on all repetitive loss properties, including maps.	These properties are located on village maps.	Ongoing	Assessor's Office; 911; NFIP	WOCEMA; WVEMD; Town of Triadelphia	Prevention
TRI – 16 (2017)	Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	After 2004 Flood, the Mayor and FEMA discussed acquisition with property owners but most were not responsive to acquisition.	Ongoing	Assessor's Office; 911; NFIP	WVEMD; Town of Triadelphia	Structural Projects
TRI – 17 (2017)	Work with WV Department of Highways to identify areas of frequent roadway flooding and develop mitigation strategies.	Ohio County has identified these roads.	Ongoing	WVDOT; HGMP	WOCEMA; WVDOH; Town of Triadelphia	Structural Projects
TRI – 18 (2017)	Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials.	Fuel (to gas stations) is the only hazard transported through town.	Ongoing	HMGP	LEPC; Town of Triadelphia	Emergency Services
TRI - 19 (2022)	Dredge and remove debris from streams and creeks (Little Wheeling Creek and Middle Creek) within Triadelphia.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of Triadelphia	Natural Resource Protection

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
TRI - 20 (2022)	Update and improve storm water sewer system to prevent flooding.	New project	5 yrs.	CDBG; Town of Triadelphia; HMGP	CDBG; Town of Triadelphia	Prevention; Structural Project
TRI - 21 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; Town of Pine Grove	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Valley Grove						
VAL - 1 (2017)	Ensure that the Village adopt the revised EOP.	Completed	Ongoing Adoption of Up-dates	N/A	WOCEMA; Village of Valley Grove	Emergency Services
VAL - 2 (2022)	Implement engineering techniques to prevent further creek bank erosion and restore damaged banks along National Road (from Eagle Den's Bar to Valley Motel) to mitigate flooding.	New project	5 yrs.	NRCS	NRCS; WVDEP; Village of Valley Grove	Prevention; Structural Project
VAL - 3 (2022)	Dredge and remove debris from streams and creeks within Valley Grove.	New project	5 yrs.	NRCS	NRCS; WVDEP; Village of Valley Grove	Natural Resource Protection
VAL - 4 (2022)	Initiate an engineering study for storm sewers and drainage development to help prevent flooding and mitigate damage	New project	5 yrs.	Village of Valley Grove; CDBG; HMGP	Village of Valley Grove; CDBG	Prevention; Structural Project
VAL - 5 (2022)	Implement training classes for Valley Grove Fire Department's members on natural disaster rescue, especially for flooding.	New project	Ongoing	N/A	Village of Valley Grove; WOCEMA	Emergency Services
VAL - 6 (2022)	Implement a flood insurance training program for Valley Grove staff and residents.	New project	Ongoing	Village of Valley Grove; NFIP	Village of Valley Grove; NFIP	Public Education

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
VAL - 7 (2022)	Set up an informational booth in Valley Grove Town Hall regarding NFIP.	New project	Ongoing	Village of Valley Grove; NFIP	Village of Valley Grove	Public Awareness and Public Education
VAL - 8 (2022)	Stabilize hillsides, where there have been slips, especially slips into resident's back yards.	New project	5 yrs.	Village of Valley Grove; WVDEP; WVDOT; HMGP	Village of Valley Grove; WVDEP; WVDOT	Structural Project; Prevention
VAL - 9 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; Town of Valley Grove	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
West Liberty						
WES – 1 (2017)	Ensure that the Town adopt the revised EOP.	Completed	Ongoing Adoption of Up-dates	N/A	WOCEMA; Town of West Liberty	Emergency Services
WES - 2 (2022)	Implement engineering techniques to prevent creek bank erosion and restore damaged banks along Short Creek.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of West Liberty	Prevention; Structural Project
WES – 3 (2022)	Dredge and remove debris from Short Creek and other streams/ creeks within West Liberty.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of West Liberty	Prevention
WES - 4 (2022)	Remove debris and dredge creeks/ streams outside West Liberty that cause flooding within West Liberty.	New project	5 yrs.	NRCS	NRCS; WVDEP; Ohio County	Prevention
WES - 5 (2022)	Replace culverts and inlets in storm sewers throughout town to prevent storm sewer issues.	New project	5 yrs.	Town of West Liber-ty; CDBG; HMGP	Town of West Liberty; WVDOT	Prevention; Structural Project
WES - 6 (2022)	Maintain (including proper drainage) 1.5 miles of previous State roads (Liberty Street, Richards Road, Sterling Street, etc.), that are now owned by the Town of West Liberty to ensure residents have a means of egress in case of a natural or man-made disaster.	New project	5 yrs.	Town of West Liberty	Town of West Liberty; WVDOT	Prevention; Structural Project

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WES - 7 (2022)	Maintain main roads (Route 88, Apple Pie Ridge Road, Girty's Point Road, Harvey Road, Weidman Run Road, North Fork Road, etc.) in to and out of West Liberty to ensure residents can safely exit and first responders can enter in case of natural or man-made disaster.	New project	5 yrs.	Town of West Liberty	Town of West Liberty; WVDOT	Prevention; Structural Project
WES - 9 (2022)	Develop and implement an Emergency/Pandemic Plan with West Liberty University that ensures proper communication between Town of West Liberty Officials and Police Department and West Liberty University Officials and Police Department to protect both residents and students in case of a natural disaster or other emergency.	New project	2 yrs.	Town of West Liberty; West Liberty University	Town of West Liberty; Town of West Liberty Police Department; West Liberty University; West Liberty University Police Department	Prevention; Public Education; Public Awareness
WES - 10 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; Town of West Liberty	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Wheeling						
WHE – 1 (2017)	Create displays for use at public events (health fair, public awareness day, county fair, city events).	Storm sewer educational outreach has been implemented.	Ongoing	WVU; Local	WOCEMA; WVU Extension Service; City of Wheeling	Public Education and Awareness
WHE – 2 (2017)	Create materials that are targeted towards tourist population.	No progress	Ongoing	Wheeling Area Chamber of Commerce	Wheeling Area Chamber of Commerce; City of Wheeling	Public Education and Awareness
WHE – 3 (2017)	Utilize the media for the distribution and publication of hazard information.	Hazard information distributed via City's Facebook page.	Ongoing	N/A	Ohio County Commission; City of Wheeling	Public Education and Awareness
WHE – 4 (2017)	Create a public speaking series on hazard related topics.	Fire Department speaks to students/ residents regarding hazard topics.	N/A	WOCEMA	City of Wheeling	Public Education and Awareness
WHE – 5 (2017)	Ensure that the Red Cross citizen's disaster course is held on a frequent basis.	N/A, as there is no local Red Cross.	N/A	N/A	N/A	N/A
WHE – 6 (2017)	Update the WOCEMA website to provide hazard related information that is easily accessible.	Ongoing Progress	Ongoing	N/A	WOCEMA; City of Wheeling	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 7 (2017)	Continue to work with the Ohio County school system to promote hazard mitigation education and awareness and discuss ways to better integrate mitigation into the curriculum.	Ongoing Progress	Review/ Improve-ments Ongoing	N/A	WOCEMA; Wheeling Fire Dept.; Ohio County Schools; City of Wheeling	Public Education and Public Awareness
WHE – 8 (2017)	Continue to work with non-governmental organizations (youth, service, professional, religious) to promote mitigation education and awareness.	Ongoing Progress	Review/ Improve-ments Ongoing	N/A	WOCEMA; City of Wheeling	Public Education and Public Awareness
WHE – 9 (2017)	Develop a telephone information line for residents to obtain emergency preparedness information and current disaster information.	Ongoing Progress	Main-tenance Ongoing	WOCEMA	WOCEMA; City of Wheeling	Public Education and Public Awareness
WHE – 10 (2017)	Distribute letters to all property owners in the City regarding potential flood hazards as required for participation in the Community Rating System (CRS).	Ongoing Progress	Ongoing	Local	Ohio County; City of Wheeling	Public Education and Public Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 11 (2017)	Establish all-hazard resource centers to be located in the main office of the City. The centers will act as a repository for information on local hazard identification, preparedness, and mitigation strategies for use by citizens, realtors, and lenders.	Information available through the Wheeling Ohio County Emergency Management Association.	Updates ongoing	WOCEMA	Ohio County; City of Wheeling	Public Education and Public Awareness
WHE – 12 (2017)	Continue to hold local course on National Flood Insurance Program (NFIP) for realtors, bankers, and insurers.	Ongoing Progress	Ongoing	WVEMD; NFIP	WVEMD; City of Wheeling	Emergency Services
WHE – 13 (2017)	Ensure that all shelters have adequate emergency power resources.	Ongoing Progress	Ongoing	N/A	City of Wheeling	Emergency Services
WHE – 14 (2017)	Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and the WOCEMA.	Ongoing Progress	Ongoing	N/A	Ohio County; City of Wheeling	Emergency Services
WHE – 15 (2017)	Develop adequate emergency shelter and evacuation plans for animals (domestic pets, livestock, and wildlife).	Ohio County Emergency Management Director is working on this.	Ongoing	N/A	County Animal Control; WV Extension Service; Society for the Prevention of Cruelty to Animals;City of Wheeling	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 17 (2017)	Increase the number of trained citizen emergency responders.	There is now a swift-water rescue team, NAV units and Explorer Programs, who provide volunteers when disasters happen.	Ongoing	Citizen Corps	City of Wheeling	Emergency Services
WHE – 18 (2017)	Conduct annual tabletop disaster exercises with local law enforcement, emergency managers, city and county officials, and other disaster response agencies.	Ongoing Progress.	Ongoing	HMGP/ EMPG	WOCEMA; City of Wheeling	Emergency Services
WHE – 19 (2017)	Provide information about local, regional, state, and federal training opportunities to fire departments, EMS, ambulance services, and other emergency responders.	Ongoing Progress.	Ongoing	RESA	RESA; City of Wheeling	Emergency Services
WHE – 20 (2017)	Continue to conduction National Weather Service Storm Spotter classes.	Ongoing Progress.	Ongoing	National Weather Service	National Weather Service; City of Wheeling	Emergency Services
WHE – 21 (2017)	Work with other municipalities to update all floodplain ordinances adopted prior to 1987.	Ohio County EMA oversees all municipalities with floodplain ordinances.	5 yrs.	N/A	WOCEMA; WVEMD; City of Wheeling	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 22 (2017)	Provide additional training to county and municipal development officials on NFIP requirements.	Ongoing Progress	Ongoing	WVEMD	WVEMD; City of Wheeling	Prevention
WHE – 23 (2017)	Review the existing Wheeling-Ohio County EOP and update where necessary based on the recommendations of the Regional Hazard Mitigation Plan.	Ongoing Progress	Ongoing	WOCEMA	WOCEMA	Emergency Services
WHE – 24 (2017)	Ensure that the City adopts the revised EOP.	EOP has been adopted.	Ongoing Adoption of Updates	N/A	WOCEMA	Emergency Services
WHE – 25 (2017)	Expand the mission and membership of the Wheeling-Ohio County Local Emergency Planning Committee (LEPC) to act as a county-wide disaster task force.	Ongoing Progress	Ongoing	N/A	WOCEMA; City of Wheeling	Emergency Services
WHE – 26 (2017)	Assist in the development of the Ohio Co. Enterprise Geographical Information System (GIS) and assist with the implementation of the E911 Center's Computer Aided Dispatch system (CAD).	Ongoing Progress	Ongoing	Assessor's Office,; Police Dept.; 911; County Commission	WOCEMA; City of Wheeling	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 27 (2017)	Conduct outreach efforts to educate municipalities about the NFIP and its requirements.	Information regarding NFIP requirements is available at the city building.	Ongoing	WVEMD; NFIP	WOCEMA; City of Wheeling	Prevention
WHE – 28 (2017)	Obtain updated information on the number of NFIP policyholders in City.	Ongoing Progress.	Ongoing	N/A	WOCEMA; WVDEMD; City of Wheeling	Prevention
WHE – 29 (2017)	Collect updated information of the number and location of all repetitive loss properties throughout the City.	FEMA sends this information to the City.	Ongoing	NFIP	WOCEMA; WVEMD; City of Wheeling	Prevention
WHE – 30 (2017)	Develop a database of information on all repetitive loss properties including maps.	Ongoing progress	Ongoing	Assessor's Office; 911; NFIP	WOCEMA; WVEMD; City of Wheeling	Structural Projects
WHE – 31 (2017)	Identify owners of repetitive loss properties that may be willing to participate in future property acquisition and relocation projects.	Ongoing progress	Ongoing	Assessor's Office; 911; NFIP	WVEMD; City of Wheeling	Structural Projects
WHE – 32 (2017)	Establish a formal process for the city and the county to coordinate disaster related efforts, which will include defining boundaries and establishing responsibilities.	Ongoing progress	Ongoing	N/A	WOCEMA; City of Wheeling	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 33 (2017)	Conduct a survey of all historic sites that are located in hazard areas.	Ongoing progress.	5 yrs.	National Historical Events	Wheeling Historical Society; City of Wheeling; Friends of Wheeling	Prevention
WHE – 34 (2017)	Develop mitigation strategies to protect any at-risk historic properties.	State of West Virginia has completed this.	Ongoing	Local	Wheeling Historical Society, WOCEMA; City of Wheeling	Prevention
WHE – 35 (2017)	Work with FEMA and WVEMD on the Map Modernization Program to improve FIRMS.	Completed. City provides this information and Fire Department shares information.	Ongoing	FEMA	WOCEMA; City of Wheeling	Prevention
WHE – 36 (2017)	Work with WV Department of Highway to identify areas of frequent roadway flooding and develop mitigation strategies.	Completed. Fire and Police Departments work with WOCEMA to develop mitigation strategies.	Ongoing	WVDOT; HMGP	WOCEMA; WVDOH; City of Wheeling	Structural Projects

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE – 37 (2017)	Identify strategies to mitigate risks from the transportation and/or storage of hazardous materials in City and County.	Yes, there are plans for the Oil and Gas Industry and other local companies that transport hazardous materials, including Ziegenfelder's, Hapchuk Disposal Services and Liquid Assets Disposal.	Ongoing	HMGP	Wheeling-Ohio County; LEPC; City of Wheeling	Emergency Services
WHE - 38 (2022)	Continue separation of combined sewer overflows (CSOs).	New project	5 yrs.	City of Wheeling; CDBG	City of Wheeling; CDBG	Prevention; Structural Project
WHE - 39 (2022)	Dredge and remove debris from streams and creeks (Big Wheeling Creek and Middle Wheeling Creek).	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Wheeling	Prevention
WHE - 40 (2022)	Establish property owner assistance fund to assist homeowners living in floodplain with mitigation improvements.	New project	5 yrs.	City of Wheeling; HMGP	City of Wheeling; NFIP	Prevention; Public Awareness
WHE - 41 (2022)	Educate residents on City's program that will pick up appliances, couches, etc. and transport them to landfill for free to prevent illegal dumping along creek banks.	New project	Ongoing	N/A	City of Wheeling; Local Landfill	Public Awareness; Public Education

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WHE - 42 (2022)	Establish capital improvement fund that assists the Public Works Department, so that funds are available for stream and creek maintenance.	New project	5 yrs.	City of Wheeling	City of Wheeling	Prevention
WHE - 43 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; City of Wheeling	Emergency Services
WHE - 44 (2022)	Construct tornado shelter in new Fire Department Headquarters.	New project	1- 3 years	City of Wheeling User Fee; HMGP	City of Wheeling; WOCEMA	Emergency Services

Table 6.1.6

2017 and 2022 Project Implementation for Marshall County and Communities in Wetzel County

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Wetzel County						
WET – 1 (2017)	Update the plan to monitor and clean storm water drainage systems within municipalities.	Ongoing progress.	Ongoing	N/A	Floodplain Coordinators	Prevention
WET – 2 (2017)	Construct floodwalls in flood prone areas and where feasible.	Ongoing progress.	5 yrs.	CDBG; NRCS; WVDEP; HMGP	WVDEP; USDA	Structural Projects
WET – 3 (2017)	Create flood control dams in flood prone areas.	Ongoing progress.	5 yrs.	CDBG; NRCS; WVDEP; HMGP	WVDEP; USDA	Structural Projects
WET – 4 (2017)	Coordinate with the WVDOH to conduct culvert inspections throughout the county.	Ongoing progress.	Ongoing	WVDOT	WVDOT	Prevention
WET – 5 (2017)	Strategically place several rain gauges throughout Wetzel County. Periodically check gauges and report results to county representatives.	Ongoing progress.	Ongoing	TBD	WCOES	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WET – 6 (2017)	Instate a county-wide permitting process which will require residents and/or developers to file a permit with the county before beginning any new construction as a means of regulating floodplain development.	Ongoing progress.	Ongoing	N/A	County Commission	Prevention
WET – 7 (2017)	Instate county-wide building codes, which will regulate the number of buildings and the materials used in buildings that are constructed in a floodplain.	Ongoing progress.	5 yrs.	N/A	County Commission	Prevention
WET – 8 (2017)	Continue to apply for Federal funding to raise or move at risk structures (both RL and non-RL properties) within floodplains.	Ongoing progress.	Ongoing	NFIP	Floodplain Coordinators; WCOES	Structural Projects
WET – 9 (2017)	Continue to apply for funding for projects that will increase the county's CRS.	Ongoing progress.	Ongoing	N/A	WCOES; County Commission	Prevention
WET – 10 (2017)	Coordinate with local fire departments to designate alternative routes with signage.	Ongoing progress.	Ongoing	N/A	WCOES; Fire Departments	Emergency Services
WET – 11 (2017)	Coordinate with the West Virginia DOH to create more contracts for emergency snow removal.	Ongoing progress.	Ongoing	WVDOT	WVDOT; WCOES	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WET – 12 (2017)	Increase the amount of snow removal equipment on county routes to speed up snow removal process.	Ongoing progress	Ongoing	WVDOT	WVDOT; Private Contractors	Emergency Services
WET – 13 (2017)	Update and distribute an informational brochure describing the proper safety procedures to carry out during a severe thunderstorm.	Ongoing progress	Ongoing	Local Funds; FEMA	WCOES	Public Education and Awareness
WET – 14 (2017)	Coordinate efforts with local media to provide earlier warning to residents of impending hailstorms.	Ongoing progress	Ongoing	N/A	WCOES; Local Media	Public Education and Awareness
WET – 15 (2017)	Coordinate with the National Weather Service in Pittsburgh, Pennsylvania to warn residents of impending sever wind or tornado conditions.	Ongoing progress	Ongoing	N/A	WCOES; National Weather Service	Public Education and Awareness
WET – 16 (2017)	Enforce county-wide building codes that model the statewide 90 mph wind load rating.	Ongoing progress	Ongoing	N/A	WCOES; County Commission; County Planning Office	Prevention
WET – 17 (2017)	Instate county-wide building codes which will regulate the number of buildings and the material used in buildings that are constructed.	Ongoing progress	Ongoing	N/A	County Commission	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WET – 18 (2017)	Reduce amount of landslide occurrences in Wetzel County by monitoring clear cutting operations.	Ongoing progress.	Ongoing	Local	Municipalities; WVDNR; Timber Industry	Prevention
WET – 19 (2017)	Develop and 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.	Ongoing progress.	Ongoing	HMGP	WCOES; WVEMD	Public Education and Awareness
WET – 20 (2017)	Coordinate with local public service districts to expand system capabilities.	Ongoing progress.	Ongoing	CDBG; WVIJDC; USDA	Municipalities	Structural Projects
WET – 21 (2017)	Develop an informational brochure to distribute to local farmers and residents.	Ongoing progress.	Ongoing	USDA	Farm Bureau; WVU Natural Resources Conservation Service	Structural Projects
WET – 22 (2017)	Publicize locations where residents can obtain water during severe drought conditions.	Ongoing progress.	Ongoing	USDA	WCOES PSD's	Public Education and Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WET – 23 (2017)	Distribute information concerning the leading causes of wildfires and steps the general public can take to avoid starting wildfires.	Ongoing progress.	Ongoing	WVDNR; State Park Commission	WVDNR	Public Education and Awareness
WET – 24 (2017)	Coordinate with the power company to clear trees and other debris from electric lines throughout the county.	Ongoing progress.	Ongoing	AEP	AEP; County Commission	Prevention
WET – 25 (2017)	Update terrorist annexes in county Emergency Operations Plans (EOPs).	Ongoing progress.	Ongoing	N/A	WCOES County Commission	Emergency Services
WET – 26 (2017)	Make the public aware of how to prepare for a bomb threat and who to contact if there is a threat.	Ongoing progress.	Ongoing	N/A	WCOES; County Commission	Public Education and Awareness
WET – 27 (2017)	Perform commodity flow studies to further assess when, where, and what hazardous materials can pass through and into the county.	Completed. Updated every 4 to 6 years.	Ongoing	HMGP; SERC	County; LEPC	Emergency Services
WET – 28 (2017)	Increase public education and awareness regarding hazardous materials (HAZMAT) incidents.	Ongoing progress	Ongoing	HMGP; SERC	WCOES	Public Education and Awareness

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
WET – 29 (2017)	County will continue to seek out opportunities to apply for Hazard Mitigation Assistance (HMA) funds for mitigation reconstruction, elevations, relocations or acquisitions of identified at risk, repetitive loss, non-repetitive loss, substantial damaged, partially or completely demolished or destroyed properties within Wetzel County. If mitigation reconstruction is chosen, properties identified as partially or completely demolished, outside of the regulatory floodway, as identified by available flood hazard data, will be reconstructed in accordance with the standards established in the local floodplain ordinance and in accordance with the same conditions as an elevated structure. Wetzel County will comply with all acquisition, elevation, relocation and mitigation reconstruction requirements, as per the HMA Guidance.	Ongoing progress	Ongoing	HMA	Wetzel County	Structural Projects

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Hundred						
HUN – 1 (2017)	Coordinate with local fire departments to designate alternative routes with signage.	No Progress.	Ongoing	N/A	WCOES; Fire Departments; Town of Hundred	Emergency Services
HUN – 2 (2017)	Reduce the amount of landslide occurrences in Wetzel County by monitoring clear cutting operations.	Ongoing Progress.	Ongoing	N/A	WVDNR Timber Industry Town of Hundred	Prevention
HUN - 3 (2022)	Map stormwater drainage system.	New project	3 yrs.	N/A	Town of Hundred	Prevention
HUN - 4 (2022)	Repair and upgrade stormwater drainage system.	New project	5 yrs.	CDBG; Town of Hundred	CDBG; Town of Hundred	Structural Project
HUN - 5 (2022)	Dredge and remove debris from streams and creeks within and outside of Hundred.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of Hundred	Prevention
HUN - 6 (2022)	Implement engineering techniques to prevent and repair stream bank erosion.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of Hundred	Prevention; Structural Project
HUN - 7 (2022)	Improve communication between the Town of Hundred and Wetzel County Health Department during pandemics.	New project	Ongoing	N/A	Health Department; Town of Hundred	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
HUN - 8 (2022)	Create a testing/vaccine distribution site during pandemics.	New project	Ongoing	N/A	Health Department; Town of Hundred	Emergency Services
HUN - 9 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, Town of Hundred	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
New Martinsville						
NEW – 1 (2017)	Update the plan to monitor and clean storm water drainage systems within municipalities	Ongoing Progress.	Ongoing	N/A	Floodplain Coordinators; City of New Martinsville	Prevention
NEW – 2 (2017)	Construct floodwalls in flood prone areas and where feasible.	No Progress.	5 yrs.	CDBG; NRCS; WVDEP; HMGP	WVDEP; USDA; City of New Martinsville	Structural Projects
NEW – 3 (2017)	Create flood control dams in flood prone areas.	No Progress.	5 yrs.	CDBG; NRCS; WVDEP; HMGP	WVDEP, USDA; City of New Martinsville	Structural Projects
NEW – 4 (2017)	Continue to apply or Federal funding to raise or move at risk structures (both RL and non-RL properties) within floodplains.	Currently applying for funding to relocate New Martinsville Fire Department out of floodplain, but will need additional funding.	Ongoing	NFIP	Floodplain Coordinators; WCOES; City of New Martinsville	Structural Projects
NEW – 5 (2017)	Coordinate with local fire departments to designate alternative routes with signage.	No Progress.	Ongoing	N/A	WCOES; Fire Departments City of New Martinsville	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
NEW - 6 (2022)	Relocate New Martinsville Fire Department out of floodplain.	New project	5 yrs.	City of New Martins-ville; CDBG; FEMA	City of New Martinsville; CDBG	Emergency Services
NEW - 7 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, City of New Martinsville	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Paden City						
PAD – 1 (2017)	Construct flood walls in flood prone areas and where feasible.	No Progress.	5 yrs.	CDBG; NRCS; WVDEP; HMGP	WVDEP, USDA; City of Paden City	Structural Projects
PAD – 2 (2017)	Create flood control dams in flood prone areas.	No Progress.	5 yrs.	CDBG; NRCS; WVDEP; HMGP	WVDEP; USDA; City of Paden City	Structural Projects
PAD – 3 (2017)	Continue to apply for Federal funding to raise or move at risk structures (both RL and non-RL properties) within floodplains.	No Progress.	Ongoing	NFIP	Floodplain Coordinators; WCOES; City of Paden City	Structural Projects
PAD – 4 (2017)	Coordinate with local fire departments to designate alternative routes with signage.	N/A for Route 2 as it is the only main route in and out of the City; however, smaller county roads could be used and should be explored.	Ongoing	N/A	WCOES; Fire Departments; City of Paden City	Emergency Services
PAD - 5 (2022)	Dredge and remove debris from Ingram Creek within Paden City.	New project	5 yrs.	NRCS	NRCS; WVDEP; City of Paden City	Natural Resource Protection

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
PAD - 6 (2022)	Coordinate with Wetzel County to dredge Ingram Creek outside of Paden City.	New project	5 yrs.	NRCS	NRCS; WVDEP; Wetzel County	Natural Resource Protection
PAD - 7 (2022)	Repair and improve stormsewer systems.	New project	5 yrs,	City of Paden City; CDBG	City of Paden City; CDBG	Structural Project
PAD - 8 (2022)	Implement educational outreach classes on the WEN system to teach residents how to use system and to obtain cell phone numbers so that they can be notified in case of disasters.	New project	Ongoing	N/A	City of Paden City; Wetzel County	Emergency Services
PAD - 9 (2022)	Construct a protective barrier/wall that separates CSX Railway from houses and City Park to mitigate potential hazmat incidents.	New project	5 yrs,	City of Paden City	CSX; City of Paden City	Prevention
PAD - 10 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC, City of Paden City	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Pine Grove						
PIN – 1 (2017)	Coordinate with local fire departments to designate alternative routes with signage.	No Progress.	Ongoing	N/A	WCOES; Fire Departments Town of Pine Grove	Emergency Services
PIN – 2 (2017)	Coordinate with local public service districts to expand systems capabilities.	Completed. A system is now in place, "Red Line", that notifies all Wetzel County residents of emergencies.	Ongoing	CDBG; WVIJDC; USDA	Town of Pine Grove	Structural Projects
PIN – 3 (2022)	Dredge and remove debris from streams and creeks within Pine Grove.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of Pine Grove	Natural Resource Protection
PIN - 4 (2022)	Create an emergency shelter that is located outside the floodplain.	New project	2 yrs.	Town of Pine Grove; HMGP	Town of Pine Grove; Wetzel County	Emergency Services
PIN - 5 (2022)	Create and implement a communication plan between the Town of Pine Grove and gas companies working in the vicinity to track when accidents happen on the road.	New project	2 yrs.	WVGHSP	WVGHSP; Town of Pine Grove; Wetzel County	Prevention

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
PIN - 6 (2012)	Implement a mutual aid agreement between Town of Pine Grove Police and Fire Departments for backup, when needed.	New project	1 yr.	Town of Pine Grove	Town of Pine Grove; Surrounding Community Fire Departments	Emergency Services
PIN - 7 (2012)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; Town of Pine Grove	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
Smithfield						
SMI – 1 (2017)	Coordinate with local fire departments to designate alternative routes with signage.	No Progress.	Ongoing	N/A	WCOES Fire Departments Town of Smithfield	Emergency Services
SMI – 2 (2017)	Update and distribute an information brochure describing the proper safety procedures to carry out during a severe thunderstorm.	FEMA pamphlets about flooding and storm readiness have been distributed.	Ongoing	Local Funds; FEMA	WCOES; Town of Smithfield	Public Education and Awareness
SMI - 3 (2022)	Dredge and remove debris from streams and creeks within Smithfield.	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of Smithfield	Natural Resource Protection
SMI - 4 (2022)	Implement engineering techniques to prevent and repair stream and creek bank erosion	New project	5 yrs.	NRCS	NRCS; WVDEP; Town of Smithfield	Prevention; Structural Project
SMI - 5 (2022)	Create an emergency shelter that is located outside the floodplain.	New project	2 yrs.	Town of Smithfield; HMGP	Town of Smithfield	Emergency Services
SMI - 6 (2022)	Establish and implement a coordinated emergency plan with surrounding fire, police departments and emergency services, as the Town of Smithfield does not have any of these services.	New project	1 yr.	Town of Smithfield	Town of Pine Grove; Surrounding Community Fire and Police Departments and EMS	Emergency Services

Project Number (Plan Year)	Description	Status	Time Frame	Funding Source	Coordinating Agency	Mitigation Type
SMI - 7 (2022)	Construct an emergency exit road out of the Town of Smithfield, as severe flooding covers current roads leading out of town (Old Route 20 could be used for this).	New project	5 yrs.	Town of Smithfield; Wetzel County	Town of Smithfield; Wetzel County; WVDOT	Prevention; Structural Project
SMI - 8 (2022)	Implement educational training programs/classes for residents on flooding /severe thunderstorm preparedness.	New project	Ongoing	Town of Smithfield; NFIP	Town of Smithfield	Prevention; Public Awareness; Public Education
SMI - 9 (2022)	Attend educational trainings/classes for floodplain manager and elected officials.	New project	Ongoing	Town of Smithfield; NFIP	Town of Smithfield; NFIP	Prevention
SMI - 10 (2022)	Continued coordination with first responders for inter-agency cooperation to assist in collaborative planning.	New project	Ongoing	N/A	EMA; Law Enforcement; Fire Department; Health Department; 911; LEPC; Town of Pine Grove	Emergency Services

Chapter 7.0 Plan Implementation and Maintenance

This document guides the mitigation efforts in the region and needs to be periodically reviewed and updated every five years. The periodic review is to include assessment after each disaster for adequacy and relevancy of mitigation efforts. There should be at least one review every year. The five-year update, being a regional effort, should be the responsibility of the Regional Planning and Development Council, while periodic reviews should be the responsibility of local jurisdictions. If revisions are needed, it should be done cooperatively by the local jurisdiction, county EMA offices and the Regional Council.

7.1 Plan Adoption

The 19 local jurisdictions have provided input in the development of this plan through individual community meetings, where assessment forms were completed and the West Virginia Flood Tool was reviewed. Residents in the 19 jurisdictions were given the opportunity to add their input through the public outreach survey and the public comment period for the draft plan. In addition, the jurisdictions provided local mitigation strategies and/or projects. Each jurisdiction also assigned priority to its projects. During the individual community meetings, they also provided the status of projects that were included in the previous plan and what challenges they have faced implementing these projects.

Local jurisdictions work closely with the County Emergency Management Agencies, who have the resources and expertise to supplement local efforts. EMAs also represent the local jurisdiction's interests in the county-wide and regional planning efforts. The larger communities of Wheeling, Moundsville, and New Martinsville have more resources than other smaller jurisdictions. All local jurisdictions were given ample opportunities for participation in this planning effort. The local jurisdictions have been made aware that they will be asked to adopt this plan before the 2017 Hazard Mitigation Plan expires.

This regional document is developed to show impacts of locally identified hazards in all three counties in Region X. It emphasizes the coordinated approach to implementation and mitigation. It recognizes that given the resource limitations of smaller jurisdictions, some strategies and projects are more suited for implementation at the county level with evaluation at the local level. After the WVEMD and FEMA review and approval, the document will be sent to the local jurisdictions for adoption by the resolution of the governing body of each jurisdiction. The resolutions will be included in the Appendix of this document.

7.2 Implementation

The 19 jurisdictions vary in size from Smithfield in Wetzel County with a population of 103 to Wheeling in Ohio County with 27,052 residents. The next largest city is Moundsville in Marshall County with a population of 8,093, followed by New Martinsville, Wetzel County

with 5,204 residents. The resources and expertise for implementing strategies and preparing comprehensive plans vary with the size of each jurisdiction. Most jurisdictions rely on resources available through the county EMA. Outside financial assistance, such as funds from the Hazard Mitigation Grant Program (HMGP), will be needed to implement strategies and projects in this plan. Even though a local project may be a high priority, it may not be implemented, due to a lack of funding at the local, state or national level. Since priorities are assigned to projects in each jurisdiction, local jurisdictions can independently pursue their priorities. Some strategies are identical across jurisdictions and such strategies can be implemented independently or cooperatively. Overlapping strategies are better addressed cooperatively for consistency and uniformity.

County EMAs should lead the effort in implementing county-wide strategies and local jurisdictions should pursue strategies that are unique to each jurisdiction. For example, county-wide adoption of a mitigation reconstruction strategy is the default strategy for all jurisdictions in the county until the jurisdiction decides to adopt a more detailed and/or stringent strategy. In this plan, a countrywide strategy is the default strategy for all local jurisdictions until they develop their unique strategy to mitigate the same hazard. Exceptions to this are FEMA requirements for participation in the National Flood Insurance Program (NFIP). All revisions of the adopted document occur during the open public meetings of the governing bodies of the local jurisdictions.

There are several low-cost mitigation efforts in the plan. These are educational/public awareness efforts that can facilitate continued participation in National Flood Insurance Program (NFIP) and local flood preparation. Local jurisdictions can also evaluate and update their flood plain ordinances. These low-cost actions can have significant impact on areas along the Ohio River and other flood prone areas in the region. The local jurisdictions can pro-actively disseminate the public awareness media prepared by county EMAs. Some low-cost actions can also be unpopular and challenging. For some jurisdictions, these may include zoning, land use and comprehensive plans.

Previous plans have emphasized the alignment of as many programs as possible with the mitigation efforts. This approach ensures that mitigation efforts occur by default. This plan builds on these efforts and attempts to promote efforts that facilitate incorporation of mitigation into the actions of coordinating agencies responsible for project implementation. While low-cost actions can be readily implemented, the other needed projects will need resources and expertise to identify funding sources and seeking funds for implementation. Smaller jurisdictions can work with county EMAs and regional agencies, such as Belomar to prepare grant applications for securing funds. Funds would be needed for flood walls and to raise or move at risk structures in floodplains.

The county EMAs work with other agencies and organizations in the area and participate in the efforts to develop economic and comprehensive plans. They ensure that emergency preparedness and mitigation efforts are considered in the other planning documents and programs. EMA directors have provided input in the Comprehensive Plan of the City of Wheeling and more recently, in the Regional Transportation Plan. Previously, Wheeling-Ohio County

Emergency Management Agency (WOCEMA) implemented warning and communications projects at the premium economic development, "The Highlands" in the region. WOCEMA continues to monitor and upgrade these systems.

The adoption of this document by local jurisdictions also signifies the continued implementation of the plan. By adopting this plan, local jurisdictions assure that they will:

- Pursue funds for their high priority actions/projects.
- Cooperatively work with other jurisdictions to implement mitigation programs/actions.
  and to seek cost sharing opportunities for implementing recommended actions.
- Partner with other jurisdictions for continued evaluation and update of this plan.

7.3 Integration into Other Plans and Programs

As a community grows, new developments occur, existing areas expand and land use changes. This change in built environment affects vulnerability to locally identified hazards. However, the location of new developments and building codes can play a major role in minimizing this vulnerability. Sustainable growth results from careful planning; thus, it is important that Hazard Mitigation Plan 2022 Update for Region X be integrated into other plans and programs throughout the region. This ensures that new growth will be less vulnerable to hazard events and associated loss.

Mitigation planning should be part of all local planning efforts and should complement economic and physical growth of a community. It can be done by pro-actively, reducing the vulnerability of existing and future developments. Early participation in other planning activities will also enable EMA directors to pro-actively review and revise Emergency Operations Plans (EOPs).

This Hazard Mitigation Plan 2022 Update is prepared with the active participation of the Transportation and Economic Development staff at the Belomar Regional Council. EMA directors were also included in the preparation of the regional Transportation Plan for 2045. All federally funded or regionally significant transportation projects must be consistent with this plan. The Hazard Mitigation Plan is incorporated in the Economic Development Administration's required Comprehensive Economic Development Strategy (CEDS) for the three counties. WOCEMA was also involved with the Comprehensive Plan for the City of Wheeling. Although only a few jurisdictions in Region X have comprehensive plans, the EMAs will be involved in future comprehensive and economic plans. Federal agencies such as USDOT and EDA, require addressing hazard mitigation in their plans and programs. All local planning activities also provide ample opportunity for public input and the involvement of all stakeholders.

7.4 Plan Maintenance

The first Hazard Mitigation Plan for Region X was prepared by JHC Consulting of

Buckhannon, West Virginia. The 2017 update, as well as this update (2022), were prepared by Belomar staff, as the EMA directors preferred local ownership of the planning process and planning document. This approach provides continued access to the plan developers after its approval and adoption and it was felt that a local effort will provide more effective plan implementation and maintenance.

Plan maintenance requires ongoing evaluation of the plan in light of events and/or local developments. Any gaps in multi-jurisdictional and interstate Memorandums of Understanding (MOUs) would need to be addressed. Ongoing evaluation is essential for situational readiness. Evaluation leads to solutions, and solutions may need a plan update. This "living" document facilitates such updates. At the very least, this document should be revisited for adequacy and relevancy once every year by local jurisdictions, Belomar staff and EMAs. It should also be reassessed after each event and a major update (as required) must happen every five years.

Public participation during the maintenance cycle is also important. Communities provide access to important documents, such as flood maps and disseminate information for public use. Citizen queries regarding mitigation are addressed by the elected and appointed officials and all ordinances are adopted after public hearings. EMA personnel have also reached out to residents of Region X to disseminate information and encourage public participation. All governing body meetings involving discussions and plan updates are open to the public. In addition, the Hazard Mitigation Plan 2022 Update will be availabe at the three county libraries, for the public to review. The plan will also be available on Belomar's website, along with an online comment form, which allows readers to submit any comments/suggestions they may have. In addition, EMA directors periodically hold public outreach events several times during the life of this plan.

Maintenance of this document is also contingent upon the availability of necessary funds to implement projects and actions and to evaluate and update the document itself. Other factors that pertain to maintenance are the public perception of benefits of this effort, cost effectiveness of action taken, economic impacts of actions, federal and state commitment and political impacts of projects and actions. The document will continue to be maintained by Belomar planning staff during the next five years.

Plan updates will continue to occur every five years, as required and will continue to be led by Belomar planning staff, unless Region X communities decide otherwise. Additionally, Belomar staff will monitor and evaluate the plan by tracking the implementation of projects over the next five years. Post event assessments, as needed will include assessment of disaster area and severity. This will be completed by local jurisdictions in the absence of funding for this activity.

Appendix A

Public Participation

A1: Stakeholder List
A2: Participating Jurisdiction
A3: Kick Off Meeting
A4: Steering Committee List
A5: Steering Committee Meetings
A6: Community-Specific Meetings Assessment Forms
A7: Public Outreach Survey
A8: Draft Review and Open House Public Notice and Associated Materials

A 1: Stakeholder List

Name	Organization	Title
Tom Hart	Marshall County Office of Emergency Management Agency	Director
Anthony Novel	Marshall County Office of Emergency Management Agency	Assistant Director
Tracey White	Marshall County Office of Emergency Management Agency	Assistant Director, Operations Coordinator & Search and Rescue Coordinator
Lou Vargo	Wheeling-Ohio County Homeland Security and Emergency Management Agency	Director
Wayland Harris	Wheeling-Ohio County Homeland Security and Emergency Management Agency	Deputy Director
Dave Weaver	Wheeling-Ohio County Homeland Security and Emergency Management Agency	Planning Officer and GIS Coordinator
Steve Yoho	Wetzel County Office of Emergency Management Agency	Director
John Gruzinskas	Marshall County Commission	President
Scott Varner	Marshall County Commission	Vice President
Mike Ferro	Marshall County Commission	Commissioner
Betsy Frohnapfel	Marshall County Commission	Administrator
Randy Wharton	Ohio County Commission	President
Don Nickerson	Ohio County Commission	Vice President
Zachary Abraham	Ohio County Commission	Commissioner
Randy Russel	Ohio County Commission	Administrator
Lisa Heasley	Wetzel County Commission	President
Gregory Morris	Wetzel County Commission	Vice President
Carla McBee	Wetzel County Commission	Commissioner

Jessica Davis	Wetzel County Commission	Administrative Assistant
Charles Reinacher	Village of Clearview	Mayor
Kenneth Murphy	Town of Triadelphia	Mayor
Chad Kleeh	Village of Valley Grove	Mayor
Mark Griffith	Town of West Liberty	Mayor
Glenn Elliott	City of Wheeling	Mayor
Walter Yates	City of Benwood	Mayor
Greg Galentine	City of Cameron	Mayor
David Blazer	City of Glen Dale	Mayor
David Goddard	City of McMechen	Mayor
David Wood	City of Moundsville	Mayor
Charles Goff	Town of Hundred	Mayor
Beth Edgell	Town of Smithfield	Mayor
Sandy Hunt	City of New Martinsville	Mayor
John Haught	Town of Pine Grove	Mayor
Bob Herron	City of Wheeling	City Manager
Rick Healy	City of Moundsville	City Manager
Rusty Jebbia	City of Wheeling	Public Works Director
Erikka Storch	Wheeling Area Chamber of Commerce	President
Scott Reager	Marshall County Chamber of Commerce	Executive Director
Tina Rush	Wetzel County Chamber of Commerce	President

Shawn Schwertfeger	City of Wheeling	Police Chief
Jim Blazier	City of Wheeling	Fire Chief
Ashley Guiler	Wetzel County Health Department	Nurse
Tom Cook	Marshall County Health Department	Administrator
Wayland Harris	Ohio County Health Department	Threat Preparedness Director
Sherry Hayes	Floodplain Manager	Town of Hundred
Joe Richmond	Floodplain Manager	City of Moundsville

Appendix A2: Participating Local Jurisdictions

County/Municipality	Name	Title
Marshall County		
Marshall County	Tom Hart	EMA Director
Benwood	Walter Yates Tiffany Ankrom Dave McLaughlin	Mayor City Clerk Public Works Director
Cameron	Greg Galentine	Mayor
Glen Dale	Dave Blazer Sean Orlofske Jane Criswell	Mayor Water Superintendent Clerk
McMechen	Dave Goddard	Mayor
Moundsville	Sandy Hunt Rick Healy Joe Richmond	Mayor City Manager Floodplain Manager
Ohio County		
Ohio County	Lou Vargo Dave Weaver	EMA Director Planning Officer/GIS Director
Bethlehem	Don Junkins Ben Gilbert	Mayor Street Crew Maintenance
Clearview	Charles Reinacher	Mayor
Traidelphia	Ken Murphy	Mayor
Valley Grove	Chad Kleeh	Mayor
West Liberty	Mark Griffith	Mayor
Wheeling	Glenn Elliott Tom Connelly Larry Helms	Mayor City Planner Floodplain Manager
Wetzel County		
Wetzel County	Steve Yoho	EMA Director
Hundred	Charles Goff Sherry Hayes	Mayor Floodplain Manager
New Martinsville	Sandy Hunt	Mayor
Paden City	Steve Kastigar	Mayor

Pine Grove	John Haught	Mayor
Smithfield	Beth Edgell Christina Shreve	Mayor Floodplain Manager

Natalie Hamilton

From: LuAnn Kennedy
Sent: Tuesday, May 31, 2022 9:57 AM
To: Natalie Hamilton
Subject: FW: Hazard Mitigation Kick-Off Meeting

From: LuAnn Kennedy
Sent: Thursday, June 17, 2021 4:37 PM
To: Walter Yates (tiffany@mcswv.net) <tiffany@mcswv.net>; Dave Blazer Mayor of Glen Dale (glendalewv@aol.com) <glendalewv@aol.com>; Don Junkins (bethlehem@vob2015.comcastbiz.net) <bethlehem@vob2015.comcastbiz.net>; Ohio County Commission (nickersondog@comcast.net) <nickersondog@comcast.net>; Betsy Wilson Frohnapfel (bfrohnapfel@marshallcountywv.org) <bfrohnapfel@marshallcountywv.org>; David Wood (dwood@cityofmoundsville.com) <dwood@cityofmoundsville.com>; Mike Ferro (ferrom4@aol.com) <ferrom4@aol.com>; Gregory Morris (gregory1957@gmail.com) <gregory1957@gmail.com>; Lisa Heasley - Wetzel County Commission (lheasley@wetzelwv.com) <lheasley@wetzelwv.com>; Johnny L. Haught (townofpinegrovewv@gmail.com) <townofpinegrovewv@gmail.com>; Mark Griffith (grffmrk556@aol.com) <grffmrk556@aol.com>; Greg Galentine (g.galentine@aol.com) <g.galentine@aol.com>; John Gruzinskas (mulligunz@hotmail.com) <mulligunz@hotmail.com>; Carla McBee (cmcbee@wetzelwv.com) <cmcbee@wetzelwv.com>; Robert Herron (citymanager@wheelingwv.gov) <citymanager@wheelingwv.gov>; Rick Healy (rhealy@cityofmoundsville.com) <rhealy@cityofmoundsville.com>; mayor@wheelingwv.gov; hundredmayor17@frontier.com; Chad Kleeh (ckleeh54@comcast.net) <ckleeh54@comcast.net>; Beth Edgell (jcshreve@frontiernet.net) <jcshreve@frontiernet.net>; Randy Wharton (rw244@aol.com) <rw244@aol.com>; eb57@villageofclearview.comcastbiz.net; Scott Varner (sgvarner@gmail.com) <sgvarner@gmail.com>; Kenneth Murphy (townoftriadelphia@comcast.net) <townoftriadelphia@comcast.net>; hunt1953@gmail.com; David Goddard (mcmechenmayorgoddard@gmail.com) <mcmechenmayorgoddard@gmail.com>; Erikka Storch (estorch@wheelingchamber.com) <estorch@wheelingchamber.com>; Scott Reager (chamber@marshallcountychamber.com) <chamber@marshallcountychamber.com>; Tom Hart (thart@marshallcountywv.org) <thart@marshallcountywv.org>; Randy Russell (rrussell@ohiocountywv.gov) <rrussell@ohiocountywv.gov>; Steve Yoho (Wce911@frontier.com) <Wce911@frontier.com>; Lou Vargo (lvargo@ohiocountywv.gov) <lvargo@ohiocountywv.gov>; Wayland W. Harris (wayland.w.harris@wv.gov) <wayland.w.harris@wv.gov>; Dave Weaver (dweaver@ohiocountywv.gov) <dweaver@ohiocountywv.gov>; Zachary Abraham (zabraham@ohiocountywv.gov) <zabraham@ohiocountywv.gov>; Jessica Davis (wccaajessica@gmail.com) <wccaajessica@gmail.com>; Anthony Novel and Tracey White (oem@marshallcountywv.org) <oem@marshallcountywv.org>; Rusty Jebbia (rjebbia@wheelingwv.gov) <rjebbia@wheelingwv.gov>; Shawn Schwertfeger (schwerts@wheelingwv.gov) <schwerts@wheelingwv.gov>; Larry Helms (wfdchief@wheelingwv.gov) <wfdchief@wheelingwv.gov>; Tina Rush (trush2@marathonpetroleum.com) <trush2@marathonpetroleum.com>
Cc: A.C. Wiethe <awiethe@belomar.org>; Rakesh Sharma <rsharma@belomar.org>; Scott Hicks <hicks@belomar.org>; Natalie Hamilton (nhamilton@belomar.org) <nhamilton@belomar.org>
Subject: Hazard Mitigation Kick-Off Meeting

KICK-OFF MEETING FOR MARSHALL-OHIO-WETZEL

REGIONAL HAZARD MITIGATION PLAN

Belomar Regional Council will be holding a kick-off meeting for the Marshall-Ohio-Wetzel Regional Hazard Mitigation Plan update. The purpose of this Plan is to identify natural and man-made disaster risks and vulnerabilities in our region (Ohio, Marshall and Wetzel Counties). The plan will also develop long-term strategies and projects that will help mitigate the effects of future disasters. A Hazard Mitigation Plan is required before communities can apply for Hazard Mitigation Assistance grants from FEMA.

Meeting Details

Wednesday, July 7th, 2021 @ 11 AM to be held virtually via Teams Meetings. If you do not have access to Teams Meetings, you can use the conference call number provided in the invitation to join, which will be sent separately tomorrow.

If you would like to review the current Marshall-Ohio-Wetzel County Regional Hazard Mitigation Plan, you can access the plan via the following link:

https://www.belomar.org/ms/hazard-mitigation-plan/

If you have any questions, please contact Natalie Hamilton at 304-242-1800 or by email: nhamilton@belomar.org

Regional Hazard Mitigation Plan Update (2022)
Virtual Kick-off Meeting
July 7, 2021 / 11 AM to 11:30 AM
Attendance Sheet

Name	Organization
1. Scott Hicks	Belomar Regional Council
2. AC Wiethe	Belomar Regional Council
3. Rakesh Sharma	Belomar Regional Council
4. Natalie Hamilton	Belomar Regional Council
5. Jim Benner	Belomar Regional Council
6. Lou Vargo	Wheeling-Ohio County Homeland Security and Emergency Management Agency
7. Dave Weaver	Wheeling-Ohio County Homeland Security and Emergency Management Agency
8. Tom Hart	Marshall County Emergency Management Agency
9. Betsy Frohnapfel	Marshall County Commission
10. Steve Yoho	Wetzel County Commission
11. Jessica Davis	Wetzel County Commission
12. Bob Herron	City of Wheeling

13. Glenn Elliott	City of Wheeling
14. Erikka Storch	Wheeling Area Chamber of Commerce
15. Rick Healy	City of Moundsville
16. Randy Russell	Ohio County Commission
17.	
18.	
19.	
20.	



Regional Hazard Mitigation Plan
(Region 10 - Marshall-Ohio-Wetzel Counties)

Plan Update Kickoff Meeting

July 7, 2021 @ 11:00 AM

Belomar Regional Council



1

Agenda

- Hazard Mitigation Planning Purpose
- Hazard Mitigation Grant Programs
- Hazards in Planning Area
- Steps in Planning Update Process
- Plan Update Timeline
- Next Steps in the Planning Process
- Questions?



2

Hazard Mitigation Planning Purpose

- Identify potential hazards that may threaten the region
- Increase awareness and preparedness
- Develop strategies to mitigate the effects of each hazard
- Sustained action taken to reduce or eliminate long-term risk to human life and property

An approved and adopted Hazard Mitigation Plan must exist for local communities to receive mitigation grant assistance from FEMA.

3

Hazard Mitigation Grant Programs



Hazard Mitigation Grant Program (HMGP)

- Provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration

Building Resilient Infrastructure and Communities (BRIC)

- Supports states, local communities, tribes and territories to undertake pre-disaster mitigation activities
- Eligible activities include:
  1) Capability and Capacity Building
  2) Mitigation Projects
  3) Management Costs
  4) Direct Technical Assistance

Flood Mitigation Assistance (FMA)

- Federal funds available to states, local communities, trines and territories to reduce or eliminate the risk of repetitive flood damage to buildings and structures insured under the National Flood Insurance Program (NFIP)
- Eligible activities include:
  1) Project Scoping
  2) Community Flood Mitigation Projects
  3) Technical Assistance
  4) Flood Hazard Mitigation Planning
  5) Individual Flood Mitigation Projects

4

Potential Hazards in Planning Area

Planning Area
- 3 Counties
- 16 Municipalities



Flooding

Land Subsistence

Hazardous Materials Incidents

Wildfires

Earthquakes

Extreme Weather: Heat, Cold, Wind, Tornados, Storms

Pandemics

Terrorism

Fracking Incidents: Well Fires, Wastewater Pond Failures

Dam Failures

5

Steps in Planning Update Process



6

Plan Update Timeline

August 2022 ⟶ Current Plan (2017) expires. 2022 Plan Update must be approved by all municipalities before this this date.

	July 2021	Aug. 2021	Sept. 2021	Oct. 2021	Nov. 2021	Dec. 2021	Jan. 2022	Feb. 2022	March 2022	April 2022	May 2022	June 2022	July 2022	Aug. 2022
Kick-off Meeting														
Organize Steering Committee														
Steering Committee Meeting														
Create and Distribute Survey														
Outreach to Communities														
Update Community Profile														
Update Natural Hazards Profile														
Review Community Capabilities														
Conduct Risk Assessment														
Identify Mitigation Goals and Actions														
Develop Action Plan for Implementation														
Identify Plan Maintenance Procedures														
Review Final Draft														
Submit Plan to State and FEMA														
Adopt Plan														

7

Next Steps in Planning Process

Public Participation

- Inform public about the Hazard Mitigation Update Process, comment and review
- Create survey to seek public input for hazard identification, mitigation, awareness and community preparedness

Steering Committee Formation

- To guide Regional Plan Update



8

Questions / Comments?

Contact Information

Natalie Hamilton, AICP
Email: nhamilton@belomar.org
Phone: 304-242-1800

Belomar Regional Council

9

A4: Steering Committee Members

Name	Organization	Title
Tom Hart	Marshall County Office of Emergency Management	Director
Lou Vargo	Wheeling-Ohio County Homeland Security and Emergency Management Agency	Director
Steve Yoho	Wetzel County Office of Emergency Management	Director
Shawn Schwertfeger	City of Wheeling Police Department	Police Chief
Jim Blazier	City of Wheeling Fire Department	Fire Chief
Betsy Frohnapfel	Marshall County Commission	Administrator
Randy Russell	Ohio County Commission	Administrator
Jessica Davis	Wetzel County Commission	Administrative Assistant
Rick Healy	City of Moundsville	City Manager
Bob Herron	City of Wheeling	City Manager
Sandy Hunt	City of New Martinsville	Mayor
Greg Galentine	City of Cameron	Mayor
Dave Weaver	Wheeling-Ohio County Homeland Security and Emergency Management Agency	Planning Officer/GIS Coordinator
Scott Hicks	Belomar Regional Council	Executive Director
A.C. Wiethe	Belomar Regional Council	Director of Management Services
Rakesh Sharma	Belomar Regional Council	Director of Transportation
Natalie Hamilton	Belomar Regional Council	Community Development
Jim Benner	Belomar Regional Council	GIS Department

Meeting #1

Natalie Hamilton

From: Natalie Hamilton
Sent: Tuesday, August 3, 2021 3:56 PM
To: A.C. Wiethe; Scott Hicks; AC Wiethe; Rakesh Sharma; Betsy Frohnapfel; Randy Russell; Jessica Davis (jdavis@wetzelwv.com); Robert Herron; Rusty Jebbia; Rick Healy; Sandy Hunt; Greg Galentine; Steve Yoho; Steve Yoho; Louis Vargo; thart@marshallcountywv.org; Marshall County Office of Emergency Management
Subject: RE: Hazard Mitigation Plan Steering Committee Meeting #1

Hi Hazard Mitigation Plan Update Steering Committee,

Just a reminder that Belomar Regional Council will be holding the first steering committee meeting for the Regional Hazard Mitigation Plan update tomorrow (August 4th) at 2 PM at Belomar's office (105 Bridge Street Plaza, Wheeling). This will be an introductory meeting to discuss how we want to approach the plan update, what has worked well in the past, what can be improved and how we can encourage more community involvement/input. We will also discuss questions to ask to our individual community leaders and questions for the online survey that will be available for residents of all three counties to take. If you are not able to make tomorrow's meeting, I will send out a summary of what we discussed.

Thanks,

Natalie Hamilton, AICP
Community Development/Grants Administrator
Belomar Regional Council
105 Bridge Street Plaza
P.O. Box 2086
Wheeling, WV 26003
Phone: (304) 242-1800
Fax: (304) 242-2437
nhamilton@belomar.org

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Regional Hazard Mitigation Plan Update (2022)
Steering Committee Meeting #1
August 4, 2021 / 2 PM to 3 PM
Attendance Sheet

Name	Organization
1. Natalie Hulton	Belomar Regional Council
2. Jessica Davis	Wetzel Co. Commission
3. Steve Yoho	Wetzel CO. OEM
4. Dave Weaver	Wheeling Ohio Co EMA
5. Tom Hart	MARSHALL COUNTY EMERGENCY MGT
6. Lou Vargo	Wheeling Ohio County EMA
7. Tony Campbell	Wheeling Ohio County EMA
8. Rakesh Sharma	Belomar
9. Scott Hill	Belomar
10. A.C. Wiethe	Belomar
11. Bob Tankersley	MCC
12.	

Regional Hazard Mitigation Plan Update (2022)
Steering Committee Meeting #1
August 4, 2021 / 2 PM to 3 PM
Agenda

Welcome/Introductions

Discussion of Planning Approach for Update

1) What worked well in the past
2) What improvements or additions would you like to see
3) How to encourage more participation/input from community leaders and residents
4) Addition of Pandemic category

Discussion of survey questions for local jurisdictions

Discussion of survey questions for community residents

Planning Timeline

Next meeting: date, topics

Local Jurisdiction Survey for the Regional Hazard Mitigation Plan for Marshall, Ohio and Wetzel Counties

1) When was your current Emergency Operations Plan (EOP) approved/adopted?

   Year _____

2) How often do you review the EOP?

   ☐ After each disaster ☐ Once a year ☐ More than a year ☐ As needed

3) How do you coordinate your hazard mitigation efforts with the countywide Emergency Management Agency? Please check all that apply.

   ☐ MOUs ☐ Joint Training ☐ Data Sharing ☐ EOP updates ☐ Communications

   Other _____

4) Do you have adequate resources to address hazard mitigation strategies appropriate to your jurisdiction?

   ☐ Yes ☐ No ☐ Don't know

5) Do you have any comments/suggestions for improving preparedness for hazard mitigation in your community?

   _____

   _____

   _____

   _____

PLEASE RETURN THIS SURVEY ASAP (no later than 5/10/17)

Email: awiethe@belomar.org or Fax: 304-242-2437

Project #	Applies to Goal	Applies to Objective	Performance Measure
MOUNDSVILLE			
MDS – 1: Coordinate with law enforcement providers and appropriate even organizers to ensure that adequate security is available during large or high-profile events.	1, 2, 3, 4, 5, 6, 7, 8	1.9, 5.3, 6.1, 8.3	Adequate staffing for events.
MDS – 2: Develop and/or enhance terrorist annexes in county Emergency Operations Plans (EOPs); develop Continuity of Operations (COOP) plans.	6, 8	6.1, 8.1, 8.2, 8.3	COOP plans for Moundsville.
MDS – 3: Coordinate with first responders for interagency cooperation to assist in collaborative planning.	1, 2, 3, 4, 5, 6, 7, 8	1.6, 1.7, 1.9, 2.2, 5.4, 6.1, 7.2, 8.3	Periodic meetings/communication with other jurisdictions; current plans.
MDS – 4: Support health department planning for Strategic National Stockpile (SNS) distributions during bioterrorism or other incidents.	5, 6, 8	5.3, 6.1, 8.2, 8.3	Necessary stockpile for mitigation.
MDS – 5: Law enforcement to work to develop a plan for oil, natural gas and chemical safety training.	2, 3, 5, 6, 8	5.3, 6.1, 8.3	Training opportunities provided.

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Fax: 304-242-2437

~ Regional Hazard Mitigation Plan Survey ~

Hazard mitigation plans are required by the Disaster Mitigation Act of 2000. (DMA 2000: Public Law (PL) 106-390). The law reinforced the importance of mitigation planning, emphasizing planning before disasters occur.
The first Hazard Mitigation Plan for the region was prepared in the year 2011 and we are in the process of updating that plan. The purpose of the plan is to identify potential hazards, associated risks and actions for mitigation. The hazard mitigation plan for Ohio, Marshall and Wetzel Counties is being prepared now.

Your input is very important. Please complete the brief survey to assist us with this planning effort.

Survey can be dropped in the box provided or mailed to the address above. Please respond by April 8, 2016.

Thanks!

How concerned are you about the following disasters affecting your county?

	Very Concerned	*Somewhat Concerned*	*Neutral*	*Not Very Concerned*	*Not Concerned*
Flooding	☐	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐	☐
Severe Wind	☐	☐	☐	☐	☐
Land Subsidence	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐
Hailstorm	☐	☐	☐	☐	☐
Sever Thunderstorm	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐	☐
Hazmat Incident	☐	☐	☐	☐	☐
Terrorism	☐	☐	☐	☐	☐

Have you experienced any of the following events?

Flooding	☐	Sever Thunderstorm	☐
Winter Storm	☐	Drought	☐
Severe Wind	☐	Wildfire	☐
Land Subsidence	☐	Hazmat Incident	☐
Earthquake	☐	Terrorism	☐
Hailstorm	☐	Did Not Experience	☐

continued on back

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Have you or someone else in your household done any of the folbwoing: (Check more than one action, if applicable)

	Have Done	*Not Done*	*Plan To Do*
Attend meetings or received written information on natural disasters or emergency preparedness?	☐	☐	☐
Talked with members in your household about what to do in case of a natural disaster or emergency?	☐	☐	☐
Developed a "Household/Family Emergency Plan" in order to decide what everyone would do in the event of a disaster?	☐	☐	☐
Prepared a "Disaster Supply Kit" (stored extra food, water, batteries or other emergency supplies)?	☐	☐	☐
In the last year, has anyone in your household been trained in First Aid or Cardio-Pulminary Resucitation (CPR)?	☐	☐	☐
Prepared your home by having smoke detectors on each level of your house?	☐	☐	☐
Discussed or created a utility shutoff procedure in the event of a natural disaster?	☐	☐	☐

continued on back

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Fax: 304-242-2437

~ Regional Hazard Mitigation Plan Survey ~

What was the year of your involvement?
AND/OR Do you remember the most recent year for any of the events?

Flooding	_____	Sever Thunderstorm	_____
Winter Storm	_____	Drought	_____
Severe Wind	_____	Wildfire	_____
Land Subsidence	_____	Hazmat Incident	_____
Earthquake	_____	Terrorism	_____
Hailstorm	_____	Dam Failure	_____

In your opinion, what is the likelihood of these happening in the future?

	Frequently	*Occasionally*	*Rarely*	*Never*
Flooding	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐
Severe Wind	☐	☐	☐	☐
Land Subsidence	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐
Hailstorm	☐	☐	☐	☐
Sever Thunderstorm	☐	☐	☐	☐
Drought	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐
Hazmat Incident	☐	☐	☐	☐
Terrorism	☐	☐	☐	☐
Dam Failure	☐	☐	☐	☐

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Do you feel that your community is prepared for these events?

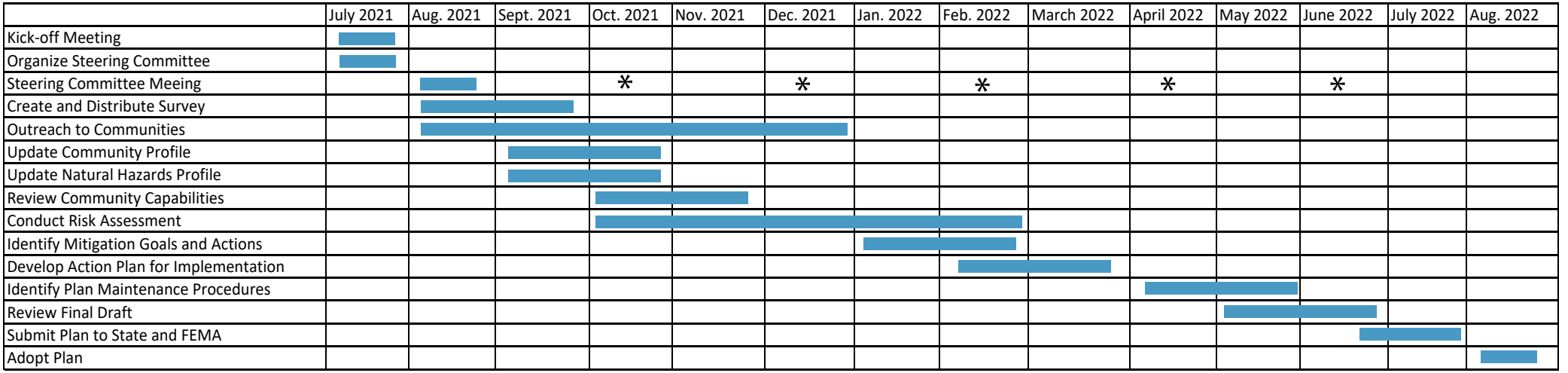
	Yes	*No*	*Don't Know*
Flooding	☐	☐	☐
Winter Storm	☐	☐	☐
Severe Wind	☐	☐	☐
Land Subsidence	☐	☐	☐
Earthquake	☐	☐	☐
Hailstorm	☐	☐	☐
Sever Thunderstorm	☐	☐	☐
Drought	☐	☐	☐
Wildfire	☐	☐	☐
Hazmat Incident	☐	☐	☐
Terrorism	☐	☐	☐
Dam Failure	☐	☐	☐

Do you have general comments or specific suggestions for mitigation?

Thank You

Tentative Planning Update Timeline

Plan must be approved by all municipalities by August 2022



Natalie Hamilton

Subject: Hazard Mitigation Plan Steering Committee Topic Meeting: Pandemic
Location: Belomar Regional Council Conference Room or Virtually

Start: Wed 11/17/2021 10:00 AM
End: Wed 11/17/2021 11:00 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Natalie Hamilton
Required Attendees Louis Vargo; Thomas Hart; Steve Yoho; Steve Yoho; Shawn Schwertfeger; Jim Blazier; Betsy Frohnapfel; Jessica Davis; Randy Russell; Bob Herron; Rick Healy; Sandy Hunt; Greg Galentine; Scott Hicks; Rakesh Sharma; AC Wiethe

Hi HMP Steering Committee,

Please join us for our next steering committee meeting on Wednesday, November 17th from 10 AM to 11 AM at Belomar Regional Council's office.
We will discuss the new category to our Hazard Mitigation Plan, Pandemics!
Members from the Ohio, Marshall and Wetzel County Health Departments will be joining us to share their experiences with the recent COVID-19 Pandemic.
If there are other people in your communities that you feel would be helpful with the pandemic topic, please share this invitation with them.
We will also have the results of our survey to discuss, as well.
If you would prefer to attend the meeting virtually, please send me an email and I will create a Teams Meeting.

Thanks,



Regional Hazard Mitigation Plan Update (2022)
Steering Committee Meeting #2
Topic: Pandemic
November 17, 2021 / 10 AM to 11 AM
Attendance Sheet

Name	Organization
1. Jessica Davis	Wetzel Co. Commission
2. Steve Yoho	Wetzel CU EMA
3. Johley Guiler	Wetzel Tyler Health Dept
4. Tom Cook	Marshall County Health Department
5. Natali Hamilton	Belomar
6. Jim Benner	Belomar
7. Scott Hoi	Belomar
8. Rakesh Sharma	Belomar
9. Shawn Schwertfeger	Wheeling Police Dept
10. Bob Trokenpo	Mi Commission
11. Tom Hart	MARSHALL CO. [redacted] OEM
12. Rick Healy (TEAMS Meeting)	City of Moundsville

13. Wayland Harris (conference call)	Ohio County Health Department
14.	
15.	
16.	
17.	
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19.	
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Regional Hazard Mitigation Plan Update
Steering Committee Meeting #2
Topic: Pandemic
November 17, 2021 / 10 AM to 11 AM

Agenda

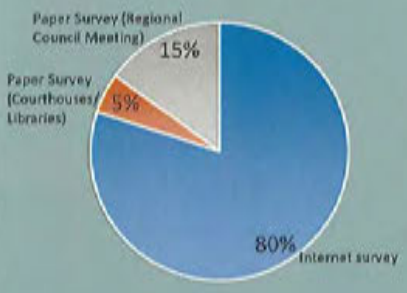
- Survey results regarding Pandemics
- West Virginia COVID-19 Statistics
- Marshal, Ohio and Wetzel County COVID-19 Statistics
- Open discussion regarding COVID-19 Pandemic

1

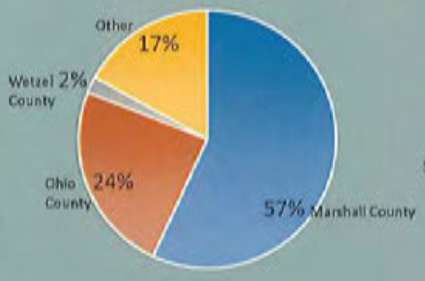
Survey Results

Total Responses: 65 responses

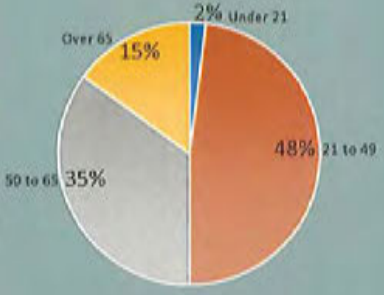
How were responses collected?



Where do respondents live?

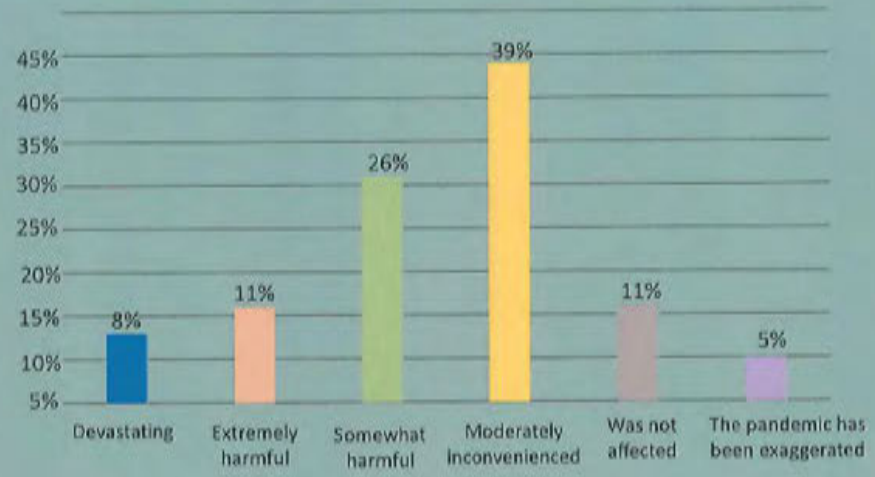


Age range of respondents



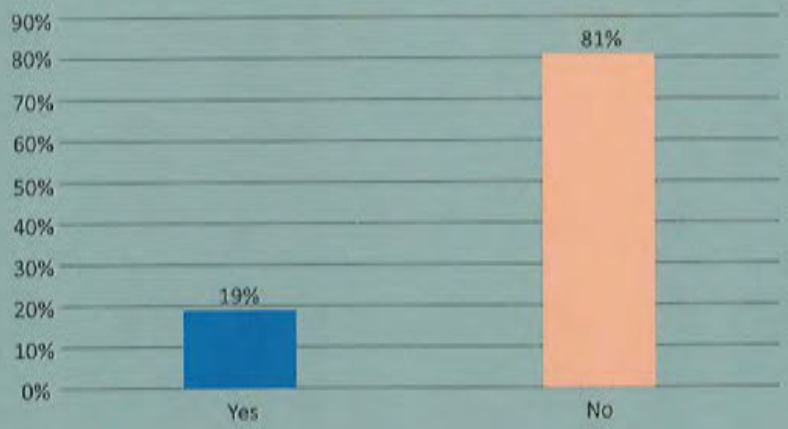
2

The COVID-19 Pandemic has impacted all of our communities. How would you rate your personal experience with the pandemic?



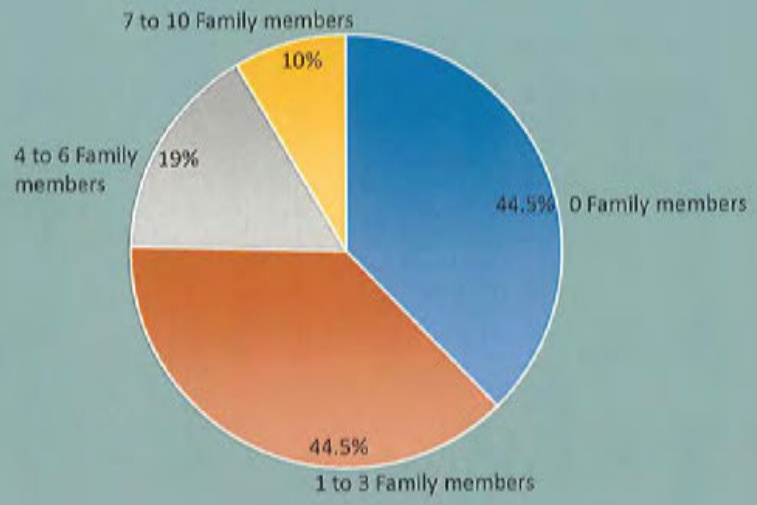
3

Have you ever tested positive for COVID-19 or had symptoms of COVID-19?



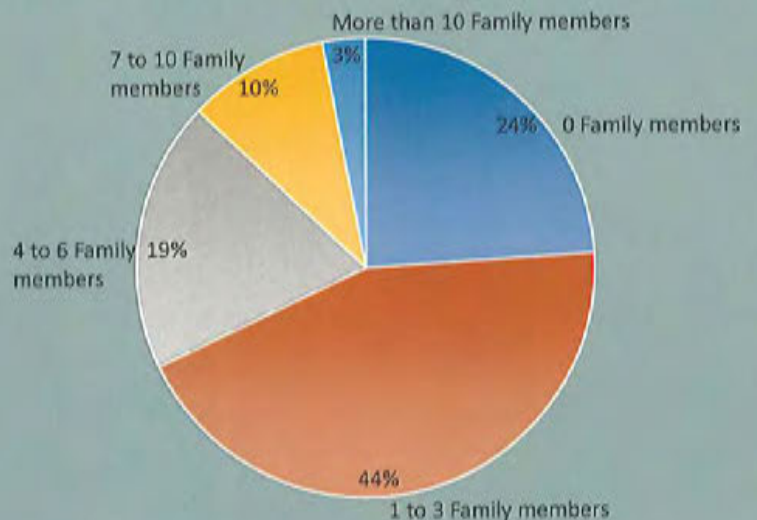
4

How many people in your immediate family tested positive for COVID-19 or had symptoms of COVID-19?



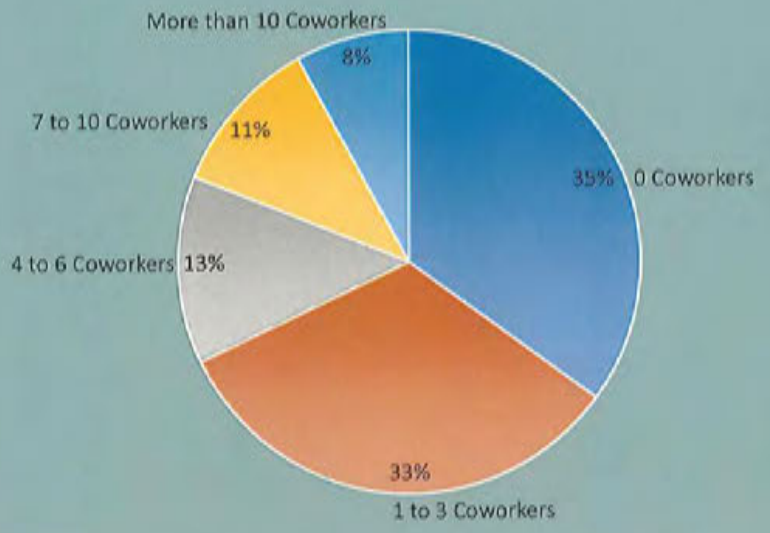
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How many people in your extended family tested positive for COVID-19 or had symptoms of COVID-19?



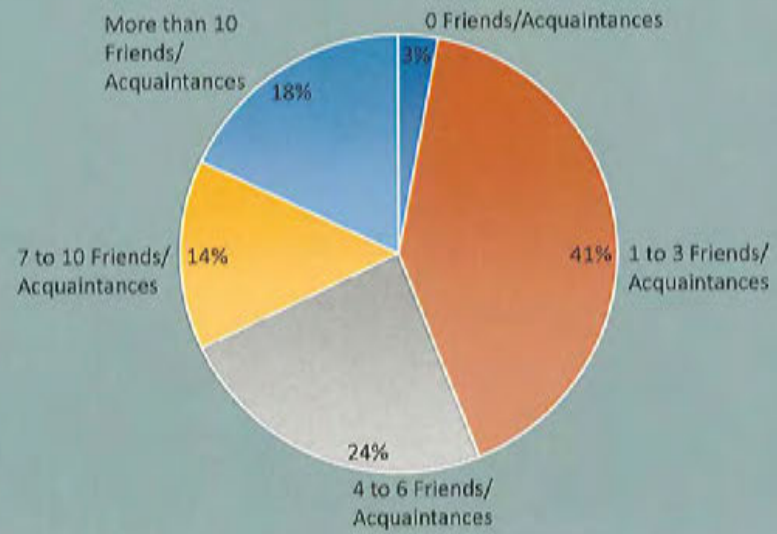
6

How many coworkers do you know that tested positive for COVID-19 or had symptoms of COVID-19?



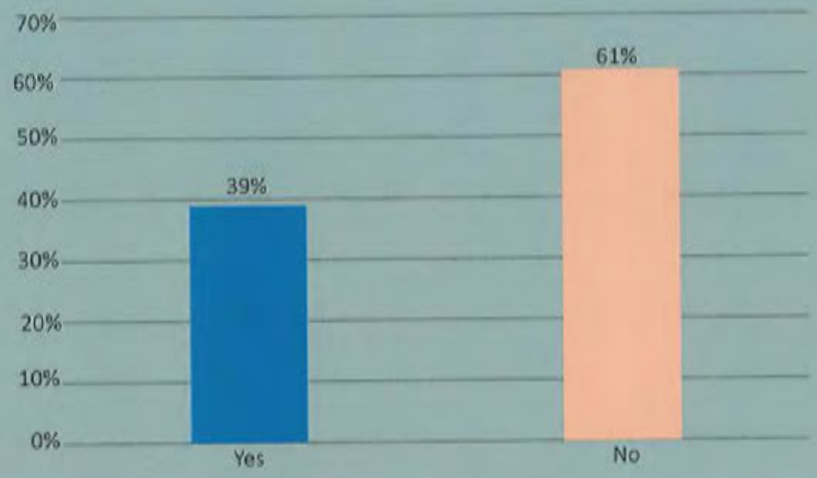
7

How many friends/acquaintances do you know that tested positive for COVID-19 or had symptoms of COVID-19?



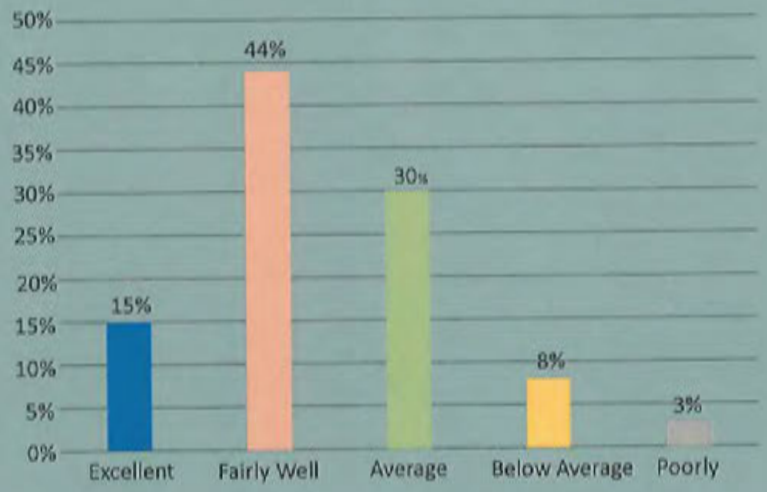
8

Have you or anyone in your family or any acquaintances been hospitalized due to COVID-19?

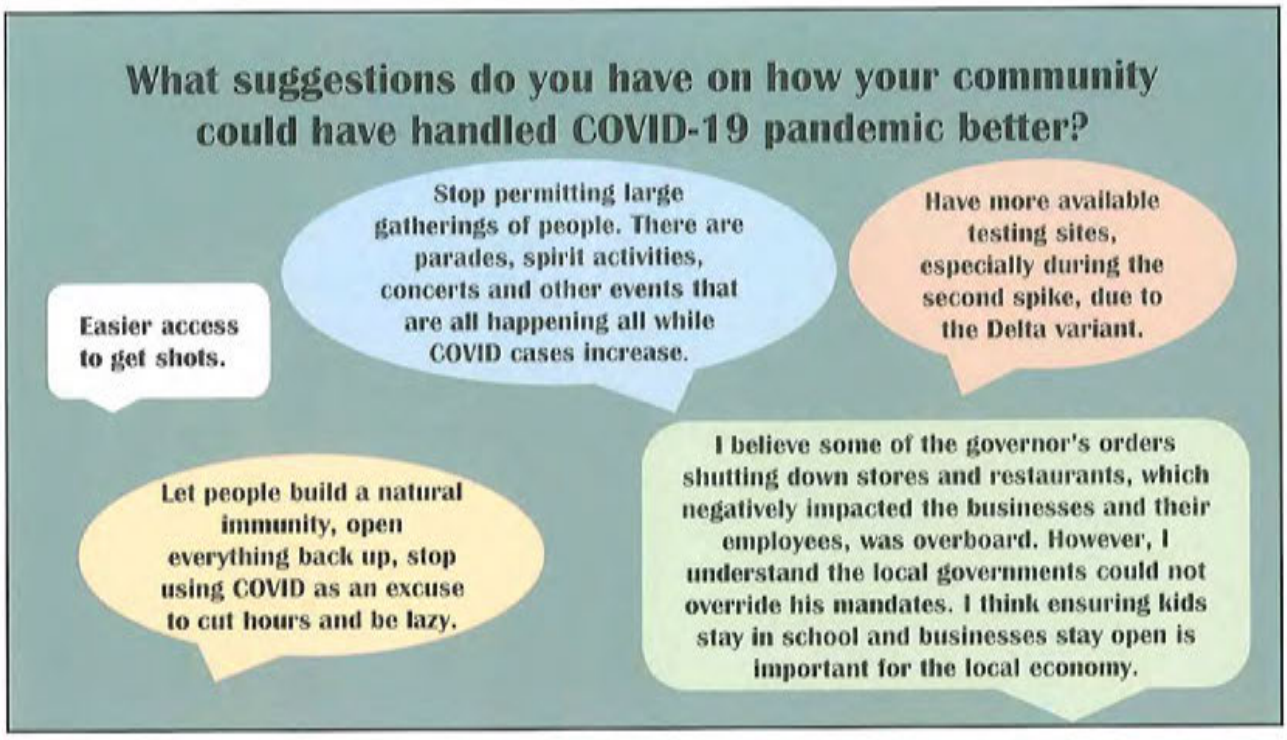


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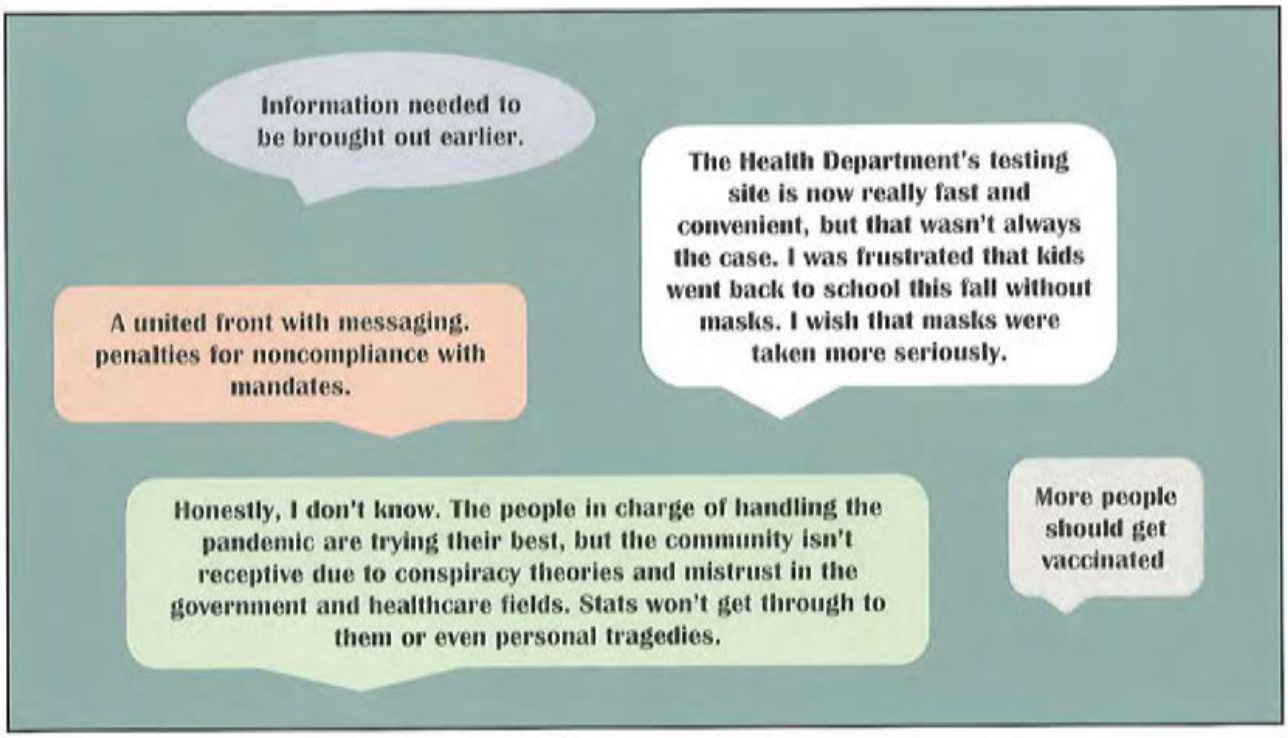
On a scale of 1 to 5, how well do you think your community Addressed the COVID-19 Pandemic?



10


What suggestions do you have on how your community could have handled COVID-19 pandemic better?
Stop permitting large gatherings of people. There are parades, spirit activities, concerts and other events that are all happening all while COVID cases increase.
Have more available testing sites, especially during the second spike, due to the Delta variant.
Easier access to get shots.
I believe some of the governor's orders shutting down stores and restaurants, which negatively impacted the businesses and their employees, was overboard. However, I understand the local governments could not override his mandates. I think ensuring kids stay in school and businesses stay open is important for the local economy.
Let people build a natural immunity, open everything back up, stop using COVID as an excuse to cut hours and be lazy.

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Information needed to be brought out earlier.
The Health Department's testing site is now really fast and convenient, but that wasn't always the case. I was frustrated that kids went back to school this fall without masks. I wish that masks were taken more seriously.
A united front with messaging. penalties for noncompliance with mandates.
Honestly, I don't know. The people in charge of handling the pandemic are trying their best, but the community isn't receptive due to conspiracy theories and mistrust in the government and healthcare fields. Stats won't get through to them or even personal tragedies.
More people should get vaccinated

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West Virginia COVID-19 Statistics

Source: West Virginia Department of Health and Human Resources
Total Number of Cases (as of 11/16/21): 284,165
Total Number of COVID-19 Deaths (as of 11/16/21): 4,676

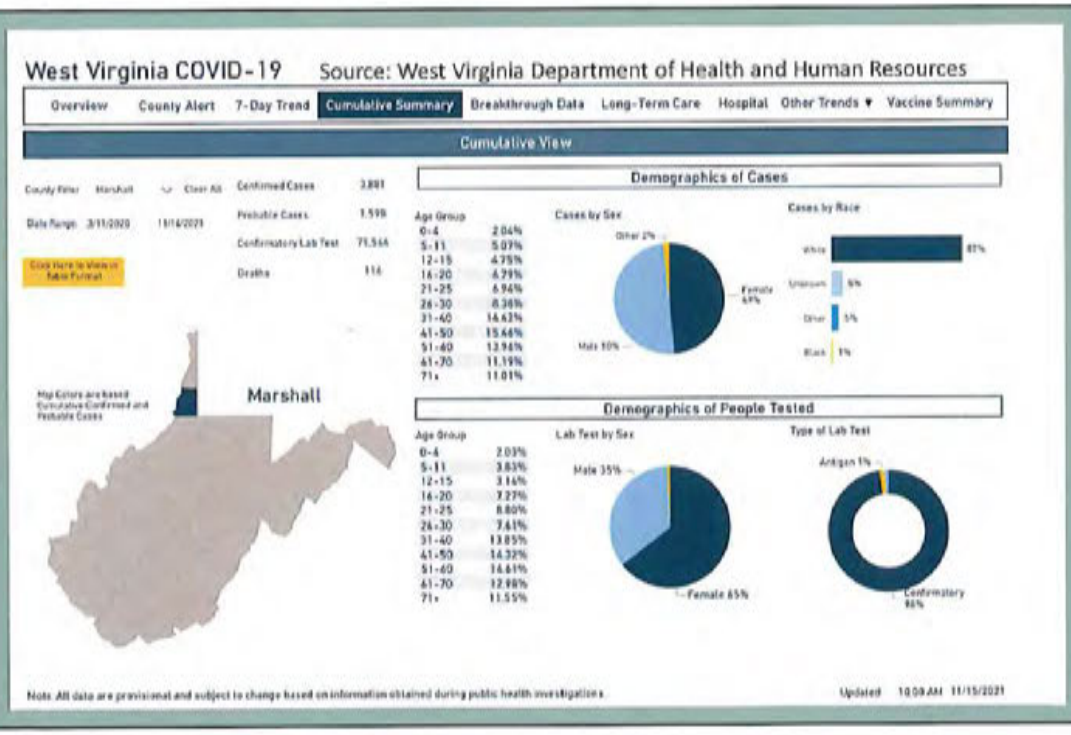
Source: Center for Disease Control
Total Number of Cases (as of 11/16/21): 283,561

Source: Kaiser Family Foundation
Total Number of Cases (as of 11/12/21): 281,865
Total Number of COVID-19 Deaths as of 11/12/21): 4,610

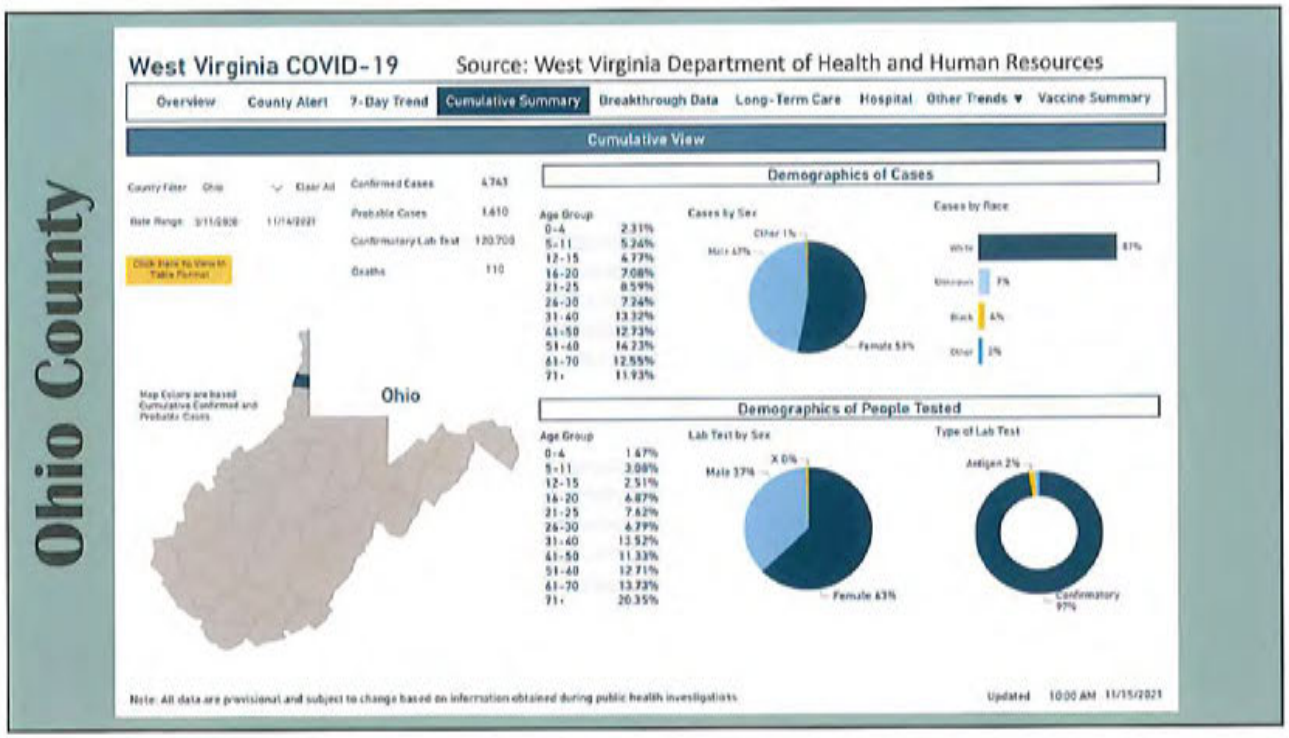
Source: Kaiser Family Foundation
West Virginia COVID-19 Fatality Rate (as of 11/12/21): 1.6%
U.S. COVID-19 Fatality Rate Average (as of 11/12/21): 1.6%
State or US Territory with lowest Fatality Rate: American Samoa (0.0%)
State or US Territory with highest Fatality Rate: New Jersey (2.3%)

13

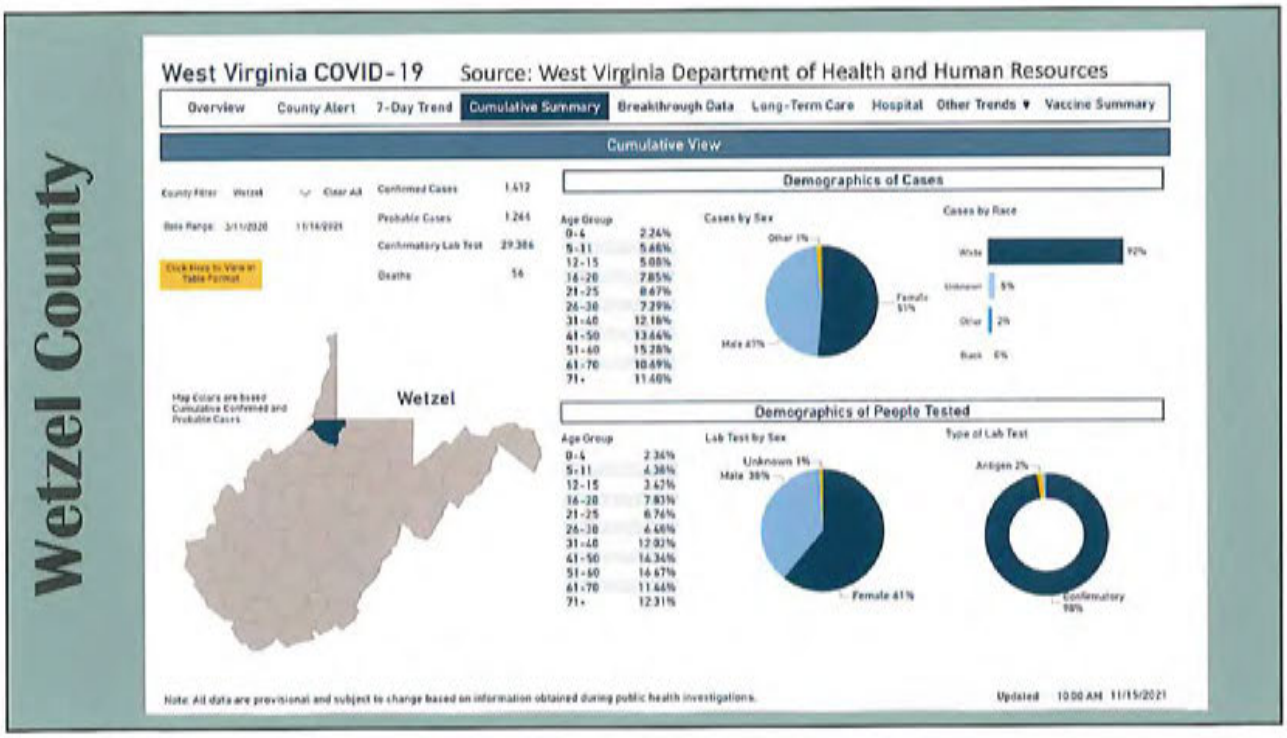
Marshall County



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Ohio County
West Virginia COVID-19
Source: West Virginia Department of Health and Human Resources
Overview
County Alert
7-Day Trend
Cumulative Summary
Breakthrough Data
Long-Term Care
Hospital
Other Trends
Vaccine Summary
Cumulative View
Demographics of Cases
Confirmed Cases 4743
Probable Cases 1410
Confirmatory Lab Test 120708
Deaths 110
Ohio
Demographics of People Tested
Note: All data are provisional and subject to change based on information obtained during public health investigations.
Updated 10:00 AM 11/15/2021

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Wetzel County
West Virginia COVID-19
Source: West Virginia Department of Health and Human Resources
Overview
County Alert
7-Day Trend
Cumulative Summary
Breakthrough Data
Long-Term Care
Hospital
Other Trends
Vaccine Summary
Cumulative View
Demographics of Cases
Confirmed Cases 1,612
Probable Cases 1,244
Confirmatory Lab Test 29,386
Deaths 56
Wetzel
Demographics of People Tested
Note: All data are provisional and subject to change based on information obtained during public health investigations.
Updated 10:00 AM 11/15/2021

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West Virginia COVID-19 Statistics
Vaccine Rates

Vaccine Doses Administered Into Arms of West Virginia Residents

Key Metric	Doses	Population	%
At Least One Dose	1,083,165	1,792,147	60.4%
Fully Vaccinated	930,239	1,792,147	51.9%
5+ At Least One Dose	1,083,165	1,699,122	63.7%
5+ Fully Vaccinated	930,239	1,699,122	54.7%
18+ At Least One Dose	1,019,066	1,432,580	71.1%
18+ Fully Vaccinated	880,228	1,432,580	61.4%
50+ At Least One Dose	633,985	736,823	86.0%
50+ Fully Vaccinated	549,578	736,823	74.6%
65+ At Least One Dose	358,589	367,011	97.7%
65+ Fully Vaccinated	306,238	367,011	83.4%
Total Doses Administered into the arms of WV Residents	1,966,846		
Additional Doses for Fully Vaccinated WV Residents	51,024		

Data Source: HHS, CDC and WV DHHR — Updated 10:00 AM 11/16/2021

Individuals counted are West Virginia residents vaccinated in-state or out-of-state through State Allocations, Federal Pharmacy Program, Federal FQHC Program and Federal Entities

Source: West Virginia Department of Health and Human Resources

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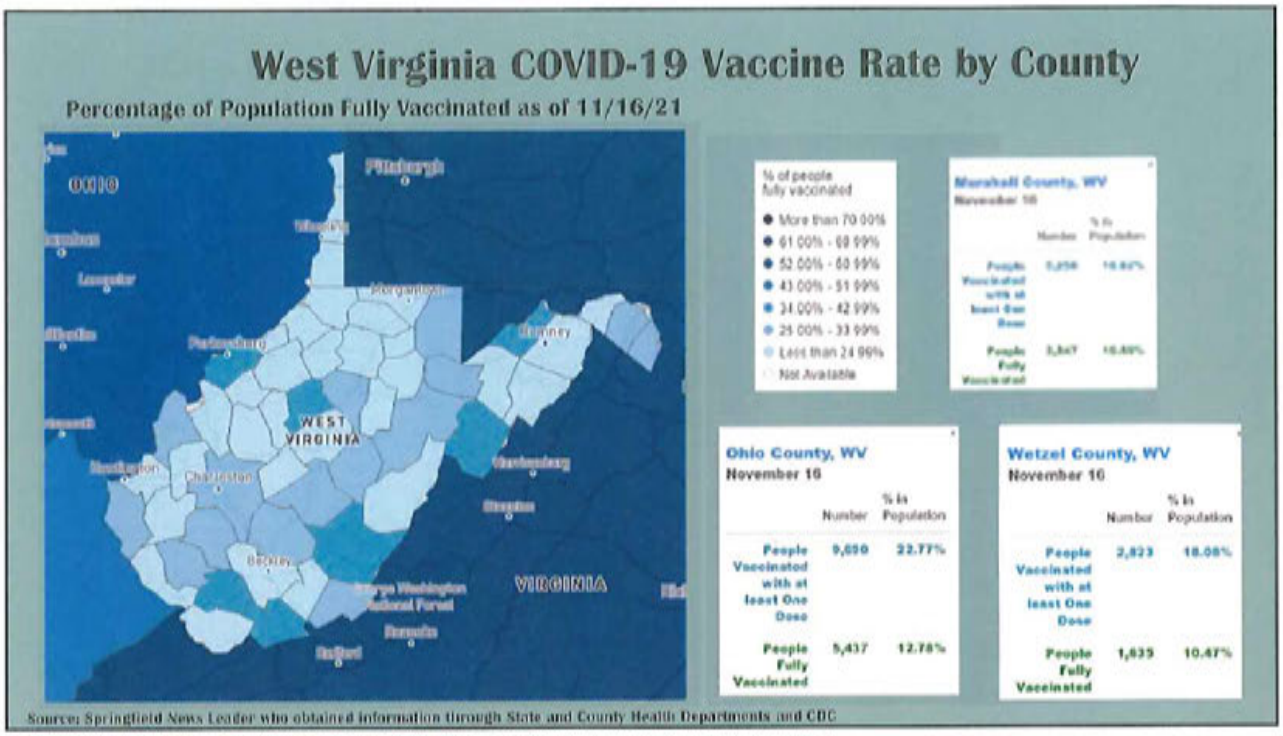
West Virginia Vaccine Rates versus Other States

Percentage of Population Fully Vaccinated as of 11/16/21

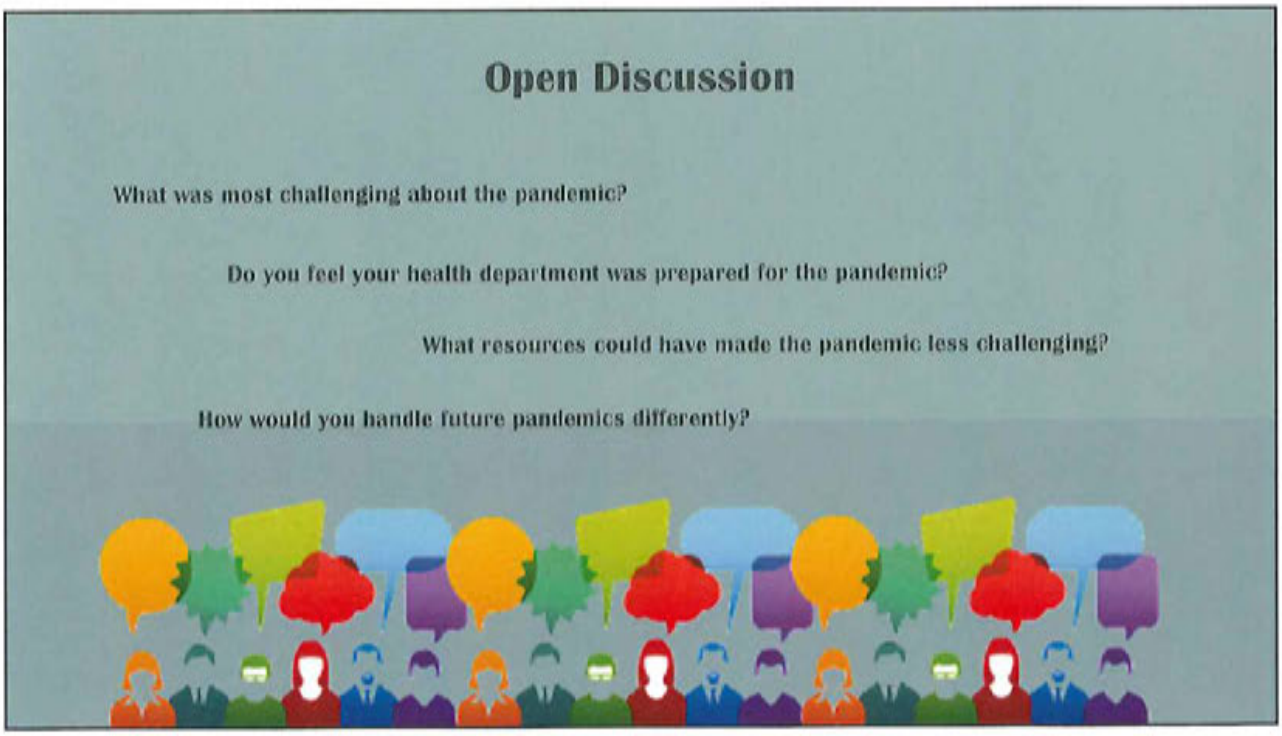


Source: Springfield News Leader who obtained information through State and County Health Departments and CDC

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West Virginia COVID-19 Vaccine Rate by County
Percentage of Population Fully Vaccinated as of 11/16/21
% of people fully vaccinated
More than 70.00%
61.00% - 69.99%
52.00% - 60.99%
43.00% - 51.99%
34.00% - 42.99%
25.00% - 33.99%
Less than 24.99%
Not Available
Marshall County, WV
November 16
Number
% in Population
People Vaccinated with at least One Dose
People Fully Vaccinated
Ohio County, WV
November 16
Number
% in Population
People Vaccinated with at least One Dose
9,690
22.77%
People Fully Vaccinated
5,437
12.78%
Wetzel County, WV
November 16
Number
% in Population
People Vaccinated with at least One Dose
2,823
18.08%
People Fully Vaccinated
1,635
10.47%
WEST VIRGINIA
VIRGINIA
Source: Springfield News Leader who obtained information through State and County Health Departments and CDC

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Open Discussion
What was most challenging about the pandemic?
Do you feel your health department was prepared for the pandemic?
What resources could have made the pandemic less challenging?
How would you handle future pandemics differently?

20

Natalie Hamilton

Subject: Hazard Mitigation Plan Update Steering Committee Meeting #3
Location: Belomar Regional Council's Office

Start: Tue 4/5/2022 2:00 PM
End: Tue 4/5/2022 3:00 PM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Natalie Hamilton
Required Attendees Louis Vargo; Thomas Hart; Steve Yoho; Steve Yoho; Shawn Schwertfeger; Betsy Frohnapfel; Jessica Davis; Randy Russell; Robert Herron; Rick Healy; Sandy Hunt; Greg Galentine; Scott Hicks; Rakesh Sharma; A.C. Wiethe; Jim Blazier (wfdchief@wheelingwv.gov)

Hi All,

The next Hazard Mitigation Plan Update Steering Committee Meeting will be Tuesday, April 5th from 2 PM to 3 PM in Belomar's office.
I will also send out a link a few days before so that you can attend virtually, if needed.
This meeting's topic will be flooding, a natural hazard that almost every community in our region encounters.
If you feel there is someone in your community that could contribute to this meeting, please bring them along or send me their email so that I can invite them.

Thanks,

Natalie Hamilton, AICP
Community Development
nhamilton@belomar.org
(304) 242-1800

105 Bridge Street Plaza
Wheeling, WV 26003
www.belomar.org

Regional Hazard Mitigation Plan Update (2022)
Steering Committee Meeting #3
Topic: Flooding
April 5, 2022 / 2 PM to 3 PM
Attendance Sheet

Name	Organization
1. Lou Vargo	Why-Ohio Co HSEMA
2. Dave Weaver	Why-Ohio Co HSEMA
3. Tony Campbell	Why-Ohio Co HS EMA
4. Tom Hart	Marshall Co OEM
5.	MCC
6. Steve Yoho	Wetzel EMA
7. Sandy Hunt	City of New Martinsville
8. Scott Hein	Belleman
9. James Benner	Belleman
10. Shawn Schweitzer	WPD
11.	Belmont
12. Sherry Hayes (virtual)	Hundred

13.	Randy Russel (virtual)	Ohio County
14.	Bob Herron (virtual)	Wheeling
15.	Rick Healy (virtual)	Moundsville
16.	Natali Holt	Belomar
17.		
18.		
19.		
20.		

Regional Hazard Mitigation Plan Update
Steering Committee Meeting #3
Topic: Flooding
April 5, 2022 / 2 PM to 3 PM

Agenda

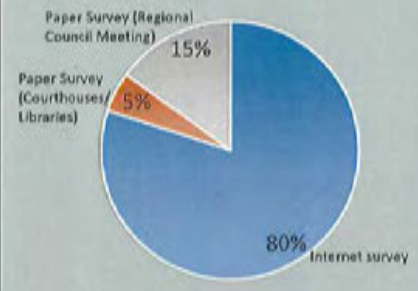
- Review of Survey Results
- Flooding

1

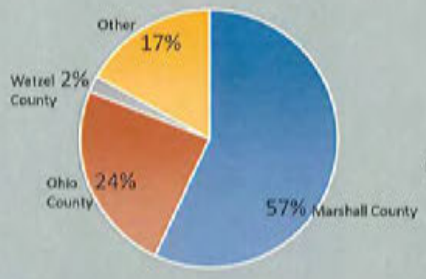
Survey Results

Total Responses: 65 responses

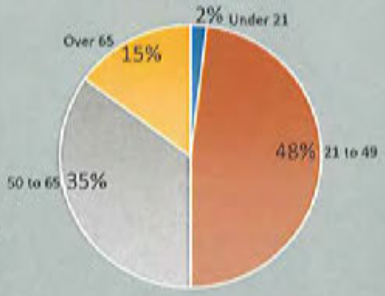
How were responses collected?



Where do respondents live?

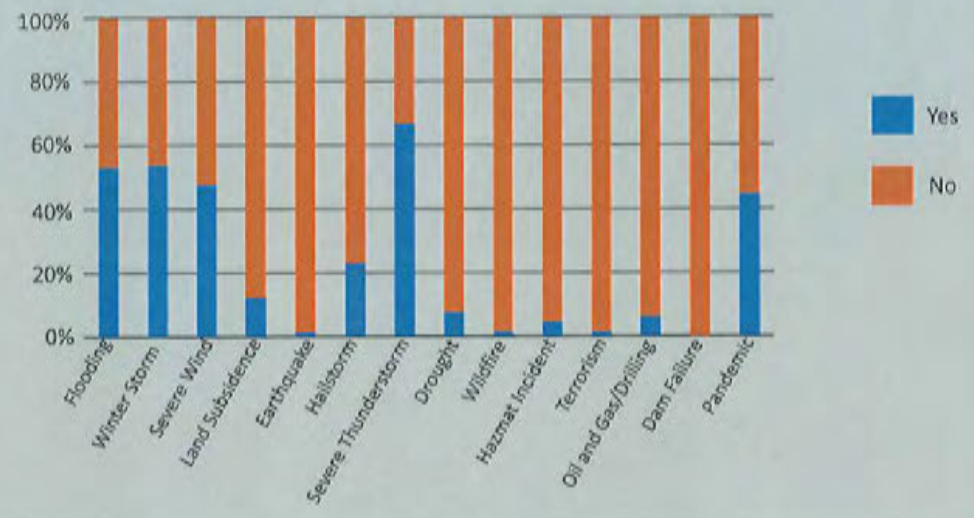


Age range of respondents



2

In addition to pandemics, there are many other natural and man-made disasters that can occur. Have you experienced any of the following events?



3

If you have experienced any of the following/man-made disasters since the update of our last plan (which was in 2017), please chose the year in which the disaster occurred?

Top 5 Disasters in 2017
1. Severe Thunderstorm
2. Flooding
3. Winter Storm
4. Severe Wind
5. Hailstorm

Top 5 Disasters in 2018
1. Severe Thunderstorm
2. Flooding
3. Winter Storm
4. Severe Wind
5. Land Subsidence

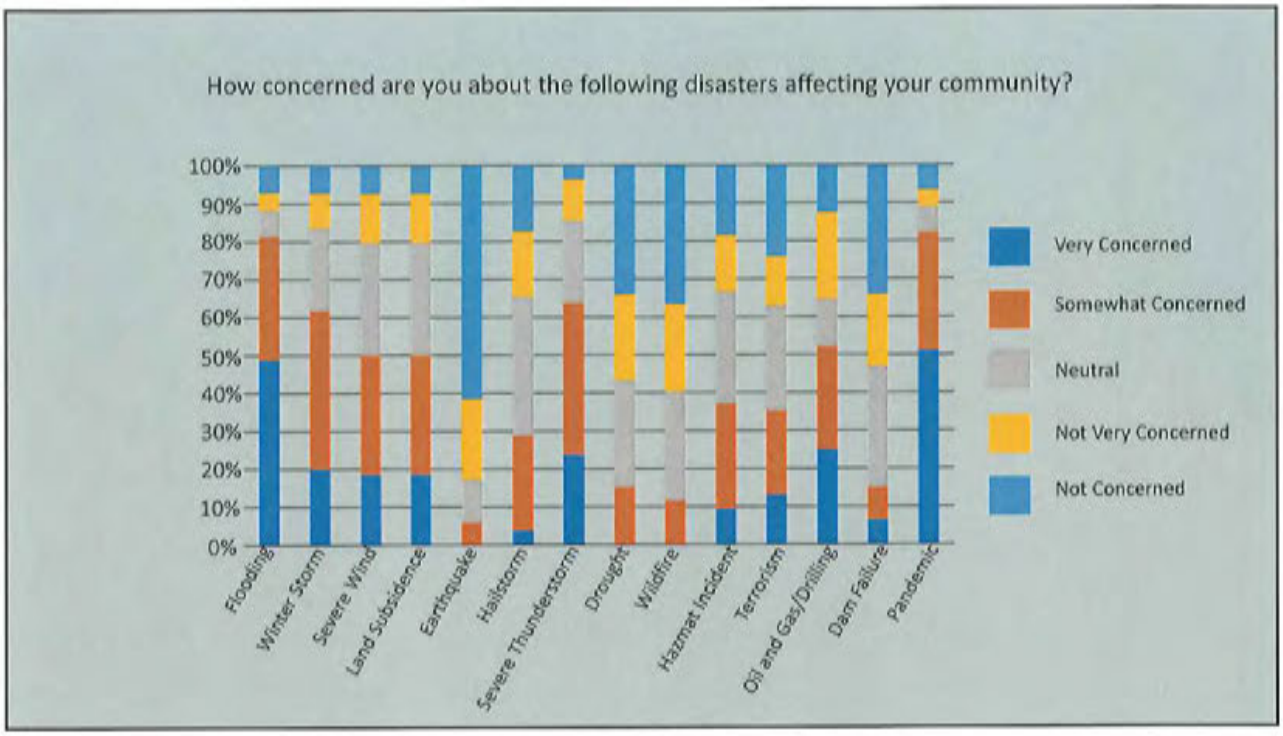
Top 5 Disasters in 2019
1. Severe Thunderstorm
2. Flooding
3. Winter Storm
4. Severe Wind
5. Hailstorm

Top 5 Disasters in 2020
1. Pandemic
2. Severe Thunderstorm
3. Severe Wind
4. Flooding
5. Winter Storm

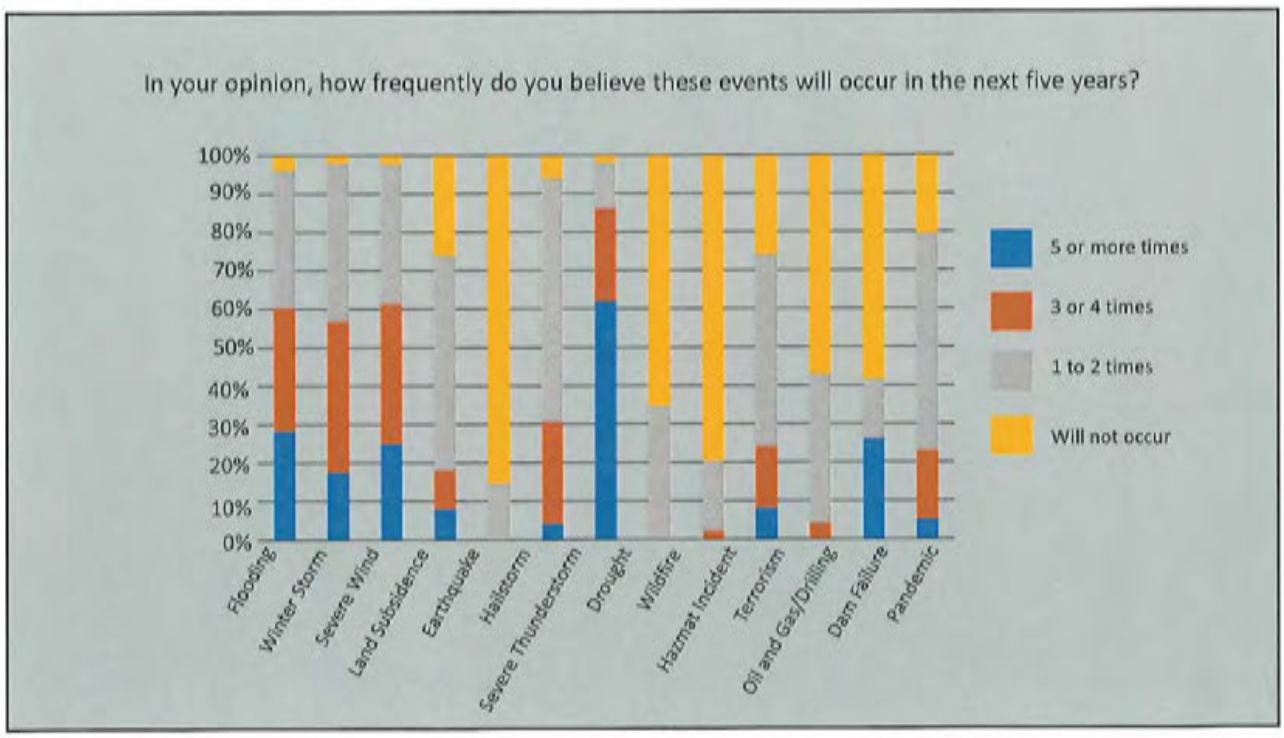
Top 5 Disasters in 2021
1. Pandemic
2. Severe Thunderstorm
3. Severe Wind
4. Flooding
5. Winter Storm



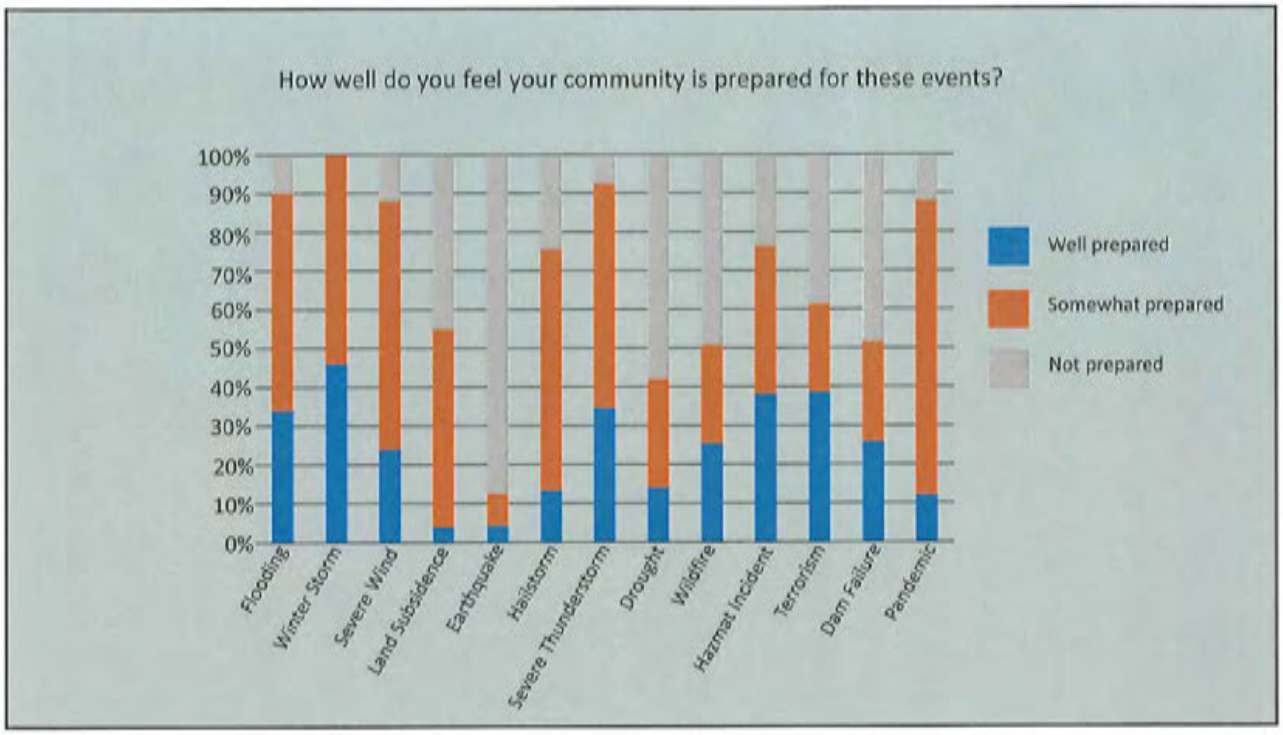
4


How concerned are you about the following disasters affecting your community?
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Flooding
Winter Storm
Severe Wind
Land Subsidence
Earthquake
Hailstorm
Severe Thunderstorm
Drought
Wildfire
Hazmat Incident
Terrorism
Oil and Gas/Drilling
Dam Failure
Pandemic
Very Concerned
Somewhat Concerned
Neutral
Not Very Concerned
Not Concerned

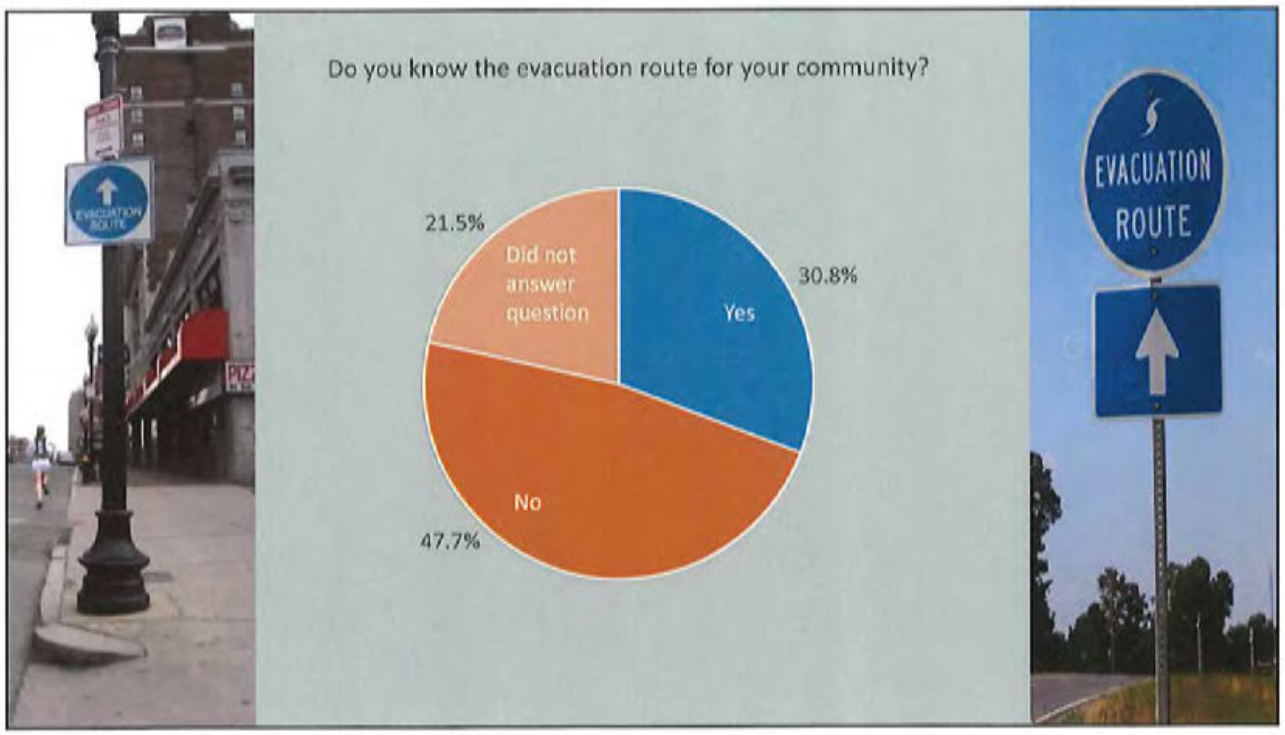
5


In your opinion, how frequently do you believe these events will occur in the next five years?
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Flooding
Winter Storm
Severe Wind
Land Subsidence
Earthquake
Hailstorm
Severe Thunderstorm
Drought
Wildfire
Hazmat Incident
Terrorism
Oil and Gas/Drilling
Dam Failure
Pandemic
5 or more times
3 or 4 times
1 to 2 times
Will not occur

6


How well do you feel your community is prepared for these events?
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Flooding
Winter Storm
Severe Wind
Land Subsidence
Earthquake
Hailstorm
Severe Thunderstorm
Drought
Wildfire
Hazmat Incident
Terrorism
Dam Failure
Pandemic
Well prepared
Somewhat prepared
Not prepared

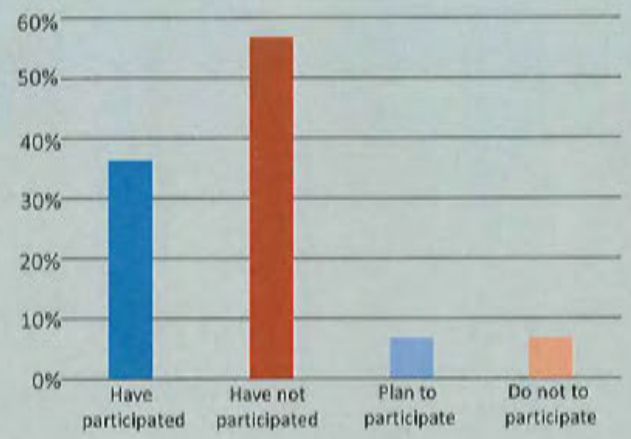
7


Do you know the evacuation route for your community?
21.5%
Did not answer question
30.8%
Yes
No
47.7%
EVACUATION ROUTE

8

Have you or anyone else in your household participated in any of the following:

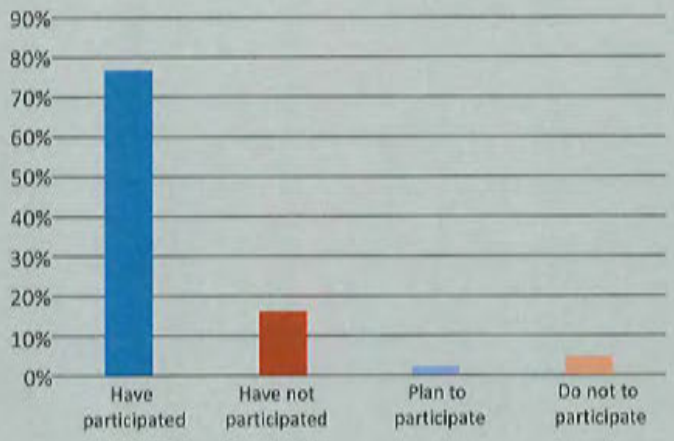
Attended meetings or received written information on natural disasters or emergency preparedness?



9

Have you or anyone else in your household participated in any of the following:

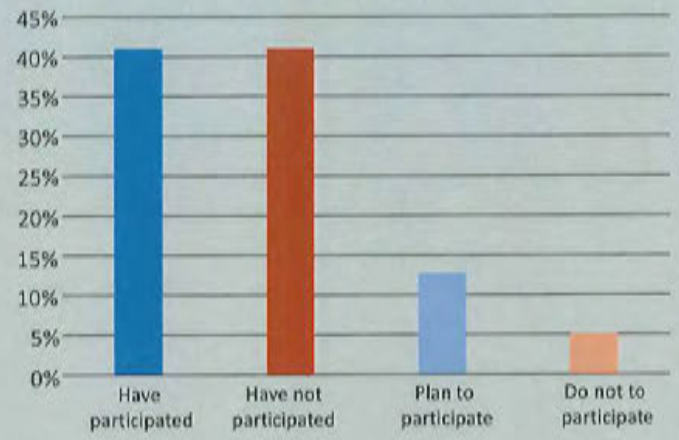
Talked with members in your household about what to do in case of a natural disaster or emergency?



10

Have you or anyone else in your household participated in any of the following:

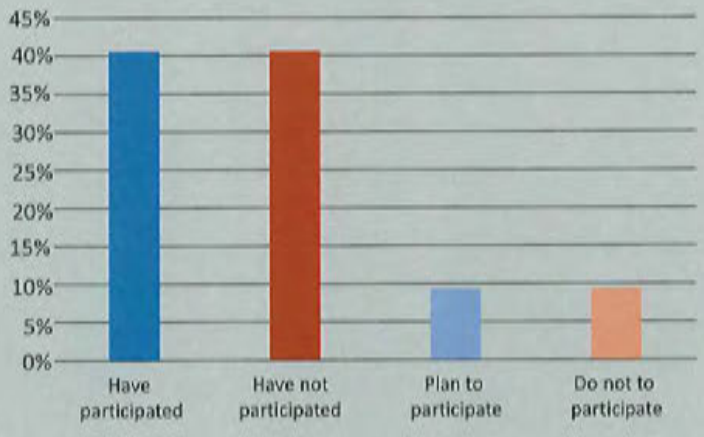
Developed "Household/Family Emergency Plan" in order to decide what everyone would do in an event of a natural disaster?



11

Have you or anyone else in your household participated in any of the following:

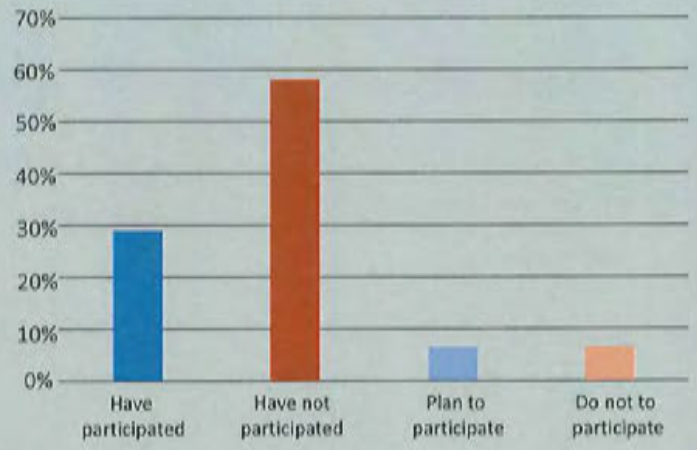
Prepared a "Disaster Supply Kit" (stored extra food, water, batteries and other emergency supplies)?



12

Have you or anyone else in your household participated in any of the following:

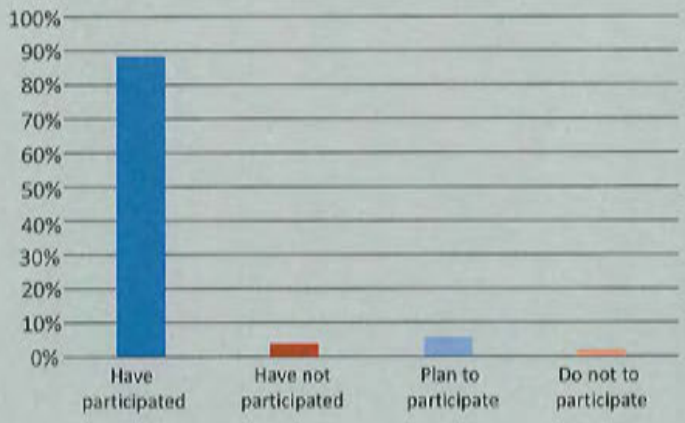
In the last year, has anyone in your household been trained in First Aid or Cardio-Pulmonary Resuscitation (CPR)?



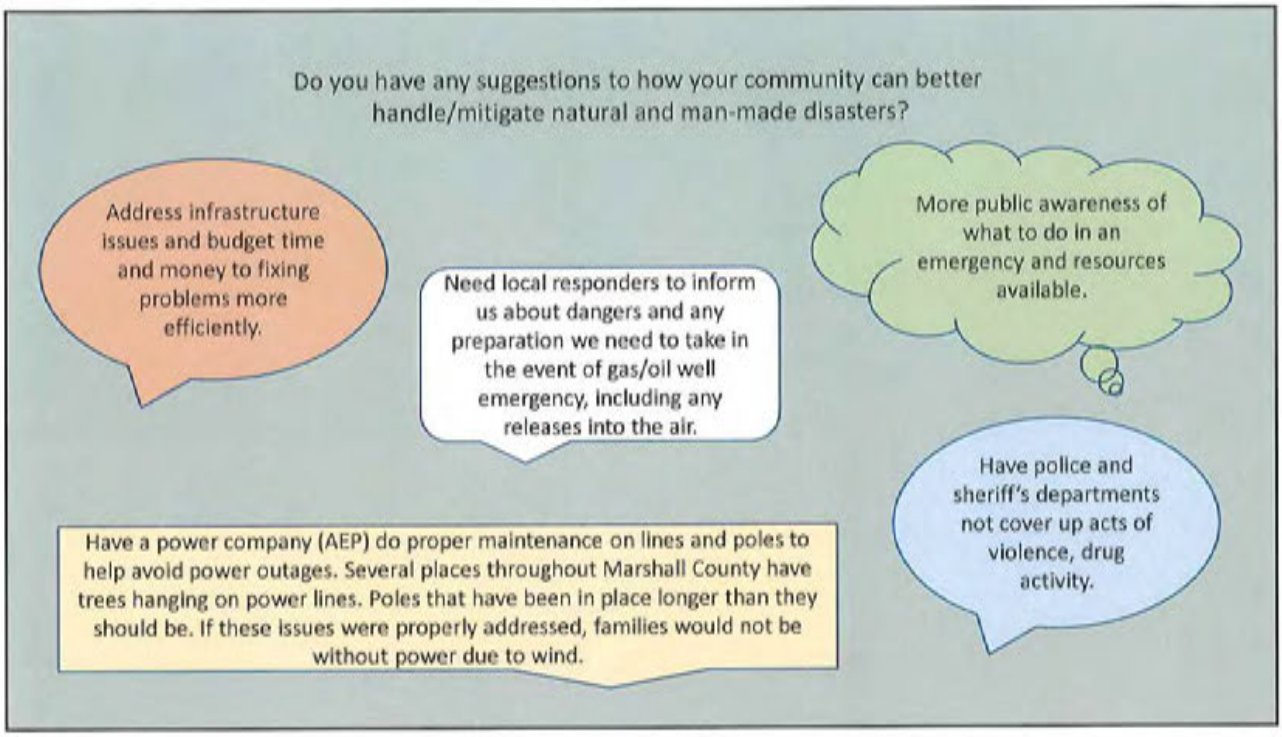
13

Have you or anyone else in your household participated in any of the following:

Prepared your home by having smoke detectors on each level of your house?



14


Do you have any suggestions to how your community can better handle/mitigate natural and man-made disasters?
Address infrastructure issues and budget time and money to fixing problems more efficiently.
Need local responders to inform us about dangers and any preparation we need to take in the event of gas/oil well emergency, including any releases into the air.
More public awareness of what to do in an emergency and resources available.
Have police and sheriff's departments not cover up acts of violence, drug activity.
Have a power company (AEP) do proper maintenance on lines and poles to help avoid power outages. Several places throughout Marshall County have trees hanging on power lines. Poles that have been in place longer than they should be. If these issues were properly addressed, families would not be without power due to wind.

15


Learn how to prevent slippage from oil/gas drilling, so people do not lose their property or homes.
Stop dumping in creeks and streams
Educate first responders and community.
Better mitigation strategies to prevent flooding.
Test the air and water quality from all of this oil and gas mining! Guarantee we are not breathing and drinking toxins.
Better communication on all levels of government, state, county, city, etc

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Do you have general comments regarding natural and man-made disasters in Marshall, Ohio and Wetzel Counties?

In general things seem to be handled pretty well. I think some public education on what do in an emergency and resources available would be helpful.

Various disasters are common on a small-scale, such as flash floods or severe storms, so people generally know how to handle the smaller ones. It might be good to do outreach to teach on the less common ones that happen around here, like pandemics.

Rural roads need better monitoring for hazardous and overweight trucks. What are they transporting? Are they being fined for road damage?

While our counties are typically quiet in terms of disasters, having adequate plans in place to combat them are an absolute requirement, due to the fact that chances of them occurring are almost never predictable.

I feel all 3 county EMAs are dedicated and well prepared.

Signs indicating evacuation routes

More training for city-level

17

Flooding

Since the last Hazard Mitigation Plan Update in 2017, has your county/community....

- experienced an increase in the number of flooding events per year?
- experienced in an increase in severity when a flooding event occurs?
- noticed new areas that flood that never flooded before?
- completed mitigation projects to help prevent severity of floods?
- taken any actions to educate residents on what to do during a flooding emergency?



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Natalie Hamilton

Subject: Hazard Mitigation Plan Update Steering Committee
Location: Microsoft Teams Meeting

Start: Mon 6/20/2022 10:00 AM
End: Mon 6/20/2022 11:00 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Natalie Hamilton
Required Attendees AC Wiethe; Betsy Frohnapfel; Bob Herron; Dave Weaver; Greg Galentine; Jessica Davis (jdavis@wetzelwv.com); Jim Benner; Jim Blazier (wfdchief@wheelingwv.gov); Louis Vargo; Rakesh Sharma; Randy Russell (rrussell@ohiocountywv.gov); Rick Healy; Sandy Hunt; Scott Hicks; Shawn Schwertiger; Steve Yoho; thart@marshallcountywv.org
Optional Attendees: Belomar Conference Room

Hi All,

Belomar would like to hold one more Steering Committee meeting before we submit the draft plan to FEMA for the 2022 update. We will discuss the remaining hazards for our region and discuss the potential mitigation projects/strategies that each community has submitted.
We will hold the meeting in person at Belomar's office, but if needed you can attend the meeting virtually via the Teams meeting link below.
Please let me know if you have any questions.

Thanks,

Natalie Hamilton, AICP
Community Development
nhamilton@belomar.org
(304) 242-1800

105 Bridge Street Plaza
Wheeling, WV 26003
www.belomar.org

Microsoft Teams meeting

Join on your computer or mobile app
Click here to join the meeting

Learn More | Meeting options

Regional Hazard Mitigation Plan Update (2022)
Steering Committee Meeting #4
July 18, 2022 / 2 PM to 3 PM
Attendance Sheet

Name	Organization
1. Steve Yoho	Wetzel OEM
2. Larry Jay Thomas	Wetzel OEM
3. Tom Hart	Marshall Co OEM
4. Dave Weaver	Ohio Co EMA
5. Tony Campbell	Ohio County EMA / Homeland Security
6. Lou Vargo	why. Ohio Co HSEMA
7. Natalie Hamilton	Belomar
8. [illegible]	Belomar
9. Betsy Frohnapfel (virtual)	Marshall County Commission
10. Sandy Hunt (virtual)	Mayor of New Martinsville
11. Randy Russell (virtual)	Ohio County Commission
12. Bob Herron (virtual)	City of Wheeling

A6: Community-Specific Meetings

Community	Contact Person (Mayor)	Phone	Email	Email sent?	Reminder email sent on 4/11/22	Comments	Meeting Date	Meeting Time	Meeting Location	Assessment Forms and review of objectives from last plan Completed	Chain of Command Sent
Benwood	Walter Yates	304-232-2545	tiffany@mcswv.net	Yes			4/13/2022	10:30 AM	Belomar	Yes	Yes
Bethlehem	Don Junkins	304-233-9527	bethlehem@vob2015.comcastbiz.net	Yes	Yes		5/18/2022	10:00 AM	Belomar	Yes	Yes
Cameron	Greg Galentine	304-686-2366	g.galentine@aol.com	Yes	Yes		5/26/2022	9:30 AM	Conference Call	Yes	Yes
Clearview	Charles Reinacher	304-277-1177	eb57@villageofclearview.comcastbiz.net	Yes	Yes		4/20/2022	10:00 AM	Belomar	Yes	Yes
Glen Dale	David Blazer	304-845-5511	glendalewv@aol.com	Yes	Yes		5/25/2022	1:00 PM	Glen Dale City Building		Yes
Hundred	Charles Goff	775-365-9703	hundredwvmayor@frontier.com	Yes			4/15/2022	2:00 PM	Teams Meeting		Yes
McMechen	David Goddard	304-232-3140	mcmechenmayorgoddard@gmail.com	Yes			4/20/2022	9:00 AM	Belomar	Yes	Yes
Moundsville	Judy Hunt/Rick Healy	304-845-6300	jhunt@cityofmoundsville.com / rhealy@cityofmoundsville.com	Yes			4/7/2022	10:00 PM	Belomar	Yes	Yes
New Martinsville	Sandy Hunt	304-455-91200	hunt1953@gmail.com	Yes			4/5/2022	3:00 PM	Belomar	Yes	Yes
Paden City	Steve Kastigar	304-337-8004	no email (208 W. Main St. Paden City, WV 26159)			left voice mail on 5/12/22					
Pine Grove	John Haught	304-889-3351	townofpinegrovewv@gmail.com	Yes	Yes		5/19/2022	4:00 PM	Conference Call	Yes	Yes
Smithfield	Beth Edgell (Christina Shreve)	304-815-5564	jcshreve@frontiernet.net	Yes	Yes		5/19/2022	9:00 AM	Teams Meeting	Yes	Yes
Triadelphia	Ken Murphy	304-547-5000	townoftriadelphia@comcast.net	Yes	Yes		4/28/2022	1:00 PM	Belomar	Yes	Yes
Valley Grove	Chad Kleeh	304-547-1550	ckleeh54@comcast.net	Yes	Yes		5/4/2022	9:00 AM	Belomar	Yes	Yes
West Liberty	Mark Griffith	304-336-7410	grffmrk556@aol.com	Yes	Yes		4/29/222	9:00 AM	Belomar	Yes	Yes
Wheeling	Glenn Elliott	304-234-3604	gelliott@wheelingwv.gov	Yes	Yes		4/27/2022	10:00 AM	Belomar	Yes	Yes

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Benwood

Your Name/Position: Walter Yates/Mayor
Tiffany Ankrom/City Clerk
Dave McLaughlin/Public Works & Floodplain Manager

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm			x	
Severe Wind		x		
Land Subsidence	x			
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm			x	
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Flooding:
1964 37.90 ft, 1964 47.70 ft, 1966 40.90 ft, 1972 47.50 ft, 1991 39.30 ft, 1996 46 ft, 2004 36.40 ft, 2004 46.3 ft, 2005 43.04 ft, 2005 43.04 ft, 2011 38.05 ft, 2018 39.79 ft, 2018 39.34 ft

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[X] Yes [ ] No

North Benwood floods due to the state sanitary sewers backing up from high river waters, Roosevelt Avenue (Boggs Run) experiences flooding due to the river backing up the creek. The flooding can be reduced or eliminated with proper funding

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[X] Yes [ ] No

Center Benwood (4th to 8th Streets) and North Benwood, North Benwood, Roosevelt Ave.

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[X] Yes [ ] No

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

Yes. Our municpality currently has funding to address minor flood clean up, we do not have adequate funding to make any repairs due to damage caused by flooding

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[X] Yes [ ] No

Our community has invested in our levy system by improving drainage under the levy from the roadways, we have invested in new flood pumps and we have continued to do maintenance to our 3 pump stations.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[X] Yes [X] No

Marshall County Emergency Services will respond to any natural disaster occuring within our city.

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

1) Would like to reduce flooding by upgrading street drainage system
2) Would also like to upgrade flood wall height and notification system. Flood wall currently is not accredited because it is several feet too short
3) Update levy systems electrical controls, current system is out of date
4)Install duckbill valves on state owned santitary drains
5) Celan and dredge the boggs creek that flows beneath ground from Boggs run exit to the Ohio river

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Our community provided sand bags and other assistance to the residents and business to help reduce damage. Our community has portable flood pumps on hand to help pump the flood waters from residents homes when water receds. Streets were blocked off to prevent the public and vehicles from entering flood waters.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☒ Not Sure ☐

b. If yes, please describe location(s):

14. Are there any changes to the community asset building lists?

Yes ☒ No ☐ Not Sure ☐

b. If yes, please describe change(s)?

Add Community Building to essential facility list. City of Benwood recently purchased this building (located next to Undo's Restaurant) to be used as a rental facility. This building can hold up to 200 people and could act as an emergency shelter during emergencies. Add City Garage located at 3 Industrial Park Road, this facilty is not in a flood zone.

Recent Crests

(1) 39.34 ft on 09/11/2018
(2) 39.79 ft on 02/18/2018
(3) 38.05 ft on 03/12/2011
(4) 30.83 ft on 03/24/2007
(5) 33.88 ft on 03/16/2007
(6) 43.04 ft on 01/07/2005
(7) 46.30 ft on 09/19/2004
(8) 36.40 ft on 01/06/2004
(9) 32.80 ft on 08/20/1996
(10) 29.40 ft on 05/19/1996
(11) 32.60 ft on 05/13/1996
(12) 46.00 ft on 01/21/1996
(13) 39.30 ft on 01/01/1991
(14) 35.80 ft on 12/20/1990
(15) 26.70 ft on 04/09/1987
(16) 27.00 ft on 03/16/1986
(17) 26.70 ft on 02/21/1986
(18) 34.50 ft on 02/06/1986
(19) 26.00 ft on 01/21/1986
(20) 33.60 ft on 11/29/1985
(21) 33.20 ft on 11/17/1985
(22) 34.60 ft on 11/06/1985
(23) 28.90 ft on 03/13/1985
(24) 32.00 ft on 02/16/1984
(25) 26.50 ft on 05/04/1983
(26) 28.50 ft on 03/18/1982
(27) 34.70 ft on 02/22/1981
(28) 26.50 ft on 08/19/1980
(29) 27.70 ft on 04/10/1980
(30) 34.80 ft on 03/06/1979
(31) 37.40 ft on 02/26/1979
(32) 32.40 ft on 01/03/1979
(33) 31.90 ft on 12/10/1978
(34) 31.30 ft on 05/18/1978
(35) 31.30 ft on 03/15/1978
(36) 31.80 ft on 01/27/1978
(37) 30.70 ft on 12/16/1977
(38) 31.90 ft on 04/03/1977
(39) 34.30 ft on 02/18/1976
(40) 25.70 ft on 01/02/1976
(41) 35.40 ft on 02/25/1975
(42) 47.50 ft on 06/25/1972
(43) 36.30 ft on 04/04/1970
(44) 30.70 ft on 05/25/1968
(45) 32.70 ft on 02/01/1968
(46) 28.50 ft on 05/09/1967
(47) 35.60 ft on 03/08/1967
(48) 40.90 ft on 02/15/1966
(49) 26.70 ft on 01/26/1965
(50) 47.70 ft on 03/11/1964
(51) 37.90 ft on 03/07/1964

Projects stated in 2017 Hazard Mitigation Plan

Benwood	Has any progress been made for this project/action?
1: Continue projects to maintain and upgrade the floodwall in the City of Benwood.	Yes, trees have been cut down on floodwall. More trees need to be cut down though but it was becoming too dangerous for City employees to do this.
2: Coordinate with first responders for interagency cooperation to assist in collaborative planning.	Yes, when COVID-19 pandemic hit, Benwood was in constant contact with Marshall County EMA office to obtain the most recent guidelines.
3: Support health department for Strategic National Stockpile distributions during bioterrorist or other incidents.	Benwood coordinated with Marshall County Health Dept. during COVID-19 pandeimc: 1) had testing center at Benwood Fire Department; 2) distributed PPE to police department; 3) answered calls from residents concerning pandemic and redirected them to health dept.

What new projects for Benwood should be stated in the 2022 Hazard Mitigation Plan Update?

1) Floodwall improvements
    - Increase height of floodwall by 4 feet so it can be accredited
    - Install SCADA system
    - Update and install new electrical controls, current controls are obsolete and non-compatible with today's systems
    - Continue debris removal and maintenance
    - Replace pumps
    - Install security lighting, cameras and fencing
2) Continue separation of CSOs (Center Benwood and North Benwood)
3) Maintain, dredge and clean "Subway Tunnel", a culvert that runs under Route 2 and North Benwood from Boggs Run area to the Ohio river

Jurisdiction: Benwood

Floodplain Manager: Dave McLaughlin



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	We untilize the FEMA online maping system for FIRM and FIS Information
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Adopted 2009, stipulates we adopt the most recent FIRM. Information is stored at the municipal clerks office
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Yes, our ordinance automatically updates when FIRM and FIS are updated
4. Does your municipality support requests for map updates?	yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	The office of the Building Enforcement Agency
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes, we encourage the community to view the FEMA website
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	David McLaughlin, Director of Operations 430 Main St Benwood, WV 26031 (304) 639-5758
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes, we rely on our equipment and techology to aceess the FEMA portal

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, Office of the Building Enforcment, Code Enforcement Officer. We also advise builders to contact the state flood plain office.
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	We don't have any area's meeting this definition
3. How does your community identify substantially improved structures? When do they intervene?	Any improvement where the cost is 50% or more of the structures value
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	No
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	yes, documentation is required with the permit application. The document will be filled with the application.
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Ordinance is enforced whrn an applicate applies for a building permit. Any violator would be required to stop construction until they come into compliance.



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	Not that I am aware of
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	no
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes, compliance topics

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Currently we do not have a program
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	Currently we do not
3. How does the municipality provide general assistance to community members regarding insurance issues?	Currently we do not
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	Currently we do not
5. Does the municipality have any levees or levee systems in its jurisdiction?	yes
6. Is the levee or levee system certified and accredited?	yes
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	yes
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	yes
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	no

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Benwood

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

But Benwood would fall under Marshall County's plan.
Benwood Fire Department also might have a plan?

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Interested in looking into this though, because Roosevelt Avenue (Boggs Run) floods a lot)

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Dave McLaughlin is in the process of becoming a certified building inspector.

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Dave McLaughlin
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Dave McLaughlin
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Tiffany Ankrom and Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Tiffany Ankrom and Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	Phase II CSO Separation to help reduce flooding

Comments: This is being funded by the Clean Water Act.

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

Benwood has its own Water Department.

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Bethlehem

Your Name/Position: Don Junkins/Mayor
Ben Gilbert/Street Crew Maintenance

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [3] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [1] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [3] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [1] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding	x			
Winter Storm				x
Severe Wind				x
Land Subsidence				x
Earthquake	x			
Hailstorm		x		
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident			x Sewer breaks, which come to the surface	
Terrorism	x			
Oil and Gas/Drilling Incident *		x Sand trucks flipped		
Dam Failure	x			
Pandemic		x		
Other: _____				

*Oil and Gas - gas trucks traveling too fast on Rt. 88 and crossing over double line

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Ice Storm in February 2022. Ice brought trees down over 15 different roads in Bethlehem. Still cleaning up in May from the storm.

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

☐ Yes ☒ No

Fairly evenly distributed but Route 88 (Ridgecrest Rd) is more prone to Oil and Gas incidents because it is heavily traveled by gas trucks. Water lines under Route 88 are also being damaged from the weight of the gas trucks.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[ ] Yes [x] No

Bethlehem contains no FEMA-designated flood plains but catch basins along Route 88 and Chapel Road do become clogged with debris and can flood the road. Both of these roads are owned by the State

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No Follow Ohio County's disaster plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

Yes, in the short-term but if a major disaster occurred for an extended period of time, resources would become an issue.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Have maintained catch basins along roads to prevent flooding on roads.
Have shored up hill sides, where areas have started to slip to prevent more severe landslides

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

Have verbal agreement with Ohio County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Install more catch basins and storm drains along major roadways to prevent flooding
Install more gabion baskets on hillsides that are beginning to slip or are vulnerable to slipping.

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Ice Storm of February 2022 was handled well by Bethlehem employees but residents kept calling Village to clear trees off that had fallen on their own private property. Village is not responsible for damage on private property but most residents wanted Village to help.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☐ Not Sure ☐

b. If yes, please describe location(s):

N/A, Bethlehem has no flood zones/plain as it is located on the hilltops.

14. Are there any changes to the community asset building lists?

Yes ☐ No ☐ Not Sure ☐

b. If yes, please describe change(s)?

N/A because there are no flood zones/plain in Bethlehem.

*Although not in any flood zone/plain, Bethlehem's newly built fire station(27 Chapel Rd.) can serve as a shelter for residents if a disaster happens. This building can hold several hundred people, if needed.

Jurisdiction: Bethlehem

Floodplain Manager: Don Junkins/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	N/A Bethlehm has no flood zones/plain as it is located on the hilltops.
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	
4. Does your municipality support requests for map updates?	
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	
3. How does your community identify substantially improved structures? When do they intervene?	
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	
3. How does the municipality provide general assistance to community members regarding insurance issues?	
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	
5. Does the municipality have any levees or levee systems in its jurisdiction?	
6. Is the levee or levee system certified and accredited?	
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Bethlehem

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Don Junkins/Mayor
Ben Gilbert/Street Crew Maintenance

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	Use Ohio County's Plan
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mark Saseen (Council Member) reviews permits
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mayor and Police Department
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Mark Saseen acts as the Chief Building Officer
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments: Have no mitigation grants but do have a Land and Water Conservation grant for their city park

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	Water and Sewer are provided by the City of Wheeling
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Cameron Your Name/Position: Greg Galentine/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [3] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

*Gas trucks on roads have become an issue

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [3] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

*Residents have become extremely concerned with trucks because they drive too fast and are oversized. Have been several roll overs and motor vehicle incidents

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times	
Flooding			x		
Winter Storm			x		
Severe Wind				x	
Land Subsidence				x	*caused from heavy rain incidents
Earthquake	x				
Hailstorm			x		
Severe Thunderstorm				x	
Drought			x		
Wildfire	x				
Hazmat Incident	x				
Terrorism	x				
Oil and Gas/Drilling Incident			x		
Dam Failure	x				
Pandemic		x			
Other: _____					

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Major flood in early 1950s
Major flood in 2019

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Flooding occurs frequently along main creek (Upper Grave Creek Tributary) that runs through Cameron along Railroad Street and along Dragon Highway (aka Route 250)

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along main creek (Upper Grave Creek Tributary) that runs through Cameron

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No Follow Marshall County's

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No, funding is very limited. Depend heavily on local volunteer fire department which consists of 10 to 12 active members

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Have had meetings with the NRCS and DNR to see if creek is eligible for debris removal/dredging but organizations have told Cameron they are not eligible because their creek does not meet the 90% blockage criteria.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

With Marshall County
During the 2019 there was an emergency declaration with Marshall County Commissioners.

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Removal of debris/cleaning of creeks and tributaries to prevent flooding
In addition, to natural debris creeks also have man-made debris (ex. tires, etc.)

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

During the 2019, there was a lot of assistance from outside organizations (Appalachian Outreach, etc.) for clean up. These outside organizations arrived quickly after flooding subsided.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe location(s):

Map is accurate except the area along Dragon Highway has begun to flood during heavy rain events but does not appear in FEMA-designated floodplain

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

First Brethern Church (127 Pennsylvania Ave.) appears on Community Asset List but does not flood.
The Blue and Gold Christian Center (between 6 Church St. and 7 Church St.) should be added to Community Asset list, as this floods

Jurisdiction: Cameron

Floodplain Manager: Greg Galentine/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Hall
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Not sure
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Do no have a floodplain ordinance
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	City Hall
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	Yes, after 2019 flood FEMA visited and antecdotal data was shared
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	This is left up to Marshall County EMA
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Greg Galentine (Mayor)
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	N/A, as there have been no new developments.
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	N/A, as there have been no new developments.
3. How does your community identify substantially improved structures? When do they intervene?	Through building permit process would identify this
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Through building permit process
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes, would be documented at City Hall
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Cameron does not have a flood plain ordinance but building permit process follows floodplain regulations. The City was recently granted the ability by the WV Fire Marshall to have a provisional building code inspector. Joseph Wendt has been hired for this and he now will have ability to enforce building codes.



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	No
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Building permit process follows NFIP guidelines
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes, especially the Volunteer Fire Department

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Do not educate formally educate community members but if they have questions they can ask City staff
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	No
3. How does the municipality provide general assistance to community members regarding insurance issues?	Residents can ask City staff questions
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No, but would be easy to calculate as Cameron is small
5. Does the municipality have any levees or levee systems in its jurisdiction?	Yes, City Reservoir Dam (aka Upper Grave Creek No. 1) and Upper Grave Creek No. 3 within municipal boundaries. Upper Grave Creek No. 4, No. 5, No. 8 and No. 9 are right outside municipal boundaries.
6. Is the levee or levee system certified and accredited?	Not sure
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	Not sure
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	Believe so, as many agencies inspect this dam
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	Yes, all are dams listed above are considered High Hazard dams.

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Cameron

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	Follow Marshall County's Plan
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	Provisional Building Code Inspector, Joseph Wendt
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Joseph Wendt
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Joseph Wendt
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments: Currently have a CDBG Sewer grant and CDBG Demolition Grant

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Clearview Your Name/Position: Charles Reinacher/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [2] Winter Storm
- [1] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [3] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [2] Winter Storm
- [1] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding	x			
Winter Storm			x	
Severe Wind			x	
Land Subsidence	x			
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm			x	
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

* A gas well will be built soon in the vicinity of Clearview, so there might be Gas Drilling Incidents in the future

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

During the early 1990s, a hazmat incident occurred where millions of gallons of diesel fuel was released upstream in the Ohio River near Pittsburgh. This affected the drinking water for Clearview, as they use the City of Wheeling's water system.

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

☐ Yes ☒ No

Land subsidence is a possible threat because coal mines are underneath Clearview. Clearview does have several roads that go in and out of Clearview so if there is damage to one road there are several other roads that can be used.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[ ] Yes [x] No

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[ ] Yes [x] No

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No, but Clearview does have its own Volunteer Fire Department and a paid police department to assist if a disaster occurs but in a large disaster, these fire and police departments would most likely be overwhelmed.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[ ] Yes [x] No

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

Clearview Volunteer Fire Department has verbal agreement with other Ohio County communities' fire departments in case Clearview's Fire Department becomes overwhelmed.

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Would like to have a written disaster plan for Clearview, would list out all potential hazards and process to handle them.

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

The community did well with the pandemic. Fire Department also did well with the hazmat incident that occurred in the 1990s with the Ohio River.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☒ Not Sure ☐

b. If yes, please describe location(s):

Clearview has no floodplains within its boundaries as it is located on the hilltops.

14. Are there any changes to the community asset building lists?

Yes ☐ No ☒ Not Sure ☐

b. If yes, please describe change(s)?

Not applicable since no flood plain.

Jurisdiction: Clearview

Floodplain Manager: Charles Reinacher/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	N/A Clearview does not have any floodplains in its jurisdiction.
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	
4. Does your municipality support requests for map updates?	
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	
3. How does your community identify substantially improved structures? When do they intervene?	
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	
3. How does the municipality provide general assistance to community members regarding insurance issues?	
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	
5. Does the municipality have any levees or levee systems in its jurisdiction?	
6. Is the levee or levee system certified and accredited?	
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Clearview

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Fall under Ohio County's Plan

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Use Belomar Regional Council or Mayor will administer small grants
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Use Belomar Regional Council or Mayor writes small grants
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Glen Dale

Your Name/Position: Dave Blazer/Mayor
Sean Orlofske/Water Superintendent
Jane Criswell/Clerk

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [2] Hazmat Incident — B&O Railway runs along river, directly west of Highline Warren Distribution and houses
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [2] Hazmat Incident — Residents are concerned with B&O Railway that carries chemicals from plants in southern Marshall County
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm			x	
Severe Wind				x
Land Subsidence	x			
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm				x
Drought	x			
Wildfire		x		
Hazmat Incident		x		
Terrorism	x			
Oil and Gas/Drilling Incident		x		
Dam Failure	x			
Pandemic		x		
Other: _____				

Small brush fires occur near B&O Railway, due to sparks coming from rail cars

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Flood in 1994 (Ohio River and Little Grave Creek flooded)

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

The following areas are more prone to flooding: Railroad Street (aka Water Street or Ohio Street) Glen Haven Avenue, northern end of town (caused by runoff from Route 2)

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[ ] Yes [ ] No

Western edge of Glen Dale along Ohio River, most of this portion is open land however there are a few houses; Glen Haven Avenue area/Lindy Lane; along Little Grave Creek which floods athletic fields of John Marshall High School south to southern boundary of Glen Dale

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No Follow Marshall County's

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Have replaced several deteriorated storm sewers over the past couple of years.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

with County and State

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Dredging and debris removal of Little Grave Creek
Prevention of hazmat incidents along B&O Railway, which runs along western edge of Glen Dale

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Flood that occurred in late 1990's. National Guard stepped in within 24 hours

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [ ] No [x] Not Sure [ ]

b. If yes, please describe location(s):

All agree flood plain maps are correct

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

John Marshall High School (building) never floods but athletic fields do
Sewage Pump station located at 905 Baltimore Ave. and two well stations at Glen Dale Water Treatment Facility should be added to Essential Asset List as they are in the flood plain.

Jurisdiction: Glen Dale

Floodplain Manager: Dave Blazer/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Hall and Water Department Office
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Yes
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Yes
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Yes, City Clerk's office
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No, but do complete any forms that FEMA sends
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Elliot Grisell (Joe Richmond of Moundsville has also offered assistance)
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Have been no new developments but if there were, Glen Dale would issue permits.
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes, if there were new developments
3. How does your community identify substantially improved structures? When do they intervene?	Glen Dale has never had to do this (only a few structures are in flood plain)
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Glen Dale has never had to do this (only a few structures are in flood plain)
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Through building permit process



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	FEMA has visited after major flood events
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Follow NFIP guidelines
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Residents are aware that they can reach out to City staff if they have questions
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	Have not had to do this recently
3. How does the municipality provide general assistance to community members regarding insurance issues?	Residents are aware that they can reach out to City staff if they have questions
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	N/A

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Glen Dale

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Dave Blazer/Mayor
Sean Orlofske/Water Superintendent

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	Follow Marshall County's
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	Zoning Department
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Chief of Police and Elliott Grisell
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Elliott Grisell
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Hundred

Your Name/Position: Charles Goff/Mayor
Sherry Hayes/Floodplain Manager
Becky Goff/Code Enforcer

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [3] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [3] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

* Prior to 2017 Flood, community never thought flooding would be an issue

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm	x			
Severe Wind		x		
Land Subsidence	x			
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

2017 Flood; 1941 Flood (2017 Flood was a 1 1/2 feet deeper than 1941 Flood)
Winter Storms in 1993 and 2004 (2004 National Guard came to Hundred)

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Main Street, Railroad Street, Route 250, Football Field, Stewart Street are more susceptible to flooding.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along Route 250, Railroad Street, Belmont Extension, Stewart Street, Pennsylvania Avenue, and Park Street

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[ ] Yes [x] No

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Hundred moved their town hall to an area less prone to flooding. (The 2017 Flood severely damaged their town hall and all their records were lost.)
Hundred-Littleton Public Service District elevated all electrical equipment on wells and monitoring in case another flood would hit the area.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

Verbal agreement with Wetzel County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Would clean/dredge streams/creeks to prevent flooding.
Mayor Goff contacted Manchin's office to see if there was funding for this but no funding available.

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

2017 Flood; Had a great response from the community. Residents were able to report issues and Hundred directed them to the appropriate organization/agency that would offer assistance. Churches provided meals to residents. A distribution center for necessities was set up at the gymnasium at Hundred High School, was later moved to warehouse building near Burton. The Hundred-Littleton Long Term Recovery Group was formed to continue assisting those residents in need.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☐ Not Sure ☐

b. If yes, please describe location(s):

The southern end of Belmont Street should be removed from the flood zone. This street is at an elevation that would not see flooding.

14. Are there any changes to the community asset building lists?

Yes ☒ No ☐ Not Sure ☐

b. If yes, please describe change(s)?

The Hundred Police Department is unlikely to flood. Hundred Public Library has never flooded and unlikely to flood in future. Hundred's Town Hall has been moved to a new location that is unlikely to flood. The Wetzel County Center Children and Families moved into the former Town Hall building, which experienced devastating floods in 2017.

Jurisdiction: Hundred

Floodplain Manager: Charles Goff/Mayor
Sherry Hayes/Floodplain Manager



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	Currently at Town Hall but all records before 2017 were destroyed in 2017 Flood.
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Not sure
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Not sure
4. Does your municipality support requests for map updates?	Yes, map updated are directed to Steve Yoho, Director of Wetzel County Office of Emergency Service
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Floodplain manager, Sherry Hayes
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes, use FIRM maps
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Sherry Hayes/Floodplain Manager PO Box 1100 Hundred, WV 26575 304-775-5131
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes, use WV Flood Tool and FIRM maps from FEMA

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes/Sherry Hayes
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes/Sherry Hayes
3. How does your community identify substantially improved structures? When do they intervene?	Yes, follow FEMA guidelines
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Yes, follow FEMA guidelines and consult with Steve Yoho, Director of Wetzel County Office of Emergency Services
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Yes



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	FEMA did visit after 2017 Flood
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Follow NFIP standards
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	No

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	No outreach is done but if community members have questions they can ask Sherry.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	Does not inform but community knows that they can find information at Town Hall
3. How does the municipality provide general assistance to community members regarding insurance issues?	No
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	No

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Hundred

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Charles Goff/Mayor
Sherry Hayes/Floodplain Manager

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Fall under Wetzel County's Plan

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Becky Goff
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Sherry Hayes
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Becky Goff
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Becky Goff
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours x_____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: McMechen Your Name/Position: David Goddard/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [3] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [3] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding				x
Winter Storm				x
Severe Wind				x
Land Subsidence			x	
Earthquake	x			
Hailstorm			x	
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism				
Oil and Gas/Drilling Incident*		x		
Dam Failure	x			
Pandemic			x	
Other: _____				

* Trees and soil were removed right outside of McMechen boundaries to install gas line pipes. This has caused landslides on Riley Hill, which has damaged culverts and has led to flooding. There is a dispute between the State and McMechen as to who is responsible for fixing it, even though it is a state road.

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

The mine fire that occurred in the early 1900s.
2017 Flood (still affecting residents today)

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

21st Street/Jim's Run area. Area especially floods when the river is flooding, water cannot flow out to river and backs up.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[X] Yes [ ] No

Southwest corner of McMechen along Ohio River (property owned by Frank Calabrese); 21st Street/Jim's Run Area; East of Route 2 on parts of 9th Street south to 16th Street.

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[ ] Yes [x] No

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Currently completing an Army Corps of Engineer Project to replace storm sewers in Jim's Run area (Jim's Run Road south to Marshall Street) to help prevent flooding.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

Verbal agreement with Marshall County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Remove debris/clean/dredge streams and creeks (Jim's Run, Snell Run and 2nd Street Run) in McMechen to help prevent flooding. All types of debris, including trees, rocks, garbage, appliances, etc are being dumped into streams

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Could have used more resources and manpower during the 2017 Flood but community came together to help those residents who were affected by the flood. A distribution center was set up to help provide food for residents for two weeks. McMechen now owns the former Bishop Donahue School and Gym, which can now be used for emergencies in future events,

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [ ] No [x] Not Sure [ ]

b. If yes, please describe location(s):

Map is accurate.

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

The Northern Panhandle Conservation District Office is elevated and Mayor Goddard has never seen it flood.

Jurisdiction: McMechen

Floodplain Manager: David Goddard/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Building
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Yes, the most recent FIRM was already adopted when Mayor Goddard took office.
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Not sure if there is an official floodplain ordinance.
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Mayor Goddard, who is also the floodplain manager
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Not sure. Mayor Goddard has not had to do this yet.
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Mayor Goddard
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	No. Definitely would like more training on floodplain tools.

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, but there has been no recent development so this has not been applicable since Mayor Goddard took office
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Not applicable since no developments have occurred recently.
3. How does your community identify substantially improved structures? When do they intervene?	Follow Marshall County guidelines
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	No
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	There is very limited developable land in McMechen so this has not been necessary since Mayor Goddard has been in office.
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	The City has not had to do this.



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	FEMA has visited several times since the 2017 Flood.
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Follow NFIP guidelines
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	FEMA held meetings in 1980's, people but flood insurance but since it did not flood during the flood insurance time period, many people did not sign up again for flood insurance after their plans expired.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	Any changes would be published in the newspaper. Town Hall meetings are scheduled but no one shows up.
3. How does the municipality provide general assistance to community members regarding insurance issues?	Provide meetings but no one shows up.
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No
5. Does the municipality have any levees or levee systems in its jurisdiction?	Not within the boundaries of McMechen but the City is located along the Ohio River, so it is affected by the conditions of the locks and dams on this river, which lie north of the City
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	N/A

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: McMechen

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Dave Goddard/Mayor

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ☐ NO ■ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Fall under Marshall County's Plan

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mayor David Goddard
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mayor Goddard and Police Dept.
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	A council member is now being trained for this role
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Belomar for larger grants and City Clerk for smaller grants
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Belomar for larger grants and City Clerk for smaller grants
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	Army Corps of Engineers
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Moundsville

Your Name/Position: Rick Healy/City Manager
Joe Richmond/Floodplain Manager and Building Inspector

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm and other extreme weather events
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [3] Other: Land subsidence from mines. Large portion of city has mines underneath.

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm and other extreme weather events
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [3] Hazmat Incident
- [ ] Terrorism
- [3] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other:

Several chemical plants south of Moundsville: Power Plant, CertainTeed (Drywall), PPG (Plastics), Blue Racer (Natural Gas), Covestro (Plastics)

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding				x
Winter Storm			x	
Severe Wind			x	
Land Subsidence		x		
Earthquake	x			
Hailstorm		x		
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident			x	
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Flooding in 2004 and late 1970s

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

☐ Yes ☐ No

Flooding along Ohio River and along Middle Grave Creek, Big Grave Creek and Parr's Run

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

☐ Yes ☐ No

Along Ohio River; 12th Street Area (southern part of city along Big Grave Creek); Parr's Run (northeastern part of city)

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

☐ Yes ☐ No Not sure, but the City of Moundsville did prepare a Pandemic Plan after the Bird Flu; otherwise follow Marshall County's plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

During a disaster, there will always be a need for more manpower, equipment, supplies, etc. Communities will have employees that are directly affected by events that will not be able to assist with the recovery of the community because they are trying to recover themselves. Depending on the extent of the event and recovery time, employees (and even volunteers) cannot work nonstop for extended amounts of time.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years?If yes, please describe:

☐ Yes ☐ No

In 2020, a retaining wall was built at the edge of Parr's Run to prevent flooding. It helped redirect stream. Debris was also removed from stream to help mitigate flooding.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

☐ Yes ☐ No

Not sure if there is a written agreement but there is a verbal agreement with Marshall County.

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Buy out properties in floodplain to prevent damage during flooding; stream restoration and debris removal from streams to prevent severity of flooding

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

The most recent disaster was the COVID-19 pandemic. The City of Moundsville followed Marshall County Health Department's plan and it worked really well. The Health Department was able to get all community's in Marshall County on the same page.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☐ Not Sure ☐

b. If yes, please describe location(s):

An area that does not flood but appears in the floodplain is at the corner of Fostoria Avenue and 1st Street (Moundsville Volunteer Fire Department and Smith Convenient Store). Former Fostoria Glass Factory Site is not in floodplain because when it was remediated, the land was built up by 10 to 15 feet to make site more marketable by taking it out of the floodplain.

14. Are there any changes to the community asset building lists?

Yes ☐ No ☐ Not Sure ☐

b. If yes, please describe change(s)?

Marshall County Co-op should be added to the community asset list in floodplain (stores lots of propane); City of Moundsville Wastewater Treatment Plant should be added to essential facility list not community asset list; Moundsville Middle School should not be listed on essential facilities list as it is located on high elevation; Sanitation Building located along Parr's run off of Jefferson Avenue should be added to essential facility list. Power Distribution Substation along Jefferson Avenue near intersection with 1st Street should be added to essential facility list.

Jurisdiction: Moundsville

Floodplain Manager: Rick Healy/City Manager
Joe Richmond/Floodplain Manager and Building Inspector



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Hall. Rely heavily on WV Flood Tool
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Yes in 2009. Information stored at City Hall
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Yes in 2009
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Floodplain Manager
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	Share elevation certificates with FEMA when applicable
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes by using WV Flood Tool
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Joe Richmond
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes; Rely heavily on WV Flood Tool

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes; Floodplain Manager
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes; Floodplain Manager, however have not had any development proposals of that size
3. How does your community identify substantially improved structures? When do they intervene?	By tracking building permits
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Yes, use FEMA guidelines to determine substantial damage and to permit repair and improvement. Floodplain Manager, Building Department and Fire Department conduct damage assessments.
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Anyway they can.



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	Not in awhile. The last time was in 2009 but there were no corrective actions required.
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	There are a few items in Moundsville's ordinance that have higher standards than FEMA but cannot remember specifics.
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Any training would be appreciated.

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	The City educates residents when they are going through the permitting process.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	There have not been any changes recently but the City would inform property owners if there were.
3. How does the municipality provide general assistance to community members regarding insurance issues?	If residents contact the City, the City will help with insurance issues if they can otherwise they will contact someone that does.
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	Yes but would have to check list to know exact numbers.
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	No
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	No
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	NO
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	NO

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Moundsville

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Rick Healy/City Manager
Joe Richmond/Floodplain Manager and Building Inspector

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Fall under Marshall County's Plan

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Smaller grants are written by Rick Healy, while larger grants are written by Belomar.
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Smaller grants are written by Rick Healy, while larger grants are written by Belomar.
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments: Do not have any mitigation grants but do have other federal and state grants including CDBG Demo and Land & Water

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: New Martinsville Your Name/Position: Sandy Hunt/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [3] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [1] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [2] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [1] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [3] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding	x			
Winter Storm		x		
Severe Wind			x	
Land Subsidence	x			
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident		x		
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Major Floods of 1964 and 1972
Flood waters reached the 2nd floors of buildings downtown.

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Areas west of Route 2 and south of Williams Cemetery are prone to flooding.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Areas along Ohio River and along Fishing Creek and Doolin Run

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[ ] Yes [x] No

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

There are adequate resources for the most part, as long as the National Guard steps in when needed. New Martinsville also has an Army Reserve Center and residents are always willing to volunteer during disaster events.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

A siren system that reaches entire city was recently installed.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

Agreement with Wetzel County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

The fire department, which is currently in a floodplain needs to be relocated to a location outside the floodplain. If the Hannibal Locks and Dam would fail, the fire department would be wiped out. There is a request with Senator Manchin to assist with funding for this project.

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Heating units recently went out at the waste water treatment plant due to freezing temperatures. The equipment would have shut down if the temperature dropped too much. The superintendent was able to get propane heaters quickly in place before the temperature dropped too much, otherwise the equipment would have failed. It took sometime to get the replacement parts for the original heating units due to COVID supply chain issues. New Martinsville now has an agreement with Tri-State Petroleum for propane emergencies.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☒ Not Sure ☐

b. If yes, please describe location(s):

There are areas that are in the floodplain however that do not flood or have not flooded in the past 60 years. This area, which is elevated is from Harlem to Parkway and Maple Avenue.

14. Are there any changes to the community asset building lists?

Yes ☐ No ☐ Not Sure ☐

b. If yes, please describe change(s)?

Mayor Hunt believes the Wetzel County Sherrif's office should not be labeled as "Effective High Risk" as it is on the 2nd floor of County Building

Jurisdiction: New Martinsville

Floodplain Manager: Sandy Hunt/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Hall
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Always refer to FIRM but not sure if it has been officially adopted
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Not sure if there is an ordinance
4. Does your municipality support requests for map updates?	Not sure
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	City Building Inspector/Floodplain Manager
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No, depend on FEMA to collect data
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Actively participate
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Joe Hanna
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, Building Inspector/Floodplain Manager
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes
3. How does your community identify substantially improved structures? When do they intervene?	If the cost of improvement is more than 50% of assessed value, permit is not granted
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	If cost of repairs are more than 50% of assessed value, not allowed to repair, must demo
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes, Building Inspector/Floodplain Manger
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Through the permitting process



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	No
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	No
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Training is underway for future Building Inspector/Floodplain Manager. Also would be open to other training opportunities.

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	No specific steps are taken at the municipal level but the banking/lending institutions educate borrowers
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	No but the banking/lending institutions do.
3. How does the municipality provide general assistance to community members regarding insurance issues?	Municipality does not but baking/lending institutions do
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	Currently completing building inventory
5. Does the municipality have any levees or levee systems in its jurisdiction?	Yes, Hannibal Locks and Dam
6. Is the levee or levee system certified and accredited?	Yes
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	Yes, fully accredited
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	Yes
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	Only dam in jurisdiction is Hannibal Locks and Dam

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: New Martinsville

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Sandy Hunt/Mayor

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Fall under Wetzel County's Plan

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ☐ NO ■ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

City Building Inspector fulfills this role
Joe Hanna is current inspector but will retire soon. Timothy Chickchick will be his replacement.

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Have grant writer who administers smaller grants. Belomar administers larger grants.
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Have grant writer who writes smaller grants. Belomar administers larger grants.
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments: Triple A Mobile Home Park Water Project currently underway.

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant Comments:
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Paden City Your Name/Position: Steve Kastigar/Mayor
Josh Billiter/Floodplain Manager

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [1] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [2] Hazmat Incident
- [ ] Terrorism
- [3] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

* CSX Railroad runs along western edge of Paden City between city park and the rest of the town. Carries chlorine and other chemicals from chemical plants (Covestro, Blue Racer, etc.) in southern Marshall County.

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [ ] Winter Storm
- [3] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [1] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm	x			
Severe Wind	x			
Land Subsidence		x		
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm			x	
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Derecho and hailstorm in 2011, which caused a lot of property damage.

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Flooding is more frequent near city pool, sewage treatment plant and Storage business, along the Ohio River.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

City Park, areas along Ohio River. Very few houses or buildings in FEMA-designated floodplain.

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No *Follow Wetzel and Tyler Counties disaster plans

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

Depends on the type of disaster.
Tyler County EMA office is located in Paden City, so that is an advantage if a disaster occurs.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Have been in contact with DNR to dredge creek (Ingram Creek) but have not had any luck in getting a permit.

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

Verbal agreement with Tyler and Wetzel Counties
Also have an agreement with WV Rural Water if there is an accident with water treatment plant.
Have mutual aid agreements with surrounding cities (New Martinsville, Sistersville and Middlebourne)

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Upgrades to storm sewer system.
In the process of separating CSOs but still have quite a few to separate

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

When the Ohio River floods, there is a gate system in place to keep people out of park when flooding occurs. Flooding also leaves a lot of mud in the park. The mud is collected and placed in piles by city workers and farmers are allowed to take this put for their fields.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes ☐ No ☒ Not Sure ☐

b. If yes, please describe location(s):

14. Are there any changes to the community asset building lists?

Yes ☐ No ☒ Not Sure ☐

b. If yes, please describe change(s)?

Jurisdiction: Paden City

Floodplain Manager: Steve Kastigar/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Building
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	No, not officially
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	No
4. Does your municipality support requests for map updates?	Yes if needed but have not had to do this yet.
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Floodplain Manager
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	Yes, when there are flooding incidents
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes, communicate with County (Wetzel and Tyler) Floodplain Managers
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Josh Billiter josh.billiter.padencity@gmail.com
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, but have had very few new developments in floodplain. Recently, permitted construction of a cell phone tower in floodplain.
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes
3. How does your community identify substantially improved structures? When do they intervene?	Follow NFIP guidelines
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Follow NFIP guidelines
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes, Floodplain manager would take care of this.
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Have not had any issues with needing to enforce floodplain ordinance. If there was an issue, the Fire and Police Chief would responsible for enforcing.



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	No
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	No, would only follow NFIP guidelines
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	The City does not educate members formally, but if they had questions they could ask the Mayor or Floodplain Manager. There are very few houses in floodplain. Most of the property in floodplain is city-owned.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	see answer to Question #1
3. How does the municipality provide general assistance to community members regarding insurance issues?	see answer to Question #1
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No. Only a few structures in floodplain.
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	No

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Paden City

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Steve Kastigar/Mayor
Josh Billiter/Floodplain Manager

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	Follow Wetzel and Tyler Counties
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Follow National Building Code Regulations
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Josh Billiter
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	But do have agreement with Thrasher Engineering for consultation and smaller projects.
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	No official officer but Fire Chief (Jim Richmond) acts as officer
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	No official officer but Fire Chief (Jim Richmond) acts as officer
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	But do have agreement with Thrasher Engineering for consultation and smaller projects.
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours x_____
Title:	
Current Position Holder:	Region 5 (Mid-Ohio Valley Regional Council)
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours x_____
Title:	
Current Position Holder:	Region 5 (Mid-Ohio Valley Regional Council)
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Pine Grove Your Name/Position: Jonh Haught/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [3] Oil and Gas/Drilling Hazardous Incident
- [2] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

*Dominion Energy is located to the north and south of Pine Grove. There is a compressor station and natural gas pipelines.

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [3] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [2] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding				x
Winter Storm		x		
Severe Wind		x		
Land Subsidence			x	
Earthquake	x			
Hailstorm		x		
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism			x	
Oil and Gas/Drilling Incident			x	
Dam Failure	x			
Pandemic		x		
Other: _____				

*Gas trucks have hit telephone polls several times, knocking down lines for several hours.

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Flood of 2004
FEMA visited Pine Grove, condemned several houses and elevated other houses.

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Yes, in the floodplain areas (some areas along Route 20 and North Fork Road)

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Some areas along Route 20, although there are large portions in the FEMA-designated floodplain that do not flood; North Fork Road and Emma Street

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No Follow Wetzel County's Plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No, would need assistance during a long-term disaster

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[ ] Yes [x] No

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

Verbal agreement with Wetzel County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Stream/creek dredging
debris removal from streams and creeks

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Current mayor has only been in office for one year, but as far as he can remember the community has always come together to help each other out during disasters.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe location(s):

Large parts of Route 20 rarely see flooding even though there is a large are that is designated as a flood zone according to FEMA

14. Are there any changes to the community asset building lists?

Yes [ ] No [x] Not Sure [ ]

b. If yes, please describe change(s)?

Both community asset and essential facilty lists are correct.

Jurisdiction: Pine Grove

Floodplain Manager: Jonh Haught/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	City Hall
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Not sure
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Not sure
4. Does your municipality support requests for map updates?	Not Sure
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Not sure
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	Not sure
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Not sure
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Not sure
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Not sure

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Rely on Wetzel County
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Rely on Wetzel County
3. How does your community identify substantially improved structures? When do they intervene?	Rely on Wetzel County
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Rely on Wetzel County
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Rely on Wetzel County
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Rely on Wetzel County



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	FEMA visited after 2004 Flood and condemned and elevated several houses
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	No
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes, flood plain management

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Not sure
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	Not sure
3. How does the municipality provide general assistance to community members regarding insurance issues?	Not sure
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	Not sure
5. Does the municipality have any levees or levee systems in its jurisdiction?	
6. Is the levee or levee system certified and accredited?	
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Pine Grove

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: john Haught/Mayor

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	Follow Wetzel County's
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	☐ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Rhonda Spencer was floodplain manager but she recently resigned, now Mayor Haught is listed.
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Pine Grove's Fire Chief and the Wetzel County Health Department will enforce building codes if necessary but Town of Pine Grove does not have a dedicated person to inspect buildings.

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	use Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments: Currently, have a sewer project funded by CDBG

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Smithfield Your Name/Position: Christina Shreve/Floodplain Manager

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [3] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm		x		
Severe Wind				x
Land Subsidence	x			
Earthquake	x			
Hailstorm		x		
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident *		x		
Dam Failure	x			
Pandemic		x		
Other: _____				

*Road to well pad was never paved and when heavy rains occur, mud from road falls down on a main road in town

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Flooding in early 2000s, 2009, 2013 and 2017
There was a loss of homes during these events.

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along Mannington Road and Route 20, there are creeks that run alongside this road that then merge as they enter Smithfield. These creeks flood the roads when heavy storms occur.

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along Route 20 (Shoreline Highway), Mannington Road,

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[ ] Yes [x] No Follow Wetzel County's Plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No, Smithfield has no revenue stream and relies on funds from the State. There are around 150 residents and most are elderly.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[ ] Yes [x] No

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

Have verbal agreement with Wetzel County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Dredging and debris removal from streams, creeks
Stabilize stream banks and creek banks to mitigate erosion

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

During the last major flood in 2017, Smithfield had a difficult time. There are no shelters within the town and several households were flooded out of there homes, which required them to leave Smithfield and live with relatives. Smithfield is always the last to receive supplies/help from the Red Cross, Wetzel County and the National Guard. During major flooding when roads are covered with water, there is no way to get in or out of Smithfield,which is worrisome because ambulances, fire trucks would not be able to access residents if they required help.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [ ] No [x] Not Sure [ ]

b. If yes, please describe location(s):

Flood Tool is accurate

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

Town Hall frequently floods but is not listed on community asset list.

Jurisdiction: Smithfield

Floodplain Manager: Christina Shreve/Floodplain Manager



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	Town Hall and Wetzel County OES
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Yes, Town Hall and Wetzel County OES
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Yes
4. Does your municipality support requests for map updates?	Yes, Wetzel County OES takes care of this
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Wetzel County OES
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	Wetzel County OES submits data
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes, submit high water documentation to FEMA
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Christina Shreve
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes, floodplain manager trains with Wetzel County OES and WV Floodplain Management

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, floodplain manager
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes
3. How does your community identify substantially improved structures? When do they intervene?	Wetzel County OES takes care of this
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Wetzel County OES takes care of this
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes, these are stored in Town Hall and by Wetzel County OES
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Floodplain manger inspects and does permitting, Wetzel County OES would assist and enforce



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	Yes, FEMA visited after recent flooding events and condemned 3 homes and would not permit repairs
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Follow NFIP guidelines
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes, interested in trainings for disaster preparedness and floodplain management

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	If home is in flood zone, residents are required to have flood insurance.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	Not sure but maybe the mayor does
3. How does the municipality provide general assistance to community members regarding insurance issues?	Any resident can contact the floodplain manager and review FIRM maps in town hall
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	Yes, this is documented in Town Hall and with Wetzel County OES
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	No

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Pine Grove

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Christina Shreve/Floodplain Manager

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	use Wetzel County's Emergency Operations Plan
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Follow Wetzel County's building codes
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Christina Shreve/jschreve@frontier.net
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Wetzel County does code enforcement
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	use Belomar Regional Council
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	use Belomar Regional Council
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Triadelphia Your Name/Position: Ken Murphy/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

*Sometimes it takes a week before side streets can be plowed

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm			x	
Severe Wind		x		
Land Subsidence	x			
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm			x	
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic		x		
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

2004 Flood - lots of damage, tore sewer lines out of creek, tore up roads and bridges

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Flooding along Little Wheeling Creek; North Pole Bend Area; Pickle Patch
Landslide behind Johnny Doyle's house

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along Little Wheeling Creek

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No Follow Ohio County's Plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

In the short-term yes, but long-term no. Do have a Volunteer Fire Department.

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[ ] Yes [x] No

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

With Ohio County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Debris removal and dredging of streams and creek within boundaries of Triadelphia but also those outside as well that have an effect on the town.

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

During the 2016 Flood, Volunteer Fire Department was able to help many residents and move them to the Town Hall, which operated as a disaster center

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe location(s):

The area directly south of the PSD says it is in the floodplain but it does not flood as it is elevated. There is also hillside that appears in the floodplain that does not flood.

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

Essential Facilities List states that Triadelphia Volunteer Fire Department is in the floodplain but this building does not flood as it sits about 20 feet about the creek that runs behind it. It could experience flooding from run-off water though.

Jurisdiction: Triadelphia

Floodplain Manager: Ken Murphy/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	Water, Street and Sewer Department in Town Hall
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Yes
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Yes
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Mayor, Water Department and Dave Weaver of the Ohio County EMA office
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Ken Murphy
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes and Dave Weaver assists the Mayor whenever needed

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, Dave Weaver assists with this
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes, Mayor, Water Dept. and Dave Weaver
3. How does your community identify substantially improved structures? When do they intervene?	Follow Ohio County's rules
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Yes, follow Ohio County's rules
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes, documented by Mayor and Dave Weaver
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Mayor and Police Dept. enforce



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	Yes, in 2005 after 2004 Flood
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Follow NFIP standards
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes, floodplain mangement

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Rely on banks and lending institutions to explain to residents
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	No, rely on banks and lending institutions
3. How does the municipality provide general assistance to community members regarding insurance issues?	Rely on banks and lending institutions
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	No, not within boundaries but close outside of boundaries

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Triadelphia

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Ken Murphy/Mayor

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mayor Murphy
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Trying to fill this position with a professional building officer, currently rely on Mayor and Police Dept for this position.

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Valley Grove Your Name/Position: Chad Kleeh/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [3] Winter Storm
- [2] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [2] Winter Storm
- [ ] Severe Wind
- [3] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [ ] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding	x			
Winter Storm				x
Severe Wind				x
Land Subsidence				x
Earthquake	x			
Hailstorm	x			
Severe Thunderstorm				x
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism	x			
Oil and Gas/Drilling Incident	x			
Dam Failure	x			
Pandemic	x			
Other: _____				

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

2004 Flood

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Landslides from northern boundary of Valley Grove to School House Lane. Flooding along creeks (Little Wheeling Creek) and streams (McGraw's Run, Battle Run, etc.)

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along National Road, McGraws Run Road, Valley Grove Road, Battle Run Road and Submarine Road

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[ ] Yes [x] No Use Ohio County's Emergency Plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[ ] Yes [x] No

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [x] No

Verbal agreement with Ohio County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Stabilize creek banks and hill sides

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

During the last great flood (2004), the Valley Grove's Volunteer Fire Department handled everything and did a good job,

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [ ] No [x] Not Sure [ ]

b. If yes, please describe location(s):

All ares designated as a floodplain are accurate expect all of the property the Mayor's house is located on is elevated enough and does not flood (His driveway is in the floodplain.)

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

Water Pump Station should be added to Essential Facility List. It is located in floodplain and is critical at supplying water to the community. Valley Grove Community Center should be added to the list. It is in the same building as the Post Office that is listed but it should be noted that the Community Center is here as well, as it can serve as a shelter in case of emergencies. The Community Park should also be listed on Community Asset list as it can serve as in important meeting place for the community in case of an emergency.

Jurisdiction: Valley Grove

Floodplain Manager: Chad Kleeh/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	Probably Town Hall but unsure
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Not sure
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Not sure
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	No, but residents would talk to the Mayor.
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	No
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	No
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Mayor Chad Kleeh
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	No

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	No new developments have occurred since Mayor has come into office
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	No new developments have occurred but if there were, BFE data would be required.
3. How does your community identify substantially improved structures? When do they intervene?	Not sure
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Not sure
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Not sure
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Not sure



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	Not sure
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Not sure
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Do not officially educate community members but if they have questions, they can call Town Hall and the Mayor will try to help.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	No, but have not been changes in awhile
3. How does the municipality provide general assistance to community members regarding insurance issues?	If they have questions, Mayor will try to help.
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	No
5. Does the municipality have any levees or levee systems in its jurisdiction?	No
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	N/A

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III

HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: Valley Grove

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Chad Kleeh/Mayor

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mayor Chad Kleeh
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Mayor Chad Kleeh
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Building inspector handles this

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: West Liberty Your Name/Position: Mark Griffith/Mayor

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [3] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [1] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [ ] Flooding
- [3] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [1] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding		x		
Winter Storm			x	
Severe Wind			x	
Land Subsidence	x			
Earthquake	x			
Hailstorm		x		
Severe Thunderstorm		x		
Drought	x			
Wildfire	x			
Hazmat Incident	x			
Terrorism		x		
Oil and Gas/Drilling Incident		x		
Dam Failure	x			
Pandemic		x		
Other: _____				

*occurred at West Liberty University
*have had minor spills on local roads

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Oil and Gas truck incident in the early 2000s, the truck was leaking brine water and it leaked into storm sewer

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Flooding of the houses and road along Short Creek

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Along Short Creek Road, Weidman Run Road

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No *Use Ohio County's Plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

No

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Installed cross drains to lessen flooding caused by runoff from hills and natural springs

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

With the State of WV and verbal agreement with Ohio County

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Reinforce the banks along Short Creek
Dredge and remove debris from Short Creek and other streams

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

Oil and Gas Incident in early 2000s. West Liberty Fire Department and Gas Company worked together quickly and disaster was taken care of in one day.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe location(s):

A unnamed stream that bisects the eastern part of town and runs under Route 88 and Harvey Road. This stream sometimes floods and comes up onto road.

14. Are there any changes to the community asset building lists?

Yes [ ] No [x] Not Sure [ ]

b. If yes, please describe change(s)?

There are no buildings listed on the community asset or essential building lists that are in floodplains for West Liberty. Most of West Liberty lies on top of a hill.

Jurisdiction: West Liberty

Floodplain Manager: Mark Griffith/Mayor



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	N/A, West Liberty only has a small portion of town that is in floodplain. Town relies on Ohio County Emergency Management Agency for any floodplain issues they have.
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	
4. Does your municipality support requests for map updates?	
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	
3. How does your community identify substantially improved structures? When do they intervene?	
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	
3. How does the municipality provide general assistance to community members regarding insurance issues?	
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	
5. Does the municipality have any levees or levee systems in its jurisdiction?	
6. Is the levee or levee system certified and accredited?	
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: West Liberty

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments: Mark Griffith/Mayor

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments: Currently have CDBG Demolition grant

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Regional Hazard Mitigation Plan
Community-Specific Assessment

The purpose of the Regional Hazard Mitigation Plan Community-Specific Assessment is to obtain information from community leaders on natural and man-made disasters that threaten their communities; what strategies they have implemented to mitigate the severity of disasters that may occur; and what strategies they would like to implement, if funding is available. This information will be included in Belomar Regional Council's Hazard Mitigation Plan 5-year Update for Marshall, Ohio and Wetzel Counties in West Virginia.

Community Name: Wheeling

Your Name/Position: Tom Connelly/City Planner
Larry Helms/Floodplain Manager & Code Official

1. What type of natural or man-made disaster is the greatest threat to your community?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [2] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [3] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [ ] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

2. What type of natural or man-made disaster are the residents in your community most concerned about?
(Choose top 3; 1 = greatest threat)

- [1] Flooding
- [ ] Winter Storm
- [ ] Severe Wind
- [ ] Land Subsidence/Slide
- [ ] Earthquake
- [ ] Hailstorm
- [2] Severe Thunderstorm
- [ ] Drought
- [ ] Wildfire
- [ ] Hazmat Incident
- [ ] Terrorism
- [3] Oil and Gas/Drilling Hazardous Incident
- [ ] Dam Failure
- [ ] Pandemic
- [ ] Other: _____

*Oil and Gas Incidents are a concern for those residents who live along roads that gas trucks travel.

3. In the past five years, how frequently did the following natural and man-made disasters occur in your community?

	0 times	1 to 2 times	3 to 4 times	5 or more times
Flooding	☐	☐	x	☐
Winter Storm	☐	☐	☐	x
Severe Wind	☐	☐	x	☐
Land Subsidence	☐	x	☐	☐
Earthquake	x	☐	☐	☐
Hailstorm	☐	x	☐	☐
Severe Thunderstorm	☐	☐	x	☐
Drought	x	☐	☐	☐
Wildfire	x	☐	☐	☐
Hazmat Incident	x	☐	☐	☐
Terrorism	x	☐	☐	☐
Oil and Gas/Drilling Incident	x	☐	☐	☐
Dam Failure	x	☐	☐	☐
Pandemic	☐	x	☐	☐
Other: _____	☐	☐	☐	☐

4. Please provide a brief description (include the year in which it took place) of the greatest natural or man-made disaster that has occurred in your community since its inception:

Flood of 1936

5. Are there certain locations in your community that are more prone to natural or man-made disasters than other locations? If yes, please describe location (neighborhood, street, etc.):

☐ Yes ☐ No

All areas in flood zone, plus along Elm Run in Woodsdale, which is not in flood zone. (Elm Run had lots of debris in it but recently an Army Corp of Engineer grant has provided for removal of debris and trenching, which has hopefully fixed the problem)

6. Are any areas in your community located in a FEMA-designated flood plain? If yes, please describe location (neighborhood, street, etc.):

[x] Yes [ ] No

Yes, along Ohio River (Warwood, large portion of downtown, Center Wheeling, South Wheeling); along Big Wheeling Creek and Middle Wheeling Creek; along creek that runs along Route 88 in Woodsdale

7. Does your community have a written disaster plan that has been distributed/communicated to residents in case of a natural or man-made disaster occurs?

[x] Yes [ ] No Use Ohio County's Emergency Plan

8. Does your community have adequate resources (financial, man-power, etc.) to address natrual and man-made disasters? Please explain:

Yes, in the short-term disasters can be taken care of, as Wheeling has professional staffing for fire, police, emergency services but if a prolonged disaster, resources eventually run out

9. Has your community taken any actions to mitigate natural and man-made disasters in the past five years? If yes, please describe:

[x] Yes [ ] No

Yes, 1) the Army Corps of Engineers provided funding for a study, debris removal and trenching along Elm Run in Woodsdale; 2) continued separation of combined sewer overflows throughout the city; 3) educational outreach about daylighting downspouts, which offers free technical assistance to residents on how to manage rainwater in their yardsx

10. Does your community have any Cooperative Agreements (e.g. MOUs) to seek assistance from County/ State/Federal sources in case of a disaster event? If yes, please explain:

[x] Yes [ ] No

With Ohio County, State of West Virginia and with surrounding municipalities' public safety departments, including those located in Ohio

11. If adequate funding is available, what actions/mitigation strategies would your community take to minimize the severity of future natural or man-made disasters?

Would continue with combined sewer overflow separation.
Would install more back flow preventers.
Debris removal and dredging of creeks.

12. Please give an assessment on how your community handled its most recent natural or man-made disaster event (What worked? What did not work? What could have worked if the appropriate resources were available?).

After the 2004-2005 flood events, many changes took place at the Wheeling Fire Department, including creating a Swift Water Rescue team and being able to offer help to Ohio County when needed.

13. Are there areas on the map which regularly flood that do not appear in the flood zone/flood plain as designated by the West Virginia Flood Tool?

a. Are there areas in your community which regularly flood that do not appear in the floodplain/zone area according to the West Virginia Flood Tool?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe location(s):

Elm Run in Woodsdale floods but does not appear in the flood zone; however, it has recently been trenched/dredged and debris has been removed so hopefully, that will fix problem.

14. Are there any changes to the community asset building lists?

Yes [x] No [ ] Not Sure [ ]

b. If yes, please describe change(s)?

Elmhurst and the Welty Home are elevated enough where it is unlikely they will ever see flooding. The WesBanco Arena should be added to the Essential Facilities list as it is in the Flood Plain but would serve as a shelter in case of an emergency.

Jurisdiction: Wheeling

Floodplain Manager: Tom Connelly/City Planner
Larry Helms/Floodplain Manager & Code Official



Community Worksheet

Floodplain Identification and Mapping

1. Where do you keep your FIRM and FIS report?	Planning Office at City Building
2. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored?	Yes in 2006 (or 2008) and information is stored at Planning Office at City Building
3. Has your community updated the floodplain ordinance language to include the current FIRM and FIS?	Yes
4. Does your municipality support requests for map updates?	Yes
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs?	Planning Office at City Building
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA?	Have not directly shared data with FEMA but have shared studies with Army Corps of Engineers
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how.	Yes, work with FEMA to determine floodplains areas.
8. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information.	Larry Helms/Building Code Official, Floodplain Manager/lhelms@wheelingwv.gov
9. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on?	Yes

Floodplain Management requires that you understand the mapping and data side when working with the public. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible?	Yes, Building Code Official
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible?	Yes, Building Code Official
3. How does your community identify substantially improved structures? When do they intervene?	Rely on assessed value from county assessor's data and if improvements will be more than 50% of assessed value, the City will intervene
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment?	Yes, Building Code Official conducts assessments and if repair or improvement is more than 50% of assessed value, the entire structure must be brought up to code
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible?	Yes, Building Code Official is responsible
6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations?	Through the approval or denial of permits for building in the floodplain



7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required?	Yes, corrective actions include requiring floodplain permit for every development in flood plain
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented.	Yes, in addition to NFIP standards, go beyond 2 ft freeboard
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community?	Yes, more floodplain training

Floodplain management has many parts. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?



Community Worksheet

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance?	Planning office has reading materials that people can take with them.
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates?	No
3. How does the municipality provide general assistance to community members regarding insurance issues?	Provide information. City of Wheeling participates in the Community Rating System (CRS) and residents receive lower insurance rates because of this.
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community?	Do not keep an official list but would be easy to generate.
5. Does the municipality have any levees or levee systems in its jurisdiction?	Have storm water retention ponds at the Hobbs-Greene Development and the Pike Island Dam lies directly north of city
6. Is the levee or levee system certified and accredited?	N/A
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)?	N/A
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program?	N/A
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant?	No

Flood risk communication to the public is vital for a community to be truly resilient. Understanding what, where, and how a disaster may affect your residents is the key. If you were unsure or answered no to any of these questions, how would you put a plan together to address them? Are there other partners/resources needed to be successful in that action?

FEMA REGION III
HAZARD MITIGATION PLAN GUIDANCE
Community Capability Assessment Worksheet

JURISDICTION: Wheeling

PLANNING AND REGULATORY

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

PLANS AND POLICIES

Indicate if the jurisdiction has the following plans or policies in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider development of the plan/policy as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the plan/policy address hazard impacts? If so, how? For example, does the plan/policy include limitations to building in areas of risk, noted by the hazard mitigation plan? If so, what are those restrictions?
- Does the plan/policy identify projects that could be included in the mitigation strategy?
- Can the plan/policy be used to implement mitigation actions?
- How can the plan/policy be expanded and improved to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific plans or policies.

COMPREHENSIVE/MASTER LAND USE PLAN	Overall policy guide for future community growth and development.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

Tom Connelly/City Planner
Larry Helms/Floodplain Manager & Code Official

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

CLIMATE CHANGE ADAPTATION PLAN	An action plan and vulnerability assessment across a broad range of government services to anticipate, plan for, increase awareness of, and build momentum to address and adapt to a changing climate.
Is this Plan/Policy in Place?	☐ YES ■ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

PLANS AND POLICIES (CONTINUED)

STREAMBANK BUFFER PROTECTION PROGRAM	A combination of conservation easements, vegetation management, and landscape restoration of vegetative buffers for streams and waterways to attenuate stormwater runoff quantity and quality issues, decrease streambank erosion, and increase habitat value of the waterway.
Is this Plan/Policy in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other plans and policies that should be included in the capability assessment for each participating jurisdiction:

- Brownfields Redevelopment Program
- Coastal Zone Management Program
- National Flood Insurance Program (NFIP) Community Rating System
- Community Wildfire Protection Plan
- Continuity of Operations Plan
- Disaster Recovery Plan
- Economic Development Plan
- Flood Mitigation Plan
- Land acquisition for open space and public recreation uses
- Transportation Plan
- Stormwater Management Plan

Comments:

Community Capability Assessment Worksheet

JURISDICTION: _____

CODES AND ORDINANCES

Indicate if the jurisdiction has the following codes or ordinances in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider enactment of the code/ordinance as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the code/ordinance address hazard impacts? If so, how?
- Is the code/ordinance adequately administered and enforced? For example, are there personnel dedicated to enforcement? Are the procedures for addressing violations clear?
- How many times has the code/ordinance been applied to enforce restrictions in hazard areas?
- Is the code/ordinance an effective measure for reducing hazard impacts?
- How can the code/ordinance be improved to reduce risk through the use of higher standards?

In addition, see Attachment A for additional questions or considerations for specific codes or ordinances.

BUILDING CODE	Minimum requirements that must be met in the construction and maintenance of buildings to ensure public health and safety.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

CODES AND ORDINANCES (CONTINUED)

FLOODPLAIN MANAGEMENT ORDINANCE/NFIP COMPLIANCE	The minimum floodplain management regulations for compliance with the NFIP that must be met by participating communities once FEMA provides flood hazard information. This is to ensure participating communities consider flood hazards, to the extent that they are known, in all official actions relating to land management and use.
Is this Code or Ordinance in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Oher hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Comments:

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions.

Note: For smaller jurisdictions without local resources, resources at the next level government may be able to provide administrative, technical, and/or financial assistance.

ADMINISTRATIVE

Indicate if the jurisdiction has the following boards, commissions, or departments in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider forming the board/commission/department as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the board / commission / department address hazard impacts? If so, how? For example, is the risk assessment of the approved Hazard Mitigation Plan (HMP) consulted when this board, commission or department considers projects or activities? If so, what is the process for review?
- Are staffing numbers and training adequate to carry out the mission of the board/commission/department?
- Does the board/commission/department identify projects that could be included in the mitigation strategy?
- Can the board/commission/department be engaged to implement mitigation actions?
- How can the board/commission/department be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

ENGINEERING DEPARTMENT	An in-house department providing civil engineering capability.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

ADMINISTRATIVE (CONTINUED)

CODE ENFORCEMENT DEPARTMENT	An in-house department responsible for evaluating private properties and public grounds against local codes.
Is this Board, Commission, or Department in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Point-of-Contact:	
Meeting Schedule:	
Relation to Hazard Mitigation:	

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education
- Emergency Management
- Maintenance Department
- Mitigation Implementation Team
- Mutual aid agreements
- Planning Commission/Zoning Board
- Public Utility Board(s)
- Public Works Department
- Purchasing Department

Comments:

JURISDICTION: _____

TECHNICAL

Indicate if the jurisdiction has the following staff positions in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider adding the position as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Does the staff position description include addressing hazard impacts and/or mitigation? If so, how and is staff trained on relevant issues related to hazard impacts and/or mitigation?
- What training and/or certification is required of the staff position?
- What additional training and/or certification does the current staff need?
- How can the staff be further engaged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CHIEF BUILDING OFFICER	The in-house or contracted code enforcement staff responsible for evaluating private properties and public grounds against local codes, answering citizen questions about the codes, and issuing citations for code violations.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Larry Helms
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

CIVIL ENGINEER - CONSTRUCTION PROJECT MANAGEMENT	The in-house or contracted engineering staff responsible for managing construction projects and meeting budget and schedule constraints.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

GRANT ADMINISTRATOR	The in-house or contracted staff familiar with and capable of successfully handling FEMA Hazard Mitigation Assistance (HMA) grant program requirements consistent with the Code of Federal Regulations, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Staff members from varios departments and Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

TECHNICAL (CONTINUED)

GRANT WRITER	The in-house or contracted staff familiar with and capable of successfully applying for FEMA HMA grants, as well as non-FEMA funding sources.
Is this Staff Position in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Full Time or Part Time?	☐ FT ☐ PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	Staff members of various deparments and Belomar Regional Council
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator
- Chief Financial Officer
- Civil Engineer – Design
- Civil Engineer – Inspections
- Clerk
- Community Planner
- Emergency Manager
- Floodplain Administrator
- GIS Coordinator (hazard and community asset data and information management, Hazus)

Comments:

JURISDICTION: _____

FINANCIAL

Financial capabilities include access to or eligibility to use funding resources for hazard mitigation.

Indicate if the jurisdiction has access and/or eligibility for the following funding resources.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider pursuing the funding resource as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the funding resource been used in the past for hazard mitigation? If so, for what type of activities?
- Could the resource be used to fund future mitigation actions?
- How can the funding resource be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

CAPITAL IMPROVEMENTS PROGRAM	A short-range plan, usually 4 to 10 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Rusty Jebbia, Bob Herron
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

FINANCIAL (CONTINUED)

FUNDING PROGRAMS – FEDERAL (NON-FEMA)	Grant programs administered by Federal agencies other than FEMA with potential to fund mitigation actions. For example, the U.S. Department of Housing and Urban Development Community Development Block Grants, U.S. Department of Energy, and the U.S. Department of Transportation, etc.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Army Corps of Engineers
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

UTILITY FEES FOR STORMWATER, WATER, SEWER, GAS, OR ELECTRIC SERVICES	Fee levied by the jurisdiction, in addition to cost of service provided, for use in funding related capital programs, such as non-Federal shares for mitigation actions.
Is there Access to and/or Eligibility for this Funding Resource?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	Water and Sewer Departments
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant Comments:
- FEMA – Hazard Mitigation Assistance
- FEMA – Public Assistance 406 Mitigation
- Funding programs – State
- Funding programs – Philanthropic
- General obligation bonds and/or special tax bonds
- Impact fees for new development
- Tax levies for specific purposes

JURISDICTION: _____

EDUCATION AND OUTREACH

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Indicate if the jurisdiction has the following programs or methods in place.

- If YES, complete the remaining rows in the table to the extent possible.
- If NO, refer to the planning team to consider developing the program or method as part of the mitigation strategy
- If you do not know (IDK), see Attachment A for recommended agencies or organizations to contact.

In the "Relation to Hazard Mitigation" field, answer the following general questions:

- Has the program/method been used in the past for hazard mitigation? If so, for what type of activities?
- Could the program/method be used to support future mitigation actions?
- How can the program/method be further leveraged to reduce risk?

In addition, see Attachment A for additional questions or considerations for specific boards, commissions, or departments.

STORMREADY CERTIFICATION	National Weather Service program that helps arm America's communities with communication and safety skills needed to save lives and property, before, during and after an event.
Is this Program/Method in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Comments:

JURISDICTION: _____

EDUCATION AND OUTREACH (CONTINUED)

SEASONAL EMERGENCY MANAGEMENT AND MITIGATION OUTREACH	Seasonal outreach. For example, in advance of hurricane season or in anticipation of winter weather, including information regarding preparedness and mitigation measures that individuals can undertake for their own risk reduction.
Is this Program/Method in Place?	■ YES ☐ NO ☐ IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	WOCEMA and Wheeling Fire Department
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.
- Natural disaster or safety related school programs
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.)
- Public-private partnership initiatives addressing disaster-related issues

Comments:

Projects stated in 2017 Hazard Mitigation Plan

Benwood	Has any progress been made for this project/action?
1: Continue projects to maintain and upgrade the floodwall in the City of Benwood.	Yes, trees have been cut down on floodwall. More trees need to be cut down though but it was becoming too dangerous for City employees to do this.
2: Coordinate with first responders for interagency cooperation to assist in collaborative planning.	Yes, when COVID-19 pandemic hit, Benwood was in constant contact with Marshall County EMA office to obtain the most recent guidelines.
3: Support health department for Strategic National Stockpile distributions during bioterrorist or other incidents.	Benwood coordinated with Marshall County Health Dept. during COVID-19 pandeimc: 1) had testing center at Benwood Fire Department; 2) distributed PPE to police department; 3) answered calls from residents concerning pandemic and redirected them to health dept.

What new projects for Benwood should be stated in the 2022 Hazard Mitigation Plan Update?

1) Floodwall improvements
    - Increase height of floodwall by 4 feet so it can be accredited
    - Install SCADA system
    - Continue debris removal and maintenance
    - Replace pumps
2) Continue separation of CSOs (Center Benwood and North Benwood)
3) Maintain “Subway Tunnel”, a culvert that runs under Route 2 and North Benwood from Boggs Run area

Chain of Command for Requesting County, State, or Federal Resources and/or Assistance due to a Natural Disaster, Terrorist Attack or Man-made Emergency in Marshall County



* Capabilities/resources must be exhausted/overwhelmed before requesting assistance at the next level.

* Following the process or "Chain of Command" can avoid delays in resources and/or assistance.

Example:

- City cannot by-pass the County and go directly to the State
- County cannot by-pass the State and go directly to the Federal Emergency Management Office (FEMA)

Chain of Command for Requesting County, State, or Federal Resources and/or Assistance due to a Natural Disaster, Terrorist Attack or Man-made Emergency in Ohio County



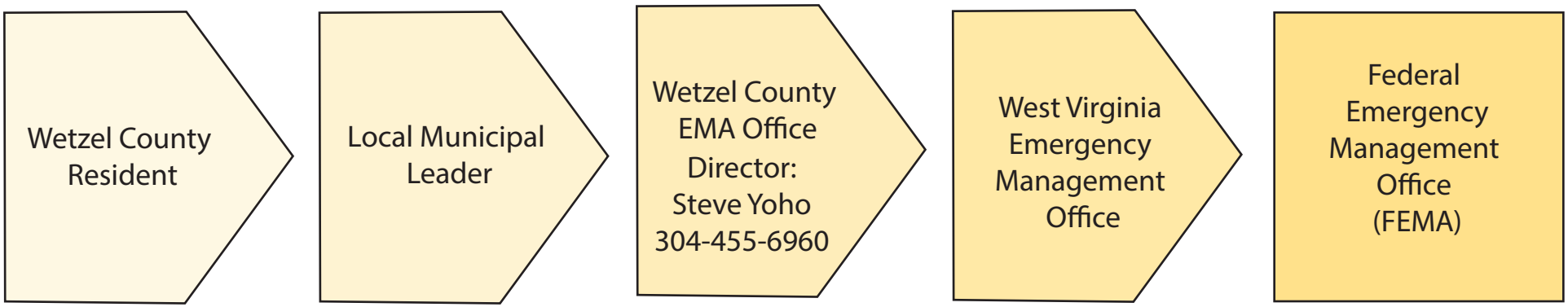
* Capabilities/resources must be exhausted/overwhelmed before requesting assistance at the next level.

* Following the process or "Chain of Command" can avoid delays in resources and/or assistance.

Example:

- City cannot by-pass the County and go directly to the State
- County cannot by-pass the State and go directly to the Federal Emergency Management Office (FEMA)

Chain of Command for Requesting County, State, or Federal Resources and/or Assistance due to a Natural Disaster, Terrorist Attack or Man-made Emergency in Wetzel County



* Capabilities/resources must be exhausted/overwhelmed before requesting assistance at the next level.

* Following the process or "Chain of Command" can avoid delays in resources and/or assistance.

Example:

- City cannot by-pass the County and go directly to the State
- County cannot by-pass the State and go directly to the Federal Emergency Management Office (FEMA)

A7: Survey

Natalie Hamilton

From: Natalie Hamilton
Sent: Monday, September 27, 2021 4:18 PM
To: A.C. Wiethe; Baden Powell; Cynthia Wells; George Ruberg; James Benner; Katie Hudak; LuAnn Kennedy; Mason Kemerer; Michele Pultz; Natalie Hamilton; Rakesh Sharma; Scott Hicks
Subject: Hazard Mitigation Survey Facebook Post

Hi Everyone,

If you have Facebook, can you please copy and post the below text and link on your Facebook page. And please take the survey yourself. Thanks!

Belomar Regional Council is in the process of updating the Regional Hazard Mitigation Plan. If you live or work in Marshall, Ohio or Wetzel Counties in
West Virginia, please click on the link below to complete a short survey by October 29th to help us understand how you and your community have been impacted
by natural and man-made hazards.

https://www.surveymonkey.com/r/HMPSurvey2022



Natalie Hamilton

From: Natalie Hamilton
Sent: Monday, September 27, 2021 4:55 PM
To: AC Wiethe; Beth Edgell (jcshreve@frontiernet.net); Betsy Frohnapfel; Bob Herron; Carla McBee (cmcbee@wetzelwv.com); Chad Kleeh; Charles Goff; Charles Reinacher; Dave Blazer; Dave Goddard; Dave Weaver; David Wood; Don Junkins; Don Nickerson; Erikka Storch; Glenn Elliott; Greg Galentine; Gregory Morris (gmorris@wetzelwv.com); Jessica Davis (jdavis@wetzelwv.com); Jim Blazier; John Gruzinskas (mulligunz@hotmail.com); John Haught; Kenneth Murphy; Lisa Heasley (lheasley@wetzelwv.com); Louis Vargo; Mark Griffith; Marshall County Office of Emergency Management ; Mike Ferro (ferrom4@aol.com); Rakesh Sharma; Randy Russell; Randy Wharton; Rick Healy; Rusty Jebbia; Sandy Hunt; Scott Hicks; Scott Reager; Scott Varner; Shawn Schwertiger; Steve Yoho; Tina Rush; Walter Yates; Wayland Harris; Zachary Abraham
Subject: Regional Hazard Mitigation Plan Update Survey Link

Hi Steering Committee and Stakeholders,

Please see link below to take the final version of the Hazard Mitigation Survey for the update of our Regional Hazard Mitigation Plan. Please also share this link with your organization and community and if possible, post on your organization or community's website and/or Facebook page. Thanks!

https://www.surveymonkey.com/r/HMPSurvey2022

Natalie Hamilton, AICP
Community Development
nhamilton@belomar.org
(304) 242-1800

105 Bridge Street Plaza
Wheeling, WV 26003
www.belomar.org

MOUNDSVILLE DAILY ECHO

SINCE 1891

(304) 845-2660
P.O. BOX 369
MOUNDSVILLE
WEST VIRGINIA
26041

AFFIDAVIT OF PUBLICATION

STATE OF WEST VIRGINIA,
COUNTY OF MARSHALL, to-wit:

I, Marlene C Myers being first duly sworn upon my oath, do depose and say:

- that I am Legal Advertising Manager of the MOUNDSVILLE DAILY ECHO, a Republican newspaper;
- that I have been duly authorized to execute this affidavit;
- that such newspaper has been published for over 119 years, is regularly published afternoons daily except Saturdays and Sundays, for at least fifty weeks during the calendar year, in the municipality of Moundsville, Marshall County, West Virginia;
- that such newspaper is a newspaper of "general circulation" as defined in Art. 3, Chap. 59 of the Code of West Virginia 1931 as amended, within Moundsville and Marshall County;
- that such newspaper averages in length four or more pages, exclusive of any cover, per issue;
- that such newspaper is circulated to the general public at a definite price or consideration;
- that such newspaper is a newspaper to which the general public resorts for passing events of a political, religious, commercial and social nature and for current happenings, announcements, miscellaneous reading matters, advertisements and other notices;
- and that the annexed notice described as follows:

Legal Advertisement

PARTY(ies)

MultiJurisdictional Hazard Mitigation Plan

NATURE (and agency if heard before one)

CERTIF-BILL TO

Belomar Regional Council
Natalie Hamilton
PO Box 2028
Wheeling WV 26003

WAS PUBLISHED IN SAID NEWSPAPER AS FOLLOWS:

Times	Dates
1	Sept. 30, Oct. 4, 2021

BY WORDS	PUBLICATION CHARGES
615	$70.73

(signed) Marlene C Myers

NOTARIZATION OFFICIAL SEAL NOTARY PUBLIC

Taken, sworn and subscribed before me this 6th day of October 2021

Notary Public

Amy McGlumphy

PUBLIC NOTICE

Belomar Regional Council is in the process of updating the Marshall, Ohio and Wetzel Counties MultiJurisdictional Hazard Mitigation Plan. Hazard mitigation plans are required by the Disaster Mitigation Act of 2000. (DMA 2000: Public Law (PL) 106-390). The law reinforced the importance of mitigation planning, emphasizing the planning before disasters occur.

The purpose of the 5-year plan update is to identify potential hazards, associated risks and actions for mitigation. As part of planning process, we are seeking your input. Please complete a brief online survey to let us know your opinions on natural hazards and mitigations by October 29, 2021.

To complete the survey, please go to https://www.surveymonkey.com/r/HMPSurvey2022.

In addition, a paper copy of the survey can be found and completed at the following locations:

Ohio County Public Library, 52 16th Street Wheeling, WV 26003
Ohio County Courthouse, 1500 Chapline Street Room #215 Wheeling, WV 26003
Moundsville-Marshall County Public Library, 700 5th Street Moundsville, WV 26041
Marshall County Courthouse, 600 7th Street Moundsville, WV 26041
New Martinsville Library, 160 Washington Street New Martinsville, WV 26155
Wetzel County Courthouse, 200 Main Street, New Martinsville, WV 26155

The Intelligencer.
Wheeling News-Register

1500 Main St, Wheeling WV 26003
304-233-0100

Statement Number	Billing Date
100031	10/31/21
Account Number	**Billing Period**
D02143	OCTOBER 2021
Total Amount Due	**Amount Enclosed**
825.00	

Advertising Invoice/Statement

Bill Account Name And Address	Remittance Address
BEL-O-MAR REG. COUNCIL 105 BRIDGE STREET PLAZA P O BOX 2086 WHEELING WV 26003	WHEELING NEWSPAPERS INC INTELLIGENCER/NEWS REGIST PO BOX 3367 CHARLESTON, WV 25333

NOTE: 75' 5/05

99901D02143000825001031213

---------- *Please Detach Upper Portion And Return With Payment* ----------

Day	Reference	Description	Dimensions	Units	Rate	Amount
		Previous Balance				1815.00
4		LINEAGE	3 X 5	15	55.00	825.00
29	CK 9029	Payment Thank You				1815.00-

Message

PLEASE SEND IN YOUR REMITTANCE SLIP WITHYOUR PAYMENT

Totals			Ageing				
Display	Other Charges	Credits	Current	30 Days	60 Days	90 Days	Total Due
825.00	.00	1815.00	825.00	.00	.00	.00	825.00

Statement Number	Billing Date
100031	10/31/21
Account Number	**Billing Period**
D02143	OCTOBER 2021

Contract Information	
Expiration Date	Requirement
Current Month	Cumulative

Terms

Balance due upon receipt of this advertising statement

Name Of Advertiser

BEL-O-MAR REG. COUNC

Salesperson

CHRISTY HILL

The Intelligencer.
Wheeling News-Register
1500 Main St, Wheeling WV 26003
304-233-0100

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Wetzel County Courthouse, 200 Main Street New Martinsville, WV 26155

WETZEL CHRONICLE

New Martinsville, WV October 13, 2021

State of West Virginia, County of Wetzel:

Personally appeared before the undersigned, a Notary Public, Eric Anderson who, being duly sworn, states that he is the manager of the Wetzel Chronicle, a weekly newspaper of general circulation, published at New Martinsville, County of Wetzel, State of West Virginia, and that a copy of the notice attached hereto was published for 2 successive weeks in the Wetzel Chronicle, beginning on the 6TH day of October, 2021 and ending on the 13TH day of October, 2021.

Eric Anderson

Manager, Wetzel Chronicle

Subscribed and sworn to before me, a Notary Public of said County, on this 13TH day of October, 2021.

Kimberly Grimm Notary Public

My Commission Expires:

OFFICIAL SEAL
Kimberly Ann Grimm
Notary Public
State of West Virginia
My Commission Expires
December 09, 2025
1721 PROCTOR CREEK RD
PROCTOR WV 26055

Printers Fee _____

PUBLIC NOTICE

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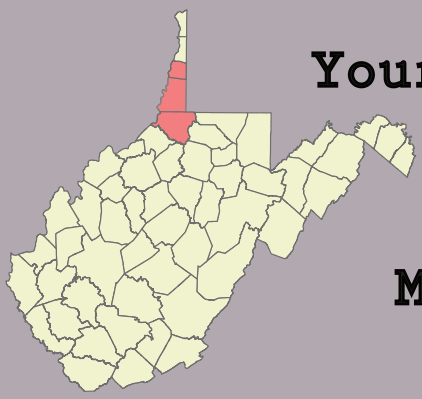
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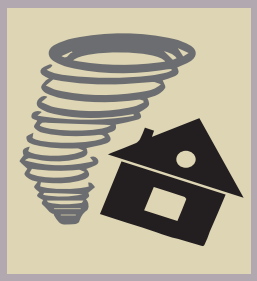
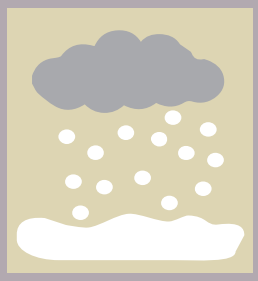


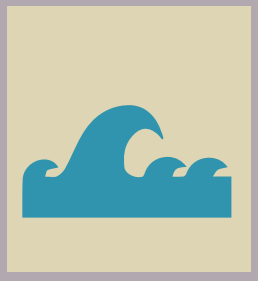
Your input is needed for the

Regional Hazard Mitigation Plan Update

Belomar Regional Council is in the process of updating the Regional Hazard Mitigation Plan 2022 for Marshall, Ohio and Wetzel Counties in West Virginia and we need to your input! Please take this short survey by October 29, 2021 to help us understand how you and your community are affected by natural disasters. The link to take the survey can be found at the bottom of this page or a paper survey can also be filled out and dropped in the survey box.





https://www.surveymonkey.com/r/HMPSurvey2022
https://www.surveymonkey.com/r/HMPSurvey2022
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Regional Hazard Mitigation Survey

The purpose of this Regional Hazard Mitigation Plan is to identify potential hazards, associated risks and actions for mitigation for the following counties in West Virginia: Marshall, Ohio and Wetzel. Hazard mitigation plans are required by the Disaster Mitigation Act of 2000 (DMA 2000: Public Law (PL) 106-390). This law reinforced the importance of mitigation planning, emphasizing planning before disasters occur.

The first Hazard Mitigation Plan for Marshall, Ohio and Wetzel Counties was prepared in 2011. An update to the plan is required every five years; therefore, the plan was updated in 2017. Belomar Regional Council is currently in the process of the second update, which must be completed by August 2022.

Your input for the 2022 Regional Hazard Mitigation Plan is very important to our planning effort. **This survey will take approximately 10 minutes to complete and your responses are anonymous.** Please complete this survey by Friday, October 29, 2021.

---

1. What county do you reside in?

- ☐ Marshall County
- ☐ Ohio County
- ☐ Wetzel County
- ☐ I do not live in any of these counties but have other associations with these counties (e.g. I live or work in one of these counties or I used to live in the area).

2. How old are you?

- ☐ Under 21
- ☐ 21 to 49
- ☐ 50 to 65
- ☐ Over 65

3. The COVID-19 Pandemic has impacted all of our communities. How would you rate your personal experience with the pandemic?

- ☐ Devastating
- ☐ Extremely harmful
- ☐ Somewhat harmful
- ☐ Moderately inconvenienced
- ☐ Was not affected
- ☐ The pandemic has been exaggerated.

4. Have you ever tested positive for COVID-19 or have symptoms of COVID-19?

- ☐ Yes
- ☐ No

5. How many people in the following categories do you know that tested positive for COVID-19 or had symptoms of COVID-19?

	0	1 to 3	4 to 6	7 to 10	More than 10
Immediate family member (parent, child, sibling)	☐	☐	☐	☐	☐
Extended family member (aunt, uncle, cousin, grandparent, grandchild, niece, nephew	☐	☐	☐	☐	☐
Co-worker	☐	☐	☐	☐	☐
Friends/Acquaintances	☐	☐	☐	☐	☐

6. Have you or anyone in your family or any acquaintances been hospitalized due to COVID-19?

- ☐ Yes
- ☐ No

7. One a scale of 1 to 5, how well do you think your community addressed the COVID-19 Pandemic?

- ☐ 1 - Excellent
- ☐ 2 - Fairly well
- ☐ 3 - Average
- ☐ 4 - Below average
- ☐ 5 - Poorly

8.. What suggestions do you have on how your community could have handled the COVID-19 Pandemic better?

_____

_____

_____

_____

_____

9. In addition to pandemics, there are many other natural and man-made disasters that can occur? Have you experienced any of the following events (check all that apply)?:

- ☐ Flooding
- ☐ Winter Storm
- ☐ Severe Wind
- ☐ Land Subsidence
- ☐ Earthquake
- ☐ Hailstorm
- ☐ Severe Thunderstorm
- ☐ Drought
- ☐ Wildfire
- ☐ Hazmat Incident
- ☐ Terrorism
- ☐ Oil and Gas/Drilling Hazardous Incident
- ☐ Dam Failure
- ☐ Pandemic
- ☐ I have not experienced any of the events listed.

Other (please provide a short description of the event):

_____

_____

_____

10. If you have experienced any of the following natural/man-made disasters since the update of our last plan (which was in 2017), please choose the year in which this disaster occurred.

	2017	2018	2019	2020	2021	Cannot remember exact year
Flooding	☐	☐	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐	☐	☐
Severe Wind	☐	☐	☐	☐	☐	☐
Land Subsidence	☐	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐	☐
Hailstorm	☐	☐	☐	☐	☐	☐
Severe Thunderstorm	☐	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐	☐	☐
Hazmat Incident	☐	☐	☐	☐	☐	☐
Terrorism	☐	☐	☐	☐	☐	☐
Oil and Gas/Drilling Incident	☐	☐	☐	☐	☐	☐
Dam Failure	☐	☐	☐	☐	☐	☐
Pandemic	☐	☐	☐	☐	☐	☐

11. How concerned are you about the following disasters affecting your community (please check one box in each row)?

	Very Concerned	Somewhat Concerned	Neutral	Not Very Concerned	Not Concerned
Flooding	☐	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐	☐
Severe Wind	☐	☐	☐	☐	☐
Land Subsidence	☐	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐	☐
Hailstorm	☐	☐	☐	☐	☐
Severe Thunderstorm	☐	☐	☐	☐	☐
Drought	☐	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐	☐
Hazmat Incident	☐	☐	☐	☐	☐
Terrorism	☐	☐	☐	☐	☐
Oil and Gas/Drilling Incident	☐	☐	☐	☐	☐
Dam Failure	☐	☐	☐	☐	☐
Pandemic	☐	☐	☐	☐	☐

12. In your opinion, how frequently do you believe these events will occur in the next five years (please check one box in each row)?

	Will not occur	1 to 2 times	3 to 4 times	5 or more times
Flooding	☐	☐	☐	☐
Winter Storm	☐	☐	☐	☐
Severe Wind	☐	☐	☐	☐
Land Subsidence	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐
Hailstorm	☐	☐	☐	☐
Severe Thunderstorm	☐	☐	☐	☐
Drought	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐
Hazmat Incident	☐	☐	☐	☐
Terrorism	☐	☐	☐	☐
Oil and Gas/Drilling Incident	☐	☐	☐	☐
Dam Failure	☐	☐	☐	☐
Pandemic	☐	☐	☐	☐

13. How well do you feel your community is prepared for these events (please check one box in each row)?

	Well prepared	Somewhat prepared	Not prepared
Flooding	☐	☐	☐
Winter Storm	☐	☐	☐
Severe Wind	☐	☐	☐
Land Subsidence	☐	☐	☐
Earthquake	☐	☐	☐
Hailstorm	☐	☐	☐
Severe Thunderstorm	☐	☐	☐
Drought	☐	☐	☐
Wildfire	☐	☐	☐
Hazmat Incident	☐	☐	☐
Terrorism	☐	☐	☐
Oil and Gas/Drilling Incident	☐	☐	☐
Dam Failure	☐	☐	☐
Pandemic	☐	☐	☐

14. Have you or anyone else in your household participated in any of the following (please check one box in each row)?

	Have participated	Have not participated	Plan to participate	Do not plan to participate
Attended meetings or received written information on natural disasters or emergency preparedness?	☐	☐	☐	☐
Talked with members in your household about what to do in case of a natural disaster or emergency?	☐	☐	☐	☐
Developed a "Disaster Supply Kit" (stored extra food, water, batteries and other emergency supplies)?	☐	☐	☐	☐
In the last year, has anyone in your household been trained in First Aid or Cardiopulmonary Resuscitation (CPR)?	☐	☐	☐	☐
Prepared your home by having smoke detectors on each level of your house?	☐	☐	☐	☐
Discussed or created a utility shutoff procedure in the event of a natural disaster?	☐	☐	☐	☐

15. Do you have any suggestions to how your community can better handle/mitigate natural and man-made disasters?

16. Do you know the evacuation route for your community?

☐ Yes

☐ No

17. Do you have any general comments regarding natural or man-made disasters in Marshall, Ohio and Wetzel Counties?

_____

_____

_____

_____

_____

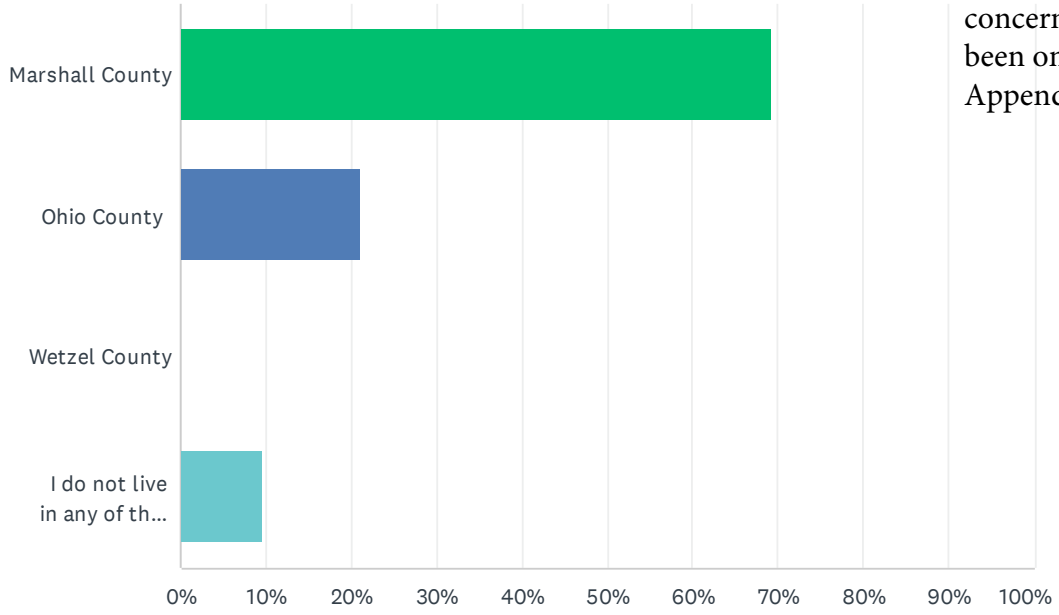
_____

*****Thank you for completing this survey! *****

These results are a summary of the survey taken via the Survey Monkey Website. There were 13 paper surveys that were also received; however, due to privacy concerns these surveys have been omitted from the Appendix.

Q1 What county do you reside in?

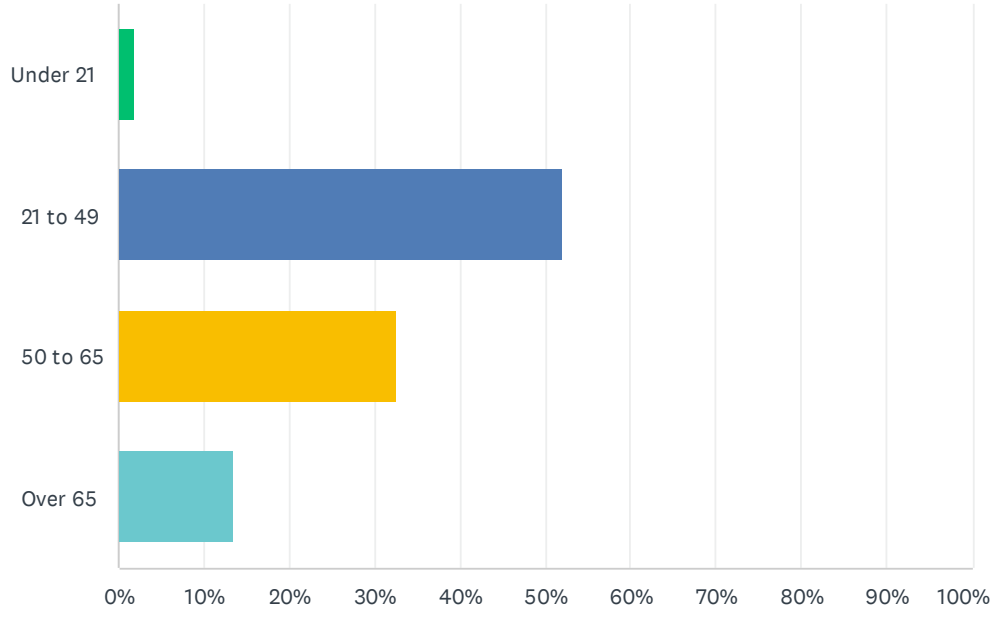
Answered: 52 Skipped: 0



ANSWER CHOICES	RESPONSES	
Marshall County	69.23%	36
Ohio County	21.15%	11
Wetzel County	0.00%	0
I do not live in any of these counties but have other associations with these counties (e.g. I live or work in one of these counties or I used to live in the area).	9.62%	5
TOTAL		52

Q2 How old are you?

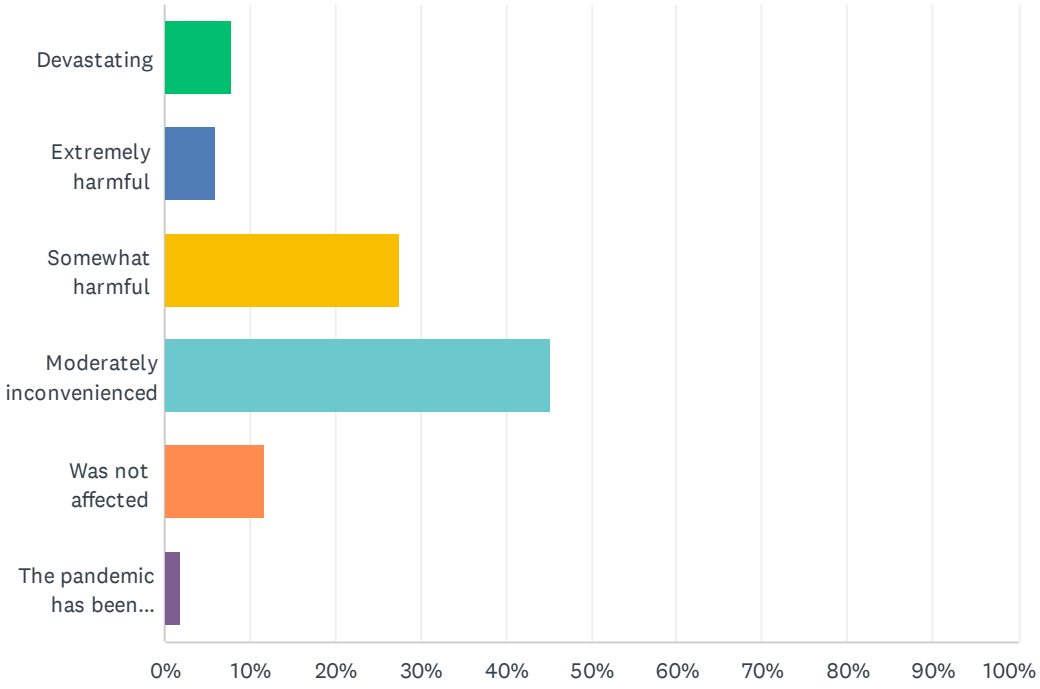
Answered: 52 Skipped: 0



ANSWER CHOICES	RESPONSES	
Under 21	1.92%	1
21 to 49	51.92%	27
50 to 65	32.69%	17
Over 65	13.46%	7
TOTAL		52

Q3 The COVID-19 Pandemic has impacted all our communities. How would you rate your personal experience with the pandemic?

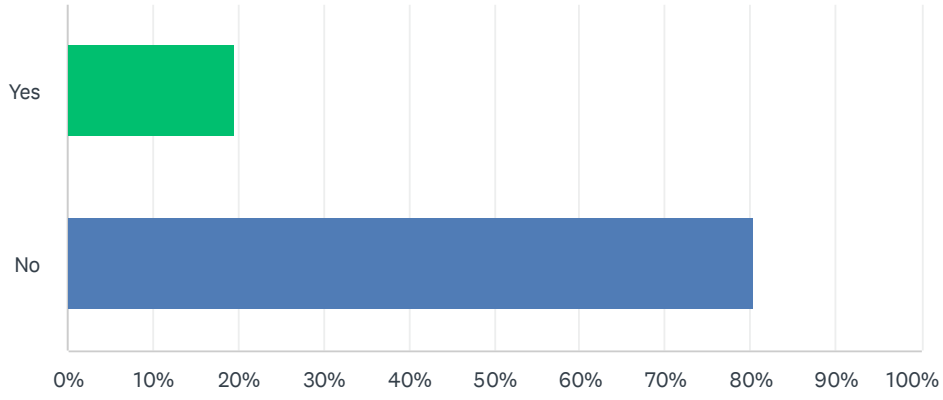
Answered: 51 Skipped: 1



ANSWER CHOICES	RESPONSES	
Devastating	7.84%	4
Extremely harmful	5.88%	3
Somewhat harmful	27.45%	14
Moderately inconvenienced	45.10%	23
Was not affected	11.76%	6
The pandemic has been exaggerated.	1.96%	1
TOTAL		51

Q4 Have you ever tested positive for COVID-19 or have symptoms of COVID-19?

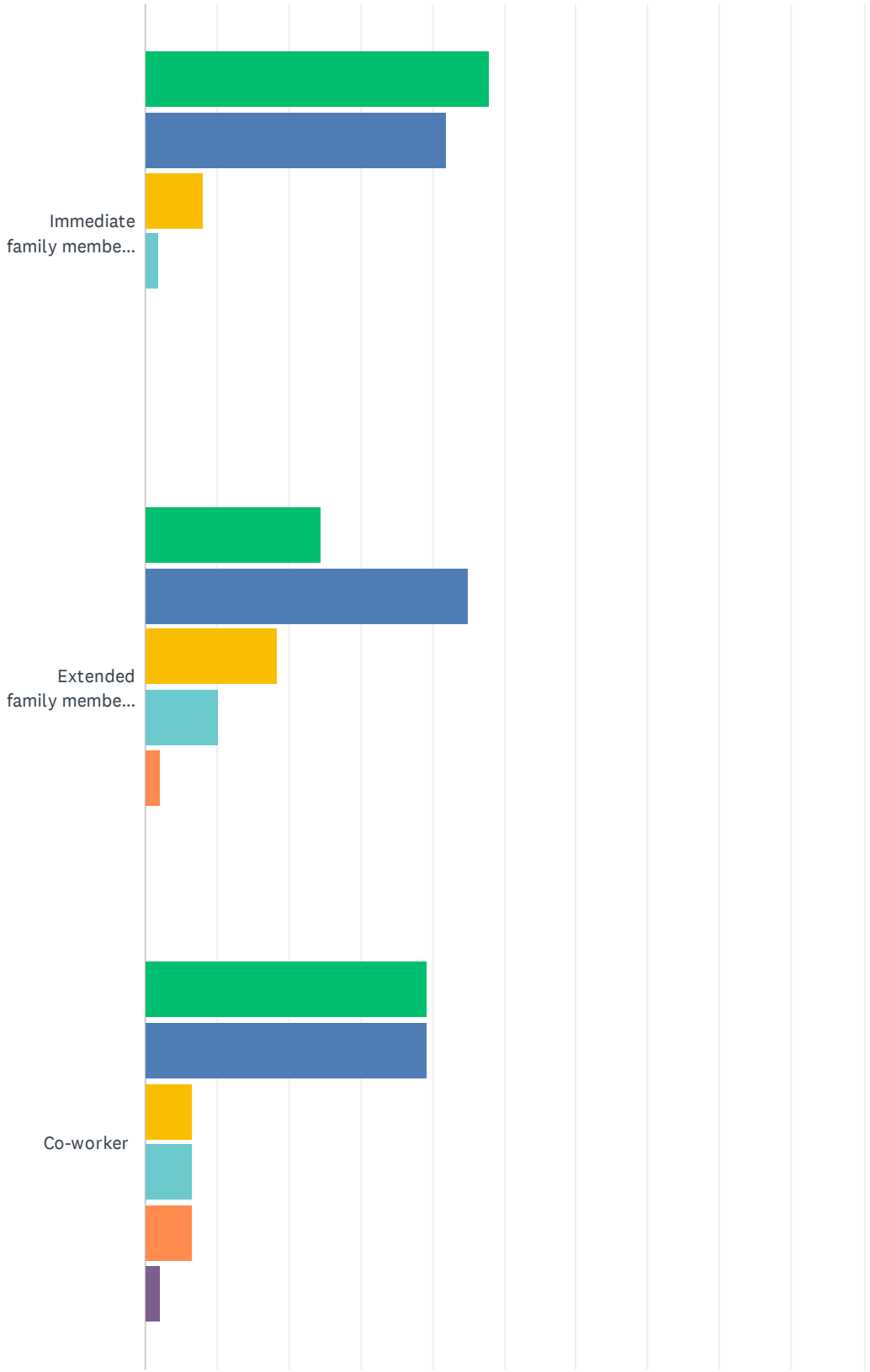
Answered: 51 Skipped: 1

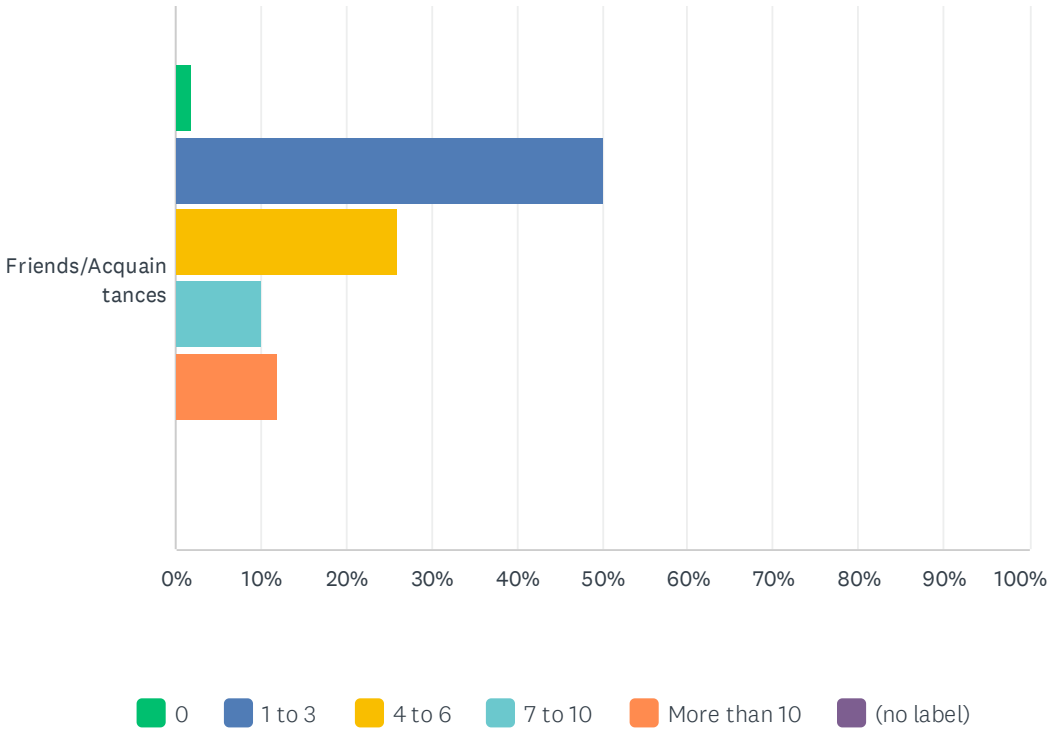


ANSWER CHOICES	RESPONSES	
Yes	19.61%	10
No	80.39%	41
TOTAL		51

Q5 How many people in the following categories do you know that tested positive for COVID-19 or had symptoms of COVID-19?

Answered: 51 Skipped: 1

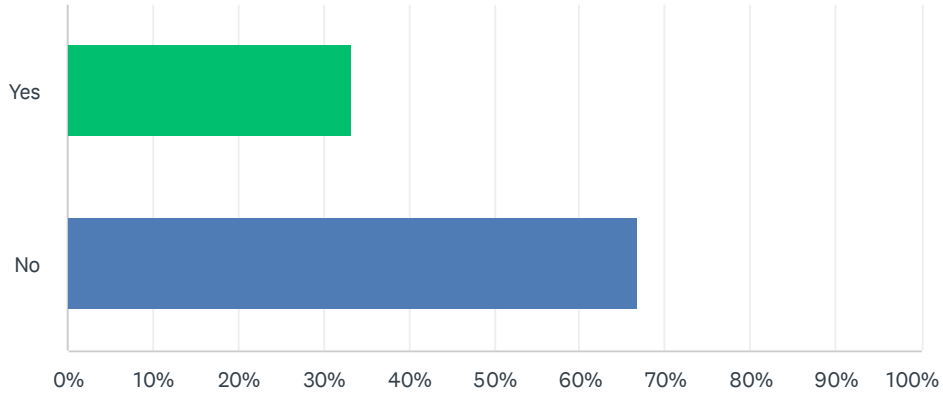




	0	1 TO 3	4 TO 6	7 TO 10	MORE THAN 10	(NO LABEL)	TOTAL	WEIGHTED AVERAGE
Immediate family member (parent, child, sibling)	48.00% 24	42.00% 21	8.00% 4	2.00% 1	0.00% 0	0.00% 0	50	1.54
Extended family member (aunt, uncle, cousin, grandparent, grandchild, niece, or nephew)	24.49% 12	44.90% 22	18.37% 9	10.20% 5	2.04% 1	0.00% 0	49	1.90
Co-worker	39.13% 18	39.13% 18	6.52% 3	6.52% 3	6.52% 3	2.17% 1	46	1.87
Friends/Acquaintances	2.00% 1	50.00% 25	26.00% 13	10.00% 5	12.00% 6	0.00% 0	50	2.32

Q6 Have you or anyone in your family or any acquaintances been hospitalized due to COVID-19?

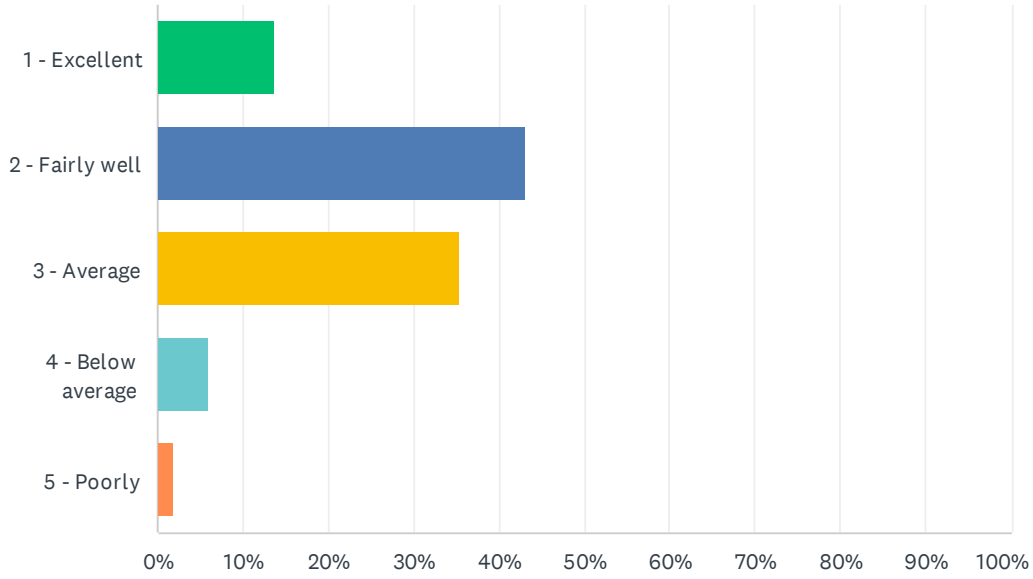
Answered: 51 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	33.33%	17
No	66.67%	34
TOTAL		51

Q7 On a scale of 1 to 5, how well do you think your community addressed the COVID-19 Pandemic?

Answered: 51 Skipped: 1



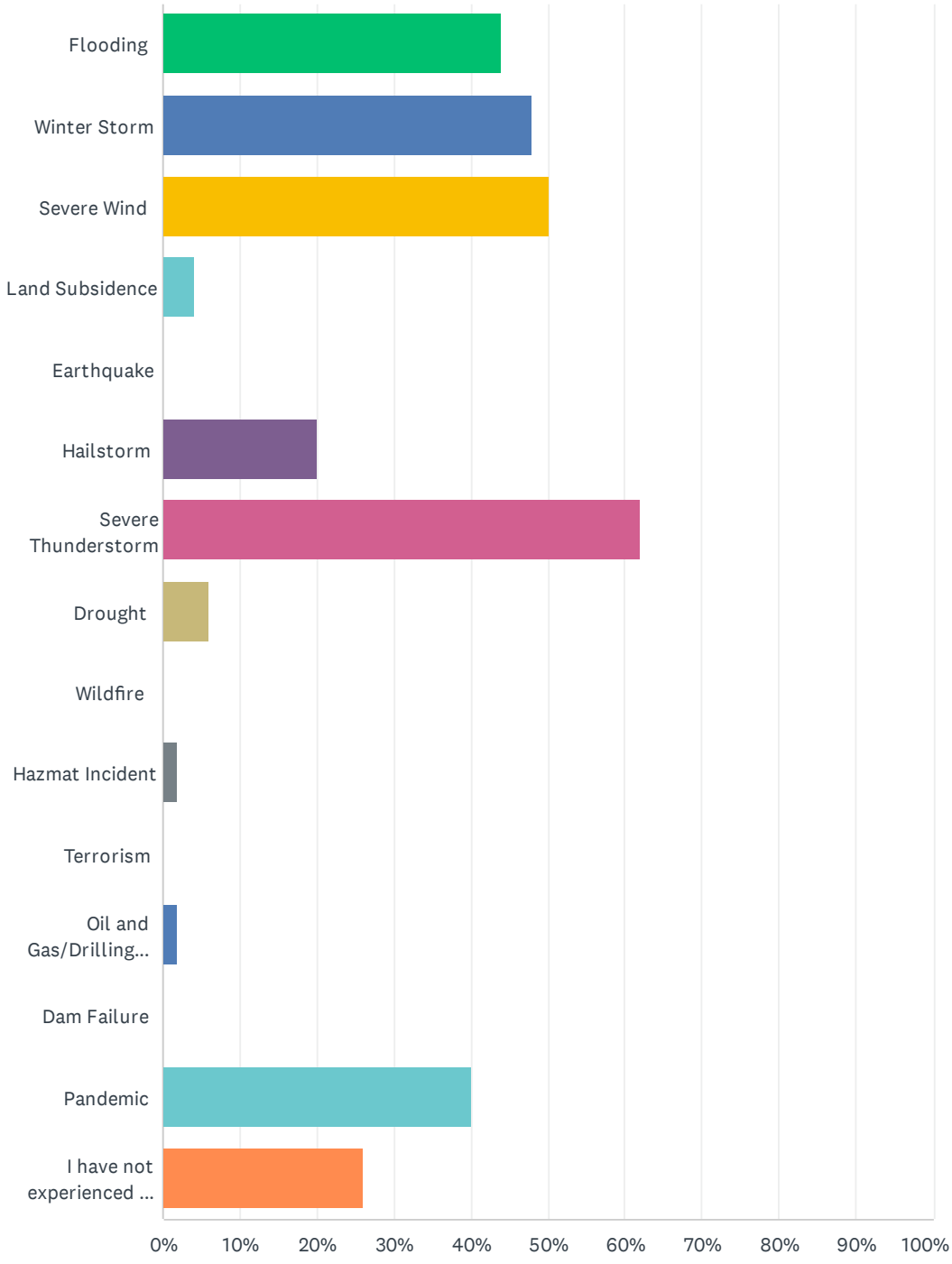
ANSWER CHOICES	RESPONSES	
1 - Excellent	13.73%	7
2 - Fairly well	43.14%	22
3 - Average	35.29%	18
4 - Below average	5.88%	3
5 - Poorly	1.96%	1
TOTAL		51

Q8 What suggestions do you have on how your community could have handled the COVID-19 Pandemic better?

Answered: 22 Skipped: 30

Q9 In addition to pandemics, there are many other natural and man-made disasters that can occur? Have you experienced any of the following events (check all that apply)?

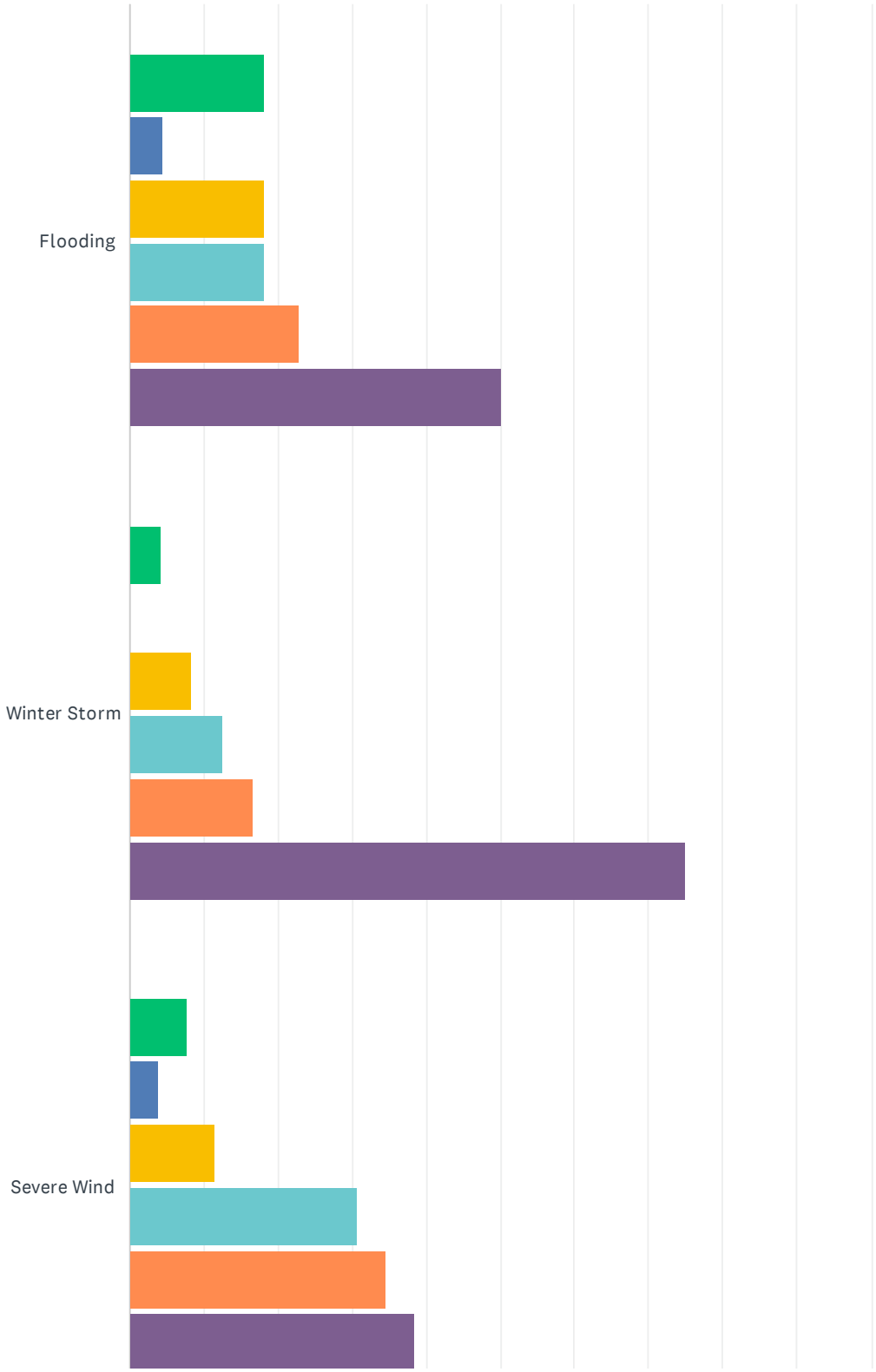
Answered: 50 Skipped: 2

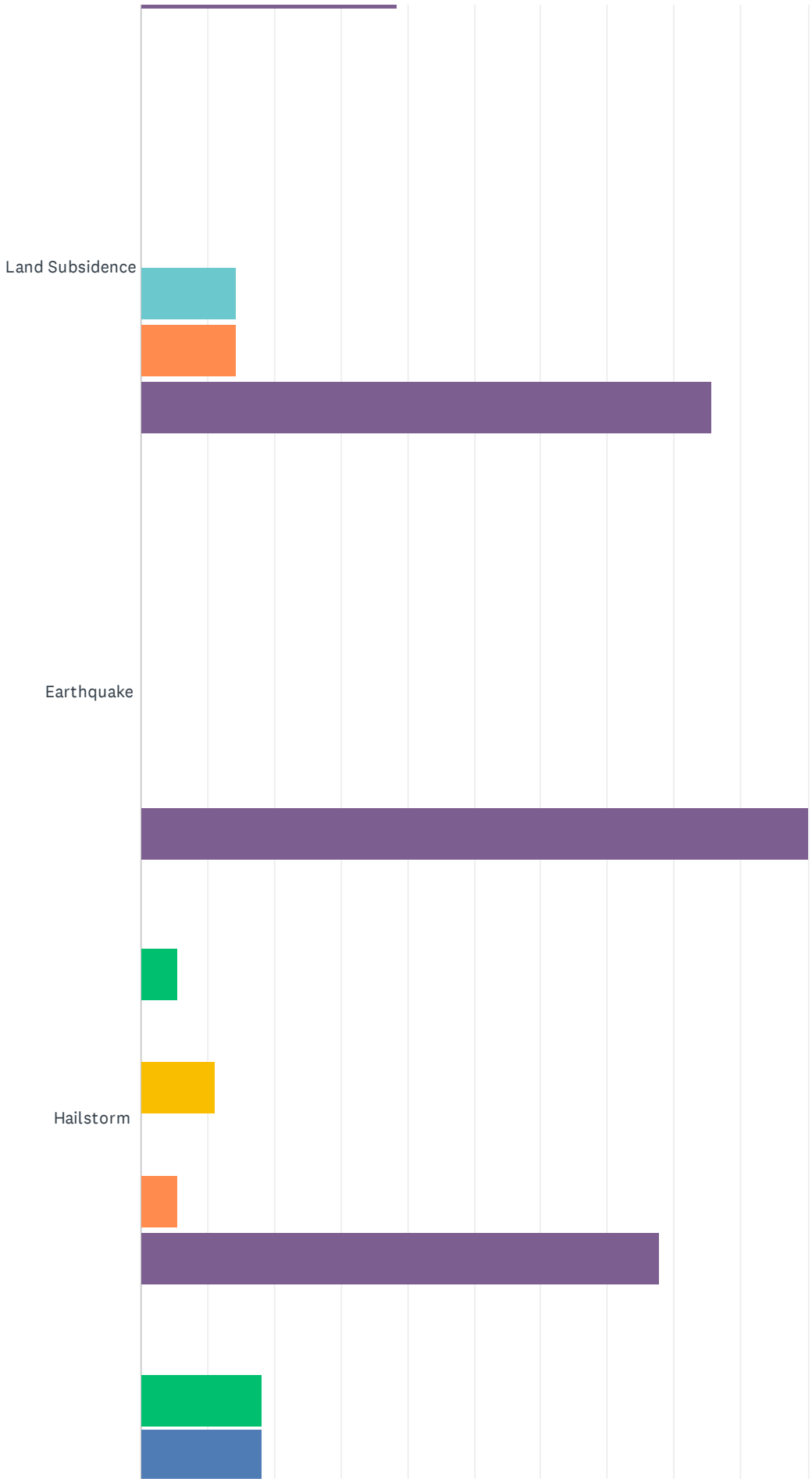


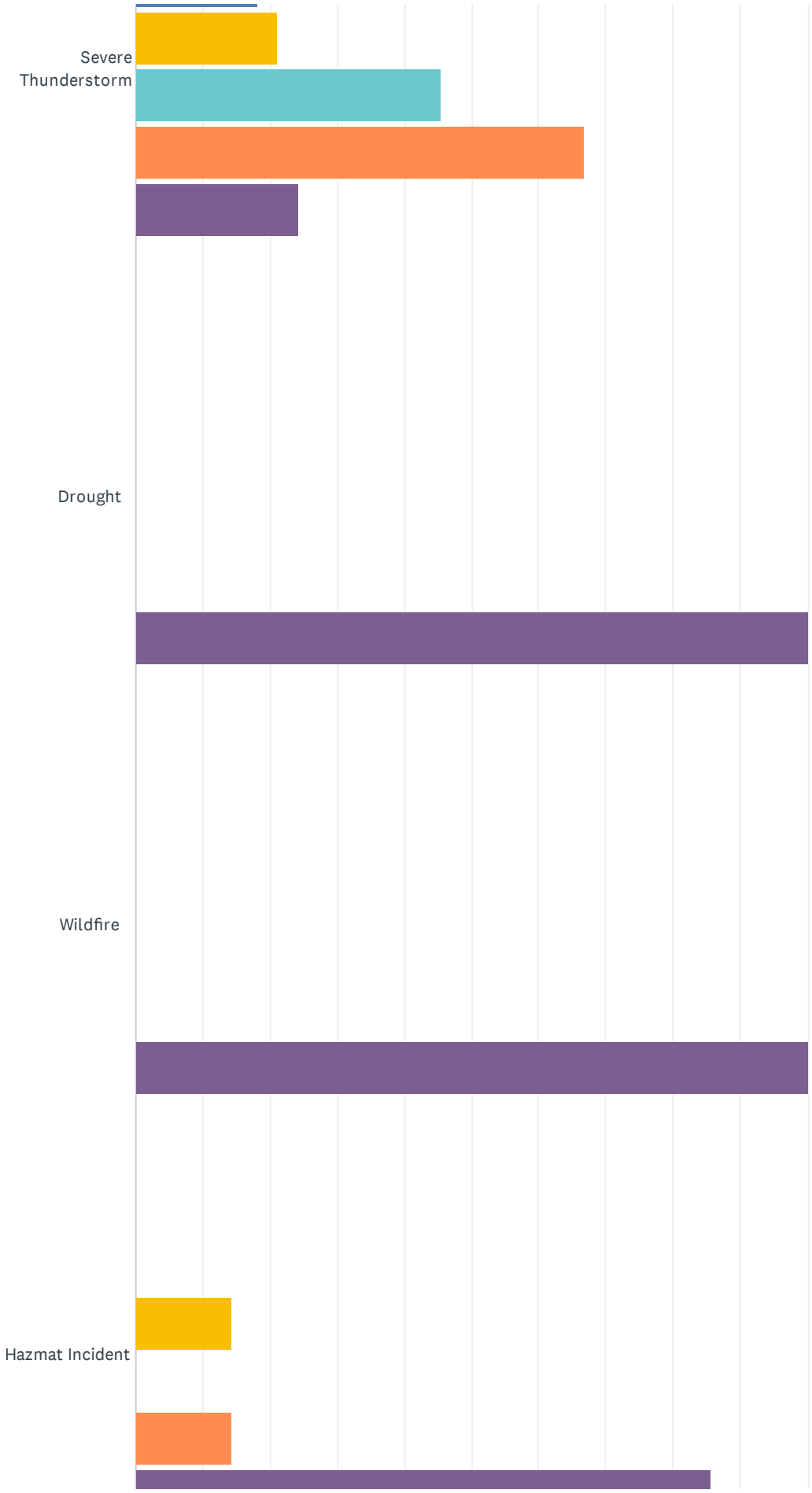
ANSWER CHOICES	RESPONSES	
Flooding	44.00%	22
Winter Storm	48.00%	24
Severe Wind	50.00%	25
Land Subsidence	4.00%	2
Earthquake	0.00%	0
Hailstorm	20.00%	10
Severe Thunderstorm	62.00%	31
Drought	6.00%	3
Wildfire	0.00%	0
Hazmat Incident	2.00%	1
Terrorism	0.00%	0
Oil and Gas/Drilling Hazardous Incident	2.00%	1
Dam Failure	0.00%	0
Pandemic	40.00%	20
I have not experienced any of the events listed.	26.00%	13
Total Respondents: 50		

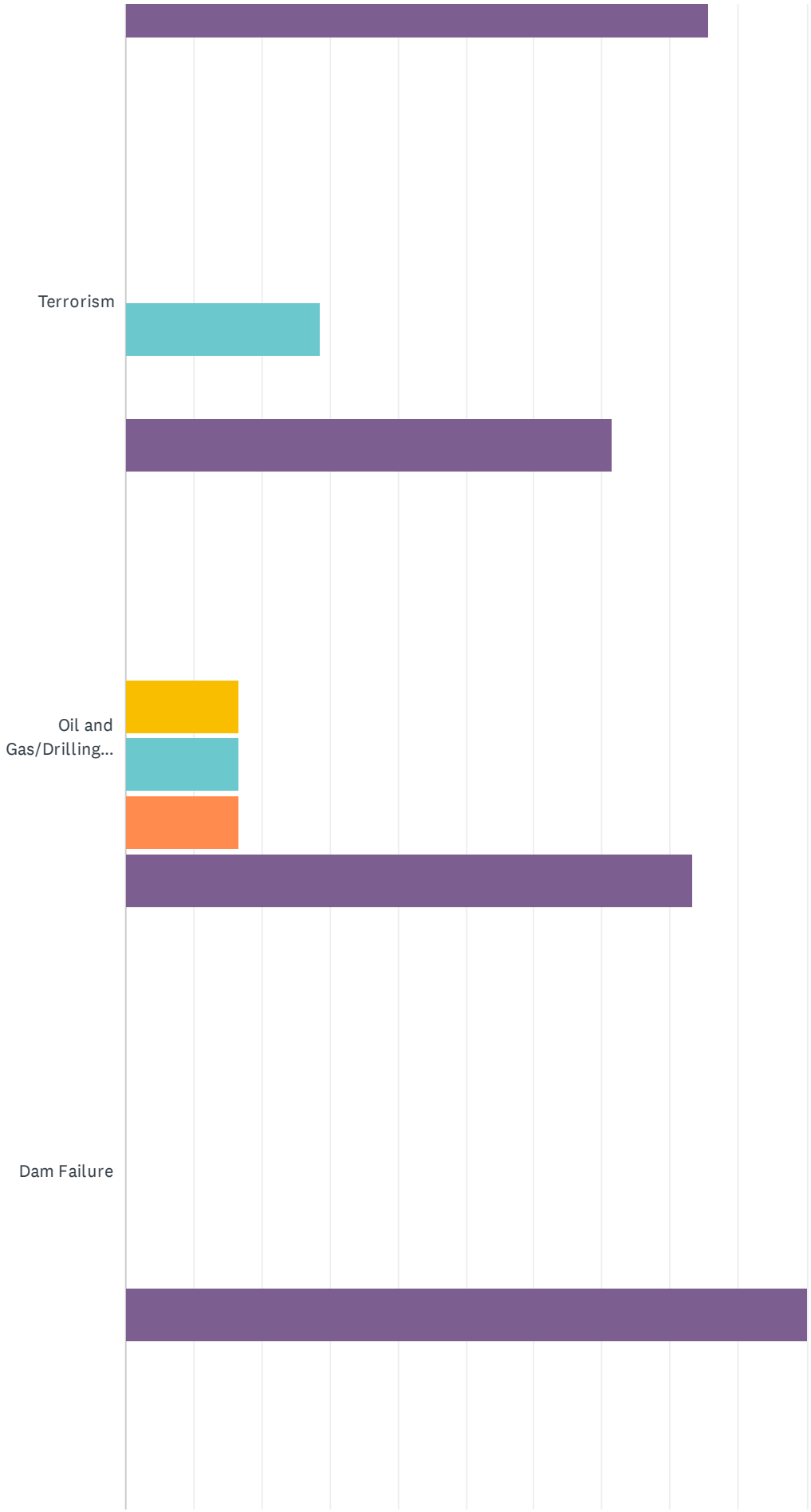
Q10 If you experienced any of the following natural/man-made disasters since the update of our last plan (which was in 2017), please choose the year in which this disaster occurred?

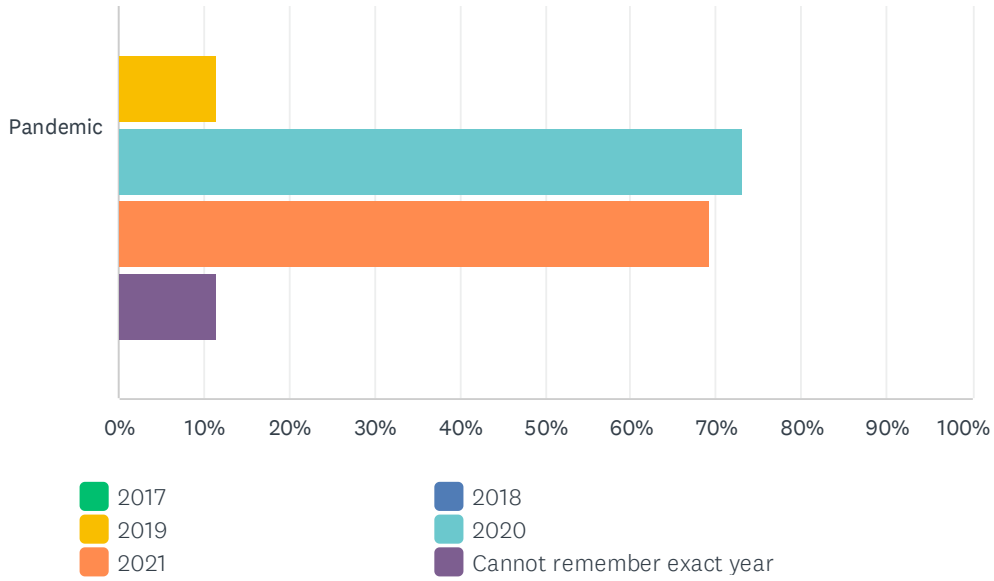
Answered: 38 Skipped: 14




Land Subsidence
Earthquake
Hailstorm


Severe Thunderstorm
Drought
Wildfire
Hazmat Incident

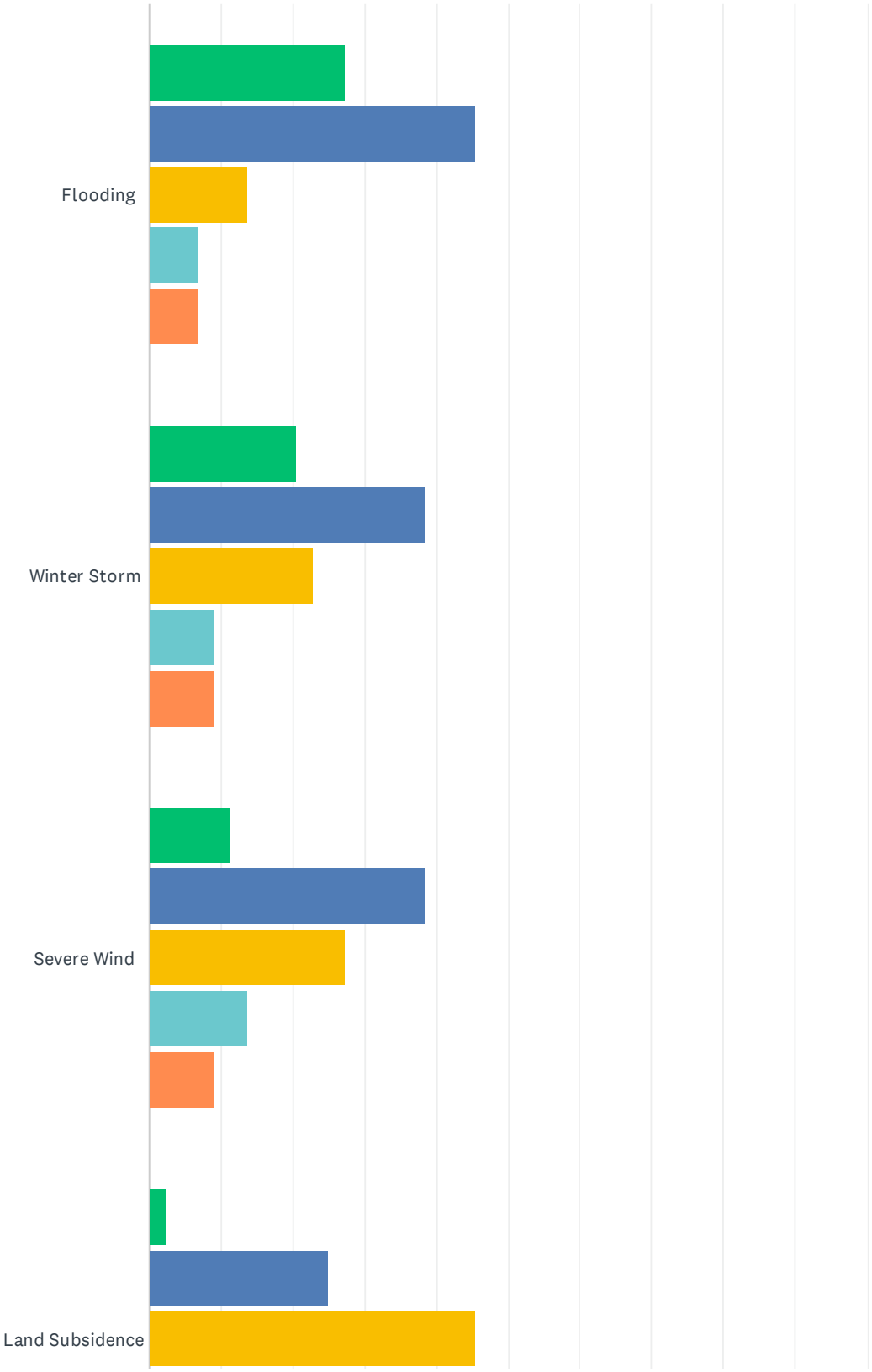

Terrorism
Oil and Gas/Drilling...
Dam Failure

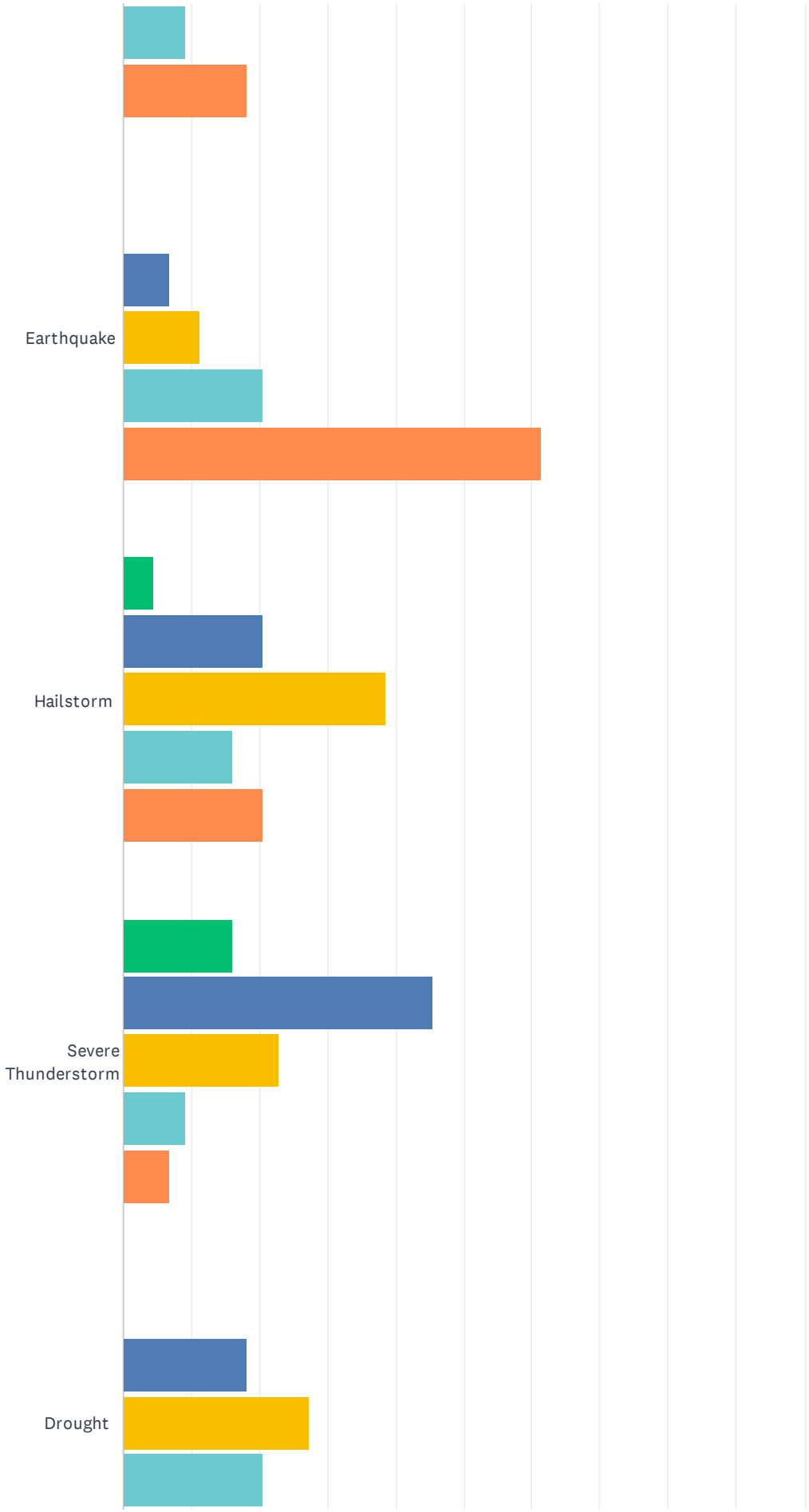


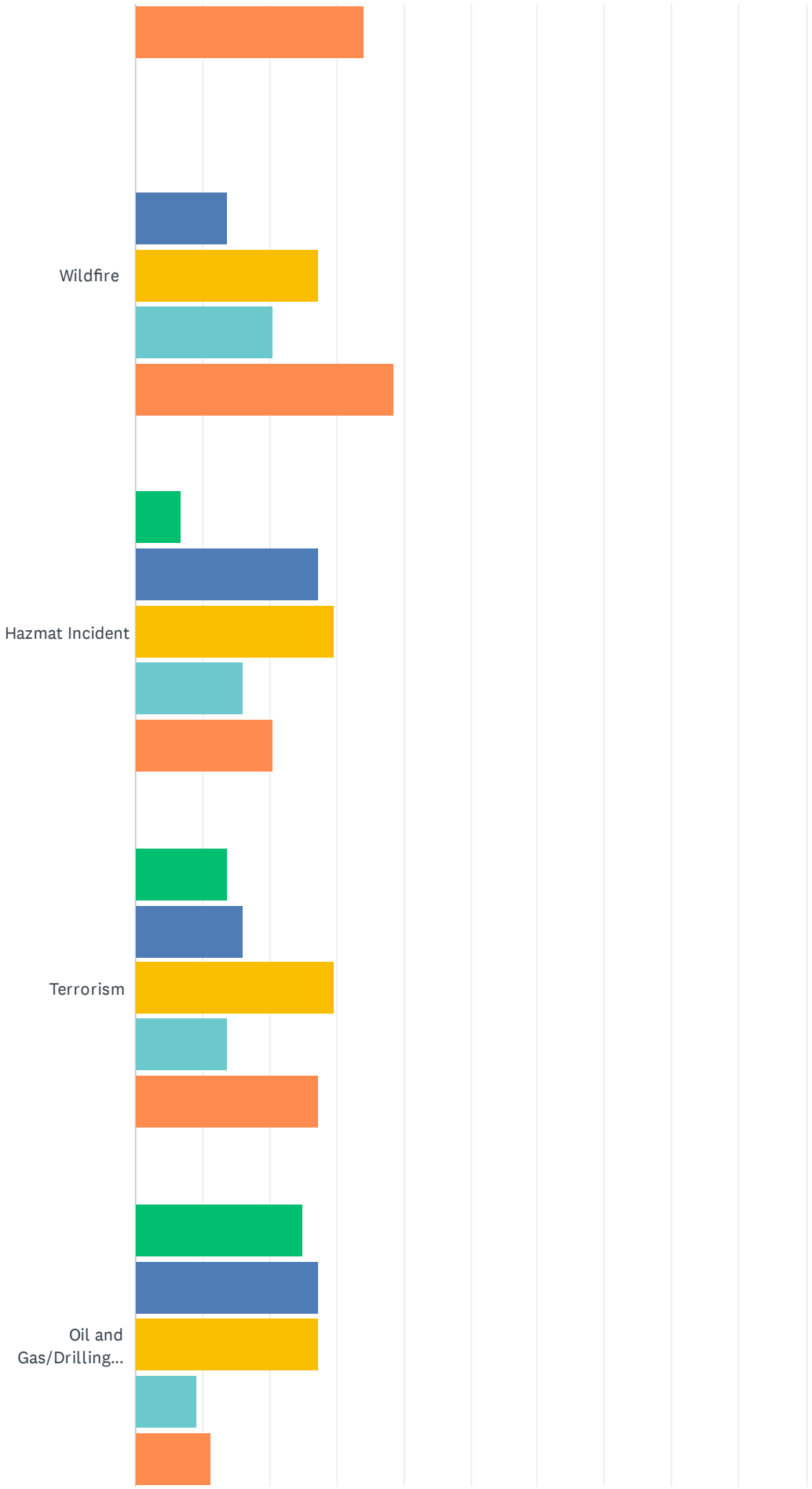
	2017	2018	2019	2020	2021	CANNOT REMEMBER EXACT YEAR	TOTAL RESPONDENTS
Flooding	18.18% 4	4.55% 1	18.18% 4	18.18% 4	22.73% 5	50.00% 11	22
Winter Storm	4.17% 1	0.00% 0	8.33% 2	12.50% 3	16.67% 4	75.00% 18	24
Severe Wind	7.69% 2	3.85% 1	11.54% 3	30.77% 8	34.62% 9	38.46% 10	26
Land Subsidence	0.00% 0	0.00% 0	0.00% 0	14.29% 1	14.29% 1	85.71% 6	7
Earthquake	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 6	6
Hailstorm	5.56% 1	0.00% 0	11.11% 2	0.00% 0	5.56% 1	77.78% 14	18
Severe Thunderstorm	18.18% 6	18.18% 6	21.21% 7	45.45% 15	66.67% 22	24.24% 8	33
Drought	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 6	6
Wildfire	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 5	5
Hazmat Incident	0.00% 0	0.00% 0	14.29% 1	0.00% 0	14.29% 1	85.71% 6	7
Terrorism	0.00% 0	0.00% 0	0.00% 0	28.57% 2	0.00% 0	71.43% 5	7
Oil and Gas/Drilling Hazardous Incident	0.00% 0	0.00% 0	16.67% 1	16.67% 1	16.67% 1	83.33% 5	6
Dam Failure	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	100.00% 5	5
Pandemic	0.00% 0	0.00% 0	11.54% 3	73.08% 19	69.23% 18	11.54% 3	26

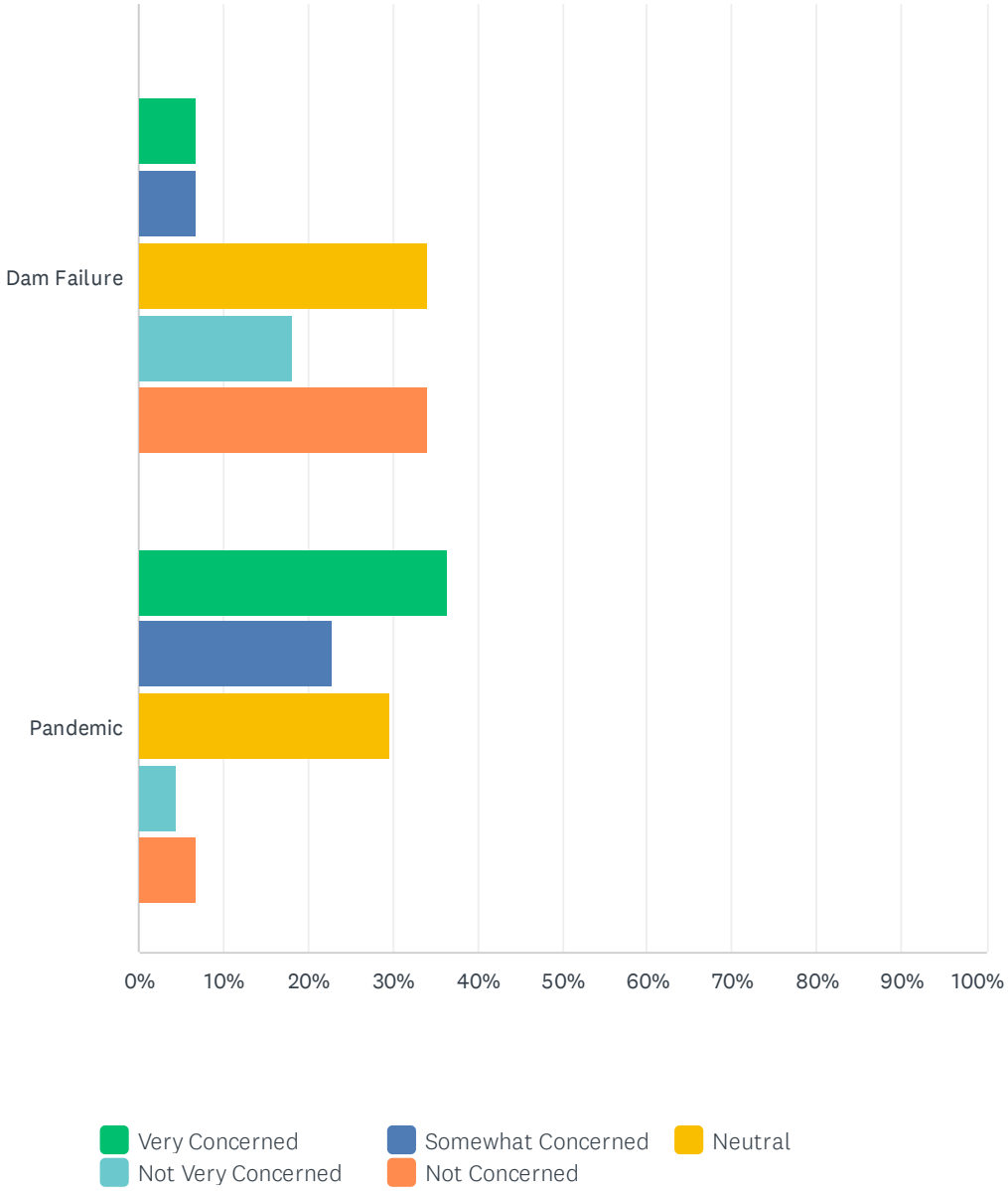
Q11 How concerned are you about the following disasters affecting your community (please check one box in each row)?

Answered: 44 Skipped: 8




Earthquake
Hailstorm
Severe Thunderstorm
Drought

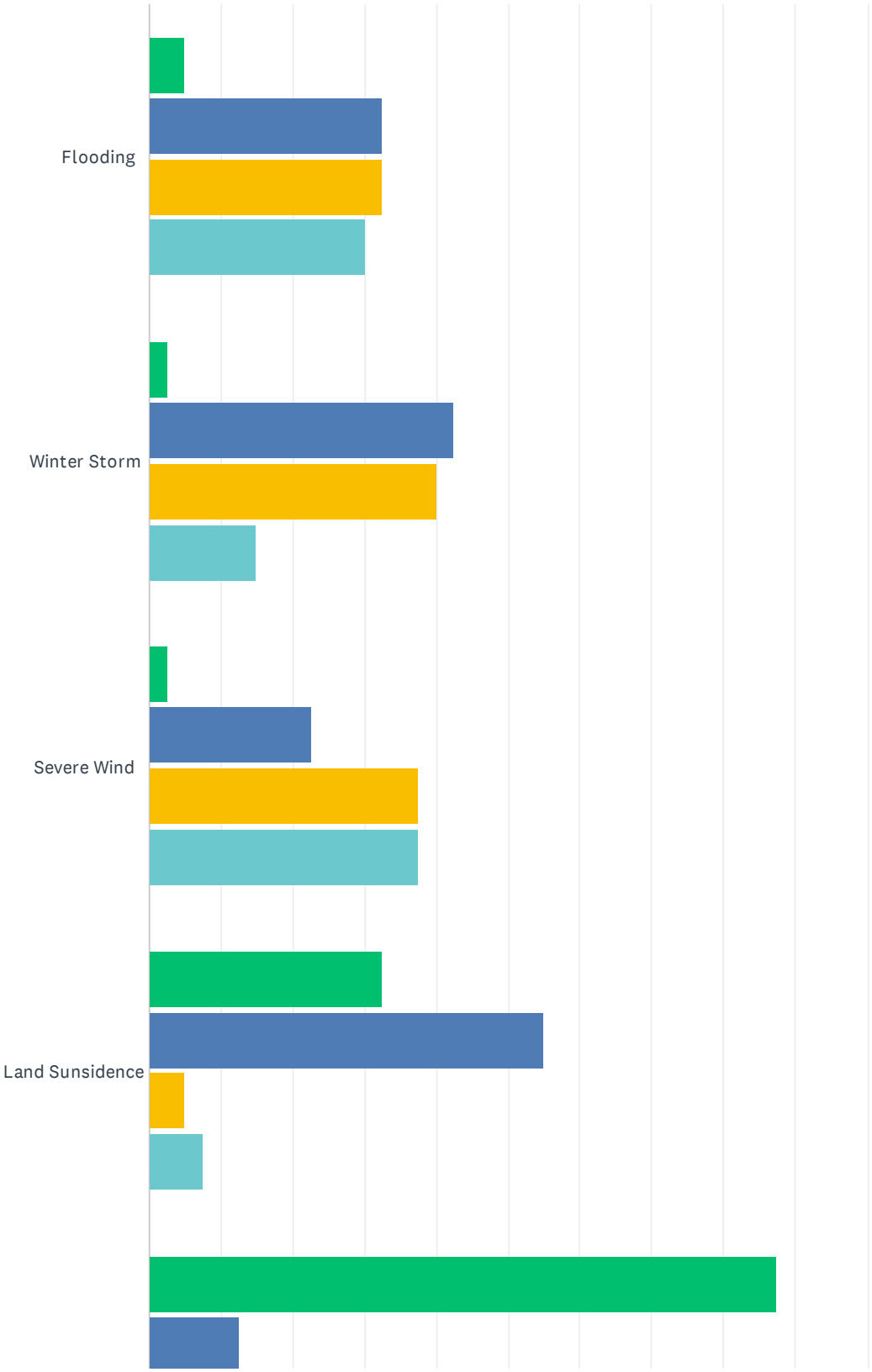

Wildfire
Hazmat Incident
Terrorism
Oil and Gas/Drilling...

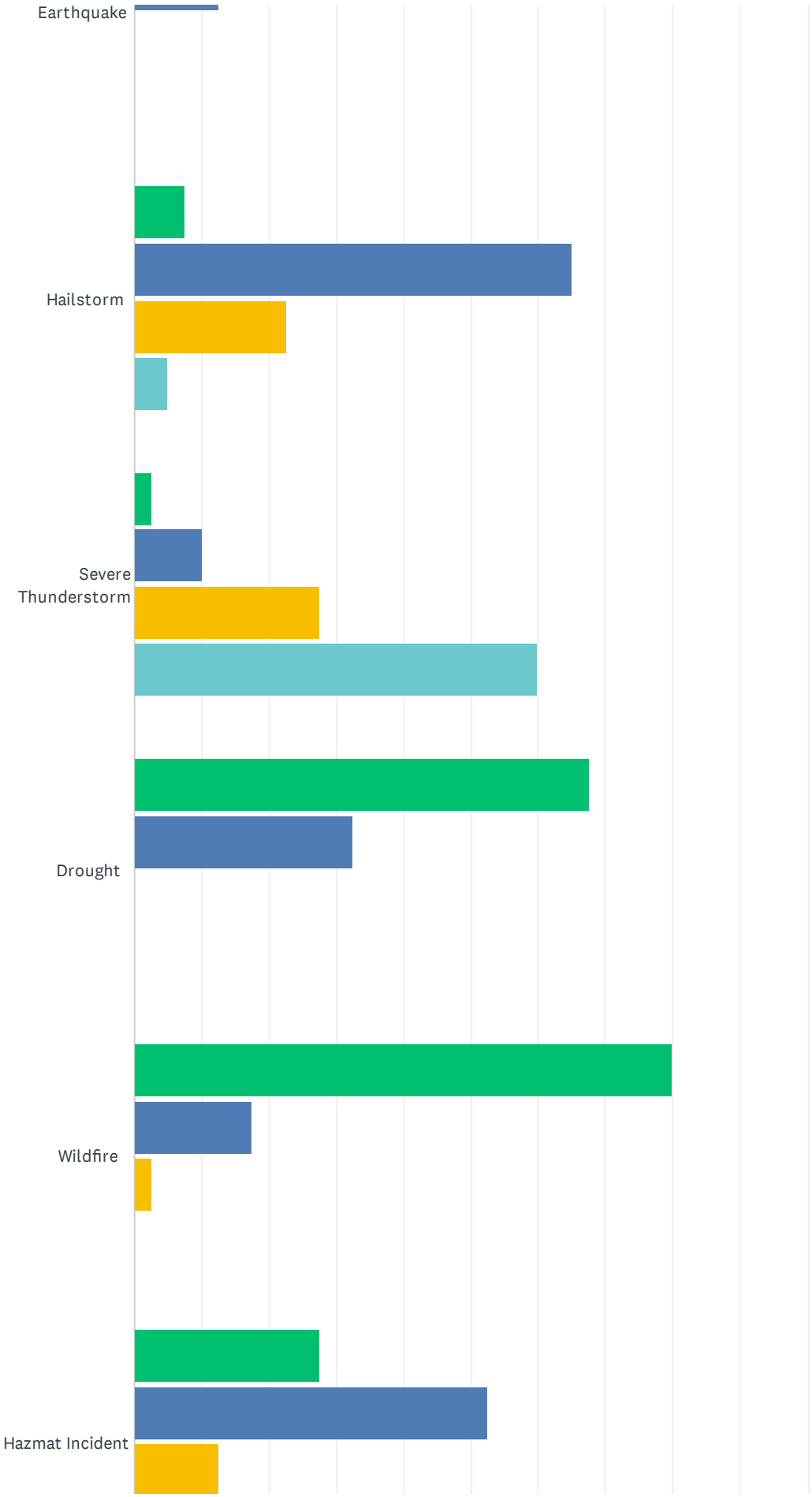

Dam Failure
Pandemic
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Very Concerned
Somewhat Concerned
Neutral
Not Very Concerned
Not Concerned

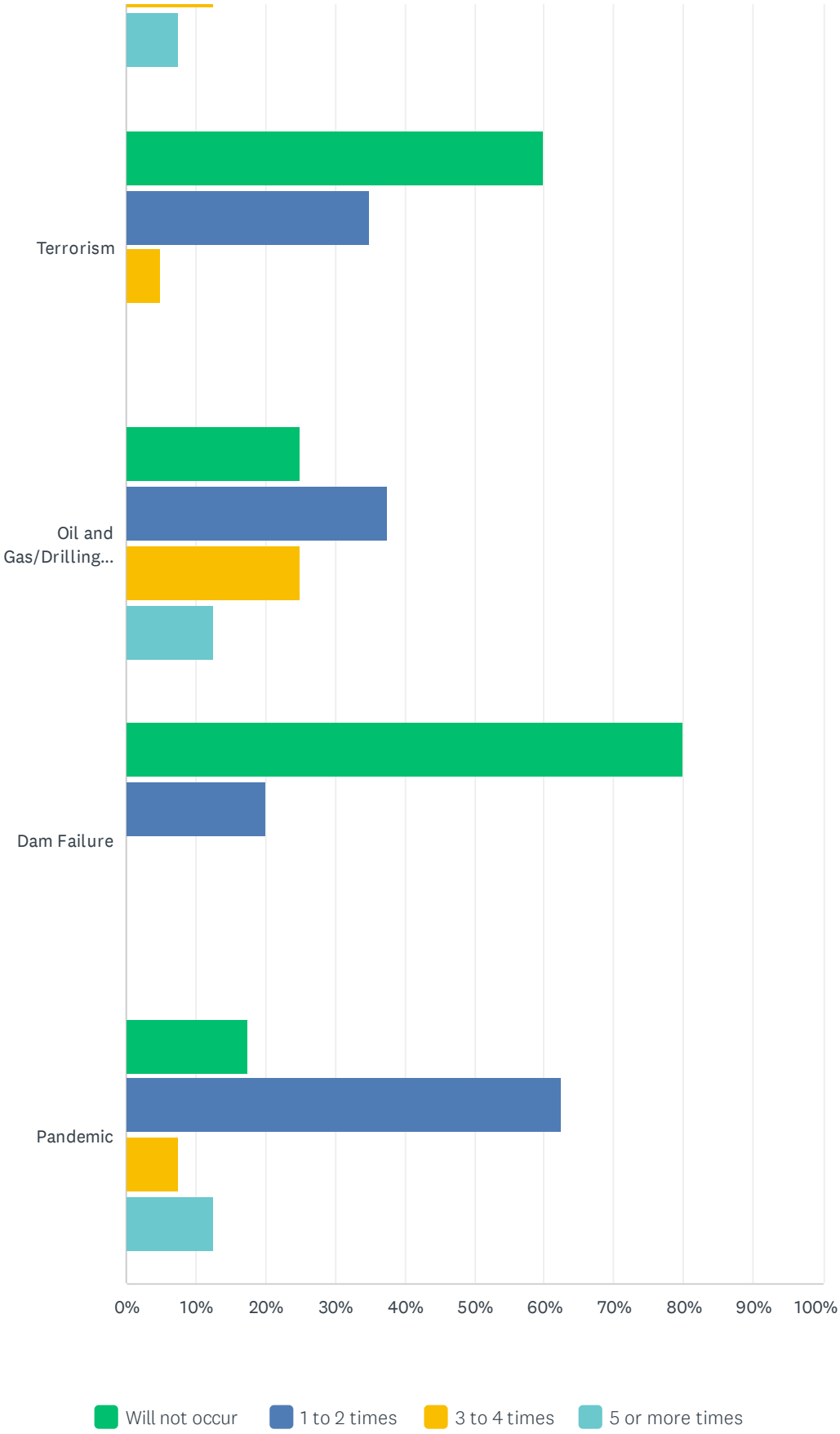
	VERY CONCERNED	SOMEWHAT CONCERNED	NEUTRAL	NOT VERY CONCERNED	NOT CONCERNED	TOTAL
Flooding	27.27% 12	45.45% 20	13.64% 6	6.82% 3	6.82% 3	44
Winter Storm	20.45% 9	38.64% 17	22.73% 10	9.09% 4	9.09% 4	44
Severe Wind	11.36% 5	38.64% 17	27.27% 12	13.64% 6	9.09% 4	44
Land Subsidence	2.27% 1	25.00% 11	45.45% 20	9.09% 4	18.18% 8	44
Earthquake	0.00% 0	6.82% 3	11.36% 5	20.45% 9	61.36% 27	44
Hailstorm	4.55% 2	20.45% 9	38.64% 17	15.91% 7	20.45% 9	44
Severe Thunderstorm	15.91% 7	45.45% 20	22.73% 10	9.09% 4	6.82% 3	44
Drought	0.00% 0	18.18% 8	27.27% 12	20.45% 9	34.09% 15	44
Wildfire	0.00% 0	13.64% 6	27.27% 12	20.45% 9	38.64% 17	44
Hazmat Incident	6.82% 3	27.27% 12	29.55% 13	15.91% 7	20.45% 9	44
Terrorism	13.64% 6	15.91% 7	29.55% 13	13.64% 6	27.27% 12	44
Oil and Gas/Drilling Hazardous Incident	25.00% 11	27.27% 12	27.27% 12	9.09% 4	11.36% 5	44
Dam Failure	6.82% 3	6.82% 3	34.09% 15	18.18% 8	34.09% 15	44
Pandemic	36.36% 16	22.73% 10	29.55% 13	4.55% 2	6.82% 3	44

Q12 In your opinion, how frequently do you believe these events will occur in the next five years (please check one box in each row)?

Answered: 40 Skipped: 12



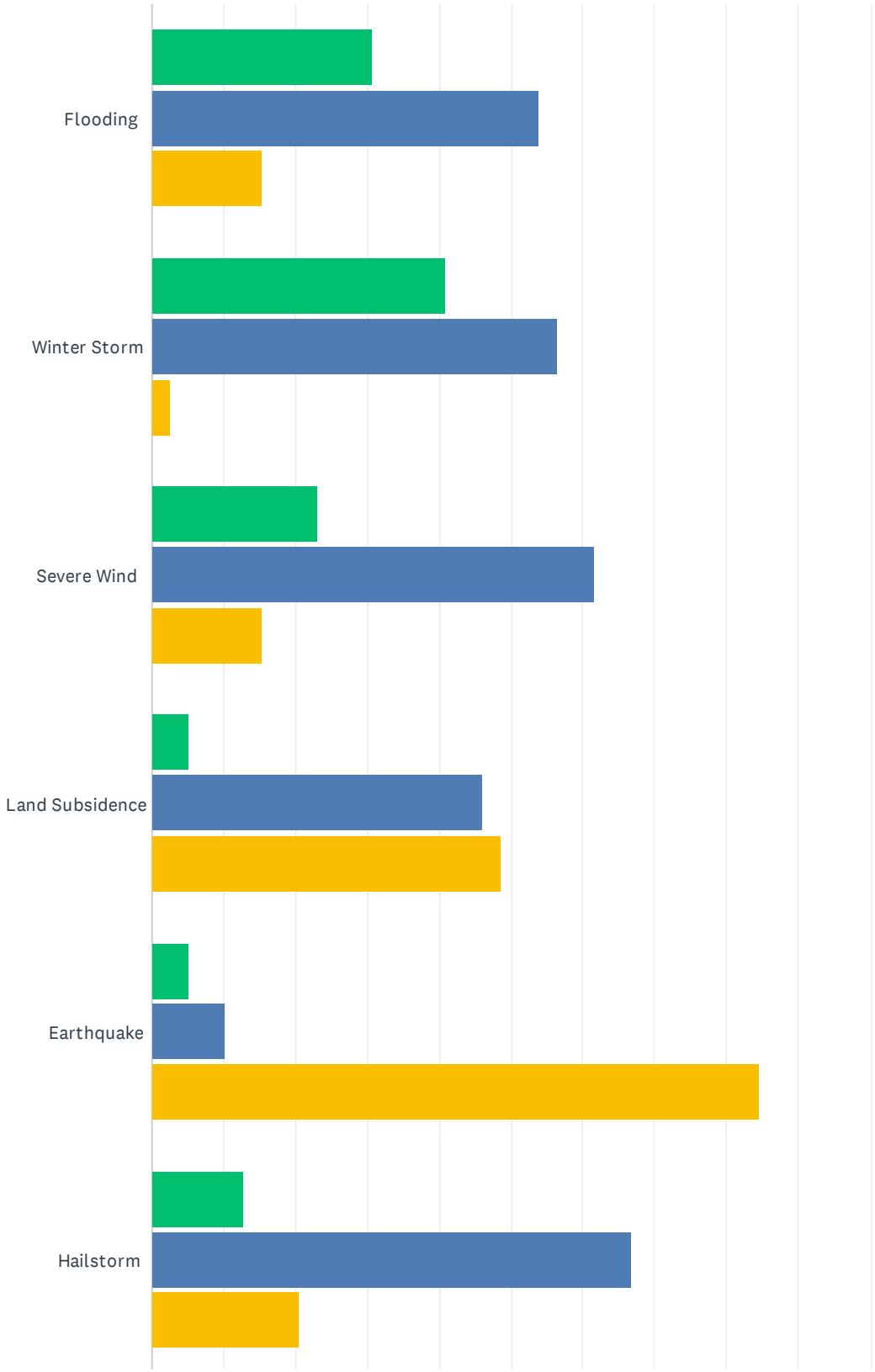

Earthquake
Hailstorm
Severe Thunderstorm
Drought
Wildfire
Hazmat Incident

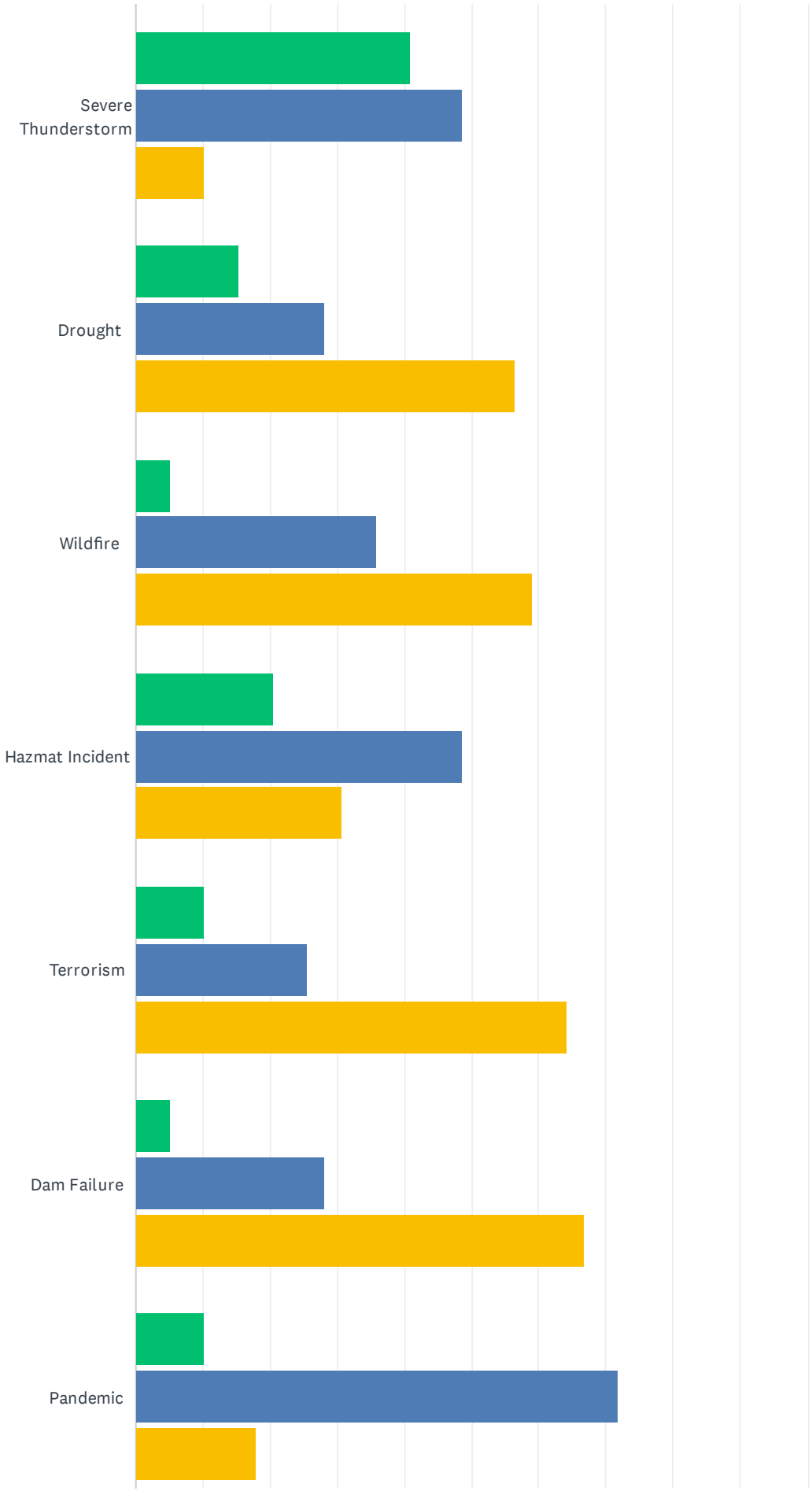

Terrorism
Oil and Gas/Drilling...
Dam Failure
Pandemic
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Will not occur
1 to 2 times
3 to 4 times
5 or more times

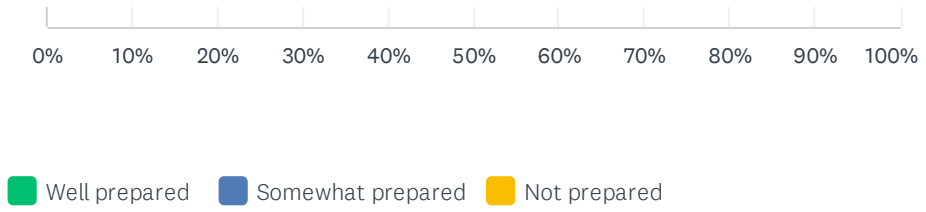
	WILL NOT OCCUR	1 TO 2 TIMES	3 TO 4 TIMES	5 OR MORE TIMES	TOTAL
Flooding	5.00% 2	32.50% 13	32.50% 13	30.00% 12	40
Winter Storm	2.50% 1	42.50% 17	40.00% 16	15.00% 6	40
Severe Wind	2.50% 1	22.50% 9	37.50% 15	37.50% 15	40
Land Sunsidence	32.50% 13	55.00% 22	5.00% 2	7.50% 3	40
Earthquake	87.50% 35	12.50% 5	0.00% 0	0.00% 0	40
Hailstorm	7.50% 3	65.00% 26	22.50% 9	5.00% 2	40
Severe Thunderstorm	2.50% 1	10.00% 4	27.50% 11	60.00% 24	40
Drought	67.50% 27	32.50% 13	0.00% 0	0.00% 0	40
Wildfire	80.00% 32	17.50% 7	2.50% 1	0.00% 0	40
Hazmat Incident	27.50% 11	52.50% 21	12.50% 5	7.50% 3	40
Terrorism	60.00% 24	35.00% 14	5.00% 2	0.00% 0	40
Oil and Gas/Drilling Hazardous Incident	25.00% 10	37.50% 15	25.00% 10	12.50% 5	40
Dam Failure	80.00% 32	20.00% 8	0.00% 0	0.00% 0	40
Pandemic	17.50% 7	62.50% 25	7.50% 3	12.50% 5	40

Q13 How well do you feel your community is prepared for these events (please check one box in each row)?

Answered: 39 Skipped: 13



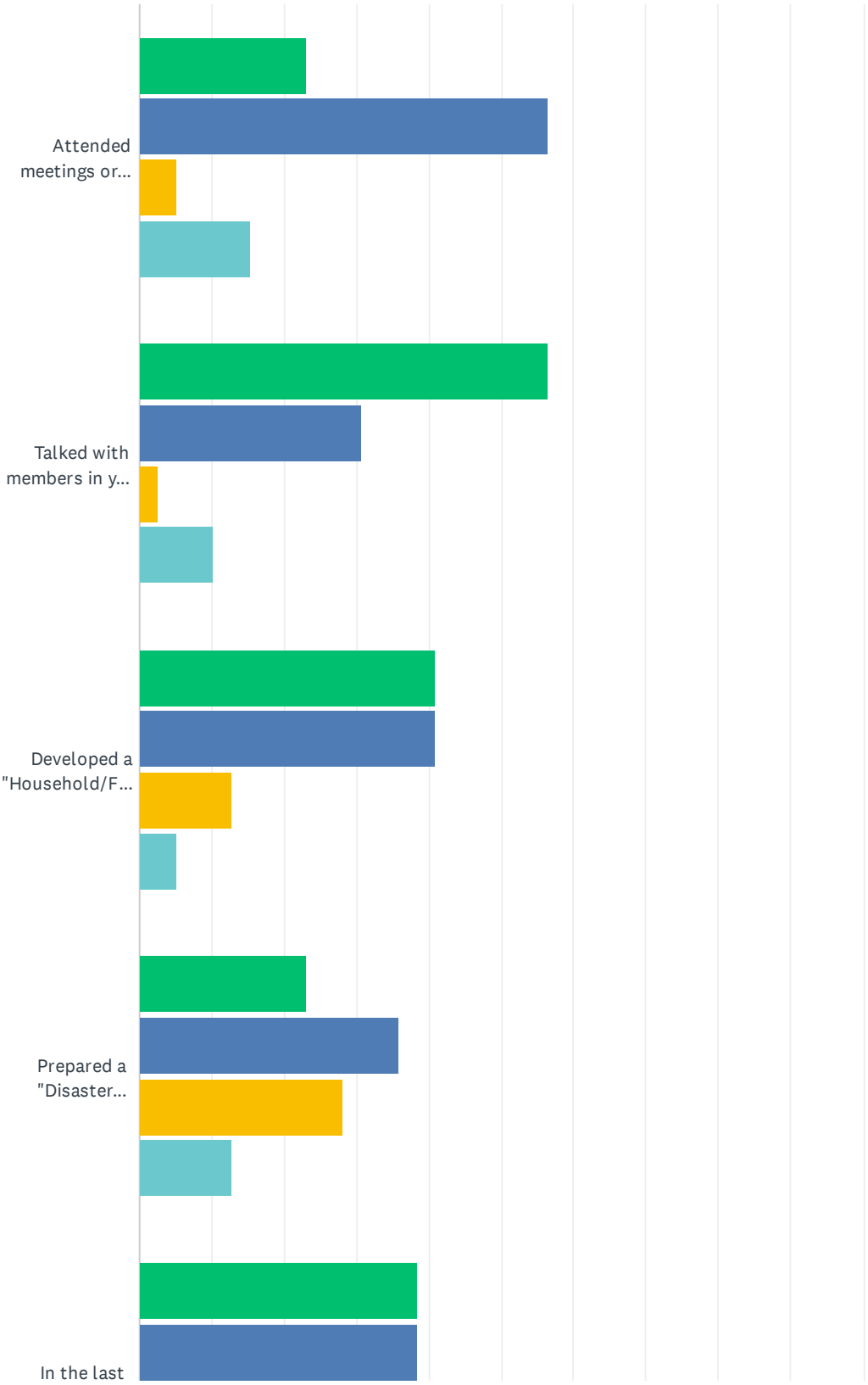

Severe Thunderstorm
Drought
Wildfire
Hazmat Incident
Terrorism
Dam Failure
Pandemic

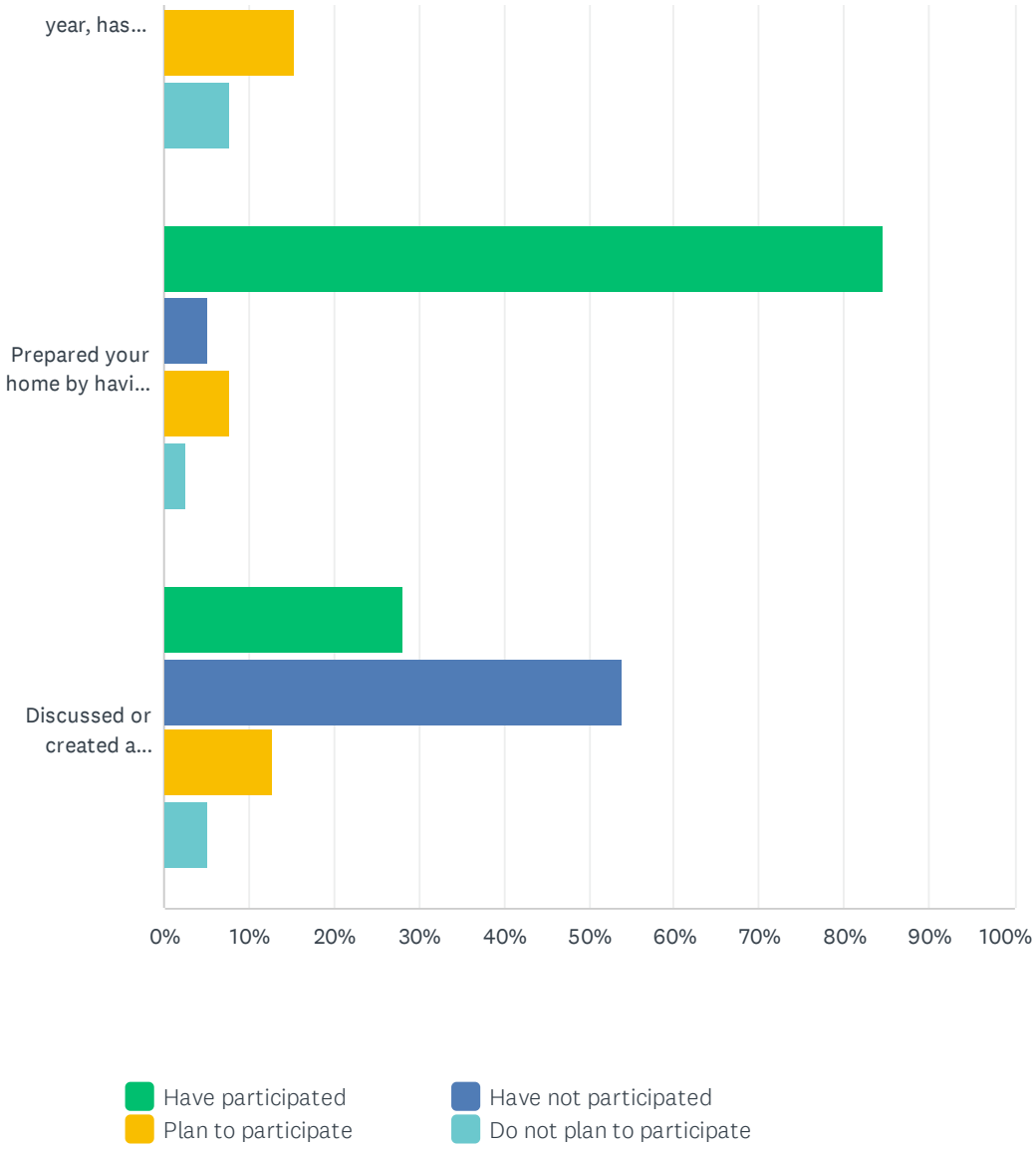


	WELL PREPARED	SOMEWHAT PREPARED	NOT PREPARED	TOTAL
Flooding	30.77% 12	53.85% 21	15.38% 6	39
Winter Storm	41.03% 16	56.41% 22	2.56% 1	39
Severe Wind	23.08% 9	61.54% 24	15.38% 6	39
Land Subsidence	5.13% 2	46.15% 18	48.72% 19	39
Earthquake	5.13% 2	10.26% 4	84.62% 33	39
Hailstorm	12.82% 5	66.67% 26	20.51% 8	39
Severe Thunderstorm	41.03% 16	48.72% 19	10.26% 4	39
Drought	15.38% 6	28.21% 11	56.41% 22	39
Wildfire	5.13% 2	35.90% 14	58.97% 23	39
Hazmat Incident	20.51% 8	48.72% 19	30.77% 12	39
Terrorism	10.26% 4	25.64% 10	64.10% 25	39
Dam Failure	5.13% 2	28.21% 11	66.67% 26	39
Pandemic	10.26% 4	71.79% 28	17.95% 7	39

Q14 Have you or anyone else in your household participated any of the following (please check one box in each row)?

Answered: 39 Skipped: 13




year, has...
Prepared your home by havi...
Discussed or created a...
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Have participated
Plan to participate
Have not participated
Do not plan to participate

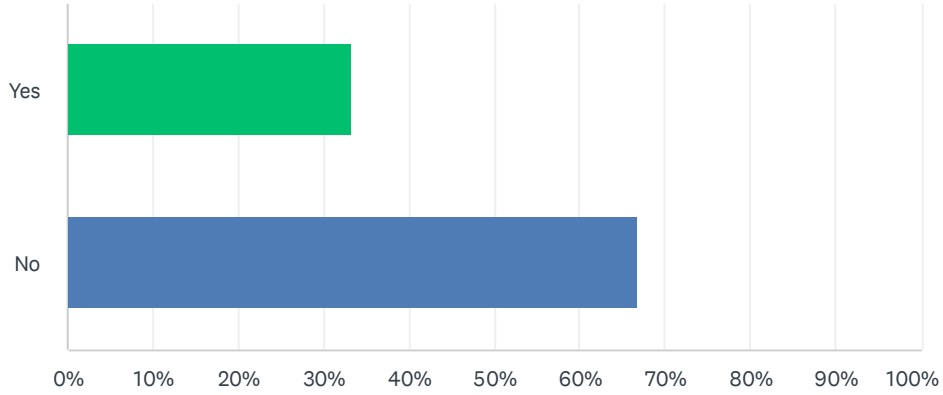
	HAVE PARTICIPATED	HAVE NOT PARTICIPATED	PLAN TO PARTICIPATE	DO NOT PLAN TO PARTICIPATE	TOTAL
Attended meetings or received written information on natural disasters or emergency preparedness?	23.08% 9	56.41% 22	5.13% 2	15.38% 6	39
Talked with members in your household about what to do in case of a natural disaster or emergency.	56.41% 22	30.77% 12	2.56% 1	10.26% 4	39
Developed a "Household/Family Emergency Plan" in order to decide what everyone would do in an event of a disaster?	41.03% 16	41.03% 16	12.82% 5	5.13% 2	39
Prepared a "Disaster Supply Kit" (stored extra food, water, batteries and other emergency supplies)?	23.08% 9	35.90% 14	28.21% 11	12.82% 5	39
In the last year, has anyone in your household been trained in First Aid or Cardio-Pulminary Resucitation (CPR)?	38.46% 15	38.46% 15	15.38% 6	7.69% 3	39
Prepared your home by having smoke detectors on each level of your house?	84.62% 33	5.13% 2	7.69% 3	2.56% 1	39
Discussed or created a utility shutoff procedure in the event of a natural disaster?	28.21% 11	53.85% 21	12.82% 5	5.13% 2	39

Q15 Do you have any suggestions to how your community can better handle/mitigate natural and man-made disasters?

Answered: 16 Skipped: 36

Q16 Do you know the evacuation route for your community?

Answered: 39 Skipped: 13



ANSWER CHOICES	RESPONSES	
Yes	33.33%	13
No	66.67%	26
TOTAL		39

Q17 Do you have general comments regarding natural disasters in Marshall, Ohio and Wetzel Counties?

Answered: 12 Skipped: 40

A8: Draft Review and Open House Public Notice and Associated Material

PUBLIC NOTICE

Belomar Regional Council is in the process of updating the Hazard Mitigation Plan for Marshall, Ohio and Wetzel Counties. Hazard Mitigation Plans are required by the Disaster Mitigation Act of 2000 (DMA 2000; Public Law (PL) 106-390). The law reinforced the importance of mitigation planning, emphasizing planning before disaster occurs. A draft Hazard Mitigation Plan has been prepared. The purpose of the 5-year plan update is to identify potential hazards, associated risks and actions for mitigation. The draft plan is available on Belomar Regional Council's website at https://www.belomar.org/draft-2022-hmp-review/

It is also available for review at the following libraries:

Moundsville-Marshall County Public Library,
700 Fifth Street,
Moundsville, WV

Ohio County Public Library,
52 Sixteenth Street,
Wheeling, WV

New Martinsville Public Library,
160 Washington Street,
New Martinsville

Please review the draft plan and provide written comments via Belomar's website or email to: nhamilton@belomar.org

Or by mail to: Comments: Hazard Mitigation Plan Belomar Regional Council P.O. Box 2086 Wheeling, WV 26003

All comments must be received by Friday, August 12, 2022.

Three open houses will also be held. The time and location of the open houses are:

Marshall County Courthouse
County Commission Room,
600 7th Street,
Moundsville, WV
Tuesday, August 9, 2022;
9 AM to 12 PM

Belomar Regional Council,
105 Bridge Street Plaza,
Wheeling, WV
Tuesday, August 9, 2022;
3 PM to 6 PM

Wetzel County Courthouse
Lobby,
200 Main Street,
New Martinsville, WV
Wednesday, August 10, 2022;
1 PM to 4 PM

Your input is very important!

Published:
Wheeling Intelligencer on July 27, 2022 and August 3 ,2022
Wheeling News Register on July 27, 2022 and August 3, 2022
Moundsville Echo on July 27, 2022 and August 3, 2022
Wetzel Chronicle on July 27, 2022 and August 3, 2022

Open Houses

Marshall County

Held on: Tuesday, August 9, 2022

Location: Marshall County Courthouse County Commission Room
600 7th Street
Moundsville, WV 26041

Time: 9 AM to 12 PM

Ohio County

Held on: Tuesday, August 9, 2022

Location: Belomar Regional Council Office
105 Bridge Street Plaza
Wheeling, WV 26003

Time: 3 PM to 6 PM

Wetzel County

Held on: Wednesday, August 10, 2022

Location: Wetzel County Courthouse Lobby
200 Main Street
New Martinsville, WV 26155

Time: 1 PM to 4 PM

Hazard Mitigation Plan 2022 Update Open House
Marshall County
Marshall County Courthouse County Commission Room
Tuesday, August 9, 2022
9 AM to 12 PM

Name	Email
1. Natalie Hamilton	
2. Michele Pultz	Pultz2614@comcast.net
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	

Hazard Mitigation Plan 2022 Update Open House
Ohio County
Belomar Regional Council Conference Room
Tuesday, August 9, 2022
3 PM to 6 PM

Name	Email
1. R. Shamme	Shawnewhy@gmail
2. Braden Powell	bpowell@belomar.org
3. Cynthia Wells	Mainemom_43935@Comcast.net
4. A.C. Wicthe	acewicthe@hotmail.com
5. Scott Hicks	hicks@belomar.org
6. Brenda Kennedy	BRENDANG5D@COMCAST.NET
7.	
8.	
9.	
10.	
11.	
12.	

Hazard Mitigation Plan 2022 Update Open House
Wetzel County
Wetzel County Courthouse Lobby
Wednesday, August 10, 2022
1 PM to 4 PM

Name	Email
1. Sandra Hurst	hurstoo7@frontiernet.net
2. Johnny Haught	jlhaught@frontier.com
3. Jessica Davis	jdavis@wetzelwv.com
4. Steven Yoho	SYoho@WetzelWV.com
5. Donald R. Smith Jr.	dsmith676@yahoo.com
6. Wesley Smith	TheWesleySmith@outlook.com
7. Linda Smittle	lsmittle@hotmail.com
8. Vici Tusic	vtusic@hotmail.com
9. Rhonda Blake	reblake66@gmail.com
10. Carol S. Haught	CAROLSHaught@gmil.com
11. Charles W Tennant III	CTennant@wetzelsheriff.com
12. Lori McCoy	lorimccoy86@gmail.com
Cathy Phillips	cphillips26154@yahoo.com
Ruth Fluharty	ruth_fluharty1@yahoo.com

Jim Rice	aaahomes@suddenlink.com
Mandy Placer	amplacer@gmail.com
Brandi Boriggs	starrbrt@hotmail.com
Bonnie [illegible]	WCCH MAIN DEPT @ yahoo.com
J MICHAEL ANDERSON	LYNDIESMOMROCKS@YAHOO
Randal & McCoy	RANDLMCCOY@[illegible]YAHOO.COM
Scott Stanley	Slomley@wvassessor.com
Mrs. Lonell Godfrey	Stelton



Region 10 Hazard Mitigation Plan Update 2022

What is hazard mitigation planning?

Hazard mitigation planning aims to reduce the loss of life and property by minimizing the impact of disasters. It begins with state, tribal and local governments identifying natural and man-made disasters and vulnerabilities that are common in the area. After identifying the risks, long-term strategies are developed to protect people and property from these risks. The Disaster Mitigation Act (DMA) 2000 (Public Law 106-390) provides the legal basis from FEMA mitigation planning requirements, as a condition of mitigation grant assistance. DMA 2000 emphasizes the need for state and local entities to closely coordinate mitigation planning and implementation efforts. As with all Hazard Mitigation Plans, Region 10's (Marshall, Ohio and Wetzel Counties) plan must be updated every five years.



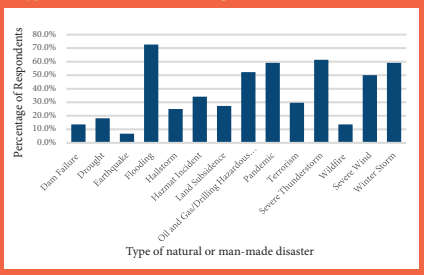
What natural and man-made hazards is Region X susceptible to?



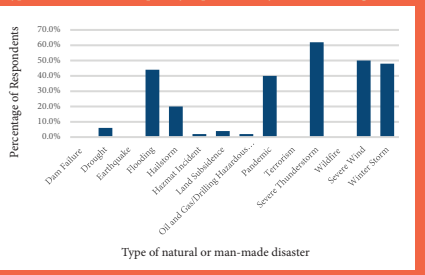
Do you think there are additional hazards?

Public Outreach Survey Results

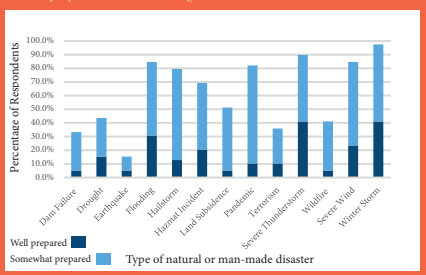
Type of disaster that residents of Region 10 are most concerned with:



Type of disaster most frequently experienced by residents of Region 10:



How prepared residents of Region 10 feel their communities are for:



Hazards experienced in Region 10 in the past 5 years



Ice Storm in 2022 that affected all 3 counties.



Severe thunderstorms in all 3 counties that have caused flooding.



Land subsidence on I-70 Ohio County.



A double derecho that hit Wheeling in 2022.



Severe flooding in Hundred in 2017.

Prepared by Belomar Regional Council

Natalie Hamilton

From: LuAnn Kennedy
Sent: Monday, August 1, 2022 10:18 AM
To: Walter Yates; Janet Scott (bedox093@gmail.com); Aaron Snider (MayorADSnider@gmail.com); Don Nickerson; Betsy Frohnapfel; Judy Hunt (jhunt@cityofmoundsville.com); Mike Ferro; Gregory Morris (gmorris@wetzelwv.com); Lisa Heasley; Johnny L. Haught (jlhaught@frontier.com); Mark Griffith; Greg Galentine; John Gruzinskas; C McBee; Robert Herron; Rick Healy; Glenn Elliott; Charles Goff - Town of Hundred (hundredwvmayor@frontier.com); Chad Kleeh; Beth Edgell; Randy Wharton; Charles Reinacher; Scott Varner; Kenneth Murphy; Sandy Hunt; Erikka Storch; Scott Reager (chamber@marshallcountychamber.com); thart; Randy Russell; Wce911; lvargo; wayland.w.harris; dweaver; Zachary Abraham; Jessica Davis; Anthony Novel Tracey White; Rusty Jebbia; Shawn Schwertfeger; Larry Helms; Tina Rush; Scott Hicks; Rakesh Sharma; A.C. Wiethe
Cc: Natalie Hamilton
Subject: Draft Regional Hazard Mitigation Plan 2022 Update

Hi All,

The draft Regional Hazard Mitigation Plan 2022 Update is available to view and/or download via the below link:

https://www.belomar.org/draft-2022-hmp-review/

We invite you to review the plan and make comments. You can make comments via a form that is provided at the above link or you can reply to this email or email any comments directly to Natalie Hamilton (nhamilton@belomar.org). The public comment period will end on Friday, August 12th. We will be holding open houses in each county, if you would like to stop by. There will be a copy of the plan, as well as a poster that summarizes the planning process and plan.

The open houses will be held on the following dates:

Marshall County: Tuesday, August 9th at the Marshall County Courthouse Commission Room from 9 AM to 12 PM

Ohio County: Tuesday, August 9th at Belomar Regional Council's Conference Room from 3 PM to 6 PM

Wetzel County: Wednesday, August 10th in the Wetzel County Courthouse Lobby from 1 PM to 4 PM

Please share this email with your staff and anyone else, who you believe would be interested in reviewing the document or learning more about hazard mitigation planning in Marshall, Ohio and Wetzel Counties.

Appendix B

Loss Estimates by Hazard

Marshall County

Hazard: Dam Failure

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	695	79%	$143,802,300	$120,795,200	84%			
Education	69	29	42%	$65,128,600	$61,664,600	95%			
Industrial	106	76	72%	$134,670,700	$126,533,300	94%			
Institution	147	95	65%	$19,057,000	$14,505,100	76%			
Residential	15,741	9,762	62%	$961,914,310	$610,480,010	63%			
Unspecified/Unknown	316	158	50%	$2,683,800	$1,497,100	56%			
Total	**17,255**	**10,815**	**63%**	**$1,327,256,710**	**$935,475,310**	**70%**	**30,591**	**22,390**	**73%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Earthquake

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	0	0%	$143,802,300	$0	0%			
Education	69	0	0%	$65,128,600	$0	0%			
Industrial	106	0	0%	$134,670,700	$0	0%			
Institution	147	0	0%	$19,057,000	$0	0%			
Residential	15,741	0	0%	$961,914,310	$0	0%			
Unspecified/Unknown	316	0	0%	$2,683,800	$0	0%			
Total	**17,255**	**0**	**0%**	**$1,327,256,710**	**$0**	**0%**	**30,591**	**0**	**0%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in *Hazard	% in Hazard
Commercial/Service/Utilities	876	154	18%	$143,802,300	$53,168,940	37%			
Education	69	5	7%	$65,128,600	$64,159,700	99%			
Industrial	106	40	38%	$134,670,700	$49,425,616	37%			
Institution	147	23	16%	$19,057,000	$2,661,200	14%			
Residential	15,741	1,342	9%	$961,914,310	$63,293,758	7%			
Unspecified/Unknown	316	0	0%	$2,683,800	$0	0%			
Total	**17,255**	**1,564**	**9%**	**$1,327,256,710**	**$232,709,214**	**18%**	**30,591**	**5,799**	**19%**

* Includes census blocks that are partially (area greater than or equal to 5%) in the flood zone.

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Hailstorm

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	0	0%	$143,802,300	$0	0%			
Education	69	0	0%	$65,128,600	$0	0%			
Industrial	106	0	0%	$134,670,700	$0	0%			
Institution	147	0	0%	$19,057,000	$0	0%			
Residential	15,741	0	0%	$961,914,310	$0	0%			
Unspecified/Unknown	316	0	0%	$2,683,800	$0	0%			
Total	**17,255**	**0**	**0%**	**$1,327,256,710**	**$0**	**0%**	**30,591**	**0**	**0%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Hazardous Materials (Hazmat) Incident

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	785	90%	$143,802,300	$137,662,700	96%			
Education	69	65	94%	$65,128,600	$64,708,200	99%			
Industrial	106	69	65%	$134,670,700	$119,699,350	89%			
Institution	147	93	63%	$19,057,000	$14,801,100	78%			
Residential	15,741	11,573	74%	$961,914,310	$723,366,877	75%			
Unspecified/Unknown	316	191	60%	$2,683,800	$1,349,250	50%			
Total	**17,255**	**12,776**	**74%**	**$1,327,256,710**	**$1,061,587,477**	**80%**	**30,591**	**25,989**	**85%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	178	20%	$143,802,300	$33,046,350	23%			
Education	69	13	19%	$65,128,600	$8,948,700	14%			
Industrial	106	26	25%	$134,670,700	$53,046,317	39%			
Institution	147	33	22%	$19,057,000	$4,035,100	21%			
Residential	15,741	6,644	42%	$961,914,310	$460,582,769	48%			
Unspecified/Unknown	316	94	30%	$2,683,800	$1,175,150	44%			
Total	**17,255**	**6,988**	**40%**	**$1,327,256,710**	**$560,834,386**	**42%**	**30,591**	**21,303**	**70%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Oil and Gas/Drilling Hazardous Incident

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	194	22%	$143,802,300	$25,490,200	18%			
Education	69	10	14%	$65,128,600	$6,132,500	9%			
Industrial	106	64	60%	$134,670,700	$106,327,500	79%			
Institution	147	67	46%	$19,057,000	$6,527,600	34%			
Residential	15,741	5,817	37%	$961,914,310	$365,713,523	38%			
Unspecified/Unknown	316	170	54%	$2,683,800	$1,578,700	59%			
Total	**17,255**	**6,322**	**37%**	**$1,327,256,710**	**$511,770,023**	**39%**	**30,591**	**13,651**	**45%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Terrorism

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	599	68%	$143,802,300	$119,859,300	83%			
Education	69	25	36%	$65,128,600	$56,569,400	87%			
Industrial	106	34	32%	$134,670,700	$20,100,100	15%			
Institution	147	59	40%	$19,057,000	$10,375,900	54%			
Residential	15,741	7,585	48%	$961,914,310	$415,214,022	43%			
Unspecified/Unknown	316	84	27%	$2,683,800	$484,200	18%			
Total	**17,255**	**8,386**	**49%**	**$1,327,256,710**	**$622,602,922**	**47%**	**30,591**	**20,079**	**66%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Thunderstorm (Severe)

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	876	100%	$143,802,300	$143,802,300	100%			
Education	69	69	100%	$65,128,600	$65,128,600	100%			
Industrial	106	106	100%	$134,670,700	$134,670,700	100%			
Institution	147	147	100%	$19,057,000	$19,057,000	100%			
Residential	15,741	15,741	100%	$961,914,310	$961,914,310	100%			
Unspecified/Unknown	316	316	100%	$2,683,800	$2,683,800	100%			
Total	**17,255**	**17,255**	**100%**	**$1,327,256,710**	**$1,327,256,710**	**100%**	**30,591**	**30,591**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Wildfire

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	217	25%	$143,802,300	$32,384,200	23%			
Education	69	25	36%	$65,128,600	$11,483,645	18%			
Industrial	106	80	75%	$134,670,700	$114,121,100	85%			
Institution	147	82	56%	$19,057,000	$7,824,700	41%			
Residential	15,741	8,801	56%	$961,914,310	$610,546,597	63%			
Unspecified/Unknown	316	239	76%	$2,683,800	$2,214,200	83%			
Total	**17,255**	**9,444**	**55%**	**$1,327,256,710**	**$778,574,442**	**59%**	**30,591**	**16,849**	**55%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Wind (Severe)

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	876	100%	$143,802,300	$143,802,300	100%			
Education	69	69	100%	$65,128,600	$65,128,600	100%			
Industrial	106	106	100%	$134,670,700	$134,670,700	100%			
Institution	147	147	100%	$19,057,000	$19,057,000	100%			
Residential	15,741	15,741	100%	$961,914,310	$961,914,310	100%			
Unspecified/Unknown	316	316	100%	$2,683,800	$2,683,800	100%			
Total	**17,255**	**17,255**	**100%**	**$1,327,256,710**	**$1,327,256,710**	**100%**	**30,591**	**30,591**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Winter Storm

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	876	876	100%	$143,802,300	$143,802,300	100%			
Education	69	69	100%	$65,128,600	$65,128,600	100%			
Industrial	106	106	100%	$134,670,700	$134,670,700	100%			
Institution	147	147	100%	$19,057,000	$19,057,000	100%			
Residential	15,741	15,741	100%	$961,914,310	$961,914,310	100%			
Unspecified/Unknown	316	316	100%	$2,683,800	$2,683,800	100%			
Total	**17,255**	**17,255**	**100%**	**$1,327,256,710**	**$1,327,256,710**	**100%**	**30,591**	**30,591**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Ohio County

Hazard: Dam Failure

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	1,352	74%	$848,367,763	$702,068,023	83%			
Education	129	36	28%	$113,466,800	$35,746,600	32%			
Industrial	51	39	76%	$41,867,400	$39,563,000	94%			
Institution	131	85	65%	$39,273,100	$24,248,100	62%			
Residential	17,051	10,688	63%	$1,624,319,100	$812,117,575	50%			
Unspecified/Unknown	186	132	71%	$944,400	$546,400	58%			
Total	**19,365**	**12,332**	**64%**	**$2,668,238,563**	**$1,614,289,698**	**61%**	**42,425**	**30,204**	**71%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?	X	

Hazard: Earthquake

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	0	0%	$848,367,763	$0	0%			
Education	129	0	0%	$113,466,800	$0	0%			
Industrial	51	0	0%	$41,867,400	$0	0%			
Institution	131	0	0%	$39,273,100	$0	0%			
Residential	17,051	0	0%	$1,624,319,100	$0	0%			
Unspecified/Unknown	186	0	0%	$944,400	$0	0%			
Total	**19,365**	**0**	**0%**	**$2,668,238,563**	**$0**	**0%**	**42,425**	**0**	**0%**

		Yes	No
1.	Do you know where your greatest damages may occur in your hazard areas?	X	
2.	Do you know whether your critical facilities will be operational after a hazard event?	X	
3.	Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4.	Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5.	Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6.	Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7.	Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in *Hazard	% in Hazard
Commercial/Service/Utilities	1,817	488	27%	$848,367,763	$138,514,234	16%			
Education	129	17	13%	$113,466,800	$69,075,020	61%			
Industrial	51	26	51%	$41,867,400	$9,591,100	23%			
Institution	131	36	27%	$39,273,100	$9,511,213	24%			
Residential	17,051	2,870	17%	$1,624,319,100	$161,270,093	10%			
Unspecified/Unknown	186	0	0%	$944,400	$0	0%			
Total	**19,365**	**3,437**	**18%**	**$2,668,238,563**	**$387,961,660**	**15%**	**42,425**	**10,933**	**26%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Hailstorm

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	0	0%	$848,367,763	$0	0%			
Education	129	0	0%	$113,466,800	$0	0%			
Industrial	51	0	0%	$41,867,400	$0	0%			
Institution	131	0	0%	$39,273,100	$0	0%			
Residential	17,051	0	0%	$1,624,319,100	$0	0%			
Unspecified/Unknown	186	0	0%	$944,400	$0	0%			
Total	**19,365**	**0**	**0%**	**$2,668,238,563**	**$0**	**0%**	**42,425**	**0**	**0%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Hazardous Materials (Hazmat) Incident

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	1,774	98%	$848,367,763	$846,539,963	100%			
Education	129	128	99%	$113,466,800	$103,513,200	91%			
Industrial	51	42	82%	$41,867,400	$41,306,000	99%			
Institution	131	120	92%	$39,273,100	$37,903,200	97%			
Residential	17,051	15,404	90%	$1,624,319,100	$1,459,606,633	90%			
Unspecified/Unknown	186	165	89%	$944,400	$830,600	88%			
Total	**19,365**	**17,633**	**91%**	**$2,668,238,563**	**$2,489,699,596**	**93%**	**42,425**	**40,970**	**97%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	501	28%	$848,367,763	$341,712,510	40%			
Education	129	35	27%	$113,466,800	$18,143,339	16%			
Industrial	51	13	25%	$41,867,400	$6,391,600	15%			
Institution	131	40	31%	$39,273,100	$10,364,740	26%			
Residential	17,051	6,502	38%	$1,624,319,100	$818,318,908	50%			
Unspecified/Unknown	186	70	38%	$944,400	$376,733	40%			
Total	**19,365**	**7,161**	**37%**	**$2,668,238,563**	**$1,195,307,831**	**45%**	**42,425**	**24,490**	**58%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Oil and Gas/Drilling Hazardous Incident

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	568	31%	$848,367,763	$292,618,863	34%			
Education	129	56	43%	$113,466,800	$20,025,300	18%			
Industrial	51	17	33%	$41,867,400	$5,167,900	12%			
Institution	131	35	27%	$39,273,100	$7,147,900	18%			
Residential	17,051	5,219	31%	$1,624,319,100	$575,391,800	35%			
Unspecified/Unknown	186	70	38%	$944,400	$460,200	49%			
Total	**19,365**	**5,965**	**31%**	**$2,668,238,563**	**$900,811,963**	**34%**	**42,425**	**15,125**	**36%**

		Yes	No
1.	Do you know where your greatest damages may occur in your hazard areas?	X	
2.	Do you know whether your critical facilities will be operational after a hazard event?	X	
3.	Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4.	Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5.	Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6.	Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7.	Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Terrorism

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	1,478	81%	$848,367,763	$754,376,293	89%			
Education	129	74	57%	$113,466,800	$93,488,200	82%			
Industrial	51	34	67%	$41,867,400	$36,699,500	88%			
Institution	131	101	77%	$39,273,100	$33,315,900	85%			
Residential	17,051	12,971	76%	$1,624,319,100	$1,198,369,540	74%			
Unspecified/Unknown	186	130	70%	$944,400	$496,000	53%			
Total	**19,365**	**14,788**	**76%**	**$2,668,238,563**	**$2,116,745,433**	**79%**	**42,425**	**35,171**	**83%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Thunderstorm (Severe)

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	1,817	100%	$848,367,763	$848,367,763	100%			
Education	129	129	100%	$113,466,800	$113,466,800	100%			
Industrial	51	51	100%	$41,867,400	$41,867,400	100%			
Institution	131	131	100%	$39,273,100	$39,273,100	100%			
Residential	17,051	17,051	100%	$1,624,319,100	$1,624,319,100	100%			
Unspecified/Unknown	186	186	100%	$944,400	$944,400	100%			
Total	**19,365**	**19,365**	**100%**	**$2,668,238,563**	**$2,668,238,563**	**100%**	**42,425**	**42,425**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Wildfire

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	464	26%	$848,367,763	$273,160,875	32%			
Education	129	1	1%	$113,466,800	$562,100	0%			
Industrial	51	20	39%	$41,867,400	$6,736,000	16%			
Institution	131	29	22%	$39,273,100	$5,174,900	13%			
Residential	17,051	4,485	26%	$1,624,319,100	$497,638,460	31%			
Unspecified/Unknown	186	63	34%	$944,400	$486,800	52%			
Total	**19,365**	**5,062**	**26%**	**$2,668,238,563**	**$783,759,135**	**29%**	**42,425**	**10,241**	**24%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Wind (Severe)

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	1,817	100%	$848,367,763	$848,367,763	100%			
Education	129	129	100%	$113,466,800	$113,466,800	100%			
Industrial	51	51	100%	$41,867,400	$41,867,400	100%			
Institution	131	131	100%	$39,273,100	$39,273,100	100%			
Residential	17,051	17,051	100%	$1,624,319,100	$1,624,319,100	100%			
Unspecified/Unknown	186	186	100%	$944,400	$944,400	100%			
Total	**19,365**	**19,365**	**100%**	**$2,668,238,563**	**$2,668,238,563**	**100%**	**42,425**	**42,425**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Winter Storm

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	1,817	1,817	100%	$848,367,763	$848,367,763	100%			
Education	129	129	100%	$113,466,800	$113,466,800	100%			
Industrial	51	51	100%	$41,867,400	$41,867,400	100%			
Institution	131	131	100%	$39,273,100	$39,273,100	100%			
Residential	17,051	17,051	100%	$1,624,319,100	$1,624,319,100	100%			
Unspecified/Unknown	186	186	100%	$944,400	$944,400	100%			
Total	**19,365**	**19,365**	**100%**	**$2,668,238,563**	**$2,668,238,563**	**100%**	**42,425**	**42,425**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Wetzel County

Hazard: Dam Failure

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	507	60%	$165,460,697	$135,150,697	82%			
Education	19	9	47%	$29,818,200	$13,501,900	45%			
Industrial	24	12	50%	$3,558,700	$1,459,400	41%			
Institution	122	44	36%	$15,070,700	$9,711,800	64%			
Residential	8,714	3,299	38%	$430,685,580	$196,300,530	46%			
Unspecified/Unknown	211	63	30%	$1,309,000	$386,500	30%			
Total	**9,940**	**3,934**	**40%**	**$645,902,877**	**$356,510,827**	**55%**	**14,442**	**6,850**	**47%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Earthquake

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	0	0%	$165,460,697	$0	0%			
Education	19	0	0%	$29,818,200	$0	0%			
Industrial	24	0	0%	$3,558,700	$0	0%			
Institution	122	0	0%	$15,070,700	$0	0%			
Residential	8,714	0	0%	$430,685,580	$0	0%			
Unspecified/Unknown	211	0	0%	$1,309,000	$0	0%			
Total	**9,940**	**0**	**0%**	**$645,902,877**	**$0**	**0%**	**14,442**	**0**	**0%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Flooding

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in *Hazard	% in Hazard
Commercial/Service/Utilities	850	255	30%	$165,460,697	$81,022,382	49%			
Education	19	8	42%	$29,818,200	$26,225,830	88%			
Industrial	24	30	125%	$3,558,700	$6,291,178	177%			
Institution	122	41	34%	$15,070,700	$5,941,060	39%			
Residential	8,714	1,613	19%	$430,685,580	$95,451,799	22%			
Unspecified/Unknown	211	0	0%	$1,309,000	$0	0%			
Total	**9,940**	**1,947**	**20%**	**$645,902,877**	**$214,932,249**	**33%**	**14,442**	**4,672**	**32%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Hailstorm

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	0	0%	$165,460,697	$0	0%			
Education	19	0	0%	$29,818,200	$0	0%			
Industrial	24	0	0%	$3,558,700	$0	0%			
Institution	122	0	0%	$15,070,700	$0	0%			
Residential	8,714	0	0%	$430,685,580	$0	0%			
Unspecified/Unknown	211	0	0%	$1,309,000	$0	0%			
Total	**9,940**	**0**	**0%**	**$645,902,877**	**$0**	**0%**	**14,442**	**0**	**0%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Hazardous Materials (Hazmat) Incident

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	784	92%	$165,460,697	$161,756,047	98%			
Education	19	18	95%	$29,818,200	$29,709,100	100%			
Industrial	24	17	71%	$3,558,700	$1,572,500	44%			
Institution	122	97	80%	$15,070,700	$13,903,900	92%			
Residential	8,714	6,897	79%	$430,685,580	$358,100,334	83%			
Unspecified/Unknown	211	160	76%	$1,309,000	$983,500	75%			
Total	**9,940**	**7,973**	**80%**	**$645,902,877**	**$566,025,381**	**88%**	**14,442**	**13,061**	**90%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Land Subsidence

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	0	0%	$165,460,697	$0	0%			
Education	19	0	0%	$29,818,200	$0	0%			
Industrial	24	0	0%	$3,558,700	$0	0%			
Institution	122	0	0%	$15,070,700	$0	0%			
Residential	8,714	13	0%	$430,685,580	$229,700	0%			
Unspecified/Unknown	211	0	0%	$1,309,000	$0	0%			
Total	**9,940**	**13**	**0%**	**$645,902,877**	**$229,700**	**0%**	**14,442**	**159**	**1%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Oil and Gas/Drilling Hazardous Incident

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	539	63%	$165,460,697	$134,712,386	81%			
Education	19	10	53%	$29,818,200	$13,715,600	46%			
Industrial	24	18	75%	$3,558,700	$2,843,500	80%			
Institution	122	67	55%	$15,070,700	$8,568,800	57%			
Residential	8,714	5,596	64%	$430,685,580	$286,273,380	66%			
Unspecified/Unknown	211	122	58%	$1,309,000	$799,800	61%			
Total	**9,940**	**6,352**	**64%**	**$645,902,877**	**$446,913,466**	**69%**	**14,442**	**10,286**	**71%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Terrorism

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	530	62%	$165,460,697	$132,710,937	80%			
Education	19	10	53%	$29,818,200	$14,063,200	47%			
Industrial	24	10	42%	$3,558,700	$1,459,400	41%			
Institution	122	47	39%	$15,070,700	$10,140,000	67%			
Residential	8,714	3,756	43%	$430,685,580	$223,405,858	52%			
Unspecified/Unknown	211	67	32%	$1,309,000	$396,567	30%			
Total	**9,940**	**4,420**	**44%**	**$645,902,877**	**$382,175,962**	**59%**	**14,442**	**7,984**	**55%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Thunderstorm (Severe)

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	850	100%	$165,460,697	$165,460,697	100%			
Education	19	19	100%	$29,818,200	$29,818,200	100%			
Industrial	24	24	100%	$3,558,700	$3,558,700	100%			
Institution	122	122	100%	$15,070,700	$15,070,700	100%			
Residential	8,714	8,714	100%	$430,685,580	$430,685,580	100%			
Unspecified/Unknown	211	211	100%	$1,309,000	$1,309,000	100%			
Total	**9,940**	**9,940**	**100%**	**$645,902,877**	**$645,902,877**	**100%**	**14,442**	**14,442**	**100%**

		Yes	No
1.	Do you know where your greatest damages may occur in your hazard areas?	X	
2.	Do you know whether your critical facilities will be operational after a hazard event?	X	
3.	Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4.	Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5.	Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6.	Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7.	Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Wildfire

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	211	25%	$165,460,697	$25,789,260	16%			
Education	19	6	32%	$29,818,200	$3,964,300	13%			
Industrial	24	16	67%	$3,558,700	$2,654,400	75%			
Institution	122	51	42%	$15,070,700	$3,193,500	21%			
Residential	8,714	4,236	49%	$430,685,580	$191,896,422	45%			
Unspecified/Unknown	211	107	51%	$1,309,000	$704,700	54%			
Total	**9,940**	**4,627**	**47%**	**$645,902,877**	**$228,202,582**	**35%**	**14,442**	**6,314**	**44%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Wind (Severe)

Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	850	100%	$165,460,697	$165,460,697	100%			
Education	19	19	100%	$29,818,200	$29,818,200	100%			
Industrial	24	24	100%	$3,558,700	$3,558,700	100%			
Institution	122	122	100%	$15,070,700	$15,070,700	100%			
Residential	8,714	8,714	100%	$430,685,580	$430,685,580	100%			
Unspecified/Unknown	211	211	100%	$1,309,000	$1,309,000	100%			
Total	**9,940**	**9,940**	**100%**	**$645,902,877**	**$645,902,877**	**100%**	**14,442**	**14,442**	**100%**

	Yes	No
1. Do you know where your greatest damages may occur in your hazard areas?	X	
2. Do you know whether your critical facilities will be operational after a hazard event?	X	
3. Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Hazard: Winter Storm

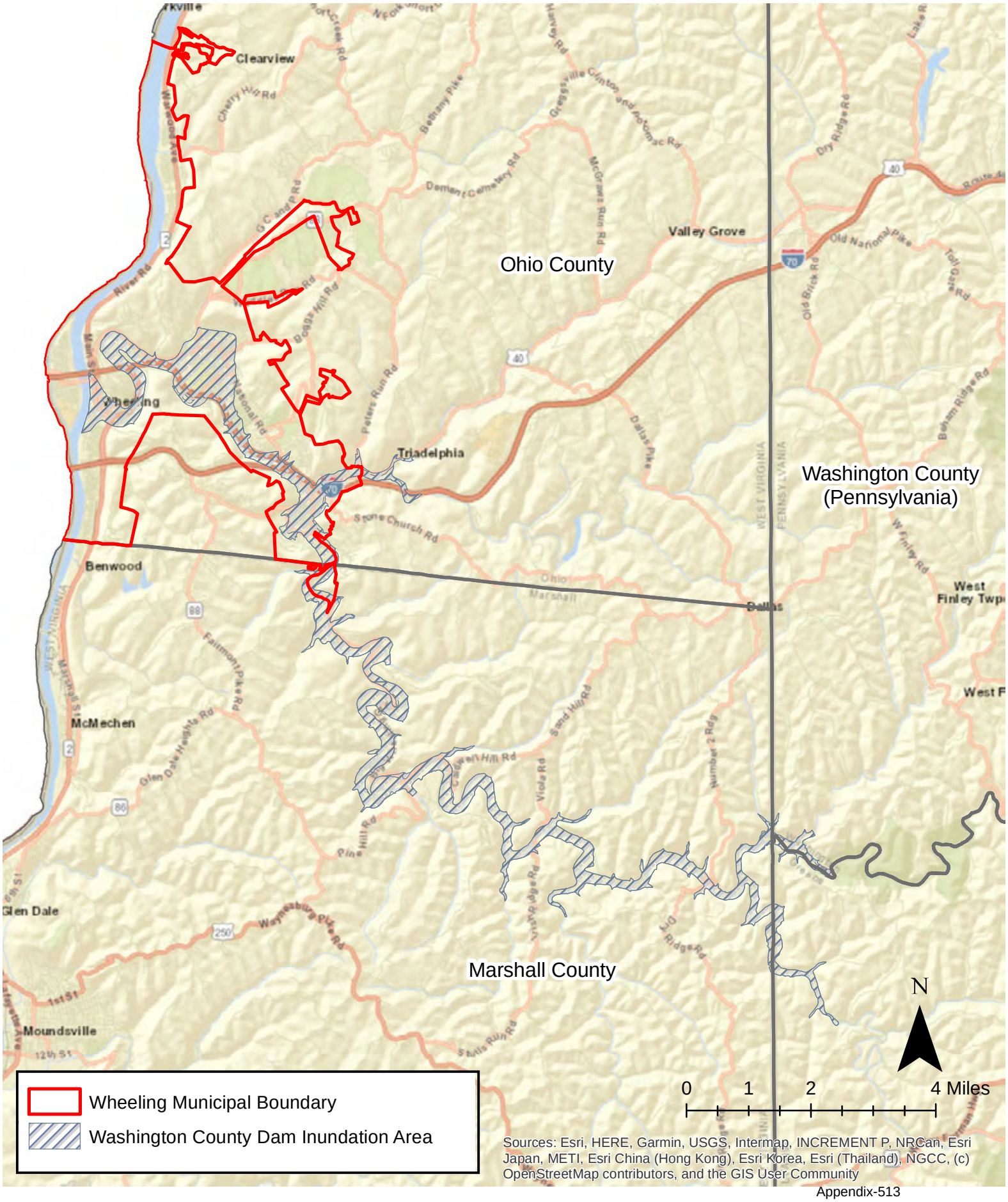
Type of Structure (Occupancy Class)	Number of Structures/Address Points			Value of Building(s) on Parcel			Number of People		
	# in Community	# in Hazard Area	% in Hazard	$ in Community	$ in Hazard Area	% in Hazard	# in Community	# in Hazard	% in Hazard
Commercial/Service/Utilities	850	850	100%	$165,460,697	$165,460,697	100%			
Education	19	19	100%	$29,818,200	$29,818,200	100%			
Industrial	24	24	100%	$3,558,700	$3,558,700	100%			
Institution	122	122	100%	$15,070,700	$15,070,700	100%			
Residential	8,714	8,714	100%	$430,685,580	$430,685,580	100%			
Unspecified/Unknown	211	211	100%	$1,309,000	$1,309,000	100%			
Total	**9,940**	**9,940**	**100%**	**$645,902,877**	**$645,902,877**	**100%**	**14,442**	**14,442**	**100%**

		Yes	No
1.	Do you know where your greatest damages may occur in your hazard areas?	X	
2.	Do you know whether your critical facilities will be operational after a hazard event?	X	
3.	Is there enough data to determine which assets are subject to the greatest potential damage?	X	
4.	Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	X	
5.	Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	X	
6.	Is there concern about a particular hazard because of its severity, repetitiveness or likelihood of occurrence?	X	
7.	Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		X

Appendix C

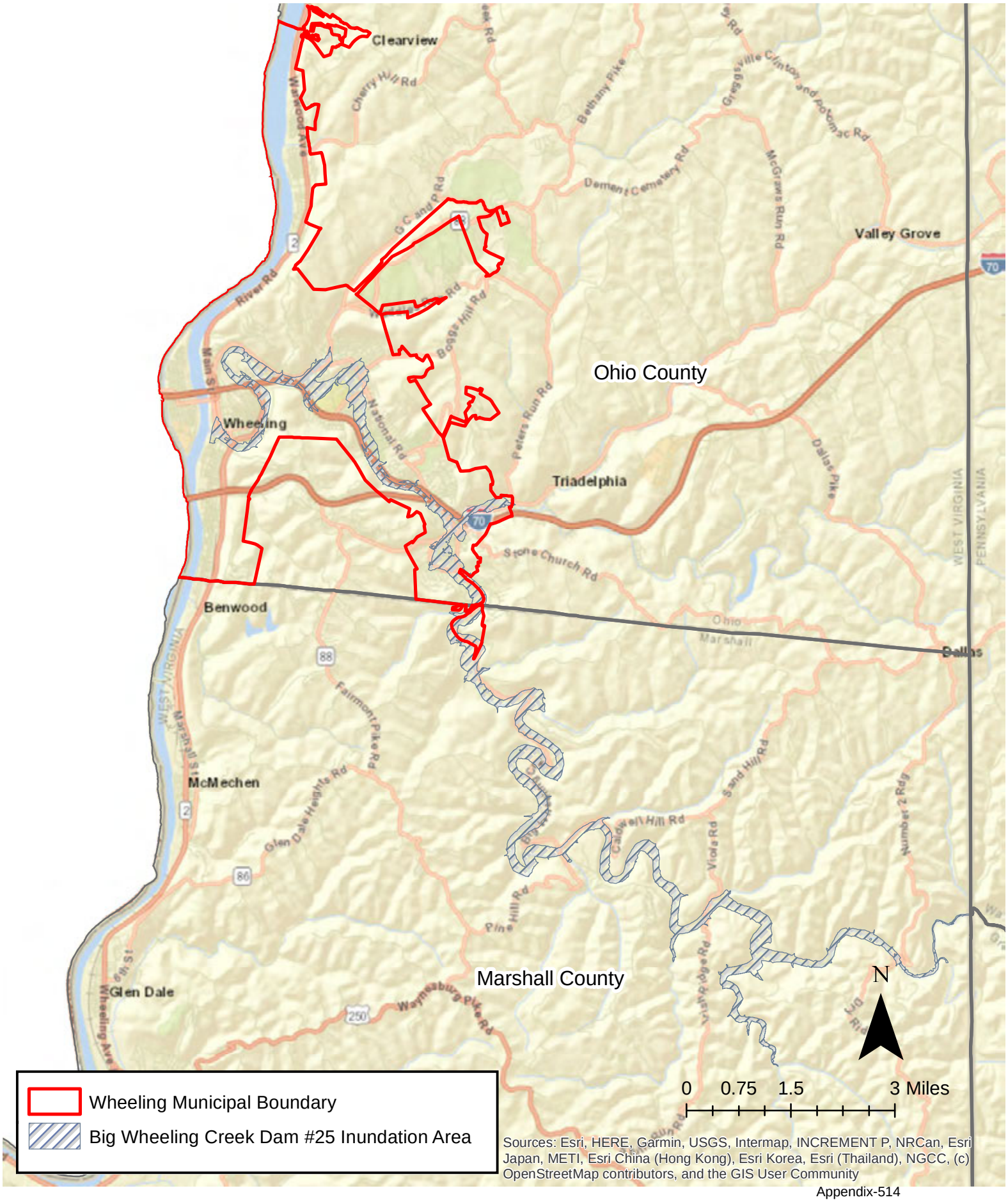
Inundation Maps for Dam Failure along Big Wheeling and Middle Wheeling Creeks

Washington County Dam Failure Inundation Area on Big Wheeling Creek

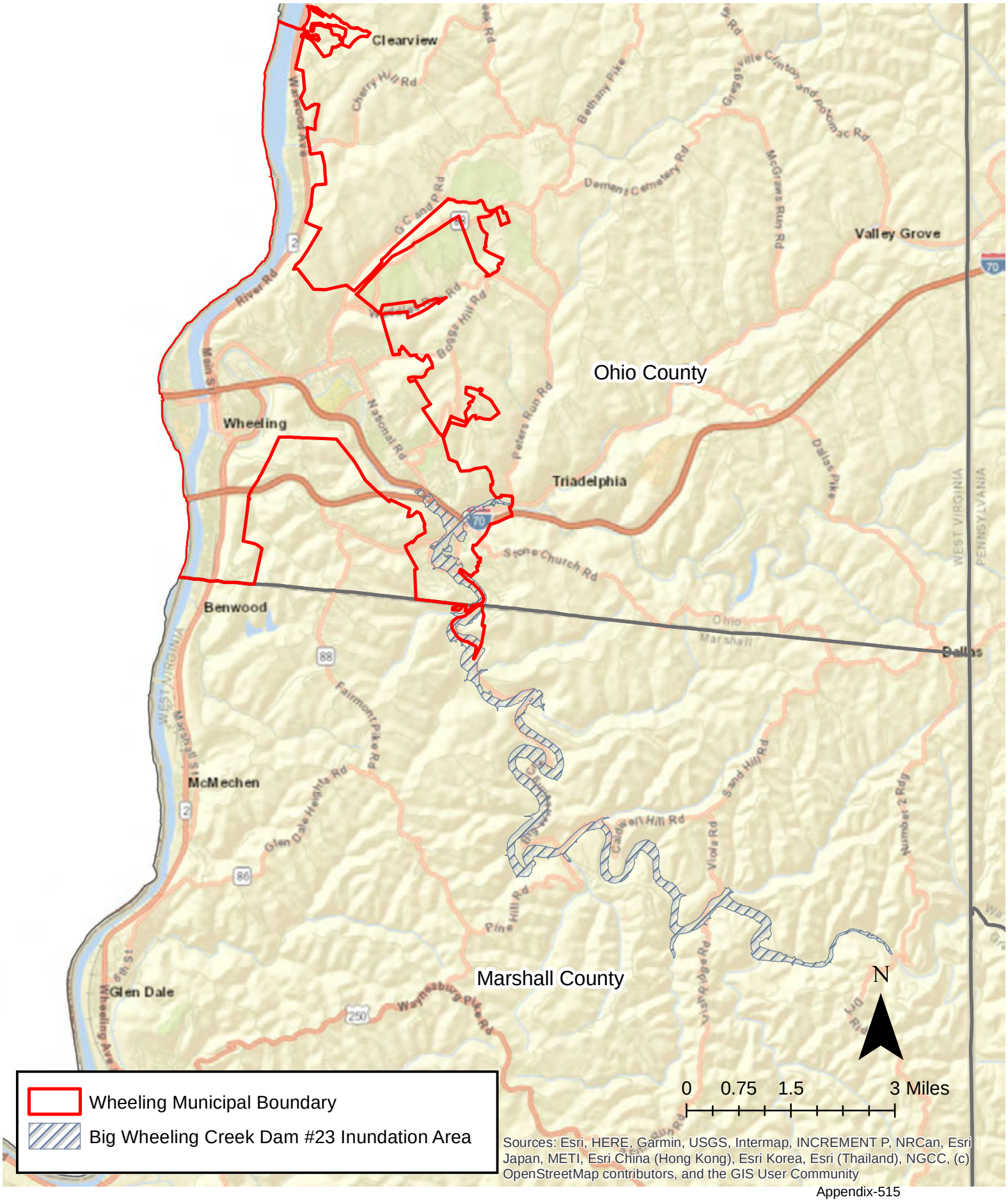


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Big Wheeling Creek Dam #25 Failure Inundation Area

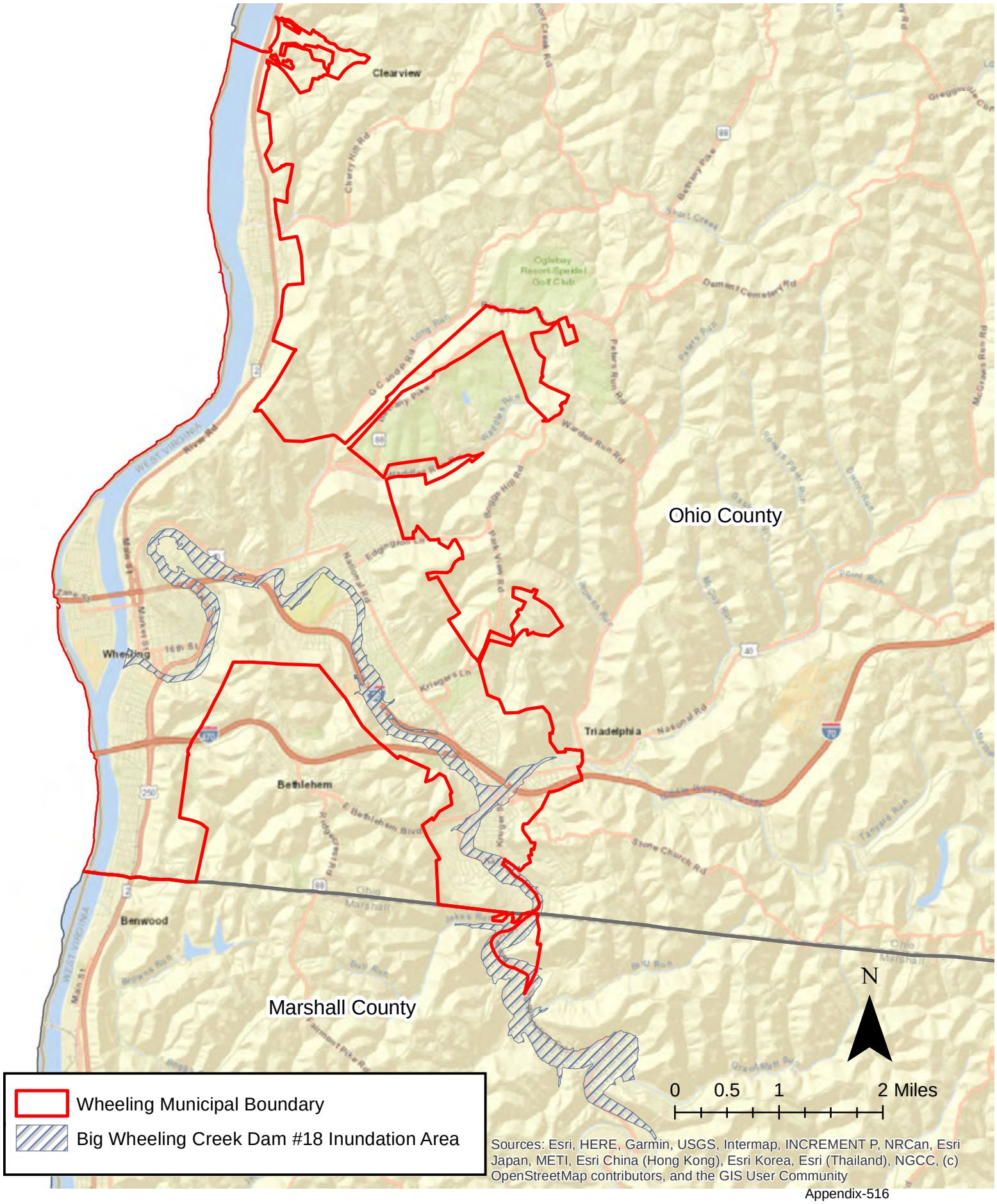


Big Wheeling Creek Dam #23 Failure Inundation Area

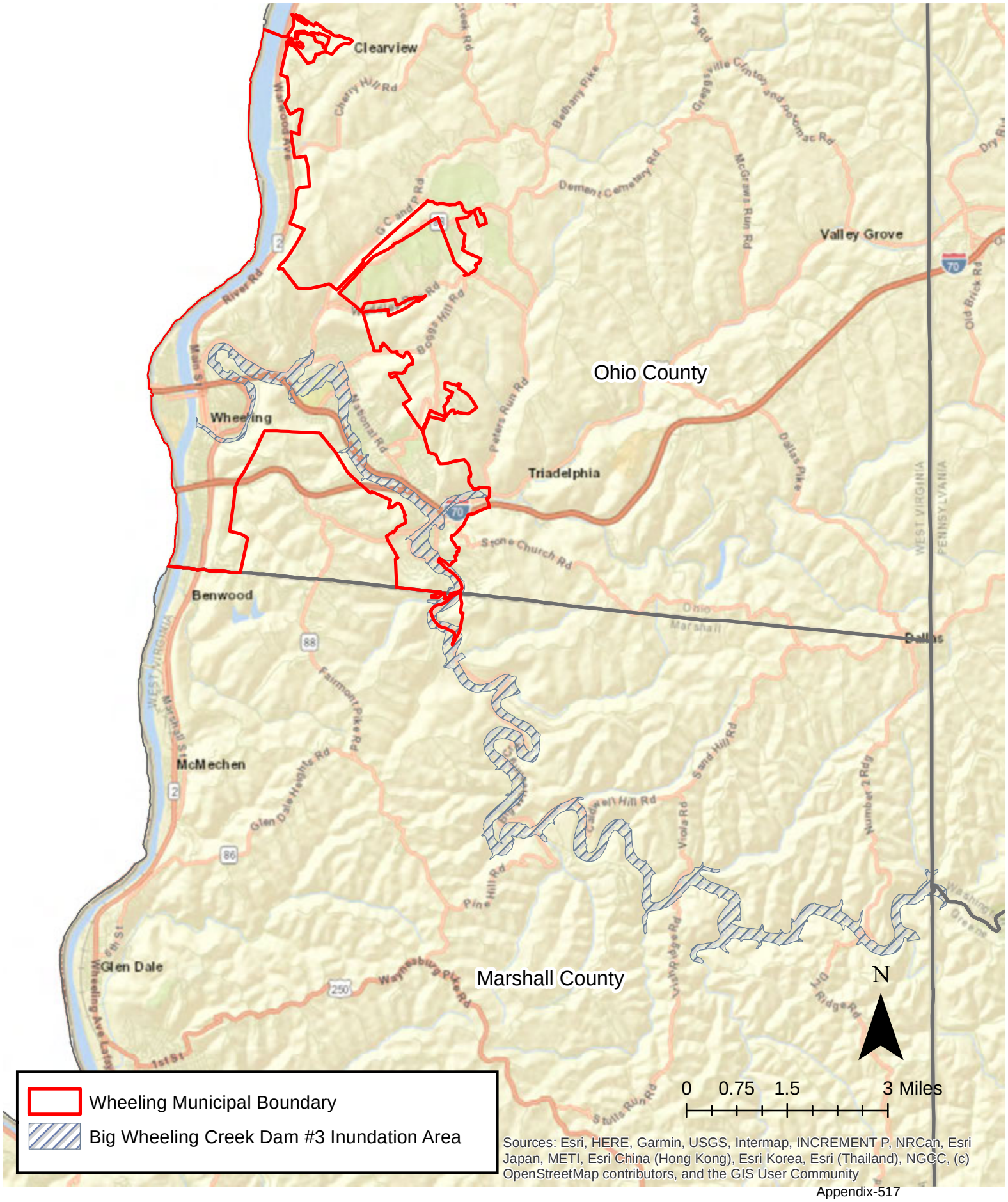


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

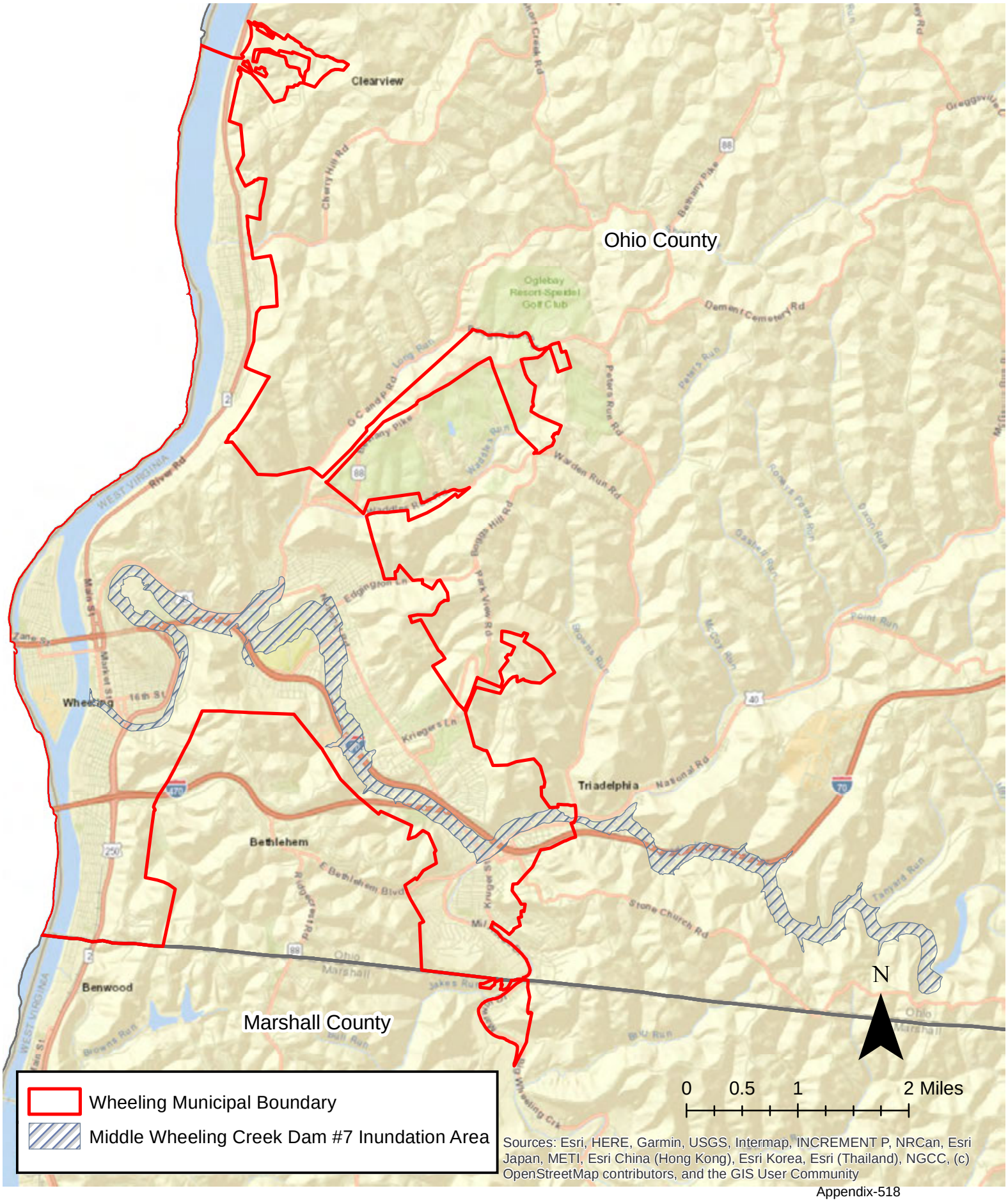
Big Wheeling Creek Dam #18 Failure Inundation Area



Big Wheeling Creek Dam #3 Failure Inundation Area



Middle Wheeling Creek Dam #7 Failure Inundation Area



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Appendix D

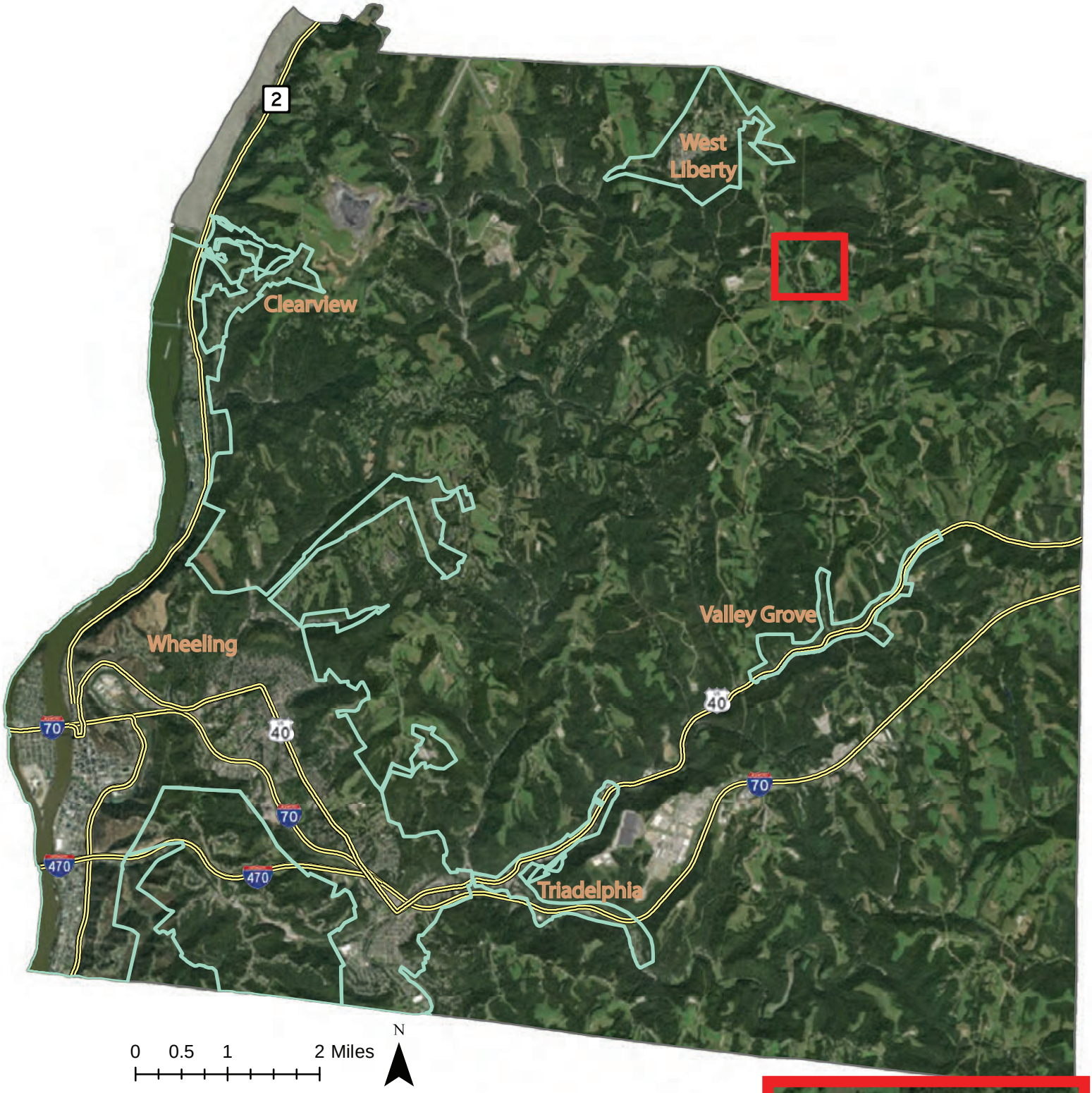
Replacement Structure Values

Replacement Structure Values for Region X

County	Commercial	Government	Education	Industrial	Institution	Residential	Total
Marshall	$44,604,201	$8,564,739	$64,159,700	$49,425,616	$2,661,200	$63,293,758	$232,709,214
Ohio	$132,890,934	$70,791,480	$8,702,160	$9,659,200	$11,352,638	$161,270,093	$394,666,505
Wetzel	$30,163,237	$26,225,830	$20,672,015	$6,291,178	$5,941,060	$95,451,799	$184,745,119
Total	$207,658,372	$105,582,049	$93,533,875	$65,375,994	$19,954,898	$320,015,650	$812,120,838

Appendix E

Sample Fracking Wastewater Pond Map



Fracking Waste Pond in Ohio County
Operator: SWN Production Company, LLC
Landowner where fracking pond is located: Clarence Farmer
Municipal Boundaries:

Appendix F

References

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West Virginia Code § 8.25

Appendix G

List of Acronyms

List of Acronyms

AEP	American Electric Power
CAD	Computer Aided Dispatch System
CDBG	Community Development Block Grant
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERT	Community Emergency Response Team
COOP	Continuity of Operations
DHHR	Department of Health and Human Resources
EMA	Emergency Management Agency
EMPG	Emergency Management Performance Grant
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
GIS	Geographical Information Systems
HMA	Hazard Mitigation Assistance
HMEP	Hazardous Materials Emergency Planning
HMGP	Hazard Mitigation Grant Program
LEPC	Local Emergency Planning Committee (LEPC)
NCDC	National Climate Data Center
NFIP	National Flood Insurance Program
NRCS	National Resources Conservation Services
PDM	Pre-Disaster Mitigation
PGA	Peak Ground Acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
PSD's	Public Service Districts
RESA	Regional Educational Service Agency
SERC	State Emergency Response Commission
SHSP	Strategic Highway Safety Plan
SNS	Strategic National Stockpile
USACE	U.S. Army Corps. of Engineers
USDA	U.S. Department of Agriculture
USGS	United States Geological Survey
WCOES	Wetzel County Office of Emergency Services
WOCEMA	Wheeling-Ohio County Emergency Management Agency
WVDEP	West Virginia Department of Environmental Protection
WVDNR	West Virginia Department of Natural Resources
WVDOH	West Virginia Division of Highways
WVDOT	West Virginia Department of Transportation
WVEMD	West Virginia Emergency Management Department
WVGES	West Virginia Geological and Economic Survey
WVIJDC	West Virginia Infrastructure and Jobs Development Council
WVOES	West Virginia Office of Emergency Services
WVU	West Virginia University

Appendix H

Recommendations for Future Plans

Recommendations for Future Improvements
Local Hazard Mitigation Plan
PDC 10
West Virginia – Region III

(Suggestions in 2017 Update for 2022 Update)

1. The committee should consider the use of social media sources to promote public awareness of the plan and seek public comments through these media sources.

   Belomar Staff and the steering committee members were asked to share the link to the public outreach survey on their private Facebook pages.

2. The planning committee should be increased to include other community organizations and interest, such as watershed organizations, business owners and other entities to provide additional information when the plan is updated next.

   In addition to the regular steering committee members, county health department officials attended steering committee meeting #2, which discussed the pandemic and the floodplain managers from several municipalities attended steering committee meeting #3, which discussed flooding.

3. The lead for the updated plan should attempt to gain more participation from the many stakeholders involved in the planning process. More specifically, attendance by jurisdictions should be improved at committee meetings.

   The steering committee for this plan update also consisted of the mayors (or city manager) from the largest city in each of the three counties in Region X. Individual meetings were held with each of the jurisdictions located in Region X.

4. The planning team needs to provide specific information on how each jurisdiction participated in the updating of the plan, as well as providing specific information on what they provided for the updated plan.

   Each jurisdiction participated in the plan update through a meeting with Belomar planning staff. During this meeting, three assessment forms were completed (which can be found in the Appendix); the WV Flood Tool was reviewed to examine if areas of frequent flooding are occurring outside floodplain determinations; what progress has been made on the previous plan's mitigation projects and what new projects should be listed in the 2022 update.

5. The updated plan should include any documentation of the committee meetings that occurred during the five years of the plan.

   The email invite, attendance sheet and the slides from the PowePoint presentations for each steering committee meeting are included in the Appendix.

6. The updated plan should include any data developed in the five years since the plan was last updated. Information could include lowest floor elevation of vulnerable structures, and other information that could be used in mitigation grant applications. This information could be kept as an appendix to the plan.

   Since the last plan update, Belomar staff have developed a database of maps that show where hydraulic fracturing (fracking) waste-water ponds are located throughout the three counites. These maps also include the name of the natural gas company that operates the well and pond, as well as the landowner who owns the land where the well and pond are located. A sample map is included in the Appendix. The database will be updated on a regular basis to include new sites where waste-water ponds have been constructed.

7. The updated plan needs to clearly document the status of any mitigation actions that have taken place during the five years of the plan. The committee should consider a narrative that celebrates the success of mitigation in the community.

   Status updates on mitigation projects from the last plan for each jurisdiction can be found in Chapter 5.0 Mitigation Strategies and Actions under the column "Progress Made Since 2017".

8. The updated plan should include information on specific projects that the jurisdictions would like to implement. This information could be placed in an appendix that includes specific information on structures. Due to its sensitive nature, this information would not be considered public information, but would be provided to State and Federal governments.

   The projects that jurisdictions would like to implement have been prioritized in Chapter 6.0 Implementation of Mitigation Strategies/Actions.

9. When the plan is updated next, a better integration with existing planning mechanisms needs to be included. For example, the County comprehensive plan should be analyzed to determine how this all Hazard Mitigation Plan can be incorporated into that existing planning mechanism and how the comprehensive plan can be incorporated into the local Hazard Mitigation Plan.

   Two jurisdictions in Region X have comprehensive plans and these were reviewed and considered when the HMP 2022 Update was developed. If a jurisdiction plans to complete a comprehensive or land use plan for their community in the future, they will be asked to review and incorporate the HMP 2022 update into their plan. Belomar planning staff and the County EMA directors can offer assistance to these jurisdictions when they are in the planning phase of their comprehensive or land use plan.

10. In the next plan update, the plan should include more in-depth information on how the NFIP is managed in each of the jurisdictions. Examples could include: process to ensure new construction is compliant with the local floodplain ordinances; how residents are assisted in mapping issues and how substantially damaged structures are managed to ensure compliance with the latest floodplain ordinance.

During the individual community meetings held with each jurisdiction, the NFIP_Guide_7.17.20 was completed. Copies of the completed forms are stored at Belomar's office and were also given to each jurisdiction. More training for floodplain managers would be helpful, especially for the smaller communities in Region X.

Recommendations for Future Improvements
Local Hazard Mitigation Plan
PDC 10
West Virginia – Region III

(Suggestions in 2022 Update for 2027 Update)

1) Obtain inundation data for all high hazard dams through Region X. For the 2022 update, this data was only available for six dams.

2) Hold all Open Houses in the lobby of the courthouse for each county, as this location appears to provide the best opportunity to engage with the public. If time permits, open houses could also be held in each county's public library.

3) Continue to give the local community the option to decide whether the plan should be completed by local planning staff at Belomar or an outside consultant.

4) Invite additional stakeholders.

5) Planning is an ongoing activity and requires ongoing funding commitment.

Appendix I

Multi-jurisdictional Summary Sheet

SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough / township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N) *=HHPD					
							A. Planning Process*	B. Hazard Identification & Risk Assessment*	C. Mitigation Strategy*	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
1	Benwood	City	Walter Yates	430 Main St. Benwood, WV 26031	tiffany@mcwv.net	304-232-2545	Y	Y	Y	Y		Y
2	Bethelem	Village	Aaron Snider	1 Community Park Road Bethlehem, WV 26003	mayorasnider@vob2015.comcastbiz.net	304-233-9527	Y	Y	Y	Y		Y
3	Cameron	City	Greg Galentine	44 Main St. Cameron, WV 26033	g.galentine@aol.com	304-686-2366	Y	Y	Y	Y		Y
4	Clearview	Village	Charles Reinacher	166 Clearview Ave. Clearview, WV 26003	Eb57@villageofclearview.comcastbiz.net	304-277-1177	Y	Y	Y	Y		Y
5	Glen Dale	City	David Blazer	402 Wheeling Ave. Glen Dale, WV 26038	glendalewv@aol.com	304-845-5511	Y	Y	Y	Y		Y
6	Hundred	Town	Charles Goff	PO Box 1100 Hundred, WV 26575	townofhundred@frontier.net	304-775-5131	Y	Y	Y	Y		Y
7	McMechen	City	David Goddard	325 Logan St. McMechen, WV 26040	mcmechenmayorgoddard@gmail.com	304-232-3140	Y	Y	Y	Y		Y

MULTI-JURISDICTION SUMMARY SHEET													
#	Jurisdiction Name	Jurisdiction Type (city/borough / township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N) *=HHPD					
							A. Planning Process*	B. Hazard Identification & Risk Assessment*	C. Mitigation Strategy*	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
8	Moundsville	City	Judy Hunt	800 6th St. Moundsville, WV 26041	jhunt@cityofmoundsville.com	304-845-6300	Y	Y	Y	Y		Y
9	New Martinsville	City	Sandy Hunt	191 Main St. New Martinsville, WV 26155	hunt1953@gmail.com	304-455-91200	Y	Y	Y	Y		Y
10	Paden City	City	Steve Kastigar	208 W. Main St. Paden City, WV 26159	No email available	304-337-8004	Y	Y	Y	Y		Y
11	Pine Grove	Town	John Haught	PO Box 286 Pine Grove, WV 26419	townofpinegrovewv@gmail.com	304-889-3351	Y	Y	Y	Y		Y
12	Smithfield	Town	Christina Shreveport	Mannington Run Rd. Smithfield, WV 26437	jcshreve@frontiernet.net	304-815-5564	Y	Y	Y	Y		Y
13	Triadelphia	Town	Ken Murphy	4453 National Rd. Triadelphia, WV 26059	townoftriadelphia@comcast.net	304-547-5000	Y	Y	Y	Y		Y
14	Valley Grove	Village	Chad Kleeh	3470 National Rd. Valley Grove, WV 26060	ckleeh54@comcast.net	304-547-1550	Y	Y	Y	Y		Y
15	West Liberty	Town	Mark Griffith	126 Main St. West Liberty, WV 26074	grffmrk556@aol.com	304-336-7410	Y	Y	Y	Y		Y
16	Wheeling	City	Glenn Elliott	1500 Chapline St. Wheeling, WV 26003	gelliott@wheelingwv.gov	304-234-3604	Y	Y	Y	Y		Y
17												
18												

Appendix J

Resolutions

AN ORDINANCE OF THE CITY OF BENWOOD ADOPTING THE UPDATED MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS natural, technological, and man-made hazards can affect the City of Benwood; and

WHEREAS significant economic losses could result from an occurrence of a natural, technological or man-made hazard events; and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses the City of Benwood incurs because of said hazard occurrences.

WHEREAS the City of Benwood has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio, and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan to further identify, define and characterize the hazards affecting Benwood as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS the City of Benwood has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Marshall County, Ohio, and Wetzel Counties in West Virginia.

WHEREAS the Benwood City Council joined the other communities within Marshall, Ohio, and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

BE IT HEREBY ORDAINED BY THE COUNCIL OF THE CITY OF BENWOOD:

SECTION ONE: The Council of the City of Benwood does hereby adopt the updated Marshall, Ohio, and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan. A copy of the updated plan being attached hereto as if fully set forth herein.

SECTION TWO: This Ordinance is effective from and after its date of passage.

Passed First Reading 12-13-2022

Passed Second Reading 12-27-2022

ATTEST

Benwood City Clerk

APPROVED

Walter W. Yates

Benwood Mayor

VILLAGE OF BETHLEHEM

(304) 233-9527
FAX (304) 231-2187

One Community Park Road P.O. Box 6339
Bethlehem, West Virginia 26003-0800

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the village; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Bethlehem incurs as a result of said hazard occurrences.

WHEREAS, the Village Council of Bethlehem has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Bethlehem as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Village Council of Bethlehem has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia.

WHEREAS, the Bethlehem Village Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the village does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 11/21/2022

ATTEST

Bethlehem Recorder

APPROVED

Bethlehem Mayor

CITY OF CAMERON

44 MAIN STREET, CAMERON, WEST VIRGINA 26033 PHONE: (304) 686-2366 FAX: (304) 686-4706

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the city; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Cameron incurs as a result of said hazard occurrences.

WHEREAS, the City Council of Cameron has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Cameron as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the City Council of Cameron has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained updated a minimum of five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Marshall County, West Virginia.

WHEREAS, the City Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of the regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 1-4-2023

ATTEST

Lisa Warren Asst.

CAMERON CITY CLERK

APPROVED

CAMERON MAYOR

Village of Clearview

166 Clearview Avenue
Wheeling, West Virginia 26003

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the village; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Clearview incurs as a result of said hazard occurrences.

WHEREAS, the Village Council of Clearview has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Clearview as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Village Council of Clearview has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia.

WHEREAS, the Clearview Village Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the village does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12-21-22

ATTEST

Kathy L Fry

Clearview Recorder

APPROVED

David McDonald

Clearview Mayor

City of Glen Dale Police Department
402 Wheeling Avenue • Glen Dale, West Virginia 26038
Phone: 304-845-5511 Fax: 304-845-5581
E-mail: gdpolice@aol.com

Edward C. Vogler, Police Chief

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the city; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Glen Dale incurs as a result of said hazard occurrences.

WHEREAS, the City Council of Glen Dale has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Glen Dale as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the City Council of Glen Dale has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Marshall County, West Virginia.

WHEREAS, the Glen Dale City Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 11/14/2022

ATTEST

Gerald R. Tremblay, Recorder

Glen Dale Recorder

APPROVED

Glen Dale Mayor

Town of hundred
58 FOUR SEASONS DRIVE., PO BOX 1100
304-775-5131/ FAX 304-775-2539
townofhundred@frontiernet.net WEBSITE- townofhundred.org

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the town; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Hundred incurs as a result of said hazard occurrences.

WHEREAS, the Town Council of Hundred has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Hundred as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Town Council of Hundred has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Wetzel County, West Virginia.

WHEREAS, the Hundred Town Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the town does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: Dec 5, 2022

ATTEST
Sherry A. Hayes
Hundred Recorder

APPROVED
Charles L Goff Jr
Hundred Mayor

MARSHALL COUNTY COMMISSION

SCOTT G. VARNER, PRESIDENT
JOHN D. GRUZINSKAS
MICHAEL T. FERRO

BETSY WILSON FROHNAPFEL, ADMINISTRATOR
JAN PEST, COUNTY CLERK

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the county; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Marshall County incurs as a result of said hazard occurrences.

WHEREAS, the Marshall County Commission has partnered with cities, towns, villages and county jurisdictions in Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Marshall County as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Marshall County Commission has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Marshall County, West Virginia.

WHEREAS, the Marshall County Commission has joined the other communities within Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance.

APPROVED
DEC 06 2022
BY COUNTY COMMISSION
MARSHALL COUNTY, WV

NOW, THEREFORE BE IT RESOLVED THAT, the Marshall County Commission does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12/6/2022

APPROVED

Marshall County Commission President

ATTEST

Marshall County Clerk

City of McMechen
325 Logan Street
McMechen Wv 26040
Phone:304-232-3140 Fax:304-232-3149

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the city; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses McMechen incurs as a result of said hazard occurrences.

WHEREAS, the City Council of McMechen has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting McMechen as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the City Council of McMechen has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be updated maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Marshall County, West Virginia.

WHEREAS, the McMechen City Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12/1/22

David

mcmechenmayorgoddard@gmail.com
cityclerkmcmechen304@gmail.com

David Goddard, Mayor

ATTEST

McMechen Recorder

APPROVED

McMechen Mayor

City of Moundsville

City Clerk 304-845-3394
City Manager 304-845-6300
Fire Department 304-845-2050

RESOLUTION

WHEREAS natural, technological, and man-made hazards can affect the city; and

WHEREAS significant structural, historical economic losses could result from an occurrence of a natural, technological, or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Moundsville incurs as a result of said hazard occurrences.

WHEREAS, the City Council of Moundsville has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio, and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Moundsville as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the City Council of Moundsville has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Marshall County, West Virginia.

WHEREAS the Moundsville City Council joined the other communities within Marshall, Ohio, and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio, and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 11-15-2022

ATTEST

Moundsville City Clerk

APPROVED

Moundsville Mayor

CITY OF NEW MARTINSVILLE
MUNICIPAL BUILDING
191 MAIN STREET
NEW MARTINSVILLE, WEST VIRGINIA 26155

(304) 455-9120
FAX (304) 455-9123

Where The Rail & River Meet

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the city; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses New Martinsville incurs as a result of said hazard occurrences.

WHEREAS, the City Council of New Martinsville has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting New Martinsville as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the City Council of New Martinsville has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Wetzel County, West Virginia.

WHEREAS, the New Martinsville City Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12/5/22

ATTEST

New Martinsville Recorder

APPROVED

New Martinsville Mayor

A RESOLUTION OF THE OHIO COUNTY COMMISSION

APPROVING THE 2022 HAZARD MITIGATION PLAN

WHEREAS, natural, technological and man-made hazards can affect the county; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Ohio County incurs as a result of said hazard occurrences.

WHEREAS, the Ohio County Commission has partnered with cities, towns, villages and county jurisdictions in Marshall and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Ohio County as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Ohio County Commission has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia.

WHEREAS, the Ohio County Commission has joined the other communities within Marshall and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW THEREFORE BE IT RESOLVED THAT, the Ohio County Commission does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12/20/2022

ATTEST

Randel A. Russell

Randel A. Russell, Administrator

APPROVED

Randy Wharton, President

City of Paden City

208 W. Main Street - P. O. Box 211
Paden City, WV 26159

This institution is an equal opportunity provider.

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the city; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Paden City incurs as a result of said hazard occurrences.

WHEREAS, the City Council of Paden City has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Paden City as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the City Council of Paden City has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Wetzel County, West Virginia.

WHEREAS, the Paden City City Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: March 6, 2023

ATTEST

Stacie Evans

Paden City Recorder

APPROVED

Paden City Mayor

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the town; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Pine Grove incurs as a result of said hazard occurrences.

WHEREAS, the Town Council of Pine Grove has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Pine Grove as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Town Council of Pine Grove has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Wetzel County, West Virginia.

WHEREAS, the Pine Grove Town Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the town does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12-13-22

ATTEST

Sandra Hurst

Pine Grove Recorder

APPROVED

Johnny Haught

Pine Grove Mayor

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the town; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Smithfield incurs as a result of said hazard occurrences.

WHEREAS, the Town Council of Smithfield has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Smithfield as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Town Council of Smithfield has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Wetzel County, West Virginia.

WHEREAS, the Smithfield Town Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the town does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 11/03/2022

ATTEST

Christina Shreve

Christina Shreve

Smithfield Recorder

APPROVED

Raymond Stout

Raymond Stout (Stand in Mayor)

Smithfield Mayor

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the town; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Triadelphia incurs as a result of said hazard occurrences.

WHEREAS, the Town Council of Triadelphia has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Triadelphia as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Town Council of Triadelphia has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia.

WHEREAS, the Triadelphia Town Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the town does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12-21-2022

ATTEST

Neal K Carr

Triadelphia Recorder

APPROVED

Kenneth L Murphy

Triadelphia Mayor



THE VILLAGE OF VALLEY GROVE

8566 National Road
PO Box 103, Valley Grove, WV 26060
Phone: 304-547-1550 Fax: 304-547-1223

INCORPORATED 1951

CHAD D. KLEEH, Mayor
MARY DARLENE PHILABAUM, Recorder/Treasurer

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the village; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Valley Grove incurs as a result of said hazard occurrences.

WHEREAS, the Village Council of Valley Grove has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Valley Grove as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Village Council of Valley Grove has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia.

WHEREAS, the Valley Grove Village Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,



THE VILLAGE OF VALLEY GROVE

8566 National Road
PO Box 103, Valley Grove, WV 26060
Phone: 304-547-1550 Fax: 304-547-1223

INCORPORATED 1951

CHAD D. KLEEH, Mayor
MARY DARLENE PHILABAUM, Recorder/Treasurer

RESOLUTION

NOW, THEREFORE BE IT RESOLVED THAT, the village does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 12-14-22

ATTEST

Mary D. Philabaum

Valley Grove Recorder

APPROVED

Chad Kleeh

Valley Grove Mayor

Town of West Liberty

1006 Van Meter Way
West Liberty, WV 26074
304.336.7410

Mark D. Griffith, Mayor townofwestliberty@hotmail.com 304.336.7410

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the town; and

WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and

WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses West Liberty incurs as a result of said hazard occurrences.

WHEREAS, the Town Council of West Liberty has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting West Liberty as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.

WHEREAS, the Town Council of West Liberty has a strong interest in reducing losses from future hazard occurrences: and

WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia.

WHEREAS, the West Liberty Town Council joined the other communities within Marshall, Ohio and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,

NOW, THEREFORE BE IT RESOLVED THAT, the town docs hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: 11/28/2022

ATTEST
Stephanie Bonar
West Liberty Recorder West Liberty

APPROVED
Mayor

WETZEL COUNTY COMMISSION

Lisa L. Heasley, President
Gregory A. Morris, Vice-President
Carla L. McBee, Commissioner
Jessica L. Davis, Admin. Assistant

Carol S. Haught, County Clerk

P.O. Box 156
New Martinsville, WV 26155

PH: (304) 455-8217
FAX: (304) 455-4450

RESOLUTION

WHEREAS, natural, technological and man-made hazards can affect the county; and
WHEREAS, significant structural, historical economic losses could result from an occurrence of a natural, technological or man-made hazard events: and
WHEREAS, undertaking mitigation projects during pre-disaster periods could decrease the total losses Wetzel County incurs as a result of said hazard occurrences.
WHEREAS, the Wetzel County Commission has partnered with cities, towns, villages and county jurisdictions in Marshall and Ohio Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan in an effort to further identify, define and characterize the hazards affecting Wetzel County as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability.
WHEREAS, the Wetzel County Commission has a strong interest in reducing losses from future hazard occurrences: and
WHEREAS, the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be updated a minimum of every five (5) years; and
WHEREAS, a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Wetzel County, West Virginia.
WHEREAS, the Wetzel County Commission has joined the other communities within Marshall and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update, and will continue to participate in its maintenance,
NOW, THEREFORE BE IT RESOLVED THAT, the Wetzel County Commission does hereby adopt the updated Marshall, Ohio and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

DATE: Nov. 22, 2022

ATTEST

Carol S. Haught

Wetzel County ~~Recorder~~
Clerk

APPROVED

Linda L Heasley

Wetzel County President

9/12

CITY OF WHEELING

CITY COUNTY BUILDING, 1500 CHAPLINE STREET
WHEELING, WEST VIRGINIA 26003

Glenn F. Elliott, Jr.
Mayor

A RESOLUTION OF THE COUNCIL OF THE CITY OF WHEELING ADOPTING THE UPDATED MARSHALL, OHIO, AND WETZEL COUNTIES MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS natural, technological, and man-made hazards can affect the city; and

WHEREAS significant structural, historical economic losses could result from an occurrence of a natural, technological, or man-made hazard event; and

WHEREAS undertaking mitigation projects during pre-disaster periods could decrease the total losses Wheeling incurs as a result of said hazard occurrences; and

WHEREAS, the City of Wheeling has partnered with other cities, towns, villages and county jurisdictions in Marshall, Ohio, and Wetzel Counties to regionalize its Multi-Jurisdictional Hazard Mitigation Plan to further identify, define and characterize the hazards affecting Wheeling as well as to continue identifying and prioritizing projects that could lessen hazard vulnerability; and

WHEREAS, the City of Wheeling has a strong interest in reducing losses from future hazard occurrences; and

WHEREAS the hazard mitigation plan is a federal and state requirement to maintain eligibility for hazard mitigation funding, and by that requirement, must be maintained and updated a minimum of every five (5) years; and

WHEREAS a cooperative effort is an efficient way to plan for and reduce hazard susceptibility in all government jurisdictions in Ohio County, West Virginia; and

WHEREAS the City of Wheeling joined the other communities within Marshall, Ohio, and Wetzel County in the completion of this regionalized Hazard Mitigation Plan 2022 Update and will continue to participate in its maintenance.

NOW, THEREFORE BE IT RESOLVED THAT, the city does hereby adopt the updated Marshall, Ohio, and Wetzel Counties Multi-Jurisdictional Hazard Mitigation Plan.

ADOPTED this sixth day of December 2022

Glenn F. Elliott Jr., Mayor

Office 304-234-6401 Fax 304-234-6419 gelliott@wheelingwv.gov