



Venango County 2020 Hazard Mitigation Plan Update

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Venango County Hazard Mitigation Plan

Certification of Annual Review Meetings

The Venango County Hazard Mitigation Local Planning Team has reviewed this Hazard Mitigation Plan. See Section 8 of the Venango County 2020 Hazard Mitigation Plan for further details regarding this form. The Director of the HMPT hereby certifies the review.

YEAR	DATE OF MEETING	PUBLIC OUTREACH ADDRESSED?*	SIGNATURE
2021			
2022			
2023			
2024			
2025			
2026			
2027			

*Confirm yes here annually and describe on record of changes page.

Venango County Hazard Mitigation Plan

Record of Changes

DATE	DESCRIPTION OF CHANGE MADE, MITIGATION ACTION COMPLETED, OR PUBLIC OUTREACH PERFORMED	CHANGE MADE BY (PRINT NAME)	CHANGE MADE BY (SIGNATURE)

REMINDER: *Please attach all associated meeting agendas, sign-in sheets, handouts, and minutes.*

Table of Contents

1 Introduction..... 8

1.1 Background..... 8

1.2 Scope..... 9

1.3 Organization of the Plan..... 9

1.4 Purpose..... 9

1.5 Authority and Reference 9

2 Community Profile..... 11

2.1 Geography and Environment..... 11

2.2 Community Facts..... 14

2.3 Population and Demographics 16

2.4 Land Use and Development..... 21

2.5 Data Sources and Limitations..... 25

3 Planning Process 29

3.1 Update Process and Participation Summary..... 29

3.2 The Planning Team..... 30

3.3 Meetings and Documentation..... 32

3.4 Public & Stakeholder Participation 34

3.5 Multi-Jurisdictional Planning..... 36

4 Risk Assessment..... 40

4.1 Update Process Summary 40

4.2 Hazard Identification 41

4.2.2 Summary of Hazards..... 42

4.3 Hazard Profiles and Vulnerability Analysis 46

4.3.1 Drought..... 46

4.3.1.1 Location and Extent 46

4.3.1.2 Range of Magnitude..... 47

4.3.1.3 Past Occurrence 52

4.3.1.4 Future Occurrence 53

4.3.1.5 Vulnerability Assessment..... 55

4.3.2 Earthquakes 56

4.3.2.1 Location and Extent 56

4.3.2.2 Range of Magnitude..... 58

4.3.2.3 Past Occurrence 60

4.3.2.4 Future Occurrence 62

4.3.2.5 Vulnerability Assessment..... 62

4.3.3	Flood, Flash Flood, Ice Jam.....	62
4.3.3.1	Location and Extent	62
4.3.3.2	Range of Magnitude.....	66
4.3.3.3	Past Occurrence	68
4.3.3.4	Future Occurrence	77
4.3.3.5	Vulnerability Assessment.....	77
4.3.4	Landslides.....	82
4.3.4.1	Location and Extent	82
4.3.4.2	Range of Magnitude.....	84
4.3.4.3	Past Occurrence	84
4.3.4.4	Future Occurrence	85
4.3.4.5	Vulnerability Assessment.....	85
4.3.5	Pandemic and Infectious Disease.....	89
4.3.5.1	Location and Extent	89
4.3.5.2	Range of Magnitude.....	90
4.3.5.3	Past Occurrence	91
4.3.5.4	Future Occurrence	93
4.3.5.5	Vulnerability Assessment.....	93
4.3.6	Radon Exposure.....	94
4.3.6.1	Location and Extent	94
4.3.6.2	Range of Magnitude.....	100
4.3.6.3	Past Occurrence	101
4.3.6.4	Future Occurrence	103
4.3.6.5	Vulnerability Assessment.....	103
4.3.7	Tornado, Windstorm.....	103
4.3.7.1	Location and Extent	103
4.3.7.2	Range of Magnitude.....	104
4.3.7.3	Past Occurrence	106
4.3.7.4	Future Occurrence	117
4.3.7.5	Vulnerability Assessment.....	117
4.3.8	Winter Storm.....	119
4.3.8.1	Location and Extent	119
4.3.8.2	Range of Magnitude.....	121
4.3.8.3	Past Occurrence	121
4.3.8.4	Future Occurrence	125
4.3.8.5	Vulnerability Assessment.....	126
4.3.9	Wildfire.....	126
4.3.9.1	Location and Extent	126
4.3.9.2	Range of Magnitude.....	127
4.3.9.3	Past Occurrence	128
4.3.9.4	Future Occurrence	131
4.3.9.5	Vulnerability Assessment.....	131
4.3.10	Hurricane, Tropical Storm, and Nor'easter.....	138
4.3.10.1	Location and Extent	138
4.3.10.2	Range of Magnitude.....	138

4.3.10.3	Past Occurrence	138
4.3.10.4	Future Occurrence	139
4.3.10.5	Vulnerability Assessment	139
4.3.11	Environmental Hazards	140
4.3.11.1	Location and Extent	140
4.3.11.2	Range of Magnitude	148
4.3.11.3	Past Occurrence	150
4.3.11.4	Future Occurrence	152
4.3.11.5	Vulnerability Assessment	152
4.3.12	Dam Failure	161
4.4	Hazard Vulnerability Summary	161
4.4.1	Methodology	161
4.4.2	Ranking Results	162
4.4.3	Potential Loss Estimates	165
4.4.4	Future Development and Vulnerability	170
5	Capability Assessment	174
5.1	Update Process Summary	174
5.2	Capability Assessment Findings	174
5.2.1	Planning and Regulatory Capability	175
5.2.1.1	Plans and Regulations	175
5.2.1.2	Emergency Management	181
5.2.1.3	Participation in the NFIP and the Community Rating System	182
5.2.2	Administrative and Technical Capability	184
5.2.3	Community Political Capability	186
5.2.4	Financial Capability	186
5.2.5	Education and Outreach Capability	197
5.2.6	Plan Integration	200
6	Mitigation Strategy	207
6.1	Update Process Summary	207
6.1.1	<i>Mitigation Goals and Objectives Review</i>	<i>207</i>
6.1.2	<i>Mitigation Progress and Successes</i>	<i>207</i>
6.2	Mitigation Goals and Objectives	221
6.3	Identification and Analysis of Mitigation Techniques	222
6.4	Mitigation Action Plan	223
7	Plan Maintenance	245
7.1	Update Process Summary	245
7.2	Monitoring, Evaluating and Updating the Plan	245
7.3	Continued Public Involvement	246

8	Plan Adoption	247
9	Appendices	251

1 Introduction

1.1 Background

Across the United States, natural and human-made disasters have led to increasing levels of deaths, injuries, property damage, and interruption of business and government services. The time, money, and effort needed to recover from these disasters exhausts resources, diverting attention from important public programs and private agendas. Since 1955 there have been a combined 62 Presidential Disaster Declarations and Emergency Declarations in Pennsylvania, 32 of which have included Venango County. The emergency management community, citizens, elected officials and other stakeholders in Venango County, Pennsylvania recognize the impact of disasters on their community and support proactive efforts needed to reduce the impact of natural and human-made hazards.

Hazard mitigation describes sustained actions taken to prevent or minimize long-term risks to life and property from hazards and create successive benefits over time. Pre-disaster mitigation actions are taken in advance of a hazard event and are essential to breaking the disaster cycle of damage, reconstruction and repeated damage. With careful selection, successful mitigation actions are cost-effective means of reducing risk of loss over the long-term.

Hazard mitigation planning has the potential to produce long-term and recurring benefits by breaking the cycle of loss. A core assumption of mitigation is that current dollars invested in mitigation practices will significantly reduce the demand for future dollars by lessening the amount needed for recovery, repair, and reconstruction. These mitigation practices will also enable local residents, businesses, and industries to re-establish themselves in the wake of a disaster, getting the economy back on track sooner and with less interruption.

2015 Hazard Mitigation Plan Update

The 2015 Plan Update consisted of a review of the 2010 Plan, which was used as a base document. The Plan Update involved the review of data on potential hazards and reprioritization of these hazards in terms of frequency and severity. The Plan Update included a review of mitigation actions, which were revised, deleted, or modified to address the high priority hazards as well as a Plan Maintenance section. The 2015 HMP Update achieved 70% municipal participation during the planning process.

2020 Hazard Mitigation Plan Update

The Venango County Hazard Mitigation Plan Steering Committee (HMPSC) and Hazard Mitigation Planning Team (HMPT), government leaders from Venango County, in cooperation with the elected officials of the County and its municipalities, have prepared this Hazard Mitigation Plan (HMP) update. The Plan is the result of work by citizens of the County to develop a pre-disaster multi-hazard mitigation plan that will not only guide the County towards greater disaster resistance but will also respect the character and needs of the community.

The Plan Update involves the review of data on potential hazards and reprioritization of these hazards in terms of frequency and severity. The Plan Update includes a review of mitigation actions, which were revised, deleted, or modified to address the high priority hazards as well as a Plan Maintenance section.

1.2 Scope

The Venango County 2020 Hazard Mitigation Plan update has been prepared to meet requirements set forth by the Federal Emergency Management Agency (FEMA) and Pennsylvania Emergency Management Agency (PEMA) in order for the County to be eligible for funding and technical assistance from state and federal hazard mitigation programs. It will be updated and maintained to address both natural and human-made hazards determined to be of significant risk to the County and/or its local municipalities. Updates will take place at a minimum every five years, but they will also take place following significant disaster events.

1.3 Organization of the Plan

The 2020 Hazard Mitigation Plan Update comprises seven chapters. Chapter 1 includes the prerequisites of the Plan including letters of adoption by the County Commission and the individual municipalities. Chapter 2 introduces the plan update process and includes an overview of the socio-economic and demographic characteristics. Chapter 3 discusses the planning process. Chapter 4 comprises the hazard identification and risk assessment and examines vulnerability and the potential losses from the top priority hazards. Chapter 4 also includes a historic profile of hazard types and associated losses, and a vulnerability assessment, which analyzes the potential for future damages due to the hazards identified. Chapter 5 contains a capability assessment including a review of existing plans and ordinances from the counties and municipalities. Chapter 6 discusses the mitigation strategy including updated mitigation goals and objectives, mitigation actions, and the method for prioritization and implementation of mitigation actions. Chapter 7 outlines how Venango County and its municipalities will implement the Plan once it is adopted and ways to monitor progress and ensure continued public involvement.

1.4 Purpose

The purpose of this All-Hazard Mitigation Plan Update is:

- To protect life, safety, and property by reducing the potential for future damages and economic losses that result from natural hazards;
- To qualify for additional grant funding, in both the pre-disaster and the post-disaster environment;
- To qualify for additional credit under the Community Ratings System (CRS);
- To speed recovery and redevelopment following future disaster events;
- To demonstrate a firm local commitment to hazard mitigation principles; and
- To comply with both state and federal legislative requirements for local hazard mitigation plans

1.5 Authority and Reference

Authority for this plan originates from the following federal sources:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C., Section 322, as amended;
- CFR, Title 44, Parts 201 and 206;
- Disaster Mitigation Act of 2000, Public Law 106-390, as amended; and
- National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 *et seq.*

Authority for this plan originates from the following Commonwealth of Pennsylvania sources:

- Pennsylvania Emergency Management Services Code. Title 35, Pa C.S. Section 101;
- Pennsylvania Municipalities Planning Code of 1968, Act 247 as reenacted and amended by Act 170 of 1988; and
- Pennsylvania Stormwater Management Act of October 4, 1978. P.L. 864, No. 167.

The following FEMA guides and reference documents were used to prepare this document:

- FEMA 386-1: *Getting Started*. September 2002.
- FEMA 386-2: *Understanding Your Risks: Identifying Hazards and Estimating Losses*. August 2001.
- FEMA 386-3: *Developing the Mitigation Plan*. April 2003.
- FEMA 386-4: *Bringing the Plan to Life*. August 2003.
- FEMA 386-5: *Using Benefit-Cost Review in Mitigation Planning*. May 2007.
- FEMA 386-6: *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning*. May 2005.
- FEMA 386-7: *Integrating Manmade Hazards into Mitigation Planning*. September 2003.
- FEMA 386-8: *Multijurisdictional Mitigation Planning*. August 2006.
- FEMA 386-9: *Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects*. August 2008.
- FEMA: *Local Mitigation Planning Handbook*. March 2013.
- FEMA: *Local Mitigation Plan Review Guide*. October 2011.
- FEMA: *National Fire Incident Reporting System 5.0: Complete Reference Guide*. January 2008.
- FEMA: *Hazard Mitigation Assistance Unified Guidance*. February 2015.
- FEMA: *Integrating Hazard Mitigation into Local Planning: Case Studies and Tools for Community Officials*. March 2013
- FEMA: *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*. January 2013.

The following Pennsylvania Emergency Management Agency (PEMA) guides and reference documents were used to prepare this document:

- PEMA: *Hazard Mitigation Planning Made Easy!*
- PEMA Mitigation Ideas: *Potential Mitigation Measures by Hazard Type; A Mitigation Planning Tool for Communities*. March 2009.
- PEMA: *Pennsylvania's Hazard Mitigation Planning Standard Operating Guide*. August 2020.

The following additional guidance document produced by the National Fire Protection Association (NFPA) was used to update this plan:

- NFPA 1600: *Standard on Disaster/Emergency Management and Business Continuity Programs*. 2007

2 Community Profile

2.1 *Geography and Environment*

Venango County is situated on the Allegheny Plateau in the northwestern section of Pennsylvania, about halfway between Erie and Pittsburgh. While it is primarily located in the Appalachian Plateau region, small portions of the northwestern and western land mass are glaciated. Venango County has a land area of 675 square miles of land (U.S. Census Bureau, 2015).

The county encompasses 31 municipalities including 9 boroughs, 20 townships, and the cities of Oil City and Franklin, the County Seat. The County's topography is steeply rolling with drainage provided by the Allegheny River and French Creek watersheds. The land is composed of mountainous areas and steep sandstone ridges with deep, irregular patterned branching streams. Venango County is bordered by Crawford, Warren, Forest, Clarion, Armstrong, Butler, and Mercer Counties. (See Figure 2.1-1)

The major watersheds are: Slippery Rock Creek, Allegheny River, French Creek, Oil Creek, Sandy Creek, East Sandy Creek, Wolf Creek and Sugar Creek watersheds (see Figure 2.1-2). Each of these basins drain surface water into the major streams and rivers running through the County. The major sources of surface water in Venango County are the Allegheny River, Oil Creek, French Creek, Sandy Creek and East Sandy Creek. There are only two major impoundments located in Venango County. One is Justus Lake, a 144-acre lake situated in the heart of Two-Mile Run County Park in Oakland Township and Sugarcreek Borough. The other, Kahle Lake, is located in both Richland Township, Venango County and Salem Township, Clarion County and is comprised of about 250 acres.

Average highs for the summer linger near 80°F while the maximum temperatures experienced in the summer are usually around 87°F. Cloudiness is prevalent in winter as a result of the "lake effect" of cold air passing over the relatively warm Lake Erie, picking up moisture and resulting in cloud formation. The County's prevailing January temperatures average about 27°F while the minimum temperatures experienced then dip to 10°F (Weather Underground, 2015). There are about 130 frost-free days during the year in Venango County. On the average, 140 days of the year will experience some form of precipitation. Annual rainfall is about 40 inches. The average annual snowfall amounts to about 50 inches a year. The first measurable snowfall typically occurs in late November or early December. Most storms result in snowfalls of 10 inches or less. After March, the chance of snow diminishes rapidly.

Venango County is also characterized by the abundance of forest land within its borders. The county is situated in the Appalachian Oak Forest, a tall broadleaf deciduous forest characterized by white oak and northern red oak, as the dominant trees. Other species that are native to the area include sugar maple, sweet birch, bitternut hickory, beech, tulip poplar, white pine, scarlet oak, scrub oak, chestnut oak, and black oak. Major park lands include Oil Creek State Park and Two Mile Run Park.

Figure 2.1-1 Venango County Base Map

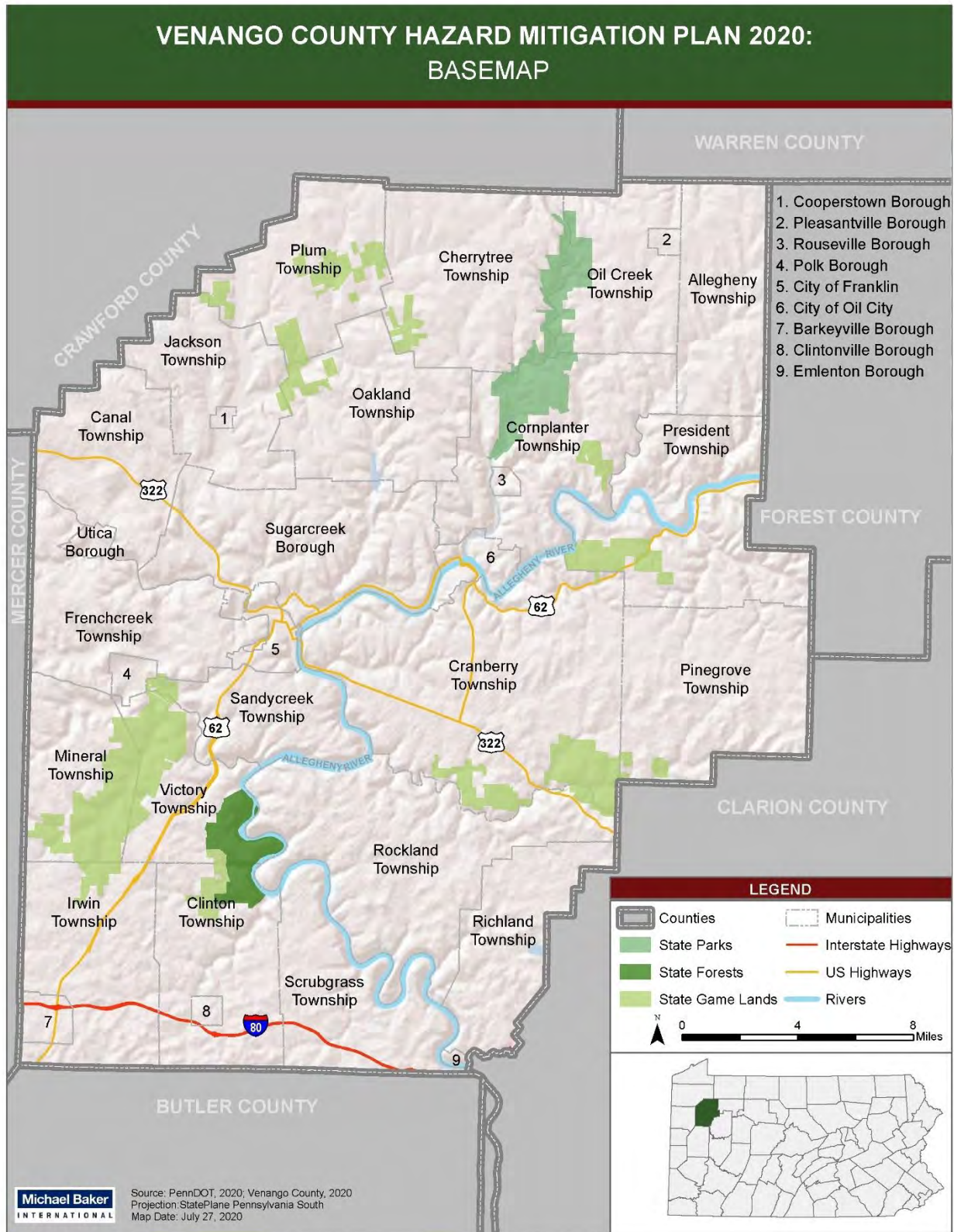
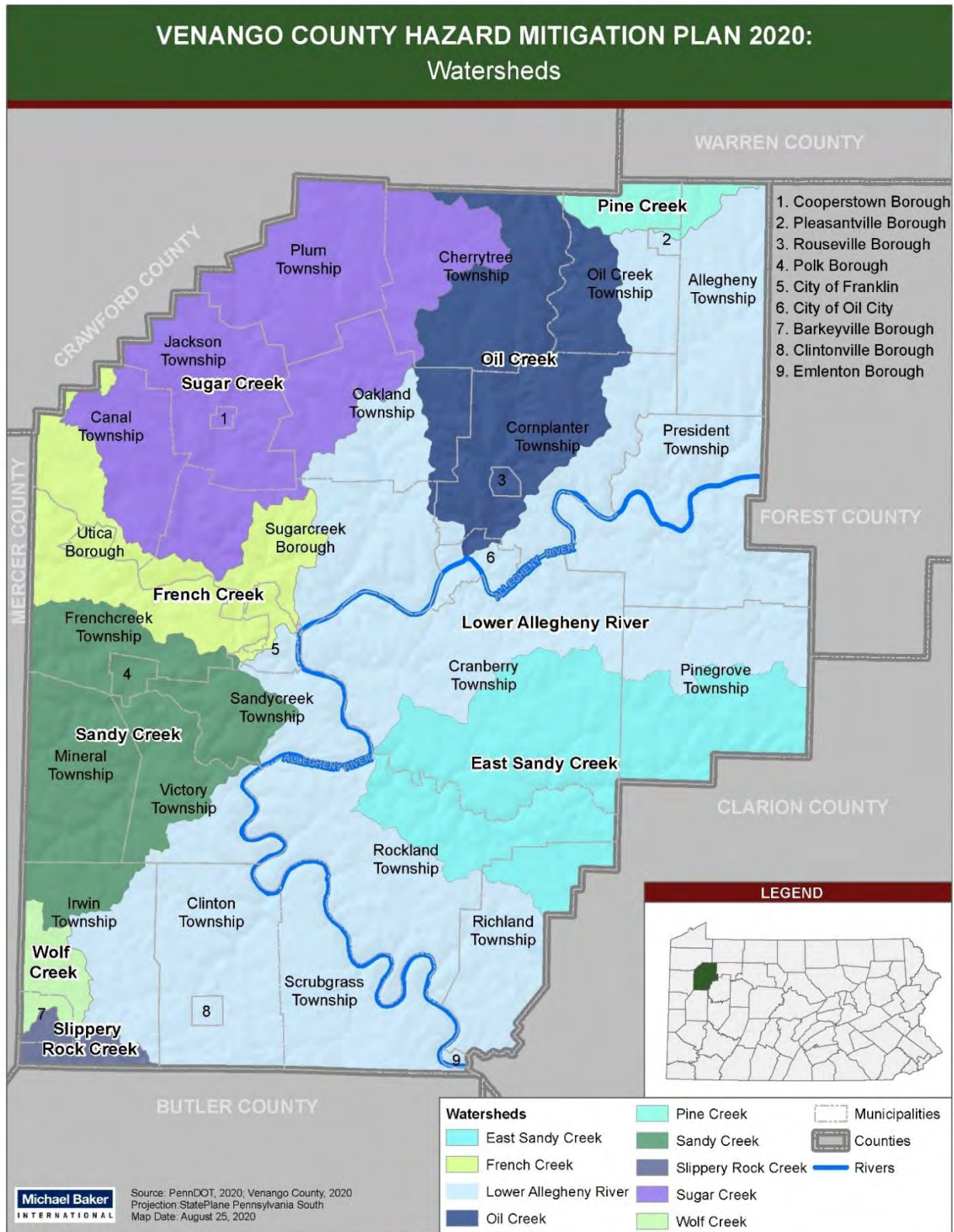


Figure 2.1-2 Venango County Watersheds



2.2 Community Facts

Venango County, the birthplace of the petroleum industry was home to the world's first commercially successful well drilled for oil, struck in 1859. Known as "Drake's Well," this led to the oil boom bringing oil barons to the county. John D. Rockefeller set up an office building still in existence today in Oil City.

Located half-way between Pittsburgh and Erie, Venango County produces some of the best hardwoods in the world and has replaced large oil companies with a mix of metal industries, electronics firms, chemical industries, service industries, and various small businesses. Agriculture remains an important part of the economy and way of life along with hunting, fishing, and outdoor recreation.

There are 530.33 miles of state highways, 223 state-owned bridges, and 66 locally owned bridges in Venango County. The major transportation routes in Venango County are:

- Interstate 80 which runs through the southernmost part of the county providing connection between Mercer and Clarion counties;
- Route 322 which runs through Franklin, connecting Crawford and Clarion counties;
- Route 62 which runs through Franklin and Oil City connecting Mercer and Forest counties; and
- Route 8, which runs through Franklin and Oil City connecting Butler and Crawford counties.

The county is served by the Venango Regional Airport located 2 miles south of Franklin. Rail freight service from Pittsburgh to Meadville and Oil City operated by Norfolk Southern, between Rouseville and Titusville operated by the Oil Creek and Titusville Lines and the Western New York and Pennsylvania Line.

Venango County is home to one institution of higher learning. Clarion University, Venango Campus is in Oil City. This campus was established in 1961 on 62 scenic acres and was the first branch campus in the Pennsylvania State System of Higher Education.

There are 8 public school districts, and 5 private and parochial schools (PA DOR, 2015). Venango County has three public libraries within its borders: the Cooperstown Public Library, the Franklin Public Library and the Oil City Library. These libraries were recently unified under the title of the Oil Region Library Association. A list of critical facilities in Venango is provided in Appendix E.

Table 2.2-1 breaks down Venango County's industry sections by the number of establishments and employees. The largest industries are Manufacturing leading with 3,876 employees, which is 25.6% of the workforce, and with only 83 establishments. This is followed by Healthcare and social assistance with 3224 employees (21.3% of workforce) and 171 establishments. Retail trade, Accommodation and food services, Other services (except public administration), Transportation and warehousing and Construction are also major employer sectors within the County. Major employers in the County include, UPMC Northwest, a major regional healthcare organization and part of the larger UPMC healthcare system, Joy Global Underground Mining Inc (now owned by Komatsu) closed a large manufacturing facility in the county in 2016 but still has

a large presence in the County and employs many at its remaining Venango County facility. Other major employers in the County include large companies like Honeywell Safety Products and Walmart as well as smaller manufacturing companies like Liberty Electronics Inc, who produce electronic wiring harnesses, and Webco Industries who produce tubing. Stakeholders from many of these employers were invited to participate in the planning process.

Table 2.2-1 Venango County Industry Sections by Establishments and Employees			
Industry Sector	Establishments	Employees	Percentage of Workforce
Manufacturing	83	3876	25.6%
Health care and social assistance	171	3224	21.3%
Retail trade	189	2439	16.1%
Accommodation and food services	103	1279	8.4%
Other services (except public administration)	184	829	5.5%
Transportation and warehousing	46	675	4.5%
Construction	84	574	3.8%
Wholesale trade	44	522	3.4%
Finance and insurance	54	338	2.6%
Administrative and support and waste management and remediation services	33	299	2.0%
Professional, scientific, and technical services	61	287	1.9%
Arts, entertainment, and recreation	15	199	1.3%
Information	20	157	1.0%
Utilities	8	134	0.9%
Real estate and rental and leasing	28	91	0.6%
Mining, quarrying, and oil and gas extraction	12	90	0.6%
Management of companies and enterprises	4	69	0.5%
Educational services	9	52	0.3%
Agriculture, forestry, fishing and hunting	4	10	0.1%
Totals	1,153	15,146	
Source: U.S. Census Bureau, 2018 County Business Patterns			

2.3 Population and Demographics

Population and demographic data provide baseline information for assessing the potential magnitude of hazards and can be used to identify trends in high-risk populations. This section includes baseline demographic trends for Venango County.

According to the 2018 Census Estimate, the population of Venango County is approximately 52,376. This is a decrease of an estimated 2,608 residents since the 2010 Census. This number reflects a continuing decrease in residents since the 2000 Census. Trends show that Venango County's population has been decreasing since the 1960s as seen in Table 2.3-1.

Table 2.3-1 Venango County Population Trends	
Year	Population
1950	65,038
1960	65,295
1970	62,353
1980	64,444
1990	59,381
2000	57,565
2010	54,984
2018	50,668
Source: U.S. Census Bureau	

Table 2.3-2 shows the distribution of the County population by municipality in the 2010 Census and the 2018 5-Year American Community Survey Estimates. Some of the most populated municipalities are:

- City of Oil City;
- City of Franklin;
- Cranberry Township;
- Sugarcreek Borough;
- Sandycreek Township;
- Cornplanter Township;

Some of the least populated municipalities are:

- Utica Borough
- Barkeyville Borough;
- Allegheny Township;
- Clintonville Borough
- Cooperstown Borough
- President Township

The largest increase in percent population change took place in Clinton Township (31.3%), Barkeyville Borough (18.1%), Cornplanter Township (12.4%), and Utica Borough (11.3%). Significant population loss has occurred in Allegheny Township, Polk Borough, and President Township.

Table 2.3-2 List of Municipalities in Venango County with Associated Populations (U.S. Census Bureau).

Municipality	Population 2010	2018 ACS 5-Year Estimate	Population Difference	Percent Change (%)
Allegheny Township	404	271	-133	-32.92%
Barkeyville Borough	298	352	54	+18.12%
Canal Township	935	795	-140	-14.97%
Cherrytree Township	1,449	1,451	2	+0.14%
Clinton Township	699	918	219	+31.33%
Clintonville Borough	466	438	-28	-6.01%
Cooperstown Borough	522	411	-111	-21.26%
Cornplanter Township	2,355	2,648	293	+12.44%
Cranberry Township	6,720	6,416	-304	-4.52%
Emlenton Borough	720	706	-14	-1.94%
Franklin, City of	6,648	6,216	-432	-6.50%
Frenchcreek Township	1,604	1,622	18	+1.12%
Irwin Township	1,321	1,279	-42	-3.18%
Jackson Township	955	1,011	56	+5.86%
Mineral Township	517	449	-68	-13.15%
Oakland Township	1,367	1,383	16	+1.17%
Oil City, City of	10,707	9,982	-725	-6.77%
Oil Creek Township	740	721	-19	-2.57%
Pinegrove Township	1,285	1,257	-28	-2.18%
Pleasantville Borough	984	833	-151	-15.35%
Plum Township	1,210	948	-262	-21.65%
Polk Borough	1,057	788	-269	-25.45%
President Township	535	409	-126	-23.55%
Richland Township	731	632	-99	-13.54%
Rockland Township	1,359	1,188	-171	-12.58%
Rouseville Borough	577	487	-90	-15.60%
Sandycreek Township	2,478	2,364	-114	-4.60%
Scrubgrass Township	821	792	-29	-3.53%
Sugarcreek Borough	5,294	5,065	-229	-4.33%
Utica Borough	159	177	18	+11.32%
Victory	403	367	-36	-8.93%
Total	54,984	52,376	-2,608	-4.74%

Recent demographic trends in Venango County are summarized in Table 2.3-3 based on the census data available. The population is declining, and the median age is increasing.

Demographic data point	2010	2018 ACS ESTIMATE
Total Population	54,984	52,376
Male/Female	27,217 / 27,766	25,842 / 26,534
Median Age (Years)	40.2	46.5
Under 5	4.7%	5.1%
Under 18	19.1%	19.9%
19 to 64	55.7%	59.0%
65 and older	23.1	21.1%

The percentage of the County population under 18 years old is lower than the national average, at 19.9% compared to 22.4%. Conversely, the percentage of the County population 65 years and older is higher than the national average, at 21.2% compared to 15.2%. Due to the large percentage of senior citizens, the County will need to develop hazard mitigation and preparedness strategies that take their needs into account. As senior citizens may not be able to drive, special evacuation plans may be required. Further, hearing or vision impairments could make receiving emergency instructions difficult.

Consideration should also be given to address hazard mitigation actions for citizens with disabilities. According to the U.S. Census, American Community Survey 2018 Estimates, 18.9% (9,767 out of 51,664) of Venango County residents have a disability. Of this population 6% are under 18, 53% are ages 18 to 64 years old, and 40% are 65 years or over.

From a race and ethnic perspective, Venango County citizens are predominantly white, followed by Black or African American. As seen in Table 2.3-4, from 2010 to 2018, there has been an increase in people with two or more races and Hispanic or Latino persons of any race.

DEMOGRAPHIC INDICATOR	2010	2018 ESTIMATE
White	53,390	50,691
Black or African American	571	434
American Indian and Alaska Native	85	12
Asian	197	191
Native Hawaiian and Other Pacific Islander	11	0
Some Other Race	108	131
Two or More Races	622	917
Hispanic or Latino of any Race	478	567
<i>Source: U.S. Census Bureau</i>		

Per Table 2.3-5, Median household income and median family income in Venango County are \$47,982 and \$60,318 respectively. The median household income is over \$12,000 less than

Pennsylvania’s, median family income is more than \$15,000 lower than the state level. Per capita income is also slightly lower than the state.

Table 2.3-5 Income Levels and Wage Statistics		
INCOME (2018 DOLLARS)	VENANGO COUNTY (2018)	PENNSYLVANIA (2018)
Median Household Income	\$47,982	\$59,445
Median Family Income	\$60,318	\$75,477
Per Capita Income	\$25,837	\$32,889
<i>Source: U.S. Census Bureau, American Community Survey 2018 5-Year Estimates</i>		

According to the U.S. Census 2018 Estimate, 52.5% of the population 16 years of age and older are in the civilian labor force (43.7% are not in the labor force). This translates to an unemployment rate of 6.8%, which is slightly higher than Pennsylvania’s unemployment rate (5.8).

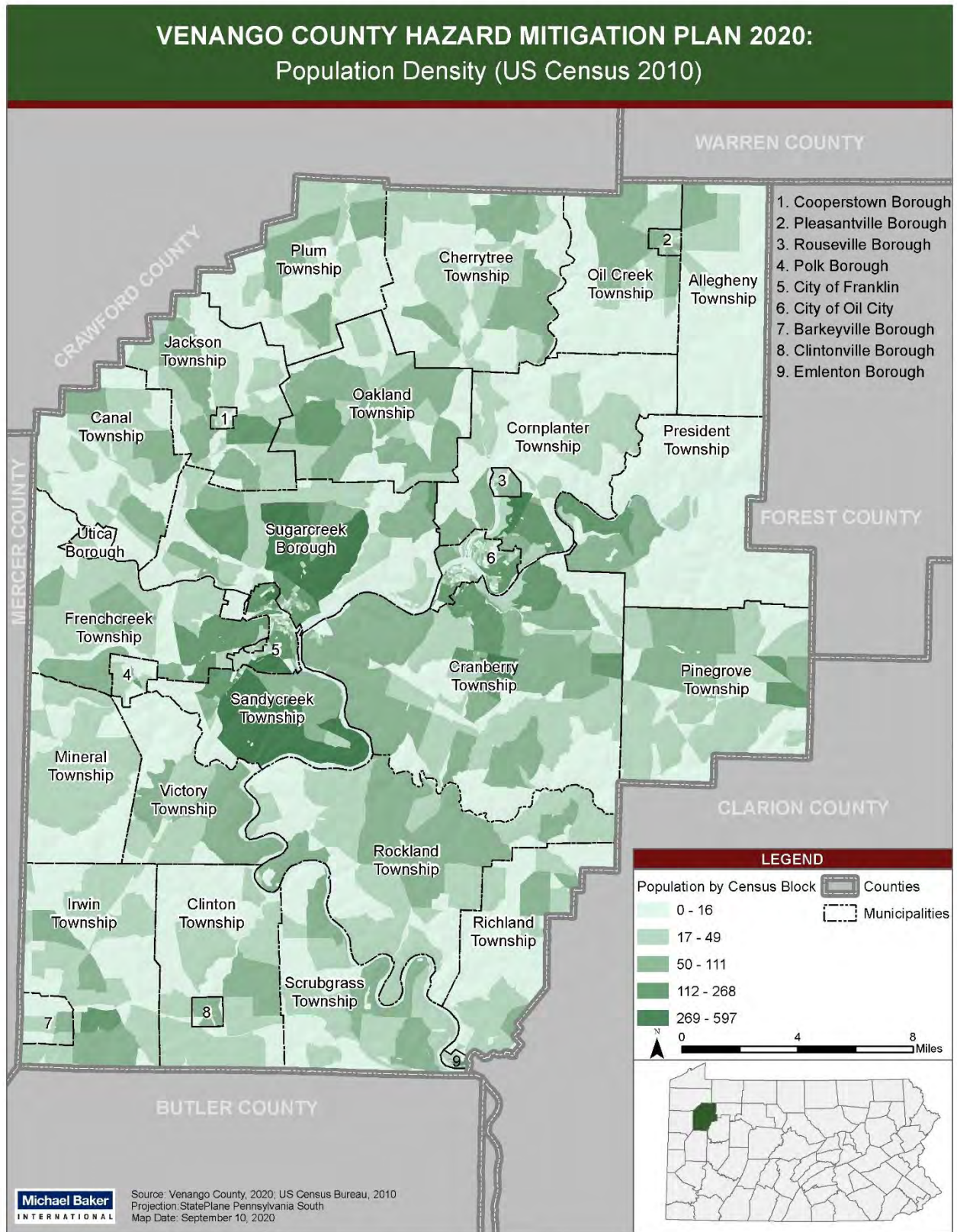
As seen in Table 2.3-6, U.S. Census data shows a slight increase in the number of housing units in Venango County between 2010 and 2018, and a corresponding increase in vacant properties. Vacant buildings are particularly vulnerable to arson and criminal activity. Since vacant properties are often not maintained, many may be structurally deficient. Citizens renting homes are typically more transient than homeowners, therefore communicating with citizens who are renters may be more difficult than communicating with homeowners.

According to the 2018 estimate, of the 27,464 housing units, 10,712 units (39%) were built in 1939 or earlier, and almost 60% of the housing stock was built prior to 1970. The age of the housing stock should be considered when planning for hazard mitigation, especially urban fire and explosion.

Table 2.3-6 Housing Characteristics		
HOUSING CHARACTERISTIC	2010	2018 ESTIMATE
Total Housing Units	27,464	27,592
Occupied Housing Units	22,457	21,915
Vacant Housing Units	5,007	5,677
Owner-Occupied Housing Units	16,839	16,557
Renter-Occupied Housing Units	5,618	5,358
Median Home Value	76,500	\$85,700
<i>Source: U.S. Census Bureau, American Community Survey, 2018 Estimates</i>		

Figure 2.3.1 illustrates the population density per census block in Venango County. The center of the county, in and around the City of Franklin, contains some of the most densely populated census blocks in the county. Surrounding municipalities of Sugarcreek Borough and Sandycreek Borough are also some of the densest areas in the county.

Figure 2.3-1 Population Density



2.4 Land Use and Development

The 2017 Census of Agriculture by the United States Department of Agriculture indicated that there were 409 farms in 2017 with an average size of 130 acres, down from 487 farms in 2007. In 2017, the total market value of agricultural products sold was \$14.7 million, up from \$11.7 million a decade earlier. Fifty nine percent of the total products come from crop sales. Venango County is ranked 55th for agricultural production within Pennsylvania. Figure 2.4-1 Illustrates land use within Venango County. Much of the land in the county is devoted to agriculture, similarly much is vacant, due to multiple game areas and forests within the county.

The 2004 Venango County Comprehensive Plan identified the “core” area of the County which includes Franklin and Oil City, with portions of Sandy Creek Township and Cranberry Township, as a “Designated Growth Area.” Peripheral growth areas include the State Route 8 Corridor south of Franklin and north from Oil City to Rouseville Borough, the interchange areas of Barkeyville, Clintonville and Emlenton with Interstate 80, State Route 27 corridor north from Pleasantville, and segments of the State Route 322 corridor north of Franklin.

Additionally, growth areas in the southern portion of the county, primarily municipalities in close proximity to Interstate 80, were identified in the 2007 Southern Venango County Regional Comprehensive Plan and can be seen in Figure 2.4-3.

A specific priority of the county in the creation of these growth areas, as outlined in the Comprehensive Plan, is to work with municipal governments to concentrate development in existing or established villages or downtowns in order to help preserve rural areas and efficiently use existing infrastructure to support new development. To achieve this vision, the Comprehensive Plan outlines a short-term action item (Priority 2, Page 218) for the County Planning Commission and Conservation District to establish “Resource Protection Areas.” These defined areas would identify lands for protection – including floodplains, wetlands, steep sloped areas, and agricultural lands – from future development. Additionally, the Plan outlines the techniques such as zoning and design standards to encourage density development within the designated growth areas (Venango County, 2004).

These growth areas, depicted in Figures 2.4-1 and 2.4-2, will have a significant impact on land use, economic development, and potential hazard creation in Venango County.

Figure 2.4-1 Venango County Land Use Map

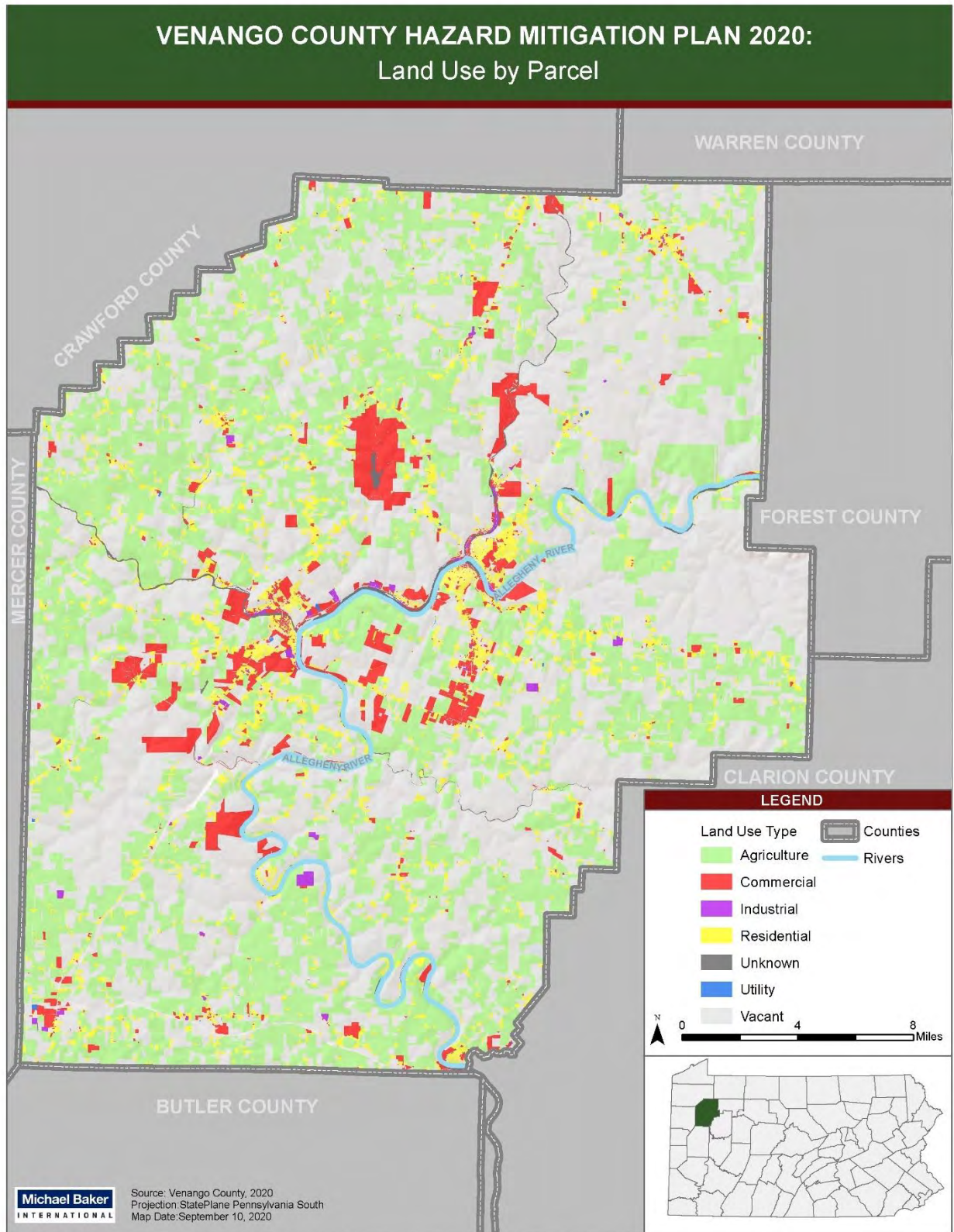


Figure 2.4-2 Venango County Growth Areas

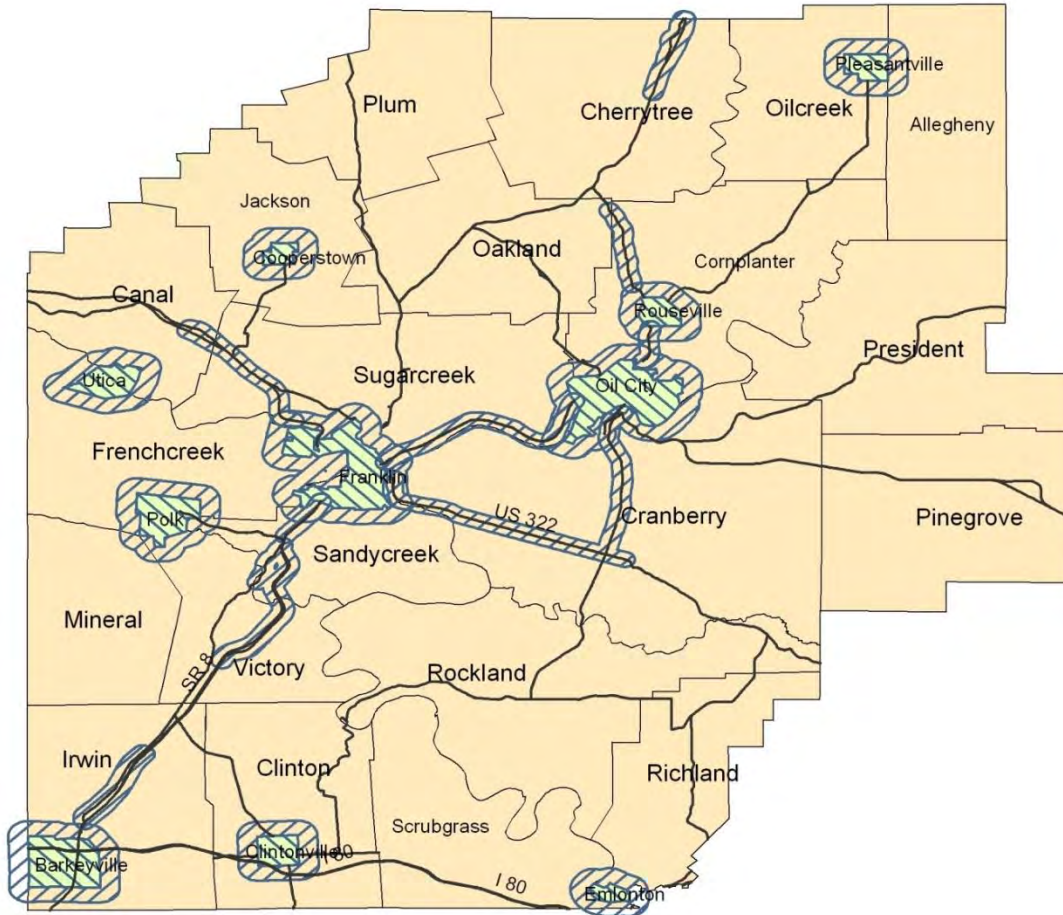
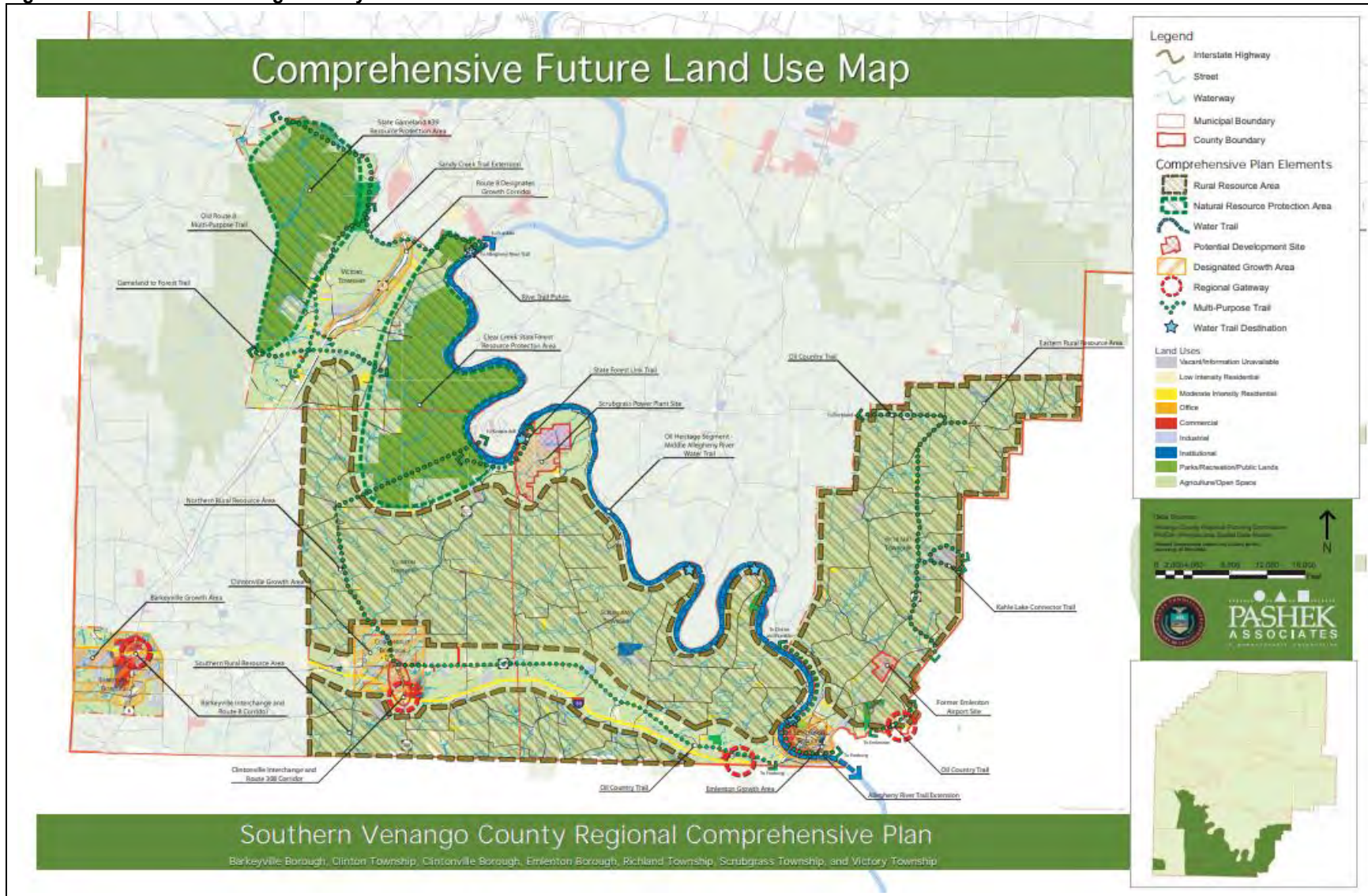


Figure 2.4-3 Southern Venango County Growth Areas



2.5 *Data Sources and Limitations*

The Venango County (point data) and parcel (polygon layer) databases were used as an inventory of properties throughout the County. The buildings data did not include type or value. These property types were assigned a generalized land use code of agricultural, commercial, industrial, residential, transportation/utilities, and unknown (for parcels with no property type code). While this allows for generalized discussion of the type of buildings at risk in Venango County, the number of buildings by type used throughout this HMP should be considered estimates. The actual building and land use may differ than information contained in the database. The property type was used to extract numbers of mobile homes. The list of critical facilities provided in Appendix E was developed based on information provided by Venango County Planning Department, Venango County Emergency Services, PEMA, FEMA, the Pennsylvania Department of Health, and the National Atlas; selection of categories was led by the Venango County HMPSC leadership.

Flood hazard data used in this plan is Venango County's effective DFIRM database from 2014, which is a digital representation of features of Flood Insurance Rate Maps (FIRMs). In addition, this plan makes use of the non-regulatory Risk MAP products produced for Venango County, namely the 1-percent annual chance depth grid. Venango County provided other GIS datasets including transportation infrastructure, boundaries, public buildings, and natural features like steep slopes and landslide prone areas. Additional data for the base map was provided by the Pennsylvania Department of Transportation, Pennsylvania Game Commission, Pennsylvania Department of Environmental Protection and the Pennsylvania Department of Conservation and Natural Resources.

Additional information used to complete the risk assessment for this plan was taken from various government agency and non-government agency sources. Those sources are cited where appropriate throughout the plan and on each map with full references listed in Appendix A – Bibliography. It should be noted that numerous GIS datasets were obtained from the Pennsylvania Spatial Data Access (PASDA) website (<http://www.pasda.psu.edu/>). PASDA is the official public access geospatial information clearinghouse for the Commonwealth of Pennsylvania. PASDA was developed by the Pennsylvania State University as a service to the citizens, governments, and businesses of the Commonwealth. PASDA is a cooperative project of the Governor's Office of Administration, Office for Information Technology, Geospatial Technologies Office and the Penn State Institutes of Energy and the Environment of the Pennsylvania State University.

In order to assess the vulnerability of different jurisdictions to the hazards, data on past occurrences of damaging hazard events was gathered. For a number of historic natural-hazard events, the National Climatic Data Center (NCDC) database was utilized. NCDC is a division of the US Department of Commerce's National Oceanic and Atmospheric Administration (NOAA). Information on hazard events is compiled by NCDC from data gathered by the National Weather Service (NWS), another division of NOAA. NCDC then presents it on their website in various formats. The data used for this plan came the US Storm Events database, which "documents the occurrence of storms and other significant weather phenomena having sufficient intensity to

cause loss of life, injuries, significant property damage, and/or disruption to commerce” (NOAA, 2006).

When applicable, Pennsylvania Emergency Incident Reporting System (PEIRS) incident data spanning 1/1/2002 through 6/1/2009 was used in the 2015 plan update and kept in the 2020 update. However, the Commonwealth of Pennsylvania ceased using PEIRS as its incident reporting system in 2009 and was unable to provide more recent comprehensive incident reports. Although PEIRS data proved valuable, primarily in the human-made hazards section where few records of past occurrences exist, data limitations exist in that the reporting system is not mandatory. As a result, while PEIRS reports provide important information on the frequency of past events, because it is a voluntary reporting system, the number and frequency of events may be under-reported. PEIRS information was used in the following hazard profile sections: Urban Fire/Explosion, Transportation Accidents, and Civil Disturbance.

HAZUS-MH is a powerful risk assessment methodology for analyzing potential losses from floods, hurricane winds and earthquakes. In HAZUS-MH, current scientific and engineering knowledge is coupled with the latest GIS technology to produce estimates of hazard-related damage before, or after, a disaster occurs. HAZUS version 4.0 was used to estimate losses for floods in Venango County; this plan incorporates an enhanced analysis. County-specific essential facilities data was incorporated into the model to make it more precise. For more information on the enhanced analysis methodology used for this plan’s flood model, please see Appendix F.

This HMP evaluates the vulnerability of the County’s critical facilities. For the purposes of this plan, critical facilities are those entities that are essential to the health and welfare of the community. Table 2.5-1 summarizes the critical facilities in Venango County by type and by municipality. For a complete listing of critical facilities and their vulnerability to individual hazards, please see Appendix.

Table 2.5-1 Venango County Critical Facilities by Municipality and Type

Municipality	Airports	Cell Towers	County Buildings	Day Care Centers	Emergency Operations Centers	Fire Stations	Hospitals/ Ambulance/EMS	Municipal Buildings	Nursing Homes	Police Stations	Schools	Total
Allegheny Township	0	0	0	0	0	0	0	1	0	0	0	1
Barkeyville Borough	0	1	0	0	0	0	0	1	0	0	0	2
Canal Township	1	0	0	0	0	1	0	1	0	0	0	3
Cherrytree Township	2	0	0	0	0	1	0	1	0	0	0	4
Clinton Township	0	2	0	0	0	0	0	1	0	0	1	4
Clintonville Borough	0	0	0	0	0	1	0	1	0	0	0	2
Cooperstown Borough	0	0	0	0	0	1	0	1	0	0	0	2
Cornplanter Township	0	1	0	1	1	1	0	1	1	0	1	7
Cranberry Township	3	0	0	1	0	1	1	1	1	1	4	13
Emlenton Borough	0	0	0	1	0	1	0	1	0	1	0	4
City of Franklin	1	0	4	4	0	2	1	1	4	2	2	21
Frenchcreek Township	0	0	0	0	0	0	0	1	0	0	0	1
Irwin Township	0	1	0	0	0	0	0	1	0	0	2	4
Jackson Township	0	0	0	0	0	0	0	1	0	0	0	1
Mineral Township	0	0	0	0	0	0	0	1	0	0	0	1
Oakland Township	1	0	0	0	0	1	0	1	0	0	0	3
City of Oil City	0	0	0	2	0	2	0	1	1	1	8	15

Municipality	Airports	Cell Towers	County Buildings	Day Care Centers	Emergency Operations Centers	Fire Stations	Hospitals/Ambulance/EMS	Municipal Buildings	Nursing Homes	Police Stations	Schools	Total
Oil Creek Township	0	0	0	0	0	0	0	1	0	0	0	1
Pinegrove Township	1	0	0	0	0	1	0	1	0	0	1	4
Pleasantville Borough	0	0	0	0	0	1	0	1	0	0	1	3
Plum Township	0	0	0	0	0	1	0	1	0	0	0	2
Polk Borough	0	0	0	0	0	1	0	1	3	1	0	6
President Township	0	0	0	0	0	1	0	1	0	0	0	2
Richland Township	0	0	0	0	0	0	0	1	0	0	0	1
Rockland Township	0	1	0	0	0	1	0	1	0	0	0	3
Rouseville Borough	0	0	0	0	0	1	0	1	0	0	0	2
Sandycreek Township	0	0	0	0	0	1	0	1	0	0	3	5
Scrubgrass Township	0	2	0	0	0	0	0	1	0	0	0	3
Sugarcreek Borough	0	0	0	0	0	2	0	1	1	1	2	7
Utica Borough	0	0	0	0	0	1	0	1	0	0	1	3
Victory Township	0	0	0	0	0	0	0	1	0	0	0	1
Grand Total	9	8	4	9	1	23	2	31	11	7	26	131

3 Planning Process

3.1 *Update Process and Participation Summary*

Michael Baker International was responsible for preparing the County's 2015 HMP, which was adopted on April 12th, 2016. The 2015 HMP was an update to the County's 2010 HMP update spearheaded by the Venango County Hazard Mitigation Planning Steering Committee. To facilitate the update of the 2020 HMP, Venango County contracted Michael Baker International once again.

The 2020 effort was led by the Venango County Department of Emergency Services with the Venango County Regional Planning Commission and Venango County municipalities. Venango County has in total 31 municipalities.

The first meeting of the Venango County Hazard Mitigation Plan Steering Committee (HMPSC) to discuss the 2020 HMP Update was held as an Internal County Kick-off teleconference on July 7, 2020. At this meeting an overview of the Hazard Mitigation Planning process was provided.

In addition to Venango County local municipalities, the HMPSC identified additional stakeholders to be included in the HMP process. Detailed information pertaining to stakeholders and stakeholder outreach is included in Section 3.4 – Public & Stakeholder Participation.

The HMPSC and the Planning Team of local municipalities and stakeholders completed an Evaluation of Identified Hazards and Risk Worksheet as part of the Planning Team Kick-Off meeting on July 7, 2020. This survey, included in Appendix C – Meeting and Other Participation Documentation, listed hazards profiled in the 2015 HMP and prompted the team to identify the frequency of occurrence, magnitude of impact, and/or the geographic extent of each hazard as increased, decreased, or did not change since the 2015 HMP preparation. This survey also provided the opportunity to assess hazards not profiled in the HMP to determine if those hazards should be included as part of the HMP Update. With no additional hazards selected for this update a total of 12 hazards were carried over from the 2015 plan for this update, including 9 natural hazards and 3 human-made hazards.

The HMPSC conducted a detailed review of draft Goals, Objectives, and Actions for the 2020 HMP Update and developed the final hazard mitigation strategy. A Mitigation Action Plan developed by the HMPSC is included in Section 6.4 – Mitigation Action Plan.

Venango County's municipalities actively participated as part of the Planning Team. Municipal involvement in developing the 2020 HMP Update is detailed in Section 3.5 – Multi-Jurisdictional Planning. Of the 31 municipalities, 16 municipalities met the participation requirements. With this level of participation, 61% of Venango County's population will be covered by this HMP.

In accordance with the Disaster Mitigation Act of 2000 (DMA 2000), the HMP Update documents the following topics:

- Planning Process;
- Hazard Identification;

- Risk Assessment;
- Mitigation Strategy: Goals, Objectives, and Actions;
- Formal Adoption by the Participating Jurisdictions; and
- PEMA and FEMA approval.

The report format is structured in accordance with the most current planning guidance from FEMA, Local Mitigation Handbook (2013), and PEMA, Standard Operating Guide (PEMA 2013). The overall format between the 2020 HMP Update and the 2015 HMP Update has not changed. Specific process updates pertaining to each section of the HMP Update are included in Sections 4.1, 5.1, 6.1, and 7.1.

3.2 *The Planning Team*

The Planning Team assembled for the 2020 HMP Update included representatives from Venango County Emergency Management Services, the Venango County Regional Planning Commission (SPC), Venango County Local Emergency Planning Committees (LEPC), DCNR Bureau of Forestry, and Venango County’s local municipalities. A subset of the Planning Team, the HMPSC, was assembled to guide the overall direction of the HMP Update and make day-to-day decisions pertaining to its completion in conjunction with the consultant Baker Team. HMPSC members for the 2020 HMP Update are listed in Table 3.2-1.

Name	Organization
Tim Dunkle	Venango County EMS
Janis Cochran	Venango County EMS
Jason Ruggiero	Venango County Regional Planning Commission
Madeleine Fincham	Michael Baker International, Consultant Point of Contact (POC)
Kevin Brown	Michael Baker International

In order to represent the diverse stakeholders in the County, the HMPSC developed a list of Planning Team members, discussed in more detail in Section 3.4. The HMPSC worked throughout the process to plan and hold meetings, collect information, and conduct public outreach.

The stakeholders listed in Table 3.2-2 served on the Planning Team, demonstrating their commitment to actively participate in the planning process by attending meetings, completing assessments, surveys, and worksheets, and/or submitting comments. The Planning Team consisted of County and local officials including municipal Supervisors and Council Members, Emergency Management Coordinators, and other identified stakeholders.

Municipality	Participant(s) & Title
Allegheny Township	Patricia Butler - Secretary
Barkeyville Borough	Warren Wetzel - President

Table 3.2-2 Participants in the 2020 Venango HMP Update	
Municipality	Participant(s) & Title
Canal Township	
Cherrytree Township	Christine C. Kurelowech - Secretary
Clinton Township	Ben Porter - Roadmaster
Clintonville Borough	
Cooperstown Borough	
Cornplanter Township	Tim Staub - Roadmaster
Cranberry Township	Chad Findlay - Manager
Emlenton Borough	Nancy Marano - Secretary
Franklin, City of	Jim Wetzel - Fire Chief & Douglas Baker - Mayor
Frenchcreek Township	Bob Jamieson - EMC
Irwin Township	Barb Sopher - Secretary
Jackson Township	
Mineral Township	Fred Krizinsky - Roadmaster
Oakland Township	Bill Flockerzi - Councilman
Oil City, City of	Mark Hicks - Fire Chief & William Moon II - Mayor
Oil Creek Township	
Pinegrove Township	Jane Whitting - Secretary
Pleasantville Borough	Martha Long - Mayor
Plum Township	Jody Davison - Secretary
Polk Borough	Tom Sherman & Dave Owens - Councilmen
President Township	Jim Kitelinger - Chairman
Richland Township	Chandra Ritchey - Secretary & David Whitehill - Councilman
Rockland Township	Terry Hunsberger - Council Member & Nicole Jones - Secretary
Rouseville Borough	Melissia Smith & Guy Milliron
Sandycreek Township	Bob Jamieson - EMC
Scrubgrass Township	Richard Cornelius - EMC & Robert Aiken - Council Member
Sugarcreek Borough	Bob McClintock - EMC
Utica Borough	Marian Murphy - Secretary
Victory Township	Jim Fryman - Roadmaster
Other Stakeholders	
Venango County Emergency Management Agency	Tim Dunkle Jr.
Venango County Emergency Management Agency	Janis Cochran
Venango County Regional Planning Commission	Jason Ruggiero
DCNR-Bureau of Forestry	Ty Ryen

Table 3.2-2 Participants in the 2020 Venango HMP Update	
Municipality	Participant(s) & Title
Oil Region Alliance	John Phillips
Pennsylvania Emergency Management Agency	Ernie Szabo
Clarion County PA	Bret Whitling

3.3 Meetings and Documentation

The following meetings, both in person and teleconference, were held as part of the planning process. Meeting documentation in the form of invitations (letter and e-mail), agendas, sign-in sheets, handouts, presentations, flyers, and minutes are included in Appendix C – Meetings and Other Participation Documentation.

June 5, 2020: The Steering Committee Kick-Off Meeting was conducted as a conference call on Friday, June 5, 2020. The meeting included discussion of the following: review of the updated planning process and project schedule, review of the Risk Assessment Hazard Descriptions, identification of stakeholders, methods for stakeholder outreach, and collection of relevant data and documents.

July 7, 2020: A Hazard Mitigation Planning Team (HMPT) Meeting was held with local municipalities and stakeholders identified by the HMPSC during the Steering Committee Kick-Off Meeting. The workshop was held virtually from 10:00 AM – 11:30 AM and 6:00 PM – 7:30 PM on Tuesday July 7, 2020. Having two meeting times on in the morning and one in the evening ensured maximum participation and flexibility for the municipalities. The workshop provided an opportunity for participants to review the hazard mitigation process; discuss capabilities; offer risk assessment input on hazards identified by the HMPSC; suggest the inclusion of additional hazards; review and provide input on existing Goals, Objectives, and Actions.

As part of the workshop, municipalities and stakeholders were asked to complete a Hazard Risk Evaluation Worksheet (Hazards in Your Community). The form included the hazards profiled in the 2015 HMP and requested attendees to rank hazards’ relative spatial extent, probable impact, possibility of future events, and overall significance. Results of the Hazard Risk Evaluation were used to prepare the Risk Factor (RF) ranking. This form was asked to be completed by the end of the workshop.

The HMPT meeting also provided the opportunity for municipalities to ask questions and complete the Capability Assessment Survey. Responses from Capability Assessment Surveys completed by each municipality for the 2015 HMP Update were pre-populated in the 2020 Capability Assessment Survey template, and each municipality was asked to review previous responses, update responses, and complete new fields. In order to receive as much information as possible, stakeholders were asked to return the form no later than the next workshop. This allowed participants to return to their municipality to collect information from other knowledgeable staff members.

14 of Venango County's 31 municipalities were represented at the workshop. Six stakeholder organizations representing Venango County Emergency Management Services, the Venango County Regional Planning Commission (SPC), DPCR Bureau of Forestry, the Oil Region Alliance, Pennsylvania Emergency Management Agency and Clarion County Pennsylvania attended the meeting. While the virtual meeting format inhibited some discussion during the meeting, stakeholders reached out to the Planning Team to raise concerns. Stakeholders emailed and called the Planning Team to provide insight and comments including requests for help completing the required forms as well as messages to inquire if the ongoing COVID-19 pandemic would be addressed in the plan. Stakeholders reached out to reiterate the hazards that impact their communities the most. Rockland Township emailed to inquire if the planning team most recent data regarding flood, wildfire, and windstorms as those hazards are of particular concern. Similarly stakeholders noted that other hazards, like hazardous materials release, were still a major concern though there had been few incidents in recent years.

August 27, 2020: A Risk Assessment/Mitigation Solutions Meeting was held via teleconference with local municipalities and stakeholders on Wednesday August 27, 2020 from 10:00 AM to 11:30 AM and from 6:00 PM to 7:30 PM. As with the previous meeting, having two meeting times throughout the day ensured maximum participation and flexibility for the municipalities. The workshop provided an opportunity for participants to review the hazard mitigation process; review the profiled hazards for the 2020 HMP Update; review the 2020 Goals, Objectives, and Actions; and begin the selection of each municipality's Actions.

The meeting started with a discussion of the basic outline of the Hazard Mitigation Plan, as well as the requirements for participations by each municipality. The results from the Hazard Risk Evaluation were presented, revealing the 12 hazards to be profiled in the 2020 HMP Update. A discussion of each hazard was conducted through the presentation of maps representing different hazards to provide some context of how each municipality may be at risk to different hazards. As a part of this discussion the Hazard Ranking and Risk Factor worksheet was introduced to meeting participants to collect information from municipalities as to which hazard(s) may have a major impact on their community. The HMPSC provided an overview of the worksheet, and participants were asked to fill it out and return it after the meeting.

The Mitigation Strategy was the last element to review and discuss with participants. What constitutes Goals, Objectives, and Actions were first went over with participants. After this, the Goals selected with the HMPSC for the 2020 HMP Update were briefed, as well as prominent Objectives. When discussing Actions, the appropriate mitigation techniques were reviewed. Mitigation Strategy Evaluations were distributed to all municipality representatives. Pre-populated Mitigation Strategy Evaluations were given to municipalities who had records of selected actions from the 2015 HMP Update. They were asked to decide whether to continue, cancel, or defer each action, as well as report on any progress. All other communities were presented with existing municipality Actions. Municipalities could also create new Actions that were not in the current Strategy. This allowed an opportunity for participants to discuss their needs and Goals with the rest of the municipality staff. A total of five communities returned either the mitigation strategy form or submitted a new mitigation action form.

A total of 16 of Venango County’s 31 municipalities were represented at the workshop. Stakeholders from DNCR Bureau of Forestry, PEMA, and NOAA the were recorded as attending the workshop. The Bureau of Forestry voiced concern about wildfire safety and forest safety education. The Bureau also contributed several new mitigation actions designed to help educate citizens about safety and wildfire risk.

September 10 & October 20 2020: Teleconferences were held to accommodate the schedules of municipalities, Rockland Township and Irwin Township, that were unable to attend the Hazard Mitigation Planning Workshops.

The purpose of the teleconference was to discuss information presented throughout the planning process; the Capability Assessment Survey; review and comment on the Goals, Objectives, and Actions using the Mitigation Strategy Evaluation Form; as well as to discuss and develop new mitigation actions. Stakeholders in Rockland and Irwin Townships needed guidance on how to complete the required forms and wanted to discuss hazards and potential mitigation ideas with the Planning Team.

3.4 Public & Stakeholder Participation

The HMPSC identified, at the June 5 Steering Committee Kick-Off Meeting, stakeholders to engage in order to obtain comprehensive input about hazards impacting, or with the potential to impact, Venango County. The following table lists stakeholders who participated in meetings and/or provided data to assist in the HMP Update. A list of stakeholders identified and invited to the HMP Update process can be found in Appendix C.

Venango County Emergency Management Services (EMS)	Venango County Regional Planning Commission
DNCR Bureau of Forestry	Pennsylvania Emergency Management Agency (PEMA)
Oil Region Alliance	

Stakeholders were invited to the workshops held July 7, 2020, as well as August 27, 2020. As part of the workshops, stakeholders were asked to complete a Hazard Risk Evaluation Form which listed hazards to be profiled for the 2020 HMP Update. Stakeholders were asked to rank each hazard from the perspective of their organization. Stakeholders were also encouraged to provide additional information pertaining to the listed hazards, as well as list additional hazards not identified on the hazard risk evaluation form, but ones which could impact their organization. Results of the Hazard Risk Evaluation Worksheet were reviewed as part of the preparation of the 2020 Risk Factor ranking. All forms were posted to the HMP project website as shown in Figure 3.4-1.

Figure 3.4-1 Venango County HMP Website



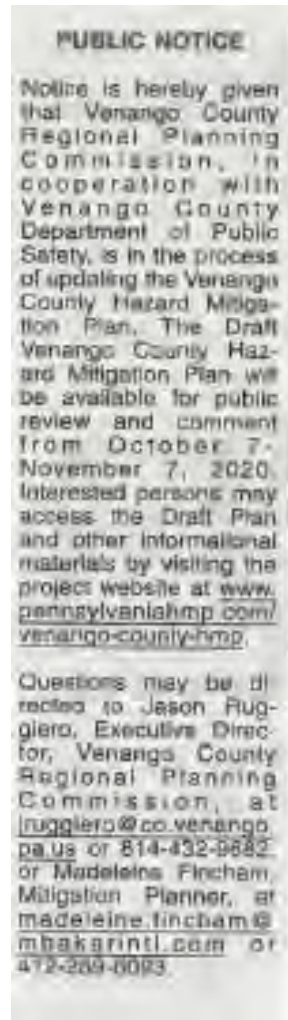
Throughout the planning process there were three touchpoints made with the public, which allowed for public participation.

The first form of public outreach was conducted through making the website publicly available. The Venango County HMP Website located at <https://www.pennsylvaniahmp.com/venango-hmp> was made public. This link was given to municipal officials who were encouraged to share the link publicly. Throughout the planning process many materials were posted on the website including meeting materials, planning resources and plan update announcements.

The second way that outreach was conducted to the public was through the Venango County HMP: Community Hazard Mitigation Survey, which asks questions about risk perception and individual preparedness. In order to gain public input through this survey, the survey link was posted to the project website and the county website, as well as posted to a local online newspaper, the Venango Explorer, a link to the survey was also provided to municipal officials to share with their communities.

The third touchpoint was a public notice which was printed in the October 3rd edition of the News Herald, a newspaper serving the Venango County area. The notice encouraged stakeholders to visit the county HMP website and review the Draft Plan and provide feedback.

Figure 3.4-2 Public Notice in The News Herald on October 3rd, 2020



Stakeholder outreach documentation including meeting invitations, e-mails, sign-in sheets, and completed surveys and forms are included in Appendix C – Meeting and Other Participation Documentation.

3.5 *Multi-Jurisdictional Planning*

This HMP update was developed using a multi-jurisdictional approach. With funding support from FEMA, the County had resources such as technical expertise and data, which local jurisdictions lacked, but involvement from local municipalities has been critical to the collection of local knowledge relating to hazard events and mitigation activities. Local municipalities also have the legal authority to enforce compliance with land use planning and development issues.

The Planning Team carried out extensive outreach to ensure that as many municipalities as possible met the participation requirement. With the COVID-19 pandemic ongoing and social distancing requirements in place, all meetings and workshops were held virtually. The Planning Team mailed paper invitations to municipalities weeks in advance of each meeting to ensure that adequate notice was given of each meeting. The Planning Team also sent email invitations ahead

of each meeting with the meeting information and detailed instructions on how to access the virtual workshops. Additionally, the Planning Team sent reminder emails to each participant days before each meeting. However, as a rural county many Venango County stakeholders lack highspeed internet connection making participating fully in virtual meetings difficult. Additionally, many of Venango County's stakeholders occupy volunteer or unpaid positions and hold full time jobs in addition to their responsibilities as local CEO, Secretary, or EMC. The Planning Team held each meetings in two identical sessions to accommodate stakeholder schedules. Stakeholders unable to attend meetings could access all meeting material (e.g. meeting presentations, required forms, and resource documents) via the project website and were encouraged to reach out with any questions or requests for additional materials. To maximize participation, the Planning Team reached out individually to each municipality. Through a mixture of emails with personalized forms and directions as well as phone calls and one-on-one trainings, the Planning Team worked to make the process as easy as possible for participants. Dates of mailed invitations, follow-up e-mails, and calls can be found in Appendix C – Meeting and Other Participation Documentation.

Table 3.5-1 documents jurisdictional presence at the meetings described in Section 3.3 and other involvement from each jurisdiction throughout the planning process. While each municipality was emailed invitations to all meetings and received email reminders prior to each session ultimately only 16 of 31 municipalities met the participation requirements as mandated by PEMA and FEMA. For municipalities that did not meet the participation requirement, the County intends to increase outreach in the next few years to encourage collaboration moving forward. Multi-jurisdictional participation is summarized in Table 3.5-1. Rows highlighted in green represent municipalities that attended at least one meeting and completed at least one form satisfying the participation requirement.

Table 3.5-1 Venango County HMP Update Stakeholders								
Municipality	Meetings				Forms			Met Participation Requirement
	Kick-Off (7/7/20)	RAMS (8/27/20)	1-on-1	Public Meeting	Hazard-Risk	Capability Assessment	Mitigation Action	
Allegheny Township	X							
Barkeyville Borough	X							
Canal Township								
Cherrytree Township	X					X	X	X
Clinton Township		X		X		X	X	X
Clintonville Borough								
Cooperstown Borough								
Cornplanter Township	X			X	X	X	X	X
Cranberry Township	X					X	X	X
Emlenton Borough		X		X	X		X	X
Franklin, City of	X	X		X	X	X	X	X
Frenchcreek Township	X			X				
Irwin Township			X			X	X	X
Jackson Township								
Mineral Township	X							
Oakland Township								
Oil City, City of	X	X		X	X	X	X	X
Oil Creek Township								
Pinegrove Township		X		X				
Pleasantville Borough				X		X	X	X
Plum Township		X			X	X	X	X
Polk Borough				X		X	X	X
President Township								
Richland Township	X			X	X	X	X	X
Rockland Township	X	X	X		X	X		X
Rouseville Borough	X			X		X	X	X
Sandycreek Township	X			X				

Scrubgrass Township	X	X		X		X		X
Sugarcreek Borough								
Utica Borough	X			X	X		X	X
Victory Township								
Total	15	8	2	14	8	14	14	16

4 Risk Assessment

4.1 Update Process Summary

The risk assessment provides a factual basis for activities proposed by the County in their mitigation strategy. Hazards that may affect Venango County are identified and defined in terms of location and geographic extent, magnitude of impact, previous events, and likelihood of future occurrence. The Risk Assessment section of the Venango County HMP update utilizes existing data and analysis from the previous Federal Emergency Management Agency (FEMA)-approved HMP as well as more recent data and analysis on hazards occurring during the last five years.

In 2010, Venango County profiled the following hazards: flooding, tornadoes, severe winter weather, earthquakes, landslides, drought, wildfire, pandemic, dam failure, and environmental hazards. All of these hazards were carried forward to the 2015 HMP. The 2015 Plan expands the environmental hazards profile to include a discussion of gas pipeline transmission data. In addition to the original hazards, a new profile on radon was added to this plan.

In the 2015 HMP, hazard names were again refined to best match the Standard Operating Guidance. In addition, development, population, and growth trends in the County were evaluated vis-à-vis the Pennsylvania Standard List of Hazards and the 2013 Pennsylvania SSAHMP. The Planning Team assessed the change in risk for all hazards identified in the 2010 plan and voted on which hazards not previously identified but included in the Pennsylvania Standard State List of Hazards had the potential to impact Venango County using the Evaluation of Identified Hazard and Risk Form. After this hazard identification and evaluation, the Planning Team agreed to including Environmental Hazards - Gas Transmission Lines and Radon Exposure, as shown in Table 4.1-1 below.

HAZARD NAME	REASON FOR INCLUSION
Environmental Hazards – Gas Transmission Lines	<ul style="list-style-type: none"> The 2010 HMP contained a profile for Environmental Hazards that covered hazardous materials releases. For the 2015 update the HMPT felt that it was important to recognize the transmission pipelines that traverse through the County. Since 2015 additional transmission pipeline has been run within the County boundaries as well.
Radon	<ul style="list-style-type: none"> Recognition of high concentration of radon levels throughout the County and the potential public health impacts

For the 2020 plan the HMPSC made no changes to the hazards profiled in the 2015 HMP. Hazard profiles were then developed in order to define the characteristics of each hazard as they apply to Venango County. In addition, participating municipalities and stakeholders evaluated the impact of the profiled hazards on their jurisdiction using the Hazards in Your Community form (see Appendix C). These evaluations, together with discussion at

community meetings and research and analysis, allow the HMP to evaluate where municipal risk may deviate from the overall county-wide risk.

Following hazard identification and profiling, a vulnerability assessment was conducted for each hazard to identify the impact of both natural and human-made hazard events on people, buildings, infrastructure, and the community, as appropriate. Each hazard is discussed in terms of its potential impact on individual communities, including the types of structures that may be at risk. This assessment allows the County and its municipalities to focus on and prioritize local mitigation efforts on areas that are most likely to be damaged or require early response to a hazard event. A vulnerability analysis was performed which identifies structures, critical facilities, and/or populations that may be impacted during hazard events and describes what events can do to physical, social, and economic assets.

4.2 Hazard Identification

Pennsylvania's disaster history provides direction on the identification of hazards that may be of concern to Venango County and other parts of the commonwealth. An analysis of past declared disasters is the first step toward predicting the future susceptibility to that hazard. This section outlines the past disaster declarations as well as defines the hazards being profiled in the 2020 HMP.

4.2.1 Table of Presidential Disaster Declarations

Under the Stafford Act, there are two forms of presidential action that authorize federal disaster assistance dollars. *Presidential Emergency Declarations* are intended to spur activities that will protect property and strengthen public safety to lessen impacts or avoid a catastrophic event. *Presidential Disaster Declarations* are made as a result of a disaster event and provide supplemental coordination and financial assistance beyond the ability of state and local governments (McCarthy, 2011). Because of the difference in these declarations, a single event may qualify for both kinds of declarations.

There is no financial threshold for an Emergency Declaration, but there are two thresholds for Presidential Disaster Declarations established under the Stafford Act: a state and a county threshold. These thresholds are based on a formula that uses the population of the jurisdiction (as recorded in the decennial Census) times a set per capita indicator. As of federal fiscal year 2020, these thresholds are \$3.84 per capita for counties and \$1.53 per capita for the state. With a population of 54,984, the Venango County threshold is over \$200,000. State and county thresholds must be simultaneously attained for a Presidential Disaster Declaration to be issued.

Table 4.2.1-1 below displays the Presidential Disaster and Emergency Declarations that have affected Venango County from most to least recent.

Table 4.2.1-1 Venango County Presidential Disaster and Emergency Declarations			
DATE	DECLARATION	DECLARATION NUMBER	EVENT
March 2020	Disaster Declaration	4506	COVID-19 Pandemic
March 2020	Emergency Declaration	3441	COVID-19 Pandemic
October 2013	Disaster Declaration	4149	Severe Storms, Tornadoes, and Flooding
October 2012	Emergency Declaration	3356	Hurricane Sandy
September, 2005 (Emergency Declaration)	Emergency Declaration	3235	Hurricane Katrina Evacuation
August, 2003	Disaster Declaration	1485	Severe Storms, Tornadoes, and Flooding
July, 1996	Disaster Declaration	1130	Flooding
January, 1996	Disaster Declaration	1093	Flooding
January, 1996	Disaster Declaration	1085	Blizzard
June, 1985	Disaster Declaration	737	Severe Storms, High Winds, Tornadoes
June, 1981	Disaster Declaration	641	Severe Storms, Flooding
March, 1956	Disaster Declaration	51	Flood

4.2.2 Summary of Hazards

The HMPT was provided the Pennsylvania Standard List of Hazards (PEMA) to be considered for evaluation in the 2020 HMP. Following a review of the hazards considered in the 2015 HMP and the Standard List of Hazards, the Steering Committee along with input from the municipalities decided that the 2020 plan should identify, profile, and analyze 12 hazards. These 12 hazards include all hazards profiled in the 2015 plan.

Table 4.2.2-1 contains a complete list of the 12 hazards that have the potential to impact Venango County as identified through previous risk assessments, the County Hazards Vulnerability Analysis, and input from those that participated in the 2020 HMP update. Hazard profiles are included in Section 4.3 for each of these hazards.

Table 4.2.2-1 Definition of hazards profiled in the 2020 Venango County HMP Update	
PROFILED HAZARDS	DESCRIPTION
NATURAL	
Drought	Drought is defined as a deficiency of precipitation experienced over an extended period of time, usually a season or more. Droughts increase the risk of other hazards, like wildfires, flash floods, and landslides or debris flows. This hazard is of particular concern in Pennsylvania due to the prevalence of farms and other water-dependent industries, water-dependent recreation uses, and residents who depend on wells for drinking water.
Earthquake	An earthquake is the motion or trembling of the ground produced by sudden displacement of rock usually within the upper 10-20 miles of the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of underground caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, result in loss of life and injury to hundreds of thousands of persons, and disrupt the social and economic functioning of the affected area.'
Flood, Flash Flood, Ice Jam	Flooding is the temporary condition of partial or complete inundation of normally dry land, and it is the most frequent and costly of all natural hazards in Pennsylvania. Flash flooding is usually a result of heavy localized precipitation falling in a short time period over a given location, often along mountain streams and in urban areas where much of the ground is covered by impervious surfaces. Winter flooding can include ice jams which occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melt combined with heavy rains can cause frozen rivers to swell, which breaks the ice layer on top of a river. The ice layer often breaks into large chunks, which float downstream, piling up in narrow passages and near other obstructions such as bridges and dams.

Table 4.2.2-1 Definition of hazards profiled in the 2020 Venango County HMP Update	
PROFILED HAZARDS	DESCRIPTION
Hurricane, Tropical Storm, & Nor'easter	Hurricanes, tropical storms, and nor'easters are classified as cyclones and are any closed circulation developing around a low-pressure center in which the winds rotate counterclockwise (in the Northern Hemisphere) and whose diameter averages 10-30 miles across. Potential threats from hurricanes include powerful winds, heavy rainfall, storm surges, coastal and inland flooding, rip currents, tornadoes, and landslides. The Atlantic hurricane season runs from June 1 to November 30.'
Landslide	In a landslide, masses of rock, earth or debris move down a slope. Landslides can be caused by a variety of factors, including earthquakes, storms, fire, and human modification of land. Areas that are prone to landslide hazards include previous landslide areas, areas on or at the base of slopes, areas in or at the base of drainage hollows, developed hillsides with leach field septic systems, and areas recently burned by forest or brush fires.
Pandemic and Infectious Disease	A pandemic is a global outbreak of disease that occurs when a new virus emerges in the human population, spreading easily in a sustained manner, and causing serious illness. An epidemic describes a smaller-scale infectious outbreak, within a region or population, that emerges at a disproportional rate. Infectious disease outbreaks may be widely dispersed geographically, impact large numbers of the population, and could arrive in waves lasting several months at a time.
Radon Exposure	Radon is a radioactive gas produced by the breakdown of uranium in soil and rock that can lead to lung cancer in people exposed over a long period of time. Most exposure comes from breathing in radon gas that enters homes and buildings through foundation cracks and other openings. According to the DEP, approximately 40% of Pennsylvania homes have elevated radon levels.'

Table 4.2.2-1 Definition of hazards profiled in the 2020 Venango County HMP Update	
PROFILED HAZARDS	DESCRIPTION
Tornado, Wind Storm	A tornado is a narrow, violently rotating column of air that extends from the base of a thunderstorm to the ground. About 1,250 tornadoes hit the U.S. each year, with about 16 hitting Pennsylvania. Damaging winds exceeding 50-60 miles per hour can occur during tornadoes, severe thunderstorms, winter storms, or coastal storms. These winds can have severe impacts on buildings, pulling off the roof covering, roof deck, or wall siding and pushing or pulling off the windows.
Wildfire	A wildfire is an unplanned fire that burns in a natural area. Wildfires can cause injuries or death and can ruin homes in their path. Wildfires can be caused by humans or lightning, and can happen anytime, though the risk increases in period of little rain. In Pennsylvania, 98% of wildfires are caused by people.
Winter Storm	A winter storm is a storm in which the main types of precipitation are snow, sleet, or freezing rain. A winter storm can range from a moderate snowfall or ice event over a period of a few hours to blizzard conditions with wind-driven snow that lasts for several days. Most deaths from winter storms are not directly related to the storm itself, but result from traffic accidents on icy roads, medical emergencies while shoveling snow, or hypothermia from prolonged exposure to cold.
HUMAN-MADE	
Dam Failure	Dam failure is the uncontrolled release of water (and any associated wastes) from a dam. This hazard often results from a combination of natural and human causes, and can follow other hazards such as hurricanes, earthquakes, and landslides. The consequences of dam failures can include property and environmental damage and loss of life.

Table 4.2.2-1 Definition of hazards profiled in the 2020 Venango County HMP Update	
PROFILED HAZARDS	DESCRIPTION
Environmental Hazards	<p>Hazardous material releases can contaminate air, water, and soils and have the potential to cause injury or death. Dispersion can take place rapidly when transported by water and wind. While often accidental, releases can occur as a result of human carelessness, intentional acts, or natural hazards. When caused by natural hazards, these incidents are known as secondary events.</p> <p>Many of the hazards associated with conventional oil and gas extraction relate to the contamination of surface and subsurface waters. Abandoned oil and gas wells that are not properly plugged can contaminate groundwater and pollute domestic drinking water wells. In addition, surface waters and soil can be contaminated by brine, a salty wastewater product of oil and gas well drilling, or by oil spills. This pollution can degrade public drinking water supplies and disrupt aquatic ecosystems.</p> <p>In addition to the hazards associated with conventional oil and gas extraction, potential hazards from Marcellus Shale gas wells include surface water depletion affecting drinking water supplies and aquatic ecosystems; contaminated surface and groundwater resulting from hydraulic fracturing and the recovery of contaminated hydraulic fracturing fluid; and mishandling of solid toxic waste.</p> <p>Pipeline failures are low-probability, potentially high-consequence events. Although gas and liquid pipeline failures are infrequent, the hazardous and inflammable materials released by these events can pose a significant threat to public safety and the built and natural environment. Explosions associated with pipeline failures, for example, can cause severe injury to nearby residents and destroy homes and other property.</p>

4.3 Hazard Profiles and Vulnerability Analysis

NATURAL HAZARDS

4.3.1 Drought

4.3.1.1 Location and Extent

Drought is a natural climatic condition which occurs in virtually all climates, the consequence of a natural reduction in the amount of precipitation experienced over a long period of time, usually a season or more in length. High temperatures, prolonged winds, and low relative humidity can exacerbate the severity of drought. This hazard is of particular concern in Pennsylvania due to the presence of farms as well as water-dependent industries and recreation areas across the Commonwealth. A prolonged drought



could severely impact these sectors of the local economy, as well as residents who depend on wells for drinking water and other personal uses (National Drought Mitigation Center, 2006).

4.3.1.2 Range of Magnitude

Droughts can have varying effects, depending upon what month they occur, severity, duration and location. Some droughts may have their greatest impact on agriculture and even short term droughts, when coupled with extreme temperatures can be devastating. Others may impact water supply or other water use activities such as recreation. Most droughts cause direct impacts to aquatic resources. Drought events are defined by rainfall amounts, vegetation conditions, soil-moisture conditions, water levels in reservoirs, stream flow, agricultural productivity, or economic impacts.

Hydrologic drought events result in a reduction of stream flows, reduction of lake/reservoir storage, and a lowering of groundwater levels. These events have adverse impacts on public water supplies for human consumption, rural water supplies for livestock consumption and agricultural operations, water quality, natural soil water or irrigation water for agriculture, soil moisture, conditions conducive to wildfire events, and water for navigation and recreation.

The Commonwealth uses five parameters to assess drought conditions:

- Stream flows (compared to benchmark records);
- Precipitation (measured as the departure from normal, 30 year average precipitation);
- Reservoir storage levels in a variety of locations (especially three New York City reservoirs in Upper Delaware River Basin);
- Groundwater elevations in a number of counties (comparing to past month, past year and historic record); and
- The Palmer Drought Index (Table 4.3.1-1), a measure of soil moisture computed by the National Weather Service.

Table 4.3.1-1 Palmer Drought Severity Index (PSDI) classifications (NDMC, 2009)		
SEVERITY CATEGORY	PSDI VALUE	DROUGHT STATUS
Extremely wet	4.0 or more	none
Very wet	3.0 to 3.99	none
Moderately wet	2.0 to 2.99	none
Slightly wet	1.0 to 1.99	none
Incipient wet spell	0.5 to 0.99	none
Near normal	0.49 to -0.49	none
Incipient dry spell	-0.5 to -0.99	none
Mild drought	-1.0 to -1.99	none
Moderate drought	-2.0 to -2.99	Watch
Severe drought	-3.0 to -3.99	Warning
Extreme drought	-4.0 or less	Emergency

In Pennsylvania, PEMA has primary responsibility for managing droughts with direct support from the Department of Environmental Protection (DEP). According to *Drought Management in Pennsylvania* (2102), PEMA and DEP use the following three stages to describe and manage droughts. They are listed in order of increasing severity:

- **Drought Watch:** A period to alert government agencies, public water suppliers, water users and the public regarding the potential for future drought-related problems, Drought Watches are invoked when three or more drought indicators are present for a county or group of counties. The focus is on increased monitoring, awareness and preparation for response if conditions worsen. A request for voluntary water conservation is made. The objective of voluntary water conservation measures during a drought watch is to reduce water uses by 5 percent in the affected areas. Due to varying conditions, individual water suppliers or municipalities may be asking for more stringent conservation actions.
- **Drought Warning:** A concentrated management phase designed to marshal all available resources to respond to actual emergency conditions, to avoid depletion of water sources, to assure at least minimum water supplies to protect public health and safety, to support essential and high priority water uses and to avoid unnecessary economic dislocations. During this phase, mandatory restrictions are imposed on nonessential water uses as provided for in 4 PA Code Chapter 119. The objective of water use restrictions and other conservation measures during this phase is to reduce consumptive water use in the affected area by at least 15 percent, and to reduce total use to the extent necessary to preserve public water system supplies, to avoid or mitigate local or area shortages, and to assure equitable sharing of limited supplies. During a drought emergency, public water suppliers are authorized to institute water rationing, if mandatory restrictions prove insufficient to protect supplies and if approved by the Commonwealth Drought Coordinator.
- **Drought Emergency:** This stage is a phase of concerted management operations to marshal all available resources to respond to actual emergency conditions, to avoid depletion of water sources, to assure at least minimum water supplies to protect public health and safety, to support essential and high priority water uses and to avoid unnecessary economic dislocations. It is possible during this phase to impose mandatory restrictions on non-essential water uses that are provided in the Pennsylvania Code (Chapter 119), if deemed necessary and if ordered by the Governor of Pennsylvania. The objective of water use restrictions (mandatory or voluntary) and other conservation measures during this phase is to reduce consumptive water use in the affected area by fifteen percent, and to reduce total use to the extent necessary to preserve public water system supplies, to avoid or mitigate local or area shortages and to assure equitable sharing of limited supplies.

In addition, local water rationing is an option for communities:

- **Local Water Rationing:** Although not a drought phase, local municipalities may, with the approval of the PA Emergency Management Council, implement local water rationing to share a rapidly dwindling or severely depleted water supply in designated water supply

service areas. These individual water rationing plans, authorized through provisions of the Pennsylvania Code (Chapter 120), will require specific limits on individual water consumption to achieve significant reductions in use. Under both mandatory restrictions imposed by the Commonwealth and local water rationing, procedures are provided for granting of variances to consider individual hardships and economic dislocations.

The worst historical drought event in Pennsylvania occurred in 1963, when precipitation statewide averaged below normal for ten of twelve months. Drought emergency status led to widespread water use restrictions, and reservoirs dipped to record low levels. Corn, hay, and other agricultural products shriveled in parched fields, causing economic losses. Governor William Scranton sought drought aid for Pennsylvania in the face of mounting agricultural losses, and the event became a presidentially declared disaster in September 1963 (Gelber, 2002).

The Pennsylvania Crop Insurance Education and Participation Program (a partnership of the US Department of Agriculture, the Pennsylvania Department of Agriculture, and Penn State University) estimated that drought was the top reason for crop failure in Pennsylvania from 1981-2009; roughly 59% of all crop failures were due to drought.

Environmental impacts of drought include:

- Hydrologic effects – lower water levels in reservoirs, lakes and ponds; reduced streamflow; loss of wetlands; estuarine impacts; groundwater depletion and land subsidence; effects on water quality such as increases in salt concentration and water temperature; decrease in supply to fight fires
- Damage to animal species – lack of feed and drinking water; disease; loss of biodiversity; migration or concentration; and reduction and degradation of fish and wildlife habitat
- Damage to plant communities – loss of biodiversity; loss of trees from urban landscapes and wooded conservation areas
- Increased number and severity of fires
- Reduced soil quality
- Air quality effects – dust and pollutants
- Loss of quality in landscape through loss in plants and plant diversity
- Loss of water for navigation and recreation
- Increase in nitrate levels which can have health impacts on pregnant women and children.

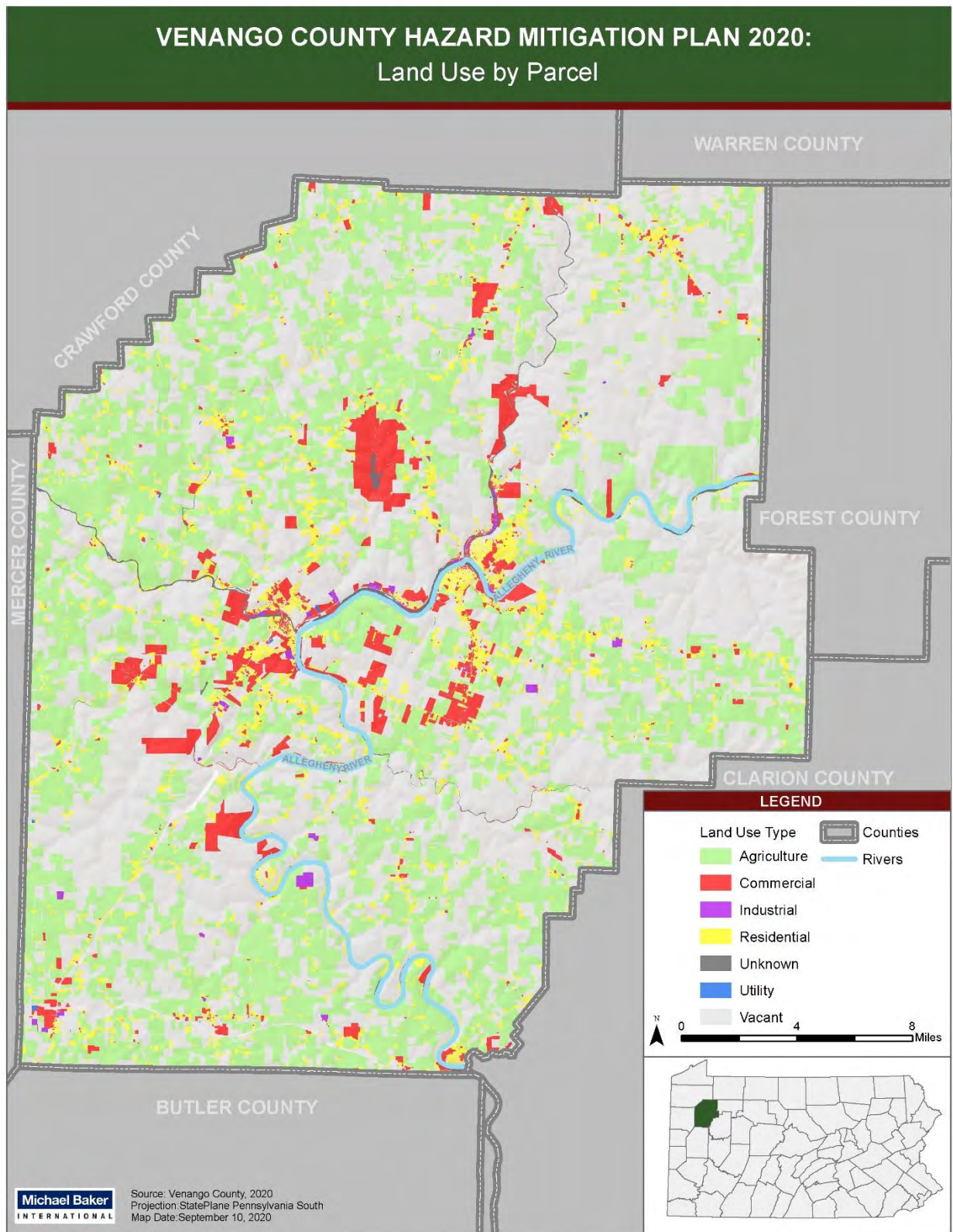
The main type of drought that affects Venango County is a hydrological drought. A hydrologic drought results when there is a shift in normal weather patterns over an area causing the amount of precipitation to fall significantly below the long-termed average. Conversely, a water management drought results not from a reduction in supply, but a disparity in supply versus demand. Poor water management practices and/or community planning generally cause this.

Droughts are regional climatic events, so when these events occur in Venango County, impacts are felt across the entire county as well as areas outside county boundaries. The spatial extent for areas of impact can range from localized areas in Pennsylvania to the entire

Mid-Atlantic region. Areas with extensive agricultural (farmland) land uses are most vulnerable to drought. Venango County has many agricultural lands, illustrated in Figure 4.3.1-1, , which are some of the most vulnerable in the county with regard to drought. Additionally, areas that heavily forested can also be negatively impacted by drought.

The worst-case scenario for Venango County would be a protracted drought that impacted all commercial crop production as well as livestock losses due to deficient water supplies.

Figure 4.3.1-1 Venango County Land Use Map



4.3.1.3 Past Occurrence

Between 1930 and 1994, the Commonwealth of Pennsylvania experienced five significant droughts: 1930-1934, 1939-1942, 1953-1955, 1961-1967, and 1991-1992. From mid-1991 through early-1992, the County experienced an extreme drought lasting almost one year, per the DEP. The DEP maintains the most comprehensive data on drought occurrences across Pennsylvania. Declared drought status for Venango County from 1980 to Present is shown in the following table. Descriptions for drought status categories (i.e. watch, warning, and emergency) are included in Section 4.3.1-1.

Table 4.3.1-2 Past drought events in Venango County (PA DEP 2014).			
DATE	DROUGHT STATUS	DATE	DROUGHT STATUS
Jul 7, 1988 – Aug 24, 1988	Watch	Jun 10, 1999 – Jun 18, 1999	Watch
Aug 24, 1988 – Dec 12, 1988	Warning	Jun 18, 1999 – July 20, 1999	Watch
Jun 28, 1991 – Jul 24, 1991	Watch	Jul 20, 1999 – Sep 30, 1999	Watch
July 24, 1991 – Aug 16, 1991	Warning	Sep 30, 1999 – Dec 16, 1999	Warning
Aug 16, 1991 – Sep 13, 1991	Emergency	Dec 16, 1999 – Feb 25, 2000	Warning
Sep 13, 1991 – Oct 21, 1991	Emergency	Feb 25, 2000 – May 5, 2000	Watch
Oct 21, 1991 – Jan 16, 1992	Emergency	Aug 24, 2001 – Nov 6, 2001	Watch
Jan 17, 1992 – Apr 20, 1992	Emergency	Nov 6, 2001 – Dec 5, 2001	Watch
Apr 20, 1992 – Jun 23, 1992	Warning	Dec 5, 2001 – Feb 12, 2002	Watch
June 23, 1992 – Sep 11, 1992	Watch	Feb 12, 2002 – May 13, 2002	Watch
Sep 1, 1995 – Sep 20, 1995	Watch	April 11, 2006 – June 30, 2006	Watch
Sep 20, 1995 – Nov 8, 1995	Watch	Aug 6, 2007 – Sept 5, 2007	Watch
Nov 8, 1995 – Dec 18, 1995	Watch	Sept 5, 2007 – Oct 5, 2007	Watch
Dec 3, 1998 – Dec 8, 1998	Watch	Oct 5, 2007 – Jan 11, 2008	Watch
Dec 8, 1998 – Dec 14, 1998	Warning	Nov 7, 2008 – Jan 26, 2009	Watch
Dec 14, 1998 – Dec 16, 1998	Warning	Sep 16, 2010 – Nov 10, 2010	Watch
Dec 16, 1998 – Jan 15, 1999	Warning	Nov 10, 2010 – Dec 17, 2010	Watch
Jan 15, 1999 – Mar 15, 1999	Warning	Aug 5, 2011 – Sep 2, 2011	Watch

DATE	DROUGHT STATUS	DATE	DROUGHT STATUS
Mar 15, 1999 – Jun 10, 1999	Watch	Jul 19, 2012 – Aug 31, 2012	Watch

As can be seen in Table 4.3.1-2 above, Venango County has not had a severe drought since 2000. According to DEP, the County has had seven Warnings and 25 Watches since the last drought emergency in August 1992. The USDA Risk Management Agency operates and manages the Federal Crop Insurance Corporation program. Since Venango County farms are eligible for crop insurance, it is possible to determine agricultural losses due to drought in the county.

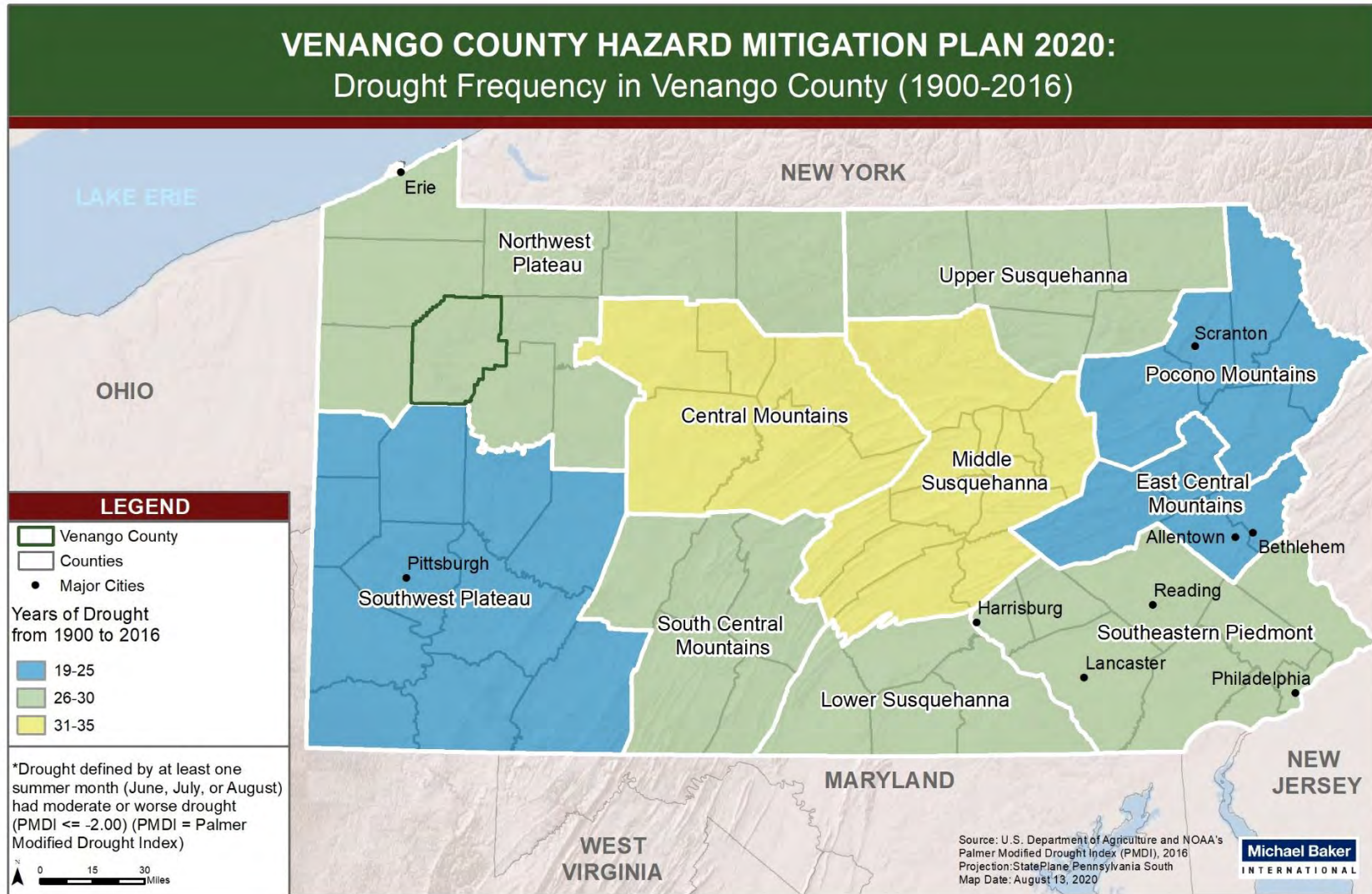
Of the crop losses summarized in Table 4.3.1-3, the crop that suffered the most substantial losses (as defined by indemnity amount) was corn. Below provides the total indemnity amount by crop type for crop years 1952 through 2013.

CROP	INDEMNITY AMOUNT (\$)
Corn	\$71,660
Fresh Market Sweet Corn	\$4,778
Oats	\$2,722
Potatoes	\$2,009
Soybeans	\$63,660
Wheat	\$3,385
All Other Crops	\$316,963
TOTAL	\$465,177.10

4.3.1.4 Future Occurrence

It is difficult to forecast the severity and frequency of future drought events. Based on national data from 1895 to 1995, Venango County and the rest of Pennsylvania’s Northwest Plateau has been in severe or extreme drought approximately 26 to 30 years from 1900-2016, shown in Figure 4.3.1-2. However, changing weather patterns have made many types of disasters more frequent and extreme. As temperatures climb, higher evaporation rates make droughts worse. The annual number of very hot days is growing and impacting areas that previously did not experience this hazard. Climate Central, an independent organization of scientists, predicts that drought intensity will more than double in the region around the City of Pittsburgh by 2050. The group also predicts that warming intensity will double by 2050, and there will be a sharp increase in heatwaves (Climate Central, 2019). The future occurrence of drought can be considered a 1% & 49.9% probability according to the Risk Factor Methodology (see Table 4.4-1).

Figure 4.3.1-2 Drought Frequency



4.3.1.5 Vulnerability Assessment

The most significant losses resulting from drought events are typically found in the agriculture sector of the County's economy. The 1999 Gubernatorial Proclamation was issued in part due to significant crop damage. Preliminary estimates by the Department of Agriculture indicated possible crop losses across the Commonwealth in excess of \$500 million. This estimate did not include a 20% decrease in dairy milk production which also resulted in million dollar losses (NDMC, 2009).

While these were statewide impacts, they illustrate the potential for droughts to severely impair the local economy in more agricultural communities. As of the 2017 Census of Agriculture, the US Department of Agriculture counted 409 farms in Venango County, a 12% decrease in farms since 2012. Nearly 53,400 acres of land are in farms, and average farm size is 130 acres. Statewide, Venango County ranks 55th out of the 67 counties in Pennsylvania for market value of agricultural products sold. In 2017, the total market value of agricultural products sold was \$14,781,000. Almost 60% of the total products come from crop sales. Venango County's strongest agricultural performance is in grains, oilseeds, dry beans, and dry peas as well as in fruits, tree nuts, and berries and nursery, greenhouse, floriculture, and sod. According to the Agricultural Census, the county has a population of 8,459 layers (chickens), 5,461 cattle and calves, 1,063 sheep and lambs, and 586 horses and ponies.

Wildfire is the most severe secondary effect associated with drought. Wildfires can devastate wooded and agricultural areas, threatening natural resources and farm production facilities. Prolonged drought conditions can cause major ecological changes, such as increases in scrub growth, flash flooding, and soil erosion.

It is important to recognize that another vulnerability in Venango County is a threat to the County's water supply. Venango County residents who private domestic wells are more vulnerable to droughts because their drinking water can literally dry up, but public supplies may also be at risk.

Table 4.3.1-4 shows the number of domestic wells per municipality. It is important to note that the well data was obtained from the Pennsylvania Groundwater Information System (PaGWIS). PaGWIS relies on voluntary submissions of well record data by well drillers; as a result, it is not a complete database of all domestic wells in the County. This is the most complete dataset of domestic wells available.

Table 4.3.1-4 PaGWIS Domestic Water Wells Drilled Per Municipality (PA DEP, 2020).

MUNICIPALITY	NUMBER OF REPORTED DOMESTIC WELLS	MUNICIPALITY	NUMBER OF REPORTED DOMESTIC WELLS
Allegheny Township	77	City of Oil City	10
Barkeyville Borough	76	Oilcreek Township	137
Canal Township	254	Pinegrove Township	164
Cherrytree Township	253	Pleasantville Borough	9
Clinton Township	136	Plum Township	165
Clintonville Borough	3	Polk Borough	62
Cooperstown Borough	17	President Township	248
Cornplanter Township	351	Richland Township	39
Cranberry Township	521	Rockland Township	285
Emlenton Borough	11	Rouseville Borough	106
City of Franklin	24	Sandycreek Township	417
Frenchcreek Township	482	Scrubgrass Township	101
Irwin Township	220	Sugarcreek Township	493
Jackson Township	205	Utica Borough	50
Mineral Township	151	Victory Township	127
Oakland Township	321		

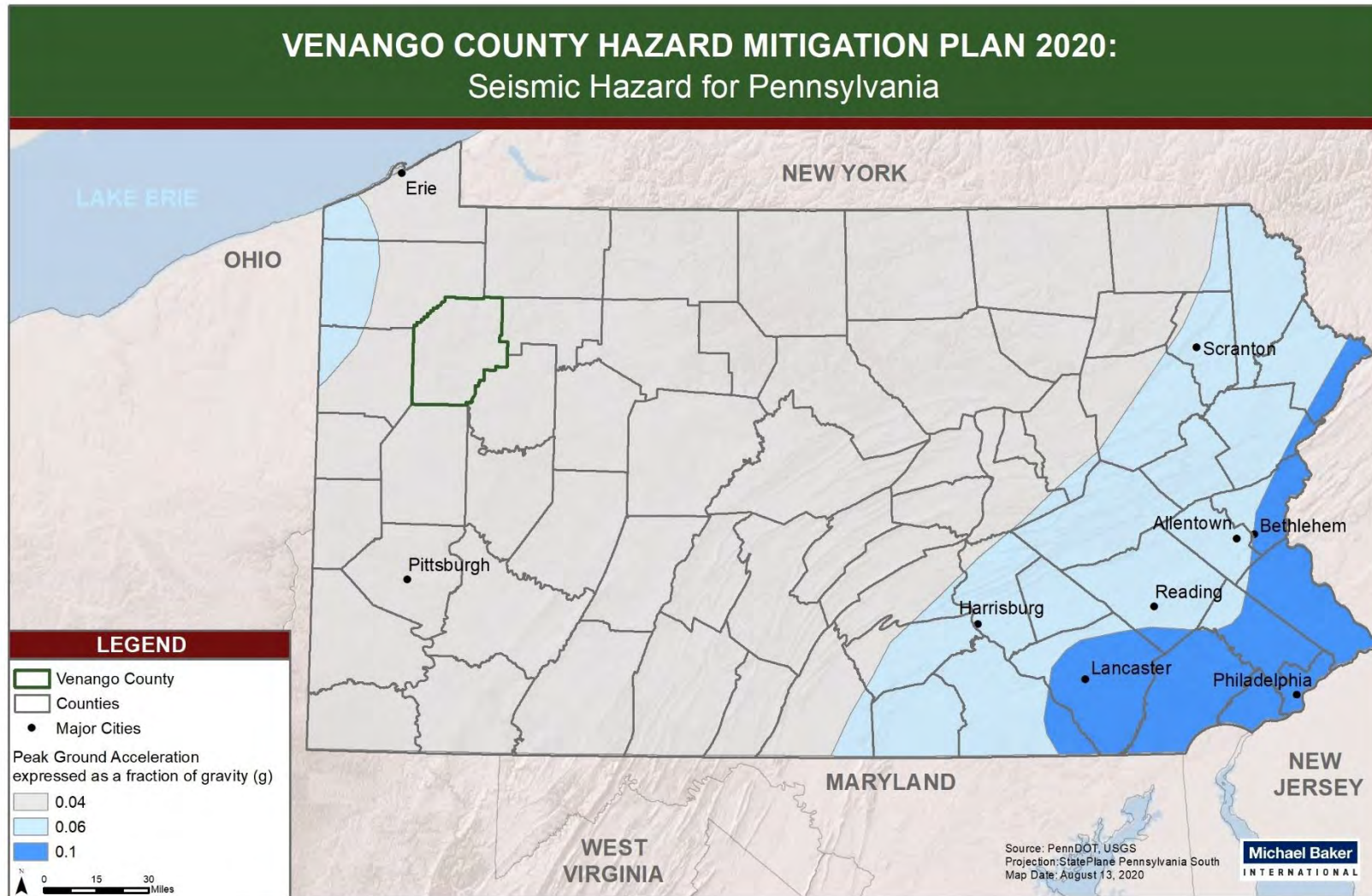
4.3.2 Earthquakes

4.3.2.1 Location and Extent

Earthquake events in Pennsylvania typically do not impact areas greater than 100 km from the epicenter, and according to available data it does not appear that there have been any earthquake epicenters within Venango County. The area is generally not known for seismicity, and USGS downgraded the probabilistic seismic hazard for much of Pennsylvania in 2014. Figure 4.3.2-1 shows the 2014 earthquake hazard in Pennsylvania and Venango, expressed as the two-percent probability of exceedance in 50 years of peak ground acceleration (g). Venango lies in the 0.04 zone, indicating that the hazard is minimal. Earthquakes originating from outside Pennsylvania can also impact the Commonwealth, as was the case with a magnitude 5.8 earthquake in Virginia in August 2011 (see Section 4.3.2.3).



Figure 4.3.2-1 Seismic Hazard for Pennsylvania



4.3.2.2 Range of Magnitude

Earthquake magnitude is often measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake. Table 4.3.2-1 summarizes Richter Scale magnitudes as they relate to the spatial extent of impacted areas. Earthquake epicenters have occurred around Venango County in Crawford and Mercer Counties ranging from 3.0 to greater than 5.0 on the Richter Scale. Pennsylvania has not experienced any earthquakes with a magnitude greater than 6.0.

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
Less than 3.5	Generally not felt, but recorded.
3.5-5.4	Often felt, but rarely causes damage.
Under 6.0	At most, slight damage to well-designed buildings; can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive up to about 100 kilometers from epicenter.
7.0-7.9	Major earthquake; can cause serious damage over large areas.
8.0 or greater	Great earthquake; can cause serious damage in areas several hundred kilometers across.

The Richter Scale does not give any indication of the impact or damage of an earthquake, although it can be inferred that higher magnitude events cause more damage. The impact an earthquake event has on an area is typically measured in terms of earthquake intensity. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale based on direct and indirect measurements of seismic effects. A detailed description of the Modified Mercalli Intensity Scale is shown in Table 4.3.2-2. The earthquakes that occur in Pennsylvania originate deep with the Earth’s crust, and not on an active fault. Based on historical data of earthquakes with a recorded intensity, little damage is expected from earthquake events. However, since the worst earthquake recorded in Pennsylvania was a magnitude 5.2, a worst-case scenario for this hazard would be if an earthquake of similar magnitude occurred in Venango County or near the border in an adjacent county, causing mild damage in populated areas.

SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
I	Instrumental	Usually detected only on seismographs.	<4.2
II	Feeble	Felt only by a few persons at rest, especially on upper floors of buildings.	
III	Slight	Felt quite noticeably indoors, especially on upper floors. Most people don't recognize it as an earthquake (i.e. a truck rumbling).	
IV	Moderate	Can be felt by people walking; dishes, windows, and doors are disturbed.	

Table 4.3.2-2 Modified Mercalli Intensity Scale with associated impacts.			
SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
V	Slightly Strong	Sleepers are awoken; unstable objects are overturned.	<4.8
VI	Strong	Trees sway; suspended objects swing; objects fall off shelves; damage is slight.	<5.4
VII	Very Strong	Damage is negligible in buildings of good design and construction, slight to moderate in well-built ordinary structures, and considerable in poorly built or badly designed structures; some chimneys are broken.	<6.1
VIII	Destructive	Damage is slight in specially designed structures; considerable in ordinary, substantial buildings. Moving cars become uncontrollable; masonry fractures, poorly constructed buildings damaged.	<6.9
IX	Ruinous	Some houses collapse, ground cracks, pipes break open; damage is considerable in specially designed structures; buildings are shifted off foundations.	
X	Disastrous	Some well-built wooden structures are destroyed; most masonry and frame structures are destroyed along with foundations. Ground cracks profusely; liquefaction and landslides widespread.	<7.3
XI	Very Disastrous	Most buildings and bridges collapse, roads, railways, pipes and cables destroyed.	<8.1
XII	Catastrophic	Total destruction; trees fall; lines of sight and level are distorted; ground rises and falls in waves; objects are thrown upward into the air.	>8.1

Since the worst earthquake recorded in Pennsylvania was a magnitude 5.2, a worst-case scenario for this hazard would be if an earthquake of similar magnitude occurred in Venango County or near the border in an adjacent county, causing mild damage in populated areas. Structural damage would not be expected in this scenario for most buildings, but blighted structures or those in a state of disrepair might experience further structural damage.

Environmental impacts of earthquakes can be numerous, widespread, and devastating, particularly if indirect impacts are considered. The worst-case scenario, although highly unlikely, for Venango County would be the occurrence of a Mercalli Scale XII earthquake with the following consequences:

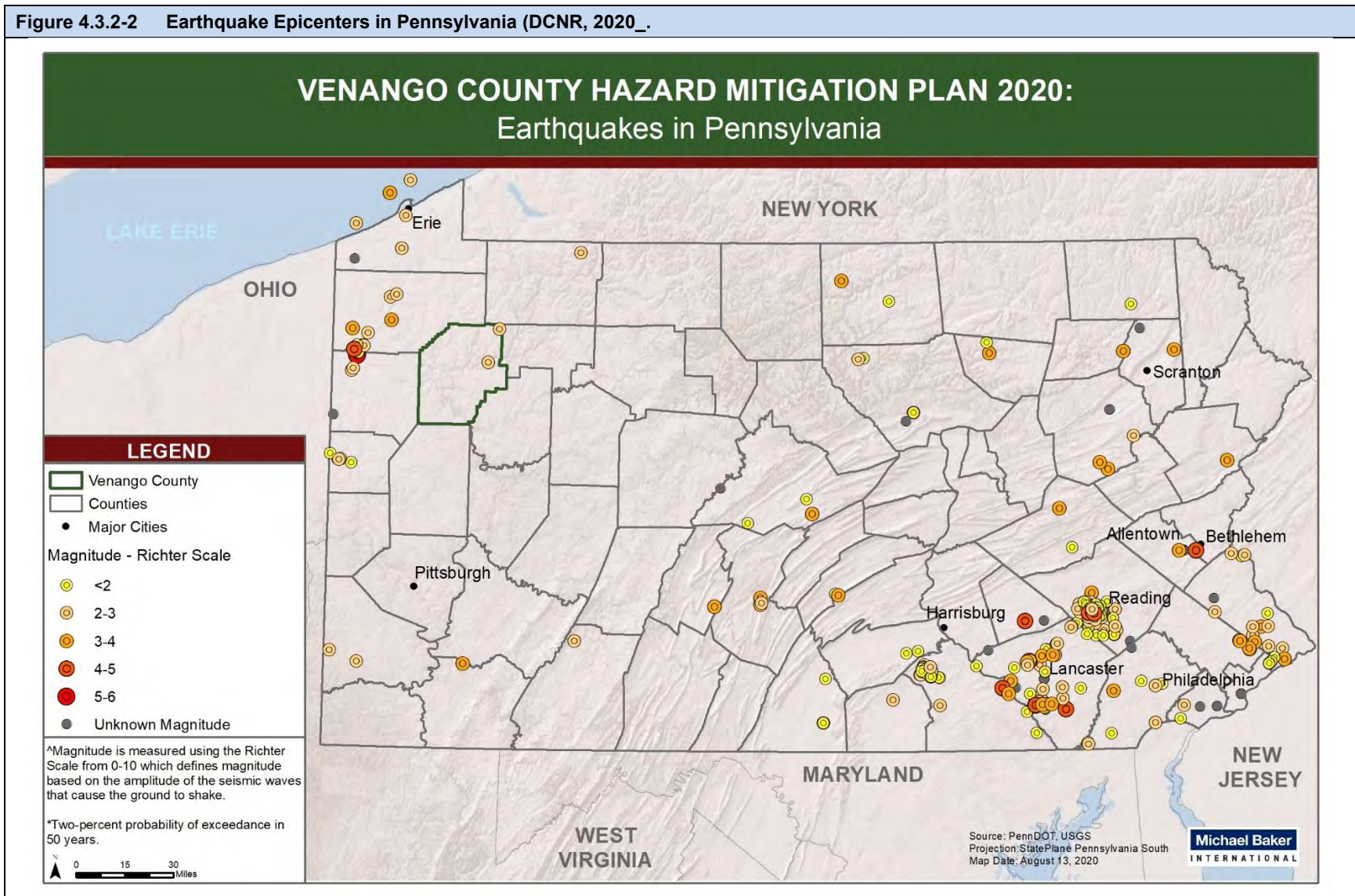
- Induced tsunamis and flooding or landslides and avalanches;
- Poor water quality;
- Damage to vegetation; and

- Breakage in sewage or toxic material containments.
- However, because of its geographic location, these impacts are extremely unlikely to occur in Venango County

4.3.2.3 Past Occurrence

The most recent occurrence to take place in Venango County was a 2.13 magnitude earthquake recorded in April 2016 in the north east corner Venango County. Prior to that a 2.3 magnitude earthquake was recorded in 2008 in the central part of the county. Figure 4.3.2-2 shows recorded earthquake events in Pennsylvania between 1990 and 2020. Earthquake events are shown in other areas of Pennsylvania, with a concentration of events occurring to the east of Cumberland County between Lancaster and Reading. Nearby Mercer and Crawford counties have experienced several large earthquakes in recent history. In 1998 a 5.2 magnitude earthquake took place on the border between the two counties. No injury or severe damage from earthquake events has been reported in Venango County.

Figure 4.3.2-2 Earthquake Epicenters in Pennsylvania (DCNR, 2020_.



4.3.2.4 Future Occurrence

One way to express an earthquake's severity is to compare its acceleration to the normal acceleration due to gravity. Peak ground acceleration (PGA) measures the strength of ground movements in this manner. PGA represents the rate in change of motion of the earth's surface during an earthquake as a ratio of the established rate of acceleration due to gravity. As shown in Figure 4.3.2-1, Venango County has a very low PGA ratio of 0.04. In contrast, the western United States has a peak ground acceleration ten times that of Venango County indicate that the future likelihood of an earthquake is unlikely as defined by the Risk Factor Methodology probability criteria (see Table 4. 1-1).

4.3.2.5 Vulnerability Assessment

The magnitude of earthquakes in seen in Pennsylvania are small and shallow. Based on the past history of earthquake events in and near Venango County, the County's vulnerability to this hazard is expected to be low. In the event of an earthquake, unanchored objects may be upset, but few damages are expected.

4.3.3 Flood, Flash Flood, Ice Jam

4.3.3.1 Location and Extent

A flood is a natural event for streams and rivers. Floodplains are lowlands adjacent to rivers, streams and creeks that are subject to recurring floods. The size of the floodplain is described by the recurrence interval of a given flood. Flood recurrence intervals are explained in more detail in Section 4.3.3.4. However, in assessing the potential spatial extent of flooding it is important to know that a floodplain associated with a flood that has a 10 percent chance of occurring in a given year is smaller than the floodplain associated with a flood that has a 0.2% annual chance of occurring.



The National Flood Insurance Program (NFIP), for which Flood Insurance Rate Maps (FIRMs) are published, identifies the 1% annual chance flood. This 1% annual chance flood event is used to delineate the Special Flood Hazard Area (SFHA) and identify Base Flood Elevations. Figure 4.3.3-1 illustrates these terms. The SFHA serves as the primary regulatory boundary used by FEMA, the Commonwealth of Pennsylvania and Venango County local governments.

Figure 4.3.3-1 Venango County Flood Zones

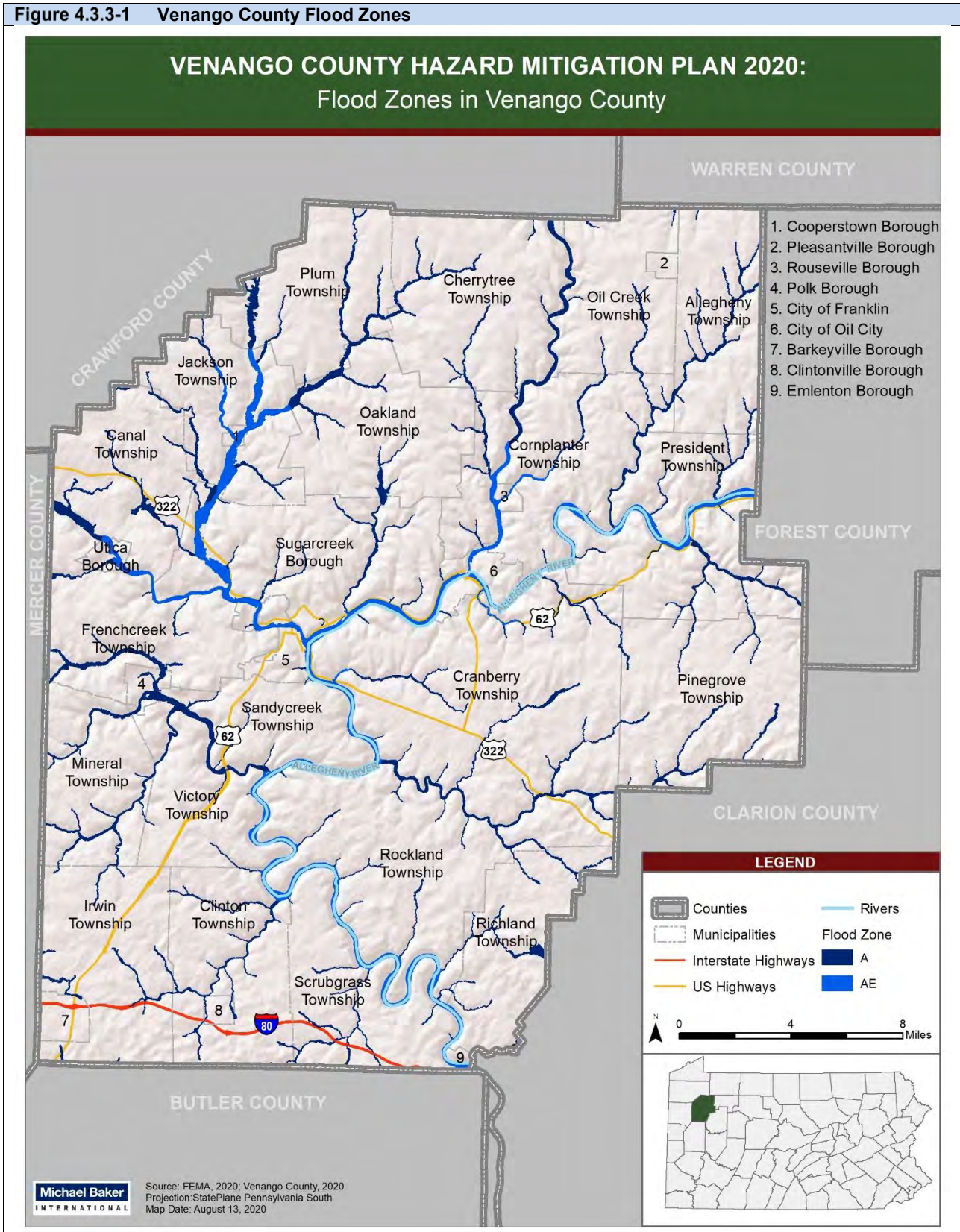
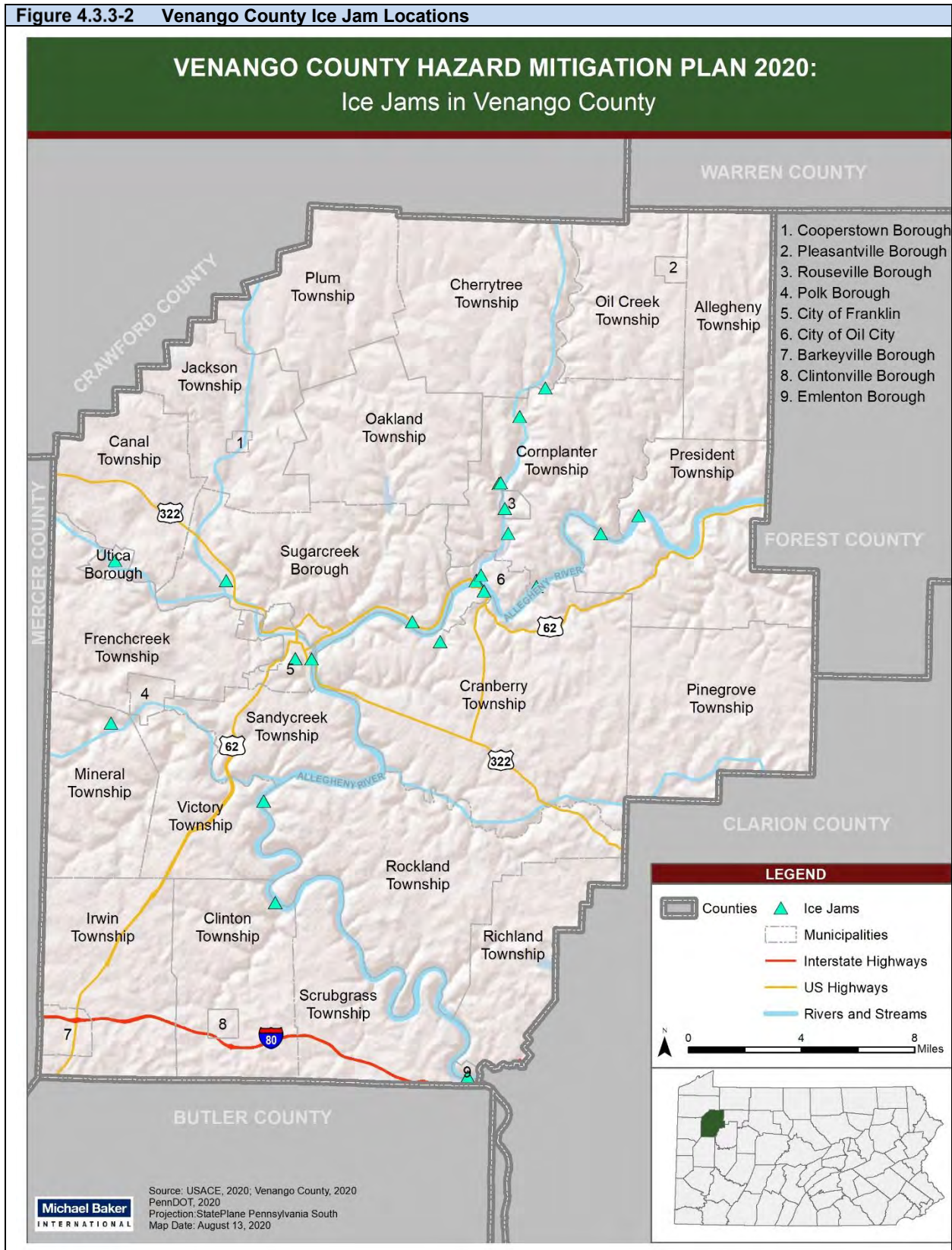


Figure 4.3.3-2 Venango County Ice Jam Locations



Venango County has FEMA effective Flood Insurance Rate Maps and a Countywide Flood Insurance Study. This study was conducted as a part of FEMA's Risk Mapping, Assessment, and Planning (Risk MAP) process and went effective on January 16, 2014. The purpose of the Risk MAP program is to assist communities nationwide to assess flood risk, encourage mitigation planning, and to strengthen local ability to make informed decisions about risk reduction. Individual map panels can be obtained from the FEMA Map Service Center (<http://www.msc.fema.gov>). These maps can be used to identify the expected spatial extent and elevation of flooding from a 1% and 0.2% annual chance event.

Of the 31 municipalities, 28 have determined SFHAs. The communities without SFHAs include Barkeyville Borough, Irwin Township, and Pleasantville Borough. The streams prone to flooding include: Chub Rub, Oil Creek, Sage Run, Morrison Run, Sugar Creek, and the Allegheny River. Typically flooding occurs from December to April.

Watersheds in Venango County include:

- East Sandy Creek
- French Creek
- Lower Allegheny River
- Oil Creek
- Pine Creek
- Sandy Creek
- Slippery Rock Creek
- Sugar Creek
- Wolf Creek

Watersheds in Venango County are illustrated in Figure 2.1-2. Table 4.3.3-1 indicates municipal participation in the National Flood Insurance Program. Only Pleasantville Borough does not participate. As of 2016, Barkeyville Borough participates in the NFIP.

Table 4.3.3-1 National Flood Insurance Program Communities.			
Community	CID	Initial FIRM Identified	Current Effective Map Date
Allegheny Township	422529	09/10/84	1/16/2014
Barkeyville Borough	422728	01/16/14	1/16/2014
Canal Township	422108	02/06/91	1/16/2014
Cherrytree Township	422530	01/01/87	1/16/2014
Clinton Township	422531	09/10/84	1/16/2014
Clintonville Borough	422532	09/10/84	1/16/2014
Cooperstown Borough	420835	02/06/91	1/16/2014
Cornplanter Township	422533	05/19/87	1/16/2014
Cranberry Township	422109	04/05/88	1/16/2014
Emlenton Borough	422107	06/30/76	1/16/2014
City of Franklin	420836	09/29/78	1/16/2014
French Creek Township	422110	05/19/87	1/16/2014
Irwin Township	422534	01/16/14	1/16/2014
Jackson Township	422535	08/19/91	1/16/2014
Mineral Township	422536	01/01/87	1/16/2014
Oakland Township	422111	02/01/87	1/16/2014
City of Oil City	420837	07/05/77	1/16/2014
Oil Creek Township	422537	10/1/1986	1/16/2014
Pinegrove Township	422538	09/10/84	1/16/2014
Pleasantville Borough	Not Participating	Not Participating	Not Participating
Plum Township	422539	09/10/84	1/16/2014
Polk Borough	420838	01/01/87	1/16/2014
President Township	422112	02/06/91	1/16/2014
Richland Township	422540	09/10/84	1/16/2014
Rockland Township	422113	10/16/90	1/16/2014
Rouseville Borough	420839	05/19/87	1/16/2014
Sandycreek Township	422541	10/16/90	1/16/2014
Scrubgrass Township	422542	08/05/91	1/16/2014
Sugarcreek Borough	420840	05/19/87	1/16/2014
Utica Borough	420841	03/04/91	1/16/2014
Victory Township	422543	09/24/84	1/16/2014

4.3.3.2 Range of Magnitude

Floods are considered hazards when people and property are affected. Most injuries and deaths from flooding happen when people are swept away by flood currents and most property damage results from inundation by sediment-filled water. A large amount of rainfall over a short time span can result in flash flood conditions. Small amounts of rain can result in floods in locations where the soil is frozen or saturated from a previous wet period or if the rain is concentrated in an area of impermeable surfaces such as large parking lots, paved roadways, or other impervious developed areas.

Several factors determine the severity of floods, including rainfall intensity and duration, topography, ground cover, and rate of snowmelt. Water runoff is greater in areas with steep slopes and little to no vegetative ground cover. Flooding is most severe in areas of the floodplain immediately adjacent to major streams and rivers. Flooding can be as frequent as the occurrence of a spring rain or summer thunderstorm. The amount of precipitation produced by storm events determines the type of flooding.

Winter floods have also resulted from runoff of intense rainfall on frozen ground, and, on rare occasions, local flooding has been exacerbated by ice jams in rivers. Ice jam floods, as mentioned in the previous section, occur on rivers that are totally or partially frozen. A rise in stream stage will break up a totally frozen river and create ice flows that can pile up on channel obstructions such as shallow riffles, log jams, or bridge piers. The jammed ice creates a dam across the channel over which the water and ice mixture continues to flow, allowing for more jamming to occur. Ice jams are particularly an issue on the Youghiogheny River and Pine Creek.

Flood effects can be volume or force related. Major floods along larger streams having wide floodplains tend to result in large-scale inundations. This causes widespread damage through soaking and silt deposits in homes, businesses, and industrial plants. In hilly regions where runoff paths are steep, flash floods may be prevalent. Flash floods are short in duration and usually occur in a somewhat localized area. In these floods, the velocity rather than the volume of water causes flood damages. Torrents of water can rush down minor hillside gullies at 30-50 miles per hour, carrying trees, debris, and rocks. These floods are often unpredictable and, particularly if they occur at night, can cause major panic and loss of life. Frozen surfaces can more than double normal runoff velocities, particularly in small drainage areas. This causes flash floods which can be compounded by ice and debris jams in channels and culverts. Obstructions within the floodplain such as bridges and undersized culverts can also increase flooding.

The undermining or washing out of roads is typically associated with flash flood. River flooding occurs less frequently and as a result of much larger storm events such as hurricanes. These larger storm events occur in northwest Pennsylvania most often in the late spring and summer.

Although floods can cause damage to property and loss of life, floods are naturally occurring events that benefit riparian systems which have not been disrupted by human actions. Such benefits include groundwater recharge and the introduction of nutrient rich sediment improving soil fertility. However, the destruction of riparian buffers, changes to land use and land cover throughout a watershed, and the introduction of chemical or biological contaminants which often accompany human presence cause environmental harm when floods occur. Hazardous material facilities are potential sources of contamination during flood events. Other negative environmental impacts of flooding include: water-borne diseases, heavy siltation, damage or loss of crops, and drowning of both humans and animals.

There are several examples of possible worst-case scenario flooding events in Venango County, but winter floods and ice jam are the most common. Major flooding occurs as a result of heavy rainfall on dense snowpack throughout contributing watersheds, although the snowpack is generally moderate during most winters. During these events massive damage and destruction to structures can be caused. Many individuals throughout could potentially be left homeless and

many businesses, located primarily within the incorporated municipalities, could be destroyed resulting in a reduction in economic activity, an increase in unemployment, and lower personal incomes.

4.3.3.3 Past Occurrence

Venango County has a long history of flooding problems. Since the Allegheny River, French Creek, and Sugar Creek, along with many their tributaries are located in Venango County, the County has suffered damage from numerous major overbank floods and localized flash flooding. This has caused much inconvenience and hardship. There are also bridges and culverts that get blocked with debris and cause backup flooding during a large storm. Property damage has been heavy at times, but no loss of life due to flooding has been recorded in Venango County. Since 2015, there has been additional \$55,000 recorded in the National Oceanic and Atmospheric Administration (NOAA) data center. Additional data from NOAA is included in Table 4.3.3-2.

Date	Type	Notes	Estimated Cost
February 4, 1883	Flood	Ice jam flooding	N/A
June 5, 1892	Flood	Heavy rains caused floods and fires in Oil City; rain washed out dam on Oil Creek; 60 people dead, hundreds injured and homeless.	N/A
March 1, 1910	Flood	Ice gorge forced water from French Creek into Utica.	N/A
March 25, 1913	Flood	Flooding in Franklin, Oil City and Utica	N/A
February 1917	Flood	Ice jam flooding in Franklin	N/A
June 28, 1924	Flood	Heavy storm causes flooding damage in Oil City	\$250,000
January –March 1926	Flood	Ice jams caused flooding in Oil City, Reno and Franklin	\$2,500,000
February 1936	Flood	Ice jam on Oil Creek	N/A
April 6, 1947	Flood	On Sugarcreek	N/A
July 14/15, 1958	Flood	Polk, Rouseville, Sugarcreek and Franklin impacted	N/A
January 1959	Flood	Ice jam on the Allegheny River flooded Franklin, Polk, Sugar Creek, and Oil Creek. Utica, Cooperstown, and Sugarcreek Village had floodwaters.	N/A
May 23, 1977	Flood	Northern Venango County	
June 8/9, 1981	Flood	Cranberry Township, Sugarcreek Borough, Oil City and Franklin flooded	\$15,000,000
February 1, 1982	Flash Flood	Oil Creek rose without warning and flooded streets of Oil City	N/A
January 29, 1994	Flash Flood	Oil City	\$50,000
August 13, 1994	Flash Flood	Countywide	\$500,000
August 27, 1994	Flood	Centerville	N/A

Table 4.3.3-2 History of Flooding in Venango County, 1883-2020 (NOAA, 2020).			
Date	Type	Notes	Estimated Cost
June 3, 1995	Flood/Flash Flood	Oil City	N/A
June 3, 1995	Flood/Flash Flood	Dempseytown	N/A
June 10, 1995	Flood/Flash Flood	Kennerdell	N/A
August 15, 1995	Flood/Flash Flood	Wallaceville	N/A
January 18, 1996	Flash Flood	Oil City	N/A
January 19, 1996	Flash Flood	Ice jam in Oil Creek State Park	\$120,000
July 1996	Flood	Chub Run flooded	N/A
May 11, 1996	Flash Flood	Polk	N/A
July 19, 1996	Flash Flood	Franklin	\$50,000,000
July 19, 1996	Flash Flood	Countywide	N/A
September 9, 1996	Flash Flood	Kennerdell	N/A
September 28, 1996	Flash Flood	Oil City	N/A
January 23, 1997	Flood	PAZ008	\$8,000
June 12, 1997	Flash Flood	Cooperstown	N/A
August 2, 2000	Flood	Oil City	\$5,000
June 21, 2001	Flood	Franklin	\$150,000
May 12, 2002	Flood	Sugarcreek	\$10,000
June 12, 2003	Flash Flood	President	N/A
June 12, 2003	Flash Flood	Emlenton	N/A
July 21, 2003	Flood	Venango	\$5,000
July 21, 2003	Flash Flood	Franklin	N/A
July 22, 2003	Flash Flood	Oil City	N/A
August 5, 2003	Flash Flood	Chapmanville	N/A
August 7, 2003	Flash Flood	Nickleville	N/A
August 9, 2003	Flash Flood	Franklin	N/A
August 16, 2003	Flash Flood	Franklin	N/A
August 26, 2003	Flash Flood	Franklin	\$110,000
September 1, 2003	Flash Flood	Barkeyville	N/A
September 1, 2003	Flash Flood	Emlenton Station	N/A
November 19, 2003	Flash Flood	Pleasantville	N/A
May 20, 2004	Flash Flood	Oil City	N/A
May 24, 2004	Flash Flood	Utica	N/A
July 12, 2004	Flood	PAZ008	N/A
July 12, 2004	Flood	PAZ008	N/A
July 18, 2004	Flash Flood	Franklin	\$5,000
August 28, 2004	Flood	PAZ008	\$4,000
September 8, 2004	Flood	PAZ008	\$50,000
September 17, 2004	Flood	PAZ008	\$15,000

Table 4.3.3-2 History of Flooding in Venango County, 1883-2020 (NOAA, 2020).			
Date	Type	Notes	Estimated Cost
June 10, 2005	Flash Flood	Oil City	N/A
June 30, 2005	Flash Flood	Franklin	N/A
July 31, 2006	Flash Flood	Sugarcreek	\$15,000
August 29, 2006	Flash Flood	Oil City	\$1,300,000
March 14, 2007	Flood	Pleasantville	N/A
March 15, 2007	Flood	Oil City	N/A
February 6, 2008	Flood	Bradleytown	\$25,000
February 6, 2008	Flood	Mc Kenzie Corners	\$25,000
February 11, 2009	Flood	Oil City	\$50,000
February 18, 2011	Flash Flood	Oil City	\$15,000
February 28, 2011	Flood	Barkleyville	\$100,000
March 5, 2011	Flood	Cherrytree	\$1000
May 15, 2011	Flood	Victory	\$5000
May 15, 2011	Flood	Polk Junction	\$5000
January 27, 2012	Flood	Rouseville	\$25,000
June 27, 2013	Flood	Franklin	N/A
June 28, 2013	Flash Flood	Clintonville	N/A
June 28, 2013	Flash Flood	Emlenton Station	N/A
August 28, 2013	Flood	Rocky Grove	N/A
January 10, 2014	Flood	Rockmere	\$2000
February 21, 2014	Flood	Oil City	\$50,000
May 21, 2014	Flood	Thornburgh	N/A
June 12, 2014	Flood	Galloway City	\$2000
June 24, 2014	Flood	Kaneville	\$10,000
June 24, 2014	Flood	Grandview	\$25,000
June 24, 2014	Flash Flood	Cherrytree	\$2000
June 24, 2014	Flash Flood	Kaneville	\$15,000
June 25, 2014	Flood	Rouseville	\$10,000
July 27, 2014	Flood	Polk Junction	\$10,000
September 2, 2014	Flood	Rockmere	\$3,000
June 16, 2015	Flash Flood	Green Oaks	\$5,000
June 16, 2016	Flash Flood	Grandview, Reno	\$10,000
January 12, 2017	Flash Flood	Grandview	\$5,000
May 28, 2017	Flash Flood	Hannasville	\$10,000
June 19, 2017	Flood	Rockmere	\$0
May 31, 2018	Flash Flood	President	\$0
July 2, 2018	Flash Flood	Eagle Rock	\$0
September 7, 2018	Heavy Rain	Seneca	\$0
July 7, 2019	Flash Flood	Coal Hill, Seneca	\$10,000
July 19, 2019	Flash Flood	Seneca, Oil City	\$20,000

Table 4.3.3-2 History of Flooding in Venango County, 1883-2020 (NOAA, 2020).			
Date	Type	Notes	Estimated Cost
		Total:	\$704,837,000

In addition to the data collected by NOAA, the Hazard Mitigation Team collected anecdotal information regarding the past occurrences of flooding in Venango County:

- February 4, 1883: Ice jam flooding
- June 5, 1892: Heavy rains caused floods and fires in Oil City; rain washed out dam on Oil Creek; 60 people dead, hundreds injured and homeless.
- March 1, 1910: Sudden rise in water from French Creek brought Utica Borough its worst flood. Ice gorge forced water from French Creek into Utica.
- March 25, 1913: Flooding in Franklin – flood stage at 22.4 feet; flooding in Oil City force businesses to close and people to leave their homes. Utica flooded.
- February, 1917: Highest recorded flood stage to date in Franklin (24 feet). Flooding caused by ice jam.
- June 28, 1924: Heavy storm causes flooding damage in Oil City; over \$250,000 in damages; flooding cause landslides.
- January/February/March, 1926: Ice jams cause by freezing and thawing caused flooding in Oil City, Reno and Franklin. Damages estimated at \$2,500,000.
- February 1936: Ice jam on Oil Creek cause flooding; ice piled up 20 feet high.
- February 27, 1936: Ice piled up on River Avenue in Emlenton; major damage caused.
- April 6, 1947: Flooding at Sugarcreek.
- July 14/15, 1958: Worst flood of the century in the Polk area. Heavy rains reached torrential proportions. One life lost. Bridges washed out, homes damaged. Rouseville, Sugarcreek, and Franklin also flooded.
- January 1959: Heavy rainfall caused a break up of ice on French Creek and then flooding when it met the stable ice in the Allegheny River. Ripped out billboards and forced industries to close in Franklin. Serious power failure on January 21, causing Franklin Hospital and Polk Center to go to emergency power. Sugar Creek and Oil Creek were flooded. Utica, Cooperstown, and Sugarcreek Village had floodwaters.
- May 23, 1977: Northern Venango County hit by brunt of storm. Damage to roads near Cherrytree and Kaneville areas. Five feet of water covered roads. Required several weeks of repairs.
- June 8/9, 1981: Rains ripped up highways and destroyed homes causing 15 million in damages. 4.5 inches of rain cause streams to flood. Areas affected include Cranberry Township, Sugarcreek Borough, Oil City, Franklin, and Fertigs.
- February 1, 1982: Oil Creek rose without warning and flooded streets of Oil City; 6 feet of water on Seneca Street; Worst flood in decades; destroyed businesses and homes; damages soared to many millions of dollars.
- January 19, 1996: Ice jam formed near Petroleum Centre Bridge in Oil Creek State Park; large cakes of ice and water closed the road from Rynd Farm to the park.

- July 1996: Chubb Run flooded part of Route 8 in Franklin cause major damage. West First Street in Oil City, Shaffer Run area of Reno, and Cranberry Township all damaged by flooding. Damages in the millions.
- August 29, 2006: Sandy Lick Creek flooded following 2 inches of rain and flooded Polk and Franklin Townships. Hundreds of inhabitants of the two municipalities were evacuated when the Piffer Dam was assessed as unsafe by the state DEP and sewage and gasoline made their way into local waterways.
- February 21, 2014: Ice jam formed on Oil Creek and the subsequent flooding caused disruption in Oil City and elsewhere. Traffic was rerouted and at least 70 people were evacuated from buildings in the city.
- July 19-20, 2019: The County EMA team worked closely with local EMCs to collect damage assessments. Community residents were urged to contact the Venango County 211 hotline with damage details to be sent to the local EMC as well as insurance companies. The storm also caused Deep Hollow Road (Route 3025) from Bredinsburg Road to Route 322 in Cranberry Township to close.

Floods are the most common and costly natural catastrophe in the United States. In terms of economic disruption, property damage, and loss of life, floods are “nature’s number-one disaster.” For that reason, flood insurance is almost never available under industry-standard homeowner’s and renter’s policies. The best way for citizens to protect their property against flood losses is to purchase flood insurance through the NFIP.

Congress established the NFIP in 1968 to help control the growing cost of federal disaster relief. The NFIP is administered by the Federal Emergency Management Agency (FEMA), part of the U.S. Department of Homeland Security. The NFIP offers federally backed flood insurance in communities that adopt and enforce effective floodplain management ordinances to reduce future flood losses.

Since 1983, the chief means of providing flood insurance coverage has been a cooperative venture of FEMA and the private insurance industry known as the Write Your Own (WYO) Program. This partnership allows qualified property and casualty insurance companies to “write” (that is, issue) and service the NFIP’s Standard Flood Insurance Policy (SFIP) under their own names.

Today, nearly 90 WYO insurance companies issue and service the SFIP under their own names. More than 4.4 million federal flood insurance policies are in force. These policies represent \$650 billion in flood insurance coverage for homeowners, renters, and business owners throughout the United States and its territories.

The NFIP provides flood insurance to individuals in communities that are members of the program. Membership in the program is contingent on the community adopting and enforcing floodplain management and development regulations.

The NFIP is based on the voluntary participation of communities of all sizes. In the context of this program, a “community” is a political entity – whether an incorporated city, town, township,

borough, or village, or an unincorporated area of a county or parish – that has legal authority to adopt and enforce floodplain management ordinances for the area under its jurisdiction.

National Flood Insurance is available only in communities that apply for participation in the NFIP and agree to implement prescribed flood mitigation measures. Newly participating communities are admitted to the NFIP's Emergency Program. Most of these communities quickly earn "promotion" to the Regular Program.

The Emergency Program is the initial phase of a community's participation in the NFIP. In return for the local government's agreeing to adopt basic floodplain management standards, the NFIP allows local property owners to buy modest amounts of flood insurance coverage.

In return for agreeing to adopt more comprehensive floodplain management measures, an Emergency Program community can be "promoted" to the Regular Program. Local policyholders immediately become eligible to buy greater amounts of flood insurance coverage.

The minimum floodplain management requirements include:

- Review and permit all development in the SFHA;
- Elevate new and substantially improved residential structures at or above the Base Flood Elevation;
- Elevate or dry floodproof new and substantially improved non-residential structures;
- Limit development in floodways;
- Locate or construct all public utilities and facilities so as to minimize or eliminate flood damage; and
- Anchor foundation or structure to resist floatation, collapse, or lateral movement.

Information on NFIP premiums and coverage, prior claims, and substantial damage claims provide additional information on past flood occurrences. Table 4.3.3-2 shows this information for each municipality with policies in force and claims. For more information on Venango County's compliance with the NFIP, please see Section 5.2.1.3.

The NFIP identifies properties that frequently experience flooding. The following definition of RL and SRL properties from the Hazard Mitigation Assistance (HMA) Unified Guidance from July 2013 reflects changes made in the Biggert-Waters Flood Insurance Reform Act of 2012. A **Repetitive Loss** property is a structure covered by a contract for flood insurance made available under the NFIP that:

- (a) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and
- (b) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage. (Please note: Homes are eligible for ICC coverage after first loss, however cost for ICC is part of all policies.)

A **Severe Repetitive Loss** property is a structure that:

- (a) Is covered under a contract for flood insurance made available under the NFIP; and
- (b) Has incurred flood related damage (i) For which four or more separate claims payments have been made under flood insurance coverage with the amount of each such claim exceeding \$5,000, and with the cumulative amount of such claims payments exceeding \$20,000; or (ii) For which at least two separate claims payments have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

As of September 30, 2018, there were 53 repetitive loss buildings in Venango County. Of the 53, 34 are in the City of Oil City, and there are repetitive loss properties in nine of the 31 municipalities. In addition to the City of Oil City, there are concentrations of properties in Jackson Township and Sugarcreek Borough. Table 4.3.3-3 contains the number of repetitive loss buildings in each municipality according to data provided by FEMA. Currently, there are no Severe Repetitive Loss Properties identified in Venango County.

Table 4.3.3-3 Summary of Repetitive Loss Properties						
MUNICIPALITY	OCCUPANCY					TOTAL
	SINGLE FAMILY	2-4 FAMILY	ASSUMED CONDO	OTHER RESIDENTIAL	NON RESIDENTIAL	
Allegheny Township	0	0	0	0	0	0
Barkleyville Borough	0	0	0	0	0	0
Canal Township	0	0	0	0	0	0
Cherrytree Township	0	0	0	0	0	0
Clinton Township	1	0	0	0	0	1
Clintonville Borough	0	0	0	0	0	0
Cooperstown Borough	0	0	0	0	0	0
Cornplanter Township	0	0	0	0	1	1
Cranberry Township	0	0	0	0	0	0
Emlenton Borough	0	0	0	0	0	0
City of Franklin	1	1	0	0	0	2
Frenchcreek Township	1	0	0	0	0	1
Irwin Township	0	0	0	0	0	0
Jackson Township	4	0	0	0	0	4
Mineral Township	0	0	0	0	0	0
Oakland Township	2	0	0	0	0	2
City of Oil City	1	0	7	0	26	34
Oil Creek Township	0	0	0	0	0	0
Pinegrove Township	0	0	0	0	0	0
Pleasantville Borough	0	0	0	0	0	0
Plum Township	0	0	0	0	0	0
Polk Borough	0	0	0	0	0	0
President Township	0	0	0	0	0	0
Richland Township	0	0	0	0	0	0

Table 4.3.3-3 Summary of Repetitive Loss Properties						
MUNICIPALITY	OCCUPANCY					TOTAL
	SINGLE FAMILY	2-4 FAMILY	ASSUMED CONDO	OTHER RESIDENTIAL	NON RESIDENTIAL	
Rockland Township	0	0	0	0	0	0
Rouseville Borough	0	0	0	0	0	0
Sandycreek Township	0	0	0	0	0	0
Scrubgrass Township	1	0	0	0	0	1
Sugarcreek Borough	7	0	0	0	0	7
Utica Borough	0	0	0	0	0	0
Victory Township	0	0	0	0	0	0
TOTAL	18	1	7	0	27	53

4.3.3.4 Future Occurrence

In Venango County, flooding occurs commonly and can occur during any season of the year. Therefore, the future occurrence of floods in Venango County can be characterized as highly likely as defined by the Risk Factor Methodology probability criteria (see Table 4.4-1).

Floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. The NFIP recognizes the 1%-annual-chance flood, also known as the base flood, as the standard for identifying properties subject to federal flood insurance purchase requirements. The NFIP uses historical records to determine the probability of occurrence for different extents of flooding. The probability of occurrence is expressed in percentages as the chance of a flood of a specific extent occurring in any given year. A specific flood that is used for a number of purposes is called the —base flood, which has a one percent chance of occurring in any particular year. The base flood is often referred to as the “100-year flood” since its probability of occurrence suggests it should reoccur once every 100 years, although this is not the case in practice. Experiencing a 100-year flood does not mean a similar flood cannot happen for the next 99 years; rather it reflects the probability that over a long period of time, a flood of that magnitude has a one percent chance of occurring in any given year. It is therefore referred to in this document as the 1%-chance flood Table 4.3.3-4 shows a range of flood recurrence intervals and associated probabilities of occurrence.

Table 4.3.3-4 Flood Probability	
Flood Recurrence Intervals	Chance of Occurrence in Any Given Year, %
10 Year	10
50 Year	2
100 Year	1
500 Year	0.2

DFIRMs and FIRMs published by FEMA can be used to identify areas subject to the 1%- and 0.2%-annual-chance flooding. Areas subject to 2%- and 10%-annual-chance events are not shown on maps; however, water surface elevations associated with these events are included in the flood source profiles contained in associated Flood Insurance Study Reports. The most recent Flood Insurance Study for each county in Pennsylvania is available from the FEMA Map Service Center.

4.3.3.5 Vulnerability Assessment

Venango County is vulnerable to flooding that causes loss of lives, property damage, and road closures. For purposes of assessing vulnerability, the County focused on community assets that are located in the 1%-annual-chance floodplain. While greater and smaller floods are possible, information about the extent and depths for this floodplain is available for all municipalities countywide, thus providing a consistent basis for analysis. Flood vulnerability maps are each applicable local municipality, showing the 1%-annual-chance flood hazard area and addressable structures, critical facilities, and transportation routes within it, are located in Appendix D. These maps were created using the 2014 Effective DFIRM data.

Flood events are also a major cause for road closures in the County and its municipalities. Affected areas of roadway may vary from a few feet for only a few hours (as in the case of flash flooding) to several hundred feet for a few days (as in the case of riverine flooding). Road closures limit accessibility to certain areas of the County, which in turn delays the provision of emergency services to the residents in those areas. In addition, despite posted signs warning drivers to stay out of floodwaters, inevitably there are individuals who must be rescued from their cars that become stranded in floodwaters. Other concerns during a flood include the safety of mobile homes and trailers, as they are typically lightweight and unanchored. Table 4.3.3-5 provides the number of mobile homes in the floodplain by jurisdiction.

MUNICIPALITY	TOTAL MOBILE HOMES	TOTAL MOBILE HOMES IN SFHA	PERCENT MOBILE HOMES IN SFHA
Allegheny Township	19	0	0%
Barkeyville Borough	17	0	0%
Canal Township	86	0	0%
Cherrytree Township	104	5	5%
Clinton Township	60	1	2%
Clintonville Borough	84	0	0%
Cooperstown Borough	7	3	43%
Cornplanter Township	63	0	0%
Cranberry Township	413	3	1%
Emlenton Borough	5	0	0%
City of Franklin	16	0	0%
Frenchcreek Township	127	0	0%
Irwin Township	120	1	1%
Jackson Township	149	4	3%
Mineral Township	58	0	0%
Oakland Township	74	2	3%
City of Oil City	4	0	0%
Oil Creek Township	72	0	0%
Pinegrove Township	86	0	0%
Pleasantville Borough	59	0	0%
Plum Township	83	0	0%
Polk Borough	22	12	55%

President Township	94	2	2%
Richland Township	46	0	0%
Rockland Township	175	3	2%
Rouseville Borough	11	3	27%
Sandycreek Township	142	1	1%
Scrubgrass Township	81	2	2%
Sugarcreek Borough	177	27	15%
Utica Borough	7	1	14%
Victory Township	75	0	0%
TOTAL	2,536	70	3%

Table 4.3.3-6 displays the number of structures, critical facilities, and populations intersecting the SFHA. The number of vulnerable structures was calculated by overlaying the structures with the SFHA. Similarly, the estimated population in the SFHA was calculated by overlaying the centroids of the 2018 Census blocks with the SFHA; while clearly an estimate, using the block centroid helps to minimize overestimation of flood prone populations. One community, Utica Borough, has 34% of its structures in the SFHA, and Polk Borough has 20% of its facilities in the SFHA. Of the County’s 29,315 structures, only 730 are in the SFHA.

Canal Township, Cooperstown Borough, City of Franklin, Jackson Township, Polk Borough, and Rouseville Borough each have one critical facility within the SFHA. Of the municipalities, the City of Franklin has the most with 21, followed by City of Oil City with 15 and Cranberry Township with 13.

The total population within the SFHA is 1,380 people, 3% of the total population. Similar to the number of structures in the SFHA, 31% of Polk Borough and 26% of Utica Borough’s population is also located within the SFHA.

Venango County 2020 Hazard Mitigation Plan Update

Table 4.3.3-6 Community Flood Vulnerability in Venango County.

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2015 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Allegheny Township	220	2	1%	1	0	0%	276	0	0%
Barkeyville Borough	141	0	0%	2	0	0%	232	0	0%
Canal Township	513	6	1%	3	1	33%	1,023	14	1%
Cherrytree Township	825	11	1%	4	0	0%	1,540	13	1%
Clinton Township	542	15	3%	4	0	0%	854	8	1%
Clintonville Borough	241	0	0%	2	0	0%	508	0	0%
Cooperstown Borough	214	27	13%	2	1	50%	460	85	18%
Cornplanter Township	1,324	47	4%	7	0	0%	2,418	36	1%
Cranberry Township	3,502	55	2%	13	0	0%	6,685	18	0%
Emlenton Borough	374	1	0%	4	0	0%	617	0	0%
City of Franklin	2,995	49	2%	21	1	5%	6,552	320	5%
Frenchcreek Township	871	34	4%	1	0	0%	1,523	20	1%
Irwin Township	730	1	0%	4	0	0%	1,366	0	0%
Jackson Township	569	22	4%	1	1	100%	1,138	66	6%
Mineral Township	331	1	0%	1	0	0%	538	0	0%
Oakland Township	735	9	1%	3	0	0%	1,503	8	1%
City of Oil City	4,769	53	1%	15	0	0%	10,557	82	1%

Venango County 2020 Hazard Mitigation Plan Update

Table 4.3.3-6 Community Flood Vulnerability in Venango County.

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2015 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Oil Creek Township	488	0	0%	1	0	0%	854	0	0%
Pinegrove Township	691	0	0%	4	0	0%	1,354	2	0%
Pleasantville Borough	471	0	0%	3	0	0%	892	0	0%
Plum Township	547	6	1%	2	0	0%	1,066	25	2%
Polk Borough	263	53	20%	6	1	17%	818	251	31%
President Township	766	38	5%	2	0	0%	540	7	1%
Richland Township	589	0	0%	1	0	0%	777	0	0%
Rockland Township	1,435	36	3%	3	0	0%	1,456	72	5%
Rouseville Borough	257	45	18%	2	1	50%	523	69	13%
Sandycreek Township	1,228	11	1%	5	0	0%	2,277	7	0%
Scrubgrass Township	723	26	4%	3	0	0%	751	1	0%
Sugarcreek Borough	2,497	136	5%	7	0	0%	5,294	225	4%
Utica Borough	125	42	34%	3	0	0%	189	50	26%
Victory Township	339	4	1%	1	0	0%	403	1	0%
TOTAL	29,315	730	2%	131	6	5%	54,984	1,380	3%

4.3.4 Landslides

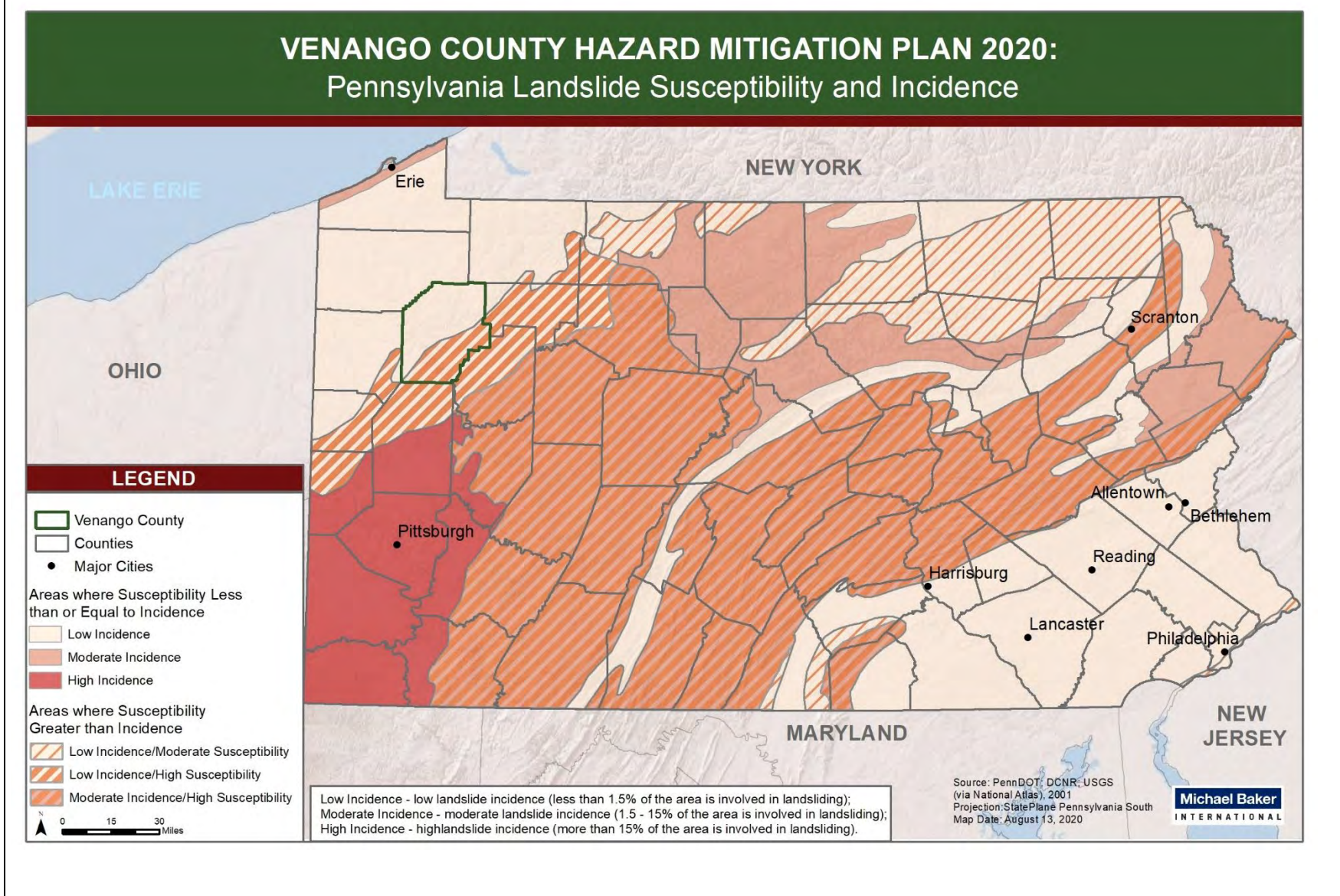
4.3.4.1 Location and Extent

Landslides occur primarily in colluvial (loose) soil and old landslide debris on steep slopes. Steep mountain slopes across the state have experienced debris avalanches associated with extreme rainfall or rain-on-snow events. Glacial and glacial-lake sediments underlie stream bank and lake bluff slumps and other failure areas across the much of the northern part of the state. Landslides often occur with other natural hazards such as earthquakes and floods.

Although landslides may occur anywhere in Pennsylvania, only 15 to 18 percent of the Commonwealth's land area is naturally prone to landslides. Areas that are generally prone to landslide hazards include previous landslide areas, the bases of steep slopes, the bases of drainage channels, developed hillsides, and areas recently burned by forest and brush fires (Delano & Wilshusen, 2001). Urban and rural land development increases both the number of landslides and the economic effects of natural slides. Major highway construction with large excavations and fills located in mountainous areas creates potential for many landslides (PA DCNR, 2000). In other words, human activity can cause instability in an otherwise stable slope because of the presence of underlying weak red beds. In general, though, slopes with a gradient of 15% or higher may be prone to slide, especially in conjunction with heavy rain events.

According to DCNR, southwestern Pennsylvania has by far the highest concentration of landslides, even though much of the state has susceptible areas. Most major and minor highways have sections cut in rock or soil that can fail. Outside the southwest, such as Venango County, high susceptibility areas are smaller and have more varied geology and topography. This can be confirmed from the map below that illustrates the relative landslide hazard susceptibility across the Commonwealth of Pennsylvania. According to figure 4.3.4-1 Venango County has "low incidence" in the northwestern half of the County and "high susceptibility" in the southern part of the County. Due to the geology and topography of the area, the southern portion of the County is more susceptible to landslides, specifically Richland, Rockland, Scrubgrass, Pine Grove, Clinton, and Cranberry Townships and Emlenton Borough. However, landslides are not a serious risk in a majority of Venango County. If they occur, they are more likely to occur in the hill and valley areas of Venango County. Limited areas of steep slopes associated with the banks of major watercourses in the County could collapse under heavy rainfall to produce a localized landslide. The potential of damage to lives or property from this type of natural hazard is low.

Figure 4.3.4-1 Land Susceptibility and Incidence for Venango County, (USGC, 2001).



4.3.4.2 *Range of Magnitude*

Landslides can have potentially devastating consequences in localized areas. Landslides cause damage to transportation routes, utilities, and buildings and create travel delays and other side effects. Structures or infrastructure built on susceptible land will likely collapse as their footings slide downhill. Structures below the landslide can be crushed. Landslides next to roads and highways have the potential to fall on and damage vehicles or cause accidents.

According to the DCNR website, deaths and injuries due to landslides are rare in Pennsylvania. Most Pennsylvania landslides are moderate to slow moving and damage property rather than people. Almost all of the known deaths due to landslides have occurred when rock falls or other slides along highways involved vehicles. If residential and recreational development increases on and near steep mountain slopes, the hazard from these rapid events will also increase. Storm-induced debris flows are the only other type of landslide likely to cause death and injuries in Venango County. Property losses due to landslides and associated effects are more common than injuries and deaths.

Most damages are less expensive, but significant. “Backyard” landslides are usually repaired incompletely or not at all. Cost estimates of several hundred thousand dollars for stabilization and repair of a landslide affecting two or three properties are typical. With repair estimates exceeding the value of the properties, abandonment is a frequent “solution”. Sometimes local governments assist with relocation costs or “buy out” homeowners. Insurance covers landslide damage only for some business situations (PA DCNR 2010).

The Pennsylvania Department of Transportation and large municipalities incur substantial costs due to landslide damage and to extra construction costs for new roads in known landslide-prone areas. A 1991 estimate showed an average of \$10 million per year is spent on landslide repair contracts across the Commonwealth and a similar amount is spent on mitigation costs for grading projects (PA DCNR, 2010). PennDOT issued a travel advisory on April 10, 2015 for Bredinsburg Road (Route 2006) in Cranberry Township due to a mudslide, which forced the indefinite closure of portions of the road (PennDOT, 2015).

The impact of landslides on the environment depends on the size and specific location of the event. In general, impacts include:

- Changes to topography
- Damage or destruction of vegetation
- Potential diversion or blockage of water in the vicinity of streams, rivers, etc...
- Increased sediment runoff both during and after event

4.3.4.3 *Past Occurrence*

According to the Pennsylvania Department of Conservation and Natural Resources (DCNR), no one really knows how many landslides occur each year in Pennsylvania or how much damage they cause, although there have been a few efforts to determine totals. Landslides are not the type of hazard that receives a disaster declaration, since they affect only localized sites.

The NCDC database captures landslides as they occur in conjunction with severe storms (with available data from 1950-2014); the NCDC database does not report any landslides in Venango County. However, the PennDOT reported a travel advisory on April 10, 2015 for Bredinsburg Road in Cranberry Township due to a mudslide, which forced indefinite closure of portions of the road (PennDOT, 2015).

More recently, NASA released a prototype Global Landslide Catalog. This is an open-source research and data dissemination tool stemming from work completed at the Goddard Space Flight Center. It should not be considered an exhaustive catalog of landslide events, but it provides more detail on the locations of landslide events than have been previously available. Currently, there are no recorded landslides in the database. On June 1, 2015, a storm caused several smaller areas where dirt and stones were washed onto the road. It was not to the scale of a landslide, but the event did cause a section of State Route 62 in President Township to be closed for several hours.

4.3.4.4 *Future Occurrence*

Since the exact number of previous landslides over a definite time interval is not known, it is not possible to determine a quantitative probability of future occurrence for landslides in Venango County. Given that damages have been reported from a landslide in Venango County, the future occurrence of landslides can be considered *possible* as defined by the Risk Factor Methodology probability criteria (see Table 4.4.1-1). However, these events are not expected to be widespread, given that only one occurrence was reported over the last 70 years. Factors such as mismanaged intense development in steeply sloped areas could increase their frequency of occurrence.

Changing weather patterns have resulted in increased precipitation in the region. Frequent and intense rainfall is leading to severe flooding and can trigger flash floods and river overflow. Saturated soils create prime conditions for landslides and mudflows. As intense rainfall continues to increase in Venango County, it is possible that there will be an increase in landslide occurrence during and after rain events. Utilizing the Risk Factor Methodology, the probability for a landslide event to occur is possible (see Table 4.4-1).

4.3.4.5 *Vulnerability Assessment*

A landslide vulnerability assessment involves determining the location of susceptible lands and then determining what community assets are located on those susceptible lands. The following steps are typically followed to determine the spatial extent of landslide hazard (FEMA):

- Identify existing or old landslides:
 - On or at the base of slopes;
 - In or at the base of minor drainage hollows;
 - At the base or top of an old fill slope;
 - At the base or top of a steep cut slope; or
 - Developed hillsides where leach field septic systems are used.
- Map the topography, since steeper slopes have greater probability of landslides.
- Map the geology, because in addition to the slope angle, the presence of rock or soil that weakens when saturated, as well as poorly drained rock or soil are indicators of slope instability as well.

- Contact local and state geological survey, other persons who might be knowledgeable about the local conditions in relation to landslides.

Conditions that may exacerbate or mitigate the severity and effects of landslides include erosion, unstable slopes, earthquakes, increase of weight of slopes, hydrologic factors and human activity. Human activities are responsible for initiating or intensifying certain conditions where otherwise there would have been little or no risk. Activities that increase vulnerability by triggering landslides include:

- Excavations and development in unstable slope materials.
- Haphazard construction or improper use of pipelines.
- Disruption of surface or subsurface drainage (streams and springs) e.g. by filling.
- Overuse of fill materials on slopes, particularly at the heads of existing slide masses.
- Removal of materials at the bases of slopes.
- Vibrations from heavy traffic, blasting, and driving piles near unstable slopes.

Landslide vulnerability is highly site-specific, but this HMP provides an estimate of structures or critical facilities that may be vulnerable to landslides by being located on slopes of 15% or steeper. Table 4.3.4-1 shows vulnerable structures by type. The structures in landslide high-susceptibility areas within Venango County. Communities of note include Clintonville Borough, Emlenton Borough, Pinegrove Township, Richland Township, and Scrubgrass Township whose structures noted below are all within high-susceptible areas. Clinton Township, Cranberry Township, and Rockland Township, and Irwin Township also have more than or almost of their structures within high-susceptible areas. Overall, structures within these areas are residential followed by agricultural and commercial.

Venango County 2020 Hazard Mitigation Plan Update

Table 4.3.4-1 Structures in Landslide High-Susceptible Areas Within Venango County.									
MUNICIPALITY	TOTAL STRUCTURES	AGRICULTURE	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	VACANT	TOTAL
Allegheny Township	220	0	0	0	0	0	0	0	0
Barkeyville Borough	141	4	7	0	43	0	0	1	55
Canal Township	513	0	0	0	0	0	0	0	0
Cherrytree Township	825	0	0	0	0	0	0	0	0
Clinton Township	542	196	22	4	289	0	0	24	535
Clintonville Borough	241	7	83	1	129	0	3	18	241
Cooperstown Borough	214	0	0	0	0	0	0	0	0
Cornplanter Township	1,324	0	0	0	0	0	0	0	0
Cranberry Township	3,502	290	378	10	861	1	1	45	1586
Emlenton Borough	374	0	62	0	292	1	4	15	374
City of Franklin	2,995	0	0	0	0	0	0	0	0
Frenchcreek Township	871	0	0	0	0	0	0	0	0
Irwin Township	730	129	10	0	179	2	0	19	339
Jackson Township	569	2	0	0	0	0	0	0	2
Mineral Township	331	0	0	0	1	0	0	0	1
Oakland Township	735	0	0	0	0	0	0	0	0
City of Oil City	4,769	0	0	0	0	0	0	0	0
Oil Creek Township	488	0	0	0	0	0	0	0	0
Pinegrove Township	691	255	31	0	375	0	0	30	691
Pleasantville Borough	471	0	0	0	0	0	0	0	0
Plum Township	547	0	0	0	0	0	0	0	0
Polk Borough	263	0	0	0	0	0	0	0	0
President Township	766	5	0	0	3	0	0	20	28
Richland Township	589	160	135	2	207	1	1	83	589
Rockland Township	1,435	259	42	1	1014	0	2	100	1418
Rouseville Borough	257	0	0	0	0	0	0	0	0

Table 4.3.4-1 Structures in Landslide High-Susceptible Areas Within Venango County.									
MUNICIPALITY	TOTAL STRUCTURES	AGRICULTURE	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	VACANT	TOTAL
Sandycreek Township	1,228	21	2	0	125	0	1	11	160
Scrubgrass Township	723	196	23	8	457	2	0	37	723
Sugarcreek Borough	2,497	0	0	0	0	0	0	0	0
Utica Borough	125	0	0	0	0	0	0	0	0
Victory Township	339	4	3	0	16	0	0	2	25
TOTAL	29,315	1,528	798	26	3,991	7	12	405	6,767

4.3.5 Pandemic and Infectious Disease

4.3.5.1 Location and Extent

Pandemic is defined as a disease affecting or attacking the population of an extensive region, including several countries, and/or continent(s). It is further described as extensively epidemic. Generally, pandemic diseases cause sudden, pervasive illness in all age groups on a global scale. Infectious diseases are also highly virulent but are not spread person-to-person.



Pandemic and infectious disease events cover a wide geographical area and can affect large populations, potentially including the entire population of the county. The exact size and extent of an infected population is dependent upon how easily the illness is spread, the mode of transmission, and the amount of contact between infected and uninfected individuals. The transmission rates of pandemic illnesses are often higher in denser areas where there are large concentrations of people. The transmission rate of infectious disease will depend on the mode of transmission of a given illness. Pandemic events can also occur after other natural disasters, particularly floods, when there is the potential for bacteria to grow and contaminate water (PA SHMP, 2018).

Venango County is primarily concerned with three diseases with pandemic and infectious potential: influenza, West Nile Virus and Coronavirus. West Nile Virus is a vector-borne disease that can cause headache, high fever, neck stiffness, disorientation, tremors, convulsions, muscle weakness, paralysis, and, in its most serious form, death. The virus spreads via mosquito bite and is aided by warm temperatures and wet climates conducive to mosquito breeding. West Nile Virus has been detected in all 67 counties throughout Pennsylvania at least once in the past 10 years. The virus is highly temporal with most cases occurring between April and October (DEP-WNCP, 2020). Coronavirus is an illness caused by a virus that can spread from person to person. It is a novel coronavirus that has spread throughout the world, and symptoms range from mild, or no symptoms, to severe illness that can lead to death (CDC, 2020).

Pandemic influenza planning began in response to the H5N1 (avian) flu outbreak in Asia, Africa, Europe, the Pacific, and the Near East in the late 1990s and early 2000s. H5N1 did not reach pandemic proportions in the United States, but the Commonwealth began actively planning for an occurrence of an influenza pandemic. As stated in the Pennsylvania Department of Health (DOH) Influenza Pandemic Response Plan, “an influenza pandemic is inevitable and will probably give little warning” (PA DOH, 2005). Influenza, also known as “the flu”, is a contagious disease that is caused by the influenza virus and most commonly attacks the respiratory tract in humans. Influenza is considered to have pandemic potential if it is novel, meaning that people have no immunity to it, virulent, meaning that it causes deaths in normally healthy individuals, and easily transmittable from person-to-person. The estimated morbidity and mortality during an influenza pandemic within 12-16 weeks nationwide and in Pennsylvania are shown in Table 4.3.5-1.

MORBIDITY	UNITED STATES	PENNSYLVANIA
Require Outpatient Care	50 Million	1.6 Million
Hospitalizations	2 Million	37,800
Deaths	500,000	9,100

Different strands of influenza mutate over time and replace older stands of the virus and thus have drastically different effects. The H1N1 virus, colloquially known as swine flu, is of particular concern. This virus was first detected in people in the United States in April 2009. On June 11, 2009, the world health organization signaled that a pandemic of 2009 H1N1 flu was underway (CDC, 2009). Avian influenza, also known as bird flu, infects birds. A recent strain, H5N1, has caused concern due to its ability to pass from wild birds to poultry then on to people. This virus has killed more than half of the people infected with it, although the avian flu is less like to infect humans.

During the Hazard Mitigation Plan Update process, a novel coronavirus spread into a worldwide pandemic. Named COVID-19/SARS-CoV2, this type of coronavirus is a novel virus that causes respiratory illness and is extremely contagious. Flu like in nature, symptoms of the virus include fever, cough, shortness of breath, and diarrhea. This virus became a great concern due to its high rates of transmission, in addition to a lack of knowledge about the virus. People were advised to practice social distancing; sheltering in place, only leaving the house for essentials like grocery shopping, and avoiding large gatherings. Even when going on walks, people are advised to remain six feet apart to slow the spread of transmission. Face coverings (masks) are mandatory for all people whenever leaving home or in public spaces. (PA DOH, 2020b).

4.3.5.2 Range of Magnitude

The magnitude of a pandemic or infectious disease threat in the Venango County will range significantly depending on the aggressiveness of the virus in question and the ease of transmission. In the case of West Nile Virus, slightly less than 80% of cases are clinically asymptomatic. Approximately 20% of cases result in mild infection, called West Nile Fever, lasting two to seven days. However, one in 150 cases result in severe neurological disease or death. Since the appearance of West Nile Virus in Pennsylvania in 2000, the worst year statewide was 2003 when 237 Pennsylvanians were infected with the virus and 9 people died. There have been very few cases in Venango County in recent years, with just one case reported in 2018. (DEP-WNCP, 2020). The virus is typically more serious in older adults.

Pandemic influenza is more easily transmitted from person-to-person than West Nile, but advances in medical technologies have greatly reduced the number of deaths caused by influenza over time. In terms of lives lost, the impact various pandemic influenza outbreaks have had globally over the last century has declined (see Table 4.3.5-2). The severity of illness from the 2009-10 H1N1 influenza flu virus varied, with the gravest cases occurring mainly among those considered at high risk. High risk populations considered more vulnerable include children, the elderly, pregnant women, and chronic disease patients with reduced immune system capacity. Most people infected with H1N1 in 2009 recovered without needing medical treatment, and this

flu strain is now included in flu shots. According to the CDC, about 70% of those who hospitalized with the 2009 H1N1 flu virus in the United States belonged to a high risk group (CDC, 2009). This pattern is expected to continue with future novel flu strains.

The magnitude of a pandemic may be exacerbated by the fact that an influenza pandemic will cause outbreaks across the United States, limiting the ability to transfer assistance from one jurisdiction to another. Additionally, effective preventative and therapeutic measures, including vaccines and other medications, will likely be in short supply or will not be available.

The 1918 Spanish flu pandemic remains the worst pandemic event on record both in Pennsylvania and worldwide. While mortality figures were probably under-reported, in the first month of the pandemic alone, 8,000 Pennsylvanians died from the flu or its complications (US DHHS, 2010). As the densest city in the Commonwealth, Philadelphia was particularly hurt from this event.

It is believed that the COVID-19 originated in an open-air market in the Wuhan province of China in November 2019. Shortly afterwards, the virus began to spread to nearby countries like Japan and South Korea. By March 2020, the virus had reached almost every country worldwide, with the most cases in the US. At first, people were mostly concerned with people who might be infected due to recent travel. However, community infections soon began to crop up in many cities and towns. This led to a statewide shutdown of schools and businesses and the cancellation of large events for Spring and Summer 2020. Only life sustaining services were permitted to remain open, including medical facilities, pharmacies, and grocery stores. People were advised to remain home as much as possible in attempt to slow the transmission of COVID-19. State health officials note that the virus has infected all age ranges at about the same rate, and that no age group can be considered more or less vulnerable to infection.

4.3.5.3 Past Occurrence

While the coronavirus pandemic has swept the nation and the world in 2020, the United States Department of Health and Human Services estimates that influenza pandemics have occurred for at least 300 years at unpredictable intervals. There have been several pandemic influenza outbreaks over the past 100 years. A list of events worldwide is shown in Table 4.3.5-2.

DATE	PANDEMIC NAME/SUBTYPE	WORLDWIDE DEATHS (APPROXIMATE)
1918-1920	Spanish Flu / H1N1	50 million
1957-1958	Asian Flu / H2N2	1.5-2 million
1968-1969	Hong Kong Flu / H3N2	1 million
2009-2011	Swine Flu / A/H1N1	284,000

Deaths occurred in the United States as a result of the Spanish Flu, Asian flu, and Hong Kong Flu outbreaks. The Spanish Flu claimed 500,000 lives in the United States, and there were 350,000 cases in Pennsylvania – 150,000 were in Philadelphia alone. Most deaths resulting from the Asian flu occurred between September 1957 and March 1958; there were about 70,000

deaths in the United States and approximately 15% of the population of Pennsylvania was affected. The first cases of the Hong Kong Flu in the U.S. were detected in September of 1968 with deaths peaking between December 1968 and January 1969 (Global Security, 2009). In the 2009/2010 flu season, when H1N1 was a primary concern. The World Health Organization declared a pandemic in June 2009.

Confirmed flu cases have been declining in Venango County over the past few years. According to the Pennsylvania Department of Health (DOH), there were 187 confirmed cases in Venango County the most recent influenza season from September 2019 to March 2020 (PA DOH, 2020a).

The CDC marked the 2014-2015 flu season as severe, with approximately 710,000 hospitalizations. The CDC does not track national deaths in adults, but the organization reported 148 pediatric deaths from influenza. The 2017-2018 flu season was another severe season. The CDC reported that the H3N2 flu, along with other strains including H1N1, led to more cases, doctors' visits, hospital visits, and deaths than previous flu seasons. The CDC also noted that the flu became widespread in all states and jurisdictions at the same time. In January 2018, approximately halfway through the flu season, 37 pediatric deaths were reported. The CDC estimated that 34 million Americans were affected by the flu (CDC, 2018).

The COVID-19 outbreak began in China in November 2019. The virus reached the US in late February 2020, and most counties in Pennsylvania were affected by March 2020. As of August, 2020, there were 74 confirmed cases of COVID 19 / SARS-CoV-2 in Venango County as shown in Table 4.3.5-3. One of these cases resulted in death. The counties adjacent to Venango have been similarly affected by the coronavirus pandemic. Butler and Mercer counties have seen higher case counts than any other surrounding counties. (Pennsylvania Department of Health, 2009). Businesses and restaurants are slowly reopening with reduced capacity and social distancing restrictions in place. While those who tested positive are isolating in their homes, county officials urge the entire population to isolate and act as if the virus is everywhere.

Table 4.3.5-3 COVID-19 Cases in and Around Venango County as of September 2020 (CDC, 2020).

County	NUMBER OF CONFIRMED COVID-19 CASES	NUMBER OF CUMULATIVE DEATHS
Venango	74	1
Butler	913	21
Clarion	107	3
Crawford	241	2
Forest	14	0
Mercer	617	13
Warren	40	1

4.3.5.4 Future Occurrence

Future occurrences of pandemic are unclear. For example, instances of the West Nile Virus have been generally decreasing due to aggressive planning and eradication efforts, but some scientists suggest that as global temperatures rise and extreme weather conditions increase due to climate change, the range of the virus in the United States will grow (Paz, 2015).

As with West Nile Virus, the precise timing of pandemic influenza is uncertain, but occurrences are most likely when the Influenza Type A virus makes a dramatic change, or antigenic shift, that results in a new or “novel” virus to which the population has no immunity. This emergence of a novel virus is the first step toward a pandemic.

Future pandemics may also emerge from other diseases, especially invasive pathogens that Pennsylvanians do not have natural immunity to, as we have seen with COVID-19. The COVID-19 pandemic has shown that occurrences of pandemic can be unpredictable, with unknown impact. It takes just one occurrence to have a major impact. Therefore, while future occurrences of pandemic are unclear, if a pandemic event is to occur it can be anticipated that it will be impactful.

Looking at the number of historical incidences of pandemic-potential diseases, the probability of future pandemic events can be considered possible according to the Risk Factor Methodology (see Table 4.4.1-1).

4.3.5.5 Vulnerability Assessment

In general, municipalities that are more densely populated are more vulnerable to disease threats when the disease is directly spread from human to human, but every jurisdiction has some vulnerability to pandemic and infectious disease threats. Colleges and universities with large residential student populations may also be more vulnerable, as a pandemic is more likely to spread through human contact in these settings.

There are some occupation-specific risks that may make some employees more vulnerable, though. For example, those working in direct patient care situations are more likely to be exposed to a pandemic disease; similarly, county employees working outdoors for extended periods of time in the warm months may be more vulnerable to West Nile Virus.

There are no true environmental impacts of pandemics and infectious disease threats, but there will be significant economic and social costs beyond the possibility of disease-related deaths. Widespread illness may increase the likelihood of shortages of personnel to perform essential community services. In addition, high rates of illness and worker absenteeism occur within the business community, and these contribute to social and economic disruption. On a national scale, the Congressional Budget Office Estimates that a severe pandemic could cost the US economy more than \$600 million, or 5% of the Gross Domestic Product (US DHHS 2005). Social and economic disruptions could be temporary but may be amplified in today’s closely interrelated and interdependent systems of trade and commerce. Social disruption may be greatest when rates of absenteeism impair essential services, such as power, transportation, and communications.

Municipal losses in a pandemic or infectious disease outbreak stem from lost wages and productivity, not losses to buildings or land. Losses are difficult to estimate because the exact rates of absenteeism and cost of treating a widespread disease will depend on the virus or bacterium in question, the availability of vaccination or treatment, and the severity of symptoms. For historical context, though, the Asian and Hong Kong Flu pandemics killed over 1.5 million people worldwide and caused an estimated \$32 billion loss due to lost productivity and medical expenses (Smith, 2004). With Pennsylvania's economy so integral to the national economy, economic losses from a pandemic or infectious disease threat could be significant.

It is expected that there will be immense losses due to the COVID-19 pandemic. Thousands of individuals were laid off across the commonwealth as non-essential businesses were forced to close. In just one week, over three million Americans filed for unemployment; the greatest amount ever (Long & Fowers, 2020). There is specific concern for those who worked in service and hospitality industries. Construction projects and other businesses are in limbo, while many others decide to permanently close. However, the commonwealth and the federal government are releasing relief packages for individuals and businesses. The ACHD compiled a growing list with links to medical information, relief packages, and other resources. It is currently unknown how COVID-19 will change the county.

4.3.6 Radon Exposure

4.3.6.1 Location and Extent



Radioactivity caused by airborne radon has been recognized for many years as an important component in the natural background radioactivity exposure of humans, but it was not until the 1980s that the wide geographic distribution of elevated values in houses and the possibility of extremely high radon values in houses were recognized. In 1984, routine monitoring of employees leaving the Limerick nuclear power plant near Reading, PA while it was still under construction and not yet functional, showed that readings on a construction worker at the plant frequently exceeded expected radiation levels. However, only natural, non-fission-product radioactivity was detected on him.

Subsequent testing of the employee's home in the Reading Prong section of Pennsylvania showed extremely high radon levels around 2,500 pCi/L (pico Curies per Liter). To put this amount in perspective, the Environmental Protection Agency (EPA) guidelines state that actions should be taken if radon levels exceed 4 pCi/L in a home, and uranium miners have a maximum exposure of 67 pCi/L. As a result of this event, the Reading Prong became the focus of the first large-scale radon scare in the world.

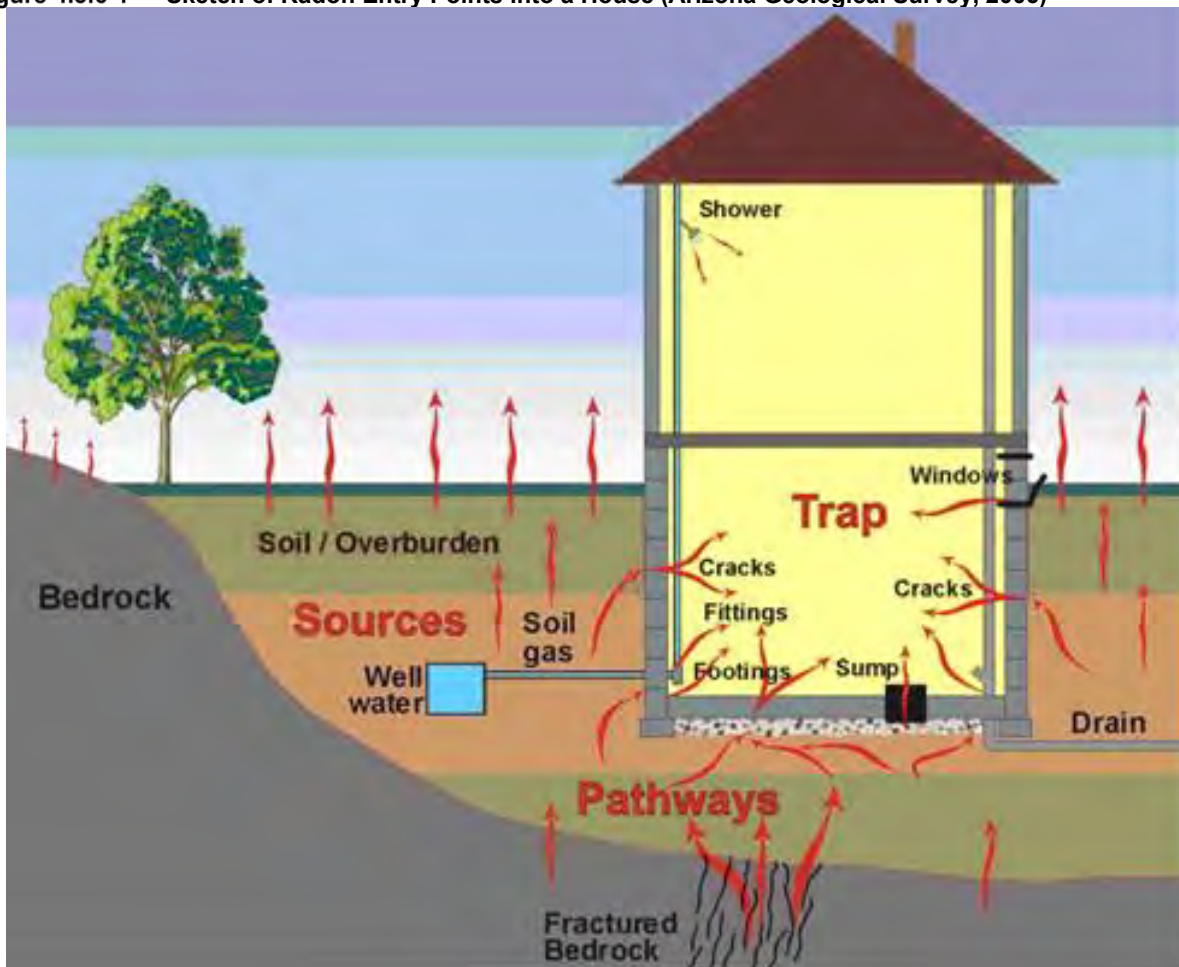
Radon is a gas that cannot be seen or smelled. It is a noble gas that originates by the natural radioactive decay of uranium and thorium. Like other noble gases (e.g., helium, neon, and argon), radon forms essentially no chemical compounds and tends to exist as a gas or as a dissolved atomic constituent in groundwater. Two isotopes of radon are significant in nature,

^{222}Rn and ^{220}Rn , formed in the radioactive decay series of ^{238}U and ^{232}Th , respectively. The isotope thoron (i.e. ^{220}Rn) has a half-life (time for decay of half of a given group of atoms) of 55 seconds, barely long enough for it to migrate from its source to the air inside a house and pose a health risk. However, radon (i.e. ^{222}Rn), which has a half-life of 3.8 days, is a widespread hazard. The distribution of radon is correlated with the distribution of radium (i.e. ^{226}Ra), its immediate radioactive parent, and with uranium, its original ancestor. Due to the short half-life of radon, the distance that radon atoms can travel from their parent before decay is generally limited to distances of feet or tens of feet.

Three sources of radon in houses are now recognized (shown in Figure 4.3.6-1):

- Radon in soil air that flows into the house;
- Radon dissolved in water from private wells and exsolved during water usage; this is rarely a problem in Pennsylvania; and
- Radon emanating from uranium-rich building materials (e.g. concrete blocks or gypsum wallboard); this is not known to be a problem in Pennsylvania.

Figure 4.3.6-1 Sketch of Radon Entry Points into a House (Arizona Geological Survey, 2006)



High radon levels were initially thought to be exacerbated in houses that are tightly sealed, but it is now recognized that rates of air flow into and out of houses, plus the location of air inflow and the radon content of air in the surrounding soil, are key factors in radon concentrations.

Outflows of air from a house, caused by a furnace, fan, thermal “chimney” effect, or wind effects, require that air be drawn into the house to compensate. If the upper part of the house is tight enough to impede influx of outdoor air (radon concentration generally <0.1 pCi/L), then an appreciable fraction of the air may be drawn in from the soil or fractured bedrock through the foundation and slab beneath the house, or through cracks and openings for pipes, sumps, and similar features. Soil gas typically contains from a few hundred to a few thousand pCi/L of radon; therefore, even a small rate of soil gas inflow can lead to elevated radon concentrations in a house.

The radon concentration of soil gas depends upon a number of soil properties, the importance of which is still being evaluated. In general, ten to fifty percent of newly formed radon atoms escape the host mineral of their parent radium and gain access to the air-filled pore space. The radon content of soil gas clearly tends to be higher in soils containing higher levels of radium and uranium, especially if the radium occupies a site on or near the surface of a grain from which the radon can easily escape. The amount of pore space in the soil and its permeability for air flow, including cracks and channels, are important factors determining radon concentration in soil gas and its rate of flow into a house. Soil depth and moisture content, mineral host and form for radium, and other soil properties may also be important. For houses built on bedrock, fractured zones may supply air having radon concentrations similar to those in deep soil.

Areas where houses have high levels of radon can be divided into three groups in terms of uranium content in rock and soil:

- Areas of very elevated uranium content (>50 ppm) around uranium deposits and prospects. Although very high levels of radon can occur in such areas, the hazard normally is restricted to within a few hundred feet of the deposit. In Pennsylvania, such localities occupy an insignificant area.
- Areas of common rocks having higher than average uranium content (5 to 50 ppm). In Pennsylvania, such rock types include granitic and felsic alkali igneous rocks and black shales. In the Reading Prong, high uranium values in rock or soil and high radon levels in houses are associated with Precambrian granitic gneisses commonly containing 10 to 20 ppm uranium, but locally containing more than 500 ppm uranium. In Pennsylvania, elevated uranium occurs in black shales of the Devonian Marcellus Formation and possibly the Ordovician Martinsburg Formation. High radon values are locally present in areas underlain by these formations.
- Areas of soil or bedrock that have normal uranium content but properties that promote high radon levels in houses. This group is incompletely understood at present. Relatively high soil permeability can lead to high radon, the clearest example being houses built on glacial eskers. Limestone-dolomite soils also appear to be predisposed for high radon levels in houses, perhaps because of the deep clay-rich residuum in which radium is concentrated by weathering on iron oxide or clay surfaces, coupled with moderate porosity and permeability. The importance of carbonate soils is indicated by the fact that

radon contents in 93 percent of a sample of houses built on limestone-dolomite soils near State College, Centre County, exceeded 4 pCi/L, and 21 percent exceeded 20 pCi/L, even though the uranium values in the underlying bedrock are all in the normal range of 0.5 to 5 ppm uranium.

The second factor listed above is most likely the cause of radon levels in Venango County, although high test results may be a result of multiple factors. Figures 4.3.6-2 and 4.3.6-3 show the radon test data available for Venango County by zip code. Most communities have average basement radon readings of over the threshold of action of 4 pCi/L. Communities with no data available did not have a sufficient sample size.

Figure 4.3.6-2 Basement Radon Test Results

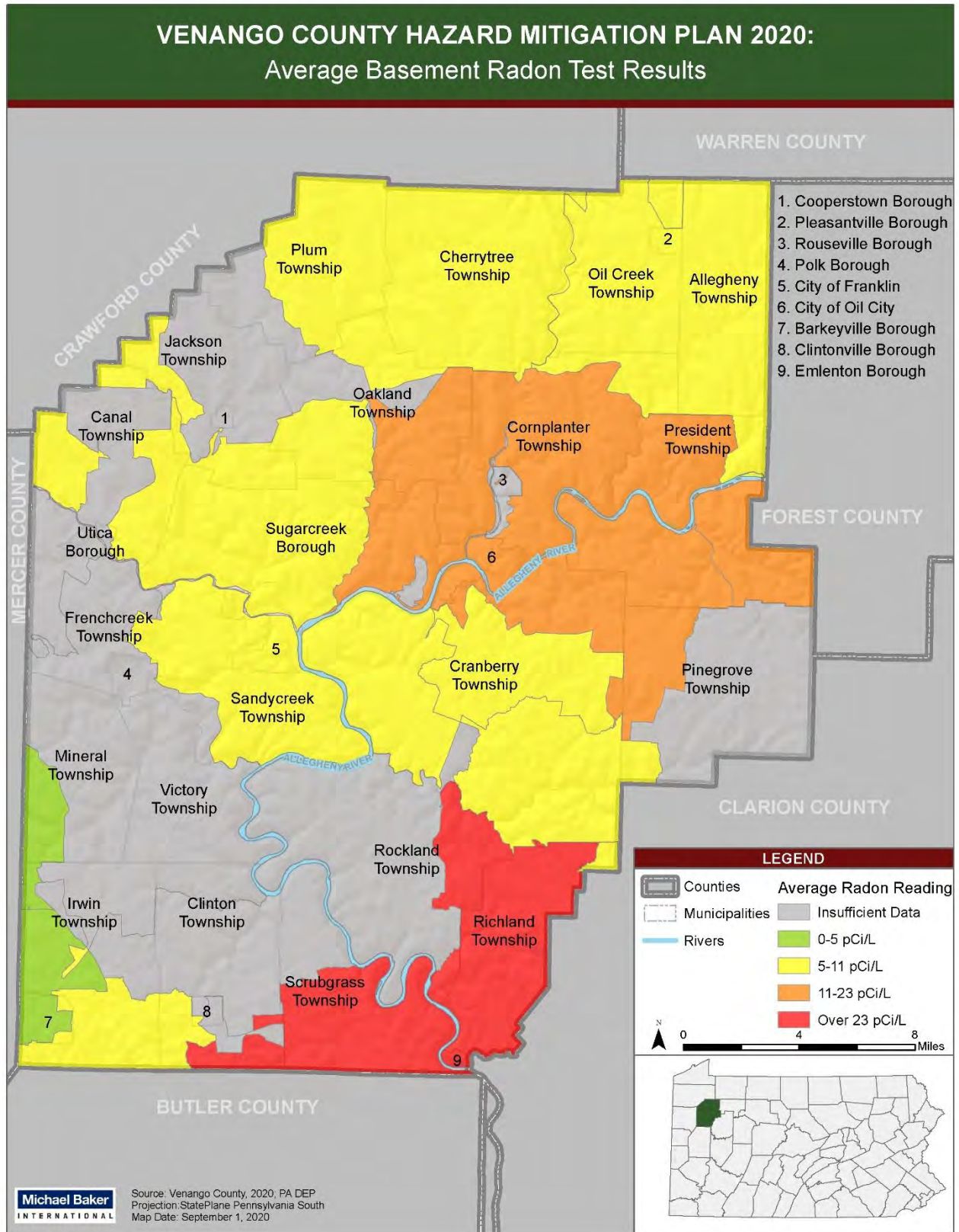
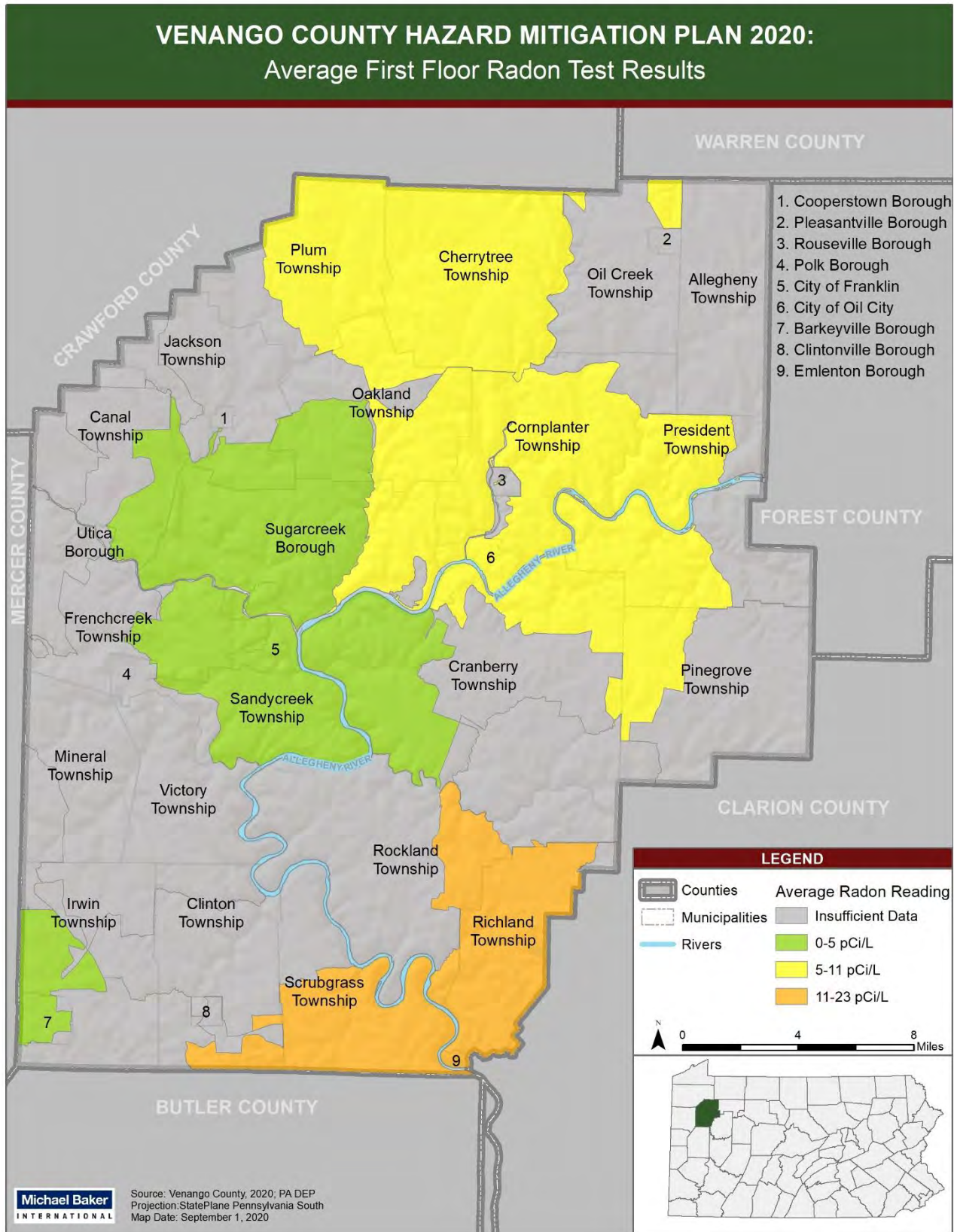


Figure 4.3.6-3 First Floor Radon Test Results



4.3.6.2 Range of Magnitude

Exposure to radon is the second leading cause of lung cancer after smoking. It is the number one cause of lung cancer among non-smokers. Radon is responsible for about 21,000 lung cancer deaths every year; approximately 2,900 of which occur among people who have never smoked. Lung cancer is the only known effect on human health from exposure to radon in air and thus far, there is no evidence that children are at greater risk of lung cancer than are adults (EPA, 2016). The main hazard is actually from the radon daughter products (218Po, 214Pb, 214Bi), which may become attached to lung tissue and induce lung cancer by their radioactive decay.

According to the EPA, the average radon concentration in the indoor air of homes nationwide is about 1.3 pCi/L. The EPA recommends homes be fixed if the radon level is 4 pCi/L or more. However, because there is no known safe level of exposure to radon, the EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L. Table 4.3.6-1 shows the relationship between various radon levels, probability of lung cancer, comparable risks from other hazards, and action thresholds. As is shown in Table 4.3.6-1, a smoker exposed to radon has a much higher risk of lung cancer (EPA, 2016).

Table 4.3.6-1 Radon Risk for Smokers and Non-Smokers (EPA, 2016).			
RADON LEVEL (pCi/L)	IF 1,000 PEOPLE WERE EXPOSED TO THIS LEVEL OVER A LIFETIME...*	RISK OF CANCER FROM RADON EXPOSURE COMPARES TO...**	ACTION THRESHOLD
SMOKERS			
20	About 260 people could get lung cancer	250 times the risk of drowning	Fix Structure
10	About 150 people could get lung cancer	200 times the risk of dying in a home fire	
8	About 120 people could get lung cancer	30 times the risk of dying in a fall	
4	About 62 people could get lung cancer	5 times the risk of dying in a car crash	
2	About 32 people could get lung cancer	6 times the risk of dying from poison	Consider fixing structure between 2 and 4 pCi/L
1.3	About 20 people could get lung cancer	(Average indoor radon level)	Reducing radon levels below 2pCi/L is difficult
0.4	About 3 people could get lung cancer	(Average outdoor radon level)	
NON-SMOKERS			
20	About 36 people could get lung cancer	35 times the risk of drowning	Fix Structure
10	About 18 people could get lung cancer	20 times the risk of dying in a home fire	
8	About 15 people could get lung cancer	4 times the risk of dying in a fall	

4	About 7 people could get lung cancer	The risk of dying in a car crash	
2	About 4 people could get lung cancer	The risk of dying from poison	Consider fixing structure between 2 and 4 pCi/L
1.3	About 2 people could get lung cancer	(Average indoor radon level)	Reducing radon levels below 2pCi/L is difficult
0.4	-	(Average outdoor radon level)	

NOTE: Risk may be lower for former smokers.
 * Lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003).
 ** Comparison data calculated using the Centers for Disease Control and Prevention's 1999-2001 National Center for Injury Prevention and Control Reports.

The worst-case scenario for radon exposure would be that a large area of tightly sealed homes provided residents high levels of exposure over a prolonged period of time without the resident being aware. This worst-case scenario exposure then could lead to a large number of people with cancer attributed to the radon exposure.

4.3.6.3 Past Occurrence

Current data on abundance and distribution of radon as it affects individual houses in the state of Pennsylvania in general is considered incomplete and potentially biased. Venango County is no exception. The EPA has estimated that the national average indoor radon concentration is 1.3 pCi/L and the level for action is 4.0 pCi/L; however they have estimated that the average indoor concentration in Pennsylvania basements is about 7.1 pCi/L and 3.6 pCi/L on the first floor (PADEP, 2019).

The Pennsylvania Department of Environmental Protection Bureau of Radiation Protection provides information for homeowners on how to test for radon in their houses. If a test results in radon concentrations over 4 pCi/L, then the Bureau works to help the homeowners make repairs to their houses to mitigate against high radon levels. The total number tests reported to the Bureau since 1990 and their results are provided by zip code on the Bureau’s website. However, this information is only provided if over 30 tests total were reported in order to best approximate the average for the area.

In Venango County, 9 zip codes had sufficient test results reported to the Bureau to list their findings, which are shown in Table 4.3.6-2.

Table 4.3.6-2 Radon Level Tests and Results in Venango County Zip Codes (PADEP, 2020)

ZIP CODE	COMMUNITY	BASEMENT			FIRST FLOOR	
		NUMBER OF TESTS	MAXIMUM RESULT (pCi/L)	AVERAGE RESULT (pCi/L)	NUMBER OF TESTS	AVERAGE RESULT (pCi/L)
16038	Barkeyville Borough	62	58.5	7.3	-	-
16127	Irwin Township	860	70.4	4.7	105	3.3
16301	Oil City	1140	280	11.6	192	5.7
16319	Cranberry Township	75	73.9	7.8	-	-
16323	Franklin City	850	271	6.1	148	3.9
16341	Cornplanter Township	34	52.4	6.8	-	-
16346	Cranberry Township	146	65.4	9.1	-	-
16354	Cherrytree Township	243	190.6	10.6	38	5.9
16373	Emlenton Borough	133	295.7	30	42	12.8

4.3.6.4 Future Occurrence

Radon exposure in Venango County is inevitable given present soil, geologic, and geomorphic factors. Future occurrence of high radon level hazards can be considered possible as defined by the Risk Factor Methodology probability criteria (see Table 4.4-1).

Development in areas where previous radon levels have been significantly high will continue to be more susceptible to exposure. However, new incidents of concentrated exposure may occur with future development or deterioration of older structures. Exposure can be limited with proper testing for both past and future development and appropriate mitigation measures.

4.3.6.5 Vulnerability Assessment

Structures in Venango County, particularly in high vulnerability areas as shown in Figures 4.3.6-2 and 4.3.6-3, could be susceptible to moderate levels of radon. Smokers can be up to ten times more vulnerable to lung cancer from high levels of radon depending on the level of radon they are exposed to. Older houses that have crawl spaces or unfinished basements are more vulnerable as well because of the increased exposure to soils which could be releasing higher levels of radon gas. Additionally, houses that rely on wells for their water may face an additional risk, although this type of exposure is low and rare in Pennsylvania.

Proper testing for radon levels should be completed throughout Venango County, especially in the areas of higher incidence levels and for vulnerable populations that face the contributing risks described above. This testing will determine the level of vulnerability that residents face in their homes, as well as in their businesses and schools. The Pennsylvania Department of Environmental Protection Bureau of Radiation Protection provides short and long term tests to determine radon levels as well as information on how to mitigate high levels of radon in a building. According to the PADEP, repairs to protect against radon can cost on average the same as routine house repairs (PADEP, 2019). As seen in Figures 4.3.6.1-2 and 4.3.6.1-3, areas with the highest reported tests were in the south eastern part of the County, while much of the central and northern portions of the county also has elevated basement radon levels. First floor radon levels were also highest in the south eastern portion of the County.

4.3.7 Tornado, Windstorm

4.3.7.1 Location and Extent

Tornadoes and windstorms can occur throughout Venango County, though events are usually localized. However, severe thunderstorms may result in conditions favorable to the formation of numerous or long-lived tornadoes. Tornadoes can occur at any time during the day or night but are most frequent during late afternoon into early evening, the warmest hours of the day, and most likely to occur during the spring and early summer months of March through June.



Tornado movement is characterized in two ways: direction and speed of spinning winds, and forward movement of the tornado, also known as the storm track. The forward motion of the tornado path can be a few hundred yards or several hundred miles in length. The width of tornadoes can vary greatly, but generally range in size from less than 100 feet to over a mile in

width. Some tornadoes never touch the ground and are short-lived, while others may touch the ground several times.

Straight-line winds and windstorms are experienced on a more region-wide scale. While such winds usually accompany tornadoes, straight-line winds are caused by the movement of air from areas of higher pressure to areas of lower pressure. Stronger winds are the result of greater differences in pressure. Windstorms are generally defined with sustained wind speeds of 40 mph or greater lasting for one hour or longer, or winds of 58 mph or greater for any duration.

4.3.7.2 Range of Magnitude

Each year, tornadoes account for \$400 million in damages and cause over 70 deaths nationally (National Geographic, 2019). While the extent of tornado damage is usually localized, the vortex of extreme wind associated with a tornado can result in some of the most destructive forces on Earth. Rotational wind speeds can range from 100 mph to more than 250 mph. In addition, the speed of forward motion can range from 0 to 50 mph. Therefore, some estimates place the maximum velocity (combination of ground speed, wind speed, and upper winds) of tornadoes at about 300 mph. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail. The most violent tornadoes have rotating winds of 250 miles per hour or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

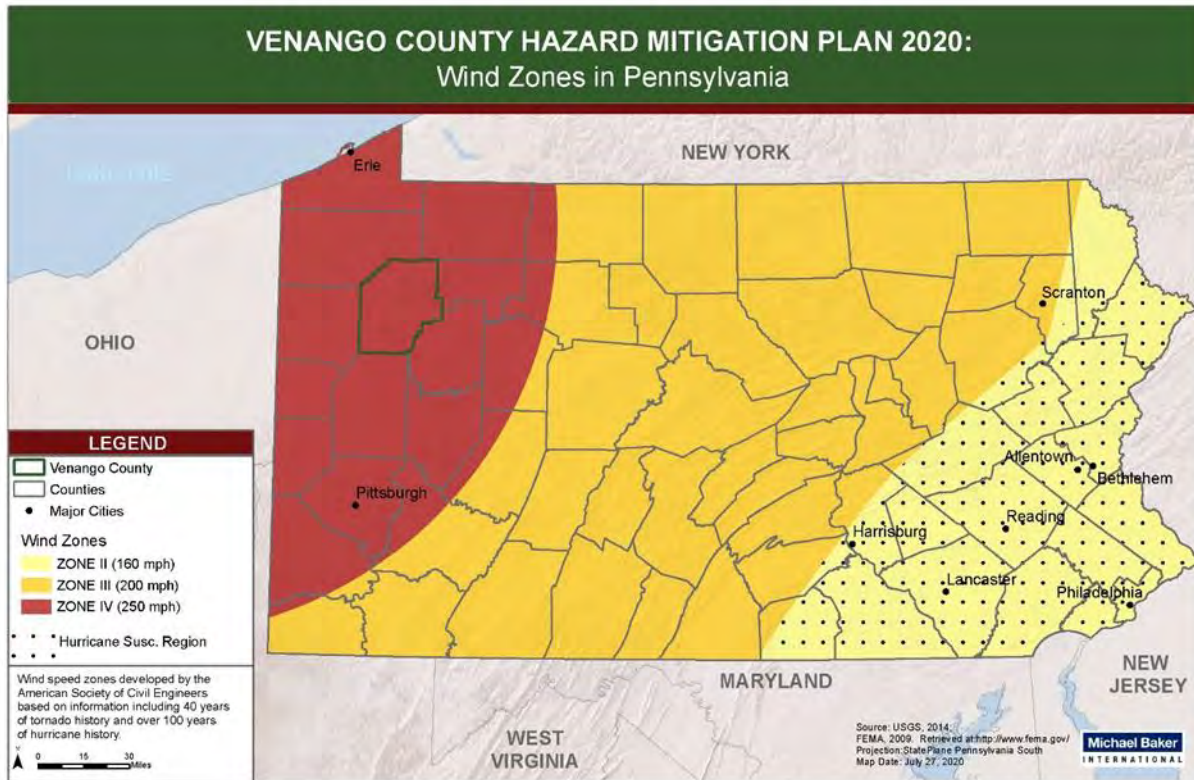
Damages and deaths can be especially significant when tornadoes move through populated, developed areas. The destruction caused by tornadoes ranges from minor to extreme damage depending on the intensity, size and duration of the storm. Typically, tornadoes cause the greatest damages to structures of light construction such as mobile homes.

The Enhanced Fujita Scale, also known as the “EF-Scale,” measures tornado strength and associated damages. The EF-Scale is an update to the earlier Fujita Scale, also known as the “F-Scale,” that was published in 1971. It classifies United States tornadoes into six intensity categories, as shown in Table 4.3.7-1, based upon the estimated maximum winds occurring within the wind vortex. Since its implementation by the National Weather Service in 2007, the EF-Scale has become the definitive metric for estimating wind speeds within tornadoes based upon damage to buildings and structures. F-Scale categories with corresponding EF-Scale wind speeds are provided in Table 4.3.7-1 since the magnitude of previous tornado occurrences is based on the F-Scale.

Table 4.3.7-1 Enhanced Fujita Scale (EF-Scale) categories with associated wind speeds and description of damages.			
EF-SCALE NUMBER	WIND SPEED (mph)	F-SCALE NUMBER	TYPE OF DAMAGE POSSIBLE
EF0	65–85	F0-F1	Minor damage: Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over. Confirmed tornadoes with no reported damage (i.e., those that remain in open fields) are always rated EF0.
EF1	86–110	F1	Moderate damage: Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111–135	F1-F2	Considerable damage: Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	136–165	F2-F3	Severe damage: Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	166–200	F3	Devastating damage: Well-constructed houses and whole frame houses completely leveled; cars thrown and small missiles generated.
EF5	>200	F3-F6	Extreme damage: Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 m (300 ft); steel reinforced concrete structure badly damaged; high-rise buildings have significant structural deformation.

Figure 4.3.7-1 shows the wind speed zones developed by the American Society of Civil Engineers based on tornado and hurricane historical events. These wind speed zones are intended to guide the design and evaluation of the structural integrity of shelters and critical facilities. All of Venango County falls within Zone IV. Shelters and critical facilities should be able to withstand a 3-second gust of up to 250 mph, regardless of whether the gust is the result of a tornado, coastal storm, or windstorm event. Therefore, these structures should be able to withstand the wind speeds experienced in an F5 tornado event.

Figure 4.3.7-1 Wind Zone Associated with Venango County



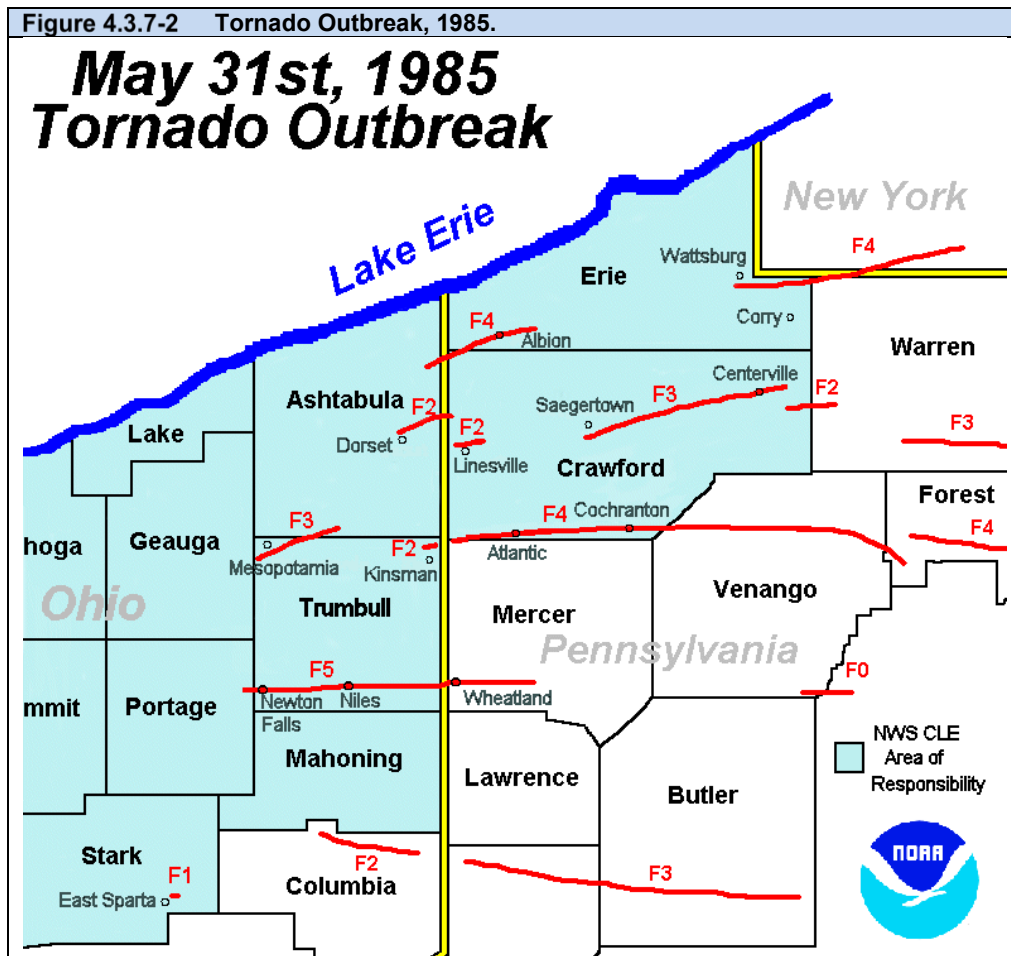
The worst tornado event on record occurred on July 15, 2004 in Campbelltown, Lebanon County. This F3 tornado, which had estimated wind speeds of 175-200 miles per hour, leveled 32 houses, severely damaged 37 homes, and an additional 50 homes suffered more minor damage. Two people were hospitalized from the tornado, one critically injured. While only on the ground for 10-15 minutes, the NCDC estimates that the tornado caused \$18 million in property damage.

Since tornado events are typically localized, environmental impacts are rarely widespread. The impacts of windstorms on the environment typically take place over a larger area. In either case, where these events occur, severe damage to plant species is likely. This includes uprooting or total destruction of trees and an increased threat of wildfire in areas where dead trees are not removed. Hazardous material facilities should meet design requirements for the wind zones identified in Figure 4.3.7-1 in order to prevent release of hazardous materials into the environment.

4.3.7.3 Past Occurrence

Tornadoes have occurred throughout Pennsylvania. Western and southeastern sections of the Commonwealth have been struck more frequently. On May 31, 1985 a very rare outbreak of 21 tornadoes tracked across northeast Ohio and northwest Pennsylvania, including Erie, Warren, Crawford, Forest, Mercer, Venango, Mercer, and Butler counties, killing 76 people (Figure 4.3.7-2). One of these tornadoes was rated an F6 while six were rated F4s on the old Fujita Scale. The deadliest tornado touched down near Jamestown, PA as an F4 on the old Fujita Scale, killing 23 people and destroying 371 homes. It stayed on the ground for over an hour and produced a 56-mile long damage path.

During that same storm in May 1985, one of the four F4 tornadoes that day entered the northern portion of Venango County and travelled across the width of the county. Three people were killed in Cooperstown. Two houses and nearly a dozen trailers were destroyed between Dempseytown and Cherrytree, with 5 deaths reported. On the same day, an F0 tornado struck extreme southeast Venango County. It traveled from 4 miles west-northwest of Emlenton to 2 miles northeast of Emlenton, for a total path length of about 6 miles. A couple trailers and 5 houses were destroyed or severely damaged in Scrubgrass Township. Two injuries occurred; a man and his son were badly hurt when their trailer was destroyed. In total, the tornadoes on May 31, 1985 caused 8 deaths and 45 injuries in Venango County.

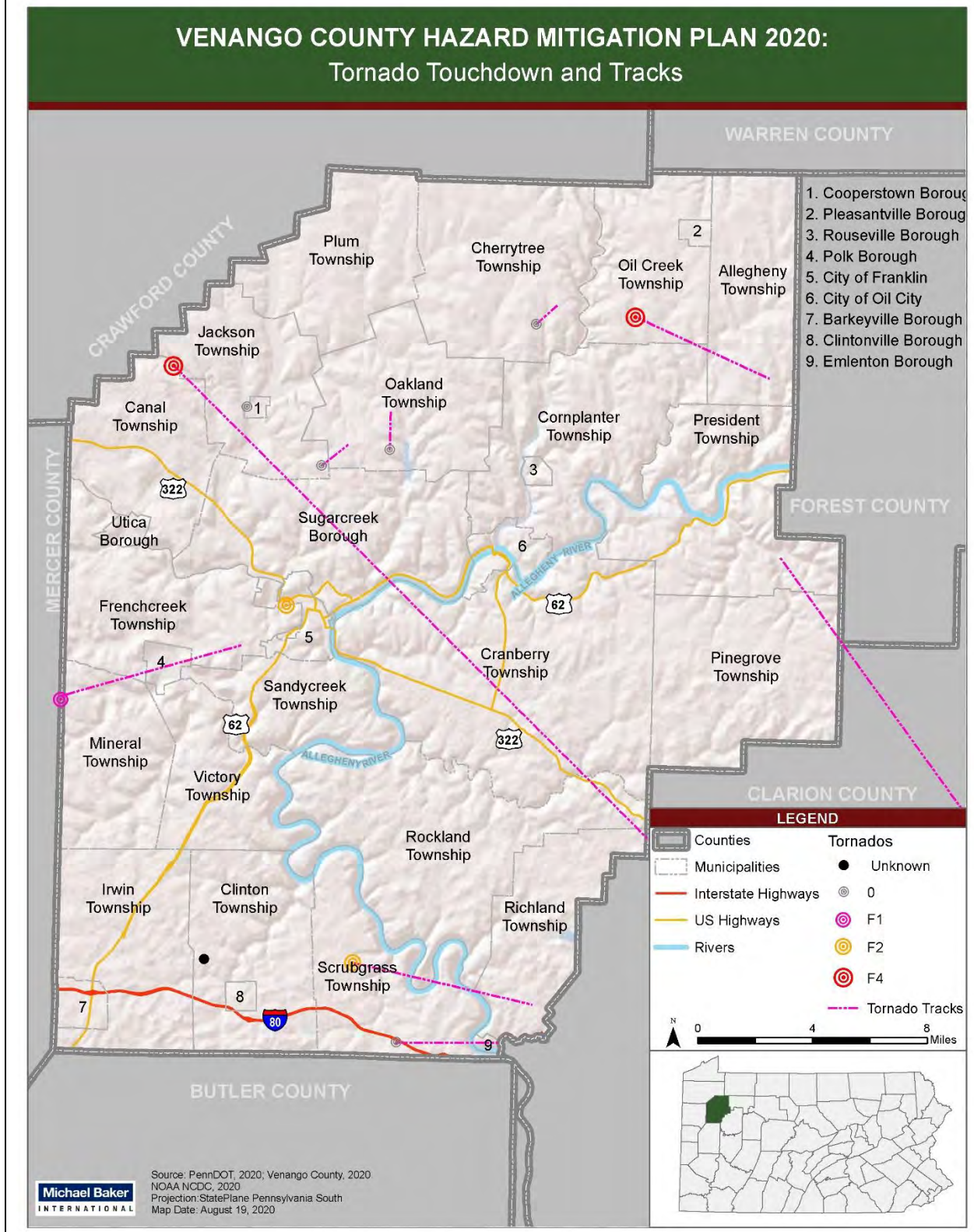


The most recent tornado experienced by Venango County was an EF0 and occurred on April 14, 2020 near Petroleum Center, no property damages were reported

Table 4.3.7-2 lists previous tornado events that have occurred in Venango County. Figure 4.3.7-3 depicts the locations of tornado touchdowns and paths.

Table 4.3.7-2 History of Tornadoes in Venango County					
LOCATION	DATE	F-SCALE	DEATHS	INJURIES	PROPERTY DAMAGE
PETROLEUM CENTER	4/14/2019	EF0	0	0	0.00K
FRANKLIN FISHER ARPT	4/14/2019	EF0	0	0	0.00K
OIL CITY	5/25/2004	F0	0	0	0.00K
RAYMILTON	4/28/2002	F1	0	0	250.00K
VENANGO CO.	6/22/1985	F0	0	0	0.00K
VENANGO CO.	5/31/1985	F0	0	0	0.00K
VENANGO CO.	5/31/1985	F2	0	1	0.00K
VENANGO CO.	5/31/1985	F4	0	0	0.00K
VENANGO CO.	5/31/1985	F4	0	5	25.000M
VENANGO CO.	5/31/1985	F4	8	40	25.000M
VENANGO CO.	8/7/1981	F2	0	0	250.00K
VENANGO CO.	9/24/1977		0	0	25.00K
VENANGO CO.	7/2/1974	F1	0	0	0.00K
TOTAL			8	46	50.525M

Figure 4.3.7-3 Venango County Tornado History



Windstorm events may be the result of thunderstorms, hurricanes, tropical storms, winter storms, or nor'easters. There have been nearly 200 events with wind speeds of greater than 50 knots in Venango County since 1993. These events frequently occurred in conjunction with thunderstorms. These events have resulted in 1 death, 2 injuries and nearly \$4M. Table 4.3.7-3 includes the location, date, type of event, magnitude, deaths, injuries, and property damage.

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
Franklin	8/2/1993	Thunderstorm Wind	52 kts.	0	0	0.50K
VENANGO (ZONE)	3/2/1996	High Wind	58 kts.	0	0	0.00K
NECTARINE	5/31/1998	Thunderstorm Wind	61 kts.	0	0	20.00K
FRANKLIN	7/21/1998	Thunderstorm Wind	52 kts.	0	0	2.00K
VENANGO (ZONE)	12/12/2000	High Wind	57 kts. E	0	0	25.00K
VENANGO (ZONE)	12/14/2001	High Wind	50 kts. E	0	0	5.00K
VENANGO (ZONE)	2/23/2003	High Wind	55 kts. EG	0	0	3.00K
VENANGO (ZONE)	3/8/2003	High Wind	55 kts. EG	0	0	0.00K
OIL CITY	7/21/2003	Thunderstorm Wind	52 kts. EG	0	0	10.00K
PLEASANTVILLE	7/21/2003	Thunderstorm Wind	50 kts. EG	0	0	0.00K
OIL CITY	7/21/2003	Thunderstorm Wind	61 kts. EG	0	0	75.00K
VENANGO (ZONE)	7/21/2003	High Wind	52 kts. EG	0	0	0.00K
COUNTYWIDE	7/21/2003	Thunderstorm Wind	52 kts. EG	0	0	5.00K
OIL CITY	8/26/2003	Thunderstorm Wind	50 kts. EG	0	0	0.00K
POLK	8/26/2003	Thunderstorm Wind	50 kts. EG	0	0	1.00K
FRANKLIN	8/26/2003	Thunderstorm Wind	50 kts. EG	0	0	2.00K
BARKEYVILLE	10/14/2003	Thunderstorm Wind	61 kts. EG	0	0	25.00K
VENANGO (ZONE)	11/13/2003	High Wind	52 kts. EG	0	0	5.00K
VENANGO (ZONE)	3/5/2004	High Wind	50 kts. EG	0	0	0.00K
PLEASANTVILLE	4/19/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K
CHERRYTREE	5/20/2004	Thunderstorm Wind	52 kts. EG	0	0	5.00K
ROCKLAND	5/21/2004	Thunderstorm Wind	50 kts. EG	0	0	0.00K
ROUSEVILLE	6/9/2004	Thunderstorm Wind	50 kts. EG	0	0	5.00K
FRANKLIN	6/14/2004	Thunderstorm Wind	52 kts. EG	0	2	30.00K
KENNERDELL	6/6/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K
OIL CITY	6/14/2005	Thunderstorm Wind	52 kts. EG	0	0	100.00K

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
FRANKLIN	6/30/2005	Thunderstorm Wind	50 kts. EG	0	0	15.00K
KENNERDELL	7/13/2005	Thunderstorm Wind	50 kts. EG	0	0	8.00K
SUGARCREEK	7/16/2005	Thunderstorm Wind	50 kts. EG	0	0	8.00K
FRANKLIN	7/25/2005	Thunderstorm Wind	50 kts. EG	0	0	5.00K
FRANKLIN	7/26/2005	Thunderstorm Wind	50 kts. EG	0	0	5.00K
OIL CITY	8/13/2005	Thunderstorm Wind	50 kts. EG	0	0	10.00K
FRANKLIN	11/6/2005	Thunderstorm Wind	50 kts. EG	0	0	12.00K
CLINTONVILLE	11/9/2005	Thunderstorm Wind	50 kts. EG	0	0	5.00K
VENANGO (ZONE)	2/17/2006	High Wind	50 kts. EG	0	0	15.00K
UTICA	6/19/2006	Thunderstorm Wind	50 kts. EG	0	0	3.00K
FRANKLIN	6/19/2006	Thunderstorm Wind	50 kts. EG	0	0	10.00K
PRESIDENT	6/19/2006	Thunderstorm Wind	50 kts. EG	0	0	5.00K
SUGARCREEK	6/22/2006	Thunderstorm Wind	50 kts. EG	0	0	0.00K
OIL CITY	6/22/2006	Thunderstorm Wind	50 kts. EG	0	0	6.00K
EMLENTON STATION	8/3/2006	Thunderstorm Wind	50 kts. EG	0	0	3.00K
WESLEY	12/1/2006	Thunderstorm Wind	55 kts. EG	0	0	10.00K
VENANGO (ZONE)	12/1/2006	High Wind	56 kts. MG	0	0	20.00K
CLINTONVILLE	6/8/2007	Thunderstorm Wind	50 kts. EG	0	0	2.00K
FRANKLIN	6/19/2007	Thunderstorm Wind	50 kts. EG	0	0	0.00K
EAST SANDY	8/7/2007	Thunderstorm Wind	50 kts. EG	0	0	2.00K
CRANBERRY	8/7/2007	Thunderstorm Wind	50 kts. EG	0	0	2.00K
PETROLEUM CENTER	9/26/2007	Thunderstorm Wind	50 kts. EG	0	0	25.00K
PLEASANTVILLE	9/26/2007	Thunderstorm Wind	50 kts. EG	0	0	20.00K
VENANGO (ZONE)	1/30/2008	High Wind	50 kts. EG	0	0	50.00K
VENANGO (ZONE)	5/11/2008	High Wind	50 kts. EG	0	0	75.00K
VICTORY	6/8/2008	Thunderstorm Wind	50 kts. EG	0	0	25.00K
KANEVILLE	6/13/2008	Thunderstorm Wind	50 kts. EG	0	0	35.00K
ROCKY GROVE	7/8/2008	Thunderstorm Wind	50 kts. EG	0	0	25.00K
BARKEYVILLE	7/21/2008	Thunderstorm Wind	50 kts. EG	0	0	50.00K
VICTORY	8/14/2008	Thunderstorm Wind	50 kts. EG	0	0	50.00K
VENANGO (ZONE)	9/14/2008	High Wind	65 kts. EG	1	0	1.000M
VENANGO (ZONE)	2/12/2009	High Wind	50 kts. EG	0	0	100.00K

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
EMLENTON STATION	6/17/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
FRANKLIN	6/17/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
UTICA	8/10/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
OIL CITY	8/10/2009	Thunderstorm Wind	50 kts. EG	0	0	25.00K
SUGARCREEK	8/20/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
DEMPESEYTOWN	8/20/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
ROCKY GROVE	12/9/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
BARKEYVILLE	12/9/2009	Thunderstorm Wind	50 kts. EG	0	0	50.00K
VENANGO (ZONE)	12/9/2009	High Wind	50 kts. EG	0	0	0.00K
OIL CITY	5/14/2010	Thunderstorm Wind	50 kts. EG	0	0	0.00K
OIL CITY	5/31/2010	Thunderstorm Wind	50 kts. EG	0	0	50.00K
AHRENSVILLE	7/23/2010	Thunderstorm Wind	50 kts. EG	0	0	25.00K
SENECA	7/24/2010	Thunderstorm Wind	50 kts. EG	0	0	25.00K
OIL CITY	7/24/2010	Thunderstorm Wind	50 kts. EG	0	0	35.00K
PRESIDENT	4/25/2011	Thunderstorm Wind	50 kts. EG	0	0	50.00K
HENRYS BEND	4/25/2011	Thunderstorm Wind	50 kts. EG	0	0	50.00K
PLEASANTVILLE	4/27/2011	Thunderstorm Wind	50 kts. EG	0	0	35.00K
FRANKLIN	4/27/2011	Thunderstorm Wind	50 kts. EG	0	0	35.00K
WALNUT BEND	4/27/2011	Thunderstorm Wind	50 kts. EG	0	0	25.00K
PLEASANTVILLE	4/27/2011	Thunderstorm Wind	50 kts. EG	0	0	50.00K
VENANGO (ZONE)	4/28/2011	High Wind	50 kts. EG	0	0	75.00K
POLK JCT	5/25/2011	Thunderstorm Wind	50 kts. EG	0	0	5.00K
CLINTONVILLE	5/25/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K
SPRINGVILLE	7/18/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K
NECTARINE	7/22/2011	Thunderstorm Wind	50 kts. EG	0	0	10.00K
PETROLEUM CENTER	8/25/2011	Thunderstorm Wind	50 kts. EG	0	0	75.00K
CHAPMANVILLE	9/13/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K
SUNVILLE	9/13/2011	Thunderstorm Wind	50 kts. EG	0	0	5.00K
HENRYS BEND	9/13/2011	Thunderstorm Wind	50 kts. EG	0	0	1.00K
OIL CITY	9/13/2011	Thunderstorm Wind	50 kts. EG	0	0	0.50K
BULLY HILL	11/14/2011	Thunderstorm Wind	50 kts. EG	0	0	25.00K
OIL CITY	11/14/2011	Thunderstorm Wind	50 kts. EG	0	0	15.00K

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
EMLENTON STATION	11/14/2011	Thunderstorm Wind	50 kts. EG	0	0	25.00K
VENANGO (ZONE)	2/24/2012	High Wind	50 kts. EG	0	0	5.00K
CRANBERRY	5/27/2012	Thunderstorm Wind	50 kts. EG	0	0	25.00K
CHERRYTREE	5/29/2012	Thunderstorm Wind	50 kts. EG	0	0	25.00K
SAWTOWN	5/29/2012	Thunderstorm Wind	50 kts. EG	0	0	20.00K
OIL CITY	7/3/2012	Thunderstorm Wind	50 kts. EG	0	0	25.00K
SUGARCREEK	7/3/2012	Thunderstorm Wind	50 kts. EG	0	0	25.00K
FRANKLIN	7/26/2012	Thunderstorm Wind	50 kts. EG	0	0	25.00K
EAGLE ROCK	7/26/2012	Thunderstorm Wind	50 kts. EG	0	0	50.00K
PRESIDENT	7/26/2012	Thunderstorm Wind	78 kts. EG	0	0	25.00K
POLK JCT	8/9/2012	Thunderstorm Wind	50 kts. EG	0	0	0.50K
POLK JCT	8/9/2012	Thunderstorm Wind	50 kts. EG	0	0	0.50K
FRANKLIN	8/9/2012	Thunderstorm Wind	50 kts. EG	0	0	0.50K
CRANBERRY	8/9/2012	Thunderstorm Wind	50 kts. EG	0	0	0.50K
VENUS	8/9/2012	Thunderstorm Wind	50 kts. EG	0	0	0.50K
PLEASANTVILLE	9/22/2012	Thunderstorm Wind	50 kts. EG	0	0	25.00K
EMLENTON STATION	4/10/2013	Thunderstorm Wind	50 kts. EG	0	0	5.00K
CLINTONVILLE	4/10/2013	Thunderstorm Wind	50 kts. EG	0	0	2.00K
EMLENTON STATION	4/10/2013	Thunderstorm Wind	50 kts. EG	0	0	5.00K
LISBON	6/25/2013	Thunderstorm Wind	50 kts. EG	0	0	1.00K
POLK JCT	6/25/2013	Thunderstorm Wind	50 kts. EG	0	0	0.50K
UTICA	6/25/2013	Thunderstorm Wind	50 kts. EG	0	0	2.00K
UTICA	6/25/2013	Thunderstorm Wind	50 kts. EG	0	0	0.50K
EMLENTON STATION	6/25/2013	Thunderstorm Wind	50 kts. EG	0	0	2.00K
POLK JCT	7/10/2013	Thunderstorm Wind	50 kts. EG	0	0	20.00K
FRANKLIN	7/10/2013	Thunderstorm Wind	50 kts. EG	0	0	50.00K
CLINTONVILLE	8/8/2013	Thunderstorm Wind	50 kts. EG	0	0	0.00K
FRANKLIN	11/17/2013	Thunderstorm Wind	50 kts. EG	0	0	35.00K
FRANKLIN	12/22/2013	Thunderstorm Wind	50 kts. EG	0	0	0.50K
BRANDON	6/3/2014	Thunderstorm Wind	50 kts. EG	0	0	2.00K
CRANBERRY	6/3/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K
MAPLE SHADE	6/3/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
ROUSEVILLE	6/17/2014	Thunderstorm Wind	50 kts. EG	0	0	10.00K
PLEASANTVILLE	6/18/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K
COOPERSTOWN	6/18/2014	Thunderstorm Wind	50 kts. EG	0	0	10.00K
POLK	6/18/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K
MT PLEASANT	6/18/2014	Thunderstorm Wind	50 kts. EG	0	0	3.00K
BARKEYVILLE	6/18/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K
CLINTONVILLE	6/18/2014	Thunderstorm Wind	50 kts. EG	0	0	2.00K
OIL CITY	9/2/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K
CLINTONVILLE	5/11/2015	Thunderstorm Wind	50 kts. EG	0	0	3.00K
FRANKLIN	5/11/2015	Thunderstorm Wind	50 kts. EG	0	0	5.00K
SENECA	5/11/2015	Thunderstorm Wind	50 kts. EG	0	0	5.00K
CRANBERRY	5/11/2015	Thunderstorm Wind	50 kts. EG	0	0	5.00K
OIL CITY	5/11/2015	Thunderstorm Wind	50 kts. EG	0	0	5.00K
PLEASANTVILLE	5/11/2015	Thunderstorm Wind	50 kts. EG	0	0	5.00K
PLEASANTVILLE	6/12/2015	Thunderstorm Wind	50 kts. EG	0	0	2.00K
PETROLEUM CENTER	7/19/2015	Thunderstorm Wind	50 kts. EG	0	0	2.00K
PLEASANTVILLE	7/19/2015	Thunderstorm Wind	50 kts. EG	0	0	2.00K
BARKEYVILLE	7/26/2015	Thunderstorm Wind	50 kts. EG	0	0	0.50K
CLINTONVILLE	7/26/2015	Thunderstorm Wind	50 kts. EG	0	0	0.50K
LISBON	7/26/2015	Thunderstorm Wind	50 kts. EG	0	0	0.50K
COOPERSTOWN	6/5/2016	Thunderstorm Wind	50 kts. EG	0	0	25.00K
CLINTONVILLE	6/5/2016	Thunderstorm Wind	50 kts. EG	0	0	20.00K
EAGLE ROCK	6/5/2016	Thunderstorm Wind	50 kts. EG	0	0	30.00K
GALLOWAY CITY	6/16/2016	Thunderstorm Wind	50 kts. EG	0	0	75.00K
COOPERSTOWN	7/18/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K
COOPERSTOWN	9/8/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K
OLEOPOLIS	9/8/2016	Thunderstorm Wind	50 kts. EG	0	0	0.50K
MT PLEASANT	9/10/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K
NILES	9/10/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K
FRANKLIN	9/10/2016	Thunderstorm Wind	50 kts. EG	0	0	0.00K
RENO	9/10/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K
RENO	5/1/2017	Thunderstorm Wind	50 kts. EG	0	0	2.00K

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
OIL CITY	5/1/2017	Thunderstorm Wind	50 kts. EG	0	0	15.00K
RENO	5/1/2017	Thunderstorm Wind	50 kts. EG	0	0	5.00K
PLEASANTVILLE	6/18/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
PLEASANTVILLE	6/18/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
ROCKMERE	6/18/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
CRANBERRY	8/4/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
PRESIDENT	8/4/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
HANNASVILLE	11/5/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
COOPERSTOWN	11/5/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
UTICA	11/5/2017	Thunderstorm Wind	50 kts. EG	0	0	2.50K
ROCKY GROVE	5/4/2018	Thunderstorm Wind	50 kts. EG	0	0	0.00K
PLEASANTVILLE	5/4/2018	Thunderstorm Wind	50 kts. EG	0	0	0.00K
FRANKLIN	5/4/2018	Thunderstorm Wind	50 kts. EG	0	0	0.00K
SENECA	5/4/2018	Thunderstorm Wind	50 kts. EG	0	0	0.00K
EAGLE ROCK	7/2/2018	Thunderstorm Wind	55 kts. EG	0	0	0.00K
UTICA	8/29/2018	Thunderstorm Wind	50 kts. EG	0	0	3.00K
DEMPSEYTOWN	8/29/2018	Thunderstorm Wind	50 kts. EG	0	0	3.00K
BULLY HILL	9/21/2018	Thunderstorm Wind	50 kts. EG	0	0	0.00K
ROUSEVILLE	10/6/2018	Thunderstorm Wind	50 kts. EG	0	0	2.00K
ROUSEVILLE	10/6/2018	Thunderstorm Wind	50 kts. EG	0	0	2.00K
VENANGO (ZONE)	2/24/2019	High Wind	50 kts. EG	0	0	0.00K
FRANKLIN	4/14/2019	Thunderstorm Wind	50 kts. EG	0	0	10.00K
GALLOWAY CITY	4/14/2019	Thunderstorm Wind	70 kts. EG	0	0	5.00K
BRADLEYTOWN	4/14/2019	Thunderstorm Wind	50 kts. EG	0	0	1.00K
WALNUT BEND	4/14/2019	Thunderstorm Wind	50 kts. EG	0	0	0.50K
PLEASANTVILLE	4/14/2019	Thunderstorm Wind	50 kts. EG	0	0	0.50K
PLEASANTVILLE	4/14/2019	Thunderstorm Wind	50 kts. EG	0	0	5.00K
OIL CITY	5/25/2019	Thunderstorm Wind	50 kts. EG	0	0	10.00K
COOPERSTOWN	5/28/2019	Thunderstorm Wind	50 kts. EG	0	0	0.00K
DEMPSEYTOWN	5/28/2019	Thunderstorm Wind	50 kts. EG	0	0	0.00K
OIL CITY	6/1/2019	Thunderstorm Wind	50 kts. EG	0	0	0.00K
CHAPMANVILLE	7/19/2019	Thunderstorm Wind	50 kts. EG	0	0	0.00K

Table 4.3.7-3 History of Windstorms Venango County						
LOCATION	DATE	TYPE OF EVENT	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE
GRANDVIEW	7/19/2019	Thunderstorm Wind	50 kts. EG	0	0	0.00K
FERTIGS	7/20/2019	Thunderstorm Wind	50 kts. EG	0	0	0.00K
GALLOWAY CITY	8/17/2019	Thunderstorm Wind	50 kts. EG	0	0	2.00K
CHERRYTREE	4/7/2020	Thunderstorm Wind	50 kts. EG	0	0	2.00K
Totals:				1	2	3.650M

4.3.7.4 Future Occurrence

The frequency of tornadoes and windstorms is expected to remain constant across Venango County. These storms can affect the entire county, windstorms especially can occur across the entire county during one event. The probability of a tornado or windstorm directly affecting Venango County is relatively high, and there have been some significant past damages. Most of Pennsylvania is susceptible to tornadoes of a magnitude of at most an EF-4. It can reasonably be assumed that future tornadoes will be similar in nature to those that have affected the County in the past. The probability of the County and its municipalities experiencing severe winds is difficult to quantify but is considered relatively high. The degree of damage and impact to the county will vary as it has in years past.

Changing weather patterns have led to more frequent and extreme storms across the Nation. This includes intense winds associated with severe rain and tropical storms. Further, the annual number of very hot days is growing. Warmer and wetter conditions provide more energy for thunderstorms and tornadoes. While it is difficult to predict, it is expected that these conditions will continue to intensify in Venango County. Overall, the probably of future tornado and windstorms should be considered likely according to the Risk Factor Methodology (see Table 4.4 -1).

4.3.7.5 Vulnerability Assessment

Tornadoes and windstorms may affect the entire County, including all critical infrastructure and all structures. However, there are a number of evaluation criteria to consider when discussing the vulnerability of structures and critical facilities. These criteria include age of the building (and what building codes may have been in effect at the time it was built), type of construction, and condition of the structure (i.e., how well has the structure been maintained). For most assets, this would require site-specific analysis.

The primary structure type vulnerable to a tornado or windstorm is mobile homes due to their lightweight, unanchored design. Table 4.3.7-4 provides the number of structures on mobile home

parcels by municipality. These should be considered an estimate of mobile homes (see Section 2.5 for data limitations).

Table 4.3.7-4 Estimated Mobile Homes Per Municipality.			
MUNICIPALITY	TOTAL STRUCTURES	MOBILE HOME	PERCENT MOBILE HOMES
Allegheny Township	220	19	8.64%
Barkeyville Borough	141	17	12.06%
Canal Township	513	86	16.76%
Cherrytree Township	825	104	12.61%
Clinton Township	542	60	11.07%
Clintonville Borough	241	84	34.85%
Cooperstown Borough	214	7	3.27%
Cornplanter Township	1,324	63	4.76%
Cranberry Township	3,502	413	11.79%
Emlenton Borough	374	5	1.34%
City of Franklin	2,995	16	0.53%
Frenchcreek Township	871	127	14.58%
Irwin Township	730	120	16.44%
Jackson Township	569	149	26.19%
Mineral Township	331	58	17.52%
Oakland Township	735	74	10.07%
City of Oil City	4,769	4	0.08%
Oil Creek Township	488	72	14.75%
Pinegrove Township	691	86	12.45%
Pleasantville Borough	471	59	12.53%
Plum Township	547	83	15.17%
Polk Borough	263	22	8.37%
President Township	766	94	12.27%
Richland Township	589	46	7.81%
Rockland Township	1,435	175	12.20%
Rouseville Borough	257	11	4.28%
Sandycreek Township	1,228	142	11.56%
Scrubgrass Township	723	81	11.20%
Sugarcreek Borough	2,497	177	7.09%
Utica Borough	125	7	5.60%
Victory Township	339	75	22.12%
Grand Total	29,315	2,536	8.65%

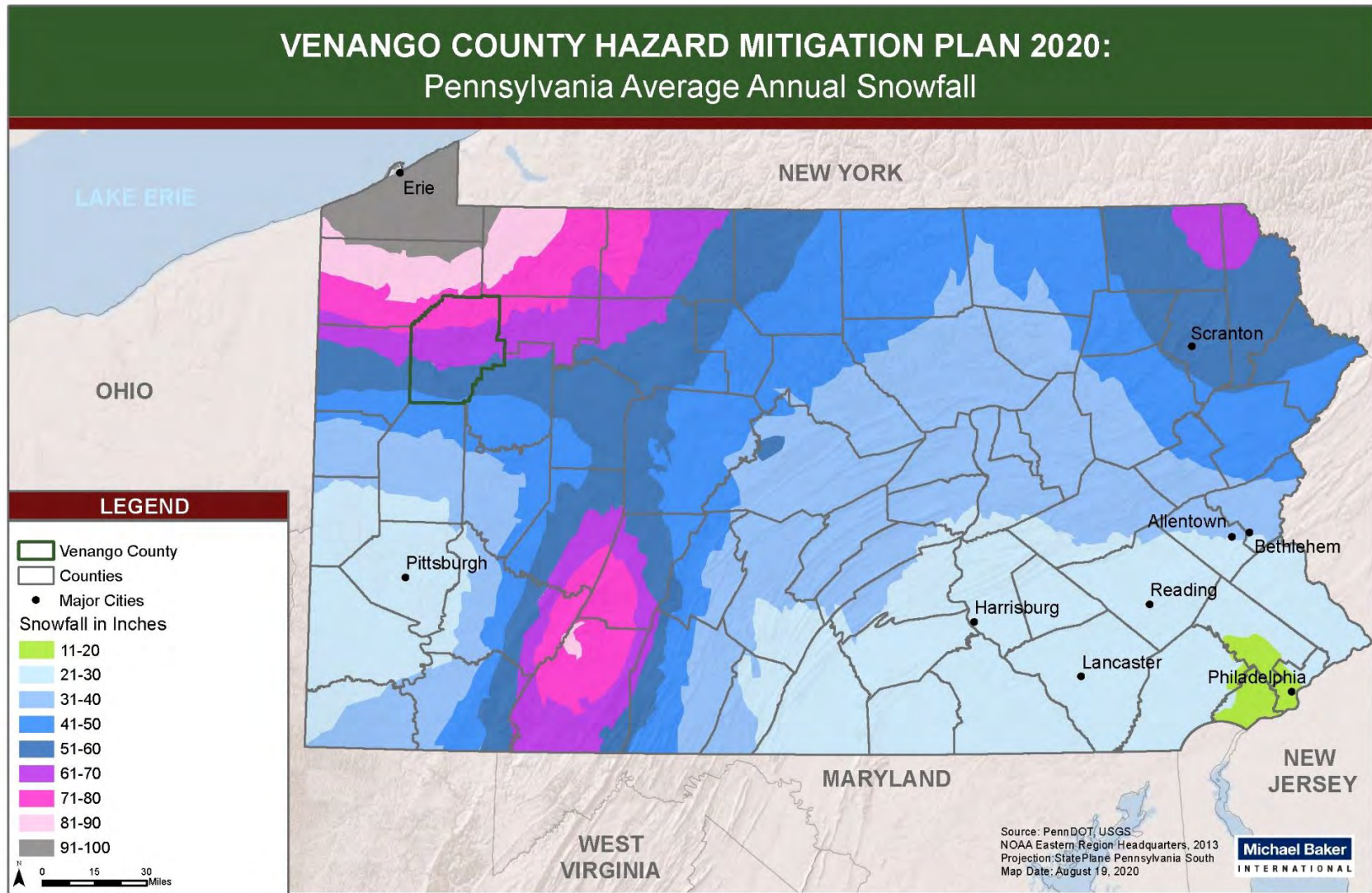
4.3.8 Winter Storm

4.3.8.1 Location and Extent

Winter storms are regional events that affect most of Pennsylvania on an annual basis. In many cases, surrounding states and even the larger northeastern U.S. region are affected. As such, every county in the Commonwealth, including Venango, is subject to severe winter storms. Winter storms begin as low-pressure systems that move through Pennsylvania either following the jet stream or developing as extra-tropical cyclonic weather systems over the Atlantic Ocean called Nor'easters. The effects of these storms can sometimes last for weeks, bringing several inches or even feet of snow and ice and cold temperatures. Venango County averages 50 inches of snow annually, shown in Figure 4.3.8-1.



Figure 4.3.8-1 Pennsylvania Annual Average Snowfall



4.3.8.2 Range of Magnitude

Winter storms consist of cold temperatures, heavy snow or ice and sometimes strong winds. They begin as low-pressure systems that move through Pennsylvania either following the jet stream or developing as extra-tropical cyclonic weather systems over the Atlantic Ocean called nor'easters. Due to their regular occurrence, these storms are considered hazards only when they result in damage to specific structures or cause disruption to traffic, communications, electric power, or other utilities.

A winter storm can adversely affect roadways, utilities, business activities, and can cause frostbite or loss of life. These storms may include one or more of the following weather events:

- **Heavy Snowstorm**: Accumulations of four inches or more in a six-hour period, or six inches or more in a twelve-hour period.
- **Sleet Storm**: Significant accumulations of solid pellets which form from the freezing of raindrops or partially melted snowflakes causing slippery surfaces posing hazards to pedestrians and motorists.
- **Ice Storm**: Significant accumulations of rain or drizzle freezing on objects (trees, power lines, roadways, etc.) as it strikes them, causing slippery surfaces and damage from the sheer weight of ice accumulation.
- **Blizzard**: Wind velocity of 35 miles per hour or more, temperatures below freezing, considerable blowing snow with visibility frequently below one-quarter mile prevailing over an extended period of time.
- **Severe Blizzard**: Wind velocity of 45 miles per hour, temperatures of 10 degrees Fahrenheit or lower, a high density of blowing snow with visibility frequently measured in feet prevailing over an extended period time.

Any of the above events can result in the closing of major or secondary roads, particularly in rural locations, stranded motorists, transportation accidents, loss of utility services, and depletion of oil heating supplies. Environmental impacts often include damage to shrubbery and trees due to heavy snow loading, ice build-up and/or high winds which can break limbs or even bring down large trees. Gradual melting of snow and ice provides excellent groundwater recharge. However, high temperatures following a heavy snowfall can cause rapid surface water runoff and severe flooding.

4.3.8.3 Past Occurrence

The Commonwealth of Pennsylvania have a long history of severe winter weather. The worst winter storm on record occurred on March 12-13, 1993. This blizzard, often called "the Storm of the Century," stretched from Canada to the Gulf of Mexico but was worst in the Eastern United States, including all of Pennsylvania. This storm caused widespread blackout conditions; snowfall totals ranged from twelve inches in Philadelphia to 20 inches in Harrisburg and Scranton to 24 inches in the Pittsburgh area. This event garnered a Presidential Emergency Declaration; the overall damage estimate for all states in this event was \$6.6 billion. This event was the third-largest snowstorm on record for the Pittsburgh weather station with a snowfall of 25.3 inches.

In the winter of 1993-1994, the state was hit by a series of protracted winter storms. The severity and nature of these storms combined with accompanying record-breaking frigid temperatures

posed a major threat to the lives, safety and well-being of Commonwealth residents and caused major disruptions to the activities of schools, businesses, hospitals and nursing homes.

One of these devastating winter storms occurred in early January 1994 with record snowfall depths in many areas of the Commonwealth, strong winds, and sleet/freezing rains. Numerous storm-related power outages were reported and as many as 600,000 residents were without electricity, in some cases for several days at a time. A ravaging ice storm followed which closed major arterial roads and downed trees and power lines. Utility crews from a five-state area were called to assist in power restoration repairs. Officials from PPL Corporation stated that this was the worst winter storm in the history of the company; related damage-repair costs exceeded \$5,000,000.

Serious power supply shortages continued through mid-January because of record cold temperatures at many places, causing sporadic power generation outages across the Commonwealth. The entire Pennsylvania-New Jersey-Maryland grid and its partners in the District of Columbia, New York and Virginia experienced 15-30 minute rolling blackouts, threatening the lives of people and the safety of the facilities in which they resided. Power and fuel shortages affecting Pennsylvania and the East Coast power grid system required the Governor to recommend power conservation measures be taken by all commercial, residential and industrial power consumers.

The record cold conditions resulted in numerous water-main breaks and interruptions of service to thousands of municipal and city water customers throughout the Commonwealth. Additionally, the extreme cold in conjunction with accumulations of frozen precipitation resulted in acute shortages of road salt. As a result, trucks were dispatched to haul salt from New York to expedite deliveries to Pennsylvania Department of Transportation storage sites.

During January and February 1994, Pennsylvania experienced at least 17 regional or statewide winter storms. In January 1996, another series of severe winter storms with 27- and 24-inch accumulated snow depths was followed by 50 to 60 degree temperatures resulting in rapid melting and flooding.

Venango County averages 50 inches of snow annually. In addition to the events described above, other winter storm events are listed in Table 4.3.8-1.

Date	Type	Property Damage (\$)
4/17/2020	Winter Weather	\$0
2/27/2020	Winter Weather	\$0
2/12/2020	Winter Weather	\$0
2/7/2020	Winter Weather	\$0
12/4/2019	Winter Weather	\$0
12/1/2019	Winter Weather	\$0
2/20/2019	Winter Weather	\$0
2/10/2019	Winter Weather	\$0
1/18/2019	Winter Storm	\$0

Table 4.3.8-1 History of Winter Storms in Venango County (NOAA 2020).		
Date	Type	Property Damage (\$)
11/14/2018	Winter Weather	\$0
3/8/2018	Winter Weather	\$0
2/7/2018	Winter Weather	\$0
1/12/2018	Winter Storm	\$0
12/29/2016	Winter Weather	\$0
12/11/2016	Winter Weather	\$0
12/9/2016	Winter Weather	\$0
4/8/2016	Winter Weather	\$0
4/2/2016	Winter Weather	\$0
2/15/2016	Heavy Snow	\$0
12/2/2014	Winter Weather	\$0
11/27/2014	Winter Weather	\$0
11/22/2014	Winter Weather	\$0
2/4/2014	Winter Storm	\$0
11/26/2013	Heavy Snow	\$0
11/23/2013	Heavy Snow	\$75,000
1/28/2013	Ice Storm	\$0
12/26/2012	Heavy Snow	\$0
2/25/2012	Winter Weather	\$0
1/2/2012	Heavy Snow	\$0
3/10/2011	Heavy Snow	\$0
2/25/2011	Heavy Snow	\$0
2/20/2011	Heavy Snow	\$0
2/1/2011	Heavy Snow	\$0
1/31/2011	Heavy Snow	\$0
12/5/2010	Heavy Snow	\$0
2/9/2010	Winter Storm	\$0
2/5/2010	Heavy Snow	\$0
12/25/2009	Ice Storm	\$0
12/13/2009	Winter Weather	\$0
1/27/2009	Winter Storm	\$0
1/17/2009	Heavy Snow	\$0
1/9/2009	Heavy Snow	\$0
1/6/2009	Winter Storm	\$0
11/20/2008	Heavy Snow	\$0
10/28/2008	Winter Weather	\$0
2/12/2008	Winter Storm	\$0
2/1/2008	Winter Storm	\$10,000
1/1/2008	Heavy Snow	\$0
12/15/2007	Heavy Snow	\$0
12/13/2007	Ice Storm	\$0

Table 4.3.8-1 History of Winter Storms in Venango County (NOAA 2020).		
Date	Type	Property Damage (\$)
3/16/2007	Heavy Snow	\$0
2/13/2007	Heavy Snow	\$0
12/15/2005	Ice Storm	\$0
4/3/2005	Heavy Snow	\$10,000
3/1/2005	Heavy Snow	\$0
1/22/2005	Heavy Snow	\$0
1/11/2005	Ice Storm	\$25,000
1/5/2005	Ice Storm	\$120,000
12/14/2004	Heavy Snow	\$0
3/16/2004	Heavy Snow	\$0
2/5/2004	Ice Storm	\$0
2/3/2004	Winter Storm	\$0
1/27/2004	Heavy Snow	\$0
1/14/2004	Heavy Snow	\$0
12/20/2003	Heavy Snow	\$0
12/5/2003	Heavy Snow	\$0
4/7/2003	Ice Storm	\$0
12/25/2002	Heavy Snow	\$0
12/13/2000	Winter Storm	\$0
11/22/2000	Heavy Snow	\$0
2/17/2000	Winter Storm	\$0
3/6/1999	Heavy Snow	\$0
1/13/1999	Winter Storm	\$0
1/8/1999	Winter Storm	\$0
1/2/1999	Winter Storm	\$250,000
12/17/1998	Heavy Snow	\$0
11/13/1997	Ice Storm	\$41,000
3/14/1997	Ice Storm	\$20,000
1/27/1997	Heavy Snow	\$0
1/16/1997	Heavy Snow	\$0
1/9/1997	Winter Storm	\$0
3/7/1996	Heavy Snow	\$0
1/2/1996	Heavy Snow	\$0
12/19/1995	Heavy Snow	\$0
11/14/1995	Heavy Snow	\$20,000
2/15/1995	Ice	\$0
1/7/1995	Ice	\$0
1/4/1995	Heavy Snow	\$0
11/23/1994	Heavy Snow	\$0
3/2/1994	Heavy Snow/Blizzard	\$5,000,000
1/17/1994	Heavy Snow	\$500,000

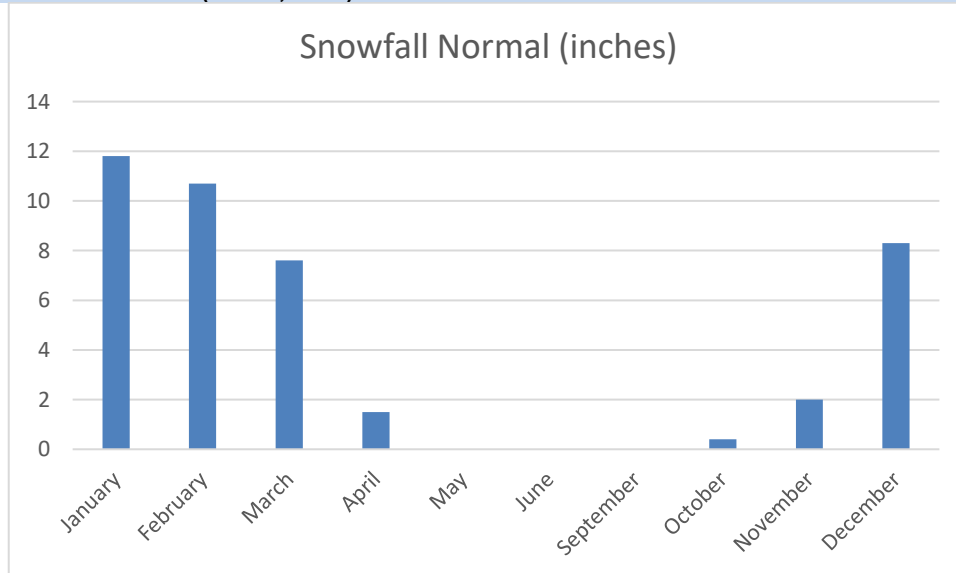
Date	Type	Property Damage (\$)
1/4/1994	Heavy Snow	\$5,000,000
10/14/1993	Heavy Snow	\$5,000
3/13/1993	Heavy Snow	\$50,000,000
2/16/1993	Heavy Snow	\$0
2/12/1993	Heavy Snow	\$0
Total		\$61,001,000

4.3.8.4 Future Occurrence

Winter storms are a regular, annual occurrence in Pennsylvania and should be considered highly likely. Based on the 30-year mean from 1981-2010, NOAA provides the following frequencies of heavy snowfalls at the Pittsburgh weather station:

- Snowfalls of 16 inches or more: once in 15 years
- Snowfalls of 13-15 inches or more: once in 5 years
- Snowfalls of 8-12 inches or more: once every two years
- Snowfalls of 5 inches or more: twice a year.

Figure 4.3.8-2 30-Year Snowfall Normal by Month at the Pittsburgh Weather Station (NOAA, 2015)



Changing weather patterns have made certain types of disasters more frequent and extreme. Precipitation levels are expected to rise in Venango County by more than two times by 2050 (Climate Central, 2019). Further, the number of very cold days annually is increasing each year. Cold temperatures combined with increased precipitation creates conditions conducive for winter weather. As these external conditions continue to change, they may impact the occurrence level of winter storms in the County. The probability of future winter storms can be considered highly likely according to the Risk Factor Methodology (see Table 4.4.1-1).

4.3.8.5 Vulnerability Assessment

Based on the information available, communities in the north of Venango County are more vulnerable to the direct impacts of winter storms. Snowfall is expected and normal in wintertime. Extreme snow is the most potentially disruptive to the public. Ice, cold temperatures, and high winds are also common and can be very dangerous. Severe winter storms could potentially produce an accumulation of snow and ice on roofs, trees and utility lines resulting in roof collapse, loss of electricity and blocked transportation routes. In addition, the more rural areas of the County are susceptible to isolation caused by winter storms. Areas that are heavily wooded can make emergency response to these areas difficult when roadways are blocked by downed trees and wires, which poses an immediate threat to human life

Vulnerability to the effects of winter storms on buildings is also dependent on the age of the building type, construction material used and condition of the structure. In Venango County, 52.7% of the occupied housing units were constructed prior to 1960 with 34.8% constructed prior to 1939. These older structures may be more prone to damage with severe winter storm events.

All structures and infrastructure in Venango County will be exposed to heavy snow and ice. Yet, because all of Pennsylvania has adopted and enforced the 2015 International Building Code (IBC) under the Uniform Construction Code (UCC), building yet to be constructed will be able to withstand the weight of heavy snow or ice.

4.3.9 Wildfire



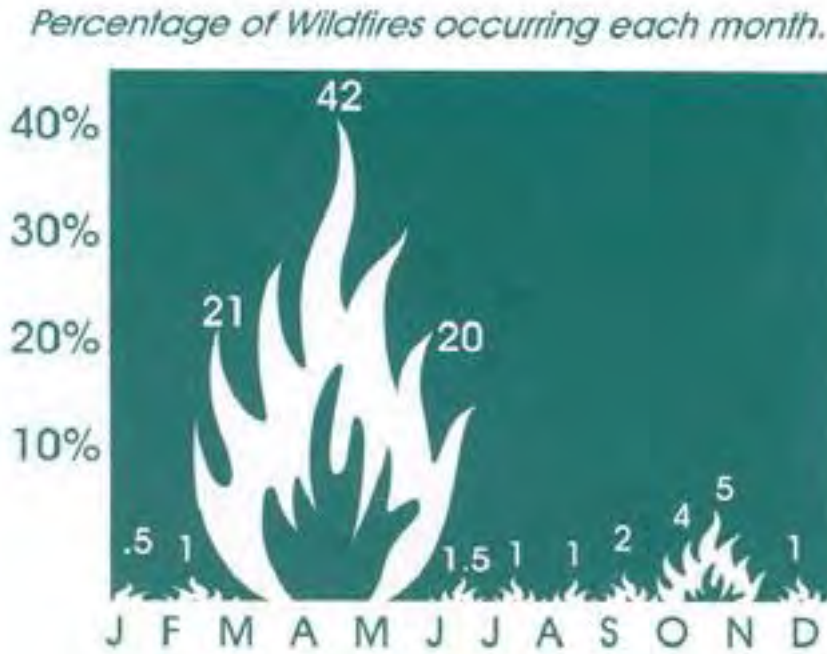
4.3.9.1 Location and Extent

Wildfires take place in less developed or completely undeveloped areas, spreading rapidly through vegetative fuels. They can occur any time of the year, but mostly occur during long, dry, hot spells. Any small fire, if not quickly detected and suppressed, can get out of control. Most wildfires are caused by human carelessness, negligence, and ignorance. However, some are precipitated by lightning strikes and in rare instances, spontaneous combustion. Wildfires in Pennsylvania can occur in open fields, grass, dense

brush, and forests.

Under dry conditions or droughts, wildfires have the potential to burn forests as well as croplands. The greatest potential for wildfires is in the spring months of March, April, and May, and the autumn months of October and November. In 2019 over 90% of all Pennsylvania wildfires occurred in these two time periods. In the spring, bare trees allow sunlight to reach the forest floor, drying fallen leaves and other ground debris. In the fall, dried leaves are also fuel for fires. Figure 4.3.9-1 shows the percentage of wildfires occurring every month in Pennsylvania, showing the spikes in March, April, and May (DCNR, 2020).

Figure 4.3.9-1 Percentage of Wildfires Occurring Each Month in Pennsylvania. (DCNR)



Portions of the Cornplanter (District 14) and Clear Creek (District 8) State Forests are located in Venango County. These forests, as well as State Game Land areas and Oil Creek State Park, are of particular concern for wildfire events due to the large area of expanded woodland. Figure 4.3.9-2 illustrates the forest districts within Pennsylvania. Figure 4.3.9-3 shows the locations of wildfire origins within Venango County as reported to DCNR.

The impact of a severe wildfire can be devastating. While some fires are not human-caused and are part of natural succession processes, a wildfire can kill people, livestock, fish, and wildlife. They often destroy property, valuable timber, forage, and recreational and scenic values. Severe erosion, silting of stream beds and reservoirs, and flooding due to a loss of ground cover may follow a fire event. The worst case scenario for Venango County would be a widespread, intense wildfire destroying property and natural resources, and resulting in loss of life.

4.3.9.2 Range of Magnitude

Wildfire events can range from small fires that can be managed by local firefighters to large fires impacting many acres of land. Large events may require evacuation from one or more communities and necessitate regional or national firefighting support. The impact of a severe wildfire can be devastating. A wildfire has the potential to kill people, livestock, fish, and wildlife. They often destroy property, valuable timber, forage, and recreational and scenic values.

In addition to the risk wildfires pose to the general public and to property owners, the safety of firefighters is also a concern. Although loss of life among firefighters does not occur often in Pennsylvania, it is always a risk. More common firefighting injuries includes falls, sprains, abrasions, or heat-related injuries such as dehydration. Response to wildfires also exposes

emergency responders to the risk of motor vehicle accidents and can place them in remote areas away from the communities that they are chartered to protect.

Vegetation loss is often a concern, but it typically is not a serious impact since natural re-growth occurs with time. The most significant environmental impact is the potential for severe erosion, silting of stream beds and reservoirs, and flooding due to ground-cover loss following a fire event.

Wildfires have a positive environmental impact in that they burn dead trees, leaves, and grasses to allow more open spaces for new and different types of vegetation to grow and receive sunlight. Another positive effect of a wildfire is that it stimulates the growth of new shoots on trees and shrubs and its heat can open pinecones and other seed pods.

The largest wildfire in Pennsylvania in recent years burned 10,000 acres in the north-central area of the Commonwealth. This fire was controlled within a week. It destroyed five cabins, but there was no loss of life. Another large wildfire burned 8,000 acres in the Poconos in 2016. About 100 people were evacuated and it took 130 firefighters to stop the blaze. Several other fires have burned over 2,000 acres each and again have been controlled within a week of the reported start. This kind of a scenario is unlikely in Venango County, where the largest wildfire reported to DCNR burned 3 acres, but is illustrative of a worst-case scenario.

4.3.9.3 Past Occurrence

DCNR reports that Fire Districts 8 & 14 which cover Venango County have averaged 114 and 41 wildfires burning on average 166 and 74 acres respectively per year between 2010 and 2019. Table 4.3.9-1 lists the number of fires and the total acres burned in each district over the same period. This data accounts for more than just Venango County. However, it illustrates the regional risk from wildfire. Figure 4.3.9-2 Illustrates the locations of Pennsylvania Fire Districts. Figure 4.3.9-3 shows the geography of wildfires in Venango County from 2008-2013.

Table 4.3.9-1		WILDFIRES IN PA FIRE DISTRICTS 8 & 14 2010-2019 (DCNR 2020)		
	DISTRICT 8		DISTRICT 14	
YEAR	FIRES	ACRES BURNED	FIRES	ACRES BURNED
2019	81	114.7	23	36.2
2018	85	116.3	43	116.1
2017	39	29.0	13	10.3
2016	59	182.9	59	149.3
2015	67	139.5	24	44.0
2014	141	377.5	14	5.5
2013	56	235.1	17	21.9
2012	73	103.0	17	123.5
2011	18	96.5	3	9.1
2010	8	274.4	17	225.2
TOTAL	627	1668.9	230	741.1

Figure 4.3.9-2 Fire Districts in Pennsylvania (PA DCNR)

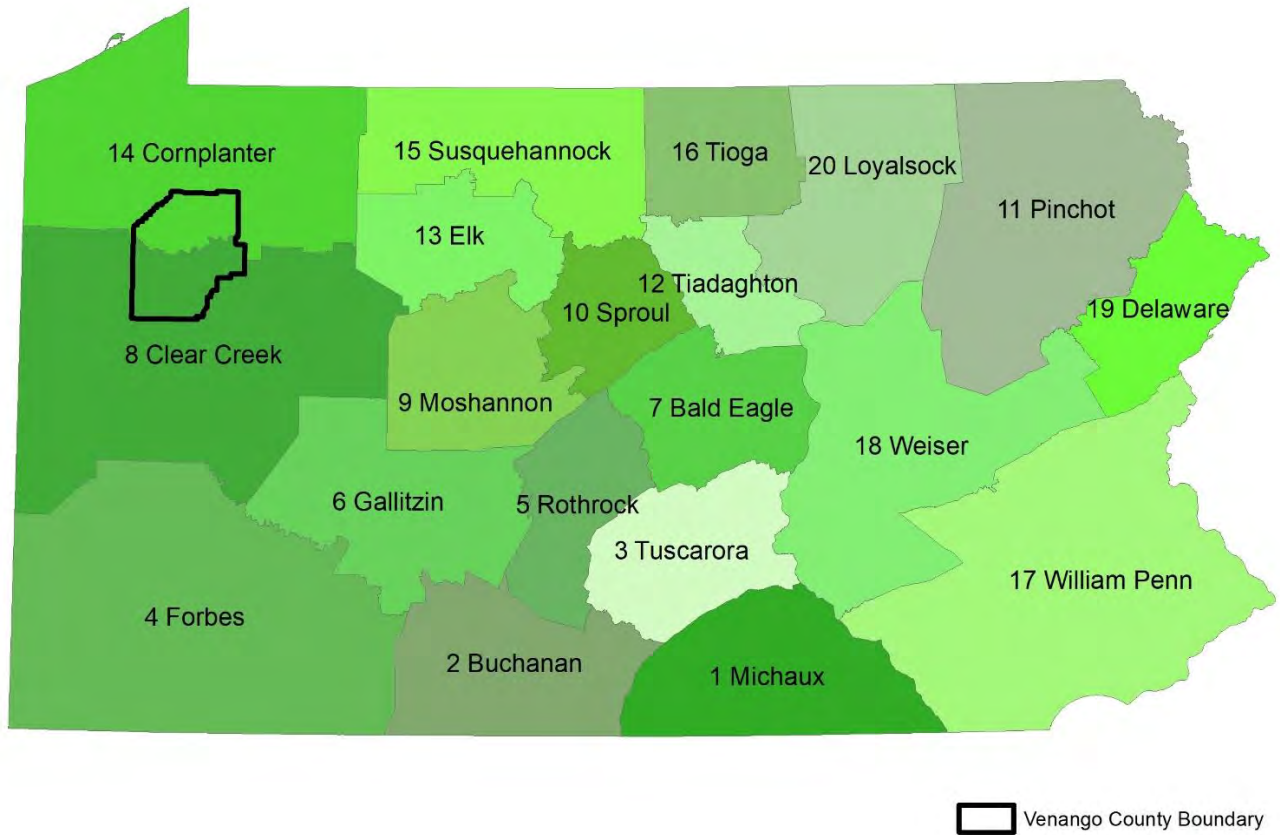
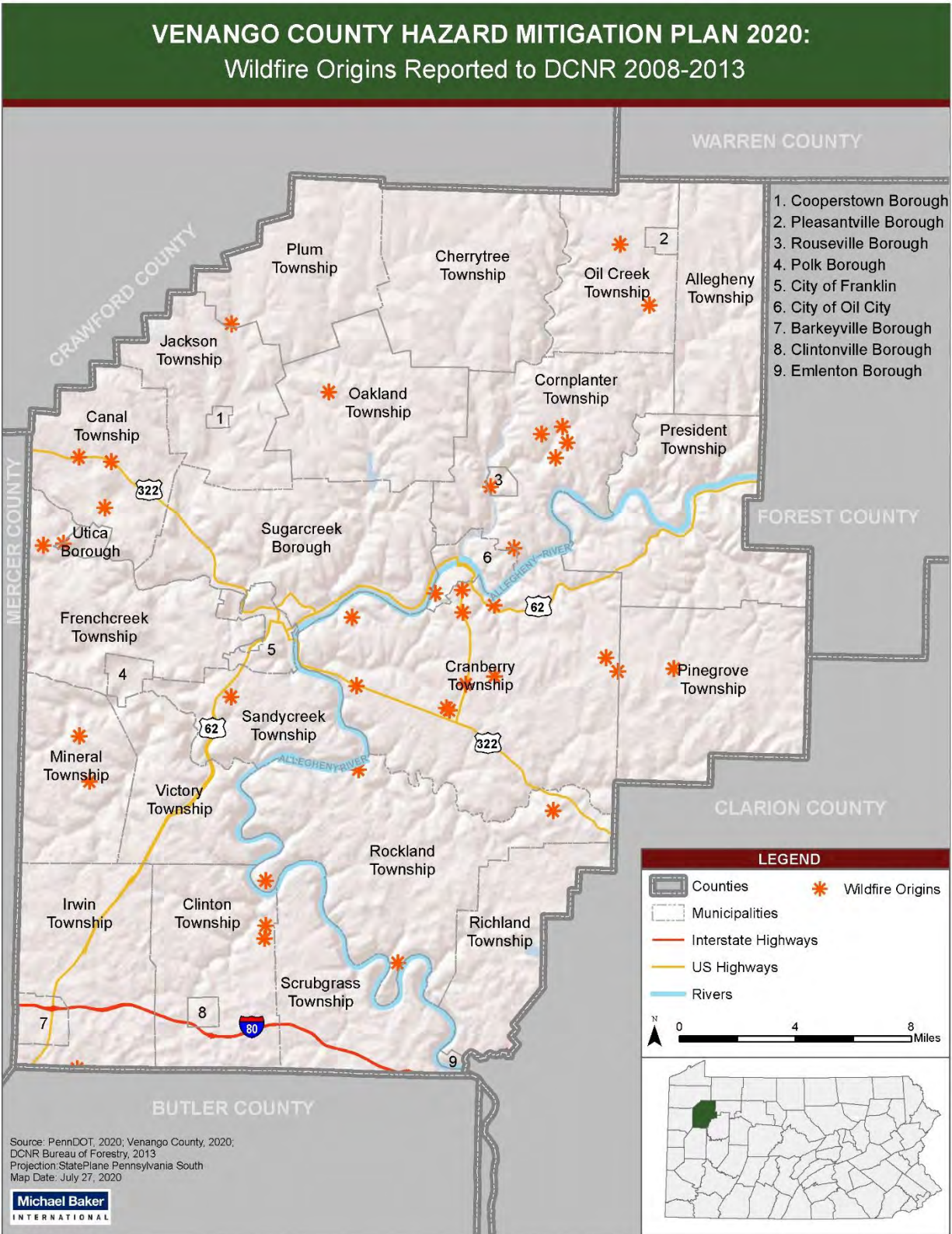


Figure 4.3.9-3 Wildfire Origins for Venango County (PA DCNR)



4.3.9.4 Future Occurrence

There is virtually a 100% chance of a forest fire of some size occurring in a given year within Venango County. The likelihood of one of those fires attaining significant size and intensity is unpredictable and highly dependent on environmental conditions and firefighting response. Changing weather patterns are creating prime conditions for future wildfires. It is expected that there will be an increase in drought events as the number of very hot days continues to increase. The region surrounding Pittsburgh in particular is predicted to more than double in drought intensity (Climate Central, 2019).

It is important to note that 99% of wildfires in Pennsylvania are human-caused (DCNR, 2019). Thus, there is rationale for including this hazard under the summary of human-made hazards. Nonetheless, the critical inference to draw from this statistic is the fact that the occurrence of future wildfire events will strongly depend on patterns of human activity. Wildfires may also be more likely after invasive species infestations or high wind events; these events would add additional potential fuel load to fire-prone locations.

4.3.9.5 Vulnerability Assessment

The Pennsylvania Bureau of Forestry has conducted an independent wildfire hazard risk assessment for the various municipalities across Venango County. Results of that assessment are shown in Figure 4.3.9-4. Wildfire hazard is defined based on conditions that affect wildfire ignition and/or behavior such as fuel, topography and local weather. Based on this assessment, most of Venango County is at moderate wildfire risk with clusters of high-risk areas in the Southwest and Northeast of the county.

Because Venango County has many high and medium wildfire hazard areas, this plan evaluates the number and type of structures and critical facilities vulnerable to wildfires by highlighting those located within the county's wildfire hazard areas. Table 4.3.9-2 shows the total structures and critical facilities in wildfire hazard areas, and Table 4.3.9-4 shows the structures by generalized land use type.

The number of fire incidents and fatalities should remain at the same level for the foreseeable future. Although newer buildings are constructed with higher safety standards and with more fire resistant material, there are still a large number of older, highly vulnerable buildings throughout the County.

Figure 4.3.9-4 Venango County Wildfire Hazard

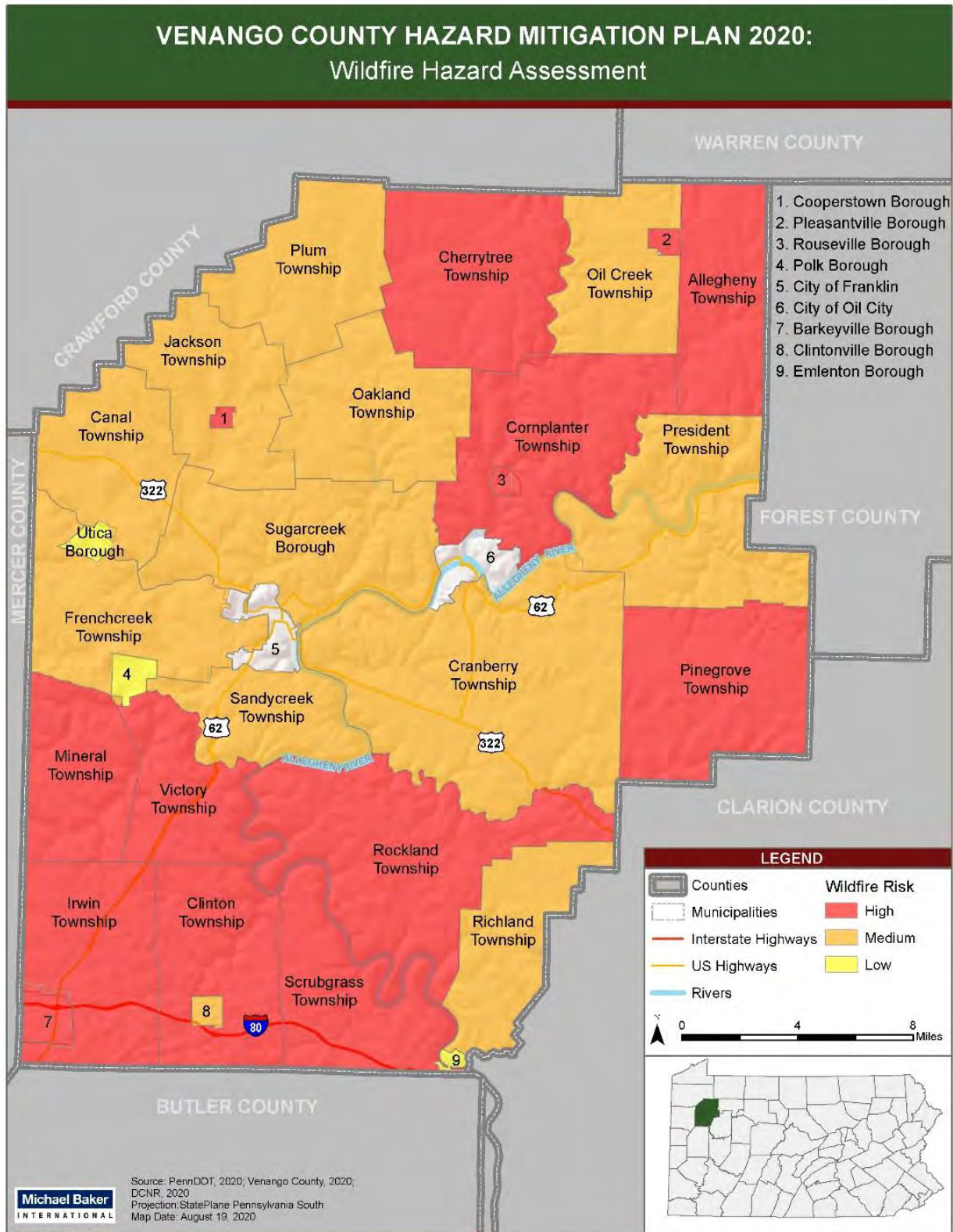


Table 4.3.9-2 Structures and Critical Facilities Vulnerable to Wildfire.						
MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN WILDFIRE HAZARD AREAS	% STRUCTURES IN WILDFIRE HAZARD AREAS	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN WILDFIRE HAZARD AREAS	% CRITICAL FACILITIES IN WILDFIRE HAZARD AREAS
Allegheny Township	220	98	45%	1	0	0%
Barkeyville Borough	141	15	11%	2	1	50%
Canal Township	513	142	28%	3	0	0%
Cherrytree Township	825	331	40%	4	0	0%
Clinton Township	542	204	38%	4	0	0%
Clintonville Borough	241	8	3%	2	0	0%
Cooperstown Borough	214	2	1%	2	0	0%
Cornplanter Township	1,324	533	40%	7	1	14%
Cranberry Township	3,502	782	22%	13	1	8%
Emlenton Borough	374	3	1%	4	0	0%
City of Franklin	2,995	30	1%	21	0	0%
Frenchcreek Township	871	250	29%	1	0	0%
Irwin Township	730	143	20%	4	0	0%
Jackson Township	569	206	36%	1	0	0%
Mineral Township	331	161	49%	1	0	0%
Oakland Township	735	249	34%	3	1	33%
City of Oil City	4,769	281	6%	15	0	0%
Oil Creek Township	488	246	50%	1	0	0%
Pinegrove Township	691	244	35%	4	0	0%
Pleasantville Borough	471	25	5%	3	0	0%
Plum Township	547	148	27%	2	0	0%
Polk Borough	263	19	7%	6	0	0%
President Township	766	349	46%	2	0	0%

Table 4.3.9-2 Structures and Critical Facilities Vulnerable to Wildfire.						
MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN WILDFIRE HAZARD AREAS	% STRUCTURES IN WILDFIRE HAZARD AREAS	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN WILDFIRE HAZARD AREAS	% CRITICAL FACILITIES IN WILDFIRE HAZARD AREAS
Richland Township	589	97	16%	1	0	0%
Rockland Township	1,435	777	54%	3	0	0%
Rouseville Borough	257	40	16%	2	0	0%
Sandycreek Township	1,228	133	11%	5	0	0%
Scrubgrass Township	723	254	35%	3	1	33%
Sugarcreek Borough	2,497	282	11%	7	1	14%
Utica Borough	125	7	6%	3	0	0%
Victory Township	339	185	55%	1	0	0%
Total	29,315	6,244	21%	131	6	5%

Table 4.3.9-3 Total Structures by Municipality and Structures Vulnerable to Wildfires by Generalized Land Use Type									
MUNICIPALITY	TOTAL STRUCTURES	AGRICULTURE	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	VACANT	TOTAL STRUCTURES VULNERABLE TO WILDFIRE
Allegheny Township	220	46	1	0	36	1	0	14	98
Barkeyville Borough	141	6	0	0	6	0	0	3	15
Canal Township	513	53	2	0	78	0	0	9	142
Cherrytree Township	825	122	7	1	184	0	0	17	331
Clinton Township	542	67	1	0	124	0	0	12	204
Clintonville Borough	241	1	1	0	4	0	1	1	8
Cooperstown Borough	214	0	0	0	2	0	0	0	2
Cornplanter Township	1,324	51	50	0	401	0	1	30	533
Cranberry Township	3,502	160	48	2	529	2	0	41	782
Emlenton Borough	374	0	0	0	2	0	0	1	3
City of Franklin	2,995	1	0	0	25	0	0	4	30
Frenchcreek Township	871	115	6	0	111	0	0	18	250
Irwin Township	730	65	1	0	61	1	0	15	143
Jackson Township	569	95	1	0	101	0	0	9	206
Mineral Township	331	78	1	0	62	0	0	20	161
Oakland Township	735	103	11	0	128	0	0	7	249
City of Oil City	4,769	7	8	0	253	1	0	12	281
Oil Creek Township	488	53	10	0	165	0	1	17	246
Pinegrove Township	691	82	9	0	134	0	0	19	244
Pleasantville Borough	471	2	1	0	22	0	0	0	25
Plum Township	547	68	1	0	73	0	0	6	148
Polk Borough	263	4	1	0	12	0	0	2	19
President Township	766	42	2	0	226	2	0	77	349
Richland Township	589	35	5	0	39	0	0	18	97
Rockland Township	1,435	144	16	0	552	0	1	64	777
Rouseville Borough	257	1	2	0	30	1	0	6	40
Sandycreek Township	1,228	18	7	0	102	0	0	6	133

Table 4.3.9-3 Total Structures by Municipality and Structures Vulnerable to Wildfires by Generalized Land Use Type									
MUNICIPALITY	TOTAL STRUCTURES	AGRICULTURE	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	VACANT	TOTAL STRUCTURES VULNERABLE TO WILDFIRE
Scrubgrass Township	723	63	1	0	178	0	0	12	254
Sugarcreek Borough	2,497	69	13	0	180	0	1	19	282
Utica Borough	125	1	0	0	4	0	0	2	7
Victory Township	339	47	2	0	120	0	0	16	185
Total	29,315	1,599	208	3	3,944	8	5	477	6,244

4.3.10 Hurricane, Tropical Storm, and Nor'easter



4.3.10.1 Location and Extent

Pennsylvania does not have any open-ocean coastline. However, the impacts of coastal storm systems such as hurricanes, tropical storms, and nor'easters can extend well inland. While it is unlikely that a tropical storm would directly impact Venango County, secondary impacts from these storm events such as strong winds, flooding, and winter storms may be experienced throughout the county. Tropical storms that could potentially impact Venango County develop in tropical or sub-tropical waters found in the Atlantic Ocean, Gulf of Mexico, or Caribbean Sea. Nor'easters are extra-tropical storms which typically develop from low-pressure centers off the Atlantic Coast north of North Carolina during the winter months. Extra-tropical is a term used to describe a hurricane or tropical storm that's cyclone has lost its 'tropical' characteristics. While an extra-tropical storm donates a change in weather pattern and the way a storm gathers energy, it may still have winds that are tropical storm or hurricane force.

Venango County is located more than 200 hundred miles from open coastline, but tropical storms can track inland causing heavy rainfall and strong winds. These storms are regional events that can impact very large areas hundreds to thousands of miles across over the life of a storm. Therefore, all communities within Venango County are equally subject to the secondary impacts of hurricanes, tropical storms, and nor'easters. However, areas within the county that are already at risk for flooding, wind, and winter storm damage are particularly vulnerable.

As discussion in Section 4.3.7, Figure 4.3.7-3 shows wind speed zones developed by the American Society of Civil Engineers based on information including 40 years of tornado history and over 100 years of hurricane history. All of Venango County falls within Zone IV, meaning that design wind speeds for shelters and critical facilities should be able to withstand a 3-second gust of up to 250 mph. Venango County is outside of the Hurricane Susceptible Region for wind consideration.

4.3.10.2 Range of Magnitude

The impacts associated with hurricanes and tropical storms are primarily wind damage and flooding. It is not uncommon for tornadoes to develop during these events. Secondary impacts from historical tropical storm and hurricane events have brought intense wind and rainfall to Venango County.

As discussed in Section 4.3.3, the worst incident of flooding in Venango County occurred in 1996, when a flash flood struck Franklin and caused over \$50 million in damage. Additionally, a F4 tornado caused 8 deaths, 45 injuries, and \$50 million in property damage in 1985, which is discussed in Section 4.3.7. Worst case scenario secondary impacts from hurricanes, tropical storms, and nor'easters in Venango County would be flooding and tornados of similar magnitudes.

4.3.10.3 Past Occurrence

While no tropical storms have directly passed through Venango County, the wind and rain from nearby storm events have had secondary impacts on the county. Two Emergency Declarations

for hurricanes have affected Venango County since 1955: Hurricane Sandy in 2012 and Hurricane Katrina in 2005. Both of these Emergency Declarations were declared for the entire state of Pennsylvania.

Past occurrences of potential secondary impacts of hurricanes, tropical storms, and nor'easters, such as flooding and tornados, are discussed in Section 4.3.3 and 4.3.7 respectively. In summary, nearly 100 flood events have occurred in Venango County since 1883, some of which have caused loss of life and millions of dollars in damage. Additionally, Venango County's history of tornados and windstorms has included 26 events, which have caused a total of nine deaths, 26 injuries, and over \$50 million in damage.

4.3.10.4 Future Occurrence

According to the National Oceanic and Atmospheric Administration Hurricane Research Division, there is less than a six-percent chance of a tropical storm or hurricane event occurring between June and November of any given year in western Pennsylvania. Additionally, a tropical storm has yet to have a direct impact on Venango County. Therefore, the probability of future hurricane events having a direct impact on the county can be considered *unlikely* according to the Risk Factor Methodology (see Table 4.4.1-1). However, flooding and tornados will likely continue to affect Venango County in the future, both as independent events as well as secondary impacts of hurricanes, tropical storms, and nor'easters.

4.3.10.5 Vulnerability Assessment

A vulnerability assessment for hurricanes and tropical storms focuses on the impacts of flooding and severe wind. Therefore, the assessment for flood-related vulnerability is addressed in Section 4.3.3 and vulnerability to wind damage is addressed in Section 4.3.7. Venango County may also be vulnerable to severe winter weather impacts caused by nor'easters, which is evaluated in Section 4.3.8.

HUMAN-MADE HAZARDS

4.3.11 Environmental Hazards



4.3.11.1 Location and Extent

Environmental hazards in Venango County focus mainly on hazardous material release and gas well and pipeline incidents. These hazards result from human activities and industries and can result in injury and death to humans and damage to property.

Additional environmental hazards include superfund facilities, manure spills, and product defect or contamination. These are included in the definition of environmental hazards, but were not profiled in the HMP update. Superfund sites are hazards originating from abandoned hazardous waste sites listed on the National Priorities List. The EPA maintains superfund site information which includes hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL. There are 127 superfund sites in Pennsylvania (EPA, 2020). Manure spills involve the release of stored or transported agricultural waste. Product defect or contamination includes highly flammable or otherwise unsafe consumer products and dangerous foods.

No information on deaths, serious injury, or property damage could be found for superfund sites, manure spills, or product defect or contamination; therefore these types of environmental hazards were not profiled in this plan.

Hazardous Material Release

Hazardous material releases pose threats to the natural environment, the built environment, and public safety through the diffusion of harmful substances, materials, or products. Hazardous materials can include toxic chemicals, infectious substances, bio-hazardous waste, and any materials that are explosive, corrosive, flammable, or radioactive (PL 1990-165, §207(e)). Hazardous material releases can occur wherever hazardous materials are manufactured, used, stored, or transported. Such releases can occur along transportation routes or at fixed-site facilities. Hazardous material releases can result in human and wildlife injury, property damage, and contamination of air, water, and soils.

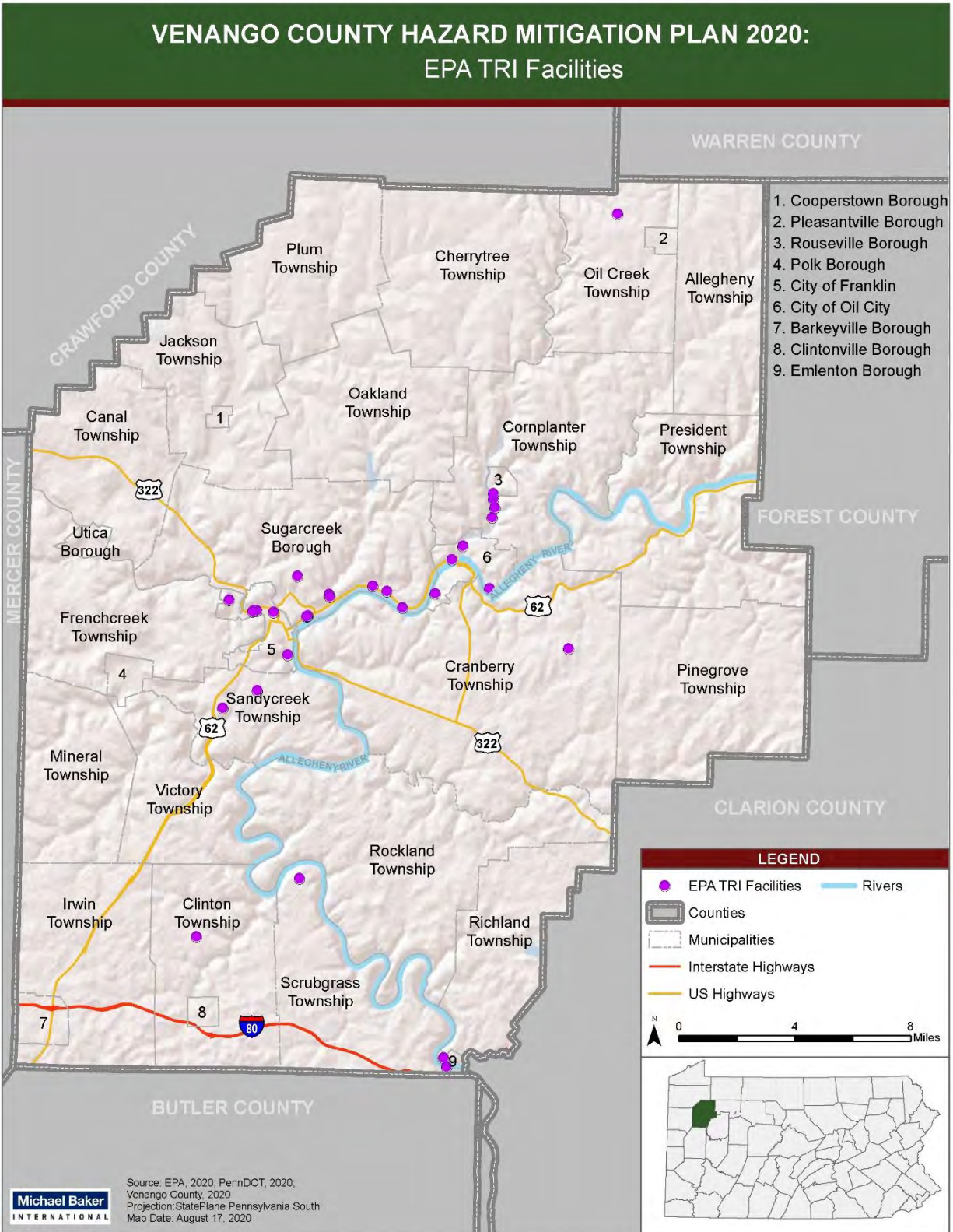
Fixed-site facilities that use, manufacture, or store hazardous materials in Venango County pose risk and must comply with both Title III of the federal Superfund Amendments and Reauthorization Act (SARA), also known as the Emergency Planning and Community Right-to-Know Act (EPCRA), and the Commonwealth's reporting requirements under the Hazardous Materials Emergency Planning and Response Act (1990-165), as amended. These legislations require that all owners or operators of facilities that manufacture, produce, use, import, export, store, supply, or distribute any extremely hazardous substance, as defined by the EPA, at or above the threshold planning quantity, as established by EPA, shall report to the county where the facility is located and to the Commonwealth that the facility is subject to the requirement to assist the Local Emergency Planning Committee (LEPC) in the development of an Off-site Emergency Response Plan. The community right-to-know reporting requirements keep communities abreast of the presence and release of chemicals at individual facilities. Information about the chemicals that

are being manufactured or processed in facilities can be found in the U.S. Environmental Protection Agency’s (USEPA) Toxic Release Inventory (TRI) database.

Facilities which employ ten or more full-time employees and which manufacture or process 25,000 pounds or more, or otherwise use 10,000 pounds or more, of any SARA Section 313-listed toxic chemical in the course of a calendar year are required to report TRI information to the EPA, the federal enforcement agency for SARA Title III, and PEMA. This plan focuses on the hazard posed by Venango County’s 27 EPA TRI facilities since TRI-reporting facilities handle potentially dangerous chemicals in potentially high quantities. The location of these sites is shown in Figure 4.3.11-1 and listed in Table 4.3.11-1.

Table 4.3.11-1 Venango County Epa Tri Facilities (USEPA)	
COMPANY/FACILITY	MUNICIPALITY
WBCO IND INC/OIL CITY TUBE DIV	OIL CITY
LATROBE SPEC STEEL SANDYCREEK SVC CTR	FRANKLIN
FRANKLIN BRONZE & ALLOY CO INC	FRANKLIN
OMG AMERICAS	FRANKLIN
HONEYWELL ALLIED SIGNAL EMLENTON PLT	EMLENTON
CENTERVILLE CASTINGS INCORPORATED	TITUSVILLE
SENECA PRINTINC INC	OIL CITY
FRANKLIN BRONZE & ALLOY	FRANKLIN
SASOL CHEMICALS (USA) LLC	OIL CITY
WITHERUP FABRICATION & ERECTION INC	KENNERDELL
AM STABILIZERS	FRANKLIN
SCRUBGRASS GENERATING PLANT	KENNERDELL
SPECIALTY FABRICATION & POWD ER COATING LLC	FRANKLIN
MILLCRAFT MFG	OIL CITY
JOY TECH INC PLANT #3	FRANKLIN
MANION STEEL BARREL	OIL CITY
ANCHOR GLASS CONTAINER CORPORATION RENO MOLD SHOP	RENO
ELECTRALLOY GO CARLSON/OIL CITY	OIL CITY
FRANKLIN IND CO/FRANKLIN	FRANKLIN
WBCO INDUSTRIES, INC. - RENO DIVISION	RENO
LIBERTY ELECTRONICS - RENO	RENO
LIBERTY ELECTRONICS - AREA III	FRANKLIN
CONAIR GROUP INC	FRANKLIN
LIBERTY ELECTRONICS	FRANKLIN
MATRIC LTD SENECA	SENECA
FUCHS LUBRICANTS CO LUBRODAL DIV	EMLENTON
FRANKLIN BRONZE PRECISION COMPONENTS LLC/FRANKLIN CITY	FRANKLIN

Figure 4.3.11-1 EPA TRI Facility Locations



Oil and Gas Well and Pipeline Incidents

In addition to TRI facilities, Venango County is home to numerous gas wells and a set of high-pressure natural gas transmission pipelines that traverse the County. Transmission pipelines are often used as a preferred means to safely transport large quantities of energy products. The characteristics of transmission lines can vary in size and placement based on the products carried and the geographic location of pipeline. For example, those located in more urban settings are often placed at greater depths below ground and subject to stricter regulations (PIPA, 2010).

Pipeline safety standards are established within the US Code of Federal Regulations (CFR), Title 49 “Transportation,” Parts 190-1999 with inspection and enforcement of these standards carried out by the Office of Pipeline Safety (OPS), within the US Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA estimates that gas transmission pipelines run through roughly 90% of all US counties. As of 2014, PHMSA reports that Pennsylvania has a total of approximately 85,000 miles of gas pipelines, with the vast majority of these pipelines used for distribution.

In Venango County, gas transmission pipelines are primarily concentrated in the central and southern portions of the County, and at times run parallel to active railroads, interstates and highways. There are notable concentrations of pipelines in Cranberry Township and Pinegrove Township. Figure 4.3.11-2 illustrate the coverage of gas pipelines throughout Venango County. There are nearly 250 mile of line in 22 out of the 31 municipalities in Venango County that have gas transmission pipelines in their communities.

Although rare, pipeline failures can occur and have the potential to significantly impact the surrounding community. Pipeline failures can occur due to both technical and natural hazard events. The susceptibility of failure can depend on the characteristics of the pipeline or the environment where the pipeline is operating. PHMSA reports that the main causes of pipeline failure can be attributed to material damage (e.g. corrosion), operational failure (due to the failure of equipment/weld/materials or incorrect operation), or physical damage associated with excavation, natural hazard events or other outside forces (PHMSA, 2015).

More than 350,000 conventional oil and gas wells have been drilled in Pennsylvania since the first commercial oil well was developed in 1859 (PIOGA, 2020). PA DEP differentiates between conventional and unconventional oil and gas wells. Conventional wells are traditional vertical wells, while unconventional wells are typically horizontally drilled wells commonly associated with the Marcellus Shale, a more recent advancement in drilling technology that has allowed for natural gas extraction from the Marcellus Shale, which exists at a depth of 5,000 to 8,000 feet. This type of extraction presents new and unique challenges and hazards in the Commonwealth.

In Venango County, most wells are conventional. Figures 4.3.11-3 and 4.3.11-4 illustrate the location and status of conventional and unconventional oil and gas wells within the county. There are 1,446 active, 10 inactive, and 14,720 abandoned conventional wells in the county. There is only 1 active unconventional wells; there are 0 abandoned and 1 inactive wells. In addition, there are 3 unconventional wells with a status of “Operator reported not drilled,” meaning the well permit has expired without being drilled or that the permit is not expired but the operator will not seek to drill, and “Proposed, but never materialized,” meaning that either a permit application was

submitted but not approved, a well was entered erroneously into the database, or the permit was issued but the well was never drilled.

Private water supplies such as domestic drinking water wells in the vicinity of oil and gas wells are at risk of contamination from brine and other pollutants including methane, which can pose a fire hazard. For more information on public and private water supplies, see Section 4.3.1.5.

Figure 4.3.11-2 Venango County Pipeline Locations

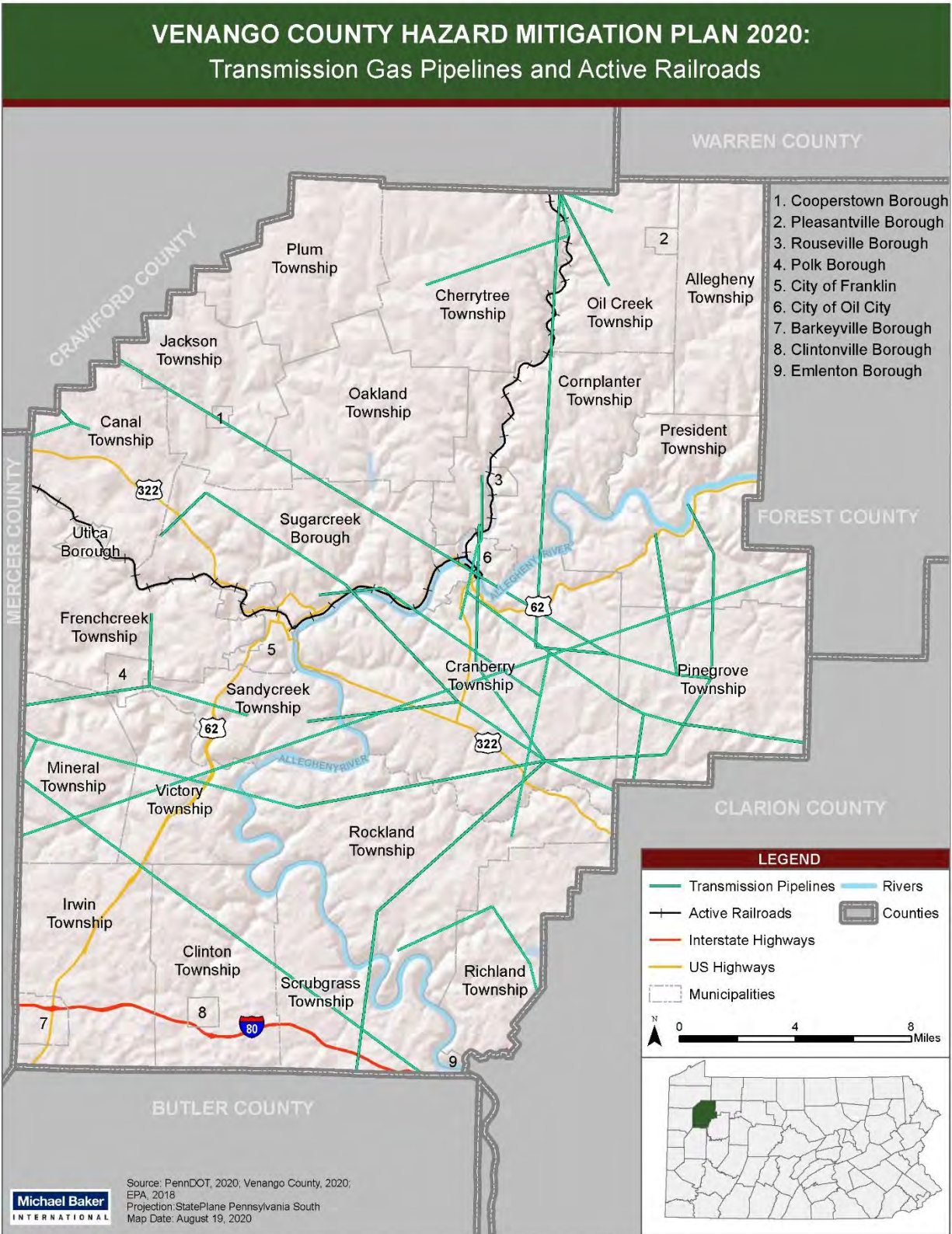


Figure 4.3.11-3 Conventional Oil and Gas Wells in Venango County

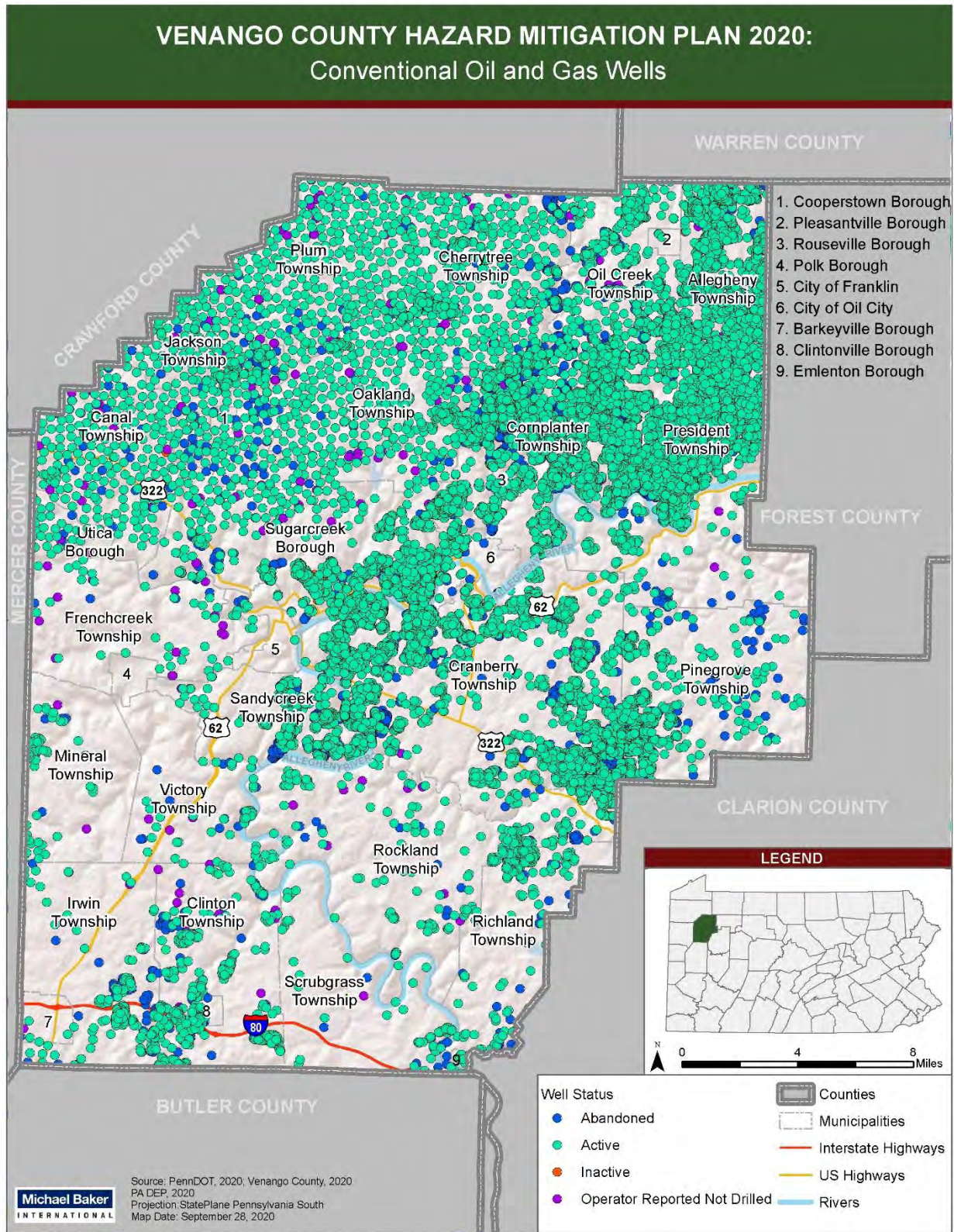
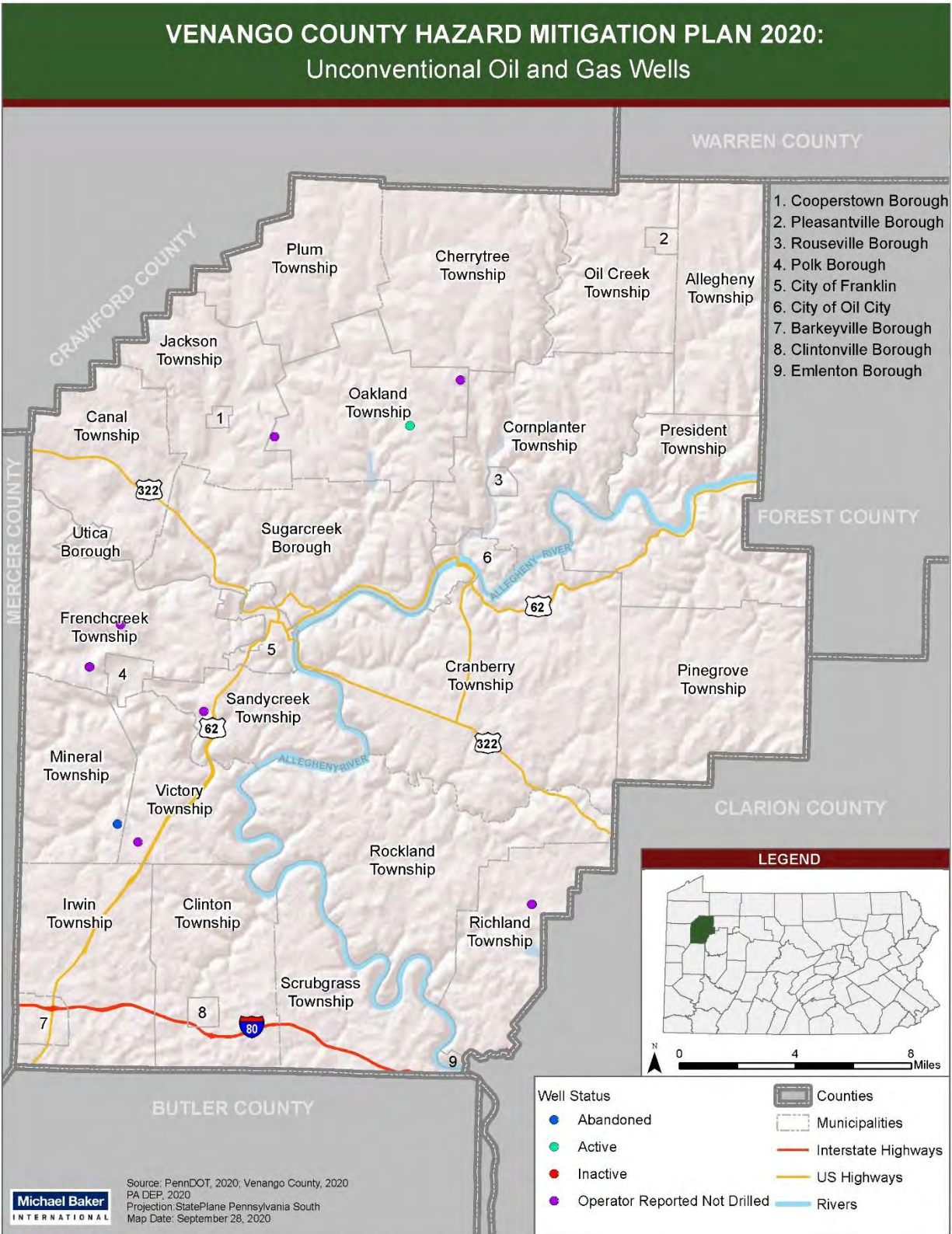


Figure 4.3.11-4 Unconventional Oil and Gas Wells in Venango County



4.3.11.2 *Range of Magnitude* **Hazardous Material Release**

Hazardous material releases can contaminate air, water and soils, possibly resulting in death and/or injuries. Dispersion can take place rapidly when transported by water and wind. While often accidental, releases can occur as a result of human carelessness, intentional acts, or natural hazards. When caused by natural hazards, these incidents are known as secondary events. Hazardous materials can include toxic chemicals, radioactive materials, infectious substances, and hazardous wastes. Such releases can affect nearby populations and contaminate critical or sensitive environmental areas.

With a hazardous material release, whether accidental or intentional, there are several potentially exacerbating or mitigating circumstances that will affect its severity or impact. Mitigating conditions are precautionary measures taken in advance to reduce the impact of a release on the surrounding environment. Primary and secondary containment or shielding by sheltering-in-place protects people and property from the harmful effects of a hazardous material release. Exacerbating conditions, characteristics that can enhance or magnify the effects of a hazardous material release include:

- Weather conditions: affects how the hazard occurs and develops
- Micro-meteorological effects of buildings and terrain: alters dispersion of hazardous materials
- Non-compliance with applicable codes (e.g. building or fire codes) and maintenance failures (e.g. fire protection and containment features): can substantially increase the damage to the facility itself and to surrounding buildings

The severity of the incident is dependent not only on the circumstances described above, but also with the type of material released and the distance and related response time for emergency response teams. The areas within closest proximity to the releases are generally at greatest risk, yet depending on the agent, a release can travel great distances or remain present in the environment for a long period of time (e.g. centuries to millennia for radioactive materials), resulting in extensive impacts on people and the environment.

A worst case scenario event of a hazardous material release occurred in March 2009 when a tractor trailer overturned spilling 16 tons of toxic hydrofluoric acid near Wind Gap, Pennsylvania, resulting in the evacuation of 5,000 people (Times Herald-Record, 2009). Residents were evacuated because contact with concentrated solutions of the acid can cause severe burns, and inhaling the gas can cause respiratory irritation, severe eye damage, and pulmonary edema.

The environmental impacts of hazardous material releases include:

- Hydrologic effects – surface and groundwater contamination
- Other effects on water quality such as changes in water temperature
- Damage to streams, lakes, ponds, estuaries, and wetland ecosystems
- Air quality effects – pollutants, smoke, and dust
- Loss of quality in landscape
- Reduced soil quality

- Damage to plant communities – loss of biodiversity; damage to vegetation
- Damage to animal species – animal fatalities; degradation of wildlife and aquatic habitat; pollution of drinking water for wildlife; loss of biodiversity; disease.

Oil and Gas

As is the case with all natural resource extraction, a variety of potential hazards exist with oil and gas extraction. Abandoned oil and gas wells that are not properly plugged can contaminate groundwater and consequently domestic drinking water wells. Surface waters and soil are sometimes polluted by brine, a salty wastewater product of oil and gas well drilling, and from oil spills occurring at the drilling site or from a pipeline breach. This can spoil public drinking water supplies and be particularly detrimental to vegetation and aquatic animals.

Methane can leak into domestic drinking wells and pose fire and explosion hazards (see Figure 4.3.14-6). In addition, natural gas well fires can occur when natural gas is ignited at the well site. Often, these fires erupt during drilling when a spark from machinery or equipment ignites the gas. The initial explosion and resulting flames have the potential to seriously injure or kill individuals in the immediate area. These fires are often difficult to extinguish due to the intensity of the flame and the abundant fuel source. When methane gas from unplugged gas wells seeps into underground coal mines, miners are at risk of asphyxiation and are subject to impacts of explosion.

Figure 2.1.1-1 **Natural Gas well explosion in Indiana Township, July 2010 (WPXI, 2010).**



Marcellus Shale play drilling has introduced a new set of hazards to the oil and gas industry in addition to the normal risks associated with the industry. The Marcellus Shale formation exists at a depth normally between 5,000 and 8,000 feet and holds trillions of cubic feet of natural gas. Extraction from this depth was previously not feasible but as drilling technology has improved over the years, recovering natural gas from Marcellus Shale is now possible (USGS, 2019).

This extraction process is different from traditional natural gas extraction in that it often requires horizontal drilling. Horizontal drilling is accomplished by hydraulic fracturing which involves pumping one to eight million gallons of water, mixed with sand and other additives including hydrochloric or muriatic acid, into the shale formation. The fluid or “frac fluid” that is recovered from this process must be properly treated as the water quality is very poor.

Frac fluid is extremely saline and can be three to six times as salty as sea water. Other contaminants can include barium, bromine, lithium strontium, sulfate, ammonium and very high concentrations of total dissolved solids (TDS). There is also some concern about normally occurring radioactive materials (NORMS) present in shale and potentially present in recovered drilling fluid, but there is very little data available on the radioactivity of frac fluid in Pennsylvania (Rowan, Engle, & Kirby, 2010).

Currently there is no known technology to treat water with this level of salinity (Kondash, Albright, & Vengosh, 2017). High levels of total dissolved solids (TDSs), though not harmful to humans, can be extremely harmful to aquatic life and can damage industrial equipment. Often, recovered frac fluid is stored in earthen impoundments and after treatment is taken to a sewage treatment facility. There is concern surrounding the toxic solid waste that remains after frac fluid is treated.

In addition to the traditional hazards associated with oil and gas well drilling, potential impacts from Marcellus Shale gas well drilling include:

- Surface water depletion from high consumptive use with low return rates affecting drinking water supplies, and aquatic ecosystems and organisms.
- Contaminated surface and groundwater resulting from hydraulic fracturing and the recovery of contaminated hydraulic fracturing fluid.
- Mishandling of solid toxic waste.

In 2010 the worst environmental disaster in United States history was realized and can be attributed to oil well drilling and extraction. British Petroleum's (BP) Deepwater Horizon oil rig, located in the Gulf of Mexico off the coast of Louisiana, began leaking millions of gallons of oil into the ocean after an explosion occurred at the site on April 20, 2010, killing 11 workers. The resulting environmental and economic impacts have been devastating to the region (Pallardy, 2020).

Though injury and death have resulted from oil and gas well drilling and extraction, the majority of impacts from this human-made hazard are environmental in nature. Wells that are improperly drilled or plugged can contaminate groundwater resulting in water well contamination or eventually surface water contamination. Drilling additives stored on site can leak and contaminate soil, surface water, and groundwater. Oil leaks at the well site from oil pipelines contaminate soil and surface water and damage aquatic life and ecosystems.

Additional potential environmental impacts of Marcellus Shale play drilling include surface water depletion and the accompanying damage to aquatic ecosystems; and contaminated surface, groundwater, and soil resulting from hydraulic fracturing, the recovery of contaminated hydraulic fracturing fluid and solid toxic waste produced from treatment.

4.3.11.3 Past Occurrence Hazardous Material Release

Since the passage of SARA Title III, facilities which produce, use, or store hazardous chemicals must notify the public through their county's emergency dispatch center and PEMA, if an accidental release of a hazardous substance meets or exceeds a designated reportable quantity

and affects or has the potential to affect persons and/or the environment outside the plant. SARA Title III and Pennsylvania Hazardous Material Emergency Planning and Response Act (Act 165) also require a written follow-up report to PEMA and to the county where the facility is located. These written follow-up reports include any known or anticipated health risks associated with the release and actions to be taken to mitigate potential future incidents. In addition, Section 204(a)(10) of Act 165 requires PEMA to staff and operate a 24-hour State Emergency Operations Center (EOC) to provide effective emergency response coordination. Prior to 2009, hazardous material incidents were reported through the Pennsylvania Emergency Incident Reporting System (PEIRS). After 2009, the state stopped using PEIRS to track incidents and to date, there is no statewide incident tracking system. However, the Pennsylvania Hazardous Materials Safety Administration (PHMSA) tracks all hazardous material incidents that occur in transit. Incidents reported by PHMSA have been incorporated into the table below, which displays the total reported hazardous materials incidents for Venango County:

DATE	NUMBER OF INCIDENTS
2018	1
2017	10
2016	5
2015	13
2014	1
2013	3
2012	2
2011	7
2010	1
2009	6
2008	5
2007	11
2006	7
2005	6
2004	9

Oil and Gas

Pennsylvania has a long history of oil and gas well drilling and, though relatively infrequent, many accidents and incidents have occurred related to the extraction of these natural resources. No comprehensive list of oil and gas related incidents exist for the Commonwealth. The hazards associated with each incident vary widely and encompass damages including serious injury, explosion, fire, and water contamination.

Other prior year incident information for Pennsylvania can be found on the Pennsylvania Emergency Management Association website. The *PENNSYLVANIA HAZARDOUS MATERIAL EMERGENCY PLANNING AND RESPONSE ACT 1990-165 2018 ANNUAL REPORT* states

there were 654 “Natural Gas Release” incidents and 18 pipeline breaks in 2018 in the Commonwealth (PEMA, 2018). However, the definition of “Natural Gas Release” is not clearly defined. To date, PHMSA has not reported any gas transmission pipeline failures in Venango County (PHMSA, 2015).

4.3.11.4 Future Occurrence

While many hazardous material release incidents have occurred in Pennsylvania in the past, they are generally considered difficult to predict. An occurrence is largely dependent upon the accidental or intentional actions of a person or group. It is difficult to predict when and where environmental hazards related to gas pipelines will arise as they are often related to equipment failure and human error. Adequate monitoring through the DEP will reduce the likelihood of potential impacts to the community and to the environment. Overall, the probability of future environmental hazards events is likely as defined by the Risk Factor Methodology (See Section 4.4-1).

4.3.11.5 Vulnerability Assessment

The vulnerability of jurisdictions to environmental hazards differs based on the type of environmental hazard being examined. While explosions or other catastrophic incidents at hazardous material facilities, or any kind of gas well or pipeline could cause property damage, the primary concern is the population living near those sites who would potentially need to be evacuated. For hazardous material releases at fixed facilities, vulnerability is defined as populations within 1.5 miles of TRI facilities. For gas pipeline incidents, vulnerability is defined as being located within a quarter mile of a gas pipeline. Tables 4.3.11-3, 4.3.11-4, and 4.3.11-5 provide this vulnerability information by community

Transportation carriers must have response plans in place to address accidents, otherwise the local emergency response team will step in to secure and restore the area. Quick response minimizes the volume and concentration of hazardous materials that disperse through air, water, and soil. Populations should be considered vulnerable to hazardous material releases in every municipality, although municipalities with hazard materials facilities should be considered more vulnerable. In the event of an accidental or intentional release, the size and type of chemical released would be critical determinants of the effects on nearby residents and the environment.

Table 4.3.11-3 Population Vulnerable To Environmental Hazards.			
MUNICIPALITY	2010 POPULATION	EST POPULATION WITHIN 1.5 MILES OF A TRI FACILITY	% POPULATION WITHIN 1.5 MILES OF A TRI FACILITY
Allegheny Township	276	0	0%
Barkeyville Borough	207	0	0%
Canal Township	1,023	0	0%
Cherrytree Township	1,540	21	1%
Clinton Township	854	19	2%
Clintonville Borough	508	80	16%
Cooperstown Borough	460	0	0%
Cornplanter Township	2,418	0	0%
Cranberry Township	6,685	100	1%
Emlenton Borough	617	49	8%
City of Franklin	6,545	205	3%
Frenchcreek Township	1,542	8	1%
Irwin Township	1,391	0	0%
Jackson Township	1,147	0	0%
Mineral Township	538	0	0%
Oakland Township	1,504	0	0%
City of Oil City	10,557	460	4%
Oil Creek Township	854	13	2%
Pinegrove Township	1,354	0	0%
Pleasantville Borough	892	4	0%
Plum Township	1,056	0	0%
Polk Borough	816	0	0%
President Township	540	11	2%
Richland Township	777	22	3%
Rockland Township	1,456	14	1%
Rouseville Borough	523	24	5%
Sandycreek Township	2,260	45	2%
Scrubgrass Township	751	46	6%
Sugarcreek Borough	5,294	164	3%
Utica Borough	189	0	0%
Victory Township	410	2	0%
Total	54,984	1287	2%

Table 4.3.11-4 Structures Vulnerable To Hazardous Materials Release At Fixed Facilities By Generalized Structure Type									
MUNICIPALITY	TOTAL STRUCTURES	AGRICULTURE	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	VACANT	TOTAL STRUCTURES VULNERABLE TO HAZARDOUS MATERIALS RELEASE
Allegheny Township	220	0	0	0	0	0	0	0	0
Barkeyville Borough	141	0	0	0	0	0	0	0	0
Canal Township	513	0	0	0	0	0	0	0	0
Cherrytree Township	825	12	5	0	103	0	0	8	128
Clinton Township	542	74	1	1	76	0	0	5	157
Clintonville Borough	241	0	0	0	0	0	0	0	0
Cooperstown Borough	214	0	0	0	0	0	0	0	0
Cornplanter Township	1,324	21	67	8	770	0	3	58	927
Cranberry Township	3,502	121	184	4	917	4	1	34	1265
Emlenton Borough	374	0	62	0	292	1	4	15	374
City of Franklin	2,995	1	589	13	2322	3	5	62	2995
Frenchcreek Township	871	33	3	0	173	0	0	10	219
Irwin Township	730	1	0	0	0	0	0	0	1
Jackson Township	569	0	0	0	0	0	0	0	0
Mineral Township	331	0	0	0	0	0	0	0	0
Oakland Township	735	0	0	0	0	0	0	0	0
City of Oil City	4,769	7	491	26	3992	11	5	236	4768
Oil Creek Township	488	51	20	6	179	0	1	11	268
Pinegrove Township	691	0	0	0	0	0	0	0	0
Pleasantville Borough	471	1	2	0	83	0	0	2	88

Table 4.3.11-4 Structures Vulnerable To Hazardous Materials Release At Fixed Facilities By Generalized Structure Type									
MUNICIPALITY	TOTAL STRUCTURES	AGRICULTURE	COMMERCIAL	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	VACANT	TOTAL STRUCTURES VULNERABLE TO HAZARDOUS MATERIALS RELEASE
Plum Township	547	0	0	0	0	0	0	0	0
Polk Borough	263	0	0	0	0	0	0	0	0
President Township	766	0	0	0	0	0	0	0	0
Richland Township	589	13	2	1	45	0	1	2	64
Rockland Township	1,435	14	2	1	205	0	0	27	249
Rouseville Borough	257	1	22	2	218	1	0	13	257
Sandycreek Township	1,228	55	176	42	611	0	6	22	912
Scrubgrass Township	723	52	12	4	168	1	0	10	247
Sugarcreek Borough	2,497	32	171	23	1478	1	3	63	1771
Utica Borough	125	0	0	0	0	0	0	0	0
Victory Township	339	0	2	0	0	0	0	0	2
Grand Total	29,315	489	1,811	131	11,632	22	29	578	14,692

Table 4.3.11-5 Critical Facilities Vulnerable To Environmental Hazards							
MUNICIPALITY	Total Critical Facilities	Total Critical Facilities within 1.5 Miles of EPA TRI Facilities	Percent Critical Facilities within 1.5 Miles of EPA TRI Facilities	Critical Facilities within .25 Miles of Major Roads	Percent Critical Facilities within .25 Miles of Major Roads	Critical Facilities within .25 Miles of Rail Lines	Percent Critical Facilities within .25 Miles of Rail Lines
Allegheny Township	1	0	0%	1	100%	0	0%
Barkeyville Borough	2	0	0%	2	100%	0	0%
Canal Township	3	0	0%	2	67%	1	33%
Cherrytree Township	4	1	25%	2	50%	0	0%
Clinton Township	4	1	25%	4	100%	0	0%
Clintonville Borough	2	0	0%	2	100%	0	0%
Cooperstown Borough	2	0	0%	2	100%	0	0%
Cornplanter Township	7	6	86%	6	86%	0	0%
Cranberry Township	13	1	8%	7	54%	0	0%
Emlenton Borough	4	4	100%	4	100%	0	0%
City of Franklin	21	18	86%	17	81%	12	57%
Frenchcreek Township	1	0	0%	1	100%	0	0%
Irwin Township	4	0	0%	4	100%	0	0%
Jackson Township	1	0	0%	0	0%	0	0%
Mineral Township	1	0	0%	1	100%	0	0%

Table 4.3.11-5 Critical Facilities Vulnerable To Environmental Hazards							
MUNICIPALITY	Total Critical Facilities	Total Critical Facilities within 1.5 Miles of EPA TRI Facilities	Percent Critical Facilities within 1.5 Miles of EPA TRI Facilities	Critical Facilities within .25 Miles of Major Roads	Percent Critical Facilities within .25 Miles of Major Roads	Critical Facilities within .25 Miles of Rail Lines	Percent Critical Facilities within within .25 Miles of Rail Lines
Oakland Township	3	0	0%	2	67%	0	0%
City of Oil City	15	15	100%	15	100%	6	40%
Oil Creek Township	1	1	100%	1	100%	0	0%
Pinegrove Township	4	0	0%	3	75%	0	0%
Pleasantville Borough	3	0	0%	3	100%	0	0%
Plum Township	2	0	0%	1	50%	0	0%
Polk Borough	6	0	0%	5	83%	0	0%
President Township	2	0	0%	2	100%	0	0%
Richland Township	1	0	0%	1	100%	0	0%
Rockland Township	3	0	0%	1	33%	0	0%
Rouseville Borough	2	2	100%	2	100%	2	100%
Sandycreek Township	5	5	100%	4	80%	0	0%
Scrubgrass Township	3	1	33%	2	67%	0	0%

Table 4.3.11-5 Critical Facilities Vulnerable To Environmental Hazards							
MUNICIPALITY	Total Critical Facilities	Total Critical Facilities within 1.5 Miles of EPA TRI Facilities	Percent Critical Facilities within 1.5 Miles of EPA TRI Facilities	Critical Facilities within .25 Miles of Major Roads	Percent Critical Facilities within .25 Miles of Major Roads	Critical Facilities within .25 Miles of Rail Lines	Percent Critical Facilities within within .25 Miles of Rail Lines
Sugarcreek Borough	7	5	71%	6	86%	3	43%
Utica Borough	3	0	0%	3	100%	0	0%
Victory Township	1	0	0%	1	100%	0	0%
Total	131	60	46%	107	82%	24	18%

Table 4.3.11-6 CRITICAL FACILITIES VULNERABLE TO ENVIRONMENTAL HAZARDS – GAS PIPELINES				
MUNICIPALITY	TOTAL CRITICAL FACILITIES	NUMBER OF CRITICAL FACILITIES WITHIN 0.25 MILES OF PIPELINE	PERCENT CRITICAL FACILITIES WITHIN 0.25 MILES OF PIPELINE	MILES OF PIPELINE
Allegheny Township	1	0	0%	0.00
Barkeyville Borough	2	0	0%	0.00
Canal Township	3	0	0%	3.40
Cherrytree Township	4	2	50%	9.34
Clinton Township	4	0	0%	5.29
Clintonville Borough	2	0	0%	0.00
Cooperstown Borough	2	2	100%	0.77
Cornplanter Township	7	0	0%	9.07
Cranberry Township	13	6	46%	71.23
Emlenton Borough	4	0	0%	0.00
City of Franklin	21	0	0%	0.00
Frenchcreek Township	1	0	0%	1.83
Irwin Township	4	0	0%	0.67
Jackson Township	1	0	0%	5.69
Mineral Township	1	0	0%	16.56
Oakland Township	3	0	0%	1.21
City of Oil City	15	5	33%	6.14
Oil Creek Township	1	0	0%	8.89
Pinegrove Township	4	1	25%	24.46
Pleasantville Borough	3	0	0%	0.00
Plum Township	2	0	0%	0.00
Polk Borough	6	2	33%	1.88
President Township	2	0	0%	10.85
Richland Township	1	0	0%	4.83
Rockland Township	3	0	0%	16.16
Rouseville Borough	2	1	50%	0.00
Sandycreek Township	5	0	0%	9.36
Scrubgrass Township	3	0	0%	10.39

Table 4.3.11-6 CRITICAL FACILITIES VULNERABLE TO ENVIRONMENTAL HAZARDS – GAS PIPELINES				
MUNICIPALITY	TOTAL CRITICAL FACILITIES	NUMBER OF CRITICAL FACILITIES WITHIN 0.25 MILES OF PIPELINE	PERCENT CRITICAL FACILITIES WITHIN 0.25 MILES OF PIPELINE	MILES OF PIPELINE
Sugarcreek Borough	7	1	14%	16.80
Utica Borough	3	0	0%	0.00
Victory Township	1		0%	8.49
Total	131	20	15%	243.31

4.3.12 Dam Failure

Due to data sensitivity, the Dam Failure profile can be found in *Appendix G*.



4.4 Hazard Vulnerability Summary

A vulnerability assessment applies the information collected through hazard profiling to Venango County's assets to summarize the impacts from hazards on the community and its vulnerable structures. These impacts are represented by measures such as population at risk, percent damages, and dollar loss estimation. However, these risk estimates are not static – as changes in local and regional land use and development, as well as changes in population, will continuously increase or decrease the County's risk and vulnerability to natural and human-made hazard events. The purpose of this analysis is to identify weaknesses or vulnerabilities prior to an event so that mitigation action plans may prevent or reduce the predicted impact of disasters. The primary objective of the vulnerability assessment is to prioritize hazards of concern to provide a framework for the mitigation strategy and policy development.

4.4.1 Methodology

Ranking hazards helps communities set goals and priorities for mitigation based on their vulnerabilities. A Risk Factor (RF) is a tool used to measure the degree of risk for identified hazards in a particular planning area. The RF can also be used to assist local community officials in ranking and prioritizing those hazards that pose the most significant threat to their area based on a variety of factors deemed important by the HMPT and other stakeholders involved in the hazard mitigation planning process. The RF system relies mainly on historical data, local knowledge, general consensus opinions from the HMPT and information collected through development of the hazard profiles included in Section 4.3. The RF approach produces numerical values that allow identified hazards to be ranked against one another; the higher the RF value, the greater the hazard risk.

RF values were obtained by assigning varying degrees of risk to five categories for each of the twelve hazards profiled in the 2015 HMP. Those categories include: *probability, impact, spatial extent, warning time* and *duration*. Each degree of risk was assigned a value ranging from 1 to 4. The weighting factor is shown in Table 4.4-1. To calculate the RF value for a given hazard, the assigned risk value for each category was multiplied by the weighting factor. The sum of all five categories equals the final RF value, as demonstrated in the example equation:

$$\text{Risk Factor Value} = [(Probability \times .30) + (Impact \times .30) + (Spatial \text{ Extent} \times .20) + (Warning \text{ Time} \times .10) + (Duration \times .10)]$$

Table 4.4.1-1 summarizes each of the five categories used for calculating a RF for each hazard. According to the weighting scheme applied, the highest possible RF value is 4.0.

Table 4.4.1-1 Summary of Risk Factor approach used to rank hazard risk.				
RISK ASSESSMENT CATEGORY	DEGREE OF RISK			WEIGHT VALUE
	LEVEL	CRITERIA	INDEX	
PROBABILITY <i>What is the likelihood of a hazard event occurring in a given year?</i>	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1% & 49.9% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 50% & 90% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY	4	
IMPACT <i>In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?</i>	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT <i>How large of an area could be impacted by a hazard event? Are impacts localized or regional?</i>	NEGLIGIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10.9% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 11 & 25% OF AREA AFFECTED	3	
	LARGE	GREATER THAN 25% OF AREA AFFECTED	4	
WARNING TIME <i>Is there usually some lead time associated with the hazard event? Have warning measures been implemented?</i>	MORE THAN 24 HRS	SELF-DEFINED	1	10%
	12 TO 24 HRS	SELF-DEFINED	2	
	6 TO 12 HRS	SELF-DEFINED	3	
	LESS THAN 6 HRS	SELF-DEFINED	4	
DURATION <i>How long does the hazard event usually last?</i>	LESS THAN 6 HRS	SELF-DEFINED	1	10%
	LESS THAN 24 HRS	SELF-DEFINED	2	
	LESS THAN 1 WEEK	SELF-DEFINED	3	
	MORE THAN 1 WEEK	SELF-DEFINED	4	

4.4.2 Ranking Results

Using the methodology described in Section 4.4.1, Table 4.4.2-1 lists the Risk Factor calculated for each of the twelve potential hazards identified in the 2015 HMP. Hazards identified as high risk have risk factors greater than 2.5. Risk Factors ranging from 2.0 to 2.4 were deemed moderate risk hazards. Hazards with Risk Factors 1.9 and less are considered low risk.

Table 4.4.2-1 Ranking of hazard types based on Risk Factor methodology.

HAZARD RISK	HAZARD NATURAL (N) or HUMAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	
HIGH	Winter Storm (N)	3	2	4	1	3	2.7
	Environmental Hazards (M)	3	2	3	3	2	2.6
	Flood, Flash Flood, Ice Jam (N)	2	2	4	2	3	2.5
MODERATE	Dam Failure (M)	1	3	3	4	2	2.4
	Wildfire (N)	4	1	2	3	2	2.4
	Tornado, Windstorm (N)	1	3	3	4	1	2.3
	Drought (N)	2	1	4	1	4	2.2
LOW	Radon Exposure (N)	2	1	2	1	4	1.8
	Hurricane, Tropical Storm Nor'easter	1	1	4	1	1	1.6
	Earthquake (N)	1	1	2	4	1	1.5
	Pandemic (M)	1	1	1	4	2	1.4
	Landslide (N)	1	1	1	4	1	1.3

Based on these results, there are three *high* risk hazards, four *moderate* risk hazards and five *low* risk hazards in Venango County. Mitigation actions were developed for all hazards (see Section 6.4) with an emphasis on the higher-ranked hazards.

A risk assessment result for the entire county does not mean that each municipality is at the same amount of risk to each hazard. Table 4.4.2-2 shows the different municipalities in Venango County and whether their risk is greater than (>), less than (<), or equal to (=) the risk factor assigned to the County as a whole. This table was developed by the consultant team based on the findings in the hazard profiles of Section 4.3 and municipal input from the “Evaluation of Identified Hazards and Risk” worksheet distributed at the October 23, 2014 HMP update meeting. Those changes are reflected in the table (*Data in the table reflects responses received as of 9/18/2020).

Table 4.4.2-2 Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR											
	Winter Storm (N)	Environmental Hazards (M)	Flood, Flash Flood, Ice Jam (N)	Dam Failure (M)	Wildfire (N)	Tornado, Windstorm (N)	Drought (N)	Radon Exposure (N)	Hurricane, Tropical Storm, Nor' easter (N)	Earthquake (N)	Pandemic (M)	Landslide (N)
	2.7	2.6	2.5	2.4	2.4	2.3	2.2	1.8	1.6	1.5	1.4	1.3
Allegheny Township	>	<	>	<	<	>	=	>	=	=	=	=
Barkeyville Borough	>	>	=	<	=	<	=	=	=	=	=	>
Canal Township	>	<	>	<	>	>	=	=	=	=	=	=
Cherrytree Township	>	<	=	<	>	<	=	>	=	=	=	>
Clinton Township	<	>	=	<	>	>	=	=	=	=	=	>
Clintonville Borough	<	<	=	<	<	<	=	=	=	=	=	=
Cooperstown Borough	>	<	=	<	<	>	=	=	=	=	=	=
Cornplanter Township	>	>	>	<	>	<	=	>	=	=	=	=
Cranberry Township	=	>	=	=	>	<	=	=	=	=	=	>
Emlenton Borough	<	<	=	<	<	>	=	=	=	=	=	=
Franklin, City of	=	>	=	<	<	<	=	>	=	=	=	=
Frenchcreek Township	=	>	=	=	<	>	=	=	=	=	=	=
Irwin Township	<	>	=	=	<	<	=	=	=	=	=	>
Jackson Township	>	<	>	<	=	<	=	=	=	=	=	=
Mineral Township	<	>	=	<	>	<	=	=	=	=	=	=
Oakland Township	>	>	=	=	=	>	=	=	=	=	=	=
Oil City, City of	=	>	>	=	>	>	=	>	=	=	=	=
Oil Creek Township	>	=	=	<	>	>	=	=	=	=	=	=
Pinegrove Township	=	>	=	=	>	<	=	>	=	=	=	>
Pleasantville Borough	>	<	=	<	<	<	=	>	=	=	=	=
Plum Township	>	<	=	<	>	>	=	>	=	=	=	=
Polk Borough	=	<	=	<	>	>	=	=	=	=	=	=
President Township	=	=	>	<	>	>	=	>	=	=	=	>
Richland Township	<	>	=	>	<	<	=	=	=	=	=	>
Rockland Township	<	>	>	<	>	<	=	=	=	=	=	>
Rouseville Borough	=	<	=	=	>	<	=	>	=	=	=	=
Sandycreek Township	=	>	=	=	=	<	=	=	=	=	=	>
Scrubgrass Township	<	=	=	<	=	>	=	=	=	=	=	>
Sugarcreek Borough	=	>	=	=	<	>	=	=	=	=	=	=
Utica Borough	>	>	>	<	>	<	=	=	=	=	=	=
Victory Township	<	>	=	<	=	<	=	=	=	=	=	>

The Venango County Planning Commission, Venango Emergency Management Agency, and additional stakeholder organizations (Department of Conservation and Natural Resources (DCNR), also participated in the process. Amongst their submissions, there was a notable trend. Representatives considered environmental hazards – particularly as it relates to oil/gas extraction and unconventional wells to be a high risk factor for the County. Those in natural resource management expressed concern over increased susceptibility to wildfire and invasive species.

4.4.3 Potential Loss Estimates

Potential loss estimates for hazard events help a community understand the monetary value of what might be at stake during a hazard event. Estimates are considered potential in that they generally represent losses that could occur in a countywide hazard scenario. In events that are localized, losses may be lower, while regional events could yield higher losses.

Estimates provided in this section are based geospatial analysis via Hazus and previous events as reported to NCDL or SHELDCUS in order to provide a comprehensive range of potential losses. NCDL and SHELDCUS losses provide actual, on-the-ground losses associated with individual flood events with a range of return periods, and are useful to indicate the range of possible losses with different flood events. Hazus shows predictive, 1% annual chance losses. These are losses associated with a base flood assuming current development and hydrologic patterns. Estimates are considered potential in that they generally represent losses that could occur in a countywide hazard scenario. In events that are localized, losses may be lower, while regional events could yield higher losses.

Potential loss estimates have four basic components, including:

- Replacement Value: Current cost of returning an asset to its pre-damaged condition, using present-day cost of labor and materials.
- Content Loss: Value of building's contents, typically measured as a percentage of the building replacement value.
- Functional Loss: The value of a building's use or function that would be lost if it were damaged or closed.
- Displacement Cost: The dollar amount required for relocation of the function (business or service) to another structure following a hazard event.

Loss estimates provided in this section fall into three broad categories: historical losses, current-condition losses, and predictive losses. Historical loss estimates come from three primary sources: the NCDL storm events database, the NFIP, and the USDA's Risk Management Agency annual crop indemnities dating from 1980-2013. Current condition losses come from geospatial analysis of the value of buildings identified as vulnerable in the Vulnerability Assessment section of hazard profiles for floods, subsidence, wildfires, and transportation accidents. Finally, predictive losses were generated using HAZUS-MH, version 2.1. Historical losses do not take into account any of the aforementioned components, but they do provide insight into what future losses might be. The current-condition losses take into account replacement value only. HAZUS modeling

takes into account all four components and provides the most comprehensive description of potential losses.

Potential loss estimates were not calculated for the following hazards: winter storms, earthquakes, environmental hazards, pandemics, radon exposure, tornado and windstorms, dam failure, and landslides. For such hazards as environmental hazards and drought, there are too many variables to consider in generating a cost of such a hazard event occurrence. For the remaining hazards, necessary structure data such as the number of stories, building code it was built under, presence of basement, and construction type that is necessary to determine damage and replacement values (the cost to rebuild) was not available from the Venango County tax assessment database at the time this Plan was developed. Market value is not available from the tax assessment; only the assessed value is provided making a thorough loss estimate difficult.

Historical Losses

Historical losses were able to be determined for drought, flooding, tornado and windstorms, and winter storms from NCDC, USDA RMA, and the NFIP.

NCDC reports include property and crop damage estimates with their incident reports. As noted in many of the hazard profiles, though, many of the events have no damages reported. This does not mean that there were no damages; rather, it indicates that no damages were reported to NCDC. As a result, these should be considered low-end estimates of losses. For example, the flood and flash flood events reported in NCDC list approximately \$704 million in property damage and no fatalities over the history of flooding in the county. Property damage estimates for tornado were reported at \$50.5 million, with a range of property damage from \$25,000 to \$25 million. Wind events of over 50 knots had estimated losses of one fatality and \$3.6 million in property damage. Historical losses for winter storms, including ice storms, sleet, and heavy snow, total \$61M in property damage.

Although agriculture is a relatively small part of Venango County's economy (representing just 0.1% of the County's share of primary jobs) up to \$14.7 million of annual crop sales would potentially be at risk to the previously aforementioned storm events (US Census Bureau, 2020; USDA, 2020). Historic crop losses \$460 thousand in annual crop loss from drought alone.

The flood hazard vulnerability assessment for the County focuses on community assets that are located in the 1%-annual-chance floodplain. While greater and smaller floods are possible, information about the extent and depths for this floodplain is available for all municipalities countywide, thus providing a consistent basis for analysis.

Of the 31 municipalities in Venango County, 28 municipalities have flood prone areas. The streams prone to flooding include: Chub Run, Oil Creek, Sage Run, Morrison Run, Sugar Creek and the Allegheny River. The main flood season is usually December through April.

The final set of historic losses relates to prior flood losses and repetitive flood loss properties, which comes from the NFIP's records of claims paid. Table 4.4.3-1 shows the total amount of claims paid in each municipality according to CIS. The City of Oil City and Cranberry Township

have had the highest amount of claims paid, and there are nine communities that have never had a claim paid despite having policies in force in the community.

COMMUNITY	PARTICIPATION STATUS	TOTAL AMOUNT OF PAID CLAIMS	NUMBER OF SUBSTANTIAL DAMAGE CLAIMS
Allegheny Township	Participating	\$0	0
Barkeyville Borough	Participating	\$0	0
Canal Township	Participating	\$1,588	0
Cherrytree Township	Participating	\$54,270	0
Clinton Township	Participating	\$20,460	0
Clintonville Borough	Participating	\$0	0
Cooperstown Borough	Participating	\$6,650	0
Cornplanter Township	Participating	\$180,617	0
Cranberry Township	Participating	\$275,039	2
Emlenton Borough	Participating	\$6,635	0
City of Franklin	Participating	\$168,158	0
Frenchcreek Township	Participating	\$46,292	0
Irwin Township	Participating	\$0	0
Jackson Township	Participating	\$114,495	1
Mineral Township	Participating	\$0	0
Oakland Township	Participating	\$72,607	0
City of Oil City	Participating	\$4,698,453	36
Oil Creek Township	Participating	\$1,977	0
Pinegrove Township	Participating	\$0	0
Pleasantville Borough	Not Participating	\$0	0
Plum Township	Participating	\$4,234	0
Polk Borough	Participating	\$238,336	1
President Township	Participating	\$54,355	2
Richland Township	Participating	\$0	0
Rockland Township	Participating	\$32,344	4
Rouseville Borough	Participating	\$10,345	0
Sandycreek Township	Participating	\$0	0

COMMUNITY	PARTICIPATION STATUS	TOTAL AMOUNT OF PAID CLAIMS	NUMBER OF SUBSTANTIAL DAMAGE CLAIMS
Scrubgrass Township	Participating	\$163,890	6
Sugarcreek Borough	Participating	\$188,561	2
Utica Borough	Participating	\$3,550	1
Victory Township	Participating	\$0	0
TOTAL		\$6,342,856	55

As described in Section 4.3.3.1, Table 4.3.3-3 provides the number of buildings identified as repetitive loss properties in Venango County. The National Flood Insurance Program identifies repetitive loss properties as structures insured under the NFIP which have had at least two paid flood losses of more than \$1,000 over any 10-year period since 1978. As of September 2020, there were 53 repetitive loss buildings in Venango County, with The City of Oil City having the highest share of these buildings (34 total).

Modeled Losses (via HAZUS)

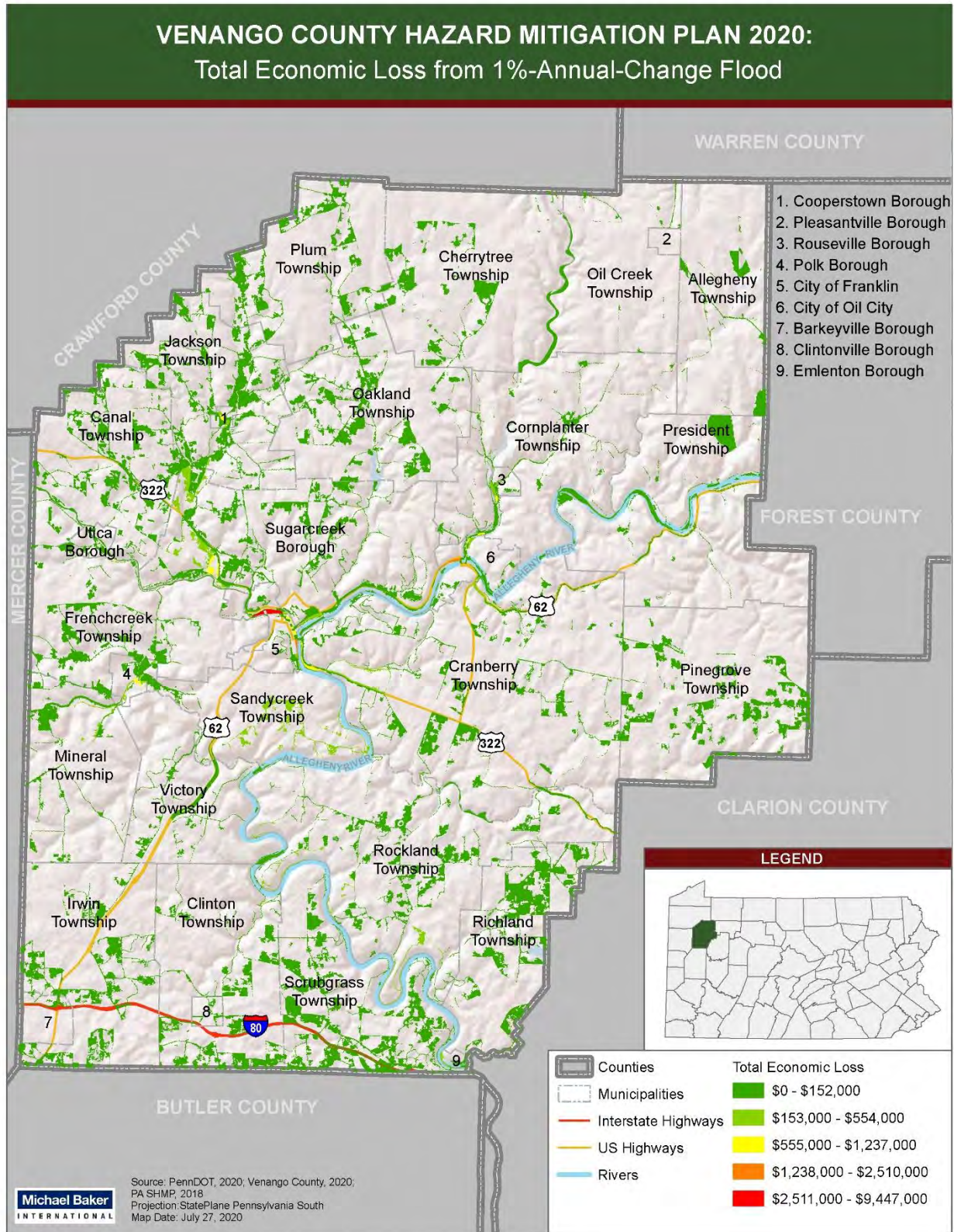
This plan employed an enhanced HAZUS analysis for floods. As opposed to basic analysis using only default data, enhanced analysis incorporates some kind of more recent, up-to-date, or specific data for inclusion in the hazard models. The enhanced data incorporated into this HMP update include:

- Updated demographic data from the 2010 Census,
- Updated essential facilities data from the County and other sources, and
- A user-delineated 100-year depth grid derived for Venango County from the effective DFIRM data and the 3.2 ft statewide LiDAR dataset from DCNR.

For more details on the HAZUS methodology used and additional results reports, see Appendix F.

Using these datasets in HAZUS-MH Version 2.1, total economic losses from a 1%-annual-chance flood in Venango County are estimated to equal \$72.84 million. Residential occupancies make up 46.4% of the total estimated building-related losses. Figure 4.4.3-1 shows a distribution of building-related losses by census block across Venango County. The highest losses are expected in Oil City, Sugarcreek Borough, Sandycreek Township, and Cornplanter Township. Total economic loss, including replacement value, content loss, functional loss and displacement cost, from a countywide 1%-annual-chance flood are estimated to equal \$72.25 million. In this scenario, an expected 50 buildings would be moderately damaged. In addition, and estimated 1,319 households would be displaced, and 2,536 people would require shelter. Most essential facilities in the County would remain undamaged, however, one fire station and one school would be at least moderately damaged and lead to a loss of use for this facilities in this scenario.

Figure 4.4.3-1 Total Economic Loss from 1%-Annual-Change-Flood



Total Econ

4.4.4 Future Development and Vulnerability

Venango County ranks as 43rd in population among counties in Pennsylvania. The population has declined from 59,381 in 1990, to 57,565 in 2000, which represents a 3.15% decrease in ten years. Since 2000 the population has declined an additional 5.5%.

The Venango County Comprehensive Plan identified the “core” area of the County which includes both Franklin and Oil City, with portions of Sandy Creek Borough and Cranberry Township, has been tentatively identified as a “Designated Growth Area.” This is not the only area being suggested for development, but this area probably has the greatest potential for attracting new development.

Peripheral growth areas include the State Route 8 Corridor south of Franklin and north from Oil City to Rouseville Borough, the interchange area of Clintonville Borough with Interstate 80, the State Route 27 corridor north from Pleasantville, and segments of the State Route 322 corridor north of Franklin.

These core growth areas have the potential to impact land use, economic development, and potential hazard creation in Venango County. Many of these core growth areas are located in flood hazard areas, especially portions of Cooperstown, Polk, Utica, and Rouseville Boroughs and the cities of Oil City and Franklin. Stringent floodplain ordinance enforcement and sound land development practices will help to mitigate any impact associated with these growth areas.

Population change is perhaps the most significant indicator of changes in vulnerability and risk in the future. A rise or decrease in population not only impacts the level of risk (as to how many individuals could be affected), but also foreshadows development and land use changes for the County and its municipalities. Venango County is expected to experience a variety of factors that will, in some areas, increase vulnerability to hazards while in other areas, vulnerability may stay static or even be reduced. Much of this is dependent on future population and land use and development patterns.

Population projections are useful in determining if a given area’s population trends will continue into the future. The PA DEP produces county and municipal population projections based on U.S. Census data from the 2000 and 2010 to aid both county and municipality comprehensive planning. Projections developed for each of Venango County’s municipalities are shown in Table 4.4.4-1.

The projections below demonstrate a trend of declining population at the County level of approximately 11% between 2010 and 2040. However, several municipalities are projected to increase in population. This projected growth is solely located in the townships, with Clinton, Irwin, Rockland, and Victory Townships expected to experience double digit growth. This is in line with statewide trends, where boroughs experience smaller rates of growth.

Table 4.4.4-1 Municipal 2010 Population and Population Projections (PA DEP 2014).					
Municipality	BASELINE POPULATION 2010 US Census	Population Projections			PERCENT CHANGE, 2010-2040
		2020	2030	2040	
Barkeyville Borough	207	188	171	154	-25.60%
Clintonville Borough	508	504	491	483	-4.92%
Cooperstown Borough	460	434	422	403	-12.39%
Emlenton Borough	617	561	511	458	-25.77%
Pleasantville Borough	892	829	827	790	-11.43%
Polk Borough	816	743	676	605	-25.86%
Rouseville Borough	523	481	493	474	-9.37%
Sugarcreek Borough	5,294	5,163	5,086	4,978	-5.97%
Utica Borough	189	172	157	140	-25.93%
<i>TOTAL: BOROUGHES</i>	<i>9299</i>	<i>8887</i>	<i>8663</i>	<i>8331</i>	<i>-10.41%</i>
City of Franklin	6,545	6,192	5,635	5,195	-20.63%
City of Oil City	10,557	9,897	9,006	8,247	-21.88%
<i>TOTAL: CITIES</i>	<i>17,102</i>	<i>16,089</i>	<i>14,641</i>	<i>13,442</i>	<i>-21.40%</i>
Allegheny Township	276	274	270	267	-3.26%
Canal Township	1,023	996	993	976	-4.59%
Cherrytree Township	1,540	1,506	1,489	1,462	-5.06%
Clinton Township	854	909	988	1,053	23.30%
Cornplanter Township	2,418	2,200	2,002	1,793	-25.85%
Cranberry Township	6,685	6,406	6,098	5,807	-13.13%
Frenchcreek Township	1,542	1,474	1,409	1,343	-12.91%
Irwin Township	1,391	1,499	1,592	1,693	21.71%
Jackson Township	1,147	1,183	1,187	1,209	5.41%
Mineral Township	538	551	559	570	5.95%
Oakland Township	1,504	1,500	1,463	1,445	-3.92%
Oilcreek Township	854	817	809	785	-8.08%
Pinegrove Township	1,354	1,328	1,326	1,311	-3.18%
Plum Township	1,056	1,071	1,075	1,085	2.75%
President Township	540	563	571	587	8.70%
Richland Township	777	773	791	796	2.45%
Rockland Township	1,456	1,518	1,607	1,681	15.45%
Sandycreek Township	2,260	2,147	2,015	1,893	-16.24%
Scrubgrass Township	751	802	797	824	9.72%
Victory Township	410	435	447	467	13.90%
<i>TOTAL: TOWNSHIPS</i>	<i>28,376</i>	<i>27,952</i>	<i>27,488</i>	<i>27,047</i>	<i>-4.68%</i>
Venango County	56,752	53,118	50,963	48,974	-13.71%

Making use of the analysis of Venango County's current population and demographics along with future population trends, it is important to explore how these projected changes may influence the County's future vulnerability to the profiled hazards. Hazard vulnerability and loss potential will be higher in the places of higher density (namely the cities) throughout the County, so as areas continue to grow and densify, these communities might become more vulnerable to hazards. For example, population growth and its associated development is likely to create increases in loss potential, as more people may be living in areas prone to hazards, especially flooding, winter storms, droughts, and wildfires.

According to the Venango County Regional Planning Commission (VCRPC) Annual Report, in 2011, there were a total of 67 subdivision and land development plans processed by the VCRPC. Cranberry Township experienced the most submittals, with a total of 9 submitted for advisory comment to the County. Some of the more notable developments included a new bank branch, childhood development center, and industrial facility in Oil City; probation and parole facility in Sugarcreek Borough; and Eastgate Plaza in Barkeyville.

Development can often change the hazard threat level of an area by placing additional critical facilities, businesses, transportation networks, and populations within vulnerable areas. Any development along transportation routes can increase the vulnerability to transportation incidents and hazardous material spills. Most often, development occurs along these transportation networks because of access and increased demand for travel and access to services. Therefore, the impact of these hazards can increase along with their frequency. While it can be difficult to curb development, it is to the municipality's advantage to be aware of development trends in order to successfully mitigate future hazards as risks increase.

The 2005 Venango County Comprehensive Plan outlines a number of goals and objectives to guide future development within the county. An immediate priority identified in the Plan, was for the County to partner with municipalities to established designated growth areas in Venango County – with the objective of concentrating development near already established villages, downtowns, and population centers (Goal 1, Objective 2). These growth areas can be seen in Section 2, Figure 2.4-1. Growth areas for the southern portion of Venango County were further refined and outlined in the 2007 Southern Venango County Regional Comprehensive Plan. As seen in Figure 2.4-2, these areas are primarily focused around key transportation infrastructure, Route 8 and I-80, and the neighboring communities of Barkeyville Borough, Clintonville Borough and portions of Clinton Township, and Emlenton Borough.

In addition, the County has taken steps to examine the impact of future development in areas that could be more prone to the hazards identified in this plan. For example, in the 2010 Venango County Act 167 Stormwater Management Plan, Phase II, the County examined the impact of projected development, prioritized problem areas, and identified best practices to reduce the impact of stormwater runoff in the County which could reduce the County's susceptibility to flooding from heavy rain events. For example, the Stormwater Management Plan included an analysis of existing and future land use and the resulting impact on the watershed from stormwater runoff.

Lastly, in several County planning documents, including the 2005 Comprehensive Plan and the 2010 Comprehensive Recreation, Parks, and Open Space Plan; the County has reiterated its commitment to preserving its rural character through farmland preservation; resource protection areas/conservation districts; and the maintenance of public parks, open space, and recreational opportunities. As described previously, goals to concentrate development along existing infrastructure or population centers, could increase or decrease the exposure of the County to certain hazards identified in this plan. For example, Goal 1, Objective 2, Short Range Priority 1 of the County Comprehensive Plan outlines the necessity for the County to establish Resource Protection Areas that would identify areas of significant protection for wetlands, floodplains, and areas of steep slopes, etc. The establishment of this priority is a clear sign that the County is taking steps to reduce its exposure to flooding and steer development away from the SFHA.

With the development and prioritization of these goals and objectives, the County has also identified specific actions that can be taken to achieve its vision for the County and guide future development. As stated previously, although agricultural production remains a relatively small part of the economy, the County has repeatedly identified it as a priority to preserve these lands. Some actions identified by the County to achieve this goal (Comprehensive Plan, Goal 1, Objective 5) are through special agricultural zoning districts; the acquisition of conservation easements and purchase of development rights; and to explore the feasibility of developing a county-wide transfer of development rights program, preferential tax assessment for farms, and the establishment of a dedicated funding source to expand the County's acquisition of development rights. Additionally, the designated growth areas identified in the Comprehensive plan are designed in a way to further discourage development within productive agricultural areas.

5 Capability Assessment

5.1 Update Process Summary

Venango County has a number of resources it can access to implement hazard mitigation initiatives including emergency response measures, local planning and regulatory tools, administrative assistance and technical expertise, fiscal capabilities, and participation in local, regional, state, and federal programs. The presence of these resources enables community resiliency through actions taken before, during, and after a hazard event.

The 2015 HMP update included a capability assessment survey developed based on FEMA and PEMA guidance and shortened from the 2011 HMP capability assessment survey to collect the most essential capability information. The survey asked about the most common plans, tools, and programs found in Venango communities; about staff and personnel resources; and ended with a self-assessment of capabilities.

For the 2020 HMP update, the capability assessment survey was developed based on the most recent FEMA and PEMA guidance, and similar to the 2015 capability assessment survey asked about the common plans and programs; staff and personnel resources; and a self-assessment of capabilities.

To aid municipalities in completing the 2020 Capability Assessment Survey, a copy of their 2015 Capability Assessment Survey was provided if a survey was completed. If a municipality did not complete a survey for the 2015 HMP Update, they were provided with a blank survey. The Capability Assessment Survey was provided in electronic format (via e-mail and the project website) to each municipality or mailed at the request of the municipality. In addition, Venango County Emergency Services and Venango County Economic Development identified county-level capabilities.

The capability assessment is a good tool to identify local capabilities and to recognize gaps and weaknesses that can be addressed through future mitigation actions. The results of the capability assessment provide useful information for developing an effective mitigation strategy. While the capability assessment serves as a good instrument for identifying local capabilities for, it also provides a means for recognizing gaps and weaknesses that can be resolved through future mitigation actions. The results of this assessment lend critical information for developing an effective mitigation strategy.

5.2 Capability Assessment Findings

Within Pennsylvania, no county-level capability assessment would be complete without considering the constituent municipalities. Local municipalities have their own governing body, enforce their own rules and regulations, purchase their own equipment, maintain their own infrastructure, and manage their own resources. In many ways, the County is only as good as the capabilities of its constituent municipalities. Therefore, the capability assessment does not consider Venango County as a lone entity but evaluates it considering the various characteristics and differences of and between its municipalities.

Venango County's 31 municipalities carry out daily operations and provide various community services according to local needs and limitations. Some of the municipalities have formed cooperative agreements and work jointly with their neighboring municipalities to provide services such as police protection, fire and emergency response, wastewater treatment, water supply management, and planning, while others choose to operate independently. Venango County's municipalities vary in staff size, resource availability, fiscal status, service provision, municipal population, overall size, and vulnerability to the profiled hazards.

In general, Venango County municipalities with fewer residents usually have less staff resulting in limited supply of available resources compared to those municipalities with a greater number of residents. Therefore, areas with limited resources to address hazard mitigation may require a more unified or coordinated approach and/or more efficient utilization of a limited supply of available resources (e.g., financial, technical, and human).

5.2.1 Planning and Regulatory Capability

Pennsylvania municipalities have the authority to govern more restrictively than state and federal minimum requirements provided they comply with criteria established in the Pennsylvania Municipalities Planning Code (MPC). Municipalities can develop their own policies and programs and implement their own rules and regulations to protect and serve their local residents. Venango County and municipalities have used, and could continue to use, planning and regulatory tools to support the goals of this hazard mitigation plan and to provide opportunities for further mitigating the potentially negative effects of hazards.

Municipalities implement land use controls via the adoption and enforcement of zoning, subdivision and land development ordinances, building codes, building permit ordinances, floodplain, and stormwater management ordinances. When effectively prepared and administered, these regulations can lead to hazard mitigation. For example, the adoption of the NFIP and the Pennsylvania Floodplain Management Act (Act 166 of 1978) established minimum floodplain management criteria. A municipality must adopt and enforce these minimum criteria to be eligible for participation in the NFIP. Municipalities have the option of adopting a single-purpose ordinance or incorporating these provisions into their zoning and/or subdivision and land development ordinances, or building codes, thereby mitigating the potential impacts of local flooding.

5.2.1.1 Plans and Regulations

The subsections below provide details on the types of major plans and ordinances that Venango County and local municipalities use to support the goals of this hazard mitigation plan and provide opportunities for further mitigating the potentially negative effects of natural hazards through regulation. The 2020 HMP Update revealed most municipalities, or the representing stakeholder, did not know what plans were in place for the municipality or which plans were held at the County-level. Stakeholders would either go through previous files in the municipal office or request records the Venango County Planning Commission. It is recommended prior to the HMP Update to export a database noting the plans in place for each municipality and which plans are at the county-level.

Table 5.2.1-1 includes the planning and regulatory capabilities identified by municipalities during the planning process in 2015 and 2020 and through review of Venango County records. Plans or ordinances under development at the time of this HMP update that were not existing prior to the update, were not marked as existing. Lastly, Venango County Regional Planning Commission reviewed and validated the table completed in the 2015 HMP.

Table 5.2.1-1 Venango County Planning & Regulatory Capabilities						
MUNICIPALITY	COMPREHENSIVE PLAN	BUILDING CODE	SUBDIVISION & LAND DEVELOPMENT ORDINANCE	ZONING ORDINANCE	STORMWATER MANAGEMENT PLAN OR ORDINANCE	HAZARD MITIGATION PLAN
Allegheny Township		X	County SALDO		X	X
Barkeyville Borough	X		County SALDO	X	X	X
Canal Township			County SALDO		X	
Cherrytree Township	X	X	County SALDO	X	X	X
Clinton Township	X	X	County SALDO		X	X
Clintonville Township	X	X	County SALDO		X	
Cooperstown Borough		X	County SALDO		X	X
Cornplanter Township	X		County SALDO	X	X	X
Cranberry Township	X	X	County SALDO	X	X	X
Emlenton Borough	X	X	County SALDO	X	X	X
City of Franklin	X	X	X	X	X	X
Frenchcreek Township		X	County SALDO	X	X	
Irwin Township			County SALDO		X	X
Jackson Township			County SALDO		X	
Mineral Township		X	County SALDO		X	X
Oakland Township		X	County SALDO		X	X
Oil City	X	X	County SALDO	X	X	X
Oil Creek Township		X	County SALDO		X	
Pinegrove Township		X	County SALDO		X	
Pleasantville Borough	X	X	County SALDO	X	X	X
Plum Township		X	County SALDO		X	X
Polk Borough	X	X	County SALDO		X	
President Township	X	X	County SALDO		X	X
Richland Township	X	X	County SALDO		X	X
Rockland Township	X	X	County SALDO		X	X

Table 5.2.1-1 Venango County Planning & Regulatory Capabilities						
MUNICIPALITY	COMPREHENSIVE PLAN	BUILDING CODE	SUBDIVISION & LAND DEVELOPMENT ORDINANCE	ZONING ORDINANCE	STORMWATER MANAGEMENT PLAN OR ORDINANCE	HAZARD MITIGATION PLAN
Rouseville Borough		X	County SALDO	X	X	X
Sandycreek Township	X	X	X	X	X	X
Scrubgrass Township	X	X	County SALDO		X	X
Sugarcreek Borough	X	X	County SALDO	X	X	X
Utica Borough			County SALDO		X	X
Victory Township	X	X	County SALDO		X	X

Comprehensive Plans

A comprehensive plan is a policy document that states objectives and guides the future growth and physical development of a municipality. The comprehensive plan is a blueprint for housing, transportation, community facilities, utilities, and land use. It examines how the past led to the present and charts the community's future path. Pennsylvania's MPC (Act 247 of 1968), as reauthorized and amended, requires counties to prepare and maintain a county comprehensive plan and to update it every 10 years. Local municipalities may prepare, but are not required by the MPC to prepare, a comprehensive plan.

With regard to hazard mitigation planning, Section 301(a)2 of the MPC requires comprehensive plans to include a plan for land use, which, among other provisions, suggests that the Plan give consideration to floodplains and other areas of special hazards and other similar uses. The MPC also requires comprehensive plans to include a plan for community facilities and services and recommends considering storm drainage and floodplain management.

The existing countywide Comprehensive Plan for Venango County was developed in 2005 and is expected to be updated in 2021. In addition to the countywide Comprehensive Plan, seven municipalities (Barkeyville Borough, Clinton Township, Clintonville Borough, Emlenton Borough, Richland Township, Scrubgrass Township, and Victory Township) collaborated to develop the Southern Venango County Regional Comprehensive Plan in 2007. County governments are required by law to adopt a comprehensive plan, while local municipalities may do so at their option. To date 19 out of 31 municipalities in Venango County have adopted a comprehensive plan.

Zoning Ordinances

Zoning ordinances allow for local municipalities to regulate the use of land to protect the interest and safety of the general public. In Pennsylvania, the MPC establishes authority to for communities to zone. Zoning ordinances can be designed to address unique conditions or concerns within a given community but must be based in maintaining public health and safety in a community. They may be used to create buffers between structures and high-risk areas, limit the type or density of development, and/or require land development to consider specific hazard vulnerabilities. Of the 31 municipalities, 13 recorded having zoning ordinances, including: Barkeyville Borough; Cherrytree Township; Cornplanter Township; Cranberry Township; Emlenton Borough; City of Franklin; Frenchcreek Township; City of Oil City; Pleasantville Borough; Richland Township; Rouseville Borough; Sandycreek Township; and Sugarcreek Borough.

Subdivision Regulations

Subdivision and land development ordinances (SALDOs) are intended to regulate the development of housing, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Within these ordinances, guidelines on how land will be divided, the placement and size of roads and the location of infrastructure can reduce exposure of development to hazard events.

Venango County enforces the subdivision and land development ordinance on behalf of all municipalities, with the exception of the City of Franklin and Sandycreek Township. The City of Franklin and Sandycreek Township have adopted a municipal zoning ordinance

Floodplain Management Ordinances

Municipalities can help regulate construction in floodplains through floodplain ordinances and floodplain management plans. Floodplain management plans describe how the community will reduce the impact of flood events through preventive and corrective actions. Through administration of floodplain ordinances, municipalities can ensure that all new construction or substantial improvements to existing structures located in a floodplain are flood-proofed, dry-proofed, or built above anticipated flood elevations. The NFIP establishes minimum ordinance requirements which must be met for that community to participate in the program. However, Venango County municipalities updated their floodplain ordinances in 2014, nearly all reported using the Pennsylvania Model Ordinance.

Stormwater Management Plan or Ordinance

The proper management of stormwater runoff can improve conditions and decrease the chance of flooding. The Pennsylvania legislature enacted the Stormwater Management Act (Act 167 of 1978), commonly called Act 167, requiring counties to develop stormwater management plans for designated watersheds. This planning effort results in sound engineering standards and criteria being incorporated into local codes and ordinances to manage stormwater runoff from new development in a coordinated, watershed-wide approach. Without such planning, stormwater is either not controlled by municipal ordinances, or is addressed on a site-by-site or municipal boundary basis. Municipalities within the same watershed may require different levels of stormwater control. The result is often the total disregard of downstream impacts or the compounding of existing flooding problems.

Act 167 Stormwater Management Plans are intended to improve stormwater management practices, mitigate potential negative impacts from future land uses, and improve the condition of impaired waterways. This type of plan provides local ordinances that incorporate standards and criteria to manage and maintain peak runoff flows throughout the combined watersheds as development occurs. Also, it is not the intent of this plan to solve existing flooding or runoff problems, but to identify for future correction and assure problems do not get worse. More specifically, this plan does not require municipalities to correct existing drainage problems.

Municipalities have an obligation to implement the criteria and standards developed in each watershed stormwater management plan by amending or adopting laws and regulations for land use and development. The implementation of stormwater management criteria and standards at the local level is necessary, since municipalities are responsible for local land use decisions and planning. The degree of detail in the ordinances depends on the extent of existing and projected development. Municipalities within rapidly developing watersheds will benefit from the watershed stormwater management plan and will use the information for sound land use considerations. A watershed stormwater management plan is designed to aid the municipality in setting standards for the land uses it has proposed. A major goal of the watershed plan and the attendant municipal regulations is to prevent future drainage problems and avoid the aggravation of existing problems

The Venango County Regional Planning Commission reports that all 31 municipalities have adopted the Venango County Act 167 County-Wide Stormwater Management Plan dated June 22, 2010.

Natural Resource Protection Plan

The PA DCNR Bureau of Forestry – Cornplanter and Clear Creek Forest Districts noted there are various forest management plans in place, particularly for public lands. Clear Creek Forest District has a District Resource Management Plan which includes the Kennderdell Tract. Oil Creek State Park has a current management plan as do all PGC Gamelands. Two Mile Run County Park also has a forest management plan.

Building Codes

Building codes are important in hazard mitigation as codes are developed specific to hazards present within a given region of the country. Consequently, structures are constructed to applicable codes developed for resistance to many hazards such as strong winds, floods, and earthquakes, and can also help mitigate regional hazards like wildfires. In 2003, the Commonwealth implemented the Uniform Construction Code (UCC) (Act 45 of 1999), a comprehensive building code that establishes minimum regulations for most new construction, including additions and renovations to existing structures.

The UCC applies to almost all buildings, excluding manufactured and industrialized housing (which are covered by other laws), agricultural buildings, and certain utility and miscellaneous buildings. The UCC has many advantages in requiring builders to use materials and methods that have been professionally evaluated for quality and safety, as well as requiring inspections of completed work to ensure compliance.

Over 90% of Pennsylvania's municipalities administer and enforce the UCC locally (known as Opt-ins), using their own employees or a certified third party agencies (private code enforcement agencies or construction code inspectors (CCIs)) they have retained. Opt-outs are those municipalities that have handed over UCC enforcement authority to either the PA Department of Labor & Industry (for non-residential buildings and structures) or certified third-party agencies (hired by a property owner for residential code enforcement). All but two Venango County municipalities (Canal Township and Irwin Township) are opt-in municipalities (PA Department of Labor & Industry, April 2015).

5.2.1.2 Emergency Management

In Venango County Emergency Management is a comprehensive, integrated program of mitigation, preparedness, response, and recovery for all types of emergencies and disasters. In Pennsylvania, Emergency Management begins at the municipal level, as required by the PA Emergency Management Service Code. Every county, city, borough, and township in the Commonwealth is required to have an emergency management coordinator selected by the elected officials of the jurisdiction. The ultimate responsibility for Emergency Management always rests with the chief elected officials and governing body, however the Emergency Management Coordinator's role is to develop plans, conduct training, and coordinate all available resources in the community pre- and post-disaster.

All municipalities in Venango County identified having an Emergency Management Coordinator, however for many municipalities this person held one or more other positions such as Mayor, Municipal Manager, Secretary, Treasurer, and Engineer or was in the Fire or Police Department. In addition, some municipalities shared their designated EMC such as....

Local Emergency Planning Committee (LEPC)

Effective partnerships are created in advance of a disaster by the Emergency Management Coordinator through the development of a proactive, comprehensive emergency operations plan and other planning, training, and exercise programs. Venango County also runs a program to proactively plan for, and be prepared for, all-hazards: LEPC. The LEPC was established in compliance with SARA Title III (Emergency Planning and Community Right-to-Know Act of 1986). Composed of business leaders, environmental groups, public safety, medical and health, human/social services agencies and departments, the LEPC's primary agenda is to develop plans and programs to mitigate the effects of hazardous material releases in the community.

During a disaster, response and recovery efforts are coordinated from an Emergency Operations Center that is staffed by paid and volunteer personnel and representatives from all emergency service departments and agencies involved in operations. When two or more municipalities are involved in a disaster, the county can assume overall emergency coordination. When two or more counties are involved in a disaster, the state can assume overall coordination. When two or more states are involved in a disaster, the federal government can assume overall coordination. The responsibility and authority for emergency management always lies with the lowest level of government affected, and a unified incident command system is implemented that is all inclusive yet is never meant to usurp local authority.

Emergency Response Agencies

There are four volunteer and three paid ambulances services that operate within Venango County, 19 volunteer and two paid fire departments, six municipal law enforcement agencies, and one state police department which provide twenty-four hours per day emergency response capabilities to the residents of Venango County.

Hazardous Material Response Team

Venango County operates a Hazardous Material Defensive Team which responds to hazardous materials incidents in Venango County. The team consists of 15 members trained in Operations Level and 3 Technician Level maintains one emergency response /communications vehicle. Venango County contracts with two private contractors; McCutcheon Enterprises Incorporated of Apollo, Pennsylvania

5.2.1.3 Participation in the NFIP and the Community Rating System

The Pennsylvania Floodplain Management Act (Act 166 of 1978) requires every municipality identified by FEMA to participate in the NFIP and permits all municipalities to adopt floodplain management regulations. It is in the interest of all property owners in the floodplain to keep development and land usage within the scope of the floodplain regulations for their community. This helps keep insurance rates low and makes sure that the risk of flood damage is not increased by property development.

All municipalities except for one, Pleasantville Borough, participate in the NFIP. Table 5.2.1-2 includes the participation status and standing of each municipality, as well as the number of policies that are in force and the total amount of premiums and coverage for each municipality.

MUNICIPALITY	PARTICIPATION STATUS	GOOD STANDING	POLICIES IN FORCE	TOTAL COVERAGE AND PREMIUM
Allegheny Township	PARTICIPATING	Yes	0	\$0
Barkeyville Borough	PARTICIPATING	Yes	0	\$0
Canal Township	PARTICIPATING	Yes	1	\$175,418
Cherrytree Township	PARTICIPATING	Yes	2	\$122,993
Clinton Township	PARTICIPATING	Yes	1	\$92,415
Clintonville Borough	PARTICIPATING	Yes	0	\$0
Cooperstown Borough	PARTICIPATING	Yes	6	\$353,446
Cornplanter Township	PARTICIPATING	Yes	5	\$808,118
Cranberry Township	PARTICIPATING	Yes	17	\$2,028,793
Emlenton Borough	PARTICIPATING	Yes	3	\$768,470
Franklin, City of	PARTICIPATING	Yes	27	\$7,493,860
Frenchcreek Township	PARTICIPATING	Yes	4	\$515,482
Irwin Township	PARTICIPATING	Yes	0	\$0
Jackson Township	PARTICIPATING	Yes	11	\$967,748
Mineral Township	PARTICIPATING	Yes	1	\$70,209
Oakland Township	PARTICIPATING	Yes	0	\$0
Oil City, City of	PARTICIPATING	Yes	35	\$10,175,497
Oil Creek Township	PARTICIPATING	Yes	0	\$0
Pinegrove Township	PARTICIPATING	Yes	0	\$0
Pleasantville Borough	NON-PARTICIPATING	N/A	N/A	N/A
Plum Township	PARTICIPATING	Yes	1	\$210,353
Polk Borough	PARTICIPATING	Yes	18	\$1,606,455
President Township	PARTICIPATING	Yes	6	\$1,137,834
Richland Township	PARTICIPATING	Yes	0	\$0
Rockland Township	PARTICIPATING	Yes	8	\$1,049,314
Rouseville Borough	PARTICIPATING	Yes	8	\$597,271
Sandycreek Township	PARTICIPATING	Yes	7	\$1,665,178
Scrubgrass Township	PARTICIPATING	Yes	8	\$1,317,013
Sugarcreek Borough	PARTICIPATING	Yes	27	\$2,927,341
Utica Borough	PARTICIPATING	Yes	4	\$521,763
Victory Township	PARTICIPATING	Yes	0	\$0
TOTAL			200	\$34,604,971

The NFIP's Community Rating System (CRS) provides discounts on flood insurance premiums in those communities that establish floodplain management programs that go beyond NFIP minimum requirements. Under the CRS, communities receive credit for more restrictive regulations; acquisition; relocation, or flood-proofing of flood-prone buildings, preservation of open space; and other measures that reduce flood damage or protect the natural resources and functions of floodplains.

The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. Section 541 of the 1994 Act amends Section 1315 of the 1968 Act to codify the CRS in the NFIP, and expands the CRS goals to specifically include incentives to reduce the risk of flood-related erosion and to encourage measures that protect natural and beneficial floodplain functions. These goals have been incorporated into the CRS, and communities now receive credit toward premium reductions for activities that contribute to them.

Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet a minimum of three of the following CRS goals:

- Reduce flood losses
- Reduce damage to property
- Protect public health and safety
- Prevent increases in flood damage from new construction
- Reduce the risk of erosion damage
- Protect natural and beneficial floodplain functions
- Facilitate accurate insurance rating
- Promote the awareness of flood insurance

There are 10 CRS classes that provide varied reduction in insurance premiums for property owners in both the SFHA and non-SFHA. Class 1 requires the most credit points and gives the largest premium reduction; Class 10 receives no premium reduction. CRS premium discounts on flood insurance range from 5 percent for Class 9 communities up to 45 percent for Class 1 communities. The CRS recognizes 18 creditable activities that are organized under four categories: Public Information, Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness.

Currently, no municipalities in Venango County participate in CRS, however during the meetings paperwork and information was provided to municipalities encouraging participation in the program. This information can be found in Appendix C.

5.2.2 Administrative and Technical Capability

Administrative capability is described by an adequacy of departmental and personnel resources for the implementation of mitigation-related activities. Technical capability relates to an adequacy of knowledge and technical expertise of local government employees or the ability to contract outside resources for this expertise to effectively execute mitigation activities. Common examples of skill sets and technical personnel needed for hazard mitigation include: planners with knowledge of land development/management practices, engineers or professionals trained in

construction practices related to buildings and/or infrastructure (e.g. building inspectors), planners or engineers with an understanding of natural and/or human caused hazards, emergency managers, floodplain managers, land surveyors, scientists familiar with hazards in the community, staff with the education or expertise to assess community vulnerability to hazards, personnel skilled in geographic information systems, resource development staff or grant writers, fiscal staff to handle complex grant application processes.

The Venango County Regional Planning Commission reported that among municipalities, 14% of municipalities had dedicated planning staff, 66% had engineers, 30% had grant writers, and no municipalities had GIS (or HAZUS) staff or capabilities. 100% of municipalities are members of the Venango County Regional Planning Commission, approximately 48% have a local planning commission or department, and over 77% have either local engineering staff or capabilities through partnering consulting firms. Generally, administrative and technical capacity to conduct hazard mitigation activities was noted as limited.

Emergency Management Coordinator and Engineering

Based on 2020 assessment results, municipalities in Venango County report limited administrative and technical staff to conduct hazard mitigation-activities. As mentioned in section 5.2.1.2, individuals tasked with participating and executing hazard mitigation planning hold one or additional positions. For engineering support, many municipalities contract for engineering capabilities retaining consulting firms such as Arcadis Consultants and Gibson-Thomas Engineering, however other municipalities noted no engineering support. The City of Oil City has an Engineering Office, however staffing is limited to two people.

Floodplain Manager

From the 2015 and 2020 assessment, results acknowledged most municipalities do not have a dedicated floodplain manager. Likely within most municipalities in the County, floodplain management duties are a component of a current job rather than a separate position such as the emergency management coordinator. Richland Township and the City of Oil City noted assigned floodplain managers with the Richland Township position also falling under EMC. For Venango County, it is not out of the ordinary for a municipal official to hold more than one title such as municipal engineer or contracted engineering firm, code enforcement officer, or municipal manager.

Grant-writing and GIS Staff

Information collected from the 2020 results suggests there has not been an increase in grant-writing or GIS staff per municipality. Richland Township noted they receive support from the County level to apply for grants and receive assistance with GIS data. The City of Oil City noted the Community Development Coordinator has provided grant support for approximately 13 years, however the City does not have GIS support. Rockland Township noted planning staff from the Township or County lead grant writing efforts and the administrative component is left to the EADS Group. The Bureau of Forestry has substantial support in GIS expertise (seven people between the two forest districts). Overall, these numbers correspond with the overall limited staff resources.

Other Administrative and Technical Support Building Code Enforcer

Feedback from the 2020 Capability Assessment provided the following highlights:

- Building Code Enforcer: Clinton Township and Rockland Township share the same Construction Code Inspector. The City of Oil City recently hired a new Building Code Officer four months ago (June 2020) in the City's Code Office. The Oil City Code Office also upholds property maintenance codes and reviews any new development plans.
- Richland Township noted in-house land use and development planners.
- The City of Oil City stated they also have mutual aid agreements and a purchasing department. Other technical positions filled include Business Administrator, Chief Financial Officer, Clerk, and Community Planner.

5.2.3 Community Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to mitigate hazard events. The adoption of hazard mitigation measures may be viewed as an impediment to growth and economic development. In many cases, mitigation may not generate interest among local officials when compared with competing priorities. Therefore, the local political climate must be considered when designing mitigation strategies, as it could be the most difficult hurdle to overcome in accomplishing the adoption or implementation of specific actions. Municipalities who completed the 2020 form noted limited community political capability.

Within Venango County, administrative and technical capability varies between the municipalities due mainly to population size and resources, however a larger percent does have limited support.

5.2.4 Financial Capability

Financial capability is important to the implementation of hazard mitigation activities. Every jurisdiction must operate within the constraints of limited financial resources. During the 1960s and 1970s, state and federal grants-in-aid were available to finance many programs, including street improvements, water and sewer facilities, airports, and parks and playgrounds. During the early 1980s, there was a significant change in federal policy, based on rising deficits and a political philosophy that encouraged states and local governments to raise their own revenues for capital programs, resulting in the need to identify alternate means to augment revenue. After the COVID-19 pandemic, communities across the country will face new challenges in balancing community economic recovery while also implementing hazard mitigation.

While some mitigation actions are less costly than others, it is important that money is available locally to implement policies and projects. Financial resources are particularly important if communities are trying to take advantage of state or federal mitigation grant funding opportunities that require local-match contributions. Survey results from the 2010 HMP found that most municipalities within the County perceive fiscal capability to be limited. This perception continued with the results from the 2020 Capability Assessment Survey. In addition to local capabilities, there are a number of local and federal programs that provide funding, technical assistance or outreach for mitigation activities.

Capital Improvement Program

The most common fiscal tool available to communities was the Capital Improvement Program (CIP). A CIP is a community planning and fiscal management tool used to coordinate the timing and financing of capital improvements over a multi-year period. A CIP includes a prioritized list of

improvements to roads, parks, and other facilities that the community plans to undertake in a given period. Typically, a CIP is a five-year plan. Most municipalities who completed the 2020 Survey noted there was not a CIP in place except for Richland Township and the City of Oil City (managed by Community Development).

Impact Fees from Unconventional Gas Drilling

The Pennsylvania Act 13 Impact Fee funded through unconventional oil and gas well drilling activities provides a fiscal mechanism available to Pennsylvania communities. The Oil and Gas Act (Act 13 of 2012) presented major changes to the oil and gas industry in Pennsylvania, including the authorization for local governments to adopt an impact fee and the provision of stronger environmental protections. The impact fees are allocated to county conservation districts, the Pennsylvania Fish and Boat Commission, the Pennsylvania Public Utility Commission, the Pennsylvania Department of Environmental Protection, the PEMA, the Pennsylvania Office of State Fire Commissioner, and the Pennsylvania Department of Transportation to address statewide issues. A portion of the impact fees are also allocated to local municipalities to address water, wastewater, and road infrastructure maintenance and improvements; emergency preparedness; environmental programs; tax reductions; increased safe/affordable housing; employee training; or planning initiatives.

The disbursement amount fluctuates based on well drilling activity. In 2019, a total of \$200.3 million in Act 13 impact fees were disbursed throughout Pennsylvania. Of that amount, approximately \$47,000 was dispersed to Venango County and all 31 municipalities. The funding was used for public infrastructure construction, stormwater and sewer systems, emergency preparedness and public safety, environmental programs, information technology, and investments in capital reserve funds (PUC, 2020).

Water and Sewer Authority Fees

Water authorities are multi-purpose authorities with water projects, many of which operate both water and sewer systems. The financing of water systems for lease back to a municipality is among the principal activities of the local government facilities' financing authorities. An operating water authority issues bonds to purchase existing facilities or to construct, extend, or improve a system. The primary source of revenue is user fees based on metered usage. The cost of constructing or extending water supply lines can be funded by special assessments against abutting property owners. Tapping fees also help fund water system capital costs. Water utilities are directly operated by municipal governments and by privately owned public utilities regulated by the Pennsylvania Public Utility Commission (PUC). The Commonwealth Financing Authority, through DCED, operates the PA Small Water and Sewer Program with consolidation of small individual water systems to make system upgrades more cost effective.

Sewer authorities include multipurpose authorities with sewer projects. The authorities issue bonds to finance acquisition of existing systems or to finance construction, extension, and improvements. Sewer authority operating revenues originate from user fees. The fee frequently is based on the amount of water consumed, and payment is enforced by the ability to terminate service or the imposition of liens against real estate. There are 26 public water supply systems and 10 sewer authorities in Venango County. The water and sewer authority fees in Venango

County usually apply to flood mitigation via stormwater management and water quality improvement projects.

Pipeline Safety Grants

First awarded in 2009, the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) provides funding to local communities and organizations for issues related to pipeline infrastructure. Funding is awarded through Technical Assistance Grants (TAG) of up to \$100,000 for government entities or non-profit groups to conduct engineering or technical studies or facilitate public participation in official pipeline proceedings. Previous awards have included funding to enhance local pipeline emergency response capabilities, improve safe digging programs, develop information resources and community awareness campaigns, implement local land use strategies, and facilitate public participation in official pipeline proceedings (PHMSA, 2015).

DEP Growing Greener Grants

Established in 1999, the Growing Greener program provides funding for environmental restoration projects across Pennsylvania. The program is administered by four state agencies, including the PA DEP. PA DEP's core funding focus in the program is to restore and protect watersheds, provide for the reclamation of abandoned mines, and plug abandoned oil and gas wells. Growing Greener has helped to slash the backlog of farmland-preservation projects statewide; protect open space; eliminate the maintenance backlog in state parks; clean up abandoned mines and restore watersheds; provide funds for recreational trails and local parks; help communities address land use; and provide new and upgraded water and sewer systems.

Venango County has received 44 Growing Greener Grants since 2000 and are listed below in Table 5.2.4-1 (PA DEP, 2015). In April 2018, the Porcupine Creek Watershed received funding to improve a long continuous segment of the stream that produces the highest rainbow trout in the population. Culver repairs add another four miles of the stream, increasing the already 20 miles. In addition the watershed produces all three species of fish that reside in Pennsylvania.

In 2019, Venango County was awarded \$66,887 to Trout Unlimited to restore approximately 1,000 feet of streambank along Bullion Run. The grant will improve fish and aquatic life habitat and reduce sediment pollution by more than 15,000 pounds per year.

Unfortunately compared to its first years, Growing Greener funded has decreased by 75 percent, from an average of \$200 million per year since the mid-2000s, to about \$60 million in 2016.

Table 5.2.4-1 Venango County Growing Greener Grants (PA DEP, 2020).				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Clinton/Irwin	4/18/2000	\$229,520.00	GG I	This project involves a comprehensive watershed assessment that will identify specific water related problems within the watershed and determine their influence on water quality and instream communities.
Oil City	1/17/2001	\$112,437.00	GG I	Bank stabilization of 4,300 feet along Oil Creek where ice flows have eroded bank. Use of rip rap and willow stakes.
Rockland	2/3/2001	\$138,959.00	GG I	This project will clean up a 1 mile-long illegal dumpsite that is encroaching upon a Native American burial ground. A barrier will be constructed to discourage future dumping. A video will be produced for community education, and water samples will be taken upstream and downstream of the site. Volunteers will assist with the project and with regular site monitoring and additional cleanup as needed after the main project.
Borough of Barkeyville	8/21/2001	\$100,000.00	GG I - Innovative Technology 2000	The Authority operates a greensand-softening treatment system that has experienced many problems in recent years. Mechanical controls have corroded and pitting has occurred in the filter walls. In addition increases in manganese and hardness levels have exceeded the capacity of the system to provide adequate softening. This system will be replaced with a mixed oxidant generating system that will produce a chlorine-based oxidant and eliminate the need for chlorine gas or direct feed sodium hypochlorite and potassium permanganate as a secondary oxidant. New sand filters will also be added, followed by a new softening system that will provide for a 50/50 split of filtered water.
Venango Conservation District	10/29/2001	\$17,602.00	GG I	This project proposes the creation of an outdoor learning center and a community environmental education program in the Lower French Creek, Oil Creek and Sandy Creek Watersheds in Venango County.
Rockland	8/7/2002	\$10,000.00	GG I	This project will establish a 501(c)3 organization watershed group and conduct an inventory of stream and groundwater quality in and around the watershed for the purpose of developing long-term monitoring and watershed protection plans at a later date.

Table 5.2.4-1 Venango County Growing Greener Grants (PA DEP, 2020).				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Clinton, Irwin, Victory, Scrubgrass	8/7/2002	\$166,324.00	GG I	This project will plug 15 abandoned oil & gas wells that have discharges into Scrubgrass Creek. This project will affect 25.3% of the perennial streams in the watershed. A secondary objective of this project is to educate the local watershed community about abandoned well issues. A Watershed Stewardship Community Day is scheduled to assist in public outreach.
Venango Conservation District	7/1/2004	\$64,000.00	GG I	
Cooperstown Borough	11/4/2004	\$21,387.00	GG I	Funding for restoration of approximately 450 feet of streambank of Lake Creek in the Borough of Cooperstown. The project will stabilize both banks of the creek just above the confluence of Sugar Creek.
Clinton	11/2/2005	\$87,391.00	GG II - Watershed Protection	Proposed plugging of ten oil wells in Scrubgrass Creek Watershed to restore viability and sustainability to this cold water stream.
Venango Conservation District	11/17/2005	\$60,000.00	GG I	Proposal is for design and implementation of sustainable best management practices. Ultimate goal is to reduce nonpoint source pollutants such as sediment and nutrients.
Clinton, Irwin	5/11/2006	\$25,000.00	GG II - Oil & Gas	Plug up to 4 abandoned oil wells on Scrubgrass Creek, South Branch, and Trout Run. Also to assist in conducting well logging throughout the watershed.
Sugarcreek Borough	6/20/2006	\$75,000.00	GG II - Watershed Protection	Stabilize approximately 500 feet of stream bank and install habitat improvement structures deemed necessary by engineers. Will also create new riparian buffer zone and enhance existing riparian area.
Venango Conservation District	7/1/2006	\$64,000.00	GG I	
Venango Conservation District	7/1/2006	\$50,000.00	GG II - Watershed Protection	Design and implement sustainable best management practices (BMPs) on agricultural lands with the ultimate goal of reducing nonpoint source pollutants such as sediment and nutrients.

Table 5.2.4-1 Venango County Growing Greener Grants (PA DEP, 2020).				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Venango Conservation District	7/1/2006	\$30,000.00	GG II - Watershed Protection	Implement measures to improve drainage and stabilize an eroding road bank that will minimize sediment from entering Commonwealth waters.
Venango Conservation District		\$10,000.00	GG I 2006	Project will continue to expand senior citizen environmental activities and expertise in the search for abandoned oil and gas wells. It will also add a new phase to this project through a partnership with the Interstate Oil and Gas Compact Commission (IOGCC). The goal of this partnership is to promote the PA Senior Environmental Corps (PaSEC/DEP/DCNR/Venango Conservation District program in other oil and gas-producing states that have similar orphan and abandoned well problems.
Cranberry Township	9/1/2006	\$10,000.00	Environmental Education 2006	Funding would allow for this district's standards to be integrated into all cross-curricula areas.
Oakland Township	9/1/2006	\$20,000.00	Environmental Education 2006	Funding will enable this conservation district to create backpack adventure modules for students, which will be specific to local resource issues and to provide better environmental education opportunities to residents and visitors.
Cranberry Township	11/29/2006	\$13,145.00	GG I 2006	Proposal is for stabilization of Lower Two Mile Run (a tributary to Allegheny River). Will significantly reduce future erosion and sediment loading to stream.
Sandycreek Township	11/29/2006	\$32,800.00	GG I	Project will fund the preparation of a detailed assessment and action plan for the Morrison Run watershed in Sandycreek Twp, Venango County. The assessment will address storm flow and flood characteristics of the waterway to identify problem stream reaches and propose BMPs within the watershed to reduce runoff. Additionally, GIS data will be created to identify impervious areas and create a Morrison Run overlay for township planning purposes.
Sugar Creek Borough	11/29/2006	\$75,000.00	GG I	Project would conduct approximately 476ft of streambank stabilization along a section of Sugar Creek in Venango County. Streambank will be graded to 3:1 slope with rock toe and riparian plantings. Project will prevent further erosion and reduce NPS loading to Sugar Creek, a tributary to French Creek.

Table 5.2.4-1 Venango County Growing Greener Grants (PA DEP, 2020).				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Cranberry Township	11/29/2006	\$13,145.00	GG I	Proposal is for stabilization of Lower Two Mile Run (a tributary to Allegheny River). Will significantly reduce future erosion and sediment loading to stream.
Irwin		\$50,000.00	GG I 2006	Abandoned mine reclamation and AMD treatment.
Venango Conservation District	7/12/2007	\$10,000.00	GG I	Project will continue to expand senior citizen environmental activities and expertise in the search for abandoned oil and gas wells. It will also add a new phase to this project through a partnership with the Interstate Oil and Gas Compact Commission (IOGCC). The goal of this partnership is to promote the PA Senior Environmental Corps (PaSEC/DEP/DCNR/Venango Conservation District program in other oil and gas-producing states that have similar orphan and abandoned well problems.
Venango Conservation District		\$10,481.00	Flood Protection 2006	
City of Oil City	3/20/2008	\$38,385.00	Flood Protection 2008	
Venango Conservation District	4/1/2008	\$103,500.00	GG II - Watershed Protection	The purpose of this grant project is to design and implement sustainable best management practices (B.M.P.'s) on agricultural lands with the ultimate goal of reducing nonpoint source pollutants such as sediment and nutrients. Establish up to 2500 lineal feet of streambank/pasture fencing (382); Establish two heavy use area protections (561); Establish two runoff management systems(558); Establish one watering facility (614); Establish one access road (560)**Exact BMP's implemented may vary based upon site specific needs but will be in accordance with Conservation Practices approved for GGII Funding form of 03/31/07.
Venango Conservation District	4/1/2008	\$103,500.00	GG II - Watershed Protection	To rank and select the highest priority eroded stream banks in Venango County and to stabilize those banks and establish a riparian buffer zone on them. At least 1000' of stream bank protected and at least 1000' of riparian buffer established.

Table 5.2.4-1 Venango County Growing Greener Grants (PA DEP, 2020).				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Venango Conservation District	7/1/2008	\$64,000.00	GG I	Watershed Specialist Position
Cranberry	3/29/2010	\$225,000.00	GG I	Project proposes design and construction of up to 10 stormwater BMPs in the Lower Two Mile Run watershed, including practices such as forested riparian buffers, infiltration trenches, vegetated swales, rain gardens/bioretenion, and other approved BMPs. The initiative is intended to reduce the impact to the watershed caused by significant commercial development in recent years.
Venango Conservation District	7/1/2010	\$64,000.00	GG I	Watershed Specialist Position
Sandycreek Township	1/6/2011	\$97,692.00	GG I	Project proposes the construction of a 3.5 acre detention basin in a subbasin of the Morrison Run watershed in Venango County. Project will control stormwater runoff from approximately 100 acres of developed land and implement the Morrison Run Watershed Assessment and Action Plan previously funded by a DEP Growing Greener grant.
Cranberry Township	2/3/2012	\$150,846.00	GG I	Project will continue an existing program to implement stormwater management improvements in the Lower Two Mile Run watershed in Venango County. Projects will include the design and construction of up to 20 raingardens, the placement of up to 50 rainbarrels with accompanying workshops, and up to 5 stormwater reuse cistern systems.
Venango Conservation District	7/1/2012	\$64,000.00	GG I	Watershed Specialist Position
Cornplanter Township	1/22/2014	\$120,000.00	GG I	Project proposes to stabilize 200ft of streambank along Oil Creek in Cornplanter Township, Venango County. Additionally, stormwater infrastructure and road reconstruction will be accomplished allowing long-term stability to the project through this grant.
Sugar Creek Borough	1/22/2014	\$28,308.00	GG I	Project proposes to conduct two streambank stabilization projects in Venango County, one on Little Sandy Creek and one on Sugar Creek. Projects will include rock toe protections, grading, log vanes, and riparian plantings.

Table 5.2.4-1 Venango County Growing Greener Grants (PA DEP, 2020).				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
President Township, Cranberry Township	1/22/2014	\$132,227.00	GG I	Install 6 (culverts) squash pipes at road crossings.
Irwin Township	7/31/2014	\$77,050.00	GG I	Remediation of Acid Mine Drainage Discharging from the Abandoned Sterrett Mine Site, Irwin Township, Venango Co.
City of Franklin	Unknown	\$48,526.00	Source Water Protection 2003	
Rouseville Borough	Unknown	\$27,738.00	Source Water Protection 2003	
President Township	4/12/2018	Unknown	GG	
Bullion Run	January 2019	\$66,887	GG	Trout Unlimited to restore approximately 1,000 feet of streambank along Bullion Run

Hazard Mitigation Grant Program (HMGP)

HMGP funds long-term hazard mitigation measures following Presidential major disaster declarations. The purpose of the program is to ensure that there is an opportunity to implement critical mitigation measures during the reconstruction process following a disaster. Eligible projects include, but are not limited to, acquiring and demolishing structures in hazard-prone areas, flood proofing and elevating structures, and implementing minor structural improvements.

Flood Mitigation Assistance (FMA)

The goal of the FMA program is to mitigate flood damaged properties to reduce or eliminate claims under the NFIP. This program is authorized by Section 1366 of the National Flood Insurance Act. Examples of eligible FMA projects include elevating, relocating, and acquiring/demolishing NFIP-insured buildings.

Building Resilient Infrastructure and Communities (BRIC)

BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program and is a result of amendments made to Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) by Section 1234 of the Disaster Recovery Reform Act of 2018 (DRRA). The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency.

State and Federal Financial Resources and Grant Programs

The decision and capacity to implement mitigation-related activities is often strongly dependent on availability of local financial resources. While some mitigation actions are less costly than others, it is important that money is available locally to implement policies and projects. Financial resources are particularly important if communities are trying to leverage state or federal mitigation grant funding opportunities that require local-match contributions.

State funding sources that may be available for hazard mitigation planning activities at the time the HMP update was prepared include but are not limited to the following (DCED, 2020).

- [CFA/DCED Abandoned Mine Drainage Abatement and Treatment Program](#)
- [CFA/DCED Baseline Water Quality Data Program](#)
- [CFA/DCED First Industries Fund](#)
- [CFA/DCED Flood Mitigation Program](#)
- [CFA/DCED H2O PA Flood Control Projects](#)
- [CFA/DCED H2O PA High Hazard Unsafe Dam Projects](#)
- [CFA/DCED H2O PA Water Supply, Sanitary Sewer and Storm Water Projects](#)
- [CFA/DCED Orphan or Abandoned Well Plugging Program](#)
- [CFA/DCED PA Small Water and Sewer](#)
- [CFA/DCED Sewage Facilities Program](#)
- [CFA/DCED Watershed Restoration Protection Program](#)
- [DCED Business Financing Programs](#)
- [DCED Keystone Communities Program](#)

- [DCED Local Government Capital Project Loan Program](#)
- [DCED Municipal Assistance Program](#)
- [DCED/DEP Coal Refuse Energy and Reclamation Tax Credit Program](#)
- [DCED/DEP Private Dam Financial Assurance Program](#)
- [DCNR Community Conservation Partnerships Program](#)
- [DEP Growing Greener Plus Grants Program](#)
- [PennDOT Pennsylvania Infrastructure Bank \(PIB\) Loan](#)
- [Pennsylvania Infrastructure Investment Authority \(PENNVEST\)](#)
- [Pennsylvania Redevelopment Assistance Capital Program \(RACP\)](#)

Federal funding sources that may be available for hazard mitigation planning activities at the time the HMP update was prepared include but are not limited to the following.

- [Appalachian Regional Commission \(ARC\) POWER Initiative Grant Program](#)
- Department of Commerce (DOC)/Economic Development Authority (EDA) Construction Grant Program
- EDA Construction Grant Post Approval Process Tool for Grant Recipients (Version 5.0)
- <https://www.eda.gov/tools/grantee-information/>
- [Department of Energy Weatherization Assistance Program](#)
- [Department of Homeland Security Grant Program \(HSGP\)](#)
- [Department of Transportation/Federal Highway Administration Emergency Relief Program](#)
- DOC/EDA Planning Grants
- DOC/EDA Technical Assistance Grants FY 2016 – FY 2019 EDA PLANNING PROGRAM AND LOCAL TECHNICAL ASSISTANCE PROGRAM
- [DOC/EDA Revolving Loan Fund \(ACEDC RLF recipient\)](#)
- [FEMA Community Assistance Program – State Support Services Element \(CAP-SSSE\)](#)
- [FEMA Community Disaster Loan Program](#)
- [FEMA NFIP Community Rating System](#)
- [FEMA Emergency Management Performance Grants \(EMPG\)](#)
- [FEMA Environmental Planning and Historic Preservation Program \(EHP\)](#)
- [FEMA Flood Mitigation Assistance Program](#)
- [FEMA Hazard Mitigation Grant Program \(HMGP\)](#)
- [FEMA Individuals and Households Program \(IHP\)](#)
- [FEMA National Dam Safety Program](#)
- [FEMA National Flood Insurance Program](#)
- [FEMA Pre-Disaster Mitigation Program \(PDM\)](#)
- [FEMA Public Assistance Program \(PA\)](#)
- [FEMA Regional Catastrophic Preparedness Grant Program](#)
- [Housing and Urban Development \(HUD\) 5\(H\) Homeownership Program](#)
- [HUD Community Development Block Grant \(CDBG\)](#)
- [HUD Disaster Housing Assistance Program \(DHAP\)](#)
- [HUD/Federal Housing Administration \(FHA\) Title I Property Improvement Loans](#)

- [HUD/FHA Section 203\(h\) Mortgage Insurance for Disaster Victims](#)
- [HUD/FHA Section 203\(k\) Rehabilitation Mortgage Insurance](#)
- HUD Partnership for Advancing Technology in Housing
- [HUD Section 108 Loan Guarantee Programs](#)
- [Internal Revenue Service Casualty Loss-Special Disaster Provisions](#)
- [NOAA National Weather Service StormReady® Program](#)
- [USDA Natural Resources Conservation Service \(NRCS\) Easement Programs](#)
- [Small Business Administration Disaster Loan Programs](#)
- [United States Army Corps of Engineers \(USACE\) General Investigation \(GI\)](#)
- [USACE Continuing Authorities Program](#)
- [USACE Flood Plain Management Services Program \(FPMS\)](#)
- [USACE Inspection of Completed Works Program \(ICW\)](#)
- [USACE National Levee Safety Program](#)
- [USACE Planning Assistance to States](#)
- [USACE Rehabilitation and Inspection Program \(RIP\)](#)
- [United States Department of Agriculture \(USDA\)/Farm Service Agency \(FSA\) Emergency Conservation Program](#)
- [USDA/FSA Emergency Farm Loans](#)
- [USDA/Emergency Forest Restoration Program \(EFRP\)](#)
- [USDA Non-insured Crop Disaster Assistance Program \(NAP\)](#)
- [USDA/NRCS Emergency Watershed Protection Program](#)
- [USDA/NRCS Watershed Protection and Flood Prevention Program](#)
- [USDA Home Renovation Loans](#)
- [USDA/Rural Housing Service \(RHS\) Community Facilities Loans and Grants](#)
- [USDA/RHS Rural Housing Assistance](#)
- [USDA/RHS Section 502 Single-Family Housing Direct and Guaranteed Loans](#)
- [USDA/RHS Single Family Housing Repair Loans & Grants](#)
- [USDA/RHS Mutual Self-Help Housing Technical Assistance Grants](#)
- [USDA/Risk Management Agency Federal Crop Insurance Program](#)
- [USDA/Rural Development Business & Industry Loan Guarantees](#)

Other Fiscal Capabilities

The City of Oil City noted access to community development block grants, philanthropic funding programs, general obligation bonds and/or special tax bonds, and tax levies for specific purposes.

5.2.5 Education and Outreach Capability

Education and outreach programs and methods are used to implement mitigation activities and communicate hazard-related information. Examples include fire safety programs that fire departments deliver to students at local schools; participation in community programs such as Firewise USA® or StormReady® and activities conducted as part of hazard awareness campaigns, such as Tornado or Flood Awareness Month. Some communities have their own

public information or communications office to handle outreach initiatives. Overall, programs not relating to certification are not common within the County.

Firewise USA® Program

The National Fire Protection Association (NFPA) administers the Firewise USA® Program to encourage local solutions for safety by involving homeowners in taking individual responsibility for preparing their homes from the risk of wildfire. The program provides resources to help homeowners learn how to adapt to living with wildfire and encourages neighbors to work together to take action to prevent losses. The national Firewise USA® Recognition Program has nearly 1,000 active member communities in 40 states, as well as a participation retention rate of 80 percent over the past decade. The program, aimed at homeowners, provides specific criteria for communities regarding wildfire preparedness, and offers national recognition for their work. According to the PA DCNR, Firewise USA® has replaced Firewise Communities which was discontinued in 2019. Only 4 Pennsylvania communities participate in NFPA Firewise USA, none are in Venango County. As a mitigation action, Venango County partnering with the PA Bureau of Forestry may want to consider municipal outreach to discuss requirements for obtaining Firewise USA® designation.

StormReady®

StormReady® is an education and outreach program that helps arm communities with the communication and safety skills needed to save lives and property before, during, and after an event. All of Pennsylvania's 67 counties meet enrollment criteria. Locations that do not meet StormReady® criteria can demonstrate their support for weather safety by joining the StormReady® Supporter program. As a mitigation action, Venango County may want to consider municipal outreach to discuss criteria for enrolling in StormReady®.

Allegheny Valley Conservancy

To promote good land use through the protection, conservation and management of the open-space, forested, agricultural, historic, natural, ecologically significant, environmentally sensitive, biological diverse and scenic resources of the Allegheny River and French Creek watersheds in northwestern Pennsylvania. Good land use is essential to the need for clean air, clean water, and livable communities. The primary tool of the conservancy is legally binding, perpetual, enforceable conservation easements. The conservancy also accepts the donation of land and may purchase significant parcels of land.

French Creek Valley Conservancy

The French Creek Valley Conservancy is a non-profit that works to promote the protection, stewardship, and education and outreach regarding issues that impact the French Creek Watershed. The Conservancy conducts various projects in the watershed, including habitat improvement, riparian buffer restoration, riparian buffer conservation, education for general public, fund raising, grant writing, public and media relations, partnership development, keep your group going, watershed planning, geographic information systems use, and land use decision making.

PA CleanWays of Venango County

PA CleanWays' mission is to empower people to eliminate illegal dumping and littering in Pennsylvania. Projects conducted by PA CleanWays' include: stream bank restoration, habitat improvements, education for watershed group, education for general public, education for other audiences, public and media relations, partnership development, and mapping.

PA Organization for Watersheds and Rivers

POWR is dedicated to the protection, sound management and enhancement of the Commonwealth's rivers and watersheds and to the empowerment of local organizations with the same commitment. POWR provides educational outreach, media relations and partnership development for the Commonwealth's rivers and watersheds.

PA Rivers Resource Advisory Council

Types of projects include: stream bank restoration, stream channel restoration, habitat improvement, riparian buffer restoration, riparian buffer conservation, stream bank fencing, agricultural BMP's, abandoned mine drainage passive and active treatment, storm drain stenciling, education for watershed group, education for general public, education for other audiences, fundraising, grant writing, public and media relations, partnership development, keep your group going, watershed planning, community visioning, mapping, GIS development, GIS use, watershed or non-point pollution assessment, water monitoring (chemical and physical), water monitoring (biological), data analysis, land use decision making, storm water management, lake management and BMP design and selection.

Watershed Assistance Center Western Pennsylvania Conservancy

The Western Pennsylvania Conservancy's Watershed Assistance Center provides technical assistance and educational trainings to watershed organizations and interested stakeholders. Typical projects of the Conservancy include: stream bank restoration, stream channel restoration, habitat improvement, riparian buffer restoration, riparian buffer conservation, stream bank fencing, agricultural BMP's, abandoned mine drainage passive and active treatment, storm drain stenciling, education for watershed group, education for general public, education for other audiences, fundraising, grant writing, public and media relations, partnership development, keep your group going, watershed planning, community visioning, mapping, GIS development, GIS use, watershed or non-point pollution assessment, water monitoring (chemical and physical), water monitoring (biological), data analysis, land use decision making, storm water management, lake management and BMP design and selection.

Other Education and Outreach Capabilities

Several municipalities report they continue to provide local law enforcement training on responding to civil disturbances. Specific types of training noted included crowd control team training in response to court verdicts, active shooter training, and civil disturbance response as part of annual update training for all officers. Municipalities also attend the county LEPC and Quarterly Trainings to distribute all-hazards education and preparedness materials to communities.

The City of Oil City noted there are local citizen groups or non-profit organization focused on environmental protection, emergency preparedness, and access and functional needs

populations. In addition, there are natural disaster or safety related school programs, ongoing public information, and public-private partnership initiatives addressing disaster-related issues.

5.2.6 Plan Integration

Plan integration recognizes that hazard mitigation is most effective when it works in concert with other plans, regulations, and programs. Per FEMA, plan integration is described as the regular consideration and management of hazard risks in a community's existing planning framework. Plan integration is the process by which communities critically analyze their existing planning framework and align efforts to build a safer, smarter community. Plan integration involves a two-way exchange of information and incorporation of ideas and concepts between hazard mitigation plans (state and local) and other community plans. Specifically, plan integration involves the incorporation of hazard mitigation principles and actions into community plans and community planning mechanisms into hazard mitigation plans. (FEMA, 2015).

In Pennsylvania, integrating hazard mitigation into planning tools is afforded through the Municipalities Planning Code in that protecting and promoting safety and health is a purpose of the code. Further, a purpose of the Municipalities Planning Code is "to minimize such problems as may presently exist or which may be foreseen," which is the focus of hazard mitigation planning.

When developing the HMP, the County Comprehensive Plan, EOP, and various land use ordinances and regulations provided key information. These documents are referenced where appropriate throughout the plan and links to the documents are included in Appendix A: Bibliography.

Moving forward, each of these documents should not be treated as unrelated and updated separately. The County and each participating municipality are responsible for incorporating the specific mitigation actions recommended in this Plan into the necessary planning documents, including the appropriate comprehensive plan, the County EOP, and any land use ordinances and regulations.

For example, zoning and other land use regulations can be amended to reflect the newly identified hazard areas, to ensure that development in those areas is minimized or at least conducted in a way that otherwise mitigates against the effects of hazards (e.g., requiring structures built in the floodplain to be elevated). As proposed changes to building codes are presented, their potential for mitigating damage due to hazards will be examined, and the changes will only be adopted if they are shown to lower risk. Changes to stormwater management plans will incorporate identified mitigation actions and will encourage increased participation in the NFIP.

Plan integration is not only accomplished through the MPC and planning tools such as comprehensive plans and zoning ordinances, but through capital improvement planning, area plans such as highway corridors and downtown plans, functional plans like stormwater and open space plans, and public and stakeholder outreach and education. This section highlights key opportunities for plan integration in Venango County.

Venango County Comprehensive Plan

The Venango Planning Regional Planning Commission adopted the County Comprehensive Plan on January 5, 2005. The plan establishes a shared vision of how the County would like to guide future growth and the policy recommendations for accomplishing the vision. Additionally, the southern portion of the County, consisting of seven municipalities, developed a Regional Comprehensive Plan in June 2007, to further refine many of the goals expressed in the 2004 county-wide comprehensive plan for their jurisdictions. Both plans identify similar objectives related to hazard mitigation planning, specifically as it relates to resource management and protection.

The 2004 Venango Comprehensive Plan outlines several goals that are directly or indirectly related to hazard mitigation planning:

- **Goal 1:** To sustain the highest quality of rural, suburban and urban life for the residents of Venango County.
- **Goal 2:** To provide policies, plans and proposals to municipalities for the physical, economic and social development of their communities while protecting the natural, historic and built environments.
- **Goal 3:** To promote conditions providing for the health, safety and welfare of the citizens of Venango County.

Table 5.2.6-1 outlines specific planning, zoning, and land use recommendations identified in the Comprehensive Plan that are relevant to hazard mitigation planning and the HMP Update.

Table 5.2.6-1 Planning, Zoning and Land Use Actions Relevant to Hazard Mitigation Planning	
ACTION	LOCATION IN PLAN
Enact municipal land use plans and ordinances in all municipalities; establish standards for review of all land use/land development requests; provide ordinances to interested stakeholders	Goal #1, Objective #1, Short Range Priority #1; Goal #2, Objective #1; Goal #2, Objective #5, Immediate Priority #1; Goal #3, Objective #3, Short Range Priority #1
Facilitate participation of all municipalities in county-wide planning efforts	Goal #1, Objective #1, Immediate Priority #1 and #3
Prepare and enact a county-wide recreation and greenway plan	Goal #1, Objective #1, Short Range Priority #4 and Long Range Priority #2
Preserve rural character of Venango County by focusing development near established villages or downtowns; Limit development in rural areas to cluster-style development	Goal #1, Objective #2; Goal #1, Objective #2, Immediate Priority #1; Goal #2, Objective #3
Create and map designated growth areas for all municipalities in the County	Goal #1, Objective #2, Immediate Priority #1 and #2; Goal #6, Objective #1, Short Range Priority #1
Establish Resource Protection Areas to identify and protect areas in need of protection (wetlands, floodplains, steep sloped areas, agricultural land, historic and cultural resource areas) ; Exclude environmentally sensitive lands for zoning density calculations	Goal #1, Objective #2, Short Range Priority #1; Goal #2, Objective #9
Explore Transfer of Development Rights (TDR) at the municipal level to direct growth away from agricultural lands; develop a variety of agricultural	Goal #1, Objective #2, Long Range Priority #2; Goal #6, Objective #1, Immediate Priority #1

Table 5.2.6-1 Planning, Zoning and Land Use Actions Relevant to Hazard Mitigation Planning	
ACTION	LOCATION IN PLAN
zoning districts to promote preservation of agricultural and forest lands	
Promote density development around existing infrastructure, use zoning ordinances to incentivize (i.e. density bonus)	Goal #1, Objective #4, Short Range Priority #1
Draft model regulations for "Conservation Subdivisions" in designated zoning districts and encourage municipal adoption	Goal #2, Objective #2, Immediate Priority #1; Goal #2, Objective 6
Encourage county-wide; watershed-wide planning for storm water and water quality management; Prepare county-wide water supply, wellhead and aquifer protection plan	Goal #2, Objective #2; Goal #3, Objective #2, Long Range Priority #1; Goal #3, Objective #4, Long Range Priority #1
Encourage exclusion of new development in floodways and limit development in 100 year floodplain. Promote use of floodplain land for passive recreational use and open space.	Goal #2, Objective 19
Establish minimum standards for emergency management professionals; provide trainings	Goal #2, Objective #22; Goal #3, Objective #9, Immediate Priority #1
Encourage County participation in regional environmental planning activities	Goal #3, Objective #13
Encourage municipal adoption of statewide building and fire codes	Goal #3, Objective #9

Goals and objectives from the Comprehensive Plan have been incorporated into the HMP Update in the following sections:

- Section 2.4 Land Use and Development
- Section 4.4.6 Future Development and Vulnerability

Integration Recommendation

In Venango County both the HMP and comprehensive plan are currently used to mutually support integrated content. In addition, municipalities and shared stakeholders participate in both efforts facilitating a means to ensure planning-level concerns are captured in both documents. Specifically, the Venango County Planning Commission position as a member of the HMP Steering Committee and the owner of the Comprehensive Plan further solidifies a means to incorporate goals and data across both mediums.

Venango County should continue to make hazard data available when the 2020 HMP update is complete. The updated hazard data can be used to help update the county and local comprehensive plans and other planning documents. This data can be used to help track plans and projects not only for the annual HMP review but for the 2025 HMP update.

Options for incorporating additional hazard mitigation planning principles into the Comprehensive Plan include:

- Consider using the HMP Update to further refine and exclude high hazard areas from future development through the use of land use controls and zoning ordinances. For example, the HMP's risk assessment and Future Development and Vulnerability discussions will provide specific risk and vulnerability information for the entire county and more specifically the potential areas of growth.
- Consider developing a safety goal and objectives to address high-hazard risks identified in the HMP Update.
- Consider developing a mechanism for monitoring, evaluating and reporting out progress made towards achieving plan goals.

The Venango County Comprehensive Plan is expected to be developed in 2021. The development of the HMP coincides perfectly with the timeline and an opportunity to put these opportunities into action.

Venango County Emergency Operations Plan

The Pennsylvania Emergency Management Services Code (35 PA C.S. Sections 7701-7707, as amended) requires each county and municipality to prepare, maintain, and keep current an Emergency Operations Plan (EOP). Venango County Emergency Services is responsible for preparing and maintaining the County EOP. All municipalities in Venango County have a local EOP, which is on file with the Venango County Department of Emergency Management and with the State. In addition, a countywide EOP also exists.

Integration Recommendation

The risk assessment information presented in the HMP is used to update the hazard vulnerability assessment section of the County EOP. The updated risk assessment information will affect subsequent updates to the EOP.

The EOP is reviewed at least biennially. Whenever portions of the plan are implemented in an emergency event or training exercise, a review is performed and changes are made where necessary. The same requirement exists for the HMP. It would be beneficial to sync the EOP review and the annual HMP review to ensure that any changes to one plan are captured in the other.

2010 Venango County Comprehensive Recreation, Parks, & Open Space Plan

In February of 2010, the County developed a Comprehensive Recreation, Parks and Open Space Plan as an appendix to the 2004 County Comprehensive Plan to conduct an inventory and assessment of the County's natural resource. The Plan provides recommendations for the continued management of these areas.

One of the three key principles of the plan is directly related to hazard mitigation planning and is as follows:

- Principle 1: Enable the continued preservation, sustainability, support, promotion, and development of the recreational, natural, and cultural resources within Venango County.

This key principle from the Venango County Recreation and Open Space Plan has been incorporated into the Mitigation Strategy (Section 6) of the HMP Update, and is reflected in the following goals:

- Goal 7: Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.

Integration Recommendation

Options for incorporating additional hazard mitigation planning principles into the County Recreation and Open Space Plan include, identifying and prioritizing high-hazard areas (i.e. flooding) prime for acquisition and conversion to open space.

Open Space Management Plan (or Parks/Rec or Greenways Plan)

Open space management plans are designed to protect the natural environment of the community. They describe how the community will manage woodlands, grasslands, and trails without sacrificing the economic goals of the community. These areas are most widely used for recreational purposes, but also serve as the primary habitat for a variety of plant and animal species. Venango County adopted a Comprehensive Recreation, Parks, and Open Space Plan in the winter of 2010.

Integration Recommendation

An approved mitigation technique, Natural Systems Protection, minimizes damage and losses and also preserves or restores the functions of natural systems. This can include sediment and erosion control, stream corridor restoration, forest management, conservation easements, and wetland restoration and preservation. Like the 2010 Venango County Comprehensive Recreation, Parks, & Open Space Plan, open spaces designated in the Open Space Management Plan should be evaluated and assessed for possible mitigation action implementation. In addition, HMP mapping and vulnerability data overlays should be reviewed to reveal potential candidate for greenways or park spaces.

2007 & 2010 Venango County Act 167 County-Wide Stormwater Management Plan (Phase I & II)

In accordance with the requirements of the Pennsylvania Stormwater Management Act 167 and guidelines established by the PA DEP, the County conducted a multiyear study of the condition of watersheds and water infrastructure in Venango. The resulting Stormwater Management Plan provides prioritized recommendations to mitigate and reduce the impacts from future development and improve the current condition of local water bodies.

Many of the goals expressed in the Plan are either directly or indirectly related to hazard mitigation planning, and include:

- Goal 3: Provide uniform stormwater management standards throughout Venango County.
- Goal 4: Encourage the management of stormwater to maintain groundwater recharge, to prevent degradation of surface and groundwater quality, and to protect water resources.
- Goal 5: Preserve the existing natural drainage ways and water courses.

- Goal 6: Ensure that existing stormwater problem areas are not exacerbated by future development and provide recommendations for improving existing problem.

Specific recommendations proposed in the Stormwater Management Plan that are relevant to hazard mitigation planning and the HMP Update include:

- Improve municipal zoning to mitigate the negative impact of future development through special zoning techniques (e.g. watershed based, overlay, performance, or large lot zoning; growth boundaries; infill development; transfer of development rights)
- Enhance floodplain management practices (e.g. adoption of PA Department of Community and Economic Development Model Floodplain Ordinance, participate in CRS, open space preservation in floodplain areas, acquisition of repetitive loss properties, implementation of a drainage system maintenance program) and where possible, provide for River Corridor Planning, Riparian Zone Protection, and identification and protection of special wetlands
- Implement design standards and policies to limit impervious cover, improve topsoil management, and incentivize low-impact development

Several goals and objectives from the Stormwater Management Plan have been incorporated into the Mitigation Strategy (Section 6) of the HMP Update. These goals are as follows:

- Goal 3 Identify all repetitive loss structures throughout the county.
- Goal 5 Attempt to reduce the current and future risk of flood damage in Venango County.
- Goal 6 Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.
- Goal 7 Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.

Integration Recommendation

The HMP capability assessment revealed many municipalities did not have an understand or knowledge of the County's Stormwater Management Plan. Including municipal officials outside of Engineering such as the EMC and emergency services would ensure all stakeholders are prepared with the same level of information. The Stormwater Management Plan also provides a focus area that the HMP does not. Many mitigation actions for the County and its municipalities can be pulled from the Stormwater Management Plan and vice versa.

Other Plan and Program Integration Opportunities

Wellhead Protection Program

Venango County has an inventory of wellheads in the County. The County has the quantity and quality of public water supplies monitored to determine chemical contamination.

Federal, State and local agencies play a direct and indirect role in reducing risks from pipeline hazards through coordinated planning, regulatory oversight, and emergency response. Key state-level groups involved in mitigating pipeline hazards include PEMA, PA DEP, PA Office of the State Fire Commissioner, and PennDOT. Local jurisdictions can influence the hazard potential of

pipelines through the use of land use controls, such as local planning and zoning ordinances and permits, which can determine where such facilities are located.

IFLOWS

Venango County has eight Integrated Flood Observing and Warning System (IFLOWS) Rain Gauge locations that monitor precipitation throughout the county and are displayed in Table 5.2.6-2. This data can be used to analyze rain and flood events.

Gauge Name	Identification Number	Municipality
Seneca/Oil City	2580	Cranberry Township
Hill City	2581	Cranberry Township
Oil Creek Township	2582	Oil Creek Township
Jackson Township	2583	Jackson Township
Cross Creek	2584	Cherrytree Township
Dempseytown	2585	Oakland Township
Chapmanville	2586	Plum Township
Polk	2587	Mineral Township

Stream Gauges

USGS maintains six stream gauges that monitor stream velocity and height in Venango County. These gauges are located on French Creek (Utica and Franklin), Allegheny River (Franklin and Kennerdell), and Oil Creek (Rouseville) (USGS, 2015). These stream gauges are primarily used for flood prediction.

6 Mitigation Strategy

6.1 Update Process Summary

6.1.1 Mitigation Goals and Objectives Review

Mitigation goals are general guidelines that explain what the County wants to achieve. Goals are usually expressed as broad policy statements representing desired long-term results. Mitigation objectives describe strategies or implementation steps to attain the identified goals. Objectives are more specific statements than goals; the described steps are usually measurable and can have a defined completion date. The HMSC reviewed the 2015 list of Goals, Objectives, and Actions and made revisions based on the current needs of the county. Objective 5.1 was revised to include language pertaining to reducing future development near high-hazard dams. The 2020 HMP Update's seven goals and 20 objectives is provided in Table 6.2-1.

6.1.2 Mitigation Progress and Successes

For the plan update, Venango County Department of Emergency Services and individual municipalities provided progress on mitigation actions and success that were accomplished since 2015. This section reflects progress and successes as of September 2020.

Richland Township, Emlenton Borough, Cherrytree Township, Cornplanter Township, Irwin Township, Plum Township and the City of Franklin noted that they will continue to encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas. This includes the planning department reviewing the SALDO. In addition, they will continue to produce and submittal mitigation projects for their high-risk structures and areas.

Oil City noted that the action to work with the American Red Cross towards upgrading all shelter resources and any new shelters that Red Cross may establish in the future is ongoing. They reported that a 2018 full scale exercise of a 'mega-shelter' was carried out at the Oil City High School in conjunction with the Red Cross. The Red Cross is targeting 'mega-shelters' like Oil City High School. They also identified Oil City Middle School as another potential shelter location. Both schools are adjacent structures located at 8 & 10 Lynch Blvd in Oil City. Utica Borough decided to cancel that same action. They noted other shelters are more desirable and there is a local of volunteers/staff that could attend the Red Cross training. The action to hold an annual work session with the West Central PA Red Cross and Venango County regarding shelter locations was deferred by Oil City to the Venango County Department of Emergency Management.

Regarding the planning department reviewing the SALDO, Utica Borough noted the action as deferred due to no zoning. Lastly, they will continue to produce and submit mitigation projects for high-risk structures and areas such as the bridge maintenance and upkeep that regularly occurs, as well as drain, culvert, and ditch clean outs. Oil City also decided to continue that same action. They reported that the Brody Block in downtown Oil City was demolished. Several houses were also demolished along Union Street in Oil City. The City of Franklin, Cherrytree Township, Cornplanter Township, and Plum Township also noted that they will continue to produce and submit Mitigation Projects. Cornplanter Township will also continue to identify and mitigate areas of frequent flooding.

Irwin Township will also continue to produce and submit mitigation projects for high-risk structures. Since 2015 Irwin Township has completed several of these projects including: a rehabilitation project on the Old Beach Road Bridge, as well as replacing overflowing culverts on Irwin, E. Gilmore, Dog Hollow, Millbrook, Burns, Kerr and Blair Roads. Additionally, the Township completed two road projects for flood management on Mill and Sterrett Roads and rebuilt a section of Whieldon road that frequently flooded.

The action to remove repetitive loss structures on Sage Run in Oil City and Cranberry Township was completed by Oil City. Houses were demolished by PennDOT for an intersection upgrade project at US 62 and SR 257. A water passage was improved at the bridge as well as the creek banks with RipRap installed at that location. Oil City also completed the action for municipal review of statewide Uniform Construction Code to ensure enforcement thereof. Oil City adopted the 2015 edition of the International Bridge Building Code via ordinance in 2018. The City of Franklin continues to carry out this action by updating ordinances or policies when the UCC is updated. Emlenton Borough and Cornplanter Township both noted they will also continue to have municipal offices review the statewide UCC.

Rouseville Borough noted that the action to work with FEMA and PEMA to update repetitive loss information on properties within the county is complete. Similarly, Rouseville Borough completed work on the action to hold a series of public meetings with the owners of repetitive loss properties in high-risk areas and identify high-risk properties.

The City of Franklin is continuing to work with municipal leaders to identify roadways with frequent flooding. The City reports that they are continually working with PennDOT when they have construction projects within the City. The City also noted that they will continue to rewrite/update the City Emergency Operations Plan. They are also continuing to mitigate repetitive loss properties associated with the Chubbs, Davis, and Smith Runs. The City of Franklin is also implementing redundancy in critical infrastructure. They noted that action is ongoing and takes place as new infrastructure is installed.

Table 6.1.2-1 captures progress on all actions since 2015. While many of the outreach, education, and training actions are considered ongoing, the following actions were completed by one or more municipalities during the update period:

- To work with FEMA and PEMA to get updated repetitive loss information on properties in the County and in the municipalities in order to plan future mitigation activities.
- When funds become available for hard mitigation projects, we plan to hold a series of public meetings with the owners of repetitive loss properties in high-risk areas. These meetings will also be used to identify high-risk properties in the unincorporated areas of the County and to determine potential participation in future acquisition and relocation projects.
- Work with municipal leaders to identify roadways with frequent flooding. Share information with PennDOT and work cooperatively to develop strategies to mitigate the identified problems.
- Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.

- Identify and mitigate areas of frequent flooding
- Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).
- Remove repetitive loss structures on Sage Run in Oil City and Cranberry Township.

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County	1	Flood, Hurricane, Tropical Storm, Nor'easter	To develop a "how to" mitigation display that can be used at special events. This display would include pictures and information, such as that contained in FEMA's Retrofitting for Homeowners Guide, Elevating Your Flood Prone Home, Elevating Residential Structures, and Information on the NFIP.					X	
Venango County	2	All	To develop an Animals In Disaster Display that will be used at 4-H Clubs, Agricultural Fair, in Veterinarians Offices and other places that animal owners may gather. The display will have information about preparing animals for disasters by making a disaster plan and a disaster supply kit for each animal. The display will encourage animal owners to decide ahead of time where animals will be sheltered and to familiarize them with the County's Animals in Disaster Annex of the Emergency Operations Plan.			X			
Venango County	3	All	Create displays for children's programs that teach safety. Examples of information to be used would be similar to that on the FEMA for Kids CD, Sparky Fire Safety Program, and Smokey Bear.			X			

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County	4	All	Send news releases to local newspapers, radio and TV stations about pre-disaster information. Design to reach all areas of Venango County.					X	
Venango County	5	All	Public Speaking series to include topic such as types of natural disasters and risks, how to develop a family disaster plan, how to develop a family disaster supply kit, how to develop a business continuity plan, simple types of mitigation projects for homeowners, etc. These speaking engagements will be offered to civic groups such as Rotary and Kiwanis Clubs, the Chamber of Commerce, Church and interfaith groups, etc. Coordination with state agencies such as DCNR-BOF as needed.				X		
Venango County	6	All	The American Red Cross will continue to hold a variety of courses, including: Adult and Child CPR, Basic First Aid, Introduction to Disaster Services, Mass Care, Shelter Operations and others at the Red Cross Office and at other locations throughout the County.			X			
Venango County	7	All	The Venango County website will have information about disaster preparedness and related activities. The plan is to expand and update the website as needed and as appropriate in a timely manner to benefit all County residents.				X		

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Allegheny Township;	8	All	Property owners will be notified in an annual municipal newsletter to be prepared for all natural disasters.					X	
Cranberry Township; Oakland Township, Oil City, Sandycreek Township; Utica Borough	9	All	To work with the American Red Cross towards upgrading all shelter resources. Also any new shelters that the Red Cross may establish in the future. This will include shelters in all areas of Venango County.		X Utica		X Oil City, Cranberry,		
Oil City	10	All	West Central PA Red Cross and Venango County EMA to hold an annual work session to share information about local shelters. Information to include the site of each shelter, how many people it can house and feed, if it has back-up power available on site, completed site survey forms and types of resources that they have or that they need. This will benefit all areas of Venango County in the event of the need to open shelters.			X			
Venango County	11	All	Establish a committee representative of all areas of the County that will include vets, pet store owners, the Humane Society, animal shelters, the Extension Service and other interested parties to work on animal-specific evacuation and sheltering needs.				X		

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County	12	All	Venango County Emergency Services Director to develop and make available information to all county residents, through community groups and/or publications, information on how to shelter in place and when it is appropriate to do so.				X		
Venango County	13	All	Publicize locations of shelters with improved shelter signage and through public information campaigns.		X				
Cornplanter Township; Venango County	14	All	Provide CERT classes to interested citizens in Venango County to assist first responders at specified emergencies throughout the county. Project Impact Coordinator to take the CERT Train the Trainer Course to assist with training in the County. Additional trainers need to attend future Train the Trainer Courses.			X			
Barkeyyville Borough, Cornplanter Township	15	All	To meet with groups of potential volunteers to attempt increase the number of trained responders for: All County Fire Departments, doctors and nurses who may become first responders in a bio-terrorism event, EMS personnel, etc. Will benefit all areas of Venango County.					X	

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County	16	All	Venango Emergency Services Director to develop and manage disaster exercises in various areas of the county. Types of exercises to include: Flood exercise, Weapons of Mass Destruction Exercise, Hazardous Materials Spill Exercise, High Winds, Wilfire, Winter Storm and Bio-Terrorism Exercise.				X		
Venango County	17	All	Review and update all annexes of the Venango County Emergency Operations Plan. Encourage participation from all municipalities in update process.				X		
Victory Township	18	Flooding, Hurricane, Tropical Storm, Nor'easter	Replace bridge and secure sections of the roadway abutting the stream to allow emergency access and evacuation.					X	
Rouseville Borough	19	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter	To work with FEMA and PEMA to get updated repetitive loss information on properties in the County and in the municipalities in order to plan future mitigation activities.	X					
Venango County	20	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter	Development of a data base in existing hazard GIS system of all repetitive loss properties in the County to be used in future mitigation activities.		X				

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Rouseville Borough	21	Flood, Hurricane, Tropical Storm, Nor'easter	When funds become available for hard mitigation projects, we plan to hold a series of public meetings with the owners of repetitive loss properties in high-risk areas. These meetings will also be used to identify high-risk properties in the unincorporated areas of the County and to determine potential participation in future acquisition and relocation projects.	X					
City of Franklin, Oil City	22	Flood; Hurricane, Tropical Storm, Nor'easter	Work with municipal leaders to identify roadways with frequent flooding. Share information with PennDOT and work cooperatively to develop strategies to mitigate the identified problems.	X Oil City			X City of Franklin		
Venango County	23	Environmental Hazards	Contact representatives of rail lines to collect information about emergency planning and risks associated with rail services in the County.					X	
Venango County	24	Environmental Hazards	Conduct a Hazardous Materials Survey to identify all hazardous materials that are either stored or traveling through the County and its municipalities.	X					

Table 6.1.2-1 Review of Previous Mitigation Actions								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				
				COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED
Venango County, Allegheny Township, Canal Township, Cherrytree Township, Clintonville Borough, Cooperstown Borough, Cornplanter Township, Cranberry Township, Emlenton Borough, City of Franklin, Irwin Township, Jackson Township, Mineral Township, Pinegrove Township, Pleasantville Borough, Plum Township, Polk Borough, President Township, Richland Township, Sandycreek Township, Scrubgrass Township, Sugarcreek Borough, Utica Borough, Victory Township	25	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.			X Utica	X Emlenton, Richland, City of Franklin, Cranberry, Cherrytree, Cornplanter, Venango County	

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County, City of Franklin	26	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Winter Storm, Hurricane, Tropical Storm, Nor'easter	Planning department and applicable municipal offices to review their comprehensive plans to ensure that designated growth areas are not in high hazard areas identified in this plan.				X		
Venango County, Cornplanter Township, Cranberry Township, Emlenton Borough, City of Franklin, Frenchcreek Township, Oil City, Sandycreek Township	27	Flood, Tornado, Earthquake, Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.	X Oil City, Cranberry, Cornplanter	X Venango County		X Utica, Emlenton, Cornplanter		
Venango County	28	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Hurricane, Tropical Storm, Nor'easter	Encourage applicable municipal offices to review their capital improvement plans to ensure that programmed infrastructure improvements are not in high hazard areas.				X		
Cornplanter Township	29	Flooding, Hurricane, Tropical Storm, Nor'easter	Identify and mitigate areas of frequent flooding	X			X		

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County	30	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter	Venango County EMA to arrange with FEMA/DCED to conduct training on the Community Rating System (CRS) for municipalities with highest number of policies.					X	
Venango County, Allegheny Township, Canal Township, Cherrytree Township, Clintonville Borough, Cooperstown Borough, Cornplanter Township, Cranberry Township, Emlenton Borough, City of Franklin, Irwin Township, Jackson Township, Mineral Township, Oil City, Pinegrove Township, Pleasantville Borough, Plum Township, Polk Borough, President Township, Richland Township, Sandycreek Township, Scrubgrass Township, Sugarcreek Borough, Utica Borough, Victory Township	31	Flooding; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).	X Cornplanter			X Emlenton, Richland, Utica, Oil City, City of Franklin, Cornplanter, Cranberry, Cherrytree, Venango County		

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
Venango County, Cranberry Township, Oil City	32	Flood, NFIP	Remove repetitive loss structures on Sage Run in Oil City and Cranberry Township.	X Oil City			X Cranberry, Venango County		
Venango County	33	All	Work with DEP, conservation agencies, park and recreation organizations, wildlife groups and other appropriate agencies to collect information including GIS of the number and location of natural resource areas throughout the County.		X				
Canal Township	34	Flooding, Hurricane, Tropical Storm, Nor'easter	Identify and mitigate frequently flooded roads.					X	
Venango County, Sandycreek Township	35	Flood, Hurricane, Tropical Storm, Nor'easter	When funds become available for mitigation projects, the county plans to hold meetings to identify high-risk properties in the county and to determine potential participation in future acquisition and relocation projects.			X			
City of Franklin	36	All	Review and update all annexes the City of Franklin's Emergency Operations Plan.				X		
Venango County	37	Flood, Hurricane, Tropical Storm, Nor'easter	County to work with DEP, DCNR, conservation agencies, and others, to research avenues for restoring degraded natural resources and open space to improve their flood control functions.					X	

Table 6.1.2-1 Review of Previous Mitigation Actions					STATUS				
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	COMPLETED	CANCELED	DEFERRED	ONGOING	NO UPDATE PROVIDED	
City of Franklin	38	Flood, Hurricane, Tropical Storm, Nor'easter	Mitigate repetitive loss properties associated with flood sources: Chubbs, Davis, and Smith Runs.				X		
City of Franklin	39	All	Implement redundancy in critical infrastructure, should a disaster occur that it does not affect all residents and/or businesses (water, sewer, transportation (traffic management), electric, natural gas pipelines, communications (Public and Emergency Services).				X		
Venango County	40	Wildfire	Develop a "how to protect a home from wildfires" display with information on defensible space and Firewise.				X		
Venango County	41	Wildfire	Issue press release prior to spring (or fall) wildfire season.				X		
Venango County	42	Wildfire	Consider developing a Community Wildfire Protection Plan.					X	
Venango County	43	Wildfire	Work with local volunteer fire departments and county EMA to identify areas of high value/high wildfire risk and work to implement Firewise mitigation strategies.				X		
Venango County	44	All	As part of the plan maintenance process, assess how effective mitigation strategy actions are at mitigating losses through a review of the qualitative and quantitative benefits (or avoided losses) of each action.				X		

6.2 Mitigation Goals and Objectives

Based on results of the goals and objectives evaluation exercise and input from the County, it was confirmed that the 2015 goals and objectives still align with the County’s vision. Table 6.2-1 details the mitigation goals and objectives re-established for the 2020 plan.

Table 6.2-1 2020 Venango County Goals and Objectives	
Goal	Objectives
Goal 1 Increase Public Awareness regarding natural and manmade hazard risks, preparedness and mitigation.	1.1 Educate residents about hazard mitigation resources and grants.
	1.2 Utilize the media for the distribution and publication of hazard information.
	1.3 Provide educational materials and conduct workshops for residents.
	1.4 Provide access to hazard and mitigation and emergency response resources to residents.
Goal 2 Ensure that adequate shelter is available to current and future populations.	2.1 Ensure that all shelters have adequate emergency power resources.
	2.2 Establish a protocol for the sharing of annual shelter survey information.
	2.3 Publicize locations of shelters.
Goal 3 Identify all repetitive loss structures throughout the county.	3.1 Collect updated information of the number and location of all repetitive loss properties throughout the county and the municipalities.
	3.2 Develop a database of information and GIS mapping on all repetitive loss properties.
	3.3 Identify owners of repetitive loss properties.
Goal 4 Develop better hazard data for Venango County and the municipalities.	4.1 Identify existing hazard data limitations and gaps.
	4.2 Develop and maintain a county hazard log.
Goal 5 Attempt to reduce the current and future risk of flood damage in Venango County.	5.1 Direct new development away from high hazard areas, especially high-hazard dams.
	5.3 Adoption and enforcement of statewide Uniform Construction Code (UCC).
	5.4 Ensure that infrastructure improvements are not directed towards hazardous areas.
	5.5 Evaluate and update existing floodplain ordinances.

Table 6.2-1 2020 Venango County Goals and Objectives	
Goal	Objectives
	5.6 Improve the enforcement of existing floodplain regulations.
Goal 6 Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.	6.1 Research possible mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.
Goal 7 Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.	7.1 Implement cost-effective and technically feasible mitigation projects.
	7.2 Utilize recreation planning and storm water management planning.

6.3 Identification and Analysis of Mitigation Techniques

The mitigation strategy in the updated HMP should include analysis of a comprehensive range of specific techniques or actions. FEMA, through the March 2013 Local Mitigation Handbook, and PEMA, through the 2020 Standard Operating Guide (SOG), identify four categories of hazard mitigation techniques.

- **Local plans and regulations:** Government authorities, policies, or codes that influence the way land and buildings are developed and built. Examples include, but are not limited to: comprehensive plans, subdivision regulations, building codes and enforcement, and NFIP and CRS.
- **Structure and infrastructure:** Modifying existing structures and infrastructure or constructing new structures to reduce hazard vulnerability. Examples include, but are not limited to: acquisition and elevation of structures in flood prone areas, utility undergrounding, structural retrofits, floodwalls and retaining walls, detention and retention structures, and culverts.
- **Natural systems protection:** Actions that minimize damage and losses and also preserve or restore the functions of natural systems. Examples include, but are not limited to: sediment and erosion control, stream corridor restoration, forest management, conservation easements, and wetland restoration and preservation.
- **Education and awareness:** Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate the hazards, and may also include participation in national programs. Examples include, but are not limited to: radio or television spots, websites with maps and information, provide information and training, NFIP outreach, StormReady, and Firewise Communities.

Table 6.3-1 provides a matrix identifying the mitigation techniques used for the hazards identified in the County. Mitigation projects associated with some of these techniques are included in Section 6.4.

Table 6.3-1 Venango County Mitigation Action Techniques				
Hazard	MITIGATION TECHNIQUE			
	Local Plans and Regulations	Structure and Infrastructure	Natural Systems Protection	Education and Awareness
Flooding	✓	✓	✓	✓
Severe Winter Weather	✓	✓		✓
Thunderstorms and Tornadoes	✓	✓		✓
Drought	✓	✓		✓
Landslides	✓	✓		✓
Wildfires	✓	✓		✓
Earthquake	✓	✓		✓
Pandemic	✓			✓
Dam Failure	✓	✓		✓
Environmental Hazards	✓	✓		✓
Radon Exposure				✓
Hurricane, Tropical Storm, Nor'easter	✓	✓	✓	✓

6.4 Mitigation Action Plan

All municipalities that participated in the plan update process have selected mitigation actions that they would like to accomplish within the next 5 years. Table 6.4-1 lists all the mitigation actions, received as of September 2020, for the 2020 HMP Update. Each mitigation action is intended to address one or more of the goals and objectives identified in Section 6.2. The prioritization of these actions follows in Table 6.4-2.

Utica Borough provided an additional action to incorporate into the 2020 HMP Update. In the past, a resident has personally provided his generators to residents on a rotating basis to provide electric (temporary power) for water and food storage. Utica Fire Department has a generator and the Borough is going to purchase MRE's to provide to residents. However, the Borough wants to develop a shelter in place plan. This plan has been taken into consideration and discussion by the Borough Council.

Clinton Township also added an action to address damage to roads and property damage from stormwater runoff. This will be done by replacing and adding catch basins and culverts and installing crossover pipes to relieve stormwater. The Township hopes to partner with the Venango County Conservation District to receive grant money towards their dirt and gravel roads.

Table 6.4-1 Mitigation Action Plan	
COMMUNITY: Venango County	ACTION: To develop a "how to" mitigation display that can be used at special events. This display would include pictures and information, such as that contained in FEMA's Retrofitting for Homeowners Guide, Elevating Your Floodprone Home, Elevating Residential Structures, and Information on the NFIP.
ACTION NO: 1	
Category:	Education and Awareness
Hazard(s) Addressed:	Flood, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango EMA
Implementation Schedule:	Ongoing
Funding Source:	County
COMMUNITY: Venango County	ACTION: To develop an Animals In Disaster Display that will be used at 4-H Clubs, Agricultural Fair, in Veterinarians Offices and other places that animal owners may gather. The display will have information about preparing animals for disasters by making a disaster plan and a disaster supply kit for each animal. The display will encourage animal owners to decide ahead of time where animals will be sheltered and to familiarize them with the County's Animals in Disaster Annex of the Emergency Operations Plan.
ACTION NO: 2	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	2 yrs.
Funding Source:	County
COMMUNITY: Venango County	ACTION: Create displays for children's programs that teach hazard prevention and safety. Examples of information to be used would be similar to that on the FEMA for Kids CD, Sparky Fire Safety Program, and Smokey Bear.
ACTION NO: 3	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA/911 and Local Fire Depts.
Implementation Schedule:	5 yrs; ongoing
Funding Source:	FEMA FP&S; DCNR; Local
COMMUNITY: Venango County	ACTION: Send press releases to local newspapers, radio and TV stations about hazard mitigation information and ideas. Design to reach all areas of Venango County.
ACTION NO: 4	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA; Municipalities

Table 6.4-1 Mitigation Action Plan	
Implementation Schedule:	Ongoing
Funding Source:	County; Municipalities
COMMUNITY: Venango County	ACTION: Public Speaking series to include topic such as types of natural disasters and risks, how to develop a family disaster plan, how to develop a family disaster supply kit, how to develop a business continuity plan, simple types of mitigation projects for homeowners, etc. These speaking engagements will be offered to civic groups such as Rotary and Kiwanis Clubs, the Chamber of Commerce, Church and interfaith groups, etc. Coordination with state agencies such as DCNR-BOF as needed.
ACTION NO: 5	
Category:	Education and Awareness
Hazard(s) Addressed:	All Natural Disasters
Lead Agency/Department:	Venango EMA
Implementation Schedule:	5 yrs.
Funding Source:	Staff time (State, County, Local)
COMMUNITY: Venango County	ACTION: The American Red Cross will continue to hold a variety of courses, including: Adult and Child CPR, Basic First Aid, Introduction to Disaster Services, Mass Care, Shelter Operations and others at the Red Cross Office and at other locations throughout the County.
ACTION NO: 6	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	American Red Cross
Implementation Schedule:	5 yrs; ongoing
Funding Source:	American Red Cross
COMMUNITY: Venango County	ACTION: Update Venango County website to provide resources regarding hazard mitigation.. The plan is to expand and update the website as needed and as appropriate in a timely manner to provide county residents with simple and effective mitigation ideas..
ACTION NO: 7	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	Ongoing
Funding Source:	County
COMMUNITY: Allegheny Township	ACTION: Property owners will be provided with hazard mitigation resources via an annual municipal newsletter.
ACTION NO: 8	

Table 6.4-1 Mitigation Action Plan	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Township
Implementation Schedule:	1 year
Funding Source:	Township
COMMUNITY: : Cranberry Township; Oakland Township, Oil City, Sandycreek Township; Utica Borough	ACTION: To work with the American Red Cross towards upgrading all shelter resources and ensuring that any new shelters are sited outside of hazard prone areas
ACTION NO: 9	
Category:	Structure and Infrastructure; Local Plans and Regulations
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA; American Red Cross
Implementation Schedule:	5 yrs
Funding Source:	County; HUD-ESG;
COMMUNITY: Oil City	ACTION: West Central PA Red Cross and Venango County EMA to hold an annual work session to share information about local shelters. Information to include the site of each shelter, how many people it can house and feed, if it has back-up power available on site, completed site survey forms and types of resources that they have or that they need. This will benefit all areas of Venango County in the event of the need to open shelters.
ACTION NO: 10	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	Deferred
Funding Source:	Staff time
COMMUNITY: Venango County	ACTION: Establish a committee representative of all areas of the County that will include vets, pet store owners, the Humane Society, animal shelters, the Extension Service and other interested parties to work on animal-specific evacuation and sheltering needs.
ACTION NO: 11	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	2 yrs

Table 6.4-1 Mitigation Action Plan	
Funding Source:	Staff time
COMMUNITY: Venango County	ACTION: Venango County Emergency Services Director to develop and make available information to all county residents, through community groups and/or publications, information on how to shelter in place and when it is appropriate to do so.
ACTION NO: 12	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	1 yr
Funding Source:	County
COMMUNITY: Venango County	ACTION: Publicize locations of shelters with improved shelter signage and through public information campaigns.
ACTION NO: 13	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	1 yr.
Funding Source:	County
COMMUNITY: Cornplanter Township; Venango County	ACTION: Provide CERT classes to interested citizens in Venango County to assist first responders at specified emergencies throughout the county. Project Impact Coordinator to take the CERT Train the Trainer Course to assist with training in the County. Additional trainers need to attend future Train the Trainer Courses.
ACTION NO: 14	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Township; Venango EMA
Implementation Schedule:	1 yr; ongoing
Funding Source:	Staff time
COMMUNITY: Barkeyyville Borough, Cornplanter Township	ACTION: To meet with groups of potential volunteers to attempt increase the number of trained responders for: All County Fire Departments, doctors and nurses who may become first responders in a bio-terrorism event, EMS personnel, etc. Will benefit all areas of Venango County.
ACTION NO: 15	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Municipality
Implementation Schedule:	2 yrs.

Table 6.4-1 Mitigation Action Plan	
Funding Source:	Staff time
COMMUNITY: Venango County	ACTION: Venango Emergency Services Director to develop and manage disaster exercises in various areas of the county. Types of exercises to include: Flood exercise, Weapons of Mass Destruction Exercise, Hazardous Materials Spill Exercise, High Winds, Wilfire, Winter Storm and Bio-Terrorism Exercise.
ACTION NO: 16	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	Ongoing
Funding Source:	County, FEMA, various
COMMUNITY: Venango County	ACTION: Review and update all annexes of the Venango County Emergency Operations Plan. Encourage participation from all municipalities in update process.
ACTION NO: 17	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango EMA
Implementation Schedule:	5 yrs.
Funding Source:	County
COMMUNITY: Victory Township	ACTION: Replace bridge and secure sections of the roadway abutting the stream to allow emergency access and evacuation.
ACTION NO: 18	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flooding, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Victory Township
Implementation Schedule:	6 months-2 yrs.
Funding Source:	Municipal; PennDOT; HMGP
COMMUNITY: Rouseville Borough	ACTION: To work with FEMA and PEMA to get updated repetitive loss information on properties in the County and in the municipalities in order to plan future mitigation activities.
ACTION NO: 19	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Borough
Implementation Schedule:	1 yr.

Table 6.4-1 Mitigation Action Plan	
Funding Source:	Staff Time
COMMUNITY: Venango County	ACTION: Develop a database of existing GIS system of all repetitive loss properties in the County to be used in future mitigation activities.
ACTION NO: 20	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango Planning Commission
Implementation Schedule:	1 yr.
Funding Source:	Staff Time
COMMUNITY: Rouseville Borough	ACTION: When funds become available for mitigation projects, the Borough will hold a series of public meetings with the owners of repetitive loss properties in high-risk areas. These meetings will also be used to identify high-risk properties in the unincorporated areas of the County and to determine potential participation in future acquisition and relocation projects.
ACTION NO: 21	
Category:	Education and Awareness.
Hazard(s) Addressed:	Flood, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Borough
Implementation Schedule:	2 yrs.
Funding Source:	Borough
COMMUNITY: City of Franklin, Oil City	ACTION: Work with municipal leaders to identify roadways with frequent flooding. Share information with PennDOT and work cooperatively to develop strategies to mitigate the identified problems.
ACTION NO: 22	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flood; Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Municipalities
Implementation Schedule:	1 yr.
Funding Source:	Staff Time
COMMUNITY: Venango County	ACTION: Contact representatives of rail lines to collect information about emergency planning and risks associated with rail services in the County.
ACTION NO: 23	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Environmental Hazards

Table 6.4-1 Mitigation Action Plan	
Lead Agency/Department:	Venango EMA
Implementation Schedule:	1 yr.
Funding Source:	Staff Time
COMMUNITY: Venango County	ACTION: Conduct a Hazardous Materials Survey to identify all hazardous materials that are either stored or traveling through the County and its municipalities.
ACTION NO: 24	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Environmental Hazards
Lead Agency/Department:	Venango EMA
Implementation Schedule:	2 yrs.
Funding Source:	County
COMMUNITY: Venango County, Allegheny Township, Canal Township, Cherrytree Township, Clintonville Borough, Cooperstown Borough, Cornplanter Township, Cranberry Township, Emlenton Borough, City of Franklin, Irwin Township, Jackson Township, Mineral Township, Pinegrove Township, Pleasantville Borough, Plum Township, Polk Borough, President Township, Richland Township, Sandycreek Township, Scrubgrass Township, Sugarcreek Borough, Utica Borough, Victory Township	ACTION: Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.
ACTION NO: 25	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango Planning Commission
Implementation Schedule:	Ongoing
Funding Source:	Staff Time
COMMUNITY: Venango County, City of Franklin	ACTION: Planning department and applicable municipal offices to review their comprehensive plans to ensure that designated growth areas are not in high hazard areas identified in this plan.
ACTION NO: 26	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Winter Storm, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango Planning Commission

Table 6.4-1 Mitigation Action Plan	
Implementation Schedule:	2 yrs.
Funding Source:	Staff Time
COMMUNITY: Venango County, Cornplanter Township, Cranberry Township, Emlenton Borough, City of Franklin, Frenchcreek Township, Oil City, Sandycreek Township	ACTION: Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.
ACTION NO: 27	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood, Tornado, Earthquake, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Municipalities
Implementation Schedule:	1 yrs.
Funding Source:	Staff Time
COMMUNITY: Venango County	ACTION: Encourage applicable municipal offices to review their capital improvement plans to ensure that programmed infrastructure improvements are not in high hazard areas.
ACTION NO: 28	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango EMA/Planning Commission
Implementation Schedule:	Ongoing
Funding Source:	Staff Time
COMMUNITY: Cornplanter Township	ACTION: Identify and mitigate areas of frequent flooding
ACTION NO: 29	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flooding, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Cornplanter Township
Implementation Schedule:	5 yrs; ongoing
Funding Source:	HMGP
COMMUNITY: Venango County	ACTION: Venango County EMA to arrange with FEMA/DCED to conduct training on the Community Rating System (CRS) for municipalities with highest number of policies.
ACTION NO: 30	
Category:	Education and Awareness
Hazard(s) Addressed:	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango County EMA

Table 6.4-1 Mitigation Action Plan	
Implementation Schedule:	3 yrs.
Funding Source:	Staff Time
Funding Source:	Staff Time
COMMUNITY: Venango County, Oil City: Venango County, Allegheny Township, Canal Township, Cherrytree Township, Clintonville Borough, Cooperstown Borough, Cornplanter Township, Cranberry Township, Emlenton Borough, City of Franklin, Irwin Township, Jackson Township, Mineral Township, Pinegrove Township, Pleasantville Borough, Plum Township, Polk Borough, President Township, Richland Township, Sandycreek Township, Scrubgrass Township, Sugarcreek Borough, Utica Borough, Victory Township	ACTION: Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).
ACTION NO: 31	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flooding; All
Lead Agency/Department:	Municipalities
Implementation Schedule:	Ongoing
Funding Source:	Staff Time; HMGP; PDM; FMA
COMMUNITY: Venango County, Cranberry Township, Oil City	ACTION: Acquire and demolish repetitive loss structures on Sage Run in Oil City and Cranberry Township.
ACTION NO: 32	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flood, NFIP
Lead Agency/Department:	Municipalities
Implementation Schedule:	5 yrs.
Funding Source:	HMGP; PDM; FMA
COMMUNITY: Venango County	ACTION: Work with DEP, conservation agencies, park and recreation organizations, wildlife groups and other appropriate agencies to collect information including GIS of the number and location of natural resource areas throughout the County.
ACTION NO: 33	
Category:	Natural systems protection
Hazard(s) Addressed:	All

Table 6.4-1 Mitigation Action Plan	
Lead Agency/Department:	Venango EMA
Implementation Schedule:	5 yrs.
Funding Source:	Staff Time
COMMUNITY: Canal Township	ACTION: Identify and mitigate frequently flooded roads.
ACTION NO: 34	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flooding, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Canal Township
Implementation Schedule:	2-5 yrs.
Funding Source:	Municipal; HMGP; PDM
COMMUNITY: Venango County, Sandycreek Township	ACTION: When funds become available for mitigation projects, the county plans to hold meetings to identify high-risk properties in the county and to determine potential participation in future acquisition and relocation projects.
ACTION NO: 35	
Category:	Education and Awareness
Hazard(s) Addressed:	Flood, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango Planning Commission
Implementation Schedule:	3 yrs.
Funding Source:	County; Staff Time
COMMUNITY: City of Franklin	ACTION: Review and update all annexes the City of Franklin's Emergency Operations Plan.
ACTION NO: 36	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All
Lead Agency/Department:	City of Franklin
Implementation Schedule:	2 yrs.
Funding Source:	Municipal
COMMUNITY: Venango County	ACTION: County to work with DEP, DCNR, conservation agencies, and others, to research avenues for restoring degraded natural resources and open space to improve their flood control functions.
ACTION NO: 37	
Category:	Natural systems protection
Hazard(s) Addressed:	Flood, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Venango EMA; Conservation District
Implementation Schedule:	Ongoing

Table 6.4-1 Mitigation Action Plan	
Funding Source:	Staff Time
COMMUNITY: City of Franklin	ACTION: Mitigate repetitive loss properties associated with flood sources: Chubbs, Davis, and Smith Runs.
ACTION NO: 38	
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flood, Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	City of Franklin
Implementation Schedule:	5 yrs
Funding Source:	HMGP; PDM; FMA
COMMUNITY: City of Franklin	ACTION: Implement redundancy in critical infrastructure, should a disaster occur that it does not affect all residents and/or businesses (water, sewer, transportation (traffic management), electric, natural gas pipelines, communications (Public and Emergency Services).
ACTION NO: 39	
Category:	Local Plans and Regulations; Structure and Infrastructure
Hazard(s) Addressed:	All
Lead Agency/Department:	City of Franklin
Implementation Schedule:	5 yrs; ongoing
Funding Source:	EMPG; PDM
COMMUNITY: Venango County	ACTION: Develop a "how to protect a home from wildfires" display with information on defensible space and Firewise.
ACTION NO: 40	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	Cornplanter Forest District
Implementation Schedule:	5 yrs; ongoing
Funding Source:	Staff time
COMMUNITY: Venango County	ACTION: Issue press release prior to spring (or fall) wildfire season.
ACTION NO: 41	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	Cornplanter Forest District
Implementation Schedule:	annually and bi-annually; ongoing
Funding Source:	Staff time
COMMUNITY: Venango County	

Table 6.4-1 Mitigation Action Plan	
ACTION NO: 42	ACTION: Consider developing a Community Wildfire Protection Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	Cornplanter Forest District
Implementation Schedule:	3 yrs.
Funding Source:	DCNR
COMMUNITY: Venango County	ACTION: Work with local volunteer fire departments and county EMA to identify areas of high value/high wildfire risk and work to implement Firewise mitigation strategies.
ACTION NO: 43	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	Cornplanter Forest District
Implementation Schedule:	3 yrs.
Funding Source:	Staff time
COMMUNITY: Venango County	ACTION: As part of the plan maintenance process, assess how effective mitigation strategy actions are at mitigating losses through a review of the qualitative and quantitative benefits (or avoided losses) of each action.
ACTION NO: 44	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All
Lead Agency/Department:	Venango Planning Commission; Venango EMA
Implementation Schedule:	ongoing
Funding Source:	Staff time
COMMUNITY: Utica Borough	ACTION: Develop a shelter in place plan.
ACTION NO: 45	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Winter Storm
Lead Agency/Department:	Utica Borough and Fire Department
Implementation Schedule:	TBD
Funding Source:	TBD but Quote for MRE's for 200 residents for 2 weeks was \$44,520 from MRE Star, LLC
COMMUNITY: Clinton Township	

Table 6.4-1 Mitigation Action Plan	
ACTION NO: 46	ACTION: Replace damaged culverts, add catch basins, and install cross pipes to relieve stormwater.
Category:	Structure and Infrastructure
Hazard(s) Addressed:	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter
Lead Agency/Department:	Clinton Township and Venango County Conservation District
Implementation Schedule:	5 Years
Funding Source:	Dirt/Gravel Road Grants
COMMUNITY: Bureau of Forestry	ACTION: Increase public awareness and more effectively publicize wildfire danger times and threats.
ACTION NO: 47	
Category:	Education and Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	
Implementation Schedule:	TBD
Funding Source:	
COMMUNITY: Bureau of Forestry	ACTION: Develop awareness and educate the public on wildland/urban interface. Develop incentives for property owners to develop and maintain defensible space around their structures. Including encouraging the use of non-combustible materials & technology (FIREWISE) when building or renovating structures.
ACTION NO: 48	
Category:	Education and Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	
Implementation Schedule:	TBD
Funding Source:	FIREWISE program; grants for defensible space in communities
COMMUNITY: Bureau of Forestry	ACTION: Survey county and determine those areas at highest risk for wildfires. Develop pre-planning for these areas should a wildfire occur.
ACTION NO: 49	
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Wildfire
Lead Agency/Department:	Fire Departments; Bureau of Forestry
Implementation Schedule:	TBD
Funding Source:	FIREWISE program; Community Wildfire Protection Program (CWPP)
COMMUNITY: Bureau of Forestry	ACTION: Incorporate hazard mitigation into school curriculum where possible.

Table 6.4-1 Mitigation Action Plan	
ACTION NO: 50	
Category:	Education and Awareness
Hazard(s) Addressed:	All
Lead Agency/Department:	Local School Districts; County VoTech program
Implementation Schedule:	TBD
Funding Source:	TBD

Actions were then compared with one another to determine a ranking or priority by applying the Multi-Objective Mitigation Action Prioritization criteria. Using the following weighted, multi-objective mitigation action prioritization criteria each action was evaluated:

- **Effectiveness** (weight: 20% of score): The extent to which an action reduces the vulnerability of people and property.
- **Efficiency** (weight: 30% of score): The extent to which time, effort, and cost is well used as a means of reducing vulnerability.
- **Multi-Hazard Mitigation** (weight: 20% of score): The action reduces vulnerability for more than one hazard.
- **Addresses High Risk Hazard** (weight: 15% of score): The action reduces vulnerability for people and property from a hazard(s) identified as high risk.
- **Addresses Critical Communications/Critical Infrastructure** (weight: 15% of score): The action pertains to the maintenance of critical functions and structures such as transportation, supply chain management, data circuits, etc.

Scores of 1, 2, or 3 were assigned for each multi-objective mitigation action prioritization criterion where 1 is a low score and 3 is a high score. The Efficiency criterion, which considers the cost and effort of each action versus its overall vulnerability reduction benefit, is the most highly weighted criterion as part of the total prioritization score. Actions were prioritized using the cumulative score assigned to each. Each mitigation action was given a priority ranking (Low, Medium, and High) based on the following:

- **Low Priority:** 1.0 – 1.8
- **Medium Priority:** 1.9 – 2.4
- **High Priority:** 2.5 – 3.0

Cumulative results of the prioritization of mitigation actions are listed by priority in Table 6.4-2.

Table 6.4-2 2020 HMP Prioritization of Mitigation Actions							
Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
9	To work with the American Red Cross towards upgrading all shelter resources. Also any new shelters that the Red Cross may establish in the future. This will include shelters in all areas of Venango County.	3	2	3	2	3	2.5
16	Venango Emergency Services Director to develop and manage disaster exercises in various areas of the county. Types of exercises to include: Flood exercise, Weapons of Mass Destruction Exercise, Hazardous Materials Spill Exercise, High Winds, Wildfire, Winter Storm and Bio-Terrorism Exercise.	3	2	3	3	2	2.5
31	Continue to produce and submit Hazard Mitigation Project Opportunity Forms for high-risk structures/areas (especially post-disaster).	3	2	3	3	2	2.5
18	Replace bridge and secure sections of the roadway abutting the stream to allow emergency access and evacuation.	3	2	2	3	3	2.5
7	The Venango County website will have information about disaster preparedness and related activities. The plan is to expand and update the website as needed and as appropriate in a timely manner to benefit all County residents.	2	3	3	2	2	2.5

Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					Total Score
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
10	West Central PA Red Cross and Venango County EMA to hold an annual work session to share information about local shelters. Information to include the site of each shelter, how many people it can house and feed, if it has back-up power available on site, completed site survey forms and types of resources that they have or that they need. This will benefit all areas of Venango County in the event of the need to open shelters.	2	3	2	2	3	2.4
13	Publicize locations of shelters with improved shelter signage and through public information campaigns.	2	3	2	2	3	2.4
17	Review and update all annexes of the Venango County Emergency Operations Plan. Encourage participation from all municipalities in update process.	3	2	3	2	2	2.4
12	Venango County Emergency Services Director to develop and make available information to all county residents, through community groups and/or publications, information on how to shelter in place and when it is appropriate to do so.	2	2	3	2	3	2.3
35	When funds become available for mitigation projects, the county plans to hold meetings to identify high-risk properties in the county and to determine potential participation in future acquisition and relocation projects.	3	2	2	3	2	2.3
20	Development of a data base in existing hazard GIS system of all repetitive loss properties in the County to be used in future mitigation activities.	3	2	1	3	3	2.3

Table 6.4-2 2020 HMP Prioritization of Mitigation Actions							
Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
24	Conduct a Hazardous Materials Survey to identify all hazardous materials that are either stored or traveling through the County and its municipalities.	3	2	1	3	3	2.3
32	Remove repetitive loss structures on Sage Run in Oil City and Cranberry Township.	3	2	1	3	3	2.3
5	Public Speaking series to include topic such as types of natural disasters and risks, how to develop a family disaster plan, how to develop a family disaster supply kit, how to develop a business continuity plan, simple types of mitigation projects for homeowners, etc. These speaking engagements will be offered to civic groups such as Rotary and Kiwanis Clubs, the Chamber of Commerce, Church and interfaith groups, etc.	2	2	3	2	2	2.2
14	Provide CERT classes to interested citizens in Venango County to assist first responders at specified emergencies throughout the county. Project Impact Coordinator to take the CERT Train the Trainer Course to assist with training in the County. Additional trainers need to attend future Train the Trainer Courses.	2	2	3	2	2	2.2
25	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.	3	2	2	2	2	2.2
26	Planning department and applicable municipal offices to review their comprehensive plans to ensure that designated growth areas are not in high hazard areas identified in this plan.	3	2	2	2	2	2.2

Table 6.4-2 2020 HMP Prioritization of Mitigation Actions							
Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
39	Implement redundancy in critical infrastructure, should a disaster occur that it does not affect all residents and/or businesses (water, sewer, transportation (traffic management), electric, natural gas pipelines, communications (Public and Emergency Services).	2	1	3	3	3	2.2
22	As part of the plan maintenance process, assess how effective mitigation strategy actions are at mitigating losses through a review of the qualitative and quantitative benefits (or avoided losses) of each action.	2	2	3	3	1	2.2
1	To develop a "how to" mitigation display that can be used at special events. This display would include pictures and information, such as that contained in FEMA's Retrofitting for Homeowners Guide, Elevating Your Flood prone Home, Elevating Residential Structures, and Information on the NFIP.	1	2	3	3	2	2.1
23	Contact representatives of rail lines to collect information about emergency planning and risks associated with rail services in the County.	2	2	2	3	2	2.1
29	Identify and mitigate areas of frequent flooding	3	2	1	3	2	2.1
34	Identify and mitigate frequently flooded roads.	3	2	1	3	2	2.1

Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
21	When funds become available for hard mitigation projects, we plan to hold a series of public meetings with the owners of repetitive loss properties in high-risk areas. These meetings will also be used to identify high-risk properties in the unincorporated areas of the County and to determine potential participation in future acquisition and relocation projects.	2	2	1	3	3	2.1
43	Work with local volunteer fire departments and county EMA to identify areas of high value/high wildfire risk and work to implement Firewise mitigation strategies.	2	3	1	2	2	2.1
4	Send news releases to local newspapers, radio and TV stations about pre-disaster information. Design to reach all areas of Venango County.	2	2	3	2	1	2.1
6	The American Red Cross will continue to hold a variety of courses, including: Adult and Child CPR, Basic First Aid, Introduction to Disaster Services, Mass Care, Shelter Operations and others at the Red Cross Office and at other locations throughout the County.	3	2	2	2	1	2.1
15	To meet with groups of potential volunteers to attempt increase the number of trained responders for: All County Fire Departments, doctors and nurses who may become first responders in a bio-terrorism event, EMS personnel, etc. Will benefit all areas of Venango County.	2	2	3	2	1	2.1
19	To work with FEMA and PEMA to get updated repetitive loss information on properties in the County and in the municipalities in order to plan future mitigation activities.	2.5	2	1	3	2	2.1

Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
37	County to work with DEP, conservation agencies, and others, to research avenues for restoring degraded natural resources and open space to improve their flood control functions.	2.5	2	1	3	2	2.1
8	Property owners will be notified in an annual municipal newsletter to be prepared for all natural disasters.	1	2	3	3	1	2
11	Establish a committee representative of all areas of the County that will include vets, pet store owners, the Humane Society, animal shelters, the Extension Service and other interested parties to work on animal-specific evacuation and sheltering needs.	2	2	2	2	2	2
27	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.	2	2	2	2	2	2
28	Encourage applicable municipal offices to review their capital improvement plans to ensure that programmed infrastructure improvements are not in high hazard areas.	2	2	2	2	2	2
33	Work with DEP, conservation agencies, park and recreation organizations, wildlife groups and other appropriate agencies to collect information of the number and location of natural resource areas throughout the County.	2	2	2	2	2	2
38	Mitigate repetitive loss properties associated with flood sources: Chubbs, Davis, and Smith Runs.	3	2	1	3	1	2
22	Work with municipal leaders to identify roadways with frequent flooding. Share information with PennDOT and work cooperatively to develop strategies to mitigate the identified problems.	2	2	1	3	2	1.9

Table 6.4-2 2020 HMP Prioritization of Mitigation Actions							
Mitigation Actions		Multi-Objective Mitigation Action Prioritization Criteria					
		Low = 0-1.8 Medium = 1.9-2.4 High = 2.5-3					
NO.	Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Total Score
30	Venango County EMA to arrange with FEMA/DCED to conduct training on the Community Rating System (CRS) for municipalities with highest number of policies.	2	2	1	3	2	1.9
3	Create displays for children's programs that teach safety. Examples of information to be used would be similar to that on the FEMA for Kids CD and/or the Sparky Fire Safety Program.	1	2	3	2	1	1.8
36	Review and update all annexes the City of Franklin's Emergency Operations Plan.	1	2	2	2	2	1.8
41	Issue press release prior to spring (or fall) wildfire season.	2	2	1	2	2	1.8
42	Consider developing a Community Wildfire Protection Plan.	2	2	1	2	2	1.8
40	Develop a "how to protect a home from wildfires" display with information on defensible space and Firewise.	1.5	2	1	2	2	1.7
2	To develop an Animals In Disaster Display that will be used at 4-H Clubs, Agricultural Fair, in Veterinarians Offices and other places that animal owners may gather. The display will have information about preparing animals for disasters by making a disaster plan and a disaster supply kit for each animal. The display will encourage animal owners to decide ahead of time where animals will be sheltered and to familiarize them with the County's Animals in Disaster Annex of the Emergency Operations Plan.	1	2	2	2	1	1.6

7 Plan Maintenance

7.1 *Update Process Summary*

Monitoring, evaluating, and updating this plan is critical to maintaining its value and success in Venango County's hazard mitigation efforts. Ensuring effective implementation of mitigation activities paves the way for continued momentum in the planning process and gives direction for the future. This section explains who will be responsible for maintenance activities and what those responsibilities entail. It also provides a methodology and schedule of maintenance activities including a description of how the public will be involved on a continued basis.

7.2 *Monitoring, Evaluating and Updating the Plan*

The Planning Team established for the 2020 HMP is designated to lead plan maintenance processes of monitoring, evaluation and updating with support and representation from all participating municipalities. The Planning Team will coordinate maintenance efforts, but the input needed for effective periodic evaluations will come from community representatives, local emergency management coordinators and planners, the general public, and other important stakeholders. The Planning Team will oversee the progress made on the implementation of action items identified in the 2020 HMPU and modify actions, as needed, to reflect changing conditions. The Planning Team will meet annually on the first Thursday of May (whenever possible) to discuss specific coordination efforts that may be needed with other stakeholders. These meetings will be open to the public and invitations to will be extended to Municipalities, emergency management coordinators, other planning team members. Meetings will be announced and publicized to attract stakeholder participation. Meeting minutes will be generated after each annual meeting. Meeting minutes will also be sent to PEMA and FEMA Region 3 to keep them informed of any changes to or progress made on the plan. In addition, it will also serve in an advisory capacity to the Venango County Board of Commissioners and the Planning Commission.

Each municipality will designate a community representative to monitor mitigation activities and hazard events within their respective communities. The local emergency management coordinator would be suitable for this role. This individual will be asked to work with the Planning Team to provide updates on applicable mitigation actions and feedback on changing hazard vulnerabilities within their community.

Periodic evaluations of the 2020 HMP will take place as deemed necessary by the Planning Team during its annual meeting, but no fewer than once every two years. Evaluations of the 2020 HMP will not only include an investigation of whether mitigation actions were completed, but also an assessment of how effective those actions were in mitigating losses. A review of the qualitative and quantitative benefits (or avoided losses) of mitigation activities will support this assessment. Results of the evaluation will then be compared to the goals and objectives established in the plan and decisions will be made regarding whether actions should be discontinued or modified in any way in light of new developments in the community. Progress will be documented by the Planning Team for use in the 2020 HMP update and submitted to the Board of Commissioners.

The 2020 HMP will be updated every five years, as required by the Disaster Mitigation Act of 2000, or following a disaster event. Future plan updates will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. During the five-year review process, the following questions will be considered as criteria for assessing the effectiveness the Venango HMP:

- Has the nature or magnitude of hazards affecting the County changed?
- Are there new hazards that have the potential to impact the County?
- Do the identified goals and actions address current and expected conditions?
- Have mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the Plan?
- Should additional local resources be committed to address identified hazards?

Issues that arise during monitoring and evaluation which require changes to the risk assessment, mitigation strategy, and other components of the plan will be incorporated during future updates.

7.3 *Continued Public Involvement*

As was done during the development of the 2020 HMP, the HMPT will involve the public during the evaluation and update of the HMP through various workshops and meetings. The public will have access to the current HMP through their local municipal office, the Venango County Planning Commission, or the Venango County Emergency Management Agency. Information on upcoming events related to the HMP or solicitation for comments will be announced via newsletters, newspapers, mailings, and the County website. The public is encouraged to submit comments on the HMP at any time. The HMPT will incorporate all relevant comments during the next update of the HMP.

8 Plan Adoption

The Plan was submitted to the Pennsylvania Emergency Management Agency for review on MONTH XX, XXXX then to FEMA for review on MONTH XX, XXXX. This section of the plan includes copies of the local adoption resolutions passed by Venango County and its municipal governments; the completed Local Mitigation Plan Review Tool can be found in Appendix B. Adoption resolution templates are provided to assist the County and municipal governments with recommended language for future adoption of the HMP.

Table 8.1-1 lists the municipalities that participated in the HMP update planning process and are eligible to adopt the approved HMP.

Table 8.1-1 Adoption date of the Venango County Hazard Mitigation Plan Update by local jurisdictions	
Jurisdiction	2020 HMPU Adoption Date
Allegheny Township	
Barkeyville Borough	
Canal Township	
Cherrytree Township	
Clintonville Borough	
Cooperstown Borough	
Cornplanter Township	
Cranberry Township	
Emlenton Borough	
Franklin, City of	
Frenchcreek Township	
Jackson Township	
Mineral Township	
Oakland Township	
Oil City, City of	
Plum Township	
Polk Borough	
President Township	
Richland Township	
Rockland Township	
Rouseville Borough	
Sandycreek Township	
Sugarcreek Borough	
Utica Borough	
Victory Township	

**Venango County 2020 Hazard Mitigation Plan
County Adoption Resolution**

Resolution No. _____
Venango County, Pennsylvania

WHEREAS, the municipalities of Venango County, Pennsylvania are most vulnerable to natural and human-made hazards which may result in loss of life and property, economic hardship, and threats to public health and safety, and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval to the President a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities, and

WHEREAS, Venango County acknowledges the requirements of Section 322 of DMA 2000 to have an approved Hazard Mitigation Plan as a prerequisite to receiving post-disaster Hazard Mitigation Grant Program funds, and

WHEREAS, the Venango County 2020 Hazard Mitigation Plan has been developed by the Venango County Department of Public Safety and the Venango County Department of Planning in cooperation with other county departments, local municipal officials, and the citizens of Venango County, and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Venango County 2020 Hazard Mitigation Plan, and

WHEREAS, the Venango County 2020 Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by both natural and human-made hazards that face the County and its municipal governments,

NOW THEREFORE BE IT RESOLVED by the governing body for the County of Venango that:

- The Venango County 2020 Hazard Mitigation Plan is hereby adopted as the official Hazard Mitigation Plan of the County, and
- The respective officials and agencies identified in the implementation strategy of the Venango County 2020 Hazard Mitigation Plan are hereby directed to implement the recommended activities assigned to them.

ADOPTED, this _____ day of _____, 2021

ATTEST:

VENANGO COUNTY COMMISSIONERS

By _____

By _____

By _____

**Venango County 2020 Hazard Mitigation Plan
Municipal Adoption Resolution**

Resolution No. _____

<Borough/Township of Municipality Name>, Venango County, Pennsylvania

WHEREAS, the <Borough/Township of Municipality Name>, Venango County, Pennsylvania is most vulnerable to natural and human-made hazards which may result in loss of life and property, economic hardship, and threats to public health and safety, and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval to the President a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities, and

WHEREAS, the <Borough/Township of Municipality Name> acknowledges the requirements of Section 322 of DMA 2000 to have an approved Hazard Mitigation Plan as a prerequisite to receiving post-disaster Hazard Mitigation Grant Program funds, and

WHEREAS, the Venango County 2020 Hazard Mitigation Plan has been developed by the Venango County Department of Public Safety and the Venango County Department of Planning in cooperation with other county departments, and officials and citizens of <Borough/Township of Municipality Name>, and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Venango County 2020 Hazard Mitigation Plan, and

WHEREAS, the Venango County 2020 Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by both natural and human-made hazards that face the County and its municipal governments,

NOW THEREFORE BE IT RESOLVED by the governing body for the <Borough/Township of Municipality Name>:

- The Venango County 2020 Hazard Mitigation Plan is hereby adopted as the official Hazard Mitigation Plan of the <Borough/Township>, and
- The respective officials and agencies identified in the implementation strategy of the Venango County 2020 Hazard Mitigation Plan are hereby directed to implement the recommended activities assigned to them.

ADOPTED, this _____ day of _____, 2021

ATTEST:

<BOROUGH/TOWNSHIP OF MUNICIPALITY NAME>

By _____

By _____

By _____

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http://www.who.int/csr/don/2010_04_09/en/index.html.

Appendix B Local Plan Review Tool with Optional HHPD

LOCAL MITIGATION PLAN REVIEW TOOL HHPD FY2020

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA’s evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan’s strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: Venango County, Pennsylvania	Title of Plan: Venango County 2020 Hazard Mitigation Plan	Date of Plan: December 7, 2020
Local Point of Contact: Jason Ruggiero		Address: 1168 Liberty Street Franklin, PA 16323
Title: Executive Director		
Agency: Venango County Regional Planning Commission		
Phone Number: 814-432-9682		
		E-Mail: juggiero@co.venango.pa.us

State Reviewer: Ernest Szabo	Title: State Hazard Mitigation Planner	Date: 12/9/2020
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FEMA Reviewer: Joseph A. Bucovetsky	Title: Community Planner	Date: Feb. 12, 2021
Date Received in FEMA Region <i>(insert #)</i>	Dec. 31, 2020	
Plan Not Approved	Revisions required	
Plan Approvable Pending Adoption		
Plan Approved		

**SECTION 1:
REGULATION CHECKLIST**

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been ‘Met’ or ‘Not Met.’ The ‘Required Revisions’ summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is ‘Not Met.’ Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST		Location in Plan		Not
Regulation (44 CFR 201.6 Local Mitigation Plans)		(section and/or page number)	Met	Met
ELEMENT A. PLANNING PROCESS				
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 3 Section 4.1 Section 5.1			X
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Sections 3.2, 3.3 & 3.4 Appendix C	X		
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Sections 3.3 & 3.4 Appendix C			X
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Sections 2.4 & 2.5 Section	X		
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 7.3	X		
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 7.2	X		

ELEMENT A: REQUIRED REVISIONS

REQUIRED REVISION:

Table 4.2.2-1 (note that this table may be may be mis-numbered) on page 36 lists all 31 municipalities in the county and provides data on participation of the respective municipalities in meetings/workshops held as part of the Hazard Mitigation Plan (HMP) preparation process and completion of forms associated with that process by municipalities. Based on the minimum standards applied by FEMA Region 3 for municipalities to qualify as 'participating' in a multi-jurisdictional HMP process (attendance at one meeting/workshop and completion and submission of one form), there appear to be 15 municipalities that do not qualify as participating in this HMP preparation process.

Please provide a narrative in the Planning Process chapter that describes the circumstances surrounding the participation of the 31 municipalities in the Venango County HMP preparation process and the benefits for municipalities that do participate. Also provide 2 lists (this may be in the form of a single table) noting the names of: 1) Venango County HMP participating municipalities, and 2) Venango County HMP non-participating municipalities.

Additional narrative has been provided regarding the outreach efforts of the Planning Team (pg. 36)

Updated the table 3.5.1 to increase transparency: A row was added at the bottom of the table to display the total number of municipalities that attended each meeting and the total number of municipalities that returned each form. A column was added on the right of the table to indicated which municipalities met the participation requirement. To address the comment about seeing who participated in the table, we have also color-coded participating municipalities in green and non-participating in white. (pg. 38 & 39)

REQUIRED REVISION:

Section 3.3, Meetings and Documentation, describes the basic program for each meeting but does not provide information about input by participants. *What Was on People's Minds?* Please Include a summary of input from participants at meetings or following meetings. The summary should include questions asked, issues raised, information volunteered, concerns voiced, etc. on the part of residents, business operators, and other attendees.

Discussion of stakeholder concerns was added to the narrative (pg. 33 & 34). Most municipalities raised their questions and concerns by completing worksheets.

REQUIRED REVISION:

According to the last paragraph of Section 2.5, "Table 2.5-1 summarizes the critical facilities in Venango County by type and by municipality", but this table appears to be missing from the document. Please provide the missing table.

Table 2.5-1 Added. Title 'Venango County Critical Facilities by Municipality and Type' (pg.27 & 28)

REQUIRED REVISION:

The last paragraph of Section 3.5 mentions *Table 3.1-1* and *Table 3.5-1*, but neither appear to be present in the document. Please provide the missing tables.

Updated table number and changed references to misnumbered tables to 3.5-1 (pg. 37)

REQUIRED REVISION:

Within Section 3.2 is a table called out as 2.1-1. Please correct the numbering as it appears that this should be Table 3.2-1. Also within Section 3.2 is a table called out as 3.2-1. Assuming the table preceding is renumbered, then this table should become 3.2-2.

Table numbers have been updated and references to the tables have been updated (pg. 30).

Recommended Revision: Neither the current (2015) Hazard Mitigation Plan (HMP) nor the draft 2020 HMP appear to be on the Venango County website. Considering that the major shortcoming of the 2020 HMP may be the failure of the planning process to sufficiently engage 15 municipalities (almost 50% of the total) so that they could be deemed 'participating' and therefore would be able to adopt the Plan and then be

eligible for FEMA funding of mitigation projects, the County should review its methods of engagement and start laying the groundwork now for a robust outreach for the next Plan update. Among the methods to consider is a prominent presence of the HMP on the County's website.

Venango County Emergency Management will work with the County to have the APA Plan posted to the County website and Emergency Management website.

Recommended Revision: The County is to be commended for completing a draft Executive Summary, but the role of it in the promulgation of the Hazard Mitigation Plan (HMP) is not clear. It isn't referenced in the HMP's Table of Contents. How does the County envision using the Executive Summary? The County should consider it both as a prominent free-standing image and link on the County website home page and as the first section of the full HMP document.

The Executive Summary is not in the TOC of the full HMP because it's treated as a separate document. The County EMA will upload the Summary to the County website as an easy read for participants to understand the HMP.

Recommended Revision: The Executive Summary mentions that "CRS communities may be able to gain points for decreased insurance costs", an odd insertion into the first paragraph of the Executive Summary in that no Venango County municipalities participate in the Community Rating System and the term *CRS* is unlikely to be known to readers of the document (the term is not explained anywhere in the Executive Summary). Reference to CRS should probably not be a part of the Overview part of the Executive Summary and, if mentioned at all, should be part of a more detailed explanation of the program in the latter part of the Executive Summary, including mention of the fact that no Venango County municipalities currently participate in the program although it might be a good idea if they did.

Text referencing CRS has been removed.

Recommended Revision: FEMA encourages public participation in the plan maintenance process. Techniques that can be employed in support of eliciting public interest and participation include inviting members of the public to annual meetings of the Planning Team (annual Planning Team meetings are described in Section 7.2). These annual meetings should be open to the public, including public comment, and would entail advertising and outreach for the public. Section 7.2 may be strengthened by mentioning that annual Planning Team meetings will be advertised to the public. In addition, a summary report on each annual Planning Team meeting should be prepared and sent to PEMA and FEMA Region 3.

Text added on page 244 noting that annual update meetings will be open to the public and invites will be sent as well as announced and publicized to get additional public participation.

Recommended Revision: Section 2.2, *Community Facts*, could be made stronger by providing specific information on the major employers in the county, including business name, type of business, and number of employees.

Description of major employers and the industry/type of business was added to section 2.2 on pages 14 and 15.

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT				
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	Section 4.3	X		
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Sections 4.3.X.3 Sections 4.3.X.4	X		
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Sections 4.3.X.5 Sections 4.4.2, 4.4.3, 4.4.4	X		
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Section 4.3.3.3 p.72-73	X		

1. REGULATION CHECKLIST

Regulation (44 CFR 201.6 Local Mitigation Plans)

Location in Plan
(section and/or
page number)

Met Not
Met Met

ELEMENT B: REQUIRED REVISIONS

REQUIRED REVISION:

Please add a strong graphic line outlining the county on Figure 4.3.9-2

Graphic replaced with new map with strong outline of Venango County boundary. (pg. 129)

Recommended Revision: Tables such as Table 4.3.11-5, Critical Facilities Vulnerable to Environmental Hazards, do a good job in communicating through accurate titling and clear column headings (the title states that the table is about critical facilities and all of the column headings state they are about critical facilities). In contrast, titles and presentation of some tables could be improved to convey their information more clearly. Table 4.3.9-3 is titled Structures vulnerable to Wildfires by Generalized Land Use Type, but the first column presents data that are not covered by the title of the table. A better title for the table might be Total Structures by Municipality and Structures Vulnerable to Wildfires by Generalized Land Use Type.

Similarly, the vertical line separating the first column from the second might be a stronger graphic line to clearly differentiate information presented in the first column (Total Structures by Municipality) from information presented in the rest of the table (Structures Vulnerable to Wildfires by Generalized Land Use Type). Other tables that could benefit from comparable improvements to their titles, column headings, and layout include Tables 4.3.11-3 and 4.3.11-4.

Table 4.3.9-3 (pg 136) title changed to "Total Structures by Municipality and Structures Vulnerable to Wildfires by Generalized Land Use Type". The last column of the table was changed to "Total Structures Vulnerable to Wildfire" A heavier line weight used to differentiate between the Total Structures by Municipality column and the columns to the right of that.

Similar adjustments for easier reading were made to tables 4.3.9-2 (pg 134), 4.3.11-4 (pg 154), 4.3.11-5 (pg 156), 4.3.11-6 (pg 159).

Recommended Revision: Appendix D, Community Flood Vulnerability Maps, is valuable content in the HMP, as these maps, particularly with their identification of structures in the Special Flood Hazard Area (SFHA), can provide a significant resource to municipalities and the County in identifying mitigation projects. However, the order that the maps appear in the Appendix is difficult to discern. Consider putting the maps in alphabetical order by municipal name, or, if there is another ordering mechanism at work here, let the reader know what that is at the beginning of the Appendix.

We have revised the maps to appear in alphabetical order by jurisdiction name.

ELEMENT C. MITIGATION STRATEGY

C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))

Section 5.2

X

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 5.2.1.3	X		
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 6.1 & 6.2	X		
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 6.4 Table 6.4.1			X
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 6.4 pgs. 227-234	X		
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Sections 5.2.2, 5.2.3 & 5.2.4	X		
<u>ELEMENT C: REQUIRED REVISIONS</u>				
REQUIRED REVISION:				
Table 6.1.2-1, <u>Review of Previous Mitigation Actions</u> , provides 4 columns in which <i>Status</i> entries may be made, but the majority of the <i>Mitigation Action</i> row entries have no corresponding <i>Status</i> entries. Please provide a <i>Status</i> entry for each <i>Mitigation Action</i> . If the current available <i>Status</i> options are inadequate to describe the situation with one or more <i>Mitigation Actions</i> , then provide additional <i>Status</i> columns or change the headings of one or more current <i>Status</i> columns.				
The County reviewed and provided additional status updates where possible. We added a column to the right of the table to note actions that did not have an update provided. Additional detail on the status of mitigation projects can be found on the County's mitigation action review in Appendix C.				
REQUIRED REVISION:				
The discussion of Funding Sources in Section 5.2.4 includes a paragraph describing FEMA's Pre-Disaster Mitigation (PDM) Program, but this is a program that is being phased out, having been effectively replaced by FEMA's Building Resilient Infrastructure and Communities (BRIC) Program. Please remove the description of PDM and substitute a description of BRIC.				
We removed the PDM description removed and replaced with a high-level description of the BRIC program. (pg. 195)				
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)				

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Section 2.4 Section 2.5 Sections 4.3.X.1 (Location and Extent) Section 4.4.4	X		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Section 6.1.2	X		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Sections 6.1 & 6.4	X		
<u>ELEMENT D: REQUIRED REVISIONS</u>				
ELEMENT E. PLAN ADOPTION				
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))				
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))				
<u>ELEMENT E: REQUIRED REVISIONS</u>				
OPTIONAL: HIGH HAZARD POTENTIAL DAM RISKS				
HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for eligible high hazard potential dams?	Appendix H Dam Failure	X		
HHPD2. Did Element B3 (risk assessment) address eligible high hazard potential dams in the risk assessment?	Appendix H Dam Failure			X
HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from eligible high hazard potential dams that pose an unacceptable risk to the public?	Section 6.2 Table 6.2-1	X		
HHPD4. Did Elements C4-C5 (mitigation actions) address HHPDs prioritize mitigation actions to reduce vulnerabilities from eligible high hazard potential dams that pose an unacceptable risk to the public?	Section 6.4 Table 6.4-1	X		

REQUIRED REVISIONS TO MEET THE OPTIONAL HIGH HAZARD POTENTIAL DAMS REQUIREMENTS

Appendix G, Dam Failure Profile, presents some information on dams in the county, but does not explicitly link the significance of High Hazard Potential Dams (HHPDs) in hazard mitigation planning to those dams in the county qualifying as HHPDs. The narrative in Section 4.3.11.1 does mention the number 3 in terms of location and extent, but does not identify the 3 HHPDs by name. Table 4.3.11 lists 8 dams by name and provides some additional information germane to each dam, but does not identify explicitly which are HHPDs. Figure 4.3.11-1 maps dams, but doesn't represent HHPDs specifically.

Updated Section 4.3.11.1 language on pg G-2 as well as Table 4.3.11-1 to list C-1 and B-1 dams by name. Highlighted HHPDs in red in table 4.3.11-1..

FEMA has a grant program to implement the rehabilitation of HHPDs. To be eligible for funding under this program, a jurisdiction's Hazard Mitigation Plan must have a certain level of detail on HHPDs and their risks. Should Venango County or any of its local jurisdictions be interested in applying for a HHPD grant in the future, the Hazard Mitigation Plan would first need to contain the required level of detail about the HHPDs. This detail should include the following elements:

- A list or inventory of HHPDs, with information on the date and type of construction, noteworthy milestones since initial construction, current circumstances, and management and maintenance protocols;
The County has reached out to dam owners and will update the plan with this data as it is received.
- A map identifying the location of the HHPDs within the planning area; **Figure 4.3.11-1 (pg. G-2)**
- A description of the method used to assess the risk to the HHPDs; **Section 4.3.11.5 (pg. G-4)**
- A summary description of the risk-based priority system;
Text was added to the end of section 4.3.11.5 to illustrate how priority was established for mitigation project funding. (pg. G-6)
- A summary of jurisdiction-specific vulnerabilities that includes:
 - Information regarding cascading impacts of seismic events, landslides, wildfires, and other hazards on dams that might affect up and downstream flooding potential (breach, non-breach, and residual risk);
 - Significant economic, environmental, or social impacts as well as multi-jurisdictional impacts from a dam incident;
 - Location and size of populations at risk (PAR) from HHPDs; **Table 4.3.11-4 (pg. G-6)**
 - Potential dam failure impacts to institutions and critical infrastructure;
 - The risk identification methodology and/or assumptions for risk data and inundations;
 - The documentation of limitations and the approach to address deficiencies.

Reference to Impacts of a Two-Mile Run Dam Failure: The reference in the last paragraph of the narrative of Section 4.3.11.2 to *Table 4.3.11-1* and *Figure 4.3.11-1* appears to be misplaced. In fact, the potential failure of Two-Mile Run dam is presented, at least in terms of a *Vulnerable Population* number, in Table 4.3.11-4.

The reference in the text changed to Table 4.3.11-4 and the reference to a figure was removed. (pg. G-6)

Reference to a Section 4.3.13.5: The 3rd paragraph in the narrative of Section 4.3.11.1 refers to a *Section 4.3.13.5*, but no such section appears to be present in the document.

Reference in text changed to 4.3.11.5. (pg. G-1)

1. REGULATION CHECKLIST	Location in Plan (section and/or page number)	Met	Not Met
<p>Regulation (44 CFR 201.6 Local Mitigation Plans)</p> <p><u>Reference to Tables 4.3.13-1 and 4.3.13-2:</u> The 5th paragraph in the narrative of Section 4.3.11.1 refers to <i>Tables 4.3.13-1 and 4.3.13-2</i>, but no such tables appear to be present in the document.</p> <p>Reference in the narrative corrected to reflect the appropriate tables, 4.3.11-2 and 4.3.11-3. (pg. G-1 & G-2)</p> <p>Recommended Revision: The title of Table 4.3.11 is awkward. Consider changing it to <u>Venango County Dams</u>.</p> <p>The title of the table changed to “Venango County Dams” (pg. G-1)</p>			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
<u>ELEMENT F: REQUIRED REVISIONS</u>			

SECTION 2: PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

How does the Plan go above and beyond minimum requirements to document the planning process with respect to:

- *Involvement of stakeholders (elected officials/decision makers, plan implementers, business owners, academic institutions, utility companies, water/sanitation districts, etc.);*
- *Involvement of Planning, Emergency Management, Public Works Departments or other planning agencies (i.e., regional planning councils);*
- *Diverse methods of participation (meetings, surveys, online, etc.); and*
- *Reflective of an open and inclusive public involvement process.*

Element B: Hazard Identification and Risk Assessment

In addition to the requirements listed in the Regulation Checklist, 44 CFR 201.6 Local Mitigation Plans identifies additional elements that should be included as part of a plan's risk assessment. The plan should describe vulnerability in terms of:

- 1) *A general description of land uses and future development trends within the community so that mitigation options can be considered in future land use decisions;*
- 2) *The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and*
- 3) *A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.*

How does the Plan go above and beyond minimum requirements to document the Hazard Identification and Risk Assessment with respect to:

- *Use of best available data (flood maps, HAZUS, flood studies) to describe significant hazards;*
- *Communication of risk on people, property, and infrastructure to the public (through tables, charts, maps, photos, etc.);*
- *Incorporation of techniques and methodologies to estimate dollar losses to vulnerable structures;*
- *Incorporation of Risk MAP products (i.e., depth grids, Flood Risk Report, Changes Since Last FIRM, Areas of Mitigation Interest, etc.); and*
- *Identification of any data gaps that can be filled as new data became available.*

Element C: Mitigation Strategy

How does the Plan go above and beyond minimum requirements to document the Mitigation Strategy with respect to:

- *Key problems identified in, and linkages to, the vulnerability assessment;*
- *Serving as a blueprint for reducing potential losses identified in the Hazard Identification and Risk Assessment;*
- *Plan content flow from the risk assessment (problem identification) to goal setting to mitigation action development;*
- *An understanding of mitigation principles (diversity of actions that include structural projects, preventative measures, outreach activities, property protection measures, post-disaster actions, etc);*
- *Specific mitigation actions for each participating jurisdiction that reflects their unique risks and capabilities;*
- *Integration of mitigation actions with existing local authorities, policies, programs, and resources; and*
- *Discussion of existing programs (including the NFIP), plans, and policies that could be used to implement mitigation, as well as document past projects.*

Element D: Plan Update, Evaluation, and Implementation (Plan Updates Only)

How does the Plan go above and beyond minimum requirements to document the 5-year Evaluation and Implementation measures with respect to:

- *Status of previously recommended mitigation actions;*
- *Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with possible solutions for overcoming risk;*
- *Documentation of annual reviews and committee involvement;*
- *Identification of a lead person to take ownership of, and champion the Plan;*
- *Reducing risks from natural hazards and serving as a guide for decisions makers as they commit resources to reducing the effects of natural hazards;*
- *An approach to evaluating future conditions (i.e. socio-economic, environmental, demographic, change in built environment etc.);*
- *Discussion of how changing conditions and opportunities could impact community resilience in the long term; and*
- *Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.*

B. Resources for Implementing Your Approved Plan

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following:

- *What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance (HMA)) to the jurisdiction(s) to assist with implementing the mitigation actions?*
- *What other Federal programs (National Flood Insurance Program (NFIP), Community Rating System (CRS), Risk MAP, etc.) may provide assistance for mitigation activities?*
- *What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?*
- *Are there upcoming trainings/workshops (Benefit-Cost Analysis (BCA), HMA, etc.) to assist the jurisdictions(s)?*
- *What mitigation actions can be funded by other Federal agencies (for example, U.S. Forest Service, National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA) Smart Growth, Housing and Urban Development (HUD) Sustainable Communities, etc.) and/or state and local agencies?*

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)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
1	Allegheny	Township	Ms. Patricia Butler	PO Box 269 15969 Tionesta Rd Pleasantville, PA 16341	alleghenytwp@csonline.net	814-589-1518	X					
2	Barkeyville	Borough	Mayor Phyllis Whetzel	5404 Pittsburgh Rd Harrisville, PA 16038	barkeyvilleboro@zoominternet.net	814-786-7280						
3	Canal	Township	Supervisor Homer Hallabaugh	1689 Old Rte 322 Utica, PA 16362	djmcanal@peoplepc.com	814-425-8127						
4	Cherrytree	Township	Ms. Christine Kurelowech	1311 Cherrytree Rd Titusville, PA 16354	cherrytreetwp@zoominternet.net	814-827-1078	X					
5	Clinton	Township	Mr. Ben Porter	P.O. Box 291 Kennedrell, PA 16374		814-385-6227	X	X	X	X		
6	Clintonville	Borough	President Jim Bollinger	P.O. Box 71 Clintonville, PA 16372	clintonvilleboro@yahoo.com	814-385-6111						

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/township/village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
7	Cooperstown	Borough	Mayor Jeffrey Mayer	220 Factory St Cooperstown, PA 16317		814-374-4909						
8	Cornplanter	Township	Mr. Timothy Straub	1226 State Rte 227 Oil City, PA 16301	<a href="mailto:khopkins.corn
twp@zoominternet.net">khopkins.corn twp@zoominternet.net	814-676-1744	X	X	X	X		
9	Cranberry	Township	Mr. Chad Findlay	122 Meadow Church Rd Seneca, PA 16346		814-676-3495	X		X			
10	Emlenton	Borough	Ms. Nancy Marano	P.O. Box 514 Emlenton, PA 16373	emlentonborough@embarqmail.com	724-867-8611	X	X	X	X		
11	Franklin	City	Mayor Douglas Baker	430 Thirteenth Street Franklin, PA 16323	info@franklin.pa.gov	814-437-1485	X	X	X	X		
12	Frenchcreek	Township	Mr. Bob Jamieson	4507 Georgetown Rd Franklin, PA 16323	frenchcreektp@zoominternet.net	814-437-6625	X			X		
13	Irwin	Township	Mr. Frederick Emmett	659 Old Route 8 Harrisville, PA 16038	irwintownship@zoominternet.net	814-786-9718	X		X			
14	Jackson	Township	Supervisor James Schwimmer	183 Sandstone Drive Franklin, PA 16323	jlstrawbridge124@gmail.com	814-374-4167						
15	Mineral	Township	Mr. Fred Krizinsky Sr.	1304 Raymilton Road Polk, PA 16342	mineraltownship@yahoo.com	814-437-3682	X					
16	Oakland	Township	Mayor George Flockerzi Jr.	2122 Creek Road Cooperstown, PA 16317	oaklandtwp@gmail.com							
17	Oil City	City	Mayor William Moon	21 Seneca Street Oil City, PA 16301	wpmoonjr@verizon.net	814-677-5601	X	X	X	X		

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/township/village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
18	Oil Creek	Township	Mr. Gordon Cook	17283 Bugtown Rd Pleasantville, PA 16341	oilcreek-twpven@verizon.net	814-589-5141						
19	Pinegrove	Township	Ms. Jane Whitling	583 Keister Rd Venus, PA 16364	pinegrovetwp@venustel.com	814-354-2843	X	X		X		
20	Pleasantville	Borough	Mayor Martha Long	137 East State St Pleasantville, PA 16341	pboro@csonline.net	814-589-7432	X		X	X		
21	Plum	Township	Ms. Jody Davison	223 Williams Rd Cooperstown, PA 16317	plumtwp@yahoo.com	814-374-4214	X	X	X			
22	Polk	Borough	Mayor Dave Owens	202 1/2 McClelland Ave Polk, PA 16342	Polkboro@gmail.com	814-432-3484	X			X		
23	President	Township	Mr. James Kitlinger	1645 Walnut Bend Rd Oil City, PA 16301		814-676-6787						
24	Richland	Township	Mr. David Whitehill	2660 Nickleville Rd Emlenton, PA 16373	richlandven@windstream.net	814-498-2893	X	X	X	X		
25	Rockland	Township	Mr. Terry Hunsberger	673 JoRoadan Hill Rd Kennedrell, PA 16374	rtoaddistrict@windstream.net	814-498-2768	X	X	X			
26	Rouseville	Borough	Ms. Millisia Smith	64 Main St P.O. Box 317 Rouseville, PA 16344	rouseville@verizon.net	814-677-3056	X		X	X		
27	Sandycreek	Township	Mr. Bob Jamieson	189 Pone Ln Franklin, PA 16323	sandycreektwp@verizon.net	814-432-3372	X					

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/township/village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
28	Scrubgrass	Township	Mr. Richard Cornelius	135 Coltsfoot Rd Emlenton, PA 16373		814-385-6123	X	X		X		
29	Sugarcreek	Borough	Mr. Charles McDaniel	291 Sleepy Hollow Dr Franklin, PA 16323	manager@sugarcreekborough.us	814-432-4717						
30	Utica	Borough	Ms. Marian Murphy	P.O. Box 174 Utica, PA 16362	uticaborough@gmail.com	814-425-2156	X	X	X	X		
31	Victory	Township	Mr. Jim Fryman	1291 Dennison Run Rd Polk, PA 16342		814-437-2160						

Appendix C Meeting and Other Participation Documentation

1. **Stakeholder and Municipality Contact List** (Invitations were sent to entire list for all meetings)
 - a. Stakeholder Contact List
 - b. Participation Tracking Table
2. **Internal County Kickoff – June 5, 2020**
 - a. Agenda
 - b. Presentation
 - c. Minutes
3. **Planning Team Kickoff – July 7, 2020**
 - a. Invitation Samples
 - b. Agenda
 - c. Minutes
 - d. Presentation
 - e. Distributed Forms and Exercises
 - f. Completed Forms and Exercises
4. **Mitigation Strategy Review with County –August 20, 2020**
 - a. Agenda/Invitation
 - b. 2015 Capability Assessment
 - c. 2015 Goals and Objectives
5. **Risk Assessment and Mitigation Solutions Workshop – August 27, 2020**
 - a. Invitation Samples
 - b. Agenda
 - c. Minutes
 - d. Presentation
 - e. Distributed Forms and Exercises
 - f. Completed Forms and Exercises
6. **Draft Plan Review Meeting – October 7, 2020**
 - a. Invitation Samples
 - b. Survey
 - c. Presentation
7. **Public Notice**

Type	Community	Type	Comm Name Full	Salutation	First	Last	Suffix	Title	Address 1	Address 2	City	State	Zip	email	phone
CEO	Allegheny	Township	Allegheny Township	The Honorable	Sherman	Copeland		Chair, Board of Supervisors	PO Box 269	15969 Tionesta Road	Pleasantville	Pennsylvania	16341		
Sec	Allegheny	Township	Allegheny Township	Ms.	Patricia	Butler		Secretary	PO Box 269	15969 Tionesta Road	Pleasantville	Pennsylvania	16341	alleghentwp@csonline.net	814-589-1518
CEO	Barkleyville	Borough	Barkleyville Borough	The Honorable	Phyllis	Whitmer		Mayor	5404 Pittsburgh Road		Harrisville	Pennsylvania	16038		
Sec	Barkleyville	Borough	Barkleyville Borough	Ms.	Cynthia	McFeaters		Secretary	5404 Pittsburgh Road		Harrisville	Pennsylvania	16038	barkleyvilleboro@zoominternet.net	814-786-7280
CEO	Canal	Township	Canal Township	The Honorable	Homer	Hallabuagh		Chair, Board of Supervisors	1689 Old Route 322		Utica	Pennsylvania	16362		
Sec	Canal	Township	Canal Township	Ms.	Dianne	McCall		Secretary	1689 Old Route 322		Utica	Pennsylvania	16362	dimcanal@peoplepc.com	814-425-8127
CEO	Cherrytree	Township	Cherrytree Township	The Honorable	James	Waugh		Chair, Board of Supervisors	1311 Cherrytree Road		Titusville	Pennsylvania	16354		
Sec	Cherrytree	Township	Cherrytree Township	Ms.	Christine	Kurelowech		Secretary	1311 Cherrytree Road		Titusville	Pennsylvania	16354	cherrytreewp@200internet.net	814-827-1078
CEO	Clinton	Township	Clinton Township	The Honorable	Michael	Stadman		Chair, Board of Supervisors	P.O. Box 291		Kennedwell	Pennsylvania	16374		
Sec	Clinton	Township	Clinton Township	Ms.	Rita	Porter		Secretary	PO Box 175		Clintonville	Pennsylvania	16372		
CEO	Clintonville	Borough	Clintonville Borough	The Honorable	Jim	Bollingier		President	P.O. Box 71		Clintonville	Pennsylvania	16372		
Sec	Clintonville	Borough	Clintonville Borough	Ms.	Judy	Stoops		Secretary	PO Box 234		Clintonville	Pennsylvania	16372	clintonvilleboro@yahoo.com	814-385-6111
CEO	Cooperstown	Borough	Cooperstown Borough	The Honorable	Jeff	Meyer		Mayor	220 Factory Street		Cooperstown	Pennsylvania	16317		
Sec	Cooperstown	Borough	Cooperstown Borough	Ms.	Sue	Fox		Secretary	PO Box 157		Cooperstown	Pennsylvania	16317		
CEO	Complanter	Township	Complanter Township	The Honorable	Dick	Balas		Chair, Board of Supervisors	1226 State Route 227		Oil City	Pennsylvania	16301		
Sec	Complanter	Township	Complanter Township	Ms.	Michelle M.	LeMire		Secretary	139 Petroleum Center Road		Oil City	Pennsylvania	16301	khopkins.comntwp@zoominternet.net	814-676-8209
CEO	Cranberry	Township	Cranberry Township	The Honorable	Fred	Buckholtz		Chair, Board of Supervisors	122 Meadow Church Road		Seneca	Pennsylvania	16346		
Sec	Cranberry	Township	Cranberry Township	Mr.	Chad	Findlay		Secretary	3726 State Route 257	PO Box 378	Seneca	Pennsylvania	16346		
CEO	Emlenton	Borough	Emlenton Borough	The Honorable	Jamie	Hunt		Mayor	P.O. Box 514		Emlenton	Pennsylvania	16373		
Sec	Emlenton	Borough	Emlenton Borough	Ms.	Nancy	Bowser Marano		Secretary	PO Box 537		Emlenton	Pennsylvania	16373	emlentonborough@embargmail.com	724-867-0753
CEO	Franklin	City	City of Franklin	The Honorable	Douglas	Baker		Mayor	430 Thirteenth Street		Franklin	Pennsylvania	16323		
Sec	Franklin	City	City of Franklin	Ms.	Tracy	Jameson		City Manager	430 Thirteenth Street		Franklin	Pennsylvania	16323	info@franklin.pa.gov	814-437-1485
CEO	Frenchcreek	Township	Frenchcreek Township	The Honorable	Eugene	Smith		Chair, Board of Supervisors	4507 Georgetown Road		Franklin	Pennsylvania	16323	none listed on sign-in	
Sec	Frenchcreek	Township	Frenchcreek Township	Ms.	Vickie	DiMatteo		Secretary	4507 Georgetown Road		Franklin	Pennsylvania	16323	frenchcreektwp@zoominternet.net	814-437-6625
CEO	Irwin	Township	Irwin Township	The Honorable	Frederick	Emmett		Chair, Board of Supervisors	659 Old Route 8		Harrisville	Pennsylvania	16038		
Sec	Irwin	Township	Irwin Township	Ms.	Barbara	Sopher		Secretary	132 Irwin Road		Harrisville	Pennsylvania	16038	irwintownship@zoominternet.net	814-786-7323
CEO	Jackson	Township	Jackson Township	The Honorable	James	Schwimmer		Chair, Board of Supervisors	183 Sandstone Drive		Franklin	Pennsylvania	16323		
Sec	Jackson	Township	Jackson Township	Ms.	Jennifer	Strawbridge		Secretary	PO Box 238		Cooperstown	Pennsylvania	16317	jlstrawbridge124@gmail.com	814-374-4167
CEO	Mineral	Township	Mineral Township	The Honorable	Frank	Krinsky	Sr.	Chair, Board of Supervisors	1304 Raymlton Road		Polk	Pennsylvania	16342		
Sec	Mineral	Township	Mineral Township	Ms.	Cindy	Krinsky		Secretary	2076 Jackson Center Polk Road		Polk	Pennsylvania	16342	mineraltownship@yahoo.com	814-437-3682
CEO	Oakland	Township	Oakland Township	The Honorable	George	Flockertzi Jr		Mayor	2122 Creek Road		Cooperstown	Pennsylvania	16317		
CEO	Oil City	City	City of Oil City	The Honorable	William	Moon		Mayor	21 Seneca Street		Oil City	Pennsylvania	16301		
Sec	Oakland	Township	City of Oil City	Ms.	Barbara J.	Thomas		Secretary	2122 Creek Road		Cooperstown	Pennsylvania	16317	oaklandtwp@gmail.com	814-677-5601 or 677-4739
Sec	Oil City	City	Oil City	Mr.	Mark	Shroyer		Secretary	21 Seneca Street		Oil City	Pennsylvania	16301		
CEO	Oil Creek	Township	Oil Creek Township	The Honorable	Gordon	Cook		Chair, Board of Supervisors	17283 Bugtown Road		Pleasantville	Pennsylvania	16341		
Sec	Oil Creek	Township	Oil Creek Township	Ms.	Am J.	Cherry		Secretary	16835 Shreve Run Road		Pleasantville	Pennsylvania	16341	oilcreek-twpen@verizon.net	814-589-5141
CEO	Pinegrove	Township	Pinegrove Township	The Honorable	Eugene	Miller		Chair, Board of Supervisors	583 Keister Road		Venus	Pennsylvania	16364		
Sec	Pinegrove	Township	Pinegrove Township	Ms.	Jane R.	Whitting		Secretary	2758 State Route 157		Venus	Pennsylvania	16364	pinegrovetwp@verizon.net	814-589-5353
CEO	Pleasantville	Borough	Pleasantville Borough	The Honorable	Martha	Long		Mayor	137 East State Street		Pleasantville	Pennsylvania	16341		
Sec	Pleasantville	Borough	Pleasantville Borough	Ms.	Stephanie	Drake		Secretary	114 West State Street	PO Box 150	Pleasantville	Pennsylvania	16341	pboro@csonline.net	814-589-7432
CEO	Plum	Township	Plum Township	The Honorable	Steve	Sterling		Chair, Board of Supervisors	223 Williams Road		Cooperstown	Pennsylvania	16317		
Sec	Plum	Township	Plum Township	Ms.	Jodi L.	Davison		Secretary	2360 Sunville Road		Cooperstown	Pennsylvania	16317	j.davison@yahoo.com	814-374-4419
CEO	Polk	Borough	Polk Borough	The Honorable	Dave	Owens		Mayor	202 1/2 McClelland Avenue		Polk	Pennsylvania	16342		
Sec	Polk	Borough	Polk Borough	Ms.	Sandy	Showers		Secretary	PO Box 1037		Polk	Pennsylvania	16342	polkboro@gmail.com	814-432-3484
CEO	President	Township	President Township	The Honorable	James	Killingier		Chair, Board of Supervisors	1645 Walnut Bend Road		Oil City	Pennsylvania	16301		
Sec	President	Township	President Township	The Honorable	Jan	Bestner		Secretary	139 Henry's Bend Road		Oil City	Pennsylvania	16301	presidenttwp@verizon.net	814-677-9132
CEO	Richland	Township	Richland Township	The Honorable	Thomas	Best		Chair, Board of Supervisors	2660 Nickleville Road		Emlenton	Pennsylvania	16373		
Sec	Richland	Township	Richland Township	Ms.	Chandra	Ritchey		Secretary	1740 Rockland-Nickleville Road		Emlenton	Pennsylvania	16373	richlandven@windstream.net	814-676-6787
CEO	Rockland	Township	Rockland Township	The Honorable	Charles	Vernam		Chair, Board of Supervisors	673 JoRoadan Hill Road		KenneRoadell	Pennsylvania	16374		
Sec	Rockland	Township	Rockland Township	Mr.	Nicole	Jones		Secretary	1115 Rockland Township Road		KenneRoadell	Pennsylvania	16374		
CEO	Rouseville	Borough	Rouseville Borough	The Honorable	Emily	Felmece		Mayor	64 Main Street	P.O. Box 317	Rouseville	Pennsylvania	16344		
Sec	Rouseville	Borough	Rouseville Borough	Ms.	Ana	Paden		Secretary	64 Main Street	PO Box 317	Rouseville	Pennsylvania	16344	rseville@verizon.net	814-676-8161
CEO	Sandycreek	Township	Sandycreek Township	The Honorable	Denton	Lake		Chair, Board of Supervisors	189 Pone Lane		Franklin	Pennsylvania	16323		
Sec	Sandycreek	Township	Sandycreek Township	Ms.	Dawn R.	Jankovich		Secretary	878 Pone Lane		Franklin	Pennsylvania	16323	sandycreektwp@verizon.net	814-437-6262
CEO	Scrubgrass	Township	Scrubgrass Township	The Honorable	Robert	Alken		Chair, Board of Supervisors	135 Coltsfoot Road		Emlenton	Pennsylvania	16373		
Sec	Scrubgrass	Township	Scrubgrass Township	Ms.	Wilda	Chutz		Secretary	4976 Emlenton Clintonville Road		Emlenton	Pennsylvania	16373		
CEO	Sugarcreek	Borough	Sugarcreek Borough	The Honorable	Charles	McDaniel		Mayor	291 Sleepy Hollow Drive		Franklin	Pennsylvania	16323		
Sec	Sugarcreek	Borough	Sugarcreek Borough	Mr.	Joseph	Sporer		Secretary	212 Fox Street		Franklin	Pennsylvania	16323	manager@sugarcreekborough.us	814-432-4717
CEO	Utica	Borough	Utica Borough	The Honorable	Maryann	Schell		Mayor	P.O. Box 174		Utica	Pennsylvania	16362		
Sec	Utica	Borough	Utica Borough	Ms.	Marian	Murphy		Secretary	PO Box 66		Utica	Pennsylvania	16362	uticaborough@gmail.com	814-425-2156
CEO	Victory	Township	Victory Township	Mr.	Jim	Fryman		Chair, Board of Supervisors	1291 Dennison Run Road		Polk	Pennsylvania	16342	harryec126@aol.com	814-758-4733
Sec	Victory	Township	Victory Township	Ms.	Sarah	Smith		Secretary	2794 Old Route 8		Polk	Pennsylvania	16342	vtctown@verizon.net (undeliverable)	814-437-2160

DCNR Division of Forestry	Cecile	Stelter	District Director	fd14@pa.gov
DCNR Division of Forestry	Ty	Ryen	Service Forester	tryen@pa.gov
Northwest Planning Commission	Sue	Smith	Regional Planning Manager	Susans@northwestpa.org
Oil Region Alliance	Deb	Lutz	VP Economic Development	dlutz@oilregion.org
PA Department of Environmental Protection-Northwest Regional Office	Eric	Mosbacher	Bureau of Watershed Management	emosbacher@pa.gov
PEMA	Ernie	Szabo	State Hazard Mitigation Planner	erszabo@pa.gov
Venango Conservation District	Devin	Lineman	Watershed Coordinator	dlineman@usachoice.net
Venango County	Todd	Johnson	EMA Training and Ops.	tjohnson@co.venango.pa.us
Venango County EMA	Janis	Cochran	Department Clerk	jcochran@co.venango.pa.us
Venango County EMA	Tom	Sherman	EMA Coordinator	tsherman@co.venango.pa.us
Venango County Planning	Phil	Gryskewicz	Planning GIS Planner	pgryskewicz@co.venango.pa.us

County	First	Last	Title	organization	email
Crawford	Allen	Clark	EMA Director	Crawford County Office of Emergency Services	aclark@co.crawford.pa.us
Warren	Todd	Lake	Department Head	Warren County Emergency Management	tlake@warren-county.net
Forest	Stephen	Hale	Emergency Management Coordinator	Forest County Emergency Management	shale@co.forest.pa.us
Clarion	Denny	Logue	Emergency Management Coordinator	Clarion County Office of Emergency Services	wlogue@dps.clarion.pa.us
Butler	Steven	Bicehouse	Emergency Management Coordinator	Butler County Department of Emergency Services	sbicehou@co.butler.pa.us
Mercer	Frank	Jannetti	Director	Mercer County Department of Public Safety	fjannetti@mcc.co.mercer.pa.us

Member	Email
Ben Hart	hartb3@upmc.edu
Bill Buchna	bbuchna@co.venango.pa.us
Bill Krulac	williamk@completewastemgmt.com
Bill Pittser	pittserbl@upmc.edu
Brian Feist	brianf@completewastemgmt.com
Chief Kevin Anundson	kanundson@franklinpa.gov
Chip Abramovic	cabramovic@co.venango.pa.us
Cranberry Township	cran@twp.comcastbiz.net
Dan Croyle	daniel.croyle@williams.com
James Daugherty	james.daugherty@borchers.com
Dave Gates	dave.gates@scrubgrass.com
Dave Servin	dservin@pa.gov
Don Klink	rr-roadtrip@comcast.net
Douglas Baker	dbaker@franklinpa.gov
Dustin Wyant	dustwyant@pa.gov
Eric Foy	efoy@co.venango.pa.us
Charles Evanoff	cevanoff@firstenergycorp.com
Kevin Forringer	kevin.forringer@williams.com
Fred Buckholtz	cran@twp.comcastbiz.net
Fred McMullen	fred.mcmullen@noaa.gov
Jake Hoovler	jayhoovler@pa.gov
Jeff Hollidge	jhollidge@communityambulance.net
Jeff Melat	jeff.melat@scrubgrass.com
Jim Wetzel	jwetzel@franklinpa.gov
Joe McFadden	joseph.mcfadden@us.sasol.com
John Eckel	johneckel2101@gmail.com
John McGinnis	jmcginnis@franklinindustriesco.com
Ken Brennon	kbrennon@pa.us
Kim Mitchell	sticks-n-stones@live.com
Paula Klinger	pklinger@pa.gov
Lois Davis	ldavis@franklinindustriesco.com
Mark Hicks	mhicks@oilcity.org
Mark Seigworth	mseigworth@co.venango.pa.us
Mathew McCray	mathew.mccray@redcross.com
Matt Hawk	matthewh@completewastemgmt.com
Merle Giesey	mgiesey@co.venango.pa.us
Mike Amsler	mamsler@amstabilizers.com
Mike Dulaney	mdulaney@co.venango.pa.us
Pat McLaughlin	pat.mclaughlin@sms-millcraft.us
Peter Rigney	peterriqney@scrubgrass.com
Rich Ruditis	rruditis@co.venango.pa.us
Ryan Ashbaugh	rashbaugh@sugarcreekborough.us
Sam Breene	sbreene@co.venango.pa.us
Tim Brooks	tbrooks@venango.pa.us
Tim Dunkle	timdunkle@verizon.net
Tim Dunkle Jr	tmdunkle@co.venango.pa.us
Tim Fletcher	tfletcher@communityambulance.net
Tom Sherman	thosherman@pa.gov
William Malia	wimalia@state.pa.us

Community	Current Participation Status (must attend one meeting or respond to a form)	Participant Name(s)	Attended Kick-off Meeting	Completed Hazard-Risk Form	Completed Capability Assessment Form	Completed NFIP Form	Provided Mitigation Action Progress Report	New Mitigation Action Form	Attended Mitigation Workshop	Attended Public Meeting	Phone Call	Notes
Allegheny Township	1	Patricia Butler	Y									
Barkeyville Borough	1	Warren Wetzel	Y									
Canal Township	0											
Cherrytree Township	3	Christine Kurelowech	Y		Y		Y					
Clinton Township	4	Ben Porter			Y			Y	Y	Y		
Clintonville Borough	0											
Cooperstown Borough	0											
Cornplanter Township	5	Timothy Staub	Y	Y	Y		Y			Y		
Cranberry Township	3	Chad Findlay	Y		Y		Y					
Emlenton Borough	4	Nancy Marano		Y			Y		Y	Y		
City of Franklin	8	Jim Wetzel & Douglas Baker	Y	Y	Y	Y	Y	Y	Y	Y		
Frenchcreek Township	2	Bob Jamieson	Y							Y		
Irwin Township	3	Barb Sopher			Y		Y				Y	
Jackson Township	0											
Mineral Township	1	Fred Krizinsky	Y									
Oakland Township	0											
City of Oil City	6	Mark Hicks & William Moon Jr	Y	Y	Y		Y		Y	Y		
Oil Creek Township	0											
Pinegrove Township	2	Jane Whiting							Y	Y		
Pleasantville Borough	3	Martha Long			Y		Y			Y		
Plum Township	3	Jody Davison			Y		Y		Y			
Polk Borough	3	Tom Sherman, Dave Owens			Y		Y			Y		
President Township	0	Jim Kitelinger										
Richland Township	6	David Whitehill & Chanda Ritchey	Y	Y	Y	Y	Y			Y		
Rockland Township	5	Terry Hunsberger & Nicole Jones	Y	Y	Y				Y		Y	
Rouseville Borough	4	Millisia Smith, Guy Milner (?)	Y		Y		Y			Y		
Sandycreek Township	2	Bob Jamieson	Y							Y		
Scrubgrass Township	5	Richard Cornelius, Robert Aiken	Y		Y	Y			Y	Y		
Sugarcreek Borough	1	Bob McClintock	Y									
Utica Borough	5	Marian Murphy	Y	Y			Y	Y		Y		
Victory Township	0	Jim Fryman										
Other Stakeholders												
Clarion PA	1	Bret Whiting	Y									
Cornplanter Forest District	0											
DCNR Division of Forestry	5	Ty Ryen	Y	Y	Y			Y	Y			
Oil Regional Alliance	1	John Phillips	Y									
PEMA	1	Ernie Szabo							Y			
PEMA	1	Darlene Bracken								Y		
PA DEP	1	Dustin Wyant								Y		
NOAA (LEPC)	1	Fred McMullen								Y		
Penn Electric (LEPC)	1	Charles Evanoff								Y		



Venango County

Pennsylvania

2020 Venango County Hazard Mitigation Plan Update Internal Kick-Off Call

June 5, 2020

1. Introductions
 2. PA HMP Planning Standards
 3. HMP Update Schedule and Meetings
 - a. Planning Team Kick-off Meeting (Municipal Officials)
 - b. Risk Assessment/Mitigation Workshop
 - c. Public Meeting/Plan Review
 - d. Recommended Submission Date
 4. Participation
 - a. Municipal
 - b. Other Stakeholders
 5. Data and Documentation
 - a. County GIS Data and Contact
 - b. Existing Plans and Documents for Integration
 6. Next Steps
-



Venango County
Pennsylvania

Hazard Mitigation Plan Update

Internal County Kick-off

June 5th, 2020



Agenda

- Introductions
- PA HMP Planning Standards
- HMP Update Schedule and Meetings
- Participation
- Data and Documentation
- Next Steps

PA HMP Planning Standards

- Invite Adjacent Counties and other Stakeholders
- Municipal Participation Requirements
 - Attend Meeting(s)
 - Provide Information/Feedback
- Are there a new hazards of concern?
 - Currently 10 hazards profiled
- Develop at least one mitigation action for each hazard profile

HMP Update Schedule and Meetings

Major Milestone	Proposed Date	Notes
Planning Team Kick-off Meeting	July 7, 2020	Can hold day and evening sessions. <i>Virtual?</i>
Planning Team Risk Assessment and Mitigation Strategy Workshop	August 27, 2020	Can hold day and evening sessions. <i>Location?</i>
Public Meeting (Draft HMP Review)	October 1, 2020	Open to the public. Could be an Open House style.
30-day Public Comment Period Start	October 5, 2020	Post to Project Website
Submit HMP to PEMA/FEMA	November 2020	Provide 60 days to obtain approval
Current Plan Expiration Date	January 12, 2021	

Participation

- Building the Planning Team:
 - Are there other County departments, state agencies, local organizations that should be included?
- Project Website
 - Post meetings and materials
 - Announcements
 - Draft Plan Review

Data and Documentation

- GIS contact and data
 - Structure and/or parcel data
 - Critical Facilities
 - Municipal boundaries
- County Plans for Integration
 - Comp Plan
 - Stormwater Management Plan
 - EOP

Next Steps

- MBI to send potential Kick-off Meeting dates
- MBI to create Planning Team contact list
- MBI to prepare invitations
- MBI to send internal county Kick-off Minutes
- MBI to send GIS data request and County to provide GIS data and related documents
- County to send municipal contacts (if available)
- County to send GIS contact information

**Venango County
2020 Hazard Mitigation Plan Update
Internal County Kick-off**

June 5, 2020
1:00 PM – 2:00 PM

Attendees:

- Tim Dunkle Jr., Venango County Emergency Management Agency (EMA)
- Janis Cochran, Venango County EMA
- Jason Ruggiero, Venango County Regional Planning Commission
- Taryn Murray, Michael Baker International (MBI)
- Madeleine Fincham, (MBI)

Action Items

Action	Who?	Status
Follow up with the Commissioner on participating in the Update	Jason	
Provide the municipal contact information (mailing addresses)	Jason	
Coordinate GIS correspondence with Mike G.	Jason	Complete
Send county letterhead and signature for meeting invitations	Jason	
Provide GIS and related data for Risk Assessment (MBI will request)	Mike	
Provide the local EMC contact information	Janis	Complete
Mail meeting invitations for 7.7.20 meeting (prepared by MBI)	Janis	ASAP
Steering Committee to review the participating stakeholders of the 2015 HMP (listed under '2-1b. PA HMP Planning Standards) and confirm or provide additional stakeholders to invite	Steering Committee	
Steering Committee to review the 2015 HMP hazards (listed under 2-3a) and the PA Standard list of hazards and identify any new hazards of concern since 2015.	Steering Committee	
Provide Commodity Flow Study	Tim	Complete
Follow-up with Commissioner on participating in the Update	Jason	
Prepare internal County Kick-off Minutes	Madeleine	
Prepare meeting invitations and mailing labels	Madeleine	Complete
Send GIS data request for Risk Assessment	Devon	
Prepare 7.7.20 Meeting Materials and post to HMP Project Website	Madeleine	

1. Introduction

Taryn Murray kicked off the call by briefly introducing the project, attendees, and consultant team. All the attendees also introduced themselves and their respective positions and involvement in the previous 2015 Hazard Mitigation Plan (HMP).

Janis Cochran participated in the full update in 2015, and Tim Dunkle Jr. participated towards the end of the 2015 HMP. Jason Ruggiero has worked for the Venango County Planning Department for 10 years and has held the Planning Director role for five years. This will be his first participation in a full update. The Venango County team mentioned Matt Gilara will lead the GIS effort and provides support to the EMA and Planning Department.

Taryn Murray led the 2015 HMP and will serve as the Project Manager. Madeleine Fincham will lead the HMP Update and be the point-of-contact (POC) for the County.

2. Pennsylvania (PA) HMP Planning Standards

Taryn went through the PA HMP Planning Standards:

1. Invite Adjacent Counties and Other Stakeholders
 - a. Tim suggested for Jason to invite the Commissioner
 - b. The County will review the list of additional stakeholders who participated in the 2015 HMP and propose any additional participants. The list of participants from the 2015 HMP are:
 - i. Judith Barrett, Venango County Regional Planning Commission
 - ii. Phil Gyskewicz, Venango County Regional Planning Commission
 - iii. Ty Ryen, DCNR-Bureau of Forestry
 - iv. Deb Lutz, Oil Region Alliance
 - v. Ernie Szabo, Pennsylvania Emergency Management Agency (PEMA)
2. Municipal Participation Requirements
 - a. Attend Meetings
 - b. Provide Information/Feedback
 - c. Provide Information/Feedback
3. Are there any additional hazards of concern since 2015?
 - a. The 2015 HMP profiled the following hazards:

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
		PROBABILITY (1-4)	IMPACT (1-4)	SPATIAL EXTENT (1-4)	WARNING TIME (1-4)	DURATION (1-4)	
HIGH	Winter Storm (N)	3	2	4	1	3	2.7
	Environmental Hazards (M)	3	2	3	3	2	2.6
	Flood, Flash Flood, Ice Jam (N)	2	2	4	2	3	2.5
MODERATE	Dam Failure (M)	1	3	3	4	2	2.4
	Wildfire (N)	4	1	2	3	2	2.4
	Tornado, Windstorm (N)	1	3	3	4	1	2.3
	Drought (N)	2	1	4	1	4	2.2
LOW	Radon Exposure (N)	2	1	2	1	4	1.8
	Hurricane, Tropical Storm Nor'easter	1	1	4	1	1	1.6
	Earthquake (N)	1	1	2	4	1	1.5
	Pandemic (M)	1	1	1	4	2	1.4
	Landslide (N)	1	1	1	4	1	1.3

- b. PEMA's Pennsylvania Standard List of hazards include:
 - i. Natural: Drought; Earthquake; Expansive Soils; Extreme Temperature; Flood, Flash Flood, Ice Jam; Hailstorm; Hurricane, Tropical Storm, Nor'easter; Invasive Species; Landslide; Lightning Strike; Pandemic and Infectious Disease; Radon Exposure; Subsidence, Sinkhole; Tornado, Windstorm; Wildfire; Winter Storm
 - ii. Human-made: Building and Structure Collapse; Civil Disturbance; Cyber Terrorism; Dam Failure; Disorientation; Drowning; Environmental Hazards- Coal Mining; Environmental Hazards- Conventional Oil and Gas Wells; Environmental Hazards- Gas and Liquid Pipelines; Environmental Hazards- Hazardous Materials Releases; Environmental Hazards- Unconventional Oil and Gas Wells; Levee Failure; Mass Food/Animal Feed Contamination; Nuclear Incident; Opioid Addiction Response; Terrorism; Transportation Accident; Urban Fire and Explosion; Utility Interruption; War and Criminal Activity
4. Develop at least one mitigation action for each hazard profiled

3. Schedule and Meetings

Madeleine went through the upcoming schedule and potential meeting dates. The following milestones were proposed to the County team, and there are no issues at this time.

1. Planning Team Kick-off Meeting: July 7, 2020, Virtual Webinar
 - a. The County proposed holding two webinars: 10:00a -11:30a and 6:00p-7:30p
 - b. The County team suggested the invite come from the Planning Department to better encourage attendance – Jason will follow up with an appropriate letterhead
 - c. Janis kindly offered to send the invitations to the attendees. Madeleine will follow-up with Janis.
2. Planning Team Risk Assessment and Mitigation Strategy Workshop: August 27, 2020, Virtual or On-site Depending on Social Distancing Restrictions
3. Public Meeting (Draft HMP Review): October 1, 2020, Open to the Public and could be Open House style.
4. 30-Day Public Comment Period Start: October 5, 2020, Post to Project Website
5. Submit HMP to PEMA/FEMA: November 12, 2020
6. 2015 Plan Expiration: January 12, 2021

4. Participation

The next topic was the participation and outreach of the County HMP. Madeleine showed the County team the 'HMP Project Website' that will be used to post meetings and materials and announcements and also be the primary portal to submit comments and review the Draft HMP.

The County will review the list of outside participants from the 2015 HMP listed under '2-1b. PA HMP Planning Standards' and provide any additional attendees.

Janis will provide the contact information for the Emergency Management Coordinators (EMCs) and Jason will provide the mailing addresses for the municipal offices.

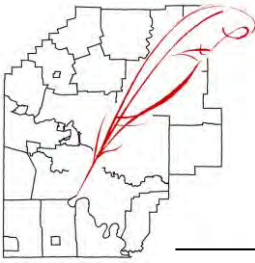
5. Data and Documentation

Taryn went over the typical GIS data request and correspondence. Tim mentioned Matt Gilara would be the GIS POC and also has the collected 911 data. Jason will set up the initial correspondence via email between the County EMA and MBI with Jason. Phil Gyskewicz is no longer the GIS POC.

Madeleine also asked if there were any current County Plans that would be beneficial to incorporate or discuss as part of the HMP Update. Tim mentioned the Emergency Operations Plan (EOP) is being updated, and the Commodity Flow Study was recently completed. These documents will be provided by the County EMA to MBI.

6. Next Steps

Madeleine went over next steps and action items for MBI and the County. A table of action items is located above, on the first page.



Venango County Regional Planning Commission

1168 Liberty Street
P.O. Box 831
Franklin, PA 16323

Phone: 814.432.9682
Fax: 814-432-9679
e-mail: jruggiero@co.venango.pa.us

*Planning Venango
County's future.
It's your county.*

June 15, 2020

The Honorable Sherman Copeland
Chair, Board of Supervisors
Allegheny Township
PO Box 269
Pleasantville, Pennsylvania 16341

I am writing to inform you of a very important initiative that is about to take place in our County. Venango County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in our community. This Plan is also **required** for Venango County and your municipality to be **eligible to receive certain types of state and federal disaster relief funds after a disaster occurs**. It will be critically important as we move forward with this Plan Update that each of our municipalities participate and provide input in the form of surveys, questionnaires, etc.

Due to government and public health recommendations and restrictions regarding COVID-19, the meeting will be held virtually in the form of an online webinar. Afternoon and evening meeting times are being offered to provide more opportunity for participation. The content of both meetings will be the same, you, or other officials involved in planning, mitigation, floodplain management, and/or disaster preparedness need only attend one meeting based on your availability. The meetings will be held via WebEx, which can be accessed via telephone and/or computer. Access information is attached and provided below.

TUESDAY, JULY 7, 2020

**Morning Meeting
10:00 am – 11:30 am**

**Evening Meeting
6:00 pm – 7:00 pm**

Information to access the virtual meetings will be provided upon RSVP.

Please RSVP and provide the following information: your name, title, community, and the time you plan to attend to our Mitigation Planner, Madeleine Fincham of Michael Baker International, at 412-269-6093, madeleine.fincham@mbakerintl.com. Sessions that have no RSVPs may be cancelled, so it is essential that you indicate which session you will attend.

If you are unable to attend the kickoff meeting and still wish to participate in the planning process, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions, please do visit the project website at: www.pennsylvaniahmp.com/venango-hmp or contact me at: 814-432-9682 or jruggiero@co.venango.pa.us

Sincerely,

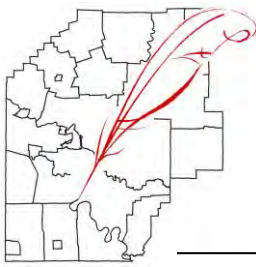
Jason Ruggiero
Executive Director
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Chair: Nancy Marano

Vice-Chair: Frank Pankratz

Sec/Treasurer: Greg Miller

Executive Director: Jason Ruggiero



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*Planning Venango
County's future.
It's your county.*

June 15, 2020

Re: Invitation to Participate in Venango County's Hazard Mitigation Planning Process

Dear Stakeholder:

I am writing to inform you of a very important initiative that is about to take place in Venango County. The County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in our community. In an effort to include surrounding communities in the planning process, you and other County representatives that may be directly involved in planning, hazard mitigation and emergency management are invited to attend this meeting.

Due to government and public health recommendations and restrictions regarding COVID-19, the meeting will be held virtually in the form of an **online webinar**. Afternoon and evening meeting times are being offered to provide more opportunity for participation. The content of both meetings will be the same, you, or other officials involved in planning, mitigation, floodplain management, and/or disaster preparedness need only attend one meeting based on your availability. The meetings will be held via WebEx, which can be accessed via telephone and/or computer. Access information is attached and provided below.

Tuesday, July 7, 2020

<p>Morning Meeting 10:00 am – 11:30 am</p> <p>Webinar Link: Click Here <i>Audio Connection</i> Phone Number: 571-209-6390 Access Code: 999 464 086#</p>	<p>Evening Meeting 6:00 pm – 7:30pm</p> <p>Webinar Link: Click Here <i>Audio Connection</i> Phone Number: 571-209-6390 Access Code: 993 635 696#</p>
---	--

Please RSVP and provide the following information: your name, title, community, and the time you plan to attend to our Mitigation Planner, Madeleine Fincham of Michael Baker International, at 412-269-6093, Madeleine.Fincham@mbakerintl.com. If you have any additional questions, please do not hesitate to contact me or Ms. Fincham.

If you are unable to attend the kickoff meeting and still wish to participate in the planning process, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions visit the project website at: www.pennsylvaniiahmp.com/venango-hmp or contact me or Ms. Fincham.

Sincerely,

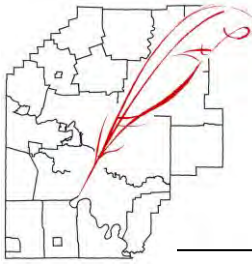
Jason Ruggiero
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June 15, 2020

Re: Invitation to Participate in Venango County's Hazard Mitigation Planning Process

Dear Municipal Official:

I am writing to inform you of a very important initiative that is about to take place in our County. Venango County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in our community. This Plan is also required for Venango County and your municipality to be eligible to receive certain types of state and federal disaster relief funds after a disaster occurs. It will be critically important as we move forward with this Plan Update that each of our municipalities participate and provide input.

Due to government and public health recommendations and restrictions regarding COVID-19, the meeting will be held virtually in the form of an **online webinar**. Afternoon and evening meeting times are being offered to provide more opportunity for participation. The content of both meetings will be the same, you, or other officials involved in planning, mitigation, floodplain management, and/or disaster preparedness need only attend one meeting based on your availability. The meetings will be held via WebEx, which can be accessed via telephone and/or computer. Access information is attached and provided below.

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If you are unable to attend the kickoff meeting and still wish to participate in the planning process in order to ensure your community is eligible for applicable mitigation funding, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions visit the project website at: www.pennsylvaniahmp.com/venango-hmp or contact me or Ms. Fincham.

Sincerely,

Jason Ruggiero
Executive Director
Venango County Regional Planning
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Chair: Nancy Marano

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June 15, 2020

Re: Invitation to Participate in Venango County's Hazard Mitigation Planning Process

Dear Stakeholder:

I am writing to inform you of a very important initiative that is about to take place in Venango County. The County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in our community. In an effort to include a broad range of stakeholders and organizations in the planning process, you and other representatives that may be directly involved in hazard mitigation, disaster recovery, and resilience are invited to attend this meeting.

Due to government and public health recommendations and restrictions regarding COVID-19, the meeting will be held virtually in the form of an **online webinar**. Afternoon and evening meeting times are being offered to provide more opportunity for participation. The content of both meetings will be the same, you need only attend one meeting based on your availability. The meetings will be held via WebEx, which can be accessed via telephone and/or computer. Access information is attached and provided below.

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Please RSVP and provide the following information: your name, title, community, and the time you plan to attend to our Mitigation Planner, Madeleine Fincham of Michael Baker International, at 412-269-6093, Madeleine.Fincham@mbakerintl.com. If you have any additional questions, please do not hesitate to contact me or Ms. Fincham.

If you are unable to attend the kickoff meeting and still wish to participate in the planning process, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions visit the project website at: www.pennsylvaniiahmp.com/venango-hmp or contact me or Ms. Fincham.

Sincerely,

Jason Ruggiero
Executive Director
Venango County Regional Planning
Commission

Chair: Nancy Marano

Vice-Chair: Frank Pankratz

Sec/Treasurer: Greg Miller

Executive Director: Jason Ruggiero

VENANGO COUNTY HAZARD MITIGATION PLAN UPDATE

Planning Team Kick-Off Meeting

TUESDAY, JULY 7, 2020



Review our [Tips for Accessing WebEx](#) prior to joining the meeting

You need only attend one meeting based on your availability. The content of both meetings will be the same.

MORNING MEETING

10:00 am – 11:30 am

When it's time, start or join the WebEx meeting from here:

<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=8a3037fcf0d913b64aa06645f0750011>

Audio Connection

Phone Number: 571-209-6390

Access Code: 999 464 086#

EVENING MEETING

6:00 pm – 7:30pm

When it's time, start or join the WebEx meeting from here:

<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=fdfd7eb7f1b36d080188e88eaec1421d>

Audio Connection

Phone Number: 571-209-6390

Access Code: 993 635 696#

Venango County 2020 Hazard Mitigation Plan Update

Venango County Hazard Mitigation Plan Update Planning Team Kick-off Meeting

AGENDA

WebEx Webinar

July 7, 2020

10:00-11:30 AM and 6:00-7:30 PM

1. Welcome and Introductions
2. Project Overview
3. Hazard Mitigation Planning Process
 - a. Community Profile
 - b. Planning Process
 - c. Risk Assessment
 - d. Capability Assessment
 - e. Mitigation Strategy
 - f. Plan Maintenance
4. Participation and Engagement
5. Next Steps and Action Items

Be sure to visit the project website at
<https://www.pennsylvaniahmp.com/venango-hmp>

Questions? Comments?

Mitigation Planner: Madeleine Fincham

madeleine.fincham@mbakerintl.com, 412-269-6093

Venango County 2020 Hazard Mitigation Plan Update

Venango County
2020 Hazard Mitigation Plan Update
Planning Team Kick-Off Meeting Minutes
July 7th, 2020
10:00 AM–11:30 AM, 6:00 PM– 7:30 PM

Agenda

1. Welcome and Introductions
2. Project Overview
3. Hazard Mitigation Planning Process
 - Community Profile
 - Planning Process
 - Risk Assessment
 - Exercise: Hazard-Risk Evaluation
 - Capability Assessment
 - Exercise: Capability Assessment Survey
 - Mitigation Strategy
 - Plan Maintenance
4. Participation and Engagement
5. Next Steps and Action Items

Welcome and Introductions

Jason Ruggiero, Executive Director of Venango County Regional Planning Commission, welcomed all participants to the meeting. He then introduced the Venango County Point of Contact (POC) a Madeleine Fincham, a hazard mitigation planning consultant with Michael Baker International. She briefed the participants of her extensive hazard mitigation planning experience within the Commonwealth. There were 18 attendees representing 14 municipalities combined between the two meetings.

Project Overview

Madeleine provided an overview of the project. She defined hazard mitigation as long-term and sustained action. She explained what a mitigation plan is, that it lays out a framework of hazards and then discusses strategies to reduce risk. Ms. Fincham explained that the county needs a plan to get access to certain kinds of pre- and post-disaster grant funding and reviewed FEMA Hazard Mitigation Assistance grant program eligible activities. Overall, these plans reduce vulnerability and help communities recover more quickly.

Hazard Mitigation Planning Process

Madeleine reviewed the components of hazard mitigation plan: Community Profile, Planning Process, Risk Assessment, Capability Assessment, Mitigation Strategy, and Plan Maintenance.

Venango County 2020 Hazard Mitigation Plan Update

Community Profile

This section contains defines the geography and environment of the planning area and includes community facts such as history and industry information. It also contains data associated with assessing risk and vulnerability including population, demographics and land use information.

Planning Process

The planning process section describes the process by which the HMP was evaluated and updated and includes information about the HMPT, the Steering Committee and overall participation. Madeleine reviewed some of the items that will be new for the HMP as part of this update such as individual municipal flood hazard maps, additional historic/cultural resource considerations, expanded capability assessment and the final HMP document will be formatted for online viewing.

Risk Assessment

The Risk Assessment includes a description of the update process, hazard identification, identified hazard profiles, hazard rankings and a vulnerability assessment. Each identified hazard profile includes: location and extent, range of magnitude, past occurrence, future occurrence, and vulnerability assessment. The HMPT reviewed the list of identified hazards and rankings from the 2015 HMP (see below) and were asked to complete the Hazard-Risk Evaluation for the 2020 HMP update. Madeleine explained that the form is meant to capture changes in severity or frequency of known hazards and identify any other hazards of significance that require focused mitigation efforts.

HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	
Winter Storm (N)	3	2	4	1	3	2.7
Environmental Hazards (M)	3	2	3	3	2	2.6
Flood, Flash Flood, Ice Jam (N)	2	2	4	2	3	2.5
Dam Failure (M)	1	3	3	4	2	2.4
Wildfire (N)	4	1	2	3	2	2.4
Tornado, Windstorm (N)	1	3	3	4	1	2.3
Drought (N)	2	1	4	1	4	2.2
Radon Exposure (N)	2	1	2	1	4	1.8
Hurricane, Tropical Storm Nor'easter	1	1	4	1	1	1.6
Earthquake (N)	1	1	2	4	1	1.5
Pandemic (N)	1	1	1	4	2	1.4
Landslide (N)	1	1	1	4	1	1.3

Capability Assessment

It is important to assess each community's ability to implement mitigation as part of the HMP update process. Madeleine provided a brief overview of the type of information that is included in the capability assessment which includes an evaluation of planning, regulatory, administrative, technical and financial capabilities as well as participation in the National Flood Insurance Program (NFIP). Plan integration is a crucial part of the capability assessment because it identifies and information integration of current and future planning mechanisms within the county. An overview of the FEMA's Community Rating System (CRS) program was provided.

The HMPT was asked to complete a capability assessment survey which could be taken back to the municipality and submitted later.

Mitigation Strategy

Madeleine explained that the mitigation strategy is composed of goals, objectives, and mitigation actions. She reviewed the goals established in the 2015 HMP:

- *Increase Public Awareness regarding natural and manmade hazard risks, preparedness and mitigation.*
- *Ensure that adequate shelter is available to current and future populations.*
- *Identify all repetitive loss structures throughout the county.*
- *Develop better hazard data for Venango County and the municipalities.*
- *Attempt to reduce the current and future risk of flood damage in Venango County.*
- *Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.*
- *Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.*

She explained that each participating jurisdiction must have at least one mitigation action in the plan and that actions led by other stakeholder organizations were strongly encouraged. Each identified hazard must have at least one associated mitigation action. All actions should be realistic and lead to sustainable risk reduction. The 2015 HMP lists 44 mitigation actions. This information can be viewed by visiting the project website at <http://www.pennsylvaniiahmp.com/venango-hmp> where the 2015 Venango County HMP is linked and can be viewed and downloaded.

A description of the four main types of mitigation techniques was provided to the HMPT and an explanation of how the mitigation strategy update would be conducted was given. The four techniques are: Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, and Education and Awareness. Members of the planning team would review the mitigation strategy, including actions, from the 2015 HMP update and provide status updates and any mitigation success information over the last five years. Each municipality will need to decide whether to carry over existing actions not yet completed or select new actions based on community need.

Venango County 2020 Hazard Mitigation Plan Update

Plan Maintenance

Madeleine provided a brief overview of Plan Maintenance and stressed the importance of revisiting the HMP at least once a year and maintaining it throughout the 5-year life cycle.

Participation and Engagement

A summary of municipal participation requirements, including meeting attendance, providing local information, and submitting at least one mitigation action, was provided. The public outreach will include a public meeting, online engagement and a public notice. Madeleine showed a screenshot of the project website and encouraged attendees to visit the site which will house participation forms, meeting materials, and includes a project calendar where meeting dates will be posted. The project website is: <http://www.pennsylvaniiahmp.com/venango-hmp>. Meeting forms and materials for this meeting have been posted to the site and can be viewed and downloaded.

Next Steps and Action Items

The schedule was provided and reviewed.

Task	Dates
Kick Off Meeting	July 7, 2020
Risk Assessment/Mitigation Solutions Workshop	August 27, 2020
Draft Plan Review Meeting	October 1, 2020
Draft Plan Submitted to EPMA/FEMA	November 12, 2020
Receive FEMA approval	December, 2020

Action items include:

Hazard Mitigation Planning Team:

- Complete Hazard-Risk Evaluation
- Complete Capability Assessment
- Check out Project Website

Project Team:

- Update project website with meeting materials
- Distribute data requests

Michael Baker

INTERNATIONAL



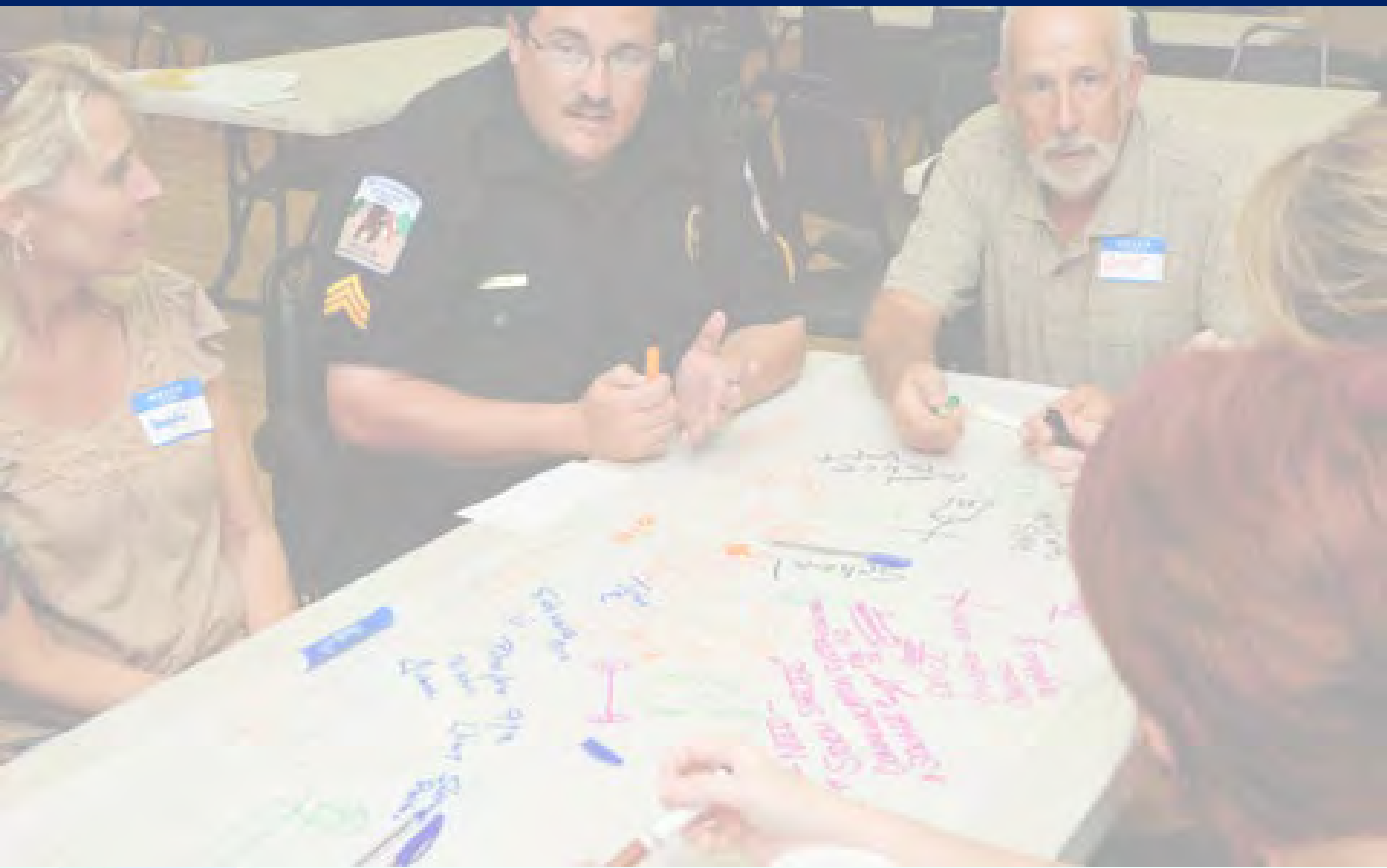
2020 Venango County Hazard Mitigation Plan Planning Team Kick-Off Meeting

July 7, 2020

- Welcome and Introductions
- Project Overview
- Hazard Mitigation Planning Process
 - Community Profile
 - Planning Process
 - Risk Assessment
 - Capability Assessment
 - Mitigation Strategy
 - Plan Maintenance
- Participation and Engagement
- Next Steps and Action Items



Welcome and Introductions



What is Hazard Mitigation?

Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and human-made hazards.



What is a Hazard Mitigation Plan?

- A Hazard Mitigation Plan is a community-driven, living document that communities use to reduce their vulnerability to hazards.
- Counties must have a plan to maintain access to mitigation grants. These grants can augment local mitigation activities already being accomplished and can leverage other funding sources.



FEMA Hazard Mitigation Grants

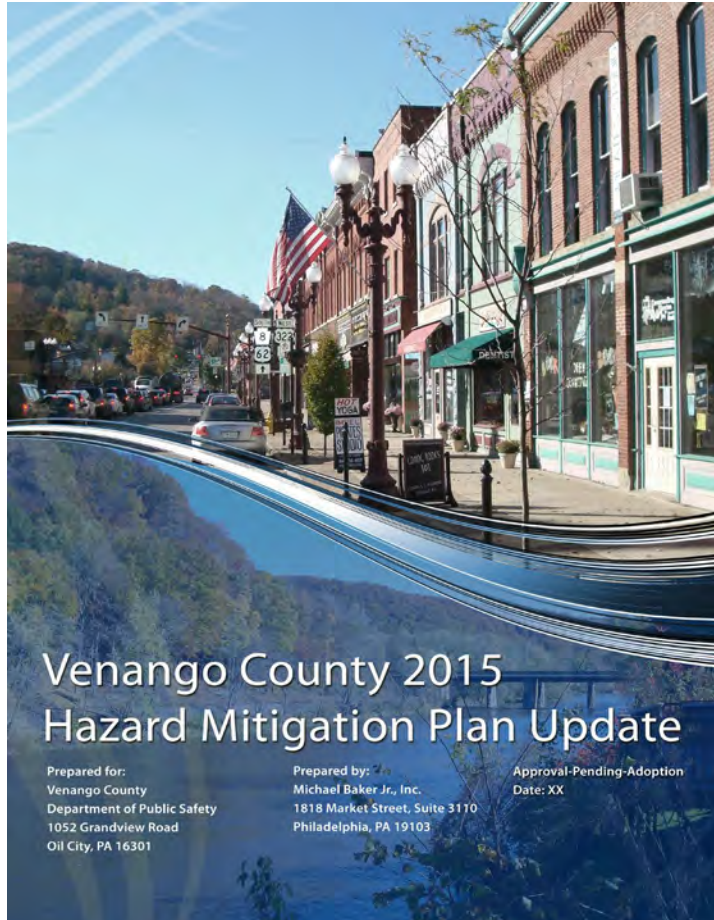
FEMA HMA Grant Program Eligible Activities

Mitigation Activity	HMA Program		
	HMGP	PDM	FMA
1.Mitigation Projects	✓	✓	✓
Property Acquisition and Structure Demolition	✓	✓	✓
Property Acquisition and Structure Relocation	✓	✓	✓
Structure Elevation	✓	✓	✓
Mitigation Reconstruction	✓	✓	✓
Dry Floodproofing of Historic Residential Structures	✓	✓	✓
Dry Floodproofing of Non-residential Structures	✓	✓	✓
Generators	✓	✓	
Localized Flood Risk Reduction Projects	✓	✓	✓
Non-Localized Flood Risk Reduction Projects	✓	✓	
Structural Retrofitting of Existing Buildings	✓	✓	✓
Non-structural Retrofitting of Existing Buildings and Facilities	✓	✓	✓
Safe Room Construction	✓	✓	
Wind Retrofit for One- and Two-Family Residences	✓	✓	
Infrastructure Retrofit	✓	✓	✓
Soil Stabilization	✓	✓	✓
Wildfire Mitigation	✓	✓	
Post-Disaster Code Enforcement	✓		
Advance Assistance	✓		
5 Percent Initiative Projects	✓		
Aquifer and Storage Recovery	✓	✓	✓
Flood Diversion and Storage	✓	✓	✓
Floodplain and Stream Restoration	✓	✓	✓
Green Infrastructure	✓	✓	✓
Miscellaneous/Other	✓	✓	✓
2.Hazard Mitigation Planning	✓	✓	✓
3.Technical Assistance			✓
4. Management Costs	✓	✓	✓

Hazard Mitigation Planning Process

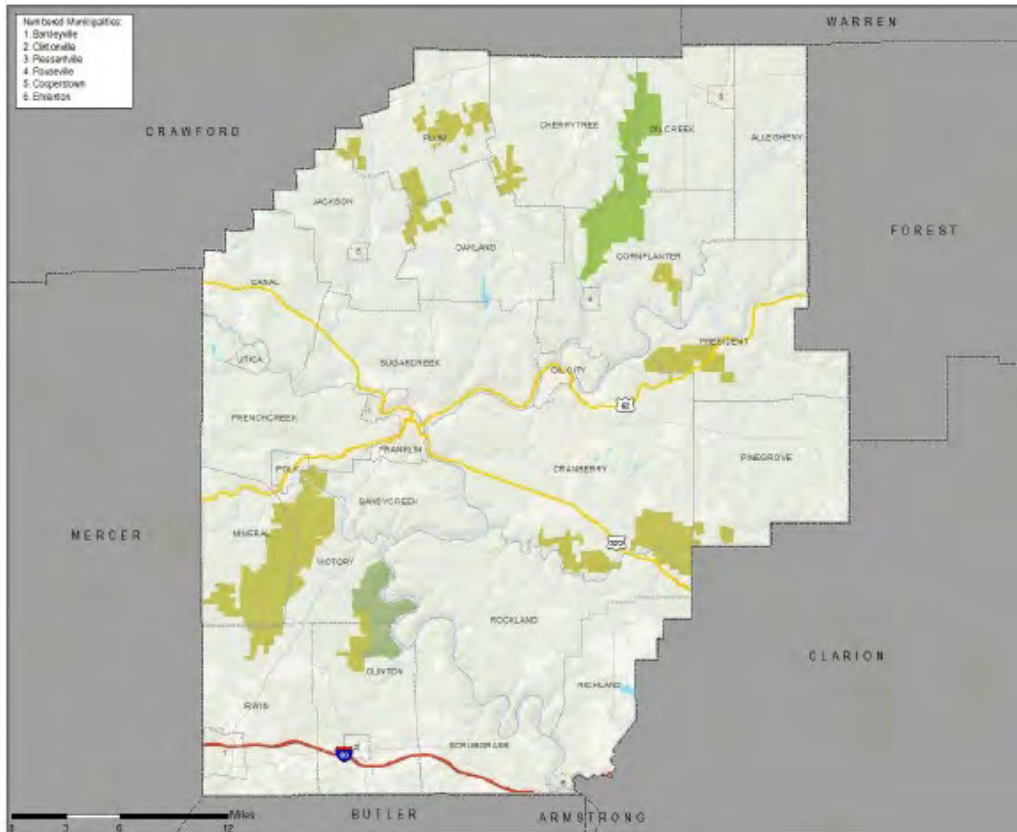


HMP Components



- Executive Summary
- Community Profile
- Planning Process
- Risk Assessment
- Capability Assessment
- Mitigation Strategy
- Plan Maintenance

Community Profile



- Geography and Environment
- Community Facts
- Population and Demographics
- Land Use and Development

- Plan development and participation
- Hazard Mitigation Planning Team
- Meetings
 - **Kick Off:** July 7, 2020
 - **Risk Assessment and Mitigation Solutions Workshop:** August 27, 2020
 - **Draft Plan Review (Public Meeting):** October 1, 2020
- Public and stakeholder participation
- Obtain Mitigation Plan State and Federal Approval and Adoption



The Planning Team:

- Steering Committee
- Municipal officials, FPAs, and EMCs
- Agency and organization stakeholder representatives
- Other suggestions?



- Identify Hazards
- Full hazard profile includes:
 - Location and extent
 - Range of magnitude
 - Past occurrence
 - Future occurrence
 - Vulnerability assessment



2015 Hazard Rankings

HAZARD	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	RISK FACTOR
Winter storm	3	2	4	1	3	2.7
Environmental Hazards (Hazardous Materials Release; Transmission Pipelines)	3	2	3	3	2	2.6
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5
Dam Failure	1	3	3	4	2	2.4
Wildfire	4	1	2	3	2	2.4
Tornado, Windstorm	1	3	3	4	1	2.3
Drought	2	1	4	1	4	2.2
Radon Exposure	2	1	2	1	4	1.8
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6
Earthquake	1	1	2	4	1	1.5
Pandemic	1	1	1	4	2	1.4
Landslide	1	1	1	4	1	1.3

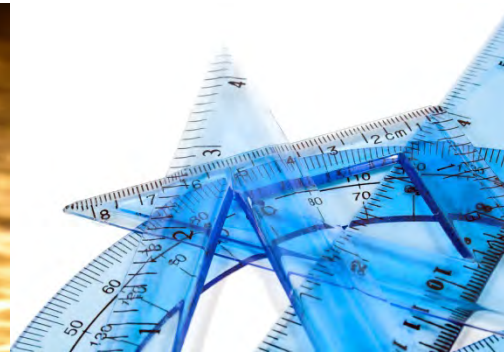
Exercise 1: Hazard-Risk Evaluation

- This exercise allows you to evaluate previously profiled hazards and to identify any new hazards that may exist.
 - PART I: Note any changes in frequency, magnitude or geographic extent by placing a "NC", "I" or "D" in the 2nd column.
 - PART II: Evaluate list of hazards NOT profiled in existing HMP.
 - Completed forms can be e-mailed to madeleine.fincham@mbakerintl.com



Capability Assessment

- Planning and Regulatory
- Administrative and Technical
- Financial
- Education and Outreach
- Participation in the NFIP
- Plan Integration



Exercise 2: Capability Assessment

- Information used to evaluate jurisdictional capabilities and plan development
- One per jurisdiction
- Completed forms can be e-mailed to madeleine.fincham@mbakerintl.com



NFIP Survey

- Asks for information on how your community administers the National Flood Insurance Program (NFIP)
- Forms located on the HMP website
- Email completed forms to madeleine.fincham@mbakerintl.com



Community Rating System Premium Discounts

Class	Premium Discount	
	SFHA*	Non-SFHA
1	45%	10%
2	40%	10%
3	35%	10%
4	30%	10%
5	25%	10%
6	20%	10%
7	15%	5%
8	10%	5%
9	5%	5%
10	0	0

* Special Flood Hazard Area. Non-SFHA premium reductions apply to B, C, D, X, A99, and AR Zones.

- CRS recognizes and encourages community floodplain management activities that exceed minimum NFIP standards.
- Point rating system that can reduce flood insurance premiums by 5% - 45%.

Mitigation Strategy

- Goals and Objectives
- Mitigation Techniques
- Mitigation Action Plan

Goal

Minimize new development in hazard-prone areas.

Objective

Reduce the number of vulnerable structures in flood hazard areas.

Actions

Amend zoning ordinance to permit only open space and uses within floodplains



Update Objectives

- Document existing mitigation actions and identify new ones.
- Develop hazard mitigation goals, objectives, and actions as they relate to reducing loss of life and property from natural and human-made hazards.
- Generate and deliver a well-documented multi-hazard mitigation plan for FEMA approval pending adoption by municipalities and the County.
- Obtain State and Federal approval of the updated plan.



Mitigation Action Plan

- Each municipality must have at least one mitigation action.
- Actions for stakeholder organizations are strongly encouraged.
- There must be at least one mitigation action for each profiled hazard.
 - For the entire county plan, not each municipality.
- Mitigation actions should be realistic and sustainable.



Mitigation Techniques



Local Mitigation Planning Handbook

March 2013



FEMA

- Updated FEMA mitigation planning guidance identifies four mitigation techniques:
 - Plans and Regulations
 - Structure and Infrastructure Projects
 - Natural Systems Protection
 - Education and Awareness Programs
- [Download from FEMA.gov](http://FEMA.gov)

Local Plans and Regulations



- Government authorities, policies, or codes that influence the way land and buildings are developed and built such as:
 - Comprehensive Plans
 - Subdivision Regulations
 - Building Codes and Enforcement
 - Capital improvement Programs
 - Stormwater Management Plan

Structure and Infrastructure Projects



- Modifying existing structures and infrastructure to remove from a hazard area
- Construction of manmade structures to reduce impacts of hazards

Natural Systems Protection

- Actions that minimize damage and losses and also preserve or restore the functions of natural systems
 - Sediment and erosion control
 - Stream corridor restoration
 - Forest management
 - Conservation easements
 - Wetland restoration and preservation



Education and Awareness Programs



- National preventative programs
- Mailings to hazard-prone communities
- Websites with maps and information
- Presentations to community groups
- Radio or TV spots

Plan Maintenance

- Monitoring, evaluating and updating the plan (Annual Reviews)
- Incorporation into other planning mechanisms
- Continued public involvement



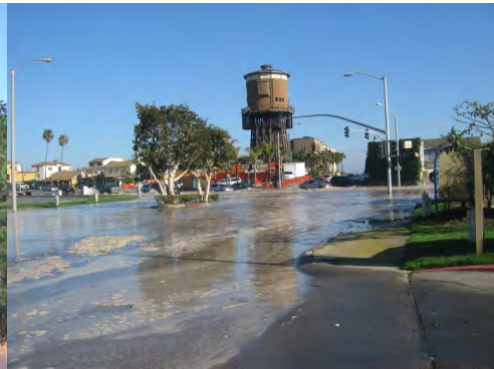
Participation and Engagement



Participation and Engagement

Jurisdictional Participation Requirements

- Attend meeting(s)
- Provide local information
- Develop mitigation action(s)



Visit <https://www.pennsylvaniahmp.com/venango-hmp>



Next Steps and Action Items



Schedule and Meetings

Task	Dates
Kick-Off Meeting	July 7, 2020
Risk Assessment/Mitigation Solutions Workshop	August 27, 2020
Draft Plan Review Meeting	October 1, 2020
Draft Plan Submitted to PEMA/FEMA	November 12, 2020
Receive FEMA Approval	December, 2020

We are Here

Next Steps and Action Items

- Hazard Mitigation Planning Team:
 - Complete Hazard-Risk Evaluation
 - Complete NFIP Survey
 - Complete Capability Assessment
 - Check out Project Website
- Project Team:
 - Update project website with meeting materials
 - Distribute data requests

Next Meeting: August 27, 2020



Questions



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Venango County 2020 Hazard Mitigation Plan Update

Evaluation of Identified Hazards and Risk

Community/Organization:	
Name and Title:	

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC =No Change I =Increase D =Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought		
Earthquake		
Flood, Flash Flood, Ice Jam		
Hurricane, Tropical Storm, Nor'easter		
Landslide		
Pandemic and Infectious Disease		
Radon Exposure		
Tornado, Windstorm		
Wildfire		
Winter Storm		
Dam Failure		
Environmental Hazards – Hazardous Materials Release		
Environmental Hazards – Gas and Liquid Pipelines		

Venango County 2020 Hazard Mitigation Plan Update

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:	
Name:	

HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Winter Storm	3	2	4	1	3	2.7	
Environmental Hazard	3	2	3	3	2	2.6	
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5	
Dam Failure	1	3	3	4	2	2.4	
Wildfire	4	1	2	3	2	2.4	
Tornado, Windstorm	1	3	3	4	1	2.3	
Drought	2	1	4	1	4	2.2	
Radon Exposure	2	1	2	1	4	1.8	
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6	
Earthquake	1	1	2	4	1	1.5	
Pandemic	1	1	1	4	2	1.4	
Landslide	1	1	1	4	1	1.3	

Venango County 2020 Hazard Mitigation Plan Update

Pennsylvania Standard Risk Factor Methodology				
RISK ASSESSMENT CATEGORY	DEGREE OF RISK			WEIGHT VALUE
	LEVEL	CRITERIA	INDEX	
PROBABILITY <i>What is the likelihood of a hazard event occurring in a given year?</i>	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 49.9% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 50 & 90% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY	4	
IMPACT <i>In terms of injuries, damage, death, and economic impact, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?</i>	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT <i>How large of an area could be impacted by a hazard event? Are impacts localized or regional?</i>	NEGLECTIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
WARNING TIME <i>Is there usually some lead time associated with the hazard event? Have warning measures been implemented?</i>	MORE THAN 24 HRS	SELF-DEFINED	1	10%
	12 TO 24 HRS	SELF-DEFINED	2	
	6 TO 12 HRS	SELF-DEFINED	3	
	LESS THAN 6 HRS	SELF-DEFINED	4	
DURATION <i>How long does the hazard event usually last?</i>	LESS THAN 6 HRS	SELF-DEFINED	1	10%
	LESS THAN 24 HRS	SELF-DEFINED	2	
	LESS THAN 1 WEEK	SELF-DEFINED	3	
	MORE THAN 1 WEEK	SELF-DEFINED	4	

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	
Name and Title:	

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan				
Emergency Operations Plan				
Evacuation Plan				
Continuity of Operations Plan				
Floodplain Management Ordinance				
Zoning Regulations				
Subdivision Regulations				
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)				
Stormwater Management Plan				
Natural Resource Protection Plan				
Capital Improvement Plan				
Firewise Community				
Storm Ready				
Building Codes				

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning				
Engineering				
Emergency Manager				
Floodplain Manager				
Staff with experience using Geographic Information Systems (GIS) software				
Grant-writing staff or other fiscal staff				

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability			
Administrative and Technical Capability			
Fiscal Capability			
Community Political Capability			

Please email completed forms to madeleine.fincham@mbakerintl.com



HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: _____

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> 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

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> 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
- Other hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Point-of-Contact:			
Meeting Schedule:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> 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

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:			
Current Position Holder:			
Length of Employment in this Position:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> 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)

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Responsible Agency/Organization:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> 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

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: _____

ATTACHMENT A

Attachment A includes the following additional guidance for assessment of specific capabilities:

- Potential agencies and organizations to contact for information
- Additional questions or considerations

PLANNING AND REGULATORY

PLANS AND POLICIES

PLAN/POLICY	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Comprehensive/ Master Land Use Plan	Planning or Zoning Departments	<ul style="list-style-type: none"> ▫ Does the plan integrate hazard profile information from the current approved HMP into development suitability analysis? ▫ Is the plan effectively reducing or eliminating development in known hazard areas, i.e., is the rate of development in the Special Flood Hazard Area lower, the same, or higher? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Climate Change Adaptation Plan	Planning Department	<ul style="list-style-type: none"> ▫ Does the plan include future hazard vulnerability projections? If so, are these projections included in the current approved HMP risk assessment? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Emergency Operations Plan (EOP)	Emergency Management Department	<ul style="list-style-type: none"> ▫ Does the EOP address all hazards identified in the current approved HMP? ▫ Does the EOP address any hazards that are not included in the current approved HMP? If so, are these hazards for which mitigation actions might be appropriate to consider? ▫ Does the EOP identify obstacles or problems for response and recovery operations that could be alleviated entirely or in part through mitigation, e.g., limited access to floodprone areas due to transportation infrastructure limitations?
Streambank Buffer Protection Program	Local or regional natural resources conservation non-profit organizations	<ul style="list-style-type: none"> ▫ Does the program reference problem areas identified in the current approved HMP? ▫ Does the program identify problem areas that should be referenced in the HMP? ▫ Is acreage in the program increasing year to year?

CODES AND ORDINANCES

CODE/ORDINANCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Building Code	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's Building Code Effectiveness Grading Schedule Score?
Floodplain Ordinance/NFIP Compliance	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's current status in the NFIP? ▫ Does the ordinance include higher standards than minimum requirements of the NFIP, e.g., additional freeboard above the Base Flood Elevation?

Community Capability Assessment Worksheet

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

ADMINISTRATIVE

BOARD/COMMISSION/DEPARTMENT	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Engineering Department	Engineering or Public Works Departments	<ul style="list-style-type: none"> Does the department have ability and availability for design, engineering, project scoping (per HMA or other grant program requirements) and construction project management for mitigation actions included in the current approved HMP and/or proposed for plan update?
Code Enforcement Department	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> Are all ordinances and codes related to hazard mitigation (e.g., building code, floodplain management ordinance, zoning), enforced by the same department? If not, what are the departments and their respective responsibilities and are compliance reviews and enforcement activities coordinated between departments? Does the department have ability and availability to enforce all ordinances and codes related to hazard mitigation?

TECHNICAL

STAFF POSITION	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Chief Building Officer	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> How does the Chief Building Officer position interact with other code and ordinance enforcement officials with hazard mitigation-related responsibilities, e.g., Floodplain Administrator?
Civil Engineer - Construction Project Management	Engineering Department	<ul style="list-style-type: none"> Have previous construction projects been completed, meeting budget and schedule constraints?
Grant Administrator	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the Grant Administrator have experience with FEMA HMA grants administration? If so, have previous HMA grant administration experiences been completed successfully? Does the Grant Administrator have experience with other Federal non-FEMA grants administration used for mitigation purposes? If so, what are the grants and was the administration of the grants completed successfully?
Grant Writer	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the grant writer have experience with FEMA HMA grants applications? Have previous HMA grant applications been awarded? If so, what kinds of projects were funded? Does the grant writer have experience with other Federal non-FEMA grants applications used for mitigation purposes? Have previous non-FEMA grant applications been awarded? If so, what were the grants and what kinds of projects were funded?

Community Capability Assessment Worksheet

JURISDICTION: _____

FINANCIAL

FUNDING RESOURCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Capital Improvement Program	Administration or Financial Departments	<ul style="list-style-type: none"> What is the process and timeframe for adding projects to the Critical Infrastructure Protection?
Funding programs – Federal (non-FEMA)	Finance or Emergency Management Departments	<ul style="list-style-type: none"> What were the grants, and what kinds of projects were funded?
Utility fees for stormwater, water, sewer, gas, or electric services	Finance or Public Works Departments	<ul style="list-style-type: none"> How much money is available annually to support implementation of hazard mitigation actions? Is that level of funding expected to decrease, stay the same, or increase in the next five years? What kinds of projects have been funded in this manner?

EDUCATION AND OUTREACH

PROGRAM/METHOD	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
StormReady Certification	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> How long has the community been certified? Have surveys been conducted to determine the effectiveness of the program? If so, what were the results?
Seasonal Emergency Management and Mitigation Outreach	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> Is awareness of potential hazard impacts increasing year to year? Are individuals and businesses taking necessary precautions in advance of events?

Venango County 2020 Hazard Mitigation Plan Update

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: _____

1. FLOODPLAIN IDENTIFICATION AND MAPPING			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.		
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.		
c. Does the municipality support request for map updates?	If yes, state how.		
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.		
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.		
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.		

Venango County 2020 Hazard Mitigation Plan Update

2. FLOODPLAIN MANAGEMENT			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Has the municipality adopted a compliant floodplain management ordinance that, at a minimum, regulates the following:	If yes, answer questions (1) through (4) below.		
(1) Does the municipality issue permits for all proposed development in the Special Flood Hazard Areas (SFHAs)?	If yes, specify the office responsible.		
(2) Does the municipality obtain, review, and utilize any Base Flood Elevation (BFE) and floodway data, and/or require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres?	If yes, specify the office responsible.		
(3) Does the municipality identify measures to keep all new and substantially improved construction reasonably safe from flooding to or above the BFE, including anchoring, using flood-resistant materials, and designing or locating utilities and service facilities to prevent water damage?	If yes, specify the office responsible.		
(4) Does the municipality document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures?	If yes, specify the office responsible.		
b. If a compliant floodplain ordinance was adopted, does the municipality enforce the ordinance by monitoring compliance and taking remedial action to correct violations?	If yes, specify how.		

Venango County 2020 Hazard Mitigation Plan Update

2. FLOODPLAIN MANAGEMENT			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
<p>c. Has the municipality considered adopting activities that extend beyond the minimum requirements? Examples include:</p> <ul style="list-style-type: none"> • Participation in the Community Rating System • Prohibition of production or storage of chemicals in SFHA • Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in SFHA • Prohibition of certain types of residential housing (manufactured homes) in SFHA • Floodplain ordinances that prohibit any new residential or nonresidential structures in SFHA 	If yes, specify activities.		

3. FLOOD INSURANCE			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality educate community members about the availability and value of flood insurance?	If yes, specify how.		
b. Does the municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?	If yes, specify how.		
c. Does the municipality provide general assistance to community members regarding insurance issues?	If yes, specify how.		

Venango County 2020 Hazard Mitigation Plan Update

Evaluation of Identified Hazards and Risk

Community/Organization:	City of Franklin
Name and Title:	James Wetzel, Fire Chief

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change I=Increase D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Hurricane, Tropical Storm, Nor'easter	NC	
Landslide	NC	
Pandemic and Infectious Disease	I	COVID-19
Radon Exposure	NC	
Tornado, Windstorm	NC	
Wildfire	NC	
Winter Storm	NC	
Dam Failure	NC	
Environmental Hazards – Hazardous Materials Release	NC	
Environmental Hazards – Gas and Liquid Pipelines	NC	

Venango County 2020 Hazard Mitigation Plan Update

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

Venango County 2020 Hazard Mitigation Plan Update

Evaluation of Identified Hazards and Risk

Community/Organization:	Cornplanter Township
Name and Title:	Timothy Staub, Roadmaster

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change I=Increase D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	1	Cost for Repairs
Hurricane, Tropical Storm, Nor'easter	NC	
Landslide	NC	
Pandemic and Infectious Disease	1	New to Personnel
Radon Exposure	NC	
Tornado, Windstorm	NC	
Wildfire	NC	
Winter Storm	NC	Crew Ready for Storms
Dam Failure	NC	
Environmental Hazards – Hazardous Materials Release	NC	
Environmental Hazards – Gas and Liquid Pipelines	NC	

Venango County 2020 Hazard Mitigation Plan Update

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

None

Venango County 2020 Hazard Mitigation Plan Update

Evaluation of Identified Hazards and Risk

Community/Organization:	PA DCNR Bureau of Forestry --- Cornplanter & Clear Creek Forest Districts
Name and Title:	Cecile Stelter, District Forester, Cornplanter Forest District

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change I=Increase D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought		
Earthquake		
Flood, Flash Flood, Ice Jam		
Hurricane, Tropical Storm, Nor'easter		
Landslide		
Pandemic and Infectious Disease		
Radon Exposure		
Tornado, Windstorm	NC	** See explanation
Wildfire	I	*** See explanation
Winter Storm		
Dam Failure		
Environmental Hazards – Hazardous Materials Release		
Environmental Hazards – Gas and Liquid Pipelines		

Venango County 2020 Hazard Mitigation Plan Update

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

** Tornado, windstorm --- Existing potential for straight-line wind and tornado damage, especially in forested areas. Historic occurrences and mapping show 'paths' for wind damage and tornadic activity.

***Wildfire --- Numbers of wildfires have shown an increase but that could be at least in part, due to better reporting. However, a significant change that we have noticed is the occurrence of wildfires outside the 'normal' spring wildfire season (March-May). It is not unusual to have 'winter fires' when there is little snowpack or as in this year ... 'summer fires.' So, the increase is in the expanded/extended season, and perhaps a slight in the number of wildfire occurrences.

Venango County 2020 Hazard Mitigation Plan Update

Evaluation of Identified Hazards and Risk

Community/Organization:	City of Oil City
Name and Title:	Mark Hicks, Fire Chief-Emergency Management Coordinator

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change I=Increase D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	I	Oil City has experienced an increased number of flooding events mostly due to flash flooding
Hurricane, Tropical Storm, Nor'easter	NC	
Landslide	NC	
Pandemic and Infectious Disease	I	COVID 19, Swine Flu
Radon Exposure	NC	
Tornado, Windstorm	NC	
Wildfire	NC	
Winter Storm	NC	
Dam Failure	NC	
Environmental Hazards – Hazardous Materials Release	NC	
Environmental Hazards – Gas and Liquid Pipelines	NC	

Venango County 2020 Hazard Mitigation Plan Update

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

Venango County 2020 Hazard Mitigation Plan Update Evaluation of Identified Hazards and Risk

Community/Organization:	Plum Township
Name and Title:	

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change I=Increase D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	I	
Hurricane, Tropical Storm, Nor'easter	NC	
Landslide	NC	
Pandemic and Infectious Disease	NC	
Radon Exposure	NC	
Tornado, Windstorm	I	
Wildfire	NC	
Winter Storm	NC	
Dam Failure	NC	
Environmental Hazards – Hazardous Materials	NC	
Environmental Hazards – Gas and Liquid Pipelines	NC	

Venango County 2020 Hazard Mitigation Plan Update PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

Please e-mail completed forms to madeleine.fincham@mbakerintl.com

Venando County 2020 Hazard Mitigation Plan

Evaluation of Identified Hazards and Risk

Community/Organization:	Richland Twp.
Name and Title:	Chanda Ritchey, Secretary

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?	
	NC=No Change I=Increase D=Decrease	Additional Comments
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Hurricane, Tropical Storm, Nor'easter	NC	
Landslide	NC	
Pandemic and Infectious Disease	NC	
Radon Exposure	NC	
Tornado, Windstorm	NC	
Wildfire	NC	
Winter Storm	NC	
Dam Failure	NC	
Environmental Hazards – Hazardous Materials Release	NC	
Environmental Hazards – Gas and Liquid Pipelines	NC	

Venando County 2020 Hazard Mitigation Plan

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts?
(If so, list and describe below)

Comments

Venango County 2020 Hazard Mitigation Plan Update

Evaluation of Identified Hazards and Risk

Community/Organization:	ROCKLAND TOWNSHIP, VENANGO COUNTY
Name and Title:	NICOLE A. JONES, SECRETARY

PART I: Identified Hazards

Identified Hazards (2015 HMP)	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change I=Increase D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Hurricane, Tropical Storm, Nor'easter	NC	
Landslide	NC	
Pandemic and Infectious Disease	NC	
Radon Exposure	NC	
Tornado, Windstorm	NC	
Wildfire	NC	
Winter Storm	NC	
Dam Failure	NC	
Environmental Hazards – Hazardous Materials Release	NC	
Environmental Hazards – Gas and Liquid Pipelines	NC	

Venango County 2020 Hazard Mitigation Plan Update

PART II: Other Hazards

Are there any other hazards, not already profiled in the HMP and listed in Part I of this form, that have the potential to significantly affect your community and require focused mitigation efforts? *(If so, list and describe below)*

Comments

GAS AND OIL WELL UPDATES AND HAZARDS

BRINE WATER HAZARDS

Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:	City of Franklin
Name:	James Wetzel

HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Winter Storm	3	2	4	1	3	2.7	
Environmental Hazard	3	2	3	4	3	2.6	I increased warning time and duration. Transportation hazmat incident could have long-term affect should it enter the sanitary or storm lines
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5	
Dam Failure	1	3	3	4	4	2.4	Depending upon which dam fails, effects could be long-term
Wildfire	2	1	2	4	2	2.4	Probability can be reduced, but warning time is minimal
Tornado, Windstorm	2	3	3	4	4	2.3	Probability seems to be increasing annually and the recovery duration could be long-term
Drought	2	1	4	1	4	2.2	
Radon Exposure	2	1	2	1	4	1.8	
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6	
Earthquake	1	1	2	4	1	1.5	
Pandemic	2	2	2	4	4	1.4	Based upon COVID, certainly need to address this more than we have in the past
Landslide	1	1	1	4	1	1.3	

Venango County 2020 Hazard Mitigation Plan

Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:	Emlenton Borough
Name:	Nancy Marano

HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Winter Storm	3	2	4	1	3	2.7	
Environmental Hazard	3	2	3	3	2	2.6	
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5	
Dam Failure	1	3	3	4	2	2.4	Suggested Changes:
Wildfire	4	1	2	3	2	2.4	Dam Failure Risk Factor – Impact (4), Duration (4)
Tornado, Windstorm	1	3	3	4	1	2.3	
Drought	2	1	4	1	4	2.2	
Radon Exposure	2	1	2	1	4	1.8	
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6	
Earthquake	1	1	2	4	1	1.5	Suggested Changes
Pandemic	1	1	1	4	2	1.4	Pandemic – Probability – (3), Warning Time (1), Duration (4)
Landslide	1	1	1	4	1	1.3	

Venango County 2020 Hazard Mitigation Plan Update

Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:	Plum Township
Name:	

HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Winter Storm	3	2	4	1	3	2.7	
Environmental Hazard	3	2	3	3	2	2.6	
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5	
Dam Failure	1	3	3	4	2	2.4	
Wildfire	4	1	2	3	2	2.4	
Tornado, Windstorm	1	3	3	4	1	2.3	
Drought	2	1	4	1	4	2.2	
Radon Exposure	2	1	2	1	4	1.8	
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6	
Earthquake	1	1	2	4	1	1.5	
Pandemic	1	1	1	4	2	1.4	
Landslide	1	1	1	4	1	1.3	

NO COMMENTS.

Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:	Utica Borough, Venango County
Name:	Marian Murphy, Secretary/Treasurer

HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Winter Storm	3	2	4	1	3	2.7	
Environmental Hazard	3	2	3	3	2	2.6	
Flood, Flash Flood, Ice Jam	3	3	4	2	3	2.5	Town in a flood plain; increased impact & probability by 1.
Dam Failure	1	3	3	4	2	2.4	Dam on Frenchcreek is a distance from Utica; sufficient warning should be possible.
Wildfire	4	1	2	3	2	2.4	
Tornado, Windstorm	1	3	3	4	1	2.3	
Drought	2	1	4	1	4	2.2	
Radon Exposure	2	1	2	1	4	1.8	
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6	
Earthquake	1	1	2	4	1	1.5	
Pandemic	1	1	1	4	2	1.4	
Landslide	1	1	1	4	1	1.3	

Venango County 2020 Hazard Mitigation Plan Update

Pennsylvania Standard Risk Factor Methodology				
RISK ASSESSMENT CATEGORY	DEGREE OF RISK			WEIGHT VALUE
	LEVEL	CRITERIA	INDEX	
PROBABILITY <i>What is the likelihood of a hazard event occurring in a given year?</i>	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 49.9% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 50 & 90% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY	4	
IMPACT <i>In terms of injuries, damage, death, and economic impact, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?</i>	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT <i>How large of an area could be impacted by a hazard event? Are impacts localized or regional?</i>	NEGLECTIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
WARNING TIME <i>Is there usually some lead time associated with the hazard event? Have warning measures been implemented?</i>	MORE THAN 24 HRS	SELF-DEFINED	1	10%
	12 TO 24 HRS	SELF-DEFINED	2	
	6 TO 12 HRS	SELF-DEFINED	3	
	LESS THAN 6 HRS	SELF-DEFINED	4	
DURATION <i>How long does the hazard event usually last?</i>	LESS THAN 6 HRS	SELF-DEFINED	1	10%
	LESS THAN 24 HRS	SELF-DEFINED	2	
	LESS THAN 1 WEEK	SELF-DEFINED	3	
	MORE THAN 1 WEEK	SELF-DEFINED	4	

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	PA DCNR Bureau of Forestry --- Cornplanter & Clear Creek Forest Districts
Name and Title:	Cecile Stelter, District Forester, Cornplanter Forest District

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan				
Emergency Operations Plan				
Evacuation Plan				
Continuity of Operations Plan				
Floodplain Management Ordinance				
Zoning Regulations				
Subdivision Regulations				
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)				
Stormwater Management Plan				
Natural Resource Protection Plan	X			There are various forest management plans in place --- especially for public lands. Clear Creek Forest District has a District Resource Management Plan which includes the Kennderdell Tract. Oil Creek State Park has a current management plan as do all PGC Gamelands. Two Mile Run County Park also has a forest management plan.

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Capital Improvement Plan				
Firewise Community			X	
Storm Ready				
Building Codes				

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning				
Engineering				
Emergency Manager	X		Nathan Fice; Cecile Stelter; Jake Scheib; Jay Lindemuth; Cody Gulvas; Zach St. Laurent; Ty Ryen	Seven (7) staff between the two forest districts have emergency management responsibilities in Venango Co
Floodplain Manager				
Staff with experience using Geographic Information Systems (GIS) software	X		Jessica Pierce; Tim Ackerman; Taylor Chamberlin; Zach St. Laurent; Cody Gulvas; Jay Lindemuth; Jake Scheib	Seven (7) staff between the two forest districts have experience employing GIS software
Grant-writing staff or other fiscal staff				

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability		X ***	
Administrative and Technical Capability		X***	
Fiscal Capability		X***	
Community Political Capability			

*** Dependent on district funding, staffing & state budgets

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	Cherrytree Township
Name and Title:	Christine Kurelowech, Secretary-Treasurer

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan		Yes		
Emergency Operations Plan	Yes			
Evacuation Plan			No	
Continuity of Operations Plan			No	
Floodplain Management Ordinance	Yes			October 7, 2013
Zoning Regulations	Yes			October 3, 2020 (amended original ordinance passed in 2006) - Currently working on a curative amendment to include regulations pertaining to solar development
Subdivision Regulations			No	No-Venango County SALDO
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)	Yes			December 1996
Stormwater Management Plan	Yes			July 7, 2014
Natural Resource Protection Plan			No	
Capital Improvement Plan			No	
Firewise Community			No	

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Venango County 2020 Hazard Mitigation Plan Update

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Storm Ready			No	
Building Codes	Yes			UCC on June 7, 2004

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning	Yes		No	Our zoning officer works part-time as a contractor on an as-needed basis
Engineering	Yes		No	Our engineer works as a contractor on an as-needed basis
Emergency Manager	Yes		volunteer	Our EMA director is Tim McGrath, who serves as a volunteer and also serves as the Cherrytree Township VFD Fire Chief
Floodplain Manager	Yes		No	Our zoning officer also serves as the floodplain manager and works part-time on an as-needed basis
Staff with experience using Geographic Information Systems (GIS) software		No		
Grant-writing staff or other fiscal staff	Yes		staff member	Our secretary-treasurer has grant-writing and fiscal experience

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

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Venango County 2020 Hazard Mitigation Plan Update

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability	X		
Administrative and Technical Capability	X		
Fiscal Capability	X		
Community Political Capability	X		
Because we are a rural township with a small budget, we are extremely limited in all categories.			

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	City of Franklin
Name and Title:	James Wetzel, Fire Chief

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	X			
Emergency Operations Plan	X			County Plan only – Need Franklin specific plan
Evacuation Plan			X	
Continuity of Operations Plan			X	
Floodplain Management Ordinance	X			
Zoning Regulations	X			
Subdivision Regulations	X			
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)	X			
Stormwater Management Plan	X			
Natural Resource Protection Plan	X			
Capital Improvement Plan			X	
Firewise Community			X	
Storm Ready			X	
Building Codes	X			

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning	X		Code Enforcement	
Engineering	X		City Engineer	
Emergency Manager	X		Douglas Baker	
Floodplain Manager	X		Code Enforcement	
Staff with experience using Geographic Information Systems (GIS) software	X		Utilities Coordinator	
Grant-writing staff or other fiscal staff	X		Community Development	

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	

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HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	Zoning Code - Land Use Code
Author/Owner:	
Effective Date:	April 6, 2009
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	Current plan is very outdated

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	Franklin Building Code
Responsible Agency:	Code Enforcement
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	Flood Districts and Flood Proofing
Responsible Agency:	Code Enforcement
Effective Date:	December 9, 2013
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
- Other hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Point-of-Contact:			
Meeting Schedule:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	Code Enforcement
Point-of-Contact:	Charles Gibbons
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

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:	Code Enforcement		
Current Position Holder:	Charles Gibbons		
Length of Employment in this Position:	15 years		
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input checked="" type="checkbox"/> PT If PT, indicate % time or hours <u>As needed</u>
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	Community Development Director
Current Position Holder:	Sheila Boughner
Length of Employment in this Position:	5 years
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	Community Development Director
Current Position Holder:	Sheila Boughner
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)

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Responsible Agency/Organization:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	Sheila Boughner
Responsible Agency/Organization:	Community Development Director
Relation to Hazard Mitigation:	

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	General Authority of the City of Franklin
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

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

ATTACHMENT A

Attachment A includes the following additional guidance for assessment of specific capabilities:

- Potential agencies and organizations to contact for information
- Additional questions or considerations

PLANNING AND REGULATORY

PLANS AND POLICIES

PLAN/POLICY	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Comprehensive/ Master Land Use Plan	Planning or Zoning Departments	<ul style="list-style-type: none"> ▫ Does the plan integrate hazard profile information from the current approved HMP into development suitability analysis? ▫ Is the plan effectively reducing or eliminating development in known hazard areas, i.e., is the rate of development in the Special Flood Hazard Area lower, the same, or higher? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Climate Change Adaptation Plan	Planning Department	<ul style="list-style-type: none"> ▫ Does the plan include future hazard vulnerability projections? If so, are these projections included in the current approved HMP risk assessment? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Emergency Operations Plan (EOP)	Emergency Management Department	<ul style="list-style-type: none"> ▫ Does the EOP address all hazards identified in the current approved HMP? ▫ Does the EOP address any hazards that are not included in the current approved HMP? If so, are these hazards for which mitigation actions might be appropriate to consider? ▫ Does the EOP identify obstacles or problems for response and recovery operations that could be alleviated entirely or in part through mitigation, e.g., limited access to floodprone areas due to transportation infrastructure limitations?
Streambank Buffer Protection Program	Local or regional natural resources conservation non-profit organizations	<ul style="list-style-type: none"> ▫ Does the program reference problem areas identified in the current approved HMP? ▫ Does the program identify problem areas that should be referenced in the HMP? ▫ Is acreage in the program increasing year to year?

CODES AND ORDINANCES

CODE/ORDINANCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Building Code	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's Building Code Effectiveness Grading Schedule Score?
Floodplain Ordinance/NFIP Compliance	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's current status in the NFIP? ▫ Does the ordinance include higher standards than minimum requirements of the NFIP, e.g., additional freeboard above the Base Flood Elevation?

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

ADMINISTRATIVE AND TECHNICAL

ADMINISTRATIVE

BOARD/COMMISSION/ DEPARTMENT	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Engineering Department	Engineering or Public Works Departments	<ul style="list-style-type: none"> ▫ Does the department have ability and availability for design, engineering, project scoping (per HMA or other grant program requirements) and construction project management for mitigation actions included in the current approved HMP and/or proposed for plan update?
Code Enforcement Department	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ Are all ordinances and codes related to hazard mitigation (e.g., building code, floodplain management ordinance, zoning), enforced by the same department? If not, what are the departments and their respective responsibilities and are compliance reviews and enforcement activities coordinated between departments? ▫ Does the department have ability and availability to enforce all ordinances and codes related to hazard mitigation?

TECHNICAL

STAFF POSITION	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Chief Building Officer	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ How does the Chief Building Officer position interact with other code and ordinance enforcement officials with hazard mitigation-related responsibilities, e.g., Floodplain Administrator?
Civil Engineer - Construction Project Management	Engineering Department	<ul style="list-style-type: none"> ▫ Have previous construction projects been completed, meeting budget and schedule constraints?
Grant Administrator	Finance or Emergency Management Departments	<ul style="list-style-type: none"> ▫ Does the Grant Administrator have experience with FEMA HMA grants administration? If so, have previous HMA grant administration experiences been completed successfully? ▫ Does the Grant Administrator have experience with other Federal non-FEMA grants administration used for mitigation purposes? If so, what are the grants and was the administration of the grants completed successfully?
Grant Writer	Finance or Emergency Management Departments	<ul style="list-style-type: none"> ▫ Does the grant writer have experience with FEMA HMA grants applications? Have previous HMA grant applications been awarded? If so, what kinds of projects were funded? ▫ Does the grant writer have experience with other Federal non-FEMA grants applications used for mitigation purposes? Have previous non-FEMA grant applications been awarded? If so, what were the grants and what kinds of projects were funded?

Community Capability Assessment Worksheet

JURISDICTION: City of Franklin

FINANCIAL

FUNDING RESOURCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Capital Improvement Program	Administration or Financial Departments	<ul style="list-style-type: none"> What is the process and timeframe for adding projects to the Critical Infrastructure Protection?
Funding programs – Federal (non-FEMA)	Finance or Emergency Management Departments	<ul style="list-style-type: none"> What were the grants, and what kinds of projects were funded?
Utility fees for stormwater, water, sewer, gas, or electric services	Finance or Public Works Departments	<ul style="list-style-type: none"> How much money is available annually to support implementation of hazard mitigation actions? Is that level of funding expected to decrease, stay the same, or increase in the next five years? What kinds of projects have been funded in this manner?

EDUCATION AND OUTREACH

PROGRAM/METHOD	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
StormReady Certification	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> How long has the community been certified? Have surveys been conducted to determine the effectiveness of the program? If so, what were the results?
Seasonal Emergency Management and Mitigation Outreach	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> Is awareness of potential hazard impacts increasing year to year? Are individuals and businesses taking necessary precautions in advance of events?



HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: Clinton Township - VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Title:			
Author/Owner:			
Effective Date:			
Next Scheduled Update (if known):			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: CLINTON TOWNSHIP,

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Title:			
Author/Owner:			
Effective Date:			
Next Scheduled Update (if known):			
Relation to Hazard Mitigation:			

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.		
Is this Plan/Policy in Place?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Title:			
Author/Owner:			
Effective Date:			
Next Scheduled Update (if known):			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: Clinton Township

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: Clinton Township

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	MIKE Grill (Construction Code Inspector)
Responsible Agency:	
Effective Date:	Unknown
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	N/A

Community Capability Assessment Worksheet

JURISDICTION: Clinton Township

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?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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
- Other hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp.

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Point-of-Contact:			
Meeting Schedule:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp.

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp.

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:			
Current Position Holder:			
Length of Employment in this Position:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT	<input type="checkbox"/> 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)

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp.

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Responsible Agency/Organization:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Responsible Agency/Organization:			
Relation to Hazard Mitigation:			

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: Clinton Twp.

ATTACHMENT A

Attachment A includes the following additional guidance for assessment of specific capabilities:

- Potential agencies and organizations to contact for information
- Additional questions or considerations

PLANNING AND REGULATORY

PLANS AND POLICIES

PLAN/POLICY	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Comprehensive/ Master Land Use Plan	Planning or Zoning Departments	<ul style="list-style-type: none"> ▫ Does the plan integrate hazard profile information from the current approved HMP into development suitability analysis? ▫ Is the plan effectively reducing or eliminating development in known hazard areas, i.e., is the rate of development in the Special Flood Hazard Area lower, the same, or higher? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Climate Change Adaptation Plan	Planning Department	<ul style="list-style-type: none"> ▫ Does the plan include future hazard vulnerability projections? If so, are these projections included in the current approved HMP risk assessment? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Emergency Operations Plan (EOP)	Emergency Management Department	<ul style="list-style-type: none"> ▫ Does the EOP address all hazards identified in the current approved HMP? ▫ Does the EOP address any hazards that are not included in the current approved HMP? If so, are these hazards for which mitigation actions might be appropriate to consider? ▫ Does the EOP identify obstacles or problems for response and recovery operations that could be alleviated entirely or in part through mitigation, e.g., limited access to floodprone areas due to transportation infrastructure limitations?
Streambank Buffer Protection Program	Local or regional natural resources conservation non-profit organizations	<ul style="list-style-type: none"> ▫ Does the program reference problem areas identified in the current approved HMP? ▫ Does the program identify problem areas that should be referenced in the HMP? ▫ Is acreage in the program increasing year to year?

CODES AND ORDINANCES

CODE/ORDINANCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Building Code	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's Building Code Effectiveness Grading Schedule Score?
Floodplain Ordinance/NFIP Compliance	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's current status in the NFIP? ▫ Does the ordinance include higher standards than minimum requirements of the NFIP, e.g., additional freeboard above the Base Flood Elevation?

Community Capability Assessment Worksheet

JURISDICTION: CLINTON TOWNSHIP

FINANCIAL

FUNDING RESOURCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Capital Improvement Program	Administration or Financial Departments	<ul style="list-style-type: none"> What is the process and timeframe for adding projects to the Critical Infrastructure Protection?
Funding programs - Federal (non-FEMA)	Finance or Emergency Management Departments	<ul style="list-style-type: none"> What were the grants, and what kinds of projects were funded?
Utility fees for stormwater, water, sewer, gas, or electric services	Finance or Public Works Departments	<ul style="list-style-type: none"> How much money is available annually to support implementation of hazard mitigation actions? Is that level of funding expected to decrease, stay the same, or increase in the next five years? What kinds of projects have been funded in this manner?

EDUCATION AND OUTREACH

PROGRAM/METHOD	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
StormReady Certification	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> How long has the community been certified? Have surveys been conducted to determine the effectiveness of the program? If so, what were the results?
Seasonal Emergency Management and Mitigation Outreach	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> Is awareness of potential hazard impacts increasing year to year? Are individuals and businesses taking necessary precautions in advance of events?

Community Capability Assessment Worksheet

JURISDICTION: CLINTON TOWNSHIP

ADMINISTRATIVE AND TECHNICAL

ADMINISTRATIVE

BOARD/COMMISSION/ DEPARTMENT	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Engineering Department	Engineering or Public Works Departments	<ul style="list-style-type: none"> Does the department have ability and availability for design, engineering, project scoping (per HMA or other grant program requirements) and construction project management for mitigation actions included in the current approved HMP and/or proposed for plan update?
Code Enforcement Department	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> Are all ordinances and codes related to hazard mitigation (e.g., building code, floodplain management ordinance, zoning), enforced by the same department? If not, what are the departments and their respective responsibilities and are compliance reviews and enforcement activities coordinated between departments? Does the department have ability and availability to enforce all ordinances and codes related to hazard mitigation?

TECHNICAL

STAFF POSITION	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Chief Building Officer	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> How does the Chief Building Officer position interact with other code and ordinance enforcement officials with hazard mitigation-related responsibilities, e.g., Floodplain Administrator?
Civil Engineer - Construction Project Management	Engineering Department	<ul style="list-style-type: none"> Have previous construction projects been completed, meeting budget and schedule constraints?
Grant Administrator	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the Grant Administrator have experience with FEMA HMA grants administration? If so, have previous HMA grant administration experiences been completed successfully? Does the Grant Administrator have experience with other Federal non-FEMA grants administration used for mitigation purposes? If so, what are the grants and was the administration of the grants completed successfully?
Grant Writer	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the grant writer have experience with FEMA HMA grants applications? Have previous HMA grant applications been awarded? If so, what kinds of projects were funded? Does the grant writer have experience with other Federal non-FEMA grants applications used for mitigation purposes? Have previous non-FEMA grant applications been awarded? If so, what were the grants and what kinds of projects were funded?

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	Cornplanter Township
Name and Title:	Timothy E. Staub, Roadmaster

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	X			
Emergency Operations Plan	X			
Evacuation Plan		X		
Continuity of Operations Plan		X		We have "rough" one
Floodplain Management Ordinance	x			
Zoning Regulations	X			
Subdivision Regulations	X			
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)	X			Master plan
Stormwater Management Plan	X			Though an ordinance
Natural Resource Protection Plan				
Capital Improvement Plan		X		Each year as money allows
Firewise Community				Maybe CVFD
Storm Ready	X			
Building Codes	X			

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning	X X		Twp.Engineer, Stiffler/McGraw	
Engineering	X		Twp.Engineer, Stiffler/McGraw	
Emergency Manager		X		
Floodplain Manager		X		
Staff with experience using Geographic Information Systems (GIS) software	X		Tim Staub	
Grant-writing staff or other fiscal staff	X		Tim Staub, Michelle LeMire	

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability			X
Fiscal Capability			X
Community Political Capability		X	

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	Cranberry Township (Venango County, PA)
Name and Title:	Chad Findlay Cranberry Township Manager

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan			X	
Emergency Operations Plan	X			for our water plants for our gravel pit
Evacuation Plan	X			
Continuity of Operations Plan			X	
Floodplain Management Ordinance	X			
Zoning Regulations	X			
Subdivision Regulations	X			
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)			X	
Stormwater Management Plan	X			
Natural Resource Protection Plan			X	
Capital Improvement Plan		X		
Firewise Community			X	
Storm Ready			X	
Building Codes	X			

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning	X		Ben Breniman	
Engineering	X		The EADS Group	
Emergency Manager	X		Fred Buckholtz	
Floodplain Manager	X		Ben Breniman	
Staff with experience using Geographic Information Systems (GIS) software		X		
Grant-writing staff or other fiscal staff	X		Chad Finley Ben Breniman	

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability			X
Community Political Capability		X	

Capability Assessment Survey

Community/Organization:	Irwin Township, Venango Co.
Name and Title:	Barbara L. Sopher, Secretary

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	X			Adopted Dec. 31, 2010
Emergency Operations Plan	X			Emergency Management Filed with Venango Co. 911
Evacuation Plan	X			Emergency Management Filed with Venango County 911
Continuity of Operations Plan				
Floodplain Management Ordinance	X			Adopted Oct. 7, 2013
Zoning Regulations				County Zoning
Subdivision Regulations	X			Venango Co. Regional Planning Comm.
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)			X	
Stormwater Management Plan	X			Adopted Aug. 8, 2011
Natural Resource Protection Plan			X	
Capital Improvement Plan			X	
Firewise Community			X	
Storm Ready			X	
Building Codes			X	

Please email completed forms to madeleine.fincham@mbakerintl.com

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning				
Engineering				
Emergency Manager				
Floodplain Manager				Venango Co. Regional Planning Comm.
Staff with experience using Geographic Information Systems (GIS) software				
Grant-writing staff or other fiscal staff				

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	



HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: CITY OF OIL 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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	<u>ZONING ORDINANCE</u>
Author/Owner:	<u>CITY OF OIL CITY</u>
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	<u>Flood plains + development.</u>

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Title:			
Author/Owner:			
Effective Date:			
Next Scheduled Update (if known):			
Relation to Hazard Mitigation:			

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.		
Is this Plan/Policy in Place?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Title:	City of Oil City Emergency Operations Plan		
Author/Owner:	Mark Hicks / City of Oil City		
Effective Date:	10/2019		
Next Scheduled Update (if known):	10/2021		
Relation to Hazard Mitigation:	All Hazards Plan		

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> 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 - *Oil Region Alliance - Brownfields Program*
- Coastal Zone Management Program *NO*
- National Flood Insurance Program (NFIP) Community Rating System *YES*
- Community Wildfire Protection Plan *NO*
- Continuity of Operations Plan *YES*
- Disaster Recovery Plan - *YES*
- Economic Development Plan - *NUMEROUS STUDIES*
- Flood Mitigation Plan - *YES*
- Land acquisition for open space and public recreation uses - *NO*
- Transportation Plan - *NO*
- Stormwater Management Plan - *YES*
- Well head protection program

Community Capability Assessment Worksheet

JURISDICTION: CITY OF OIL CITY

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	International Building Code - 2015 EDITION
Responsible Agency:	Oil City CODE OFFICE
Effective Date:	10/2019
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	International FIRE CODE is ADOPTED by International Building CODE. Regulates New CONSTRUCTION - IBC

Community Capability Assessment Worksheet

JURISDICTION: City of Dil City

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> 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 - yes
- International Property Maintenance Code - yes
- Other hazard-specific ordinances (stormwater, steep slope, and wildfire) - Ord # 2798 City of D.C.
- Site plan development review ordinance - COUNTY HAS LEAD. STORMWATER MANAGEMENT
- Subdivision development review ordinance
- Zoning ordinance yes

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	Oil City Engineering Office
Point-of-Contact:	JAN. RUDITIS + Lyndsey King
Meeting Schedule:	N/A
Relation to Hazard Mitigation:	Limited Impact potential due to staffing

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	Oil City Code Office
Point-of-Contact:	YVONNE GREENE
Meeting Schedule:	N/A
Relation to Hazard Mitigation:	Enforcement of Building Codes, Property Maintenance Code. New Development plans Review.

Other administrative boards, commissions, or departments that should be included in the capability assessment for each participating jurisdiction:

- Board of Education - NO
- Emergency Management - YES
- Maintenance Department - YES
- Mitigation Implementation Team - YES
- Mutual aid agreements - YES
- Planning Commission/Zoning Board - YES
- Public Utility Board(s) - NO
- Public Works Department - YES
- Purchasing Department - YES

Community Capability Assessment Worksheet

JURISDICTION: City of Dil City

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:	CODE OFFICER		
Current Position Holder:	YVONNE GREENE		
Length of Employment in this Position:	4 MONTHS		
Relation to Hazard Mitigation:	Newly HIRED. Currently learning + developing		

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	Hired Through Contracting. Company - Arcadis Consultants

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	Community Development Coordinator
Current Position Holder:	Kelly Amos
Length of Employment in this Position:	13 years
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:	Community Development Coordinator		
Current Position Holder:	Kelly Amos		
Length of Employment in this Position:	13 years		
Relation to Hazard Mitigation:			

Other technical staff positions that should be included in the capability assessment for each participating jurisdiction:

- Business Administrator - yes
- Chief Financial Officer - yes
- Civil Engineer - Design - HIRED OUT
- Civil Engineer - Inspections - HIRED OUT
- Clerk - yes
- Community Planner - yes
- Emergency Manager - yes
- Floodplain Administrator - yes
- GIS Coordinator (hazard and community asset data and information management, Hazus) - N/A

Community Capability Assessment Worksheet

JURISDICTION: CITY OF Oil City

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	<i>Community Development - Kelly Amos</i>
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: CITY OF Oil City

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	<u>Kelly Amos</u>
Responsible Agency/Organization:	<u>Community Development.</u>
Relation to Hazard Mitigation:	

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	<u>Terrri Felmler</u>
Responsible Agency/Organization:	<u>Utility OFFICE</u>
Relation to Hazard Mitigation:	

Other funding resources that should be included in the capability assessment for each participating jurisdiction:

- Community Development Block Grant - yes
- FEMA – Hazard Mitigation Assistance - yes
- FEMA – Public Assistance 406 Mitigation - NO
- Funding programs – State - yes
- Funding programs – Philanthropic - yes
- General obligation bonds and/or special tax bonds - yes
- Impact fees for new development - NO
- Tax levies for specific purposes - yes

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: City of Oil City

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	MARK J. HICKS
Responsible Agency/Organization:	CITY FIRE DEPARTMENT/EMERGENCY MANAGEMENT.
Relation to Hazard Mitigation:	

Other programs or methods that should be included in the capability assessment for each participating jurisdiction:

- Firewise USA certification - *NO*
- Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. - *YES*
- Natural disaster or safety related school programs - *yes*
- Ongoing public education or information program (e.g., Environmental Education, Fire Safety, Household Preparedness, Responsible Water Use, etc.) - *yes*
- Public-private partnership initiatives addressing disaster-related issues - *yes*



HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: Plum Township.

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Title:			
Author/Owner:			
Effective Date:			
Next Scheduled Update (if known):			
Relation to Hazard Mitigation:			

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:	CLI Construction Code Inspectors		
Responsible Agency:	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">↓</div> <div style="text-align: center;">↓</div> <div style="text-align: center;">↓</div> </div>		
Effective Date:			
Next Scheduled Update (if known):			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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
- Other hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Point-of-Contact:			
Meeting Schedule:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	CCF Construction Code Inspectors
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

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____
Title:	
Current Position Holder:	
Length of Employment in this Position:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT	<input type="checkbox"/> 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)

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> 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

Community Capability Assessment Worksheet

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	<i>Blum Township</i>
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	<i>Preparing for winter storms</i>

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

Community Capability Assessment Worksheet

JURISDICTION: _____

ATTACHMENT A

Attachment A includes the following additional guidance for assessment of specific capabilities:

- Potential agencies and organizations to contact for information
- Additional questions or considerations

PLANNING AND REGULATORY

PLANS AND POLICIES

PLAN/POLICY	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Comprehensive/ Master Land Use Plan	Planning or Zoning Departments	<ul style="list-style-type: none"> ▫ Does the plan integrate hazard profile information from the current approved HMP into development suitability analysis? ▫ Is the plan effectively reducing or eliminating development in known hazard areas, i.e., is the rate of development in the Special Flood Hazard Area lower, the same, or higher? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Climate Change Adaptation Plan	Planning Department	<ul style="list-style-type: none"> ▫ Does the plan include future hazard vulnerability projections? If so, are these projections included in the current approved HMP risk assessment? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Emergency Operations Plan (EOP)	Emergency Management Department	<ul style="list-style-type: none"> ▫ Does the EOP address all hazards identified in the current approved HMP? ▫ Does the EOP address any hazards that are not included in the current approved HMP? If so, are these hazards for which mitigation actions might be appropriate to consider? ▫ Does the EOP identify obstacles or problems for response and recovery operations that could be alleviated entirely or in part through mitigation, e.g., limited access to floodprone areas due to transportation infrastructure limitations?
Streambank Buffer Protection Program	Local or regional natural resources conservation non-profit organizations	<ul style="list-style-type: none"> ▫ Does the program reference problem areas identified in the current approved HMP? ▫ Does the program identify problem areas that should be referenced in the HMP? ▫ Is acreage in the program increasing year to year?

CODES AND ORDINANCES

CODE/ORDINANCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Building Code	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's Building Code Effectiveness Grading Schedule Score?
Floodplain Ordinance/NFIP Compliance	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's current status in the NFIP? ▫ Does the ordinance include higher standards than minimum requirements of the NFIP, e.g., additional freeboard above the Base Flood Elevation?

Community Capability Assessment Worksheet

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

ADMINISTRATIVE

BOARD/COMMISSION/ DEPARTMENT	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Engineering Department	Engineering or Public Works Departments	<ul style="list-style-type: none"> Does the department have ability and availability for design, engineering, project scoping (per HMA or other grant program requirements) and construction project management for mitigation actions included in the current approved HMP and/or proposed for plan update?
Code Enforcement Department	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> Are all ordinances and codes related to hazard mitigation (e.g., building code, floodplain management ordinance, zoning), enforced by the same department? If not, what are the departments and their respective responsibilities and are compliance reviews and enforcement activities coordinated between departments? Does the department have ability and availability to enforce all ordinances and codes related to hazard mitigation?

TECHNICAL

STAFF POSITION	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Chief Building Officer	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> How does the Chief Building Officer position interact with other code and ordinance enforcement officials with hazard mitigation-related responsibilities, e.g., Floodplain Administrator?
Civil Engineer - Construction Project Management	Engineering Department	<ul style="list-style-type: none"> Have previous construction projects been completed, meeting budget and schedule constraints?
Grant Administrator	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the Grant Administrator have experience with FEMA HMA grants administration? If so, have previous HMA grant administration experiences been completed successfully? Does the Grant Administrator have experience with other Federal non-FEMA grants administration used for mitigation purposes? If so, what are the grants and was the administration of the grants completed successfully?
Grant Writer	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the grant writer have experience with FEMA HMA grants applications? Have previous HMA grant applications been awarded? If so, what kinds of projects were funded? Does the grant writer have experience with other Federal non-FEMA grants applications used for mitigation purposes? Have previous non-FEMA grant applications been awarded? If so, what were the grants and what kinds of projects were funded?

Community Capability Assessment Worksheet

JURISDICTION: _____

FINANCIAL

FUNDING RESOURCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Capital Improvement Program	Administration or Financial Departments	<ul style="list-style-type: none"> ▫ What is the process and timeframe for adding projects to the Critical Infrastructure Protection?
Funding programs - Federal (non-FEMA)	Finance or Emergency Management Departments	<ul style="list-style-type: none"> ▫ What were the grants, and what kinds of projects were funded?
Utility fees for stormwater, water, sewer, gas, or electric services	Finance or Public Works Departments	<ul style="list-style-type: none"> ▫ How much money is available annually to support implementation of hazard mitigation actions? Is that level of funding expected to decrease, stay the same, or increase in the next five years? ▫ What kinds of projects have been funded in this manner?

EDUCATION AND OUTREACH

PROGRAM/METHOD	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
StormReady Certification	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> ▫ How long has the community been certified? ▫ Have surveys been conducted to determine the effectiveness of the program? If so, what were the results?
Seasonal Emergency Management and Mitigation Outreach	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> ▫ Is awareness of potential hazard impacts increasing year to year? ▫ Are individuals and businesses taking necessary precautions in advance of events?

Venango County 2020 Hazard Mitigation Plan Update Capability Assessment Survey

Community/Organization:	
Name and Title:	PLUM TOWNSHIP

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan		X		
Emergency Operations Plan			X	
Evacuation Plan			X	
Continuity of Operations Plan			X	
Floodplain Management Ordinance			X	
Zoning Regulations			X	
Subdivision Regulations			X	
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)			X	
Stormwater Management Plan	X			
Natural Resource Protection Plan			X	
Capital Improvement Plan			X	
Firewise Community			X	
Storm Ready	X			

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Building Codes	X			under CCI

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning		X		
Engineering		X		
Emergency Manager		X		
Floodplain Manager		X		
Staff with experience using Geographic Information Systems (GIS) software		X		
Grant-writing staff or other fiscal staff		X		

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Venango County 2020 Hazard Mitigation Plan Update

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability	X		
Administrative and Technical Capability	X		
Fiscal Capability	X		
Community Political Capability	X		

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	Pleasantville Borough
Name and Title:	Harvey J. Long, Borough Council President

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	X			Emergency Plan reviewed. Revised and adopted in 2020
Emergency Operations Plan	X			Same as above
Evacuation Plan	X			Same as above. In addition, we have the all-system to contact residents in case of emergency
Continuity of Operations Plan	X			Coordination with local First Responders in event of emergency
Floodplain Management Ordinance	N/A			No rivers, dams, etc. within area of Borough
Zoning Regulations	X			Ordinances have been established
Subdivision Regulations	X			Ordinances have been established
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)	X			Ordinances have been established
Stormwater Management Plan	X			Not a high priority since Borough is located highest in county and does not dams, rivers, etc.
Natural Resource Protection Plan	X			Ordinances have been established
Capital Improvement Plan	X			Plans established to constantly review and improve water and sewer systems—major effects os capital growth for the Borough

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Firewise Community	X			Borough has very well trained and active First Responders in its Volunteer Fire Department
Storm Ready	X			Borough has a well-trained and active Volunteer Fire Department that will help coordinate
Building Codes	X			Ordinances have been established

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning	X		Borough council committee reviews as is necessary	The Borough has ordinances in place, a person in place to observe and bring issues to the Council, and will hold special meetings for issues when necessary
Engineering	X		A professional Engineer is on retainer for the Borough	Consultation takes place as the need arises.
Emergency Manager	X		Local EMA coordinator is in consultation with the Council (President)	The local EMA and the Council will work closely together emergencies arise.
Floodplain Manager	X		Local EMA and the Council (President) will work as a team	Consultation takes place as need arises
Staff with experience using Geographic Information Systems (GIS) software		X		There has not been a need within the Borough
Grant-writing staff or other fiscal staff		X	No specific individual. Grants are written and applied for by a member of the council.	The Borough does consult with the Borough's state organization for grants available.

Self-Assessment of Capability:

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability	X		
Fiscal Capability	X		
Community Political Capability		X	

Venando County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization	Richard Twp.
Name and Title:	Chanda Ritchey

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	✓			
Emergency Operations Plan	✓			
Evacuation Plan	✓			
Continuity of Operations Plan	✓			
Floodplain Management Ordinance	✓			
Zoning Regulations	✓			
Subdivision Regulations	✓			
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)	✓			
Stormwater Management Plan	✓			
Natural Resource Protection Plan	✓			
Capital Improvement Plan	✓			
Firewise Community	✓			
Storm Ready	✓			
Building Codes	✓			

Please email completed forms to madeleine.fincham@mbakerintl.com

Venando County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning	✓			
Engineering	✓		Gibson-Thomas	
Emergency Manager	✓		Thomas best	
Floodplain Manager	✓		Thomas best	
Staff with experience using Geographic Information Systems (GIS) software			County	
Grant-writing staff or other fiscal staff	✓		With help from County	

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability	✓		
Administrative and Technical Capability	✓		
Fiscal Capability	✓		
Community Political Capability	✓		

Please email completed forms to madeleine.fincham@mbakerintl.com



HAZARD MITIGATION PLAN GUIDANCE

Community Capability Assessment Worksheet

JURISDICTION: Rockland Township, Venango County

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	VENANGO COUNTY COMPREHENSIVE PLAN
Author/Owner:	VENANGO COUNTY
Effective Date:	2004
Next Scheduled Update (if known):	2021
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

EMERGENCY OPERATIONS PLAN	Organizational procedures and processes to respond to and recover from an emergency.
Is this Plan/Policy in Place?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Title:	
Author/Owner:	
Effective Date:	
Next Scheduled Update (if known):	
Relation to Hazard Mitigation:	

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:	BUILDING CODE		
Responsible Agency:	THIRD PARTY- CONSTRUCTION CODE INPECTORS		
Effective Date:	2010		
Next Scheduled Update (if known):	N/A		
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	LOCAL FLOODPLAIN ORDINANCE
Responsible Agency:	VENANGO COUNTY
Effective Date:	2014
Next Scheduled Update (if known):	N/A
Relation to Hazard Mitigation:	SETS GUIDANCES FOR BUILDING IN THE FLOODPLAIN

Other codes and ordinances that should be included in the capability assessment for each participating jurisdiction:

- Fire department inspections
- International Property Maintenance Code
- Other hazard-specific ordinances (stormwater, steep slope, and wildfire)
- Site plan development review ordinance
- Subdivision development review ordinance
- Zoning ordinance

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Point-of-Contact:			
Meeting Schedule:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:	CONSTRUCTION CODE INSPECTORS		
Point-of-Contact:	MIKE GRILL (814.432.2630)		
Meeting Schedule:			
Relation to Hazard Mitigation:	SETS GUIDANCES FOR CONSTRUCTION		

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

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:	TOWNSHIP BUILDING OFFICER		
Current Position Holder:	MIKE GRILL (CONTRACTOR)		
Length of Employment in this Position:	2010- PRESENT		
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:			
Current Position Holder:			
Length of Employment in this Position:			
Relation to Hazard Mitigation:			

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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input type="checkbox"/> FT	<input type="checkbox"/> PT If PT, indicate % time or hours _____	
Title:	N/A		
Current Position Holder:	EADS GROUP		
Length of Employment in this Position:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Full Time or Part Time?	<input checked="" type="checkbox"/> FT <input type="checkbox"/> PT If PT, indicate % time or hours _____		
Title:	TOWNSHIP STAFF AND/OR COUNTY		
Current Position Holder:	PLANNING STAFF		
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)

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> IDK (see Attachment A)
Name:			
Responsible Agency/Organization:			
Relation to Hazard Mitigation:			

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	
Responsible Agency/Organization:	
Relation to Hazard Mitigation:	

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IDK (see Attachment A)
Name:	NO PUBLIC SEWAGE, NO PUBLIC WATER, UTILITIES ARE PRIVATE
Responsible Agency/Organization:	FEES CHARGED FOR SEWAGE FROM OIL REGION JOINT SEWAGE AUTHORITY, WATER IS PRIVATE, UTILITIES ARE PRIVATE
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

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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:

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> 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

Community Capability Assessment Worksheet

JURISDICTION: ROCKLAND TOWNSHIP, VENANGO COUNTY

ATTACHMENT A

Attachment A includes the following additional guidance for assessment of specific capabilities:

- Potential agencies and organizations to contact for information
- Additional questions or considerations

PLANNING AND REGULATORY

PLANS AND POLICIES

PLAN/POLICY	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Comprehensive/ Master Land Use Plan	Planning or Zoning Departments	<ul style="list-style-type: none"> ▫ Does the plan integrate hazard profile information from the current approved HMP into development suitability analysis? ▫ Is the plan effectively reducing or eliminating development in known hazard areas, i.e., is the rate of development in the Special Flood Hazard Area lower, the same, or higher? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Climate Change Adaptation Plan	Planning Department	<ul style="list-style-type: none"> ▫ Does the plan include future hazard vulnerability projections? If so, are these projections included in the current approved HMP risk assessment? ▫ Does the plan include recommendations or cross reference relevant mitigation actions from the current approved HMP?
Emergency Operations Plan (EOP)	Emergency Management Department	<ul style="list-style-type: none"> ▫ Does the EOP address all hazards identified in the current approved HMP? ▫ Does the EOP address any hazards that are not included in the current approved HMP? If so, are these hazards for which mitigation actions might be appropriate to consider? ▫ Does the EOP identify obstacles or problems for response and recovery operations that could be alleviated entirely or in part through mitigation, e.g., limited access to floodprone areas due to transportation infrastructure limitations?
Streambank Buffer Protection Program	Local or regional natural resources conservation non-profit organizations	<ul style="list-style-type: none"> ▫ Does the program reference problem areas identified in the current approved HMP? ▫ Does the program identify problem areas that should be referenced in the HMP? ▫ Is acreage in the program increasing year to year?

CODES AND ORDINANCES

CODE/ORDINANCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Building Code	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's Building Code Effectiveness Grading Schedule Score?
Floodplain Ordinance/NFIP Compliance	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> ▫ What is the community's current status in the NFIP? ▫ Does the ordinance include higher standards than minimum requirements of the NFIP, e.g., additional freeboard above the Base Flood Elevation?

Community Capability Assessment Worksheet

JURISDICTION: _____

ADMINISTRATIVE AND TECHNICAL

ADMINISTRATIVE

BOARD/COMMISSION/ DEPARTMENT	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Engineering Department	Engineering or Public Works Departments	<ul style="list-style-type: none"> Does the department have ability and availability for design, engineering, project scoping (per HMA or other grant program requirements) and construction project management for mitigation actions included in the current approved HMP and/or proposed for plan update?
Code Enforcement Department	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> Are all ordinances and codes related to hazard mitigation (e.g., building code, floodplain management ordinance, zoning), enforced by the same department? If not, what are the departments and their respective responsibilities and are compliance reviews and enforcement activities coordinated between departments? Does the department have ability and availability to enforce all ordinances and codes related to hazard mitigation?

TECHNICAL

STAFF POSITION	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Chief Building Officer	Code Enforcement or Engineering Departments	<ul style="list-style-type: none"> How does the Chief Building Officer position interact with other code and ordinance enforcement officials with hazard mitigation-related responsibilities, e.g., Floodplain Administrator?
Civil Engineer - Construction Project Management	Engineering Department	<ul style="list-style-type: none"> Have previous construction projects been completed, meeting budget and schedule constraints?
Grant Administrator	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the Grant Administrator have experience with FEMA HMA grants administration? If so, have previous HMA grant administration experiences been completed successfully? Does the Grant Administrator have experience with other Federal non-FEMA grants administration used for mitigation purposes? If so, what are the grants and was the administration of the grants completed successfully?
Grant Writer	Finance or Emergency Management Departments	<ul style="list-style-type: none"> Does the grant writer have experience with FEMA HMA grants applications? Have previous HMA grant applications been awarded? If so, what kinds of projects were funded? Does the grant writer have experience with other Federal non-FEMA grants applications used for mitigation purposes? Have previous non-FEMA grant applications been awarded? If so, what were the grants and what kinds of projects were funded?

Community Capability Assessment Worksheet

JURISDICTION: _____

FINANCIAL

FUNDING RESOURCE	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
Capital Improvement Program	Administration or Financial Departments	<ul style="list-style-type: none"> What is the process and timeframe for adding projects to the Critical Infrastructure Protection?
Funding programs – Federal (non-FEMA)	Finance or Emergency Management Departments	<ul style="list-style-type: none"> What were the grants, and what kinds of projects were funded?
Utility fees for stormwater, water, sewer, gas, or electric services	Finance or Public Works Departments	<ul style="list-style-type: none"> How much money is available annually to support implementation of hazard mitigation actions? Is that level of funding expected to decrease, stay the same, or increase in the next five years? What kinds of projects have been funded in this manner?

EDUCATION AND OUTREACH

PROGRAM/METHOD	AGENCY/ORGANIZATION	ADDITIONAL QUESTIONS/CONSIDERATIONS
StormReady Certification	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> How long has the community been certified? Have surveys been conducted to determine the effectiveness of the program? If so, what were the results?
Seasonal Emergency Management and Mitigation Outreach	Emergency Management or Public Information Departments	<ul style="list-style-type: none"> Is awareness of potential hazard impacts increasing year to year? Are individuals and businesses taking necessary precautions in advance of events?

Venango County 2020 Hazard Mitigation Plan Update Capability Assessment Survey

Community/Organization:	<i>Govt</i>
Name and Title:	<i>Guy Mulliken</i>

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
? Hazard Mitigation Plan	X			
? Emergency Operations Plan	X			
Evacuation Plan			X	
? Continuity of Operations Plan			X	
Floodplain Management Ordinance	X			
Zoning Regulations	X			
Subdivision Regulations			X	
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)			X	
Stormwater Management Plan	X			
Natural Resource Protection Plan			X	
Capital Improvement Plan			X	
Firewise Community			X	
Storm Ready			X	

Venango County 2020 Hazard Mitigation Plan Update

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Building Codes	X			

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning		X		
Engineering	X		Sam Gibson / KKH Engineering	
Emergency Manager	X		Jim [unclear]	
Floodplain Manager		X		
Staff with experience using Geographic Information Systems (GIS) software		X		
Grant-writing staff or other fiscal staff	X		Joseph Dangel	

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Venango County 2020 Hazard Mitigation Plan Update

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability			
Administrative and Technical Capability			
Fiscal Capability			
Community Political Capability			

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization	Scrubgrass Twp
Name and Title:	Richard Cornelius

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	X			Adopted Venango Co. Plan 2/15/11.
Emergency Operations Plan	X			9/2019
Evacuation Plan				
Continuity of Operations Plan				
Floodplain Management Ordinance	X			Ordinance # 2013-1 Passed 11/19/13
Zoning Regulations				
Subdivision Regulations				
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)				
Stormwater Management Plan				Adopted Venango Co. Plan 4/19/11
Natural Resource Protection Plan				
Capital Improvement Plan				
Firewise Community				
Storm Ready				
Building Codes	X			4/2014 Venango Co. Cog - CCI

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning		X		
Engineering		X		
Emergency Manager		X	County	
Floodplain Manager		X		
Staff with experience using Geographic Information Systems (GIS) software		X		
Grant-writing staff or other fiscal staff		X		

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability	X		
Administrative and Technical Capability	X		
Fiscal Capability	X		
Community Political Capability	X		

Please email completed forms to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization:	POLK Borough
Name and Title:	DAVE OWENS - Mayor

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	✓			Venango County Plan
Emergency Operations Plan	✓			
Evacuation Plan	✓			
Continuity of Operations Plan	✓			
Floodplain Management Ordinance	✓			
Zoning Regulations	✓			
Subdivision Regulations	✓			
Comprehensive Land Use Plan (or General, Master, or Growth Management Plan)	✓			
Stormwater Management Plan	✓			
Natural Resource Protection Plan	✓			
Capital Improvement Plan	✓			
Firewise Community	✓			
Storm Ready	✓			
Building Codes	✓			

Venango County 2020 Hazard Mitigation Plan Update

Available Staff and Technical Assistance:

Please indicate whether your jurisdiction has the following personnel resources on-staff or available to assist with hazard mitigation efforts.

Staff or Personnel Resource	Yes	No	Department or Staff Member	Comments
Land Use/Development Planning		✓		WE Rely on Venango County
Engineering		✓		
Emergency Manager		✓		
Floodplain Manager		✓		
Staff with experience using Geographic Information Systems (GIS) software		✓		
Grant-writing staff or other fiscal staff		✓		

Self-Assessment of Capability:

Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in other sections of this survey.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability	✓		
Administrative and Technical Capability	✓		
Fiscal Capability	✓		
Community Political Capability	✓		

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: _____CITY OF FRANKLIN_____

1. FLOODPLAIN IDENTIFICATION AND MAPPING			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.	Yes	
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.	Yes	Nov/2013
c. Does the municipality support request for map updates?	If yes, state how.	Yes	Digital and web site
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.	NO	
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.	Yes	Digital Data and Mapping
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.	Yes	Code Enforcement



2. FLOODPLAIN MANAGEMENT			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Has the municipality adopted a compliant floodplain management ordinance that, at a minimum, regulates the following:	If yes, answer questions (1) through (4) below.	Yes	
(1) Does the municipality issue permits for all proposed development in the Special Flood Hazard Areas (SFHAs)?	If yes, specify the office responsible.	Yes	Code Enforcement
(2) Does the municipality obtain, review, and utilize any Base Flood Elevation (BFE) and floodway data, and/or require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres?	If yes, specify the office responsible.	Yes	Code Enforcement
(3) Does the municipality identify measures to keep all new and substantially improved construction reasonably safe from flooding to or above the BFE, including anchoring, using flood-resistant materials, and designing or locating utilities and service facilities to prevent water damage?	If yes, specify the office responsible.	Yes	Code Enforcement
(4) Does the municipality document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures?	If yes, specify the office responsible.	Yes	Code Enforcement
b. If a compliant floodplain ordinance was adopted, does the municipality enforce the ordinance by monitoring compliance and taking remedial action to correct violations?	If yes, specify how.	Yes	Code Enforcement
c. Has the municipality considered adopting activities that extend beyond the minimum requirements? Examples include: <ul style="list-style-type: none"> • Participation in the Community Rating System • Prohibition of production or storage of chemicals in SFHA 	If yes, specify activities.	NO	



Venango County 2020 Hazard Mitigation Plan Update

<ul style="list-style-type: none"> • Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in SFHA • Prohibition of certain types of residential housing (manufactured homes) in SFHA • Floodplain ordinances that prohibit any new residential or nonresidential structures in SFHA 			
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3. FLOOD INSURANCE			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality educate community members about the availability and value of flood insurance?	If yes, specify how.	No	
b. Does the municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?	If yes, specify how.	Yes	Mailings (postcard)
c. Does the municipality provide general assistance to community members regarding insurance issues?	If yes, specify how.	No	



Venango County 2020 Hazard Mitigation Plan Update

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: Plum Township

1. FLOODPLAIN IDENTIFICATION AND MAPPING

Requirement	Recommended Action	Yes/No	Comments
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.	NO	
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.	NO	
c. Does the municipality support request for map updates?	If yes, state how.	NO	
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.	NO	
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.	NO	
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.	NO	

Venango County 2020 Hazard Mitigation Plan Update

2. FLOODPLAIN MANAGEMENT

Requirement	Recommended Action	Yes/No	Comments
a. Has the municipality adopted a compliant floodplain management ordinance that, at a minimum, regulates the following:	If yes, answer questions (1) through (4) below.	Yes	
(1) Does the municipality issue permits for all proposed development in the Special Flood Hazard Areas (SFHAs)?	If yes, specify the office responsible.	NO	
(2) Does the municipality obtain, review, and utilize any Base Flood Elevation (BFE) and floodway data, and/or require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres?	If yes, specify the office responsible.		
(3) Does the municipality identify measures to keep all new and substantially improved construction reasonably safe from flooding to or above the BFE, including anchoring, using flood-resistant materials, and designing or locating utilities and service facilities to prevent water damage?	If yes, specify the office responsible.		
(4) Does the municipality document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures?	If yes, specify the office responsible.		
b. If a compliant floodplain ordinance was adopted, does the municipality enforce the ordinance by monitoring compliance and taking remedial action to correct violations?	If yes, specify how.		

Venango County 2020 Hazard Mitigation Plan Update

2. FLOODPLAIN MANAGEMENT

<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
c. Has the municipality considered adopting activities that extend beyond the minimum requirements? Examples include: <ul style="list-style-type: none"> • Participation in the Community Rating System • Prohibition of production or storage of chemicals in SFHA • Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in SFHA • Prohibition of certain types of residential housing (manufactured homes) in SFHA • Floodplain ordinances that prohibit any new residential or nonresidential structures in SFHA 	If yes, specify activities.	NO	

3. FLOOD INSURANCE

<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality educate community members about the availability and value of flood insurance?	If yes, specify how.	NO	
b. Does the municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?	If yes, specify how.	NO	
c. Does the municipality provide general assistance to community members regarding insurance issues?	If yes, specify how.	NO	

Venando County 2020 Hazard Mitigation Plan Update

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: Richland Twp.

1. FLOODPLAIN IDENTIFICATION AND MAPPING			
Requirement	Recommended Action	Yes/No	Comments
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.	No	
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.	No	
c. Does the municipality support request for map updates?	If yes, state how.	No	
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.	No	
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.	No	
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.	No	

Venando County 2020 Hazard Mitigation Plan Update

2. FLOODPLAIN MANAGEMENT			
Requirement	Recommended Action	Yes/No	Comments
a. Has the municipality adopted a compliant floodplain management ordinance that, at a minimum, regulates the following:	If yes, answer questions (1) through (4) below.	Yes	
(1) Does the municipality issue permits for all proposed development in the Special Flood Hazard Areas (SFHAs)?	If yes, specify the office responsible.	No	
(2) Does the municipality obtain, review, and utilize any Base Flood Elevation (BFE) and floodway data, and/or require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres?	If yes, specify the office responsible.	No	
(3) Does the municipality identify measures to keep all new and substantially improved construction reasonably safe from flooding to or above the BFE, including anchoring, using flood-resistant materials, and designing or locating utilities and service facilities to prevent water damage?	If yes, specify the office responsible.	No	
(4) Does the municipality document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures?	If yes, specify the office responsible.	No	
b. If a compliant floodplain ordinance was adopted, does the municipality enforce the ordinance by monitoring compliance and taking remedial action to correct violations?	If yes, specify how.	No	

Venango County 2020 Hazard Mitigation Plan Update

<p>c. Has the municipality considered adopting activities that extend beyond the minimum requirements? Examples include:</p> <ul style="list-style-type: none"> • Participation in the Community Rating System • Prohibition of production or storage of chemicals in SFHA • Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in SFHA • Prohibition of certain types of residential housing (manufactured homes) in SFHA • Floodplain ordinances that prohibit any new residential or nonresidential structures in SFHA 	<p>If yes, specify activities.</p>	<p>No</p>	
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3. FLOOD INSURANCE

<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
<p>a. Does the municipality educate community members about the availability and value of flood insurance?</p>	<p>If yes, specify how.</p>	<p>No</p>	
<p>b. Does the municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?</p>	<p>If yes, specify how.</p>	<p>No</p>	
<p>c. Does the municipality provide general assistance to community members regarding insurance issues?</p>	<p>If yes, specify how.</p>	<p>No</p>	

Venando County 2020 Hazard Mitigation Plan Update

2. FLOODPLAIN MANAGEMENT			
Requirement	Recommended Action	Yes/No	Comments
a. Has the municipality adopted a compliant floodplain management ordinance that, at a minimum, regulates the following:	If yes, answer questions (1) through (4) below.	Yes	
(1) Does the municipality issue permits for all proposed development in the Special Flood Hazard Areas (SFHAs)?	If yes, specify the office responsible.	No	
(2) Does the municipality obtain, review, and utilize any Base Flood Elevation (BFE) and floodway data, and/or require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres?	If yes, specify the office responsible.	No	
(3) Does the municipality identify measures to keep all new and substantially improved construction reasonably safe from flooding to or above the BFE, including anchoring, using flood-resistant materials, and designing or locating utilities and service facilities to prevent water damage?	If yes, specify the office responsible.	No	
(4) Does the municipality document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures?	If yes, specify the office responsible.	No	
b. If a compliant floodplain ordinance was adopted, does the municipality enforce the ordinance by monitoring compliance and taking remedial action to correct violations?	If yes, specify how.	No	

Venango County 2020 Hazard Mitigation Plan Update

<p>c. Has the municipality considered adopting activities that extend beyond the minimum requirements? Examples include:</p> <ul style="list-style-type: none"> • Participation in the Community Rating System • Prohibition of production or storage of chemicals in SFHA • Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in SFHA • Prohibition of certain types of residential housing (manufactured homes) in SFHA • Floodplain ordinances that prohibit any new residential or nonresidential structures in SFHA 	<p style="text-align: center; font-size: 2em;">No</p> <p>If yes, specify activities.</p>		
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3. FLOOD INSURANCE

<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
<p>a. Does the municipality educate community members about the availability and value of flood insurance?</p>	<p>If yes, specify how.</p>	<p style="text-align: center;">NO</p>	
<p>b. Does the municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?</p>	<p>If yes, specify how.</p>	<p style="text-align: center;">NO</p>	
<p>c. Does the municipality provide general assistance to community members regarding insurance issues?</p>	<p>If yes, specify how.</p>	<p style="text-align: center;">NO</p>	

Venando County 2020 Hazard Mitigation Plan Update

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: SCRUBGRASS TWP

1. FLOODPLAIN IDENTIFICATION AND MAPPING			
Requirement	Recommended Action	Yes/No	Comments
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.	?	
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.	?	
c. Does the municipality support request for map updates?	If yes, state how.	No	
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.	No	
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.	No	
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.	No	

Brown, Kevin

Subject: Venango County HMP Check-in
Location: Dial: 571-209-6390 / Passcode: 999 655 982#

Start: Thu 8/20/2020 10:00 AM
End: Thu 8/20/2020 11:00 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Fincham, Madeleine
Required Attendees: Tim Dunkle Jr; Janis Cochran; Jason Ruggiero; Brown, Kevin
Optional Attendees: Murray, Taryn

AGENDA

- Review the 2015 Capability Assessment (attached – please review prior to meeting if possible)
- Review 2015 Goals and Objectives (attached)
- RAMS Meeting Check-in
- Public Outreach

DO NOT DELETE OR CHANGE ANY OF THE TEXT BELOW THIS LINE

Madeleine Fincham has scheduled this WebEx meeting.

Venango County HMP Check-in
Host: Madeleine Fincham

When it's time, start or join the WebEx meeting from here:
<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=3fd1360c68e3c497ed3ff148f530fce1>

Access Information

Meeting Number: 999 655 982
Meeting Password: (This meeting does not require a password.)

Audio Connection

571-209-6390 (Cisco WebEx)

Access Code:
999 655 982

Hosts, need your host access code or key? Go to the meeting information page:
<https://meetings.mbakercorp.com/orion/meeting/meetingInfo?MTID=b7635cadfc34ac738c6298585f0a59f5>

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<http://compass.mbakercorp.com/communities/DigitalSvc/Pages/default.aspx>

Table 6.1-1: Five-Year Mitigation Plan Review of Actions		
Action #	Action Description	Review Comments
37	Develop a database in existing GIS system of all natural resource areas including maps to be used in future mitigation activities.	Continue. GIS layers including forest, landslide prone areas, agriculture, gas transmission lines have been incorporated into this HMP update.
38	When funds become available for mitigation projects, the county plans to hold meetings to identify high-risk properties in the county and to determine potential participation in future acquisition and relocation projects.	Continue.
39	Planning Department to continue the development of the County-wide Stormwater Management Plan within the next 5 years.	Complete. Phase II Act 167 SWMP was released in 2010 along with a SWMP Model Ordinance.
40	County to work with DEP, conservation agencies, and others, to research avenues for restoring degraded natural resources and open space to improve their flood control functions.	Continue. In cooperation with DCNR, Allegheny Valley Trails Association, Council on Greenways and Trails, businesses and local parks, the County Planning Commission completed the Comprehensive Recreation, Park, and Open Space Plan in 2010.

6.2 Mitigation Goals and Objectives

Hazard mitigation goals and objectives for the 2015 Plan were developed after the Venango LPT reviewed the results of the updated Risk Assessment and Capability Analysis. Table 6.2-1 identifies the goals and objectives established for the 2015 HMP.

Table 6.2-1 Venango County Goals and Objectives	
Goal	Objectives
Goal 1 Increase Public Awareness regarding natural and manmade hazard risks, preparedness and mitigation.	1.1 Create displays for use at public events (health fair, public awareness day, and county fair).
	1.2 Utilize the media for the distribution and publication of hazard information.
	1.3 Create a public speaking series on hazard related topics.
	1.4 Ensure that the Red Cross citizen's disaster course is held on a frequent basis.
	1.5 Update the county website to provide hazard related information that is easily accessible.
Goal 2 Ensure that adequate shelter is available to	2.1 Ensure that all shelters have adequate emergency power resources.

Table 6.2-1 Venango County Goals and Objectives	
Goal	Objectives
current and future populations.	2.2 Establish a protocol for the sharing of annual shelter survey information between the local Red Cross chapter and Venango County Emergency Services EMA. 2.3 Publicize locations of shelters.
Goal 3 Identify all repetitive loss structures throughout the county.	3.1 Collect updated information of the number and location of all repetitive loss properties throughout the county and the municipalities. 3.2 Develop a database of information and GIS mapping on all repetitive loss properties including maps. 3.3 Identify owners of repetitive loss properties who are interested in participating in future property acquisition and relocation projects.
Goal 4 Develop better hazard data for Venango County and the municipalities.	4.1 Identify existing hazard data limitations and gaps. 4.2 Coordinate with Venango County EMA and local emergency management coordinators to develop and maintain a county hazard log.
Goal 5 Attempt to reduce the current and future risk of flood damage in Venango County.	5.1 Reduce flood damage by directing new development away from high hazard areas by reviewing existing regulations to ensure adequacy in reducing the amount of future development in identified hazard areas. 5.2 Municipalities to review all comprehensive plans to ensure that designated growth areas are not in hazard areas. 5.3 Adoption and enforcement of statewide Uniform Construction Code (UCC). 5.4 Review any capital improvement plans to ensure that infrastructure improvements are not directed towards hazardous areas without adhering to all applicable state, federal, and local regulations. 5.5 Evaluate and update existing floodplain ordinances to meet or exceed the NFIP standards. 5.6 Improve the enforcement of existing floodplain regulations.
Goal 6 Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.	6.1 Research possible mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems. Some projects may include restoring riparian corridors to a natural condition, streambank restoration, conservation subdivision practices

Goal	Objectives
	and other greenway techniques.
Goal 7 Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.	7.1 Protect Venango County's natural resources through the implementation of cost-effective and technically feasible mitigation projects.
	7.2 Protect Venango County's natural resources through the implementation of recreation planning and storm water management planning.

6.3 Identification and Analysis of Mitigation Techniques

In order to ensure that a broad range of mitigation actions were considered, the Venango LPT and the LPT analyzed a comprehensive range of specific mitigation actions for each hazard. This was done by developing a matrix of mitigation planning techniques (described below) versus the priority hazards in the County. This helped to ensure that there was sufficient breadth and creativity in the mitigation actions considered.

There are four categories of mitigation actions which Venango County considered in developing its mitigation action plan. Those categories include:

- **Local plans and regulations:** Government authorities, policies, or codes that influence the way land and buildings are developed and built. Examples include, but are not limited to: comprehensive plans, subdivision regulations, building codes and enforcement, and NFIP and CRS.
- **Structure and infrastructure:** Modifying existing structures and infrastructure or constructing new structures to reduce hazard vulnerability. Examples include, but are not limited to: acquisition and elevation of structures in flood prone areas, utility undergrounding, structural retrofits, floodwalls and retaining walls, detention and retention structures, and culverts.
- **Natural systems protection:** Actions that minimize damage and losses and also preserve or restore the functions of natural systems. Examples include, but are not limited to: sediment and erosion control, stream corridor restoration, forest management, conservation easements, and wetland restoration and preservation.
- **Education and awareness:** Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate the hazards, and may also include participation in national programs. Examples include, but are not limited to: radio or television spots, websites with maps and information, provide information and training, NFIP outreach, StormReady, and Firewise Communities.

Table 6.3-1 provides a matrix identifying the mitigation techniques used for the moderate and high risk hazards identified in the County. Mitigation projects associated with some of these techniques (e.g. structural project implementation for flood hazards) are included in Section 6.4.

5 Capability Assessment

5.1 Update Process Summary

Venango County has a number of resources it can access to implement hazard mitigation initiatives including emergency response measures, local planning and regulatory tools, administrative assistance and technical expertise, fiscal capabilities, and participation in local, regional, state, and federal programs. The presence of these resources enables community resiliency through actions taken before, during, and after a hazard event.

The 2010 HMP identified the presence of local plans, ordinances, and codes in each municipality. It also specified local, state, and federal resources available for mitigation efforts. Through responses to the *Capability Assessment Survey* distributed at the Kick-off and Mitigation Strategy meetings as well as being posted online, the 2015 HMP update provides an updated inventory of the most critical local planning tools available within each municipality and a summary of the fiscal and technical capabilities available through programs and organizations outside of the County. It also identifies emergency management capabilities and the processes used for implementation of the National Flood Insurance Program.

While the capability assessment serves as a good instrument for identifying local capabilities for, it also provides a means for recognizing gaps and weaknesses that can be resolved through future mitigation actions. The results of this assessment lend critical information for developing an effective mitigation strategy.

5.2 Capability Assessment Findings

Venango County has identified the resources and capabilities that are currently in place to reduce the risk from their identified hazards. A capability assessment entails looking at what you are doing or what you can potentially do to reduce your communities' risks from hazards. This capability assessment looks at government programs and policies, regulations and ordinances, existing emergency plans, public outreach information, personnel and equipment, and the like. Capability assessment also looks at the resources available to local communities to reduce disaster risks.

5.2.1 Planning and Regulatory Capability

There are numerous existing regulatory and planning mechanisms in place at the state, County, and municipal level of government which support hazard mitigation planning efforts. These tools include the Commonwealth of Pennsylvania Standard All-Hazard Mitigation Plan, local floodplain management ordinances, the Venango County Stormwater Management (Act 167) Plan, the Venango County Comprehensive Plan, Local Emergency Operation Plans, and local zoning ordinances. These mechanisms were discussed at community meetings and are described in Section 5.2. They enhance the County's mitigation strategy and are therefore incorporated into several of the mitigation actions identified in Section 6.4.

Some of the most important planning and regulatory capabilities that can be utilized for hazard mitigation include comprehensive plans, building codes, floodplain ordinances, subdivision and land development ordinances, and zoning ordinances. These tools provide mechanisms for the

implementation of adopted mitigation strategies. Table 5.2.1-1 summarizes the capability of the County

Venango County 2015 Hazard Mitigation Plan Update

MUNICIPALITY	COMPREHENSIVE PLAN	BUILDING CODE	SUBDIVISION & LAND DEVELOPMENT ORDINANCE	ZONING ORDINANCE	STORMWATER MANAGEMENT ORDINANCE	HAZARD MITIGATION PLAN
Allegheny Township		X	County zoning		X	X
Barkeyville Borough	X		County zoning	X	X	X
Canal Township			County zoning		X	
Cherrytree Township	X	X	County zoning	X	X	X
Clinton Township		X	County zoning		X	X
Clintonville Township		X	County zoning		X	
Cooperstown Borough		X	County zoning		X	X
Cornplanter Township	X		County zoning	X	X	X
Cranberry Township	X	X	County zoning	X	X	X
Emlenton Borough	X	X	County zoning	X	X	X
City of Franklin	X	X	X	X	X	X
French Creek Township		X	County zoning	X	X	
Irwin Township			County zoning		X	X
Jackson Township			County zoning		X	
Mineral Township		X	County zoning		X	X
Oakland Township		X	County zoning		X	X
Oil City	X	X	County zoning	X	X	X
Oil Creek Township		X	County zoning		X	
Pinegrove Township		X	County zoning		X	
Pleasantville Borough	X	X	County zoning	X	X	X
Plum Township		X	County zoning		X	X
Polk Borough	X	X	County zoning		X	
President Township	X	X	County zoning		X	X
Richland Township		X	County zoning		X	X
Rockland Township		X	County zoning		X	X
Rouseville Borough	X	X	County zoning	X	X	X
Sandycreek Township	X	X	X	X	X	X

Table 5.2.1-1 Venango County Planning and Regulatory Capability (Venango County Planning Department, 2014)						
MUNICIPALITY	COMPREHENSIVE PLAN	BUILDING CODE	SUBDIVISION & LAND DEVELOPMENT ORDINANCE	ZONING ORDINANCE	STORMWATER MANAGEMENT ORDINANCE	HAZARD MITIGATION PLAN
Scrubgrass Township	X		County zoning		X	X
Sugarcreek Borough	X	X	County zoning	X	X	X
Utica Borough			County zoning		X	X
Victory Township	X	X	County zoning		X	X
<i>X – in place</i>						

Participation in the National Flood Insurance Program (NFIP)

Floods are the most common and costly natural catastrophe. In terms of economic disruption, property damage, and loss of life, floods are “nature’s number-one disaster.” For that reason, flood insurance is almost never available under industry-standard homeowner’s and renter’s policies. The best way for citizens to protect their property against loss to flood is to purchase flood insurance through the National Flood Insurance Program (NFIP).

Congress established the National Flood Insurance Program (NFIP) in 1968 to help control the growing cost of federal disaster relief. The NFIP is administered by the Federal Emergency Management Agency (FEMA), part of the U.S. Department of Homeland Security. The NFIP offers federally backed flood insurance in communities that adopt and enforce effective floodplain management ordinances to reduce future flood losses.

29 out of the 31 municipalities in Venango County participate in the NFIP, with all participating municipalities in good standing. A list of participating municipalities can be seen in Table 4.3.3-2 of Section 4.3.3. The program is managed by local municipalities participating in the program through ordinance adoption and floodplain regulation while the County provides an oversight and coordination role. Similarly, permitting processes needed for building construction and development in the floodplain are implemented at the municipal level through various ordinances (e.g. zoning, subdivision and land development, and floodplain ordinances). All compliance and enforcement mechanisms are instituted through municipal codes and enforced by local zoning officers.

The NFIP provides flood insurance to individuals in communities that are members of the program. Membership in the program is contingent on the community adopting and enforcing floodplain management and development regulations.

National Flood Insurance is available only in communities that apply for participation in the NFIP and agree to implement prescribed flood mitigation measures. The minimum floodplain management requirements include:

- Review and permit all development in the Special Flood Hazard Area (SFHA);
- Elevate new and substantially improved residential structures above the BFE;
- Elevate or dry floodproof new and substantially improved non-residential structures;
- Limit development in floodways;
- Locate or construct all public utilities and facilities to minimize or eliminate flood damage; and
- Anchor foundation or structure to resist floatation, collapse, or lateral movement.

In addition, communities are eligible to participate in the NFIP’s Community Rating System (CRS). Under the CRS, policyholders can receive premium discounts of 5 to 45 percent as their cities and towns adopt more comprehensive flood mitigation measures. Currently, there are no communities in Venango County that participate in the NFIP Community Rating System.

Table 5.2.1-2 shows the number of NFIP policies and claims for Venango County municipalities. Table 4.4-2 in Section 4.4.4 provides the number of claims paid and substantial damage claims that have been filed in the County.

Table 5.2.1-2 NFIP Policies and Claims in Venango County (FEMA CIS, 2014).		
COMMUNITY	# POLICIES	# CLAIMS
Allegheny Township	1	0
Barkeyville Borough	N/A	N/A
Canal Township	3	1
Cherrytree Township	2	2
Clinton Township	4	5
Clintonville Borough	0	0
Cooperstown Borough	5	5
Cornplanter Township	10	11
Cranberry Township	32	18
Emlenton Borough	7	3
City of Franklin	32	24
Frenchcreek Township	5	7
Irwin Township	0	0
Jackson Township	12	14
Mineral Township	2	0
Oakland Township	0	9
City of Oil City	39	196
Oil Creek Township	1	0
Pinegrove Township	0	0
Pleasantville Borough	N/A	N/A
Plum Township	1	1
Polk Borough	26	15
President Township	4	5
Richland Township	0	0
Rockland Township	15	7
Rouseville Borough	8	2
Sandycreek Township	8	0
Scrubgrass Township	11	9
Sugarcreek Borough	34	46
Utica Borough	4	1

Table 5.2.1-2 NFIP Policies and Claims in Venango County (FEMA CIS, 2014).		
COMMUNITY	# POLICIES	# CLAIMS
Victory Township	1	0
TOTAL	267	381

Hazard Mitigation Plan

HMPs such as this 2015 HMP Update, describe in detail the hazards that may affect the community, the community’s vulnerability to those hazards, and an action plan for how the community plans to minimize or eliminate that vulnerability. HMPs are governed by the Disaster Mitigation Act of 2000 (DMA 2000), and having a FEMA-approved HMP makes the jurisdiction eligible for federal mitigation funding.

Comprehensive Plans

Comprehensive Plans promote sound land use and regional cooperation among local governments to address planning issues. A comprehensive plan is an expression of how a county sees itself in the future, and a blueprint of how the county will achieve the future. These plans serve as the official policy guide for influencing the location, type, and extent of future development by establishing the basis for decision-making and review processes on zoning matters, subdivision and land development, land uses, public facilities, and housing needs over time.

The existing countywide Comprehensive Plan for Venango County was developed in 2005. In addition to the countywide Comprehensive Plan, seven municipalities (Barkeyville Borough, Clinton Township, Clintonville Borough, Emlenton Borough, Richland Township, Scrubgrass Township, and Victory Township) collaborated to develop the Southern Venango County Regional Comprehensive Plan in 2007. County governments are required by law to adopt a comprehensive plan, while local municipalities may do so at their option. To date 15 out of 31 municipalities in Venango County have adopted a comprehensive plan.

Building Codes

Building codes regulate construction standards for new construction and substantially renovated buildings. The adoption of various construction, property maintenance and fire prevention codes are critical for quality construction and safety reasons. Therefore, the building code is increasingly recognized as an indispensable tool to promote the public health, safety and welfare through the establishment of minimum building/construction standards. It includes requirements for the various special facilities and equipment, which may be placed in buildings, such as air conditioning, electrical, plumbing, heating, and other facilities, and elevators. Standards can be adopted that require resistant or resilient building design practices to address hazard impacts common to a given community.

In 2004, the Commonwealth of Pennsylvania implemented Act 45 of 1999, the Uniform Construction Code (UCC), a comprehensive building code that establishes minimum regulations for most new construction, including additions and renovations to existing structures. 24 municipalities in Venango County have since adopted the UCC. Current UCC Regulations took effect on December 31, 2012 and include the 2009 International Codes issued by the International Code Council (ICC) and Chapter 11 and Appendix E of the 2012 International Building Code with exceptions identified by the PA Department of Labor and Industry (PA Department of Labor & Industry, 2014). Over 90% of Pennsylvania's municipalities administer and enforce the UCC locally (known as Opt-ins), using their own employees or a certified third party agencies (private code enforcement agencies) they have retained. Opt-outs are those municipalities that have handed over UCC enforcement authority to either the PA Department of Labor & Industry (for non-residential buildings and structures) or certified third-party agencies (hired by a property owner for residential code enforcement). All but two Venango County municipalities (Canal Township and Irwin Township) are opt-in municipalities (PA Department of Labor & Industry, April 2015).

Open Space Management Plan (or Parks/Rec or Greenways Plan)

Open space management plans are designed to protect the natural environment of the community. They describe how the community will manage woodlands, grasslands, and trails without sacrificing the economic goals of the community. These areas are most widely used for recreational purposes, but also serve as the primary habitat for a number of species of plants and animals.

Venango County adopted a Comprehensive Recreation, Parks, and Open Space Plan in the winter of 2010.

Stormwater Management Plan/Ordinance

The proper management of stormwater runoff can improve conditions and decrease the chance of flooding. The Pennsylvania Department of Environmental Protection's Stormwater Management Program provides grant moneys to counties to develop stormwater management plans for designated watersheds. This planning effort, as required by the Stormwater Management Act of 1978 (Act 167), results in sound engineering standards and criteria being incorporated into local codes and ordinances to manage stormwater runoff from new development in a coordinated, watershed-wide approach. Without such planning, stormwater is either not controlled by municipal ordinances, or is addressed on a site-to-site or municipal boundary basis. Municipalities within the same watershed may require different levels of control of stormwater. The result is often the total disregard of downstream impacts or the compounding of existing flooding problems.

Municipalities have an obligation to implement the criteria and standards developed in each watershed stormwater management plan by amending or adopting laws and regulations for land use and development. The implementation of stormwater management criteria and standards at the local level is necessary, since municipalities are responsible for local land use decisions and planning. The degree of detail in the ordinances depends on the extent of existing and projected

development. Municipalities within rapidly developing watersheds will benefit from the watershed stormwater management plan and will use the information for sound land use considerations. A watershed stormwater management plan is designed to aid the municipality in setting standards for the land uses it has proposed. A major goal of the watershed plan and the attendant municipal regulations is to prevent future drainage problems and avoid the aggravation of existing problems.

The Venango County Regional Planning Commission reports that all 31 municipalities have adopted the Venango County Act 167 County-Wide Stormwater Management Plan dated June 22, 2010.

Zoning and Subdivision Ordinances

Municipalities in Venango County have zoning and subdivision regulations. Of the two, zoning most directly affects land use patterns, while subdivision regulations speak more to the way in which raw land is physically prepared for development. Zoning ordinances allow for local communities to regulate the use of land in order to protect the interested and safety of the general public. Zoning ordinances can be designed to address unique conditions or concerns within a given community. They may be used to create buffers between structures and high-risk areas, limit the type or density of development, and/or require land development to consider specific hazard vulnerabilities. 12 of the 31 municipalities in Venango County have adopted and enforce a zoning ordinance.

The Subdivision Ordinance operates on a smaller scale than a Zoning Ordinance, but can be effective in achieving well planned new residential and commercial developments so as to insure the provision of adequate community facilities, public utilities, and streets plus an acceptable level of subdivision layout and design. Venango County enforces the subdivision and land development ordinance on behalf of all municipalities, with the exception of the City of Franklin and Sandycreek Township. The City of Franklin and Sandycreek Township have adopted a municipal zoning ordinance

IFLOWS

Venango County has eight Integrated Flood Observing and Warning System (IFLOWS) Rain Gauge locations that monitor precipitation throughout the county and are displayed in Table 5.2.1-3. This data can be used to analyze rain and flood events.

Table 5.2.1-3 Venango County IFLOWS Locations		
Gauge Name	Identification Number	Municipality
Seneca/Oil City	2580	Cranberry Township
Hill City	2581	Cranberry Township
Oil Creek Township	2582	Oil Creek Township
Jackson Township	2583	Jackson Township
Cross Creek	2584	Cherrytree Township
Dempseytown	2585	Oakland Township
Chapmanville	2586	Plum Township
Polk	2587	Mineral Township

Stream Gauges

USGS maintains six stream gauges that monitor stream velocity and height in Venango County. These gauges are located on French Creek (Utica and Franklin), Allegheny River (Franklin and Kennerdell), and Oil Creek (Rouseville) (USGS, 2015). These stream gauges are primarily used for flood prediction.

Wellhead Protection Program

Venango County has an inventory of wellheads in the County. The County has the quantity and quality of public water supplies monitored to determine chemical contamination.

Federal, State and local agencies play a direct and indirect role in reducing risks from pipeline hazards through coordinated planning, regulatory oversight, and emergency response. Key state-level groups involved in mitigating pipeline hazards include PEMA, PA DEP, PA Office of the State Fire Commissioner, and PennDOT. Local jurisdictions can influence the hazard potential of pipelines through the use of land use controls, such as local planning and zoning ordinances and permits, which can determine where such facilities are located.

Emergency Management

The Venango County Department of Emergency Management coordinates countywide emergency management efforts. Venango County and its municipalities have designated local emergency management coordinators who possess a unique knowledge of the impact hazard events have on their community. A significant amount of information used to develop this plan was obtained from the County and municipal emergency management coordinators. The Emergency Management Services Code (PA Title 35) requires that all municipalities in the Commonwealth have a Local Emergency Operations Plan (EOP) which is updated every two years. All municipalities in Venango County have a local EOP, which is on file with the Venango County Department of Emergency Management and with the State. In addition, a countywide EOP also exists.

These OEPs are all-hazard plans developed for use by local and county government departments and agencies to ensure a coordinated and effective response to natural, technological, or man-made disasters that may occur in Venango County.

The ability for Venango County and its municipalities to engage in mitigation activities is largely dependent on the political will of elected officials to engage in such activities. Mitigation activities are not disaster recovery activities; they are sustained actions taken to reduce or eliminate long-term risk to people and property from natural and man-made hazards and their effects. Sustained actions without an immediate, tangible benefit require political will to implement. Based on survey results, most municipalities within the County perceive political capability to be moderate.

Emergency Response Agencies

There are four volunteer and three paid ambulances services that operate within Venango County, nineteen volunteer and two paid fire departments, six municipal law enforcement agencies, and one state police department which provide twenty-four hours per day emergency response capabilities to the residents of Venango County.

Hazardous Material Response Team

Venango County operates a Hazardous Material Defensive Team which responds to hazardous materials incidents in Venango County. The team consists of 15 members trained in Operations Level and 3 Technician Level maintains one emergency response /communications vehicle. Venango County contracts with two private contractors; McCutcheon Enterprises Incorporated of Apollo, Pennsylvania.

Allegheny Valley Conservancy

To promote good land use through the protection, conservation and management of the open-space, forested, agricultural, historic, natural, ecologically significant, environmentally sensitive, biological diverse and scenic resources of the Allegheny River and French Creek watersheds in northwestern Pennsylvania. Good land use is essential to the need for clean air, clean water, and livable communities. The primary tool of the conservancy is legally binding, perpetual, enforceable conservation easements. The conservancy also accepts the donation of land and may purchase significant parcels of land.

French Creek Valley Conservancy

The French Creek Valley Conservancy is a non-profit that works to promote the protection, stewardship, and education and outreach regarding issues that impact the French Creek Watershed. The Conservancy conducts various projects in the watershed, including habitat improvement, riparian buffer restoration, riparian buffer conservation, education for general public, fund raising, grant writing, public and media relations, partnership development, keep your group going, watershed planning, geographic information systems use, and land use decision making.

PA CleanWays of Venango County

PA CleanWays' mission is to empower people to eliminate illegal dumping and littering in Pennsylvania. Projects conducted by PA CleanWays' include: stream bank restoration, habitat improvements, education for watershed group, education for general public, education for other audiences, public and media relations, partnership development, and mapping.

PA Organization for Watersheds and Rivers

POWR is dedicated to the protection, sound management and enhancement of the Commonwealth's rivers and watersheds and to the empowerment of local organizations with the same commitment. POWR provides educational outreach, media relations and partnership development for the Commonwealth's rivers and watersheds.

PA Rivers Resource Advisory Council

Types of projects include: stream bank restoration, stream channel restoration, habitat improvement, riparian buffer restoration, riparian buffer conservation, stream bank fencing, agricultural BMP's, abandoned mine drainage passive and active treatment, storm drain stenciling, education for watershed group, education for general public, education for other audiences, fundraising, grant writing, public and media relations, partnership development, keep your group going, watershed planning, community visioning, mapping, GIS development, GIS use, watershed or non-point pollution assessment, water monitoring (chemical and physical), water monitoring (biological), data analysis, land use decision making, storm water management, lake management and BMP design and selection.

Watershed Assistance Center Western Pennsylvania Conservancy

The Western Pennsylvania Conservancy's Watershed Assistance Center provides technical assistance and educational trainings to watershed organizations and interested stakeholders. Typical projects of the Conservancy include: stream bank restoration, stream channel restoration, habitat improvement, riparian buffer restoration, riparian buffer conservation, stream bank fencing, agricultural BMP's, abandoned mine drainage passive and active treatment, storm drain stenciling, education for watershed group, education for general public, education for other audiences, fundraising, grant writing, public and media relations, partnership development, keep your group going, watershed planning, community visioning, mapping, GIS development, GIS use, watershed or non-point pollution assessment, water monitoring (chemical and physical), water monitoring (biological), data analysis, land use decision making, storm water management, lake management and BMP design and selection.

5.2.2 Administrative and Technical Capability

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

In 2010, the Venango County Regional Planning Commission reported that among municipalities, 14% of municipalities had dedicated planning staff, 66% had engineers, 7% had scientists, 30% had grant writers, and no municipalities had GIS (or HAZUS) staff or capabilities. To date, approximately 90% of municipalities are members of the Venango County Regional Planning Commission, approximately 48% have a local planning commission or department, and over 77% have either local engineering staff or capabilities through partnering

consulting firms. Generally, administrative and technical capacity to conduct hazard mitigation activities is limited.

5.2.3 Fiscal Capability

The decision and capacity to implement mitigation-related activities is often strongly dependent on the presence of local financial resources. While some mitigation actions are less costly than others, it is important that money is available locally to implement policies and projects. Financial resources are particularly important if communities are trying to take advantage of state or federal mitigation grant funding opportunities that require local-match contributions. Survey results from the 2010 HMP found that most municipalities within the County perceive fiscal capability to be limited. In addition to local capabilities, there are a number of local and federal programs that provide funding, technical assistance or outreach for mitigation activities.

Hazard Mitigation Grant Program (HMGP)

HMGP funds long-term hazard mitigation measures following Presidential major disaster declarations. The purpose of the program is to ensure that there is an opportunity to implement critical mitigation measures during the reconstruction process following a disaster. Eligible projects include, but are not limited to, acquiring and demolishing structures in hazard-prone areas, flood proofing and elevating structures, and implementing minor structural improvements.

Flood Mitigation Assistance (FMA)

The goal of the FMA program is to mitigate flood damaged properties to reduce or eliminate claims under the NFIP. This program is authorized by Section 1366 of the National Flood Insurance Act. Examples of eligible FMA projects include elevating, relocating, and acquiring/demolishing NFIP-insured buildings.

Pre-Disaster Mitigation (PDM)

The PDM program is an annually funded, nationwide, competitive grant program. PDM is intended to assist with the implementation of a sustained pre-disaster natural hazard mitigation program. Examples of eligible projects include, but are not limited to, relocating and elevating structures, constructing safe rooms, implementing stormwater management and localized flood control projects, and developing hazard mitigation plans.

Department of Environmental Protection (DEP) Growing Greener Grants

Established in 1999, the Growing Greener program provides funding for environmental restoration projects across Pennsylvania. The program is administered by four state agencies, including the PA DEP. PA DEP's core funding focus in the program is to restore and protect watersheds, provide for the reclamation of abandoned mines, and plug abandoned oil and gas wells. Venango County has received 42 Growing Greener Grants since 2000 and are listed below in Table 5.2-1 (PA DEP, 2015):

Table 5.2-1 Venango County Growing Greener Grants (PA DEP, 2015)				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Clinton/Irwin	4/18/2000	\$229,520.00	GG I	This project involves a comprehensive watershed assessment that will identify specific water related problems within the watershed and determine their influence on water quality and instream communities.
Oil City	1/17/2001	\$112,437.00	GG I	Bank stabilization of 4,300 feet along Oil Creek where ice flows have eroded bank. Use of rip rap and willow stakes.
Rockland	2/3/2001	\$138,959.00	GG I	This project will clean up a 1 mile-long illegal dumpsite that is encroaching upon a Native American burial ground. A barrier will be constructed to discourage future dumping. A video will be produced for community education, and water samples will be taken upstream and downstream of the site. Volunteers will assist with the project and with regular site monitoring and additional cleanup as needed after the main project.
Borough of Barkeyville	8/21/2001	\$100,000.00	GG I - Innovative Technology 2000	The Authority operates a greensand-softening treatment system that has experienced many problems in recent years. Mechanical controls have corroded and pitting has occurred in the filter walls. In addition increases in manganese and hardness levels have exceeded the capacity of the system to provide adequate softening. This system will be replaced with a mixed oxidant generating system that will produce a chlorine-based oxidant and eliminate the need for chlorine gas or direct feed sodium hypochlorite and potassium permanganate as a secondary oxidant. New sand filters will also be added, followed by a new softening system that will provide for a 50/50 split of filtered water.
Venango Conservation District	10/29/2001	\$17,602.00	GG I	This project proposes the creation of an outdoor learning center and a community environmental education program in the Lower French Creek, Oil Creek and Sandy Creek Watersheds in Venango County.
Rockland	8/7/2002	\$10,000.00	GG I	This project will establish a 501(c)3 organization watershed group and conduct an inventory of stream and groundwater quality in and around the watershed for the purpose of developing long-term monitoring and watershed protection plans at a later date.

Venango County 2015 Hazard Mitigation Plan Update

Table 5.2-1 Venango County Growing Greener Grants (PA DEP, 2015)				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Clinton, Irwin, Victory, Scrubgrass	8/7/2002	\$166,324.00	GG I	This project will plug 15 abandoned oil & gas wells that have discharges into Scrubgrass Creek. This project will affect 25.3% of the perennial streams in the watershed. A secondary objective of this project is to educate the local watershed community about abandoned well issues. A Watershed Stewardship Community Day is scheduled to assist in public outreach.
Venango Conservation District	7/1/2004	\$64,000.00	GG I	
Cooperstown Borough	11/4/2004	\$21,387.00	GG I	Funding for restoration of approximately 450 feet of streambank of Lake Creek in the Borough of Cooperstown. The project will stabilize both banks of the creek just above the confluence of Sugar Creek.
Clinton	11/2/2005	\$87,391.00	GG II - Watershed Protection	Proposed plugging of ten oil wells in Scrubgrass Creek Watershed to restore viability and sustainability to this cold water stream.
Venango Conservation District	11/17/2005	\$60,000.00	GG I	Proposal is for design and implementation of sustainable best management practices. Ultimate goal is to reduce nonpoint source pollutants such as sediment and nutrients.
Clinton, Irwin	5/11/2006	\$25,000.00	GG II - Oil & Gas	Plug up to 4 abandoned oil wells on Scrubgrass Creek, South Branch, and Trout Run. Also to assist in conducting well logging throughout the watershed.
Sugarcreek Borough	6/20/2006	\$75,000.00	GG II - Watershed Protection	Stabilize approximately 500 feet of stream bank and install habitat improvement structures deemed necessary by engineers. Will also create new riparian buffer zone and enhance existing riparian area.
Venango Conservation District	7/1/2006	\$64,000.00	GG I	
Venango Conservation District	7/1/2006	\$50,000.00	GG II - Watershed Protection	Design and implement sustainable best management practices (BMPs) on agricultural lands with the ultimate goal of reducing nonpoint source pollutants such as sediment and nutrients.

Table 5.2-1 Venango County Growing Greener Grants (PA DEP, 2015)				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Venango Conservation District	7/1/2006	\$30,000.00	GG II - Watershed Protection	Implement measures to improve drainage and stabilize an eroding road bank that will minimize sediment from entering Commonwealth waters.
Venango Conservation District		\$10,000.00	GG I 2006	Project will continue to expand senior citizen environmental activities and expertise in the search for abandoned oil and gas wells. It will also add a new phase to this project through a partnership with the Interstate Oil and Gas Compact Commission (IOGCC). The goal of this partnership is to promote the PA Senior Environmental Corps (PaSEC/DEP/DCNR/Venango Conservation District program in other oil and gas-producing states that have similar orphan and abandoned well problems.
Cranberry Township	9/1/2006	\$10,000.00	Environmental Education 2006	Funding would allow for this district's standards to be integrated into all cross-curricula areas.
Oakland Township	9/1/2006	\$20,000.00	Environmental Education 2006	Funding will enable this conservation district to create backpack adventure modules for students, which will be specific to local resource issues and to provide better environmental education opportunities to residents and visitors.
Cranberry Township	11/29/2006	\$13,145.00	GG I 2006	Proposal is for stabilization of Lower Two Mile Run (a tributary to Allegheny River). Will significantly reduce future erosion and sediment loading to stream.
Sandycreek Township	11/29/2006	\$32,800.00	GG I	Project will fund the preparation of a detailed assessment and action plan for the Morrison Run watershed in Sandycreek Twp, Venango County. The assessment will address storm flow and flood characteristics of the waterway to identify problem stream reaches and propose BMPs within the watershed to reduce runoff. Additionally, GIS data will be created to identify impervious areas and create a Morrison Run overlay for township planning purposes.
Sugar Creek Borough	11/29/2006	\$75,000.00	GG I	Project would conduct approximately 476ft of streambank stabilization along a section of Sugar Creek in Venango County. Streambank will be graded to 3:1 slope with rock toe and riparian plantings. Project will prevent further erosion and reduce NPS loading to Sugar Creek, a tributary to French Creek.

Venango County 2015 Hazard Mitigation Plan Update

Table 5.2-1 Venango County Growing Greener Grants (PA DEP, 2015)				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Cranberry Township	11/29/2006	\$13,145.00	GG I	Proposal is for stabilization of Lower Two Mile Run (a tributary to Allegheny River). Will significantly reduce future erosion and sediment loading to stream.
Irwin		\$50,000.00	GG I 2006	Abandoned mine reclamation and AMD treatment.
Venango Conservation District	7/12/2007	\$10,000.00	GG I	Project will continue to expand senior citizen environmental activities and expertise in the search for abandoned oil and gas wells. It will also add a new phase to this project through a partnership with the Interstate Oil and Gas Compact Commission (IOGCC). The goal of this partnership is to promote the PA Senior Environmental Corps (PaSEC/DEP/DCNR/Venango Conservation District program in other oil and gas-producing states that have similar orphan and abandoned well problems.
Venango Conservation District		\$10,481.00	Flood Protection 2006	
City of Oil City	3/20/2008	\$38,385.00	Flood Protection 2008	
Venango Conservation District	4/1/2008	\$103,500.00	GG II - Watershed Protection	The purpose of this grant project is to design and implement sustainable best management practices (B.M.P.'s) on agricultural lands with the ultimate goal of reducing nonpoint source pollutants such as sediment and nutrients. Establish up to 2500 lineal feet of streambank/pasture fencing (382); Establish two heavy use area protections (561); Establish two runoff management systems(558); Establish one watering facility (614); Establish one access road (560)**Exact BMP's implemented may vary based upon site specific needs but will be in accordance with Conservation Practices approved for GGII Funding form of 03/31/07.
Venango Conservation District	4/1/2008	\$103,500.00	GG II - Watershed Protection	To rank and select the highest priority eroded stream banks in Venango County and to stabilize those banks and establish a riparian buffer zone on them. At least 1000' of stream bank protected and at least 1000' of riparian buffer established.

Venango County 2015 Hazard Mitigation Plan Update

Table 5.2-1 Venango County Growing Greener Grants (PA DEP, 2015)				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
Venango Conservation District	7/1/2008	\$64,000.00	GG I	Watershed Specialist Position
Cranberry	3/29/2010	\$225,000.00	GG I	Project proposes design and construction of up to 10 stormwater BMPs in the Lower Two Mile Run watershed, including practices such as forested riparian buffers, infiltration trenches, vegetated swales, rain gardens/bioretenion, and other approved BMPs. The initiative is intended to reduce the impact to the watershed caused by significant commercial development in recent years.
Venango Conservation District	7/1/2010	\$64,000.00	GG I	Watershed Specialist Position
Sandycreek Township	1/6/2011	\$97,692.00	GG I	Project proposes the construction of a 3.5 acre detention basin in a subbasin of the Morrison Run watershed in Venango County. Project will control stormwater runoff from approximately 100 acres of developed land and implement the Morrison Run Watershed Assessment and Action Plan previously funded by a DEP Growing Greener grant.
Cranberry Township	2/3/2012	\$150,846.00	GG I	Project will continue an existing program to implement stormwater management improvements in the Lower Two Mile Run watershed in Venango County. Projects will include the design and construction of up to 20 raingardens, the placement of up to 50 rainbarrels with accompanying workshops, and up to 5 stormwater reuse cistern systems.
Venango Conservation District	7/1/2012	\$64,000.00	GG I	Watershed Specialist Position
Cornplanter Township	1/22/2014	\$120,000.00	GG I	Project proposes to stabilize 200ft of streambank along Oil Creek in Cornplanter Township, Venango County. Additionally, stormwater infrastructure and road reconstruction will be accomplished allowing long-term stability to the project through this grant.
Sugar Creek Borough	1/22/2014	\$28,308.00	GG I	Project proposes to conduct two streambank stabilization projects in Venango County, one on Little Sandy Creek and one on Sugar Creek. Projects will include rock toe protections, grading, log vanes, and riparian plantings.

Venango County 2015 Hazard Mitigation Plan Update

Table 5.2-1 Venango County Growing Greener Grants (PA DEP, 2015)				
MUNICIPALITY	DATE AWARDED	AMOUNT	GRANT PROGRAM	PROJECT DESCRIPTION
President Township, Cranberry Township	1/22/2014	\$132,227.00	GG I	Install 6 (culverts) squash pipes at road crossings.
Irwin Township	7/31/2014	\$77,050.00	GG I	Remediation of Acid Mine Drainage Discharging from the Abandoned Sterrett Mine Site, Irwin Township, Venango Co.
City of Franklin	Unknown	\$48,526.00	Source Water Protection 2003	
Rouseville Borough	Unknown	\$27,738.00	Source Water Protection 2003	

Pipeline Safety Grants

First awarded in 2009, the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) provides funding to local communities and organizations for issues related to pipeline infrastructure. Funding is awarded through Technical Assistance Grants (TAG) of up to \$100,000 for government entities or non-profit groups to conduct engineering or technical studies or facilitate public participation in official pipeline proceedings. Previous awards have included funding to enhance local pipeline emergency response capabilities, improve safe digging programs, develop information resources and community awareness campaigns, implement local land use strategies, and facilitate public participation in official pipeline proceedings (PHMSA, 2015).

5.2.4 Education and Outreach

Education and outreach programs and methods are used to implement mitigation activities and communicate hazard-related information. Examples include fire safety programs that fire departments deliver to students at local schools; participation in community programs, such as Firewise Communities Certification or StormReady Certification; and activities conducted as part of hazard awareness campaigns, such as Tornado or Flood Awareness Month. Some communities have their own public information or communications office to handle outreach initiatives.

5.2.5 Plan Integration

Hazard mitigation planning is most effective when it works in concert with other plans, regulations, and programs. Ensuring that the goals and actions of hazard mitigation are applied to comprehensive planning efforts promotes safe, resilient growth, effective emergency management and an overall reduction of risk. Some of the most important planning and regulatory mechanisms that can be utilized for hazard mitigation have been discussed above and include: hazard mitigation plans, emergency operations plans, comprehensive plans, building codes, floodplain ordinances, subdivision and land development ordinances, and zoning ordinances. These local planning mechanisms provide a vehicle for the implementation of adopted mitigation strategies. The following section highlights the link between current planning in Venango County and how the HMP Update can be integrated to strengthen these actions in the future.

Venango County Comprehensive Plans

The Venango Planning Regional Planning Commission adopted the current County Comprehensive Plan on January 5, 2005. The plan establishes a shared vision of how the County would like to guide future growth and policy recommendations for attaining these goals. Additionally, the southern portion of the County, consisting of seven municipalities, developed a Regional Comprehensive Plan in June of 2007, to further refine many of the goals expressed in the 2004 county-wide comprehensive plan for their jurisdictions. Both of the plans identify similar objectives related to hazard mitigation planning, specifically as it relates to resource management and protection.

The 2005 Venango Comprehensive Plan outlines a number of goals that are directly or indirectly related to hazard mitigation planning and include:

- Goal No. 1 – To sustain the highest quality of rural, suburban and urban life for the residents of Venango County.
- Goal No 2 - To provide policies, plans and proposals to municipalities for the physical, economic and social development of their communities while protecting the natural, historic and built environments.
- Goal No. 3 - To promote conditions providing for the health, safety and welfare of the citizens of Venango County.

Table 5.2-2 outlines specific planning, zoning, and land use recommendations identified in the Comprehensive Plan that are relevant to hazard mitigation planning and the HMP Update.

Table 5.2-2 Planning, Zoning and Land Use Actions Relevant to Hazard Mitigation Planning	
ACTION	LOCATION IN PLAN
Enact municipal land use plans and ordinances in all municipalities; establish standards for review of all land use/land development requests; provide ordinances to interested stakeholders	Goal #1, Objective #1, Short Range Priority #1; Goal #2, Objective #1; Goal #2, Objective #5, Immediate Priority #1; Goal #3, Objective #3, Short Range Priority #1
Facilitate participation of all municipalities in county-wide planning efforts	Goal #1, Objective #1, Immediate Priority #1 and #3
Prepare and enact a county-wide recreation and greenway plan	Goal #1, Objective #1, Short Range Priority #4 and Long Range Priority #2
Preserve rural character of Venango County by focusing development near established villages or downtowns; Limit development in rural areas to cluster-style development	Goal #1, Objective #2; Goal #1, Objective #2, Immediate Priority #1; Goal #2, Objective #3
Create and map designated growth areas for all municipalities in the County	Goal #1, Objective #2, Immediate Priority #1 and #2; Goal #6, Objective #1, Short Range Priority #1
Establish Resource Protection Areas to identify and protect areas in need of protection (wetlands, floodplains, steep sloped areas, agricultural land, historic and cultural resource areas) ; Exclude environmentally sensitive lands for zoning density calculations	Goal #1, Objective #2, Short Range Priority #1; Goal #2, Objective #9
Explore Transfer of Development Rights (TDR) at the municipal level to direct growth away from agricultural lands; develop a variety of agricultural zoning districts to promote preservation of agricultural and forest lands	Goal #1, Objective #2, Long Range Priority #2; Goal #6, Objective #1, Immediate Priority #1
Promote density development around existing infrastructure, use zoning ordinances to incentivize (i.e. density bonus)	Goal #1, Objective #4, Short Range Priority #1
Draft model regulations for "Conservation Subdivisions" in designated zoning districts and encourage municipal adoption	Goal #2, Objective #2, Immediate Priority #1; Goal #2, Objective 6

Table 5.2-2 Planning, Zoning and Land Use Actions Relevant to Hazard Mitigation Planning	
ACTION	LOCATION IN PLAN
Encourage county-wide; watershed-wide planning for storm water and water quality management; Prepare county-wide water supply, wellhead and aquifer protection plan	Goal #2, Objective #2; Goal #3, Objective #2, Long Range Priority #1; Goal #3, Objective #4, Long Range Priority #1
Encourage exclusion of new development in floodways and limit development in 100 year floodplain. Promote use of floodplain land for passive recreational use and open space.	Goal #2, Objective 19
Establish minimum standards for emergency management professionals; provide trainings	Goal #2, Objective #22; Goal #3, Objective #9, Immediate Priority #1
Encourage County participation in regional environmental planning activities	Goal #3, Objective #13
Encourage municipal adoption of statewide building and fire codes	Goal #3, Objective #9

Goals and objectives from the Comprehensive Plan have been incorporated into the HMP Update in the following sections:

- Section 2.4 Land Use and Development
- Section 4.4.6 Future Development and Vulnerability

Options for incorporating additional hazard mitigation planning principles into the Comprehensive Plan include:

- Consider using the HMP Update to further refine and exclude high hazard areas from future development through the use of land use controls and zoning ordinances.
- Consider developing a safety goal and objectives to address high-hazard risks identified in the HMP Update.
- Consider developing a mechanism for monitoring, evaluating and reporting out progress made towards achieving plan goals.

2007 & 2010 Venango County Act 167 County-Wide Stormwater Management Plan (Phase I & II)

In accordance with the requirements of the Pennsylvania Stormwater Management Act 167 and guidelines established by the PA DEP, the County conducted a multiyear study of the condition of watersheds and water infrastructure in Venango. The resulting Stormwater Management Plan provides prioritized recommendations to mitigate and reduce the impacts from future development and improve the current condition of local water bodies.

Many of the goals expressed in the Plan are either directly or indirectly related to hazard mitigation planning, and include:

- Goal 3: Provide uniform stormwater management standards throughout Venango County.

- Goal 4: Encourage the management of stormwater to maintain groundwater recharge, to prevent degradation of surface and groundwater quality, and to protect water resources.
- Goal 5: Preserve the existing natural drainage ways and water courses.
- Goal 6: Ensure that existing stormwater problem areas are not exacerbated by future development and provide recommendations for improving existing problem.

Specific recommendations proposed in the Stormwater Management Plan that are relevant to hazard mitigation planning and the HMP Update include:

- Improve municipal zoning to mitigate the negative impact of future development through special zoning techniques (e.g. watershed based, overlay, performance, or large lot zoning; growth boundaries; infill development; transfer of development rights)
- Enhance floodplain management practices (e.g. adoption of PA Department of Community and Economic Development Model Floodplain Ordinance, participate in CRS, open space preservation in floodplain areas, acquisition of repetitive loss properties, implementation of a drainage system maintenance program) and where possible, provide for River Corridor Planning, Riparian Zone Protection, and identification and protection of special wetlands
- Implement design standards and policies to limit impervious cover, improve topsoil management, and incentivize low-impact development

Several goals and objectives from the Stormwater Management Plan have been incorporated into the Mitigation Strategy (Section 6) of the HMP Update. These goals are as follows:

- Goal 3 Identify all repetitive loss structures throughout the county.
- Goal 5 Attempt to reduce the current and future risk of flood damage in Venango County.
- Goal 6 Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.
- Goal 7 Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.

Options for incorporating additional hazard mitigation planning principles into the Stormwater Management Plan include:

- Work with municipalities to implement the recommendations identified in the Plan.

2010 Venango County Comprehensive Recreation, Parks, & Open Space Plan

In February of 2010, the County developed a Comprehensive Recreation, Parks and Open Space Plan as an appendix to the 2004 County Comprehensive Plan to conduct an inventory and assessment of the County's natural resource. The Plan provides recommendations for the continued management of these areas.

One of the three key principles of the plan is directly related to hazard mitigation planning and is as follows:

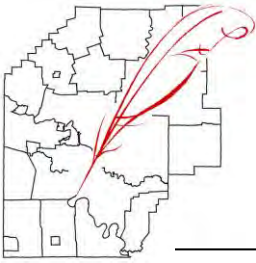
- Principle #1: Enable the continued preservation, sustainability, support, promotion, and development of the recreational, natural, and cultural resources within Venango County.

This key principle from the Venango County Recreation and Open Space Plan has been incorporated into the Mitigation Strategy (Section 6) of the HMP Update, and are reflected in the following goals:

- Goal 7: Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.

Options for incorporating additional hazard mitigation planning principles into the County Recreation and Open Space Plan include:

- Identify and prioritize high-hazard areas (i.e. flooding) prime for acquisition and conversion to open space.



Venango County Regional Planning Commission

1168 Liberty Street
P.O. Box 831
Franklin, PA 16323

Phone: 814.432.9682
Fax: 814-432-9679
e-mail: jruggiero@co.venango.pa.us

*Planning Venango
County's future.
It's your county.*

August 7, 2020

The Honorable Phyllis Whetzel
Mayor
Barkeyville Borough
5404 Pittsburgh Road
Harrisville, Pennsylvania 16038

Re: Invitation to Participate in Venango County's Hazard Mitigation Planning Process

Dear Mayor Whetzel,

We are in the process of updating the Venango County Hazard Mitigation Plan (HMP). The function of the HMP is to provide action plans for municipalities to protect lives, prevent extreme damage, and to overall mitigate both manmade and natural disasters. The completion of this plan is required for your municipality to receive state and federal funding for disaster mitigation.

A *Risk Analysis & Mitigation Solutions Workshop* has been scheduled and will focus on Venango County's hazard vulnerability and the selection of mitigation actions that will reduce or eliminate potential losses. Due to government restrictions and recommendations regarding COVID-19, the meeting will be held virtually in the form of an online webinar. A morning and evening session are being offered but you are required to attend only one. The content of both meetings will be the same; you, or other officials involved in planning, mitigation, floodplain management, and/or disaster preparedness may select one meeting based on your availability. The meetings will be held via WebEx, which can be accessed via telephone and/or computer. Access information is attached and provided below.

Date: Thursday, August 27, 2020

Times – Choose One

- 10:00 am – 11:30 am (Dial: 571-209-6390; Access Code: 992 328 204)
- 6:00 pm – 7:30 pm (Dial: 571-209-6390; Access Code: 993 596 788)

Please RSVP and provide the following information: your name, title, community, and the time you plan to attend, to our Mitigation Planner, Madeleine Fincham of Michael Baker International, at 412-269-6093, madeleine.fincham@mbakerintl.com. Sessions that have no RSVPs may be cancelled, so it is essential that you indicate which session you will attend.

If you are unable to attend either of these workshops, please notify me. If you have any additional questions, please do visit the project website at: www.pennsylvaniiahmp.com/venango-hmp or contact me at: 814-432-9682 or jruggiero@co.venango.pa.us.

Sincerely,

Jason Ruggiero
Executive Director
Venango County Regional Planning Commission

Chair: Nancy Marano

Vice-Chair: Frank Pankratz

Sec/Treasurer: Greg Miller

Executive Director: Jason Ruggiero

Brown, Kevin

Subject: Venango County HMP Risk Assessment-Mitigation Solutions Workshop

Hello,

You're invited to participate in the Venango County Hazard Mitigation Planning process.

The two sessions will focus on Venango County's hazard vulnerability and selecting mitigation actions that will reduce or eliminate potential losses. The material covered at each session will be identical, you need only attend one session. Due to government and public health recommendations and restrictions regarding COVID-19, the meeting will be held virtually in the form of an online webinar.

When:

THURSDAY, AUGUST 27, 2020

Morning Meeting

10:00 am – 11:30 am

Evening Meeting

6:00 pm – 7:00 pm

Information to access the virtual meetings is provided in the attached invitation and document.

Please RSVP by contacting our Mitigation Planning consultant, Madeleine Fincham of Michael Baker International, at 412-269-6093 or Madeleine.Fincham@mbakerintl.com.

Check out our project website to get project updates throughout the planning process:

www.pennsylvaniahmp.com/venango-hmp

Kevin Brown | Planning Associate II

100 Airside Drive, Airside Business Park | Moon Township, PA 15108 | [O] 412-269-4607

kevin.brown@mbakerintl.com | www.mbakerial.com     



VENANGO COUNTY HAZARD MITIGATION PLAN UPDATE

Risk Assessment & Mitigation Solutions Workshop

THURSDAY, AUGUST 27, 2020



Review our [Tips for Accessing WebEx](#) prior to joining the meeting

You need only attend one meeting based on your availability. The content of both meetings will be the same.

MORNING MEETING

10:00 am – 11:30 am

When it's time, start or join the WebEx meeting from here:

<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=b2d73ee642ea9fcf6caeea4d771491a1>

Audio Connection

Phone Number: 571-209-6390

Access Code: 992 328 204#

EVENING MEETING

6:00 pm – 7:30pm

When it's time, start or join the WebEx meeting from here:

<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=c275ca0cb0b7f28c3fef3e95c516a541>

Audio Connection

Phone Number: 571-209-6390

Access Code: 993 596 788#

Risk Assessment Summary and Mitigation Solutions Workshop Agenda
August 27, 2020

Meeting 1: 10:00am-11:30am; Meeting 2: 6:00pm-7:30pm

1. Welcome and Introductions
2. Kick-off Meeting Recap
3. Risk Assessment Overview
 - a. Hazard Identification and Profiles
 - b. Hazard Ranking and Risk Factor (RF)
 - i. *Exercise #1: Risk Ranking Evaluation*
 - c. Risk Mapping
4. Capability Assessment Overview
5. Mitigation Strategy Discussion
 - a. Mitigation Strategy Components
 - b. Mitigation Goals
 - c. Mitigation Action Plan Update
 - i. *Exercise #2: Mitigation Progress*
 - ii. *Exercise #3: New Mitigation Actions*
6. Next Steps and Action Items

Be sure to visit the project website at

<https://www.pennsylvaniahmp.com/venango-hmp>

Questions? Comments?

Mitigation Planner: Madeleine Fincham

madeleine.fincham@mbakerintl.com, 412-269-6093

Venango County 2020 Hazard Mitigation Plan Update

Venango County HMP Update Risk Assessment and Mitigation Solutions Workshop Minutes

August 27, 2020

10:00am – 11:30am & 6:00pm – 7:30pm

Agenda

1. Welcome and Introductions
2. Recap of Kick-Off Meeting
3. Risk Assessment Overview and Hazard Identification
4. Mitigation Strategy Discussion
 - Exercise #1: Mitigation Action Progress
 - Exercise #2: New Mitigation Action Identification
5. Next Steps and Action Items

Welcome and Introductions

Madeleine Fincham, a hazard mitigation planning consultant with Michael Baker International, welcomed all members of the Venango County Hazard Mitigation Planning Team (HMPT). And asked that anyone that called into the meeting email her to record their attendance at the meeting so that they could be counted for participating.

Recap of Kick-Off Meeting

Madeleine provided an overview of topics discussed and activities conducted at the Kick-Off meeting, including the 2020 Hazard Mitigation Plan (HMP) planning process and requirements, hazards and risks identified in the 2015 HMP, the hazard-risk and capability assessment exercises, mitigation goals and the four types of mitigation techniques.

Risk Assessment Overview and Hazard Review

A significant portion of the meeting focused on reviewing the hazards to be profiled in the 2020 HMP and asking for feedback or comments from planning team members about the identified hazards. Madeleine presented maps showing the location, magnitude, or past occurrence of each hazard that was profiled and reviewed each of the hazards with the group. She also presented tables showing the results of the vulnerability assessment for select hazards. Below is a summary of key discussions related to several of the hazards:

Hazard Review

Winter Storm: This remains the highest risk hazard for Venango County. The number of winter storms that have occurred each year has remained fairly consistent since 2015. While winter storms remain a high-risk hazard, the risk has not significantly changed since the last HMP Update.

Flood, Flash Flood, and Ice Jam: 28 out of 31 municipalities in Venango County have flood-prone areas. A significant number of structures and critical facilities are in flood hazard areas throughout the county.

Venango County 2020 Hazard Mitigation Plan Update

Hurricane, Tropical Storm, and Nor'easter: Indirect impacts of tropical storms continue to be felt in Venango County, though they remain a low-risk hazard.

Radon: Venango County is a High-hazard potential area for Radon exposure.

Wildfire: Much of Venango County is either a Medium or High wildfire risk area. Areas in the south west and north east of the county

Tornado and Windstorm: Madeleine discussed Tornado history in Venango County and highlighted that in 2019 there was a tornado near Petroleum Center.

Environmental Hazards: The location of TRI facilities and gas pipelines within the county was discussed. A map of TRI facilities within the county was discussed. TRI facilities are primarily located along the Allegheny River and major transportation routes throughout the county.

Mitigation Strategy Discussion

Madeleine also discussed the mitigation goals, types of mitigation actions, and mitigation projects included in the 2015 HMP.

Mitigation Techniques

Madeleine reviewed the four types of mitigation techniques, including:

- Local Plans and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs

Mitigation Strategy

Madeleine explained how updating the mitigation strategy will involve documenting progress on existing mitigation actions and identifying new actions for the 2020 HMP. She then discussed how each jurisdiction must have at least one mitigation action in the HMP and that there must be at least one mitigation action for each profiled hazard.

Exercise #1: Mitigation Action Progress

Madeleine then discussed the Mitigation Action Progress forms. She explained that the forms are meant to detail updates on the status of each action and note any additional information, such as what was accomplished during the reporting period, whether the action was still relevant, or whether any information related to the action should be revised.

She informed team members that the forms were available for download on the Venango County HMP website or could be email to them directly. Planning team members were asked to complete these exercises after the meeting and email them to Madeleine when complete.

Exercise #2: New Action Identification

Madeleine also explained an exercise to identify new mitigation actions for the 2020 HMP. She explained that if a municipality completed or cancelled an action, they could add a new action using this form and that each municipality must have at least one mitigation action. She informed the group that if needed these forms could be downloaded from the County HMP website or they could be emailed to the team directly.

Venango County 2020 Hazard Mitigation Plan Update

Madeleine referenced FEMA's [Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards](#) as a resource to gather ideas for potential mitigation actions. She also mentioned that relevant ongoing actions could be incorporated into the plan, which would help promote plan integration.

Planning team members were also asked to complete these exercises after the meeting and submit them to Madeleine when complete.

Next Steps and Action Items

Madeleine reviewed the project timeline, which is shown below:

Task	Dates
Kick-Off Meeting	July 7, 2020
Risk Assessment and Mitigation Solutions Workshop	August 27, 2020
Draft Plan Review Public Meeting	October 1, 2020
Deliver to PEMA/FEMA for Review	November 12, 2019
Distribute to Municipalities for Adoption	December 2020

Action items included:

HMPT

- Complete Risk Ranking Evaluation
- Complete Mitigation Action Progress Forms
- Complete New Mitigation Action form if needed
- Check out project website.

Project Team:

- Update Project Website with Meeting Materials
- Prepare Draft Plan for Review Meeting

Finally, Madeleine again encouraged the HMPT to visit the project website (<https://www.pennsylvaniiahmp.com/venango-hmp>) to view meeting materials, review the 2015 mitigation strategies, and obtain digital copies of forms and other HMP related documents and resources.

Michael Baker

INTERNATIONAL

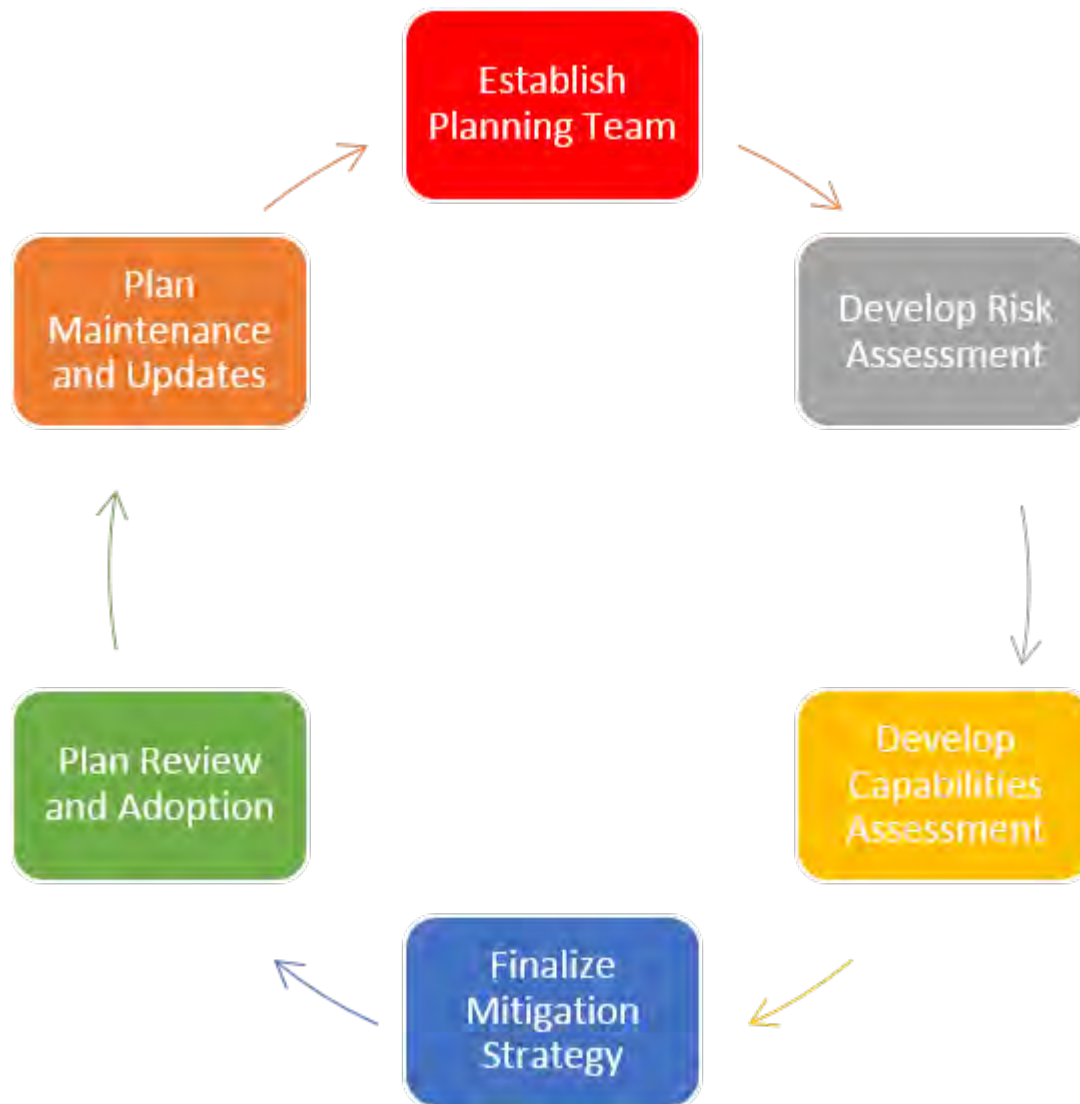


Venango County Hazard Mitigation Plan Risk Assessment and Mitigation Strategy Meeting

27 August 2020

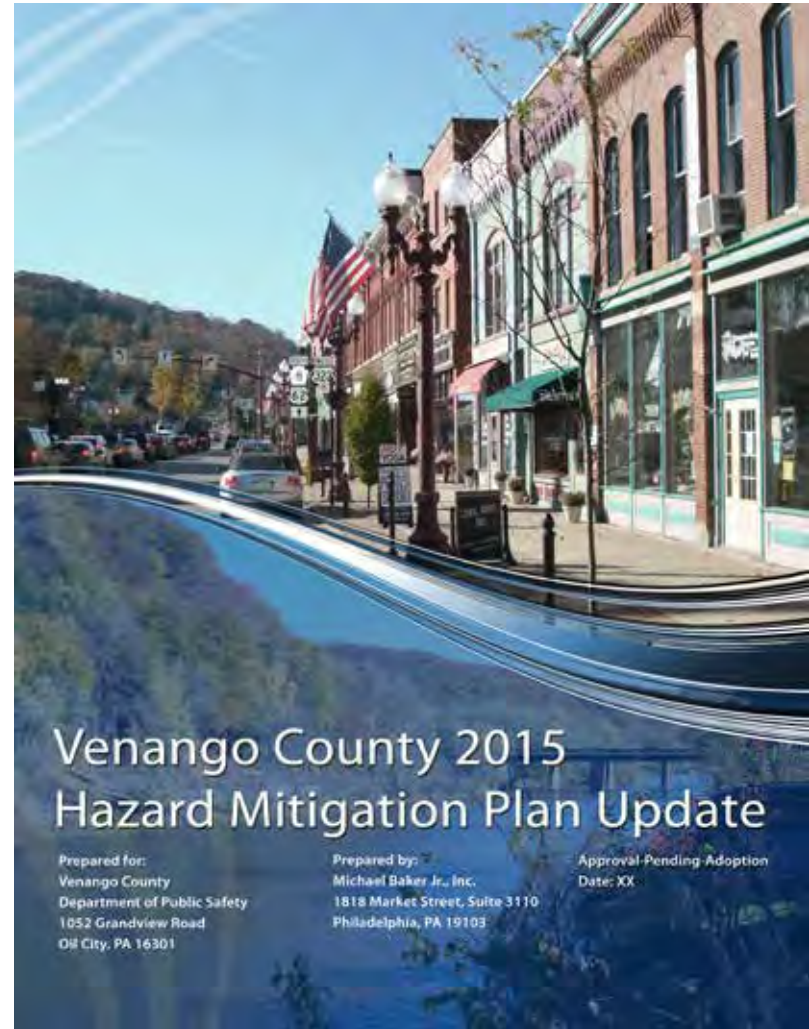
- § Welcome and Introductions
- § Kick-Off Meeting Recap
- § Risk Assessment Overview
 - *Exercise: Risk Ranking Evaluation*
 - Risk Assessment Overview
- § Capability Assessment Overview
- § Mitigation Strategy Discussion
 - *Exercise: Mitigation Action Progress*
 - *Exercise: New Mitigation Actions*
- § Next Steps and Action Items

Kick-Off Meeting Recap



What We Covered

- § Discussed the 2020 HMP planning process and requirements
- § Discussed hazards and risks identified in the 2015 HMP
- § Completed Hazard-Risk Assessment Exercise
- § Completed a Capability Assessment Survey
- § Reviewed mitigation goals and techniques
- § Discussed participation opportunities



Risk Assessment Overview



Natural Hazards

- § Drought
- § Earthquake
- § Flood, Flash Flood, Ice Jam
- § Landslide
- § Pandemic and Infectious Disease
- § Radon Exposure
- § Tornado, Windstorm
- § Winter Storm
- § Wildfire
- § Hurricane, Tropical Storm, and Nor'easter

Human-Made Hazards

- § Environmental Hazards(Hazardous Materials Release; Transmission Pipelines)
- § Dam Failure

§ **Location and Extent**

- *Where* does the hazard happen?

§ **Range of Magnitude**

- How *minor or major* might the event be?

§ **Past Occurrence**

- *When and where* has the event happened in the past?

§ **Future Occurrence**

- *How likely* is it that the event will happen in the future?

§ **Vulnerability Assessment**

- What *people, structures, and critical facilities* are at risk?

- § Standardized method to rank risks
- § Conducted on a countywide basis

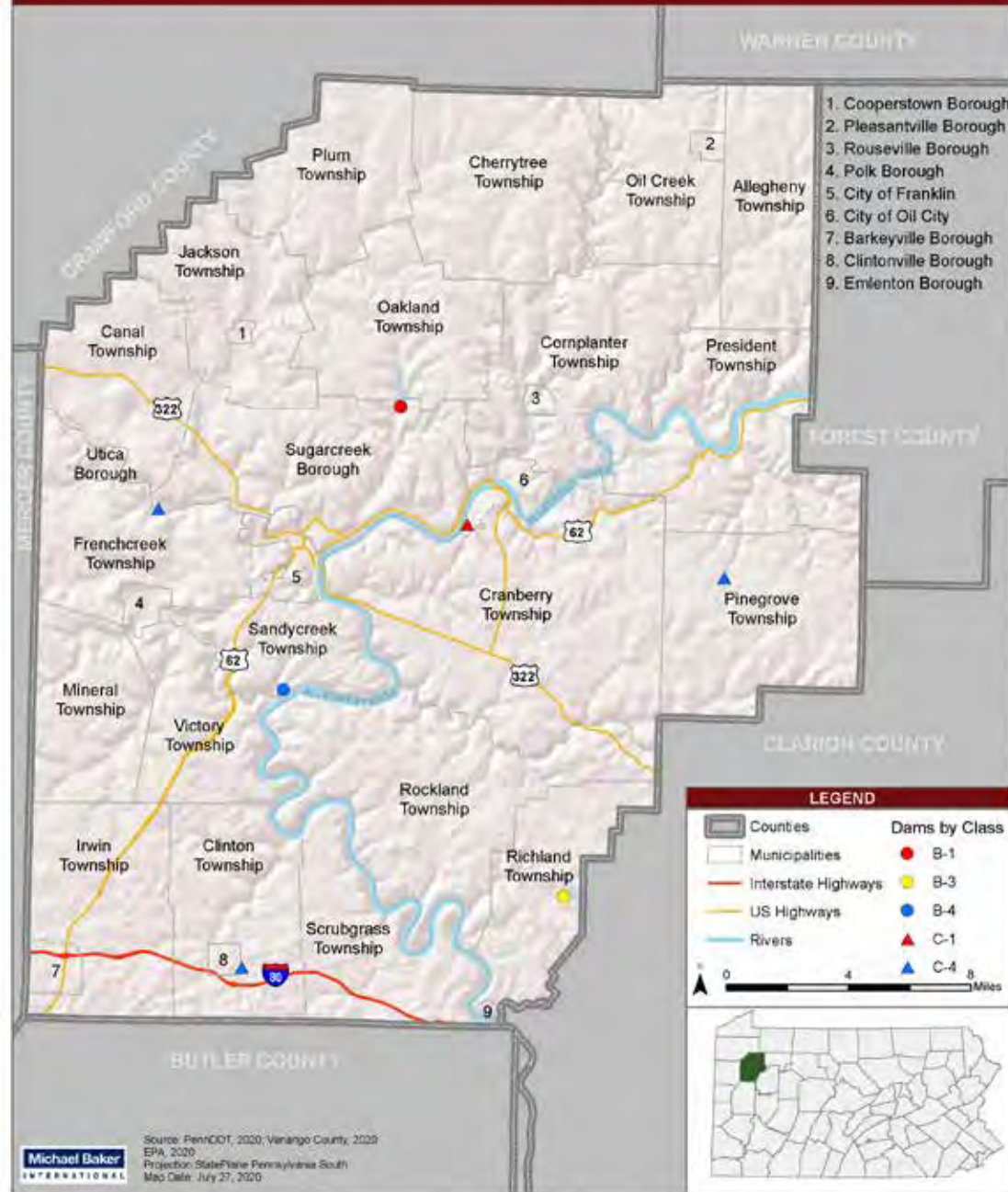
$$\begin{aligned} \text{Risk Factor Value} = & \\ & [(Probability \times .30) + (Impact \times .30) + \\ & (Spatial Extent \times .20) + (Warning Time \times .10) + \\ & (Duration \times .10)] \end{aligned}$$

2015 Hazard Rankings

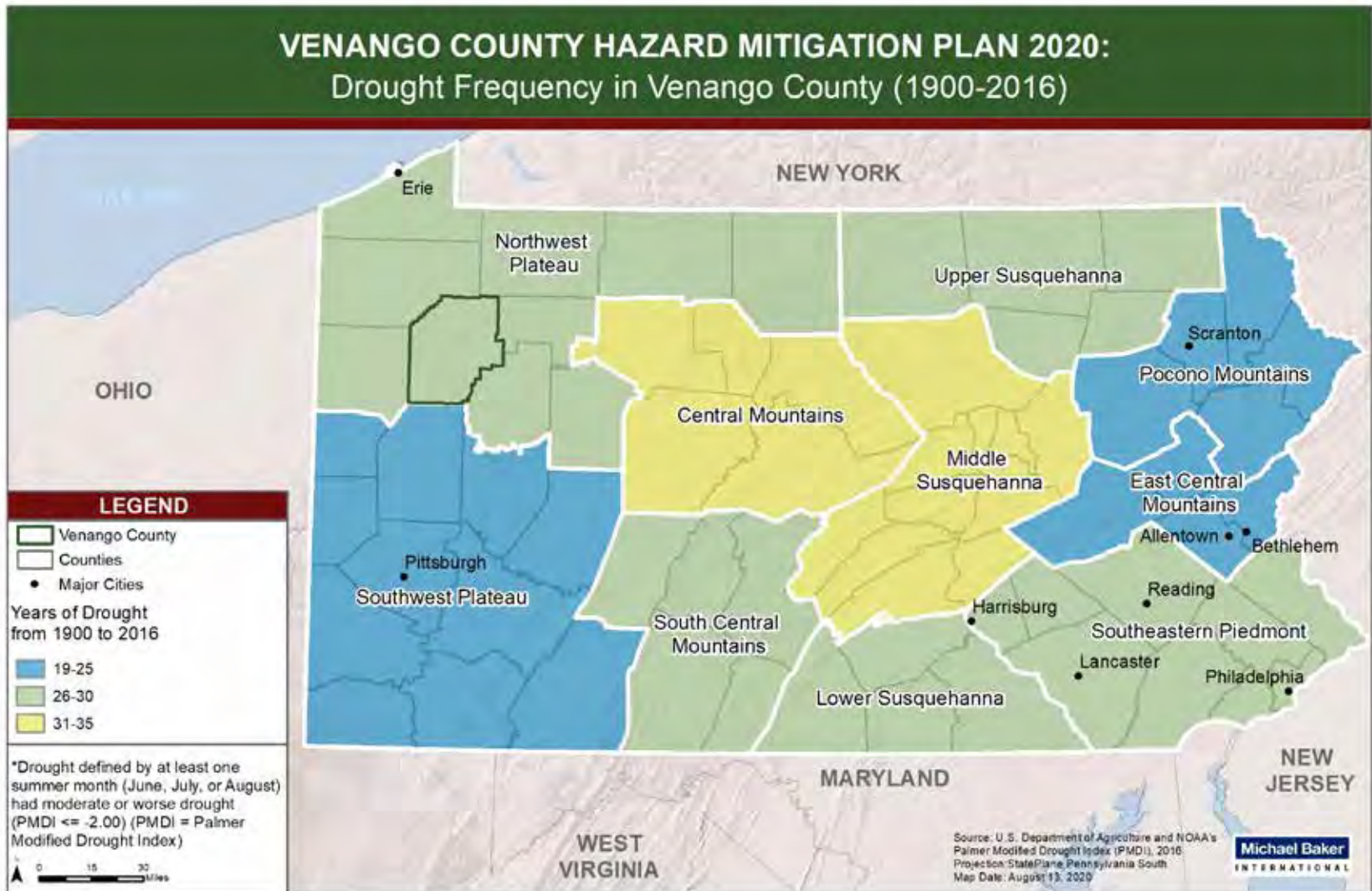
HAZARD	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	RISK FACTOR
Winter storm	3	2	4	1	3	2.7
Environmental Hazards	3	2	3	3	2	2.6
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5
Dam Failure	1	3	3	4	2	2.4
Wildfire	4	1	2	3	2	2.4
Tornado, Windstorm	1	3	3	4	1	2.3
Drought	2	1	4	1	4	2.2
Radon Exposure	2	1	2	1	4	1.8
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6
Earthquake	1	1	2	4	1	1.5
Pandemic	1	1	1	4	2	1.4
Landslide	1	1	1	4	1	1.3

Hazard Review: Dam Failure

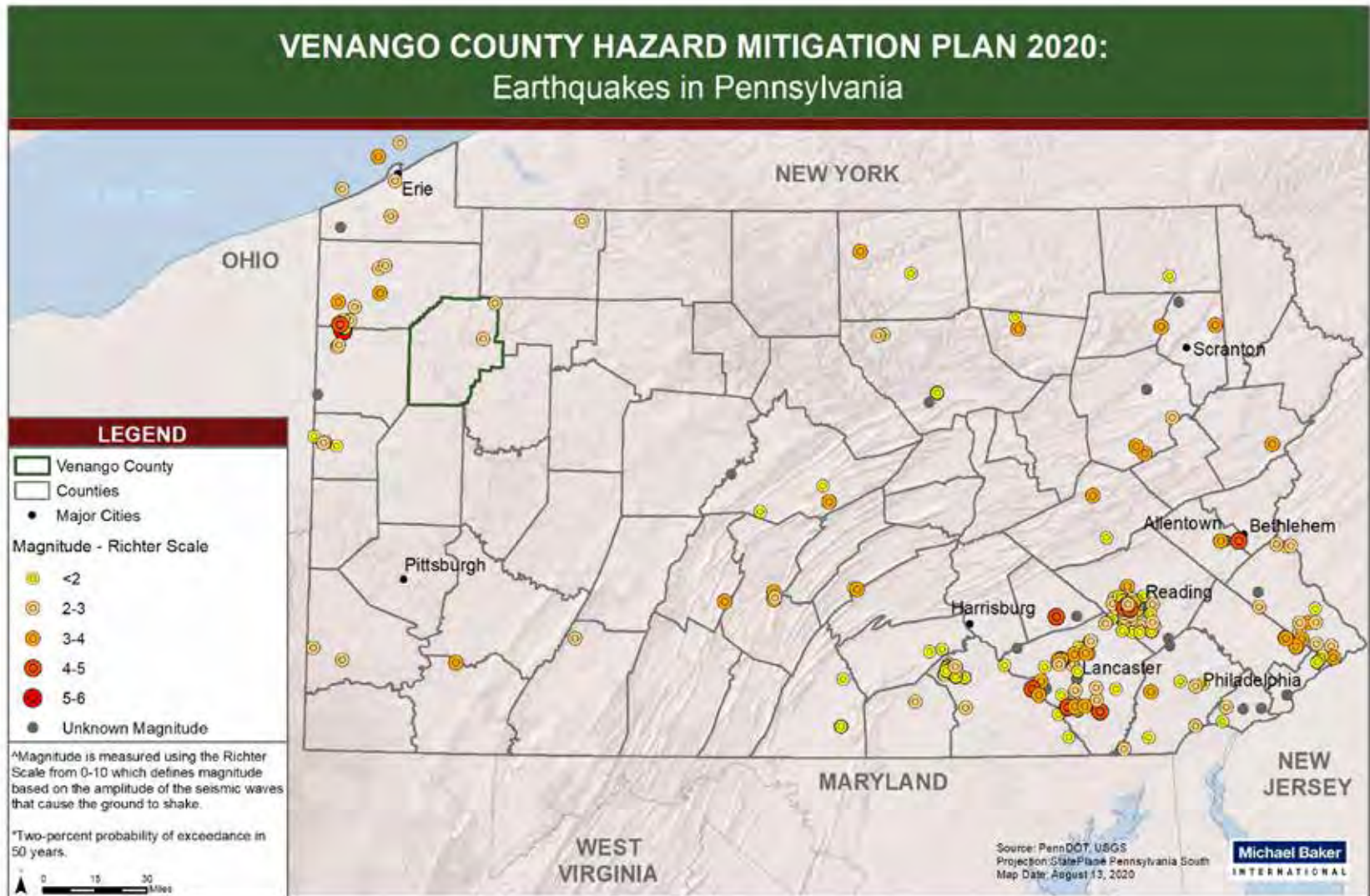
- § Dams provide benefits such as flood protection, power generation, drinking water, irrigation, and recreation
- § Eight dams in Venango County, publicly and privately owned
- § Three dams are classified by the PA DEP as high-hazard (C-4) which require an Emergency Action Plan



Hazard Review: Drought



Hazard Review: Earthquake

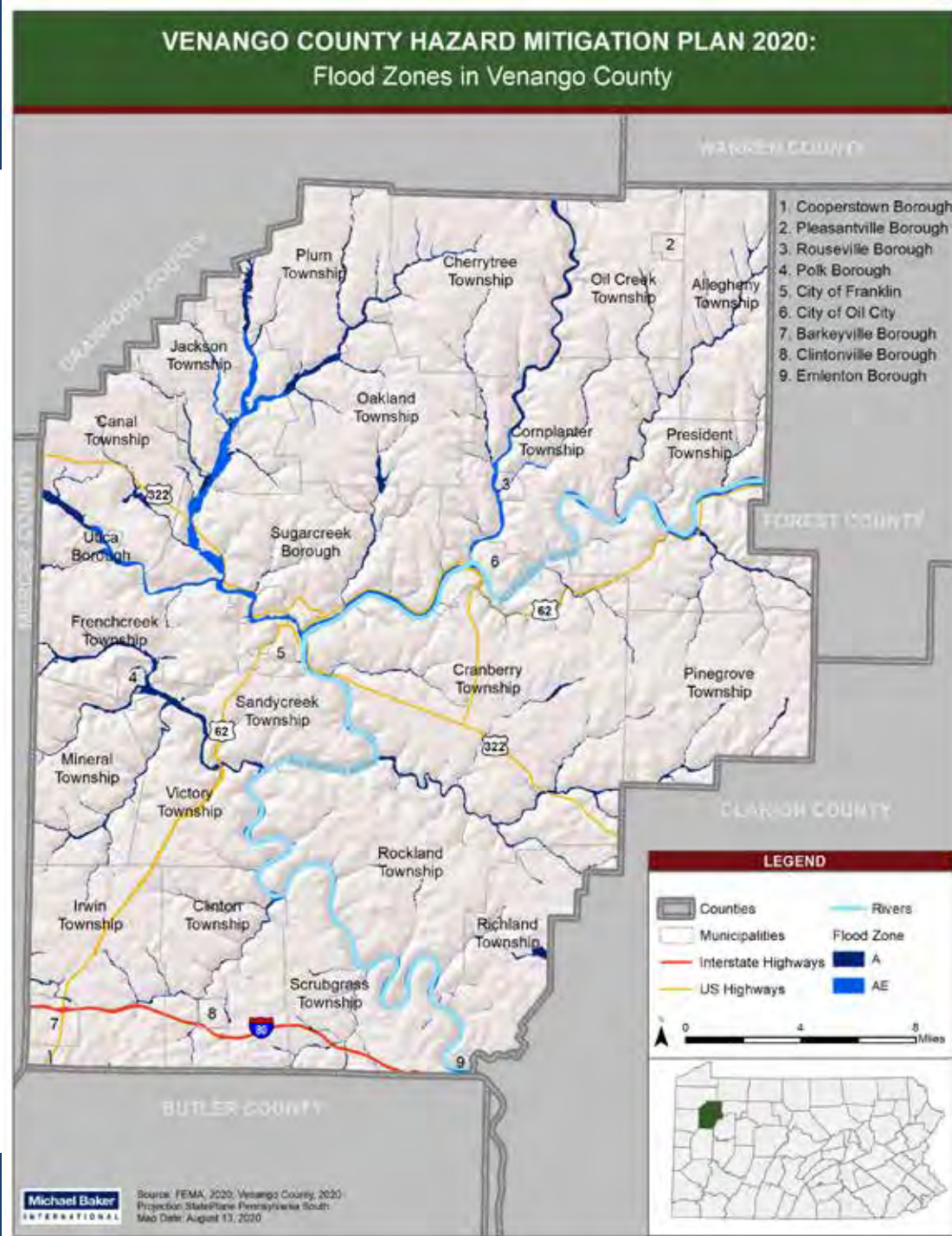


Hazard Review: Earthquake



Hazard Review: Flood

- § 28 out of 31 municipalities have flood-prone areas
- § Flood season is December through April
- § Normally result of thunderstorm, rapid snowmelt, and/or ice jam
- § Please send us any flooding experiences you may have to incorporate into the plan



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

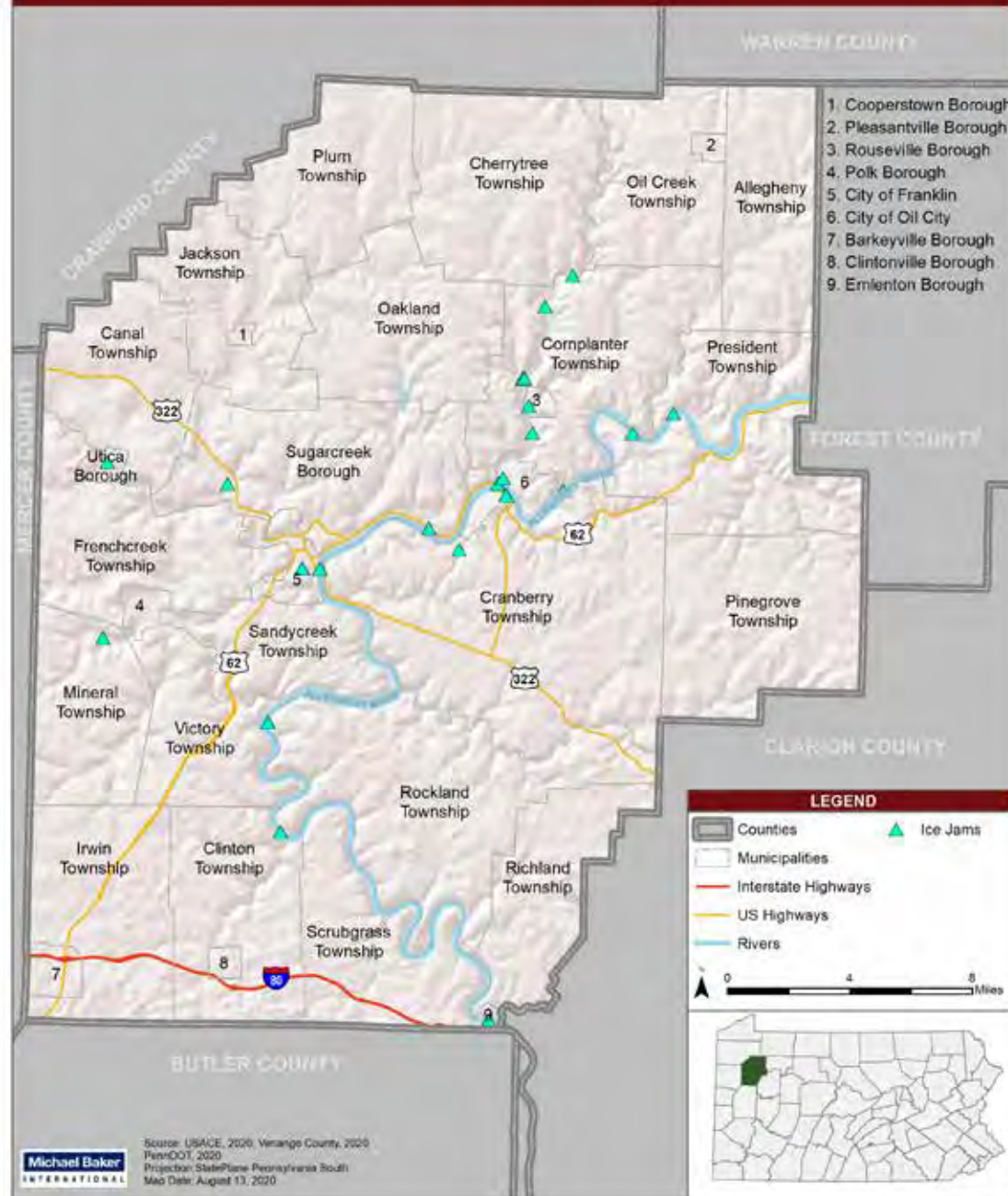
Ice Jams in Venango County

Hazard Review: Ice Jam

§ Occurs on waterways that are totally or partially frozen

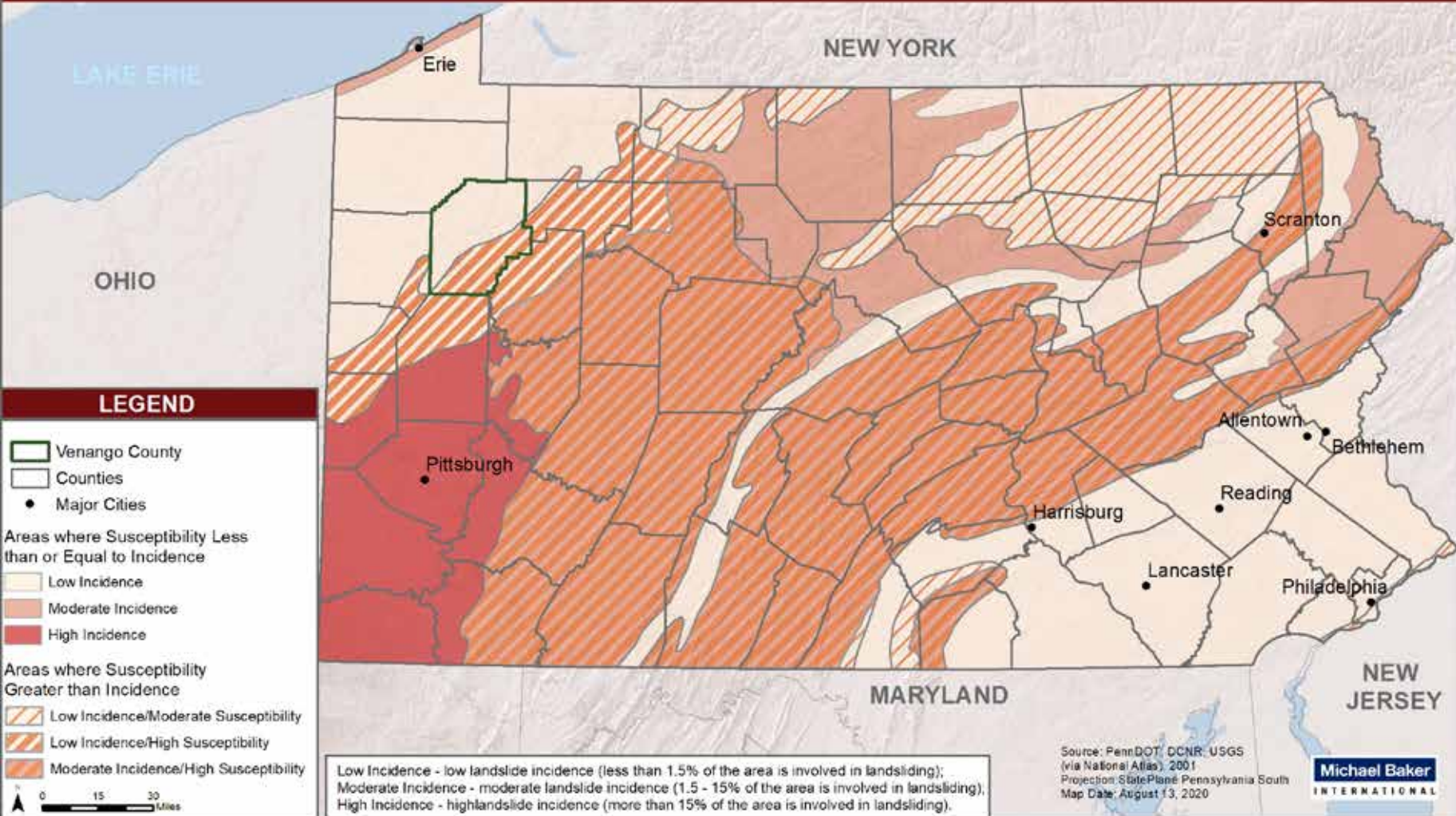
§ Rise in stream stage will break frozen areas and create ice flows that can pile up on obstructions. The ice creates a dam across the channel over which water and ice continue to flow, allowing for more jamming.

§ Ice Jams are concentrated around Cornplanter Township, Rouseville Borough, and Oil City



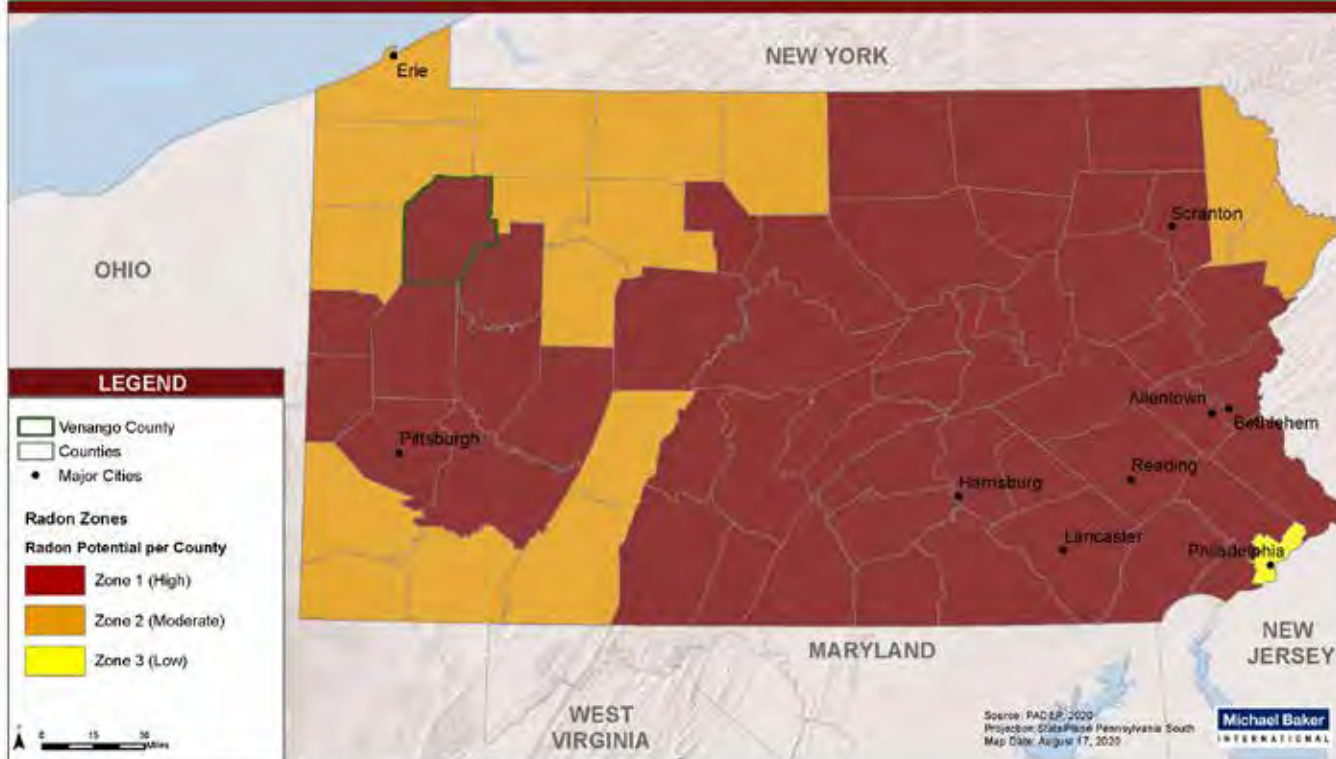
Hazard Review: Landslide

Pennsylvania Landslide Susceptibility and Incidence



Hazard Review: Radon

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Pennsylvania Radon Zones



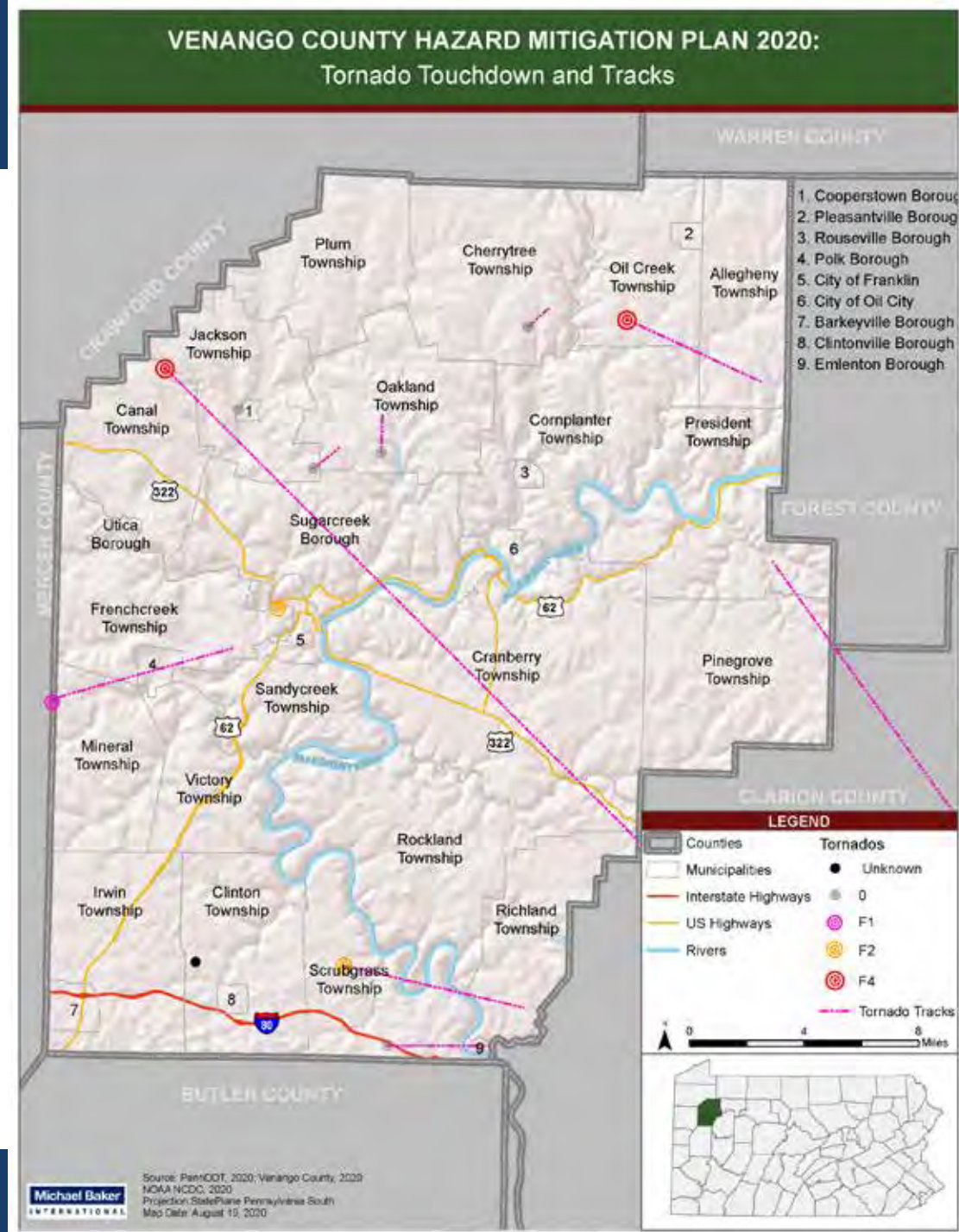
§ Not until the 1980s that the geographic distribution of elevated to high values in houses was recognized

§ Venango County is in a High Potential Radon Zone – predicted indoor level greater than 4 pico Curies per Liter (pCi/L)

	Zone 1 counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) (red zones)	High Potential
	Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L (orange zones)	Moderate Potential
	Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L (yellow zones)	Low Potential

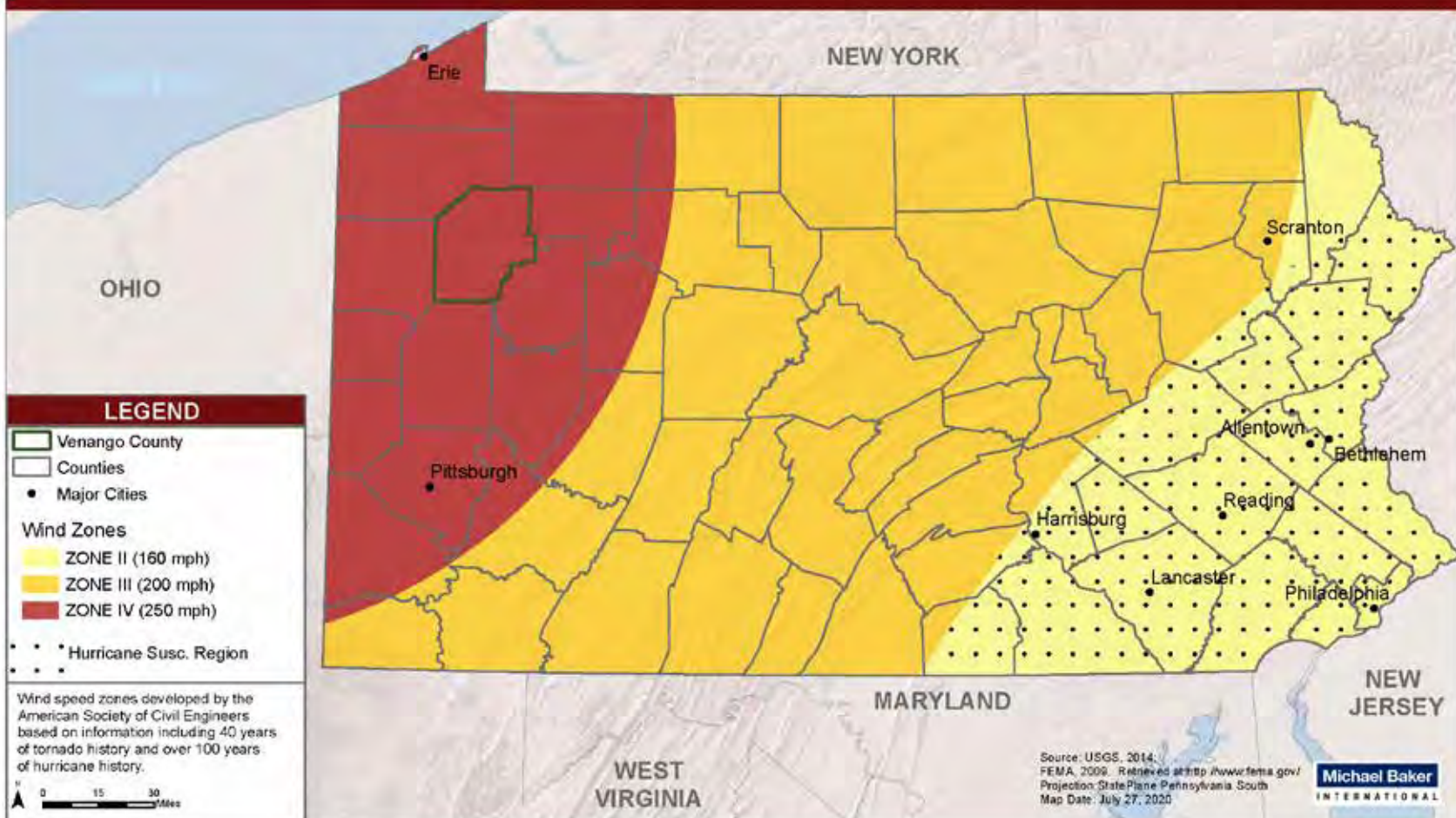
Hazard Review: Tornado

- § The strongest tornado in Venango County occurred in 1985 and caused \$50M worth of damage.
- § Most recent tornado occurred in 2019 near Petroleum Center
- § Characterized in two ways: direction and speed of spinning winds and the forward movement of the tornado, known as the storm track
- § Straight-line winds and windstorms are more common



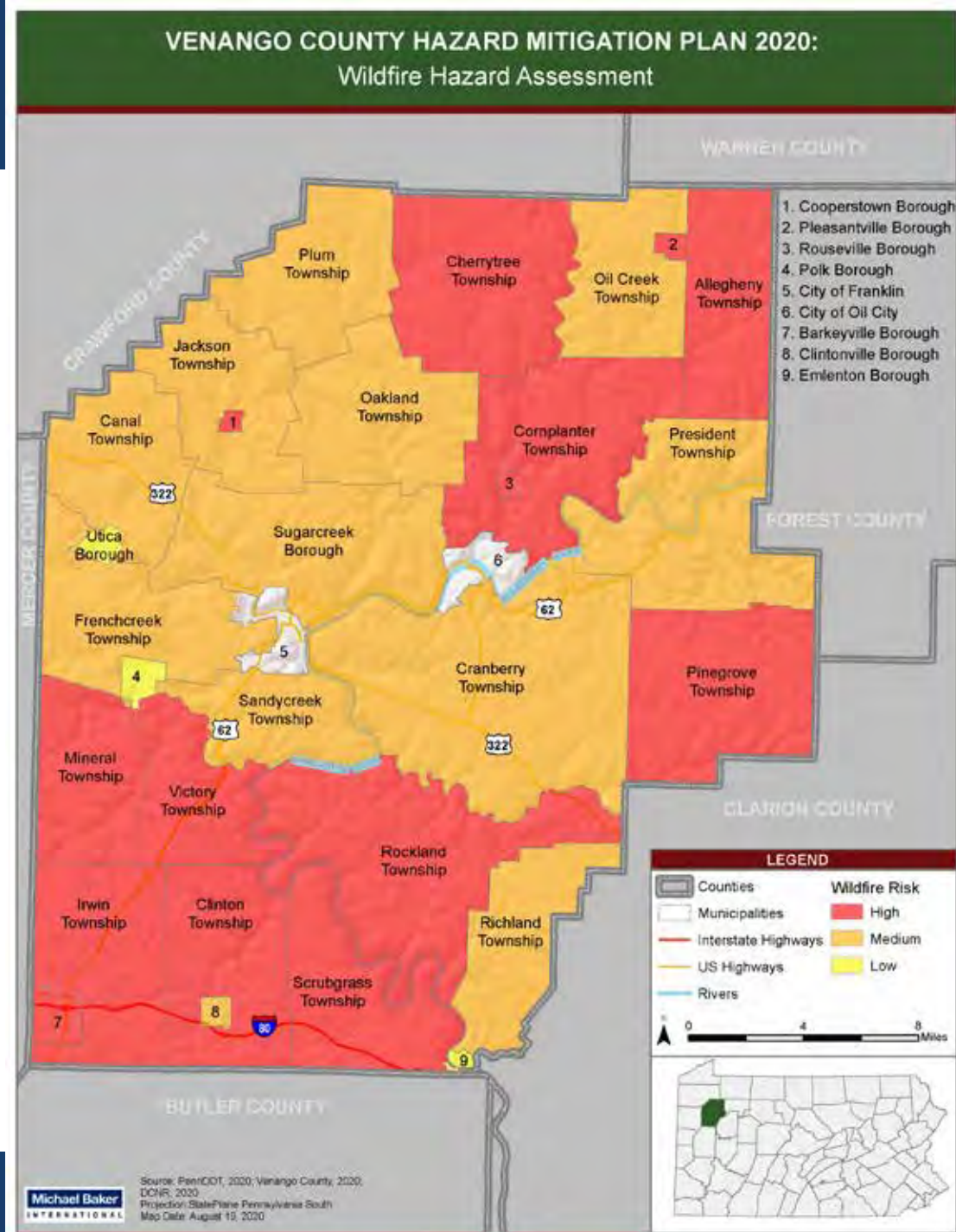
Hazard Review: Windstorm

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Wind Zones in Pennsylvania



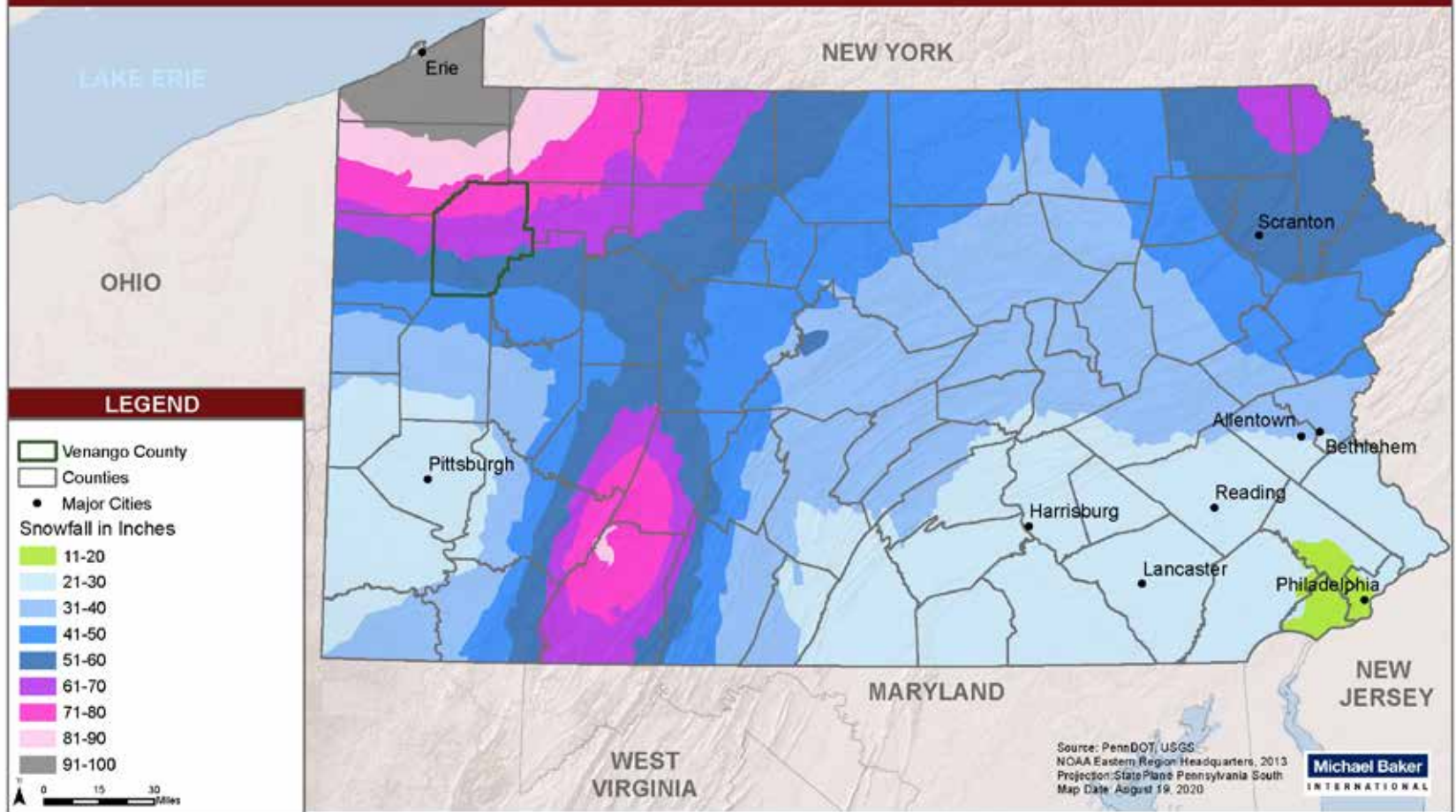
Hazard Review: Wildfire

- § Much of the county is in either Medium or High Wildfire Risk areas
- § Utica Borough and Polk Borough and Emlenton Borough are the only areas with low risk
- § City of Franklin and City of Oil City have no data



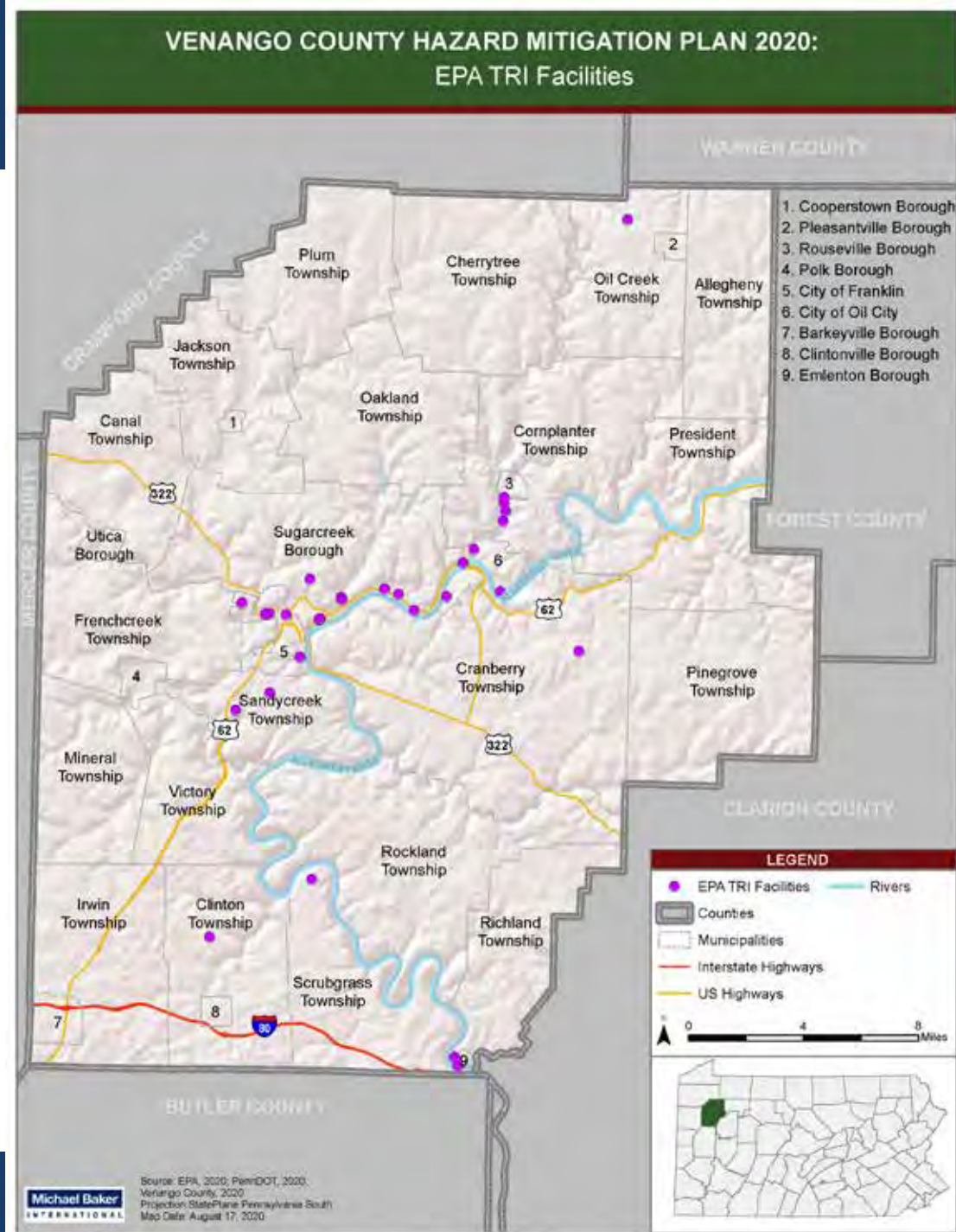
Hazard Review: Winter Storm

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Pennsylvania Average Annual Snowfall



Hazard Review: Hazardous Materials Sites

- Hazardous Materials Site Trends
 - Sites primarily line waterways
 - There are also concentrations along some of the major roadways
 - Please send us any specific major events your municipality or organization has experienced!



Exercise #1: Hazard Risk Ranking Review

Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:								
Name:								
HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.	
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION			
Winter Storm	3	2	4	1	3	2.7		
Environmental Hazard	3	2	3	3	2	2.6		
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5		
Dam Failure	1	3	3	4	2	2.4		
Wildfire	4	1	2	3	2	2.4		
Tornado, Windstorm	1	3	3	4	1	2.3		
Drought	2	1	4	1	4	2.2		
Radon Exposure	2	1	2	1	4	1.8		
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6		
Earthquake	1	1	2	4	1	1.5		
Pandemic	1	1	1	4	2	1.4		
Landslide	1	1	1	4	1	1.3		

- § Review and comment on countywide hazard risk ratings
- § Based on comments from the kick-off meeting and risk assessment analysis landslide and subsidence, sinkhole have risen to high risk factor

Capability Assessment



Capability Assessment Overview

- § Need to receive feedback by next month – only have received a few surveys at this time
- § Capability Section is a huge component in FEMA's approval process – demonstrates ability to take actions before, during, or after an event
- § Presents resources to implement hazard mitigation such as emergency response measures, local planning and regulatory, administrative and technical expertise, fiscal, and participation in programs

Venango County 2020 Hazard Mitigation Plan Update

Capability Assessment Survey

Community/Organization: Public Works
Name and Title: Christine Kelly

Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update if known.

Tool/Program	Status			Comments
	In Place	Under Development	Not Started/Do not Have	
Hazard Mitigation Plan	<input checked="" type="checkbox"/>			
Emergency Operations Plan	<input checked="" type="checkbox"/>			
Evacuation Plan	<input checked="" type="checkbox"/>			
Continuity of Operations Plan	<input checked="" type="checkbox"/>			
Floodplain Management Ordinance	<input checked="" type="checkbox"/>			
Zoning Regulations	<input checked="" type="checkbox"/>			
Subdivision Regulations	<input checked="" type="checkbox"/>			
Comprehensive Land Use Plan (or General Master, or Growth Management Plan)	<input checked="" type="checkbox"/>			
Stormwater Management Plan	<input checked="" type="checkbox"/>			
Natural Resource Protection Plan	<input checked="" type="checkbox"/>			
Capital Improvement Plan	<input checked="" type="checkbox"/>			
Firewise Community	<input checked="" type="checkbox"/>			
Storm Ready	<input checked="" type="checkbox"/>			
Building Codes	<input checked="" type="checkbox"/>			

Please email completed forms to maddeline.fincham@mbakerintl.com

Mitigation Strategy



Mitigation Strategy Components

- § Goals and Objectives
- § Evaluation of 2015 Mitigation Strategy
- § Mitigation Techniques
- § Mitigation Action Plan



Defining Goals, Objectives & Actions

- § Goals and Objectives
- § Mitigation Techniques
- § Mitigation Action Plan

Goal

Minimize new development in hazard-prone areas.

Objective

Reduce the number of vulnerable structures in flood hazard areas.

Actions

Amend zoning ordinance to permit only open space uses within floodplains

2015 HMP Goals:

1. Increase Public Awareness regarding natural and manmade hazard risks, preparedness and mitigation.
2. Ensure that adequate shelter is available to current and future populations.
3. Identify all repetitive loss structures throughout the county.
4. Develop better hazard data for Venango County and the municipalities.
5. Attempt to reduce the current and future risk of flood damage in Venango County.
6. Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.
7. Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function.

Mitigation Strategy

Mitigation Action Plan:

- § Each municipality must have at least one mitigation action.
- § There must be at least one mitigation action for each profiled hazard.
- § Mitigation actions should be realistic and sustainable.
- § 2015 HMP: 44 actions
 - Some actions are shared by multiple municipalities
 - Municipalities encouraged to share resources if they are working towards the same action



Exercise #2: Mitigation Progress

§ Status and other notes on actions from the 2015 HMP

§ Each action can be noted as completed, canceled, deferred or ongoing

§ Deferred actions are those that may still align with state goals, risks, and capabilities, but could not be completed in the previous cycle

§ Provide today if possible, or submit no later than **18 September**

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Leetsdale Borough	Civil Disturbances	Provide training to local law enforcement on responding to civil disturbances.					
Leetsdale Borough	All hazards	Use the county LEPC and Quarterly Trainings to distribute all-hazards education and preparedness materials to communities.					
Leetsdale Borough	Flood, Flash Flood, Ice Jam, Hurricane, Tropical Storm, Nor'easter	Address identified data limitations regarding lack of detailed information about individual structures located in the 100-year floodplain; flood probabilities other than the 100-year flood; presence of basements/finished basements/crawl spaces and first floor elevations for priority areas.					
Leetsdale Borough	Flood, Flash Flood, Ice Jam, Hurricane, Tropical Storm, Nor'easter	If funding becomes available, acquire, elevate, or floodproof structures, with an emphasis on mitigating Repetitive Loss and Severe Repetitive Loss properties.					
Leetsdale Borough	Flood, Flash Flood, Ice Jam, Hurricane, Tropical Storm, Nor'easter	Reduce possibility of damage and loss of function to community-identified critical facilities in the floodplain.					

Please email completed form to Madeline.Fincham@mbakerintl.com

Mitigation Techniques



Local Mitigation Planning Handbook

March 2013



FEMA

§ Updated FEMA mitigation planning guidance identifies four mitigation techniques:

- Plans and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs

Local Plans and Regulations



§ Government authorities, policies, or codes that influence the way land and buildings are developed and built such as:

- Comprehensive Plans
- Subdivision Regulations
- Building Codes and Enforcement
- Capital improvement Programs
- Stormwater Management Plans
- Emergency Operations Plans

Structure and Infrastructure Projects



- § Modifying existing structures and infrastructure to remove from a hazard area
- § Construction of manmade structures to reduce impacts of hazards

Natural Systems Protection

§ Actions that minimize damage and losses and also preserve or restore the functions of natural systems

- Sediment and erosion control
- Stream corridor restoration
- Forest management
- Conservation easements
- Wetland restoration and preservation



Education and Awareness Programs



- § National preventative programs
- § Mailings to hazard-prone communities
- § Websites with maps and information
- § Presentations to community groups
- § Radio or TV spots

Sample Mitigation Actions

Mitigation Technique	Action
Local Plans and Regulations	Ensure integration of vulnerabilities into local, regional, and countywide comprehensive planning processes.
Structure and Infrastructure Projects	Relocate a section of main waterline currently in an area vulnerable to flooding and transportation accidents.
Structure and Infrastructure Projects	Elevate structures repeatedly impacted by flooding on a specific street.
Natural Systems Protection	Coordinate to conduct prescribed burns as necessary to reduce wildfire risk.
Education and Awareness Programs	Identify senior independent living, extended care, and hospice care residential living facilities and provide targeted information about evacuation and sheltering resources.

Stormwater Management Plan

§ Stormwater Management Plan created in 2010

§ Goals Include:

- Manage stormwater runoff created by new development activities
- Meet the legal water quality requirements under Federal and State laws
- Provide uniform stormwater management standards throughout Venango County.
- Preserve the existing natural drainage ways and water courses.



Incorporating Stormwater Management Plan (SMP) Into the Hazard Mitigation Plan (HMP)

§ Integrate data and resources

- Integrate into Flood, Levee Failure and Dam and Lock sections of the HMP
- Use findings from floodplain analysis, watershed modeling, best practice identification, etc. from SMP

§ Identify mitigation actions that address problems identified in the SMP

- Address SMP goals when identifying actions
- Target problem areas identified in SMP

Exercise #3: New Mitigation Action Identification

- § Determine additional actions based on current risk, vulnerability, and mitigation goals
- § Develop actions for new hazards

Venango County 2020 Hazard Mitigation Plan Update

New Mitigation Action Form

Municipality/Organization:	
Name and Title:	

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniammp.com/ategheny-hmp>.

Action Title	
Assessing the Risk	
Hazard(s) addressed	
Describing the Action	
Background/issue addressed	
Action description	
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	
Potential partners	
Potential funding sources	
Timeline	

Please email completed form to madeleine.fincham@mbakerintl.com

Next Steps and Action Items



Schedule and Meetings

Task	Dates
Kick-Off Meeting	July 7, 2020
Risk Assessment/Mitigation Solutions Workshop	August 27, 2020
Draft Plan Review Meeting	October 1, 2020
Draft Plan Submitted to PEMA/FEMA	November 12, 2020
Receive FEMA Approval	December 2020



We are Here

§ Hazard Mitigation Planning Team:

- Complete Risk Ranking Evaluation
- Complete Mitigation Action Progress Form
- Develop Mitigation Actions as needed and complete New Mitigation Action Form
- Check out project website

§ Project Team:

- Update project website with meeting materials
- Prepare Draft Plan for review

Next Meeting: October 1st
Complete Forms: September 18th





§ Please submit all questions via chat

Thank You

Tim Dunkle

814-677-0325, tmdunkle@co.venango.pa.us

Janis Cochran

814-677-0325, jcochran@co.venango.pa.us

Jason Ruggiero

814-432-9682, jruggiero@co.venango.pa.us

Madeleine Fincham

412-269-6093, madeleine.fincham@mbakerintl.com



Risk Ranking Evaluation

Use this worksheet, which summarizes countywide risk ratings for all hazards being profiled in the Hazard Mitigation Plan, to provide comments and feedback on proposed rankings. The Pennsylvania Risk Factor Methodology used for this assessment is on the back side of this form for your reference. You may also identify any unique impacts of hazards in your municipality in the comments section below.

Municipality/Organization:	
Name:	

HAZARD	RISK ASSESSMENT CATEGORY					RISK FACTOR	Please provide any comments about specific hazard rankings. You may also enter municipal specific considerations here if needed.
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Winter Storm	3	2	4	1	3	2.7	
Environmental Hazard	3	2	3	3	2	2.6	
Flood, Flash Flood, Ice Jam	2	2	4	2	3	2.5	
Dam Failure	1	3	3	4	2	2.4	
Wildfire	4	1	2	3	2	2.4	
Tornado, Windstorm	1	3	3	4	1	2.3	
Drought	2	1	4	1	4	2.2	
Radon Exposure	2	1	2	1	4	1.8	
Hurricane, Tropical Storm, Nor'easter	1	1	4	1	1	1.6	
Earthquake	1	1	2	4	1	1.5	
Pandemic	1	1	1	4	2	1.4	
Landslide	1	1	1	4	1	1.3	

Venango County 2020 Hazard Mitigation Plan Update

Pennsylvania Standard Risk Factor Methodology				
RISK ASSESSMENT CATEGORY	DEGREE OF RISK			WEIGHT VALUE
	LEVEL	CRITERIA	INDEX	
PROBABILITY <i>What is the likelihood of a hazard event occurring in a given year?</i>	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 49.9% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 50 & 90% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY	4	
IMPACT <i>In terms of injuries, damage, death, and economic impact, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?</i>	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT <i>How large of an area could be impacted by a hazard event? Are impacts localized or regional?</i>	NEGLECTIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
WARNING TIME <i>Is there usually some lead time associated with the hazard event? Have warning measures been implemented?</i>	MORE THAN 24 HRS	SELF-DEFINED	1	10%
	12 TO 24 HRS	SELF-DEFINED	2	
	6 TO 12 HRS	SELF-DEFINED	3	
	LESS THAN 6 HRS	SELF-DEFINED	4	
DURATION <i>How long does the hazard event usually last?</i>	LESS THAN 6 HRS	SELF-DEFINED	1	10%
	LESS THAN 24 HRS	SELF-DEFINED	2	
	LESS THAN 1 WEEK	SELF-DEFINED	3	
	MORE THAN 1 WEEK	SELF-DEFINED	4	

New Mitigation Action Form

Municipality/Organization:	
Name and Title:	

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniiahmp.com/allegheeny-hmp>

Action Title	
Assessing the Risk	
Hazard(s) addressed	
Describing the Action	
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Action description	
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	
Potential partners	
Potential funding sources	
Timeline	

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
City of Franklin	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Work with municipal leaders to identify roadways with frequent flooding. Share information with PennDOT and work cooperatively to develop strategies to mitigate the identified problems.				XXX	Continually working with PennDOT when they have construction projects within the City
City of Franklin	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				XXX	
City of Franklin	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Winter Storm; Hurricane, Tropical Storm, Nor'easter	Planning department and applicable municipal offices to review their comprehensive plans to ensure that designated growth areas are not in high hazard areas identified in this plan.				XXX	

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

City of Franklin	Flood, Flash Flood, Ice Jam; Tornado; Earthquake; Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.				XXX	Ordinances and/or policies are updated when the Uniform Construction Codes change
City of Franklin	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				XXX	
City of Franklin	All	Review and update all annexes the City of Franklin's Emergency Operations Plan.				XXX	City of Franklin Emergency Plan needs re-written/updated

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

City of Franklin	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Mitigate repetitive loss properties associated with flood sources: Chubbs, Davis, and Smith Runs.				XXX	
City of Franklin	All	Implement redundancy in critical infrastructure, should a disaster occur that it does not affect all residents and/or businesses (water, sewer, transportation (traffic management), electric, natural gas pipelines, communications (Public and Emergency Services).				XXX	As new infrastructure is installed this is being addressed

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Cancelled	Deferred	Ongoing	
City of Oil City	All	To work with the American Red Cross towards upgrading all shelter resources. Also any new shelters that the Red Cross may establish in the future. This will include shelters in all areas of Venango County.				✓	2018 Fullscale Exercise of A Megashelter held at the Oil City High School in conjunction with the RED CROSS. Oil City High School AND Middle School identified as shelters. Address of 8 + 10 LYNCH BLVD.
City of Oil City	All	West Central PA Red Cross and Venango County EMA to hold an annual work session to share information about local shelters. Information to include the site of each shelter, how many people it can house and feed, if it has back-up power available on site, completed site survey forms and types of resources that they have or that they need. This will benefit all areas of Venango County in the event of the need to open shelters.			✓		DEFER TO VENANGO COUNTY EMERGENCY MANAGEMENT
City of Oil City	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Work with municipal leaders to identify roadways with frequent flooding. Share information with PennDOT and work cooperatively to develop strategies to mitigate the identified problems.	✓				Multiple Catch Basins Constructed AND Repaired on UNION STREET. ALSO Rip WRAP installed at STATE ROUTE 257 + US 62

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

City of Oil City	Flood, Flash Flood, Ice Jam; Tornado; Earthquake; Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.	✓				City of Oil City adopted the 2015 Edition of the International Building Code By Ordinance in 2018.
City of Oil City	Flooding; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				✓	Brady Block located in Downtown Oil City demolished. Houses demolished on Union Street in Oil City.
City of Oil City	Flooding; NFIP	Remove repetitive loss structures on Sage Run in Oil City and Cranberry Township.	✓				Houses Demolished by PennDOT upgrading intersection of US 62 + SR 257. WATER

PASSAGE IMPROVED AT BRIDGE AS WELL AS CREEK BANKS WITH RIPRAP APPLIED.

Fincham, Madeleine

From: Mark Hicks <mhicks@oilcity.org>
Sent: Wednesday, September 16, 2020 1:44 PM
To: Fincham, Madeleine
Subject: Re: EXTERNAL: Hazard Assessment

Madeline,

I can provide information on a couple of them. The City working with the Red Cross is still ongoing. The Red Cross has changed its mission slightly since the previous plan. The Red Cross is looking at Mega Shelters of which the City has identified two, those being the Oil City High School and Middle School located at 8 and 10 Lynch Blvd. The City Emergency Services along with the Red Cross actually ran a mega shelter full scale drill in 2018 that worked very well.

I am going to defer the question between the County EMA and the Red Cross working to identify shelters especially those that have emergency power.

I will have more answers for you tomorrow concerning the other questions.

Mark J. Hicks
Fire Chief, Oil City Fire Department
404 Central Avenue
Oil City, Pa 16301
Office# 814-678-3061
Cell# 814-673-3988
Fax# 814-676-0963

On Wed, Sep 16, 2020 at 11:43 AM Fincham, Madeleine <Madeleine.Fincham@mbakerintl.com> wrote:

Give me a call if you have any questions. I just need a status update on each of the actions. If it's ongoing, please record any completions or movement since 2015 on the action. You can also cancel the actions or defer.




Madeleine Fincham | Planner
100 Airside Drive, Airside Business Park | Moon Township, PA 15108 | [O] 412-269-6093 | [M] 724-986-5806
madeleine.fincham@mbakerintl.com | www.mbakertnl.com     



From: Fincham, Madeleine
Sent: Wednesday, September 16, 2020 11:42 AM
To: 'Mark Hicks' <mhicks@oilcity.org>
Subject: RE: EXTERNAL: Hazard Assessment

Mark,

Attached is the mitigation action form 😊

Madeleine Fincham | Planner
100 Airside Drive, Airside Business Park | Moon Township, PA 15108 | [O] 412-269-6093 | [M] 724-986-5806
madeleine.fincham@mbakerintl.com | www.mbakerial.com     



From: Mark Hicks <mhicks@oilcity.org>
Sent: Wednesday, September 16, 2020 11:39 AM
To: Fincham, Madeleine <Madeleine.Fincham@mbakerintl.com>
Subject: Re: EXTERNAL: Hazard Assessment

Madeline,

Are they available on the website because I don't think I have seen those ones?

Mark J. Hicks

Fire Chief, Oil City Fire Department

404 Central Avenue

Oil City, Pa 16301

Office# 814-678-3061

Cell# 814-673-3988

Fax# 814-676-0963

On Wed, Sep 16, 2020 at 10:47 AM Fincham, Madeleine <Madeleine.Fincham@mbakerintl.com> wrote:

Hi Chief Hicks,

No, I had not received this form yet. Thanks for sending!

Do you happen to also have the attached second form completed with the City's mitigation actions? This is the only form I need and then Oil City is good to go 😊

Thanks!

Madeleine

Madeleine Fincham | Planner

100 Airside Drive, Airside Business Park | Moon Township, PA 15108 | [O] 412-269-6093 | [M] 724-986-5806

madeleine.fincham@mbakerintl.com | www.mbakerial.com     



From: Mark Hicks <mhicks@oilcity.org>

Sent: Wednesday, September 16, 2020 10:10 AM

To: Fincham, Madeleine <Madeleine.Fincham@mbakerintl.com>

Subject: EXTERNAL: Hazard Assessment

Madeline,

I couldn't remember if I had sent you this information.

Mark J. Hicks

Fire Chief, Oil City Fire Department

404 Central Avenue

Oil City, Pa 16301

Office# 814-678-3061

Cell# 814-673-3988

Fax# 814-676-0963

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Cornplanter Township	All	Provide CERT classes to interested citizens in Venango County to assist first responders at specified emergencies throughout the county. Project Impact Coordinator to take the CERT Train the Trainer Course to assist with training in the County. Additional trainers need to attend future Train the Trainer Courses.					Probably should be completed by the CVFD
Cornplanter Township	All	To meet with groups of potential volunteers to attempt increase the number of trained responders for: All County Fire Departments, doctors and nurses who may become first responders in a bio-terrorism event, EMS personnel, etc. Will benefit all areas of Venango County.					The Township is not involved in this. The CVFD may be
Cornplanter Township	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.	X			X	This is always a concern

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Cornplanter Township	Flood, Flash Flood, Ice Jam; Tornado; Earthquake; Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.	X			X	
Cornplanter Township	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Identify and mitigate areas of frequent flooding	X			X	
Cornplanter Township	Flooding; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).	X			X	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>We need to do this every time it floods</p> </div>

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Cranberry Township	All	To work with the American Red Cross towards upgrading all shelter resources. Also any new shelters that the Red Cross may establish in the future. This will include shelters in all areas of Venango County.				X	
Cranberry Township	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				X	
Cranberry Township	Flood, Flash Flood, Ice Jam; Tornado; Earthquake; Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.	X				

Please email completed form to Madeleine.Fincham@mbakerintl.com

!015 Mitigation Action Review

Cranberry Township	Flooding; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	Working with the US Army Corps of Engineers
Cranberry Township	Flooding; NFIP	Remove repetitive loss structures on Sage Run in Oil City and Cranberry Township.				X	

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Cancelled	Deferred	Ongoing	
Emlenton Borough	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				X	
Emlenton Borough	Flood, Flash Flood, Ice Jam; Tornado; Earthquake; Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.				X	
Emlenton Borough	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status			Status Notes
			Completed	Canceled	Deferred	
Irwin Township	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.	X			Irwin Twp. is a member of the Venango Co. Regional Planning Comm. which reviews all new development and subdivisions for stormwater management.
Irwin Township	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).	Completed and Ongoing			Irwin Twp. has completed a rehabilitation project on the Old Beech Rd. Bridge. We have replaced overflowing culverts on Irwin, E. Gilmore (3), Dog Hollow Millbrook, Burns, Kerr and Blair Rds. We also completed two

Dirty Gravel Rd. project for Flood Management on Mill & Sterrett Rds and rebuilt a section of Whieldon Rd. that would flood in a heavy rain.

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Plum Township	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				X	
Plum Township	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Pleasantville Borough	Severe Storm Water shortage	<p>In case of a severe storm where there is damage to residences, the local First Responders will be alerted which includes an EMT staff. Residences will be alerted either by phone or door-to-door as needed to determine needs.</p> <p>The Borough purchases its water supply. If that were to be disrupted for an extended period of time: Residences will be alert through an all-call system and appropriate county and state agencies will be alerted for available aid. In addition, the local responders will be alerted and involved.</p>	Emergency Plan has been reviewed, revised and adopted in 2020				Being a small community, instead of separate departments within the Borough, the Borough President and local First responders and EMA are in periodic contact during the year as what action to take when necessary. Home and cell phone numbers of the Borough workers, council members fire department, and EMA. Plan revisions are made as needed and as outside influences may take place.
Pleasantville Borough	Tanker truck crash/spill Semi-truck crash and the spilling of harmful substances	<p>Being the crossroads for two state highways (Rte. 27 and Rte. 36) with I80 to the south and Erie and I90 to the north, Many tanker trucks and semi-trucks pass through the Borough daily. If an accident were to occur, the basic plan would be to:</p> <ul style="list-style-type: none"> Alert the local First Responders Coordinate action with the local EMA If chemical of harmful substance, call EAP, Inc. of Titusville to send in a team An all-call system will be activated to alert all residents affected Shelters have been planned and will be activated if necessary Alert appropriate county, state agencies 	Although completed at any one time, this is really on-going with periodic review with the local volunteer fire department and EMA.				

NOTE: for the second item, unable to type in "status notes" area. Will not accept information.

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Richland Township	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				X	
Richland Township	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Rouseville Borough	Flood, Flash Flood, Ice Jam; NFIP; Hurricane, Tropical Storm, Nor'easter	To work with FEMA and PEMA to get updated repetitive loss information on properties in the County and in the municipalities in order to plan future mitigation activities.	✓				
Rouseville Borough	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	When funds become available for hard mitigation projects, we plan to hold a series of public meetings with the owners of repetitive loss properties in high-risk areas. These meetings will also be used to identify high-risk properties in the unincorporated areas of the County and to determine potential participation in future acquisition and relocation projects.	✓				

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Utica Borough	All	To work with the American Red Cross towards upgrading all shelter resources. Also any new shelters that the Red Cross may establish in the future. This will include shelters in all areas of Venango County.		X			Other shelter location more desirable; lack of volunteers/staff that could attend the Red Cross training.
Utica Borough	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.			X		No zoning.
Utica Borough	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	Bridge maintenance & upkeep regularly occurs as well as drain, culvert and ditch clean outs.

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Polk Borough	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				✓	Dave Owens will attend meetings and act as contact
Polk Borough	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				✓	"

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review

Community	Hazard(s) Addressed	Mitigation Action	Status				Status Notes
			Completed	Canceled	Deferred	Ongoing	
Cherrytree Township	Dam Failure; Flood, Flash Flood, Ice Jam; Earthquake; Landslide; Wildfire; Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				X	We are currently developing a curative amendment to our zoning ordinance that includes regulations pertaining to solar development. Our zoning officer also serves as floodplain administrator and stormwater enforcement officer.
Cherrytree Township	Flood, Flash Flood, Ice Jam; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	We will consider mitigation projects on an as-needed basis as situations arise.

Please email completed form to Madeleine.Fincham@mbakerintl.com

2015 Mitigation Action Review								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				STATUS NOTES
				COMPLETED	CANCELED	DEFERRED	ONGOING	
Venango County	1	Flood, Hurricane, Tropical Storm, Nor'easter	To develop a "how to" mitigation display that can be used at special events. This display would include pictures and information, such as that contained in FEMA's Retrofitting for Homeowners Guide, Elevating Your Flood Prone Home, Elevating Residential Structures, and Information on the NFIP.					
Venango County	2	All	To develop an Animals In Disaster Display that will be used at 4-H Clubs, Agricultural Fair, in Veterinarians Offices and other places that animal owners may gather. The display will have information about preparing animals for disasters by making a disaster plan and a disaster supply kit for each animal. The display will encourage animal owners to decide ahead of time where animals will be sheltered and to familiarize them with the County's Animals in Disaster Annex of the Emergency Operations Plan.				X	Venango County's CART does community outreach events yearly. This includes agricultural fairs, fire prevention events, shelter drills. At these events they provide information to pet owners along with displays that cover a range of topics from emergency kits and preparedness plans for pet and other animals
Venango County	3	All	Create displays for children's programs that teach safety. Examples of information to be used would be similar to that on the FEMA for Kids CD, Sparky Fire Safety Program, and Smokey Bear.				X	EMA participates yearly at several public events. We have used Wally the Preparedness Turtle at local schools for education of elementary age students
Venango County	4	All	Send news releases to local newspapers, radio and TV stations about pre-disaster information. Design to reach all areas of Venango County.					
Venango County	5	All	Public Speaking series to include topic such as types of natural disasters and risks, how to develop a family disaster plan, how to develop a family disaster supply kit, how to develop a business continuity plan, simple types of mitigation projects for homeowners, etc. These speaking engagements				X	EMA has spokes at several group events yearly. They range from the Rotary and ICAP to boy scout and girl scout troops.

2015 Mitigation Action Review								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				STATUS NOTES
				COMPLETED	CANCELED	DEFERRED	ONGOING	
			will be offered to civic groups such as Rotary and Kiwanis Clubs, the Chamber of Commerce, Church and interfaith groups, etc. Coordination with state agencies such as DCNR-BOF as needed.					
Venango County	6	All	The American Red Cross will continue to hold a variety of courses, including: Adult and Child CPR, Basic First Aid, Introduction to Disaster Services, Mass Care, Shelter Operations and others at the Red Cross Office and at other locations throughout the County.			X		The Red Cross has reorganized several time in our region several time in the last 4 years. Because of this reorganization, they do not conduct educational classes on a regular basis. They conducted a shelter operations drill in 2018.
Venango County	7	All	The Venango County website will have information about disaster preparedness and related activities. The plan is to expand and update the website as needed and as appropriate in a timely manner to benefit all County residents.				X	The Venango County website currently has a quick link to preparedness guides. The website was redesigned within the last 2-3 years and information and links are still being worked on
Venango County	11	All	Establish a committee representative of all areas of the County that will include vets, pet store owners, the Humane Society, animal shelters, the Extension Service and other interested parties to work on animal-specific evacuation and sheltering needs.				X	The CART team works with local vets, the Humane Society, PennState Agricultural for animal specific needs
Venango County	12	All	Venango County Emergency Services Director to develop and make available information to all county residents, through community groups and/or publications, information on how to shelter in place and when it is appropriate to do so.				X	The EMA Director speaks at/with several groups yearly on a variety of topic. At each event, information pamphlets are available to the participants.
Venango County	13	All	Publicize locations of shelters with improved shelter signage and through public information campaigns.		X			Most shelters in Venango County are located in public schools or volunteer fire departments. Because those builds may not have 24/7 access,

2015 Mitigation Action Review								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				STATUS NOTES
				COMPLETED	CANCELED	DEFERRED	ONGOING	
								publicizing their availability is not in the best interest of those facilities or the public.
Venango County	14	All	Provide CERT classes to interested citizens in Venango County to assist first responders at specified emergencies throughout the county. Project Impact Coordinator to take the CERT Train the Trainer Course to assist with training in the County. Additional trainers need to attend future Train the Trainer Courses.			X		Venango County previously had a CERT group. However, participation waned and group dissolved. There has been conversations yearly, but has been extremely limited or non-existent.
Venango County	16	All	Venango Emergency Services Director to develop and manage disaster exercises in various areas of the county. Types of exercises to include: Flood exercise, Weapons of Mass Destruction Exercise, Hazardous Materials Spill Exercise, High Winds, Wilfire, Winter Storm and Bio-Terrorism Exercise.				X	Exercises and drills are based on PEMA requirements. Exercises and drills meeting PEMA's requirements and the funding available to hold them.
Venango County	17	All	Review and update all annexes of the Venango County Emergency Operations Plan. Encourage participation from all municipalities in update process.				X	EMA Director reviews the Emergency Operations Plan on a yearly bases
Venango County	20	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter	Development of a data base in existing hazard GIS system of all repetitive loss properties in the County to be used in future mitigation activities.		X			In the past 5 years, there has been limited repetitive loss properties to warrant a data base
Venango County	23	Environmental Hazards	Contact representatives of rail lines to collect information about emergency planning and risks associated with rail services in the County.					

2015 Mitigation Action Review								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				STATUS NOTES
				COMPLETED	CANCELED	DEFERRED	ONGOING	
Venango County	24	Environmental Hazards	Conduct a Hazardous Materials Survey to identify all hazardous materials that are either stored or traveling through the County and its municipalities.	X				A Commodity Flow Study was completed in 2018. This study is done approximately every 5 years to keep up to date on what chemicals are in or travel through Venango County. EMA also reviews Tier II reports on a yearly bases to become aware of any new or change quantities of chemicals within Venango County.
Venango County	25	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Hurricane, Tropical Storm, Nor'easter	Encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas in their jurisdiction. Planning department to review Subdivision and Land Development Ordinance.				X	County Planning staff is notified of any proposed changes to municipal zoning or regulations. Planning staff will utilize these mandatory reviews to ensure that adequate regulations are in place to reduce future development in high hazard areas.
Venango County	26	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Winter Storm, Hurricane, Tropical Storm, Nor'easter	Planning department and applicable municipal offices to review their comprehensive plans to ensure that designated growth areas are not in high hazard areas identified in this plan.				X	County Planning staff is notified of any propose changes to municipal comprehensive plans and will utilize these mandatory reviews to ensure that designated growth areas are not in high hazard areas.
Venango County	27	Flood, Tornado, Earthquake, Hurricane, Tropical Storm, Nor'easter	Municipal offices to review statewide Uniform Construction Code to ensure enforcement thereof.		X			The Uniform Construction Code is administered on a municipal level within Venango County and while the County will always encourage municipalities to follow appropriate state regulations the County will not be conducting any type of audit in regard to the local enforcement of the UCC.

2015 Mitigation Action Review								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				STATUS NOTES
				COMPLETED	CANCELED	DEFERRED	ONGOING	
Venango County	28	Dam Failure, Flood, Earthquake, Landslide, Wildfire, Hurricane, Tropical Storm, Nor'easter	Encourage applicable municipal offices to review their capital improvement plans to ensure that programmed infrastructure improvements are not in high hazard areas.				X	County Planning staff will continue to work with municipalities to make wise capital investments through open lines of communication and involvement in local comprehensive planning efforts.
Venango County	30	Flood, NFIP, Hurricane, Tropical Storm, Nor'easter	Venango County EMA to arrange with FEMA/DCED to conduct training on the Community Rating System (CRS) for municipalities with highest number of policies.					
Venango County	31	Flooding; All	Continue to produce and submit Mitigation Projects for high-risk structures/areas (especially post-disaster).				X	
Venango County	32	Flood, NFIP	Remove repetitive loss structures on Sage Run in Oil City and Cranberry Township.				X	Local municipalities are currently working on obtaining funding for remove of structures and possible mitigation for future events.
Venango County	33	All	Work with DEP, conservation agencies, park and recreation organizations, wildlife groups and other appropriate agencies to collect information including GIS of the number and location of natural resource areas throughout the County.		X			
Venango County	35	Flood, Hurricane, Tropical Storm, Nor'easter	When funds become available for mitigation projects, the county plans to hold meetings to identify high-risk properties in the county and to determine potential participation in future acquisition and relocation projects.			X		No funding has been available in the last 5 years.

2015 Mitigation Action Review								
COMMUNITY	ACTION #	HAZARD(S) ADDRESSED	MITIGATION ACTION	STATUS				STATUS NOTES
				COMPLETED	CANCELED	DEFERRED	ONGOING	
Venango County	37	Flood, Hurricane, Tropical Storm, Nor'easter	County to work with DEP, DCNR, conservation agencies, and others, to research avenues for restoring degraded natural resources and open space to improve their flood control functions.					
Venango County	40	Wildfire	Develop a "how to protect a home from wildfires" display with information on defensible space and Firewise.				X	PA Forestry has several educational programs. They participate in public events when available to educate the general public multiple topics
Venango County	41	Wildfire	Issue press release prior to spring (or fall) wildfire season.				X	PA Forestry provides public notices regarding brushfire seasons yearly.
Venango County	42	Wildfire	Consider developing a Community Wildfire Protection Plan.					
Venango County	43	Wildfire	Work with local volunteer fire departments and county EMA to identify areas of high value/high wildfire risk and work to implement Firewise mitigation strategies.				X	Volume of wildfires is low. Data is being collected to help identify high value risk
Venango County	44	All	As part of the plan maintenance process, assess how effective mitigation strategy actions are at mitigating losses through a review of the qualitative and quantitative benefits (or avoided losses) of each action.				X	

New Mitigation Action Form

Municipality/Organization:	DCNR - Bureau of Forestry - Cornplanter Forest District 14
Name and Title:	Cecile Stelter, District Forester

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniahmp.com/venango-hmp>

Action Title	Survey county and determine those areas at highest risk for wildfires. Develop pre-planning for these areas should a wildfire occur.
Assessing the Risk	
Hazard(s) addressed	Wildfire
Describing the Action	
Background/issue addressed	Residential structures (homes, camps, etc.) built in the wildland urban interface (WUI) are at greater threat for damage/destruction from wildfires
Action description	Work with local fire departments and municipalities to determine those areas in the county that are the highest risk of wildfire due to terrain, one-way/narrow access, limited water supply, etc. designate those areas
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	
Potential partners	Volunteer Fire Departments and municipalities; PA Bureau of Forestry; County Emergency & Planning Departments
Potential funding sources	FIREWISE program; Community Wildfire Protection Program (CWPP)
Timeline	

New Mitigation Action Form

Municipality/Organization:	DCNR - Bureau of Forestry - Cornplanter Forest District 14
Name and Title:	Cecile Stelter, District Forester

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniahmp.com/venango-hmp>

Action Title	Increase public awareness and more effectively publicize wildfire danger times and threats.
Assessing the Risk	
Hazard(s) addressed	Wildfire
Describing the Action	
Background/issue addressed	Typically wildfires in Pennsylvania have occurred in the spring (March through May) and occasionally in the fall (Oct-November) but we have been seeing a lengthening of that season. Wildfires can occur in almost any month
Action description	Work with local media, volunteer fire departments, etc. to increase public awareness during those times when wildfire hazards are increased. Provide information about alternatives to burning and how to burn safety outdoors
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	
Potential partners	County emergency services, volunteer fire departments, PA Bureau of Forestry
Potential funding sources	
Timeline	

New Mitigation Action Form

Municipality/Organization:	DCNR - Bureau of Forestry - Cornplanter Forest District 14
Name and Title:	Cecile Stelter, District Forester

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniahmp.com/venango-hmp>

Action Title	Develop awareness and educate the public on wildland/urban interface. Develop incentives for property owners to develop and maintain defensible space around their structures. Including encouraging the use of non-combustible materials & technology (FIREWISE) when building or renovating structures.
Assessing the Risk	
Hazard(s) addressed	Wildfire
Describing the Action	
Background/issue addressed	Residential structures (homes, camps, etc.) built in the wildland urban interface (WUI) are at greater threat for damage/destruction from wildfires
Action description	Work with construction companies, building suppliers to provide information about using building methods and materials that are more non-combustible. Work with communities to provide 'defensible space' around dwellings.
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	
Potential partners	Volunteer Fire Departments; PA Bureau of Forestry; building contractors; building supply companies; County Emergency & Planning Departments; local municipalities (local municipalities and planning dept can provide info when issuing permits)
Potential funding sources	FIREWISE program; grants for defensible space in communities

Venango County 2020 Hazard Mitigation Plan Update

Timeline	
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New Mitigation Action Form

Municipality/Organization:	DCNR - Bureau of Forestry - Cornplanter Forest District 14
Name and Title:	Cecile Stelter, District Forester

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniahmp.com/venango-hmp>

Action Title	Incorporate emergency preparedness into school curriculum. Increase exposure of middle/high school students to first responder opportunities and careers.
Assessing the Risk	
Hazard(s) addressed	Wildfire; low volunteerism in local FVD's; EMS
Describing the Action	
Background/issue addressed	There has been a steady decline in participation and volunteerism for local FVD's and EMS for the last couple decades.
Action description	Build/expand on work already started by some schools and the VoTech program to introduce student to opportunities to volunteer and careers in EMS (including wildfire and structure protection) and the local VFD's
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	Local Schools & Districts; County VoTech program
Potential partners	Local Volunteer Fire Departments; PA Bureau of Forestry; County Emergency & Planning Departments
Potential funding sources	
Timeline	

New Mitigation Action Form

Municipality/Organization:	City of Franklin
Name and Title:	James Wetzel, Fire Chief

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniahmp.com/venango-hmp>

Action Title	Disruption of Water & Wastewater Service
Assessing the Risk	
Hazard(s) addressed	Water & Wastewater Disruption
Describing the Action	
Background/issue addressed	<p>We take our water and wastewater services for granted until something happens. In 2018 we had a mechanical failure of equipment which injected high quantities of fluoride into our water distribution lines. This caused a Do Not Use Advisory city wide and into the adjoining communities where we provide water initially until we were able to determine the cause. Upon cause determination, it became an advisory that might discolor kids' teeth.</p> <p>Another community in northwestern PA had a catastrophic failure of their main water line into the water treatment facility which resulted in long-term mitigation efforts.</p> <p>Similar issues could occur with wastewater treatment facilities.</p> <p>Hopefully these are isolated incidents, but the potential is there when you are dealing with old infrastructure.</p>
Action description	Establish a plan so essential services can be delivered, regional resource listing
Evaluating the Action	
Cost estimate	
Priority	Moderate to High
Implementing the Action	

Venango County 2020 Hazard Mitigation Plan Update

Responsible party	General Authority of the City of Franklin and the City of Franklin
Potential partners	General Authority of the City of Franklin, neighboring municipalities, regional resources
Potential funding sources	
Timeline	On-going

Venango County 2020 Hazard Mitigation Plan Update

New Mitigation Action Form

Municipality/Organization:	CLINTON TOWNSHIP
Name and Title:	BEN PORTER - SUPERVISOR

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniiahmp.com/alleghehny-hmp>

Action Title	STORM WATER RUNOFF MITIGATION
Assessing the Risk	
Hazard(s) addressed	DAMAGE TO ROADS PROPERTY DAMAGE
Describing the Action	
Background/issue addressed	REPLACING AND ADDING CATCH BASINS. INSTALLING CROSSOVER PIPES TO RELIEVE STORM WATER
Action description	REPLACING DAMAGED CULVERTS ADD CATCH BASINS INSTALLING CROSS PIPES
Evaluating the Action	
Cost estimate	UN KNOWN
Priority	UNKNOWN
Implementing the Action	
Responsible party	CLINTON TOWNSHIP
Potential partners	VENANGO CO. CONSERVATION DISTRICT
Potential funding sources	DIRT / GRAVEL ROAD GRANTS
Timeline	AS NEEDED

Please email completed form to madeleine.fincham@mbakerintl.com

Venango County 2020 Hazard Mitigation Plan Update

New Mitigation Action Form

Municipality/Organization:	Richland Township
Name and Title:	Chanda Ritchey

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniahmp.com/allegheeny-hmp>

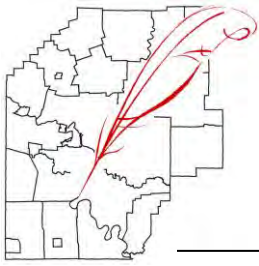
Action Title	Natural Disaster Plan
Assessing the Risk	
Hazard(s) addressed	Dam failure, Flood, Flash Flood, Ice Jam, Hurricane, Tropical storm, Northeastern, Earthquake, Landslide, Wildfire
Describing the Action	
Background/issue addressed	Regulations, Zoning, Subdivision + Land Development Ordinances Work with American Red Cross to upgrade resource shelters Review State wide Construction Codes
Action description	Encourage local Officials to review regulations, keep adequate zoning. Reduce development in Hazard areas
Evaluating the Action	
Cost estimate	
Priority	
Implementing the Action	
Responsible party	
Potential partners	Venango Co. Officials + American Red Cross
Potential funding sources	
Timeline	ON going

New Mitigation Action Form

Municipality/Organization:	Utica Borough, Venango County
Name and Title:	Marian Murphy, Secretary/Treasurer

Please complete this worksheet for each new mitigation action. See *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* for sample mitigation actions to reduce risk from hazards. This resource is located in the resource section of the project website: <http://www.pennsylvaniiahmp.com/allegheeny-hmp>

Action Title	Shelter in place plan.
Assessing the Risk	
Hazard(s) addressed	Winter ice and snow storms.
Describing the Action	
Background/issue addressed	Heating, food for residents for 2 weeks and water.
Action description	Utica Fire Department has a generator; in the past a resident has personally provided his generators to residents on a rotating basis to provide electric (temporary power), for water and food storage. Also, Borough to purchase MREs to provide to residents.
Evaluating the Action	
Cost estimate	Quote for MRE's for 200 residents for 2 weeks was \$44,520 from MRE Star, LLC
Priority	Taken into consideration and discussion by Utica Borough Council.
Implementing the Action	
Responsible party	
Potential partners	
Potential funding sources	
Timeline	



Venango County Regional Planning Commission

1168 Liberty Street
P.O. Box 831
Franklin, PA 16323

Phone: 814.432.9682
Fax: 814-432-9679
e-mail: jruggiero@co.venango.pa.us

*Planning Venango
County's future.*

September 24, 2020

Ms. Christine Kurelowech
Secretary Cherrytree Township
1311 Cherrytree Road
Titusville, Pennsylvania 16354

Re: Invitation to Participate in the Venango County Hazard Mitigation Planning Process

Dear Secretary Kurelowech:

As you know, Venango County is updating its Local Hazard Mitigation Plan (HMP). The plan includes strategies to reduce the impacts of natural and human-made hazards within our community. This plan is also necessary for Venango County and your municipality to be eligible to receive certain types of state and federal disaster mitigation funding after a disaster occurs.

We are nearing the end of the planning process and will be holding a final meeting to review information contained in the Venango County HMP, as well as provide you with information on how to review the draft document and provide comments and valuable feedback. However, due to restrictions made by our government and public health officials regarding COVID-19, the meeting must be held virtually in the form of an online webinar. The meetings will be held in both the morning and evening, but you are required to attend only one. The meetings will be held via WebEx, which can be reached either by telephone and/or computer. Access information will be provided following your RSVP.

Date: Wednesday, October 7, 2020

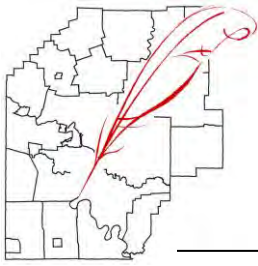
Times: *Choose one-*

- 10:00 a.m. to 11:30 a.m.
- 6:00 p.m. to 7:30 p.m.

Please RSVP and provide the following information: your name, title, community, and the time you plan to attend to our Mitigation Planning consultant, **Madeleine Fincham of Michael Baker International, at 412-269-6093, Madeleine.Fincham@mbakerintl.com**. As a reminder, there is still time to complete the required documentation to fulfill your municipality's participation requirements. Please contact Ms. Fincham with questions regarding your municipality's participation. You can access pertinent participation documents and complete a short survey by visiting the project website, under *Planning Documents* at <https://www.pennsylvaniahmp.com/venango-hmp>.

Sincerely,

Jason Ruggiero
Executive Director
Venango County Regional Planning Commission



Venango County Regional Planning Commission

1168 Liberty Street
P.O. Box 831
Franklin, PA 16323

Phone: 814.432.9682
Fax: 814-432-9679
e-mail: jruggiero@co.venango.pa.us

*Planning Venango
County's future.*

September 24, 2020

The Honorable Jamie Hunt
Mayor Emlenton Borough
P.O. Box 514
Emlenton, Pennsylvania 16373

Re: Invitation to Participate in the Venango County Hazard Mitigation Planning Process

Dear Mayor Hunt:

As you know, Venango County is updating its Local Hazard Mitigation Plan (HMP). The plan includes strategies to reduce the impacts of natural and human-made hazards within our community. This plan is also necessary for Venango County and your municipality to be eligible to receive certain types of state and federal disaster mitigation funding after a disaster occurs.

We are nearing the end of the planning process and will be holding a final meeting to review information contained in the Venango County HMP, as well as provide you with information on how to review the draft document and provide comments and valuable feedback. However, due to restrictions made by our government and public health officials regarding COVID-19, the meeting must be held virtually in the form of an online webinar. The meetings will be held in both the morning and evening, but you are required to attend only one. The meetings will be held via WebEx, which can be reached either by telephone and/or computer. Access information will be provided following your RSVP.

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Sincerely,

Jason Ruggiero
Executive Director
Venango County Regional Planning Commission

From: [Brown, Kevin](#)
To: [alleghenytwp@csonline.net](#); [barkeyvilleboro@zoominternet.net](#); [djmcanal@peoplepc.com](#); [cherrytreetwp@200minternet.net](#); [clintonvilleboro@yahoo.com](#); [khopkins.cornetwp@zoominternet.net](#); [emlentonborough@embarqmail.com](#); [info@franklin.pa.gov](#); [frenchcreektwp@zoominternet.net](#); [irwintownship@zoominternet.net](#); [jlstrawbridge1124@gmail.com](#); [mineraltownship@yahoo.com](#); [oaklandtwp@gmail.com](#); [oilcreek-twpven@verizon.net](#); [pinegrovetwp@venustel.com](#); [pboro@csonline.net](#); [jl.davidson@yahoo.com](#); [polkboro@gmail.com](#); [richlandven@windstream.net](#); [rouseville@verizon.net](#); [sandycreektwp@verizon.net](#); [manager@sugarcreekborough.us](#); [joannecburgert@gmail.com](#); [harryecs126@aol.com](#); [victown@verizon.net](#); [fd14@pa.gov](#); [Ryen, Ty A](#); [Susans@northwestpa.org](#); [dlutz@oilregion.org](#); [emosbacher@pa.gov](#); [erszabo@pa.gov](#); [dlineman@usachoice.net](#); [tbjohnson@co.venango.pa.us](#); [Janis Cochran](#); [tsherman@co.venango.pa.us](#); [pgryskewicz@co.venango.pa.us](#); [aclark@co.crawford.pa.us](#); [tlake@warren-county.net](#); [shale@co.forest.pa.us](#); [Denny Logue](#); [sbicehou@co.butler.pa.us](#); [fjannetti@mcc.co.mercer.pa.us](#); [hartb3@upmc.edu](#); [bbuchna@co.venango.pa.us](#); [williamk@completewastemgmt.com](#); [pittserbl@upmc.edu](#); [brianf@completewastemgmt.com](#); [kanundson@franklinpa.gov](#); [cabramovic@co.venango.pa.us](#); [cran@twp.comcastbiz.net](#); [daniel.croyle@williams.com](#); [james.daugherty@borchers.com](#); [dave.gates@scrubgrass.com](#); [dservin@pa.gov](#); [rr-roadtrip@comcast.net](#); [dbaker@franklinpa.gov](#); [dustwyant@pa.gov](#); [efoy@co.venango.pa.us](#); [cevanoff@firstenergycorp.com](#); [kevin.forringer@williams.com](#); [cran@twp.comcastbiz.net](#); [fred.mcmullen@noaa.gov](#); [jayhoovler@pa.gov](#); [jhollidge@communityambulance.net](#); [jeff.melat@scrubgrass.com](#); [James Wetzel](#); [joseph.mcfadden@us.sasol.com](#); [johnneckel2101@gmail.com](#); [jmcginnis@franklinindustriesco.com](#); [kbrennon@pa.us](#); [sticks-n-stones@live.com](#); [pklinger@pa.gov](#); [ldavis@franklinindustriesco.com](#); [mhicks@oilcity.org](#); [mseiqworth@co.venango.pa.us](#); [mathew.mccray@redcross.com](#); [matthewh@completewastemgmt.com](#); [mgiesey@co.venango.pa.us](#); [mamsler@amstabilizers.com](#); [mdulaney@co.venango.pa.us](#); [pat.mclaughlin@sms-millcraft.us](#); [peterrigney@scrubgrass.com](#); [rruditis@co.venango.pa.us](#); [rashbaugh@sugarcreekborough.us](#); [sbreene@co.venango.pa.us](#); [tbrooks@venango.pa.us](#); [timdunkle@verizon.net](#); [tfletcher@communityambulance.net](#); [thosherman@pa.gov](#); [wimalla@state.pa.us](#)
Cc: [Fincham, Madeleine](#); [Murray, Taryn](#); [Janis Cochran](#); [Tim Dunkle Jr](#); [Jason Ruggiero](#)
Subject: Venango County Draft Plan Review Meeting October 7, 2020
Date: Wednesday, September 23, 2020 5:58:00 PM
Attachments: [Draft Plan Review Webinar Access Information 10 7 2020.pdf](#)

Hello, you're invited!

Please join us for our final Hazard Mitigation Planning Team meeting as we near the end of the Hazard Mitigation Planning process. The plan includes strategies to reduce the impacts of natural and human-made hazards within our community. This plan is also necessary for Venango County and your municipality to be eligible to receive certain types of state and federal disaster mitigation funding after a disaster occurs. During this meeting we will share information about hazards of concern and strategies to reduce hazard impacts along with information about how to view the Draft Hazard Mitigation Plan and provide comments and feedback.

Because of our concern for and commitment to public safety, and per mandated governmental requirements in response to COVID-19, we are regretfully unable to host this meeting in-person. Rather, we have arranged to hold morning and evening webinar meetings via WebEx which you may access from your telephone and/or computer.

Meetings will be held on Wednesday, October 7, 2020 at 10:00 a.m. – 11:30 a.m. and 6:00 p.m.- 7:30 p.m. The content of both meetings will be the same; you, and/or other community officials involved in planning, mitigation, or floodplain management, need only attend one meeting based on your availability. Meeting access information for both sessions is included in the attached document along with a link to Tips for Accessing WebEx, which we recommend you review prior to the joining your session of choice.

Please RSVP by responding to this email or by emailing or calling **Madeleine Fincham of Michael Baker International, at 412-269-6093, Madeleine.Fincham@mbakerintl.com** and providing your name, title, community, and the time of the meeting you plan to attend.

In the meantime, you can access pertinent participation documents and project information and complete a short survey by visiting the project website at <https://www.pennsylvaniiahmp.com/venango-hmp>.

You may also respond to this email if you'd like more information about your community's participation or how to get involved. As a reminder, there is still time to complete the required documentation to fulfill your municipality's participation requirements.

Please stay safe! We look forward to moving the planning process forward with your help.

Kevin Brown | Planner

100 Airside Drive, Airside Business Park | Moon Township, PA 15108 | [O] 412-269-4607

kevin.brown@mbakerintl.com | www.mbakertnl.com



VENANGO COUNTY HAZARD MITIGATION PLAN UPDATE

Draft Plan Review Meeting

WEDNESDAY, OCTOBER 7, 2020



Review our [Tips for Accessing WebEx](#) prior to joining the meeting

You need only attend one meeting based on your availability. The content of both meetings will be the same.

MORNING MEETING

10:00 am – 11:30 am

When it's time, start or join the WebEx meeting from here:

<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=ac94935e3c5493ffa14e9f572fd6ae72>

Audio Connection

Phone Number: 571-209-6390

Access Code: 991 587 835#

EVENING MEETING

6:00 pm – 7:30pm

When it's time, start or join the WebEx meeting from here:

<https://meetings.mbakercorp.com/orion/joinmeeting.do?MTID=2397a220a89acc89a9242ed84b9467c3>

Audio Connection

Phone Number: 571-209-6390

Access Code: 999 058 618#



Venango County HMP: Community Hazard Mitigation Survey

Dear Community Member,

Venango County is in the process of updating the Venango County Hazard Mitigation Plan (HMP). The HMP identifies natural and human-made hazards that may impact our community and provides an assessment of our vulnerable population and infrastructure. The updated HMP includes a mitigation strategy, including goals, objectives, and actions, for reducing our risk to future damage and loss.

Your participation in the Venango County HMP update is greatly appreciated and will help make the County a safer, more resilient place to live and work! This survey should take less than three minutes to complete, and your responses are anonymous.

Thank you for your time!

Which Venango County Municipality do you live in? *(Please note if you do not live in Venango County.)*

Do you own or rent?

- Rent
 Own

Do you have any of the following type(s) of insurance? Mark all that apply.

- Flood Insurance
 Homeowners Insurance
 Renters Insurance
 None of the above

How informed are you about the the risks from the hazards affecting your community?

- I'm very informed
 I'm somewhat informed
 There's probably a lot I'm not aware of
 What risk?
 I'm not sure

Which natural or human-caused hazards do you believe present the most danger to your community? *(List all hazards of personal concern.)*

Has anyone in your household performed any of the following preparedness activities? *(Check all that apply)*

- Discussed what to do in case of an emergency
 Prepared a family emergency plan
 Put together or purchased an emergency kit
 Attended emergency or disaster related training

None of the above

Would you be interested in attending public education training related to risk and preparedness?


- Yes, definitely
- Maybe, not sure
- No, not at all

What would be the best way for you to receive information about hazard risk and preparedness? *(Select up to 3.)*

- County website
- Municipal website
- Social Media (if selected please also select "other" and specify which form of social media you prefer)
- Email (newsletter or news blast)
- In-person class/workshop
- Online class/workshop
- Other (please specify)

Is there anything else related to hazards and preparedness you'd like to share with us?

Done

Powered by
 SurveyMonkey
See how easy it is to [create a survey](#).

[Privacy & Cookie Policy](#)



2020 Hazard Mitigation Plan Update Venango County

Draft Plan Review Meeting
October 7, 2020



WELCOME!

**Thank you so much for attending
this virtual meeting!**

- To limit disruptions and background noise, audio function has been turned off
- If you have questions AT ANY TIME throughout the presentation please post your question(s) to the chat to [Kevin Brown](#)
- You can also send any questions you may have to:

madeleine.fincham@mbakerintl.com

Let us know you're here!

Send an email to:

madeleine.fincham@mbakerintl.com

Or

kevin.brown@mbakerintl.com

Include your name, municipality/organization, and position.

- **Venango County HMP Steering Committee**
 - Tim Dunkle, Venango County Department of Public Safety
 - Janis Cochran, Venango County Department of Public Safety
 - Jason Ruggiero, Venango County Regional Planning Commission
 - Madeleine Fincham, Mitigation Planner, MBI
 - Kevin Brown, Mitigation Planner, MBI

- **Hazard Mitigation Planning Team**
 - County Officials
 - Municipal Officials
 - Other Stakeholders including Oil Region Alliance, DCNR Bureau of Forestry, Venango County Local Emergency Planning Committees (LEPC) and Officials from Clarion County, PA

- **Municipal Participation**
 - Pending the attendance for this meeting and completed paperwork, **64%** of the Municipalities have participated. 20 out of 31 municipalities
 - If you have not completed a Capability Assessment Survey and/or a Mitigation Action Review please do so!

- Hazard Mitigation Plan and Project Overview
- Planning Process Overview
- Risk Assessment Summary
- Capability Assessment Overview
- Mitigation Strategy Summary
- Next Steps and Action Items

VENANGO COUNTY HAS BEEN WORKING TO UPDATE ITS HAZARD MITIGATION PLAN (HMP) SINCE MAY 2020

MUNICIPAL AND COUNTY OFFICIALS, ALONG WITH OTHER AGENCY AND ORGANIZATION STAKEHOLDERS HAVE PARTICIPATED IN MEETINGS AND PROVIDED INPUT TO INFORM THE PLANNING PROCESS

TODAY WE'RE GOING TO TALK ABOUT THE HIGHLIGHTS OF THE DRAFT HMP, HOW TO VIEW IT, AND NEXT STEPS

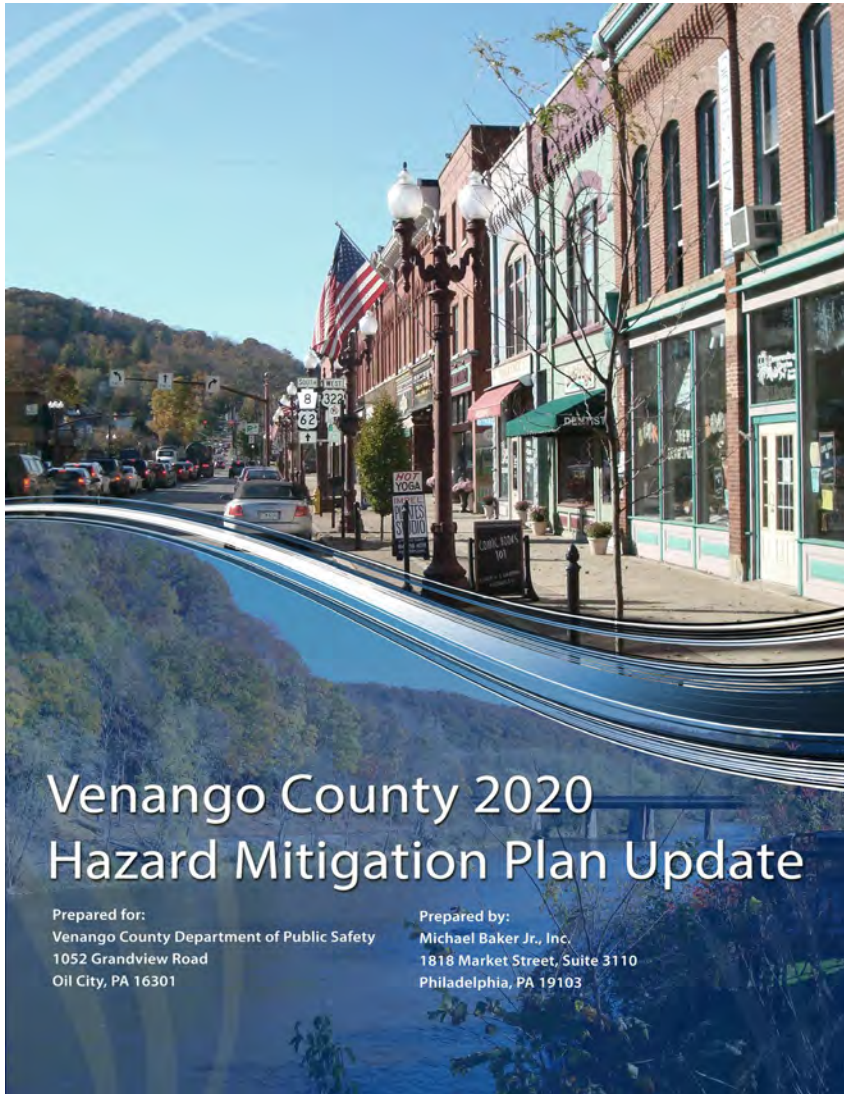
Hazard mitigation is any **sustained action taken to reduce or eliminate long-term risk** to life and property resulting from natural and human-made hazards.



- A Hazard Mitigation Plan (HMP) is a **community-driven, living document** that communities use to reduce their vulnerability to hazards.
- Counties **must have a plan to maintain access to certain mitigation grants.**





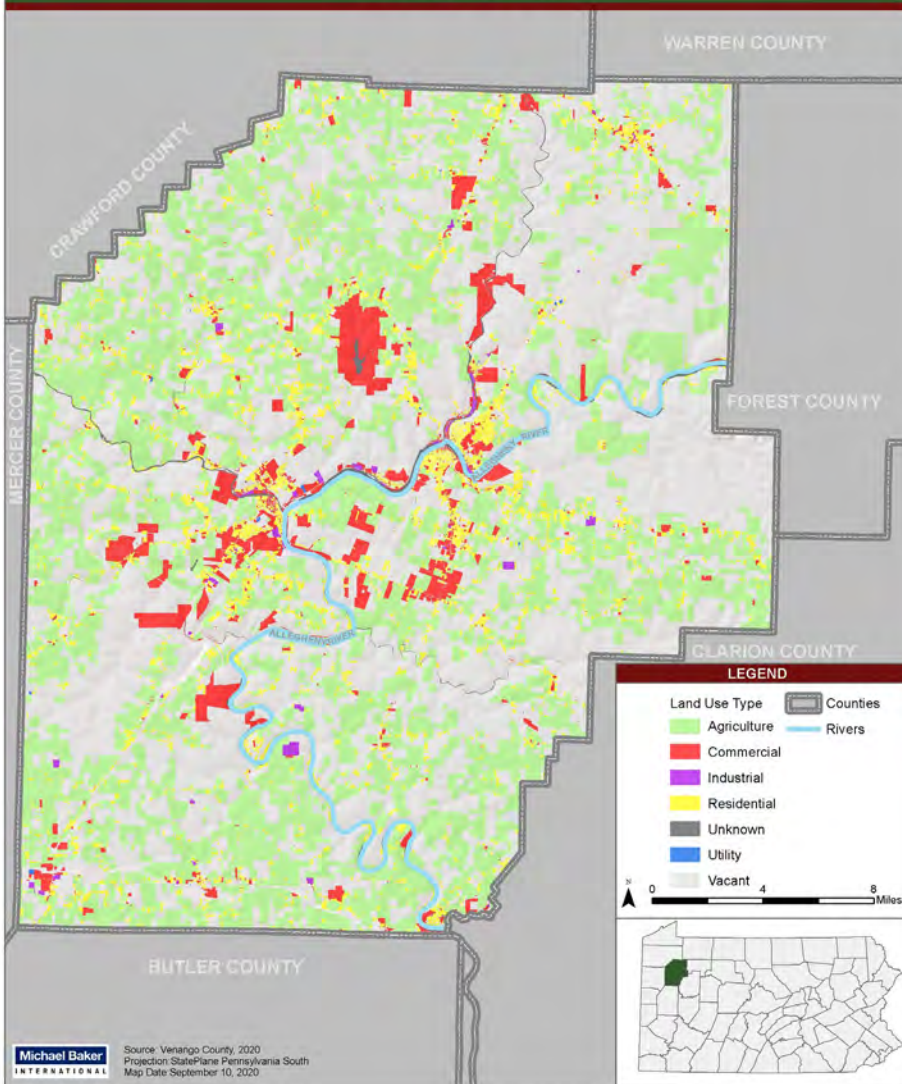


- Community Profile
- Planning Process
- Risk Assessment
- Capability Assessment
- Mitigation Strategy
- Plan Maintenance

- Snapshot of the County's:
 - Geography in western Pennsylvania and its environment
 - Community facts and key statistics
 - Population and demographic patterns and historical changes
 - Land use and development patterns

- Approximately 675 square miles
- 31 Municipalities
- Eight watersheds
- Largest industries: Manufacturing with 3,876 employees (25.6% of workforce)
- Approximately 52,376 people (2018 ACS)
- 27,592 Housing Units
- Abundant Agricultural and Forest Lands
- 2017: 409 farms, averaging 130 acres each

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Land Use by Parcel



- **Planning Team Assessment and Participation:**
 - Kick-Off Meeting (July 7, 2020)
 - Capability Assessment
 - Hazard Risk Review
 - Risk Assessment-Mitigation Solutions Workshop (August 27, 2020)
 - Mitigation Action Progress Report
 - New Mitigation Action Identification
- **Risk and Vulnerability Analysis**
 - Data Collection and Analysis
 - GIS Assessment
 - Hazus (Potential Loss Estimation)



2020 Hazards

Natural Hazards

- Drought
- Earthquake
- Flood
- Hurricane
- Landslide
- Pandemic
- Radon Exposure
- Tornado, Windstorm
- Wildfire
- Winter Storm

Human-Made Hazards

- Dam Failure
- Environmental Hazards

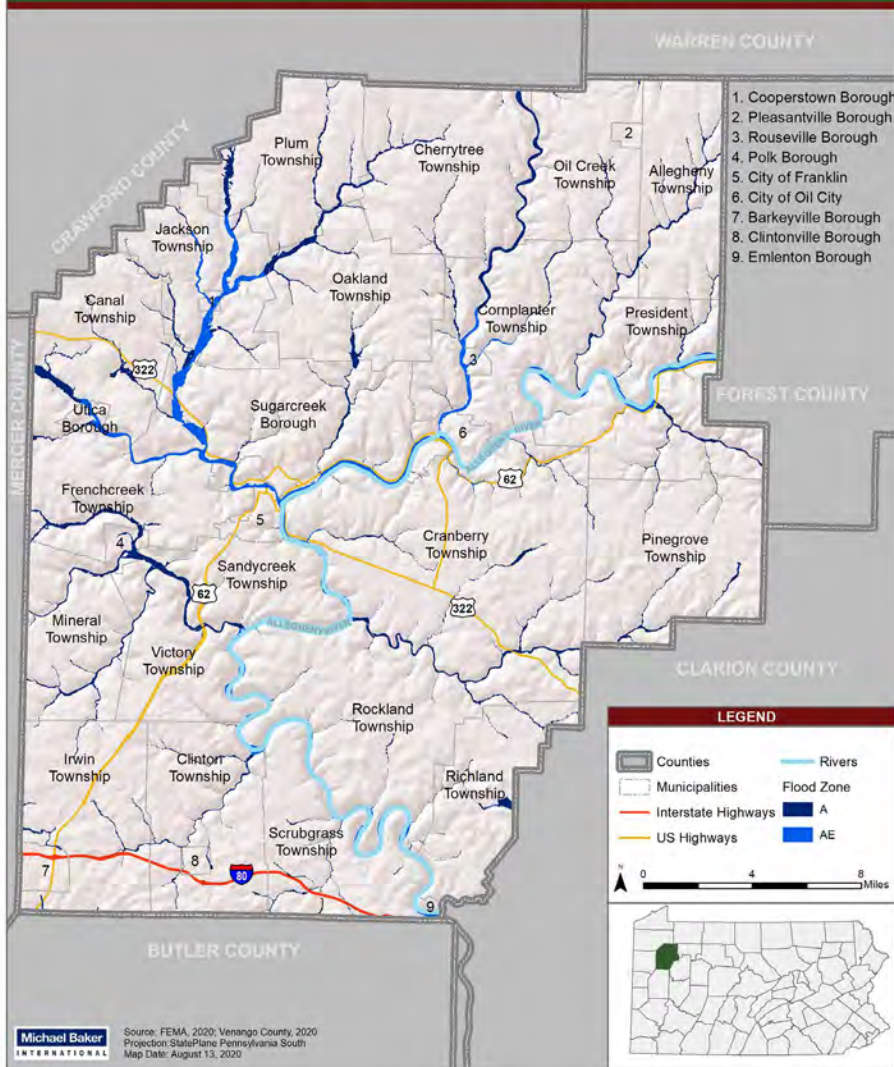
- **Location and Extent**
 - *Where* does the hazard happen?
- **Range of Magnitude**
 - How *minor or major* might the event be?
- **Past Occurrence**
 - *When and where* has the event happened in the past?
- **Future Occurrence**
 - *How likely* is it that the event will happen in the future?
- **Vulnerability Assessment**
 - What *people, structures, and critical facilities* are at risk?

- Standardized method to rank risks
- Conducted on a countywide basis

$$\begin{aligned} \text{Risk Factor Value} = & \\ & [(Probability \times .30) + (Impact \times .30) + \\ & (Spatial Extent \times .20) + (Warning Time \times .10) + \\ & (Duration \times .10)] \end{aligned}$$

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	
HIGH	Winter Storm (N)	3	2	4	1	3	2.7
	Environmental Hazards (M)	3	2	3	3	2	2.6
	Flood, Flash Flood, Ice Jam (N)	2	2	4	2	3	2.5
MODERATE	Dam Failure (M)	1	3	3	4	2	2.4
	Wildfire (N)	4	1	2	3	2	2.4
	Tornado, Windstorm (N)	1	3	3	4	1	2.3
	Drought (N)	2	1	4	1	4	2.2
LOW	Radon Exposure (N)	2	1	2	1	4	1.8
	Hurricane, Tropical Storm Nor'easter	1	1	4	1	1	1.6
	Earthquake (N)	1	1	2	4	1	1.5
	Pandemic (M)	1	1	1	4	2	1.4
	Landslide (N)	1	1	1	4	1	1.3

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Flood Zones in Venango County

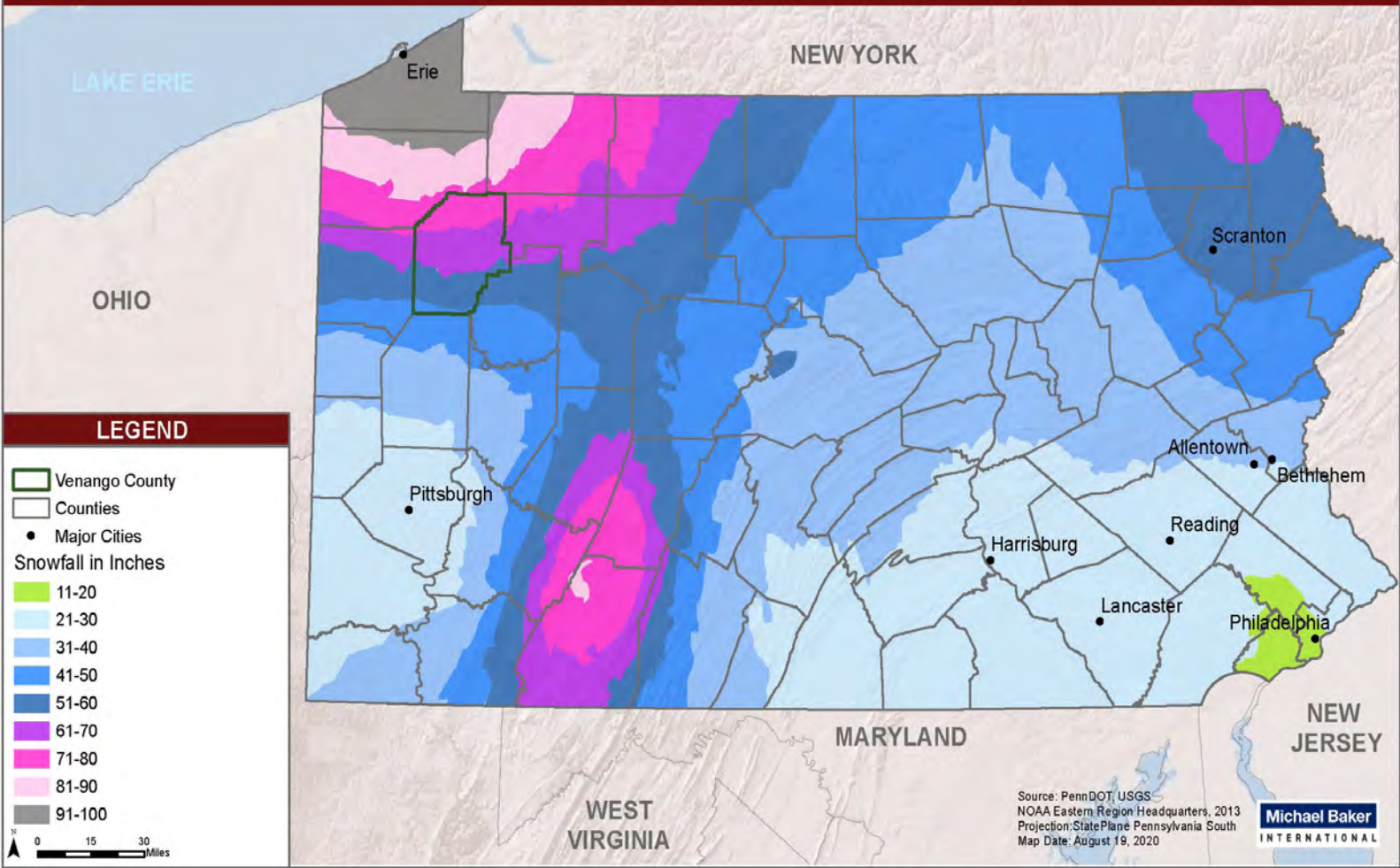


- 28 of 31 municipalities have Special Flood Hazard Areas (SFHAs)
- Watersheds in Venango County include:
 - East Sandy Creek
 - French Creek
 - Lower Allegheny River
 - Oil Creek
 - Pine Creek
 - Sandy Creek
 - Slippery Rock Creek
 - Sugar Creek
 - Wolf Creek
- Long history of flooding problems
- Suffered damage from numerous major overbank floods and localized flash flooding
- Several bridges and culverts that get blocked with debris and cause backup flooding during a large storm

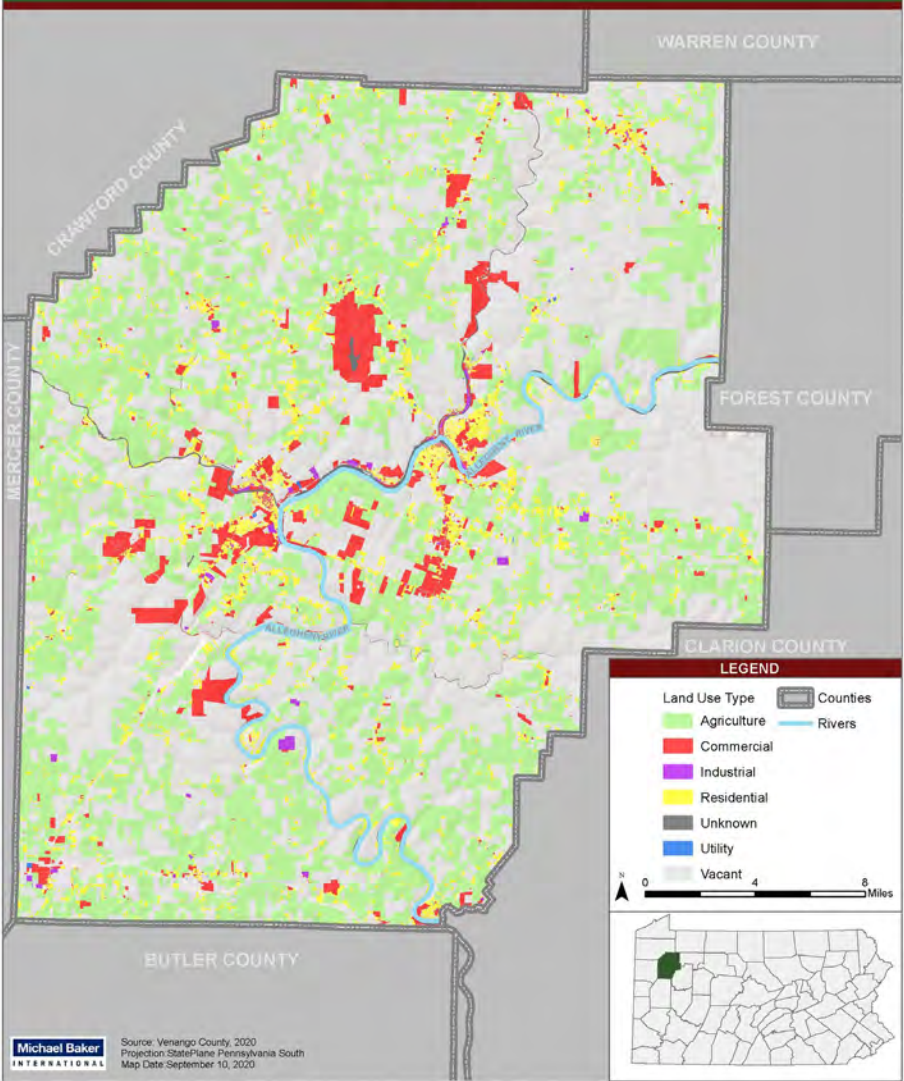
- Countywide, approximately 2% of all structures and 3% of the population are located in the SFHA
- Approximately 5% of critical facilities are located in the SFHA



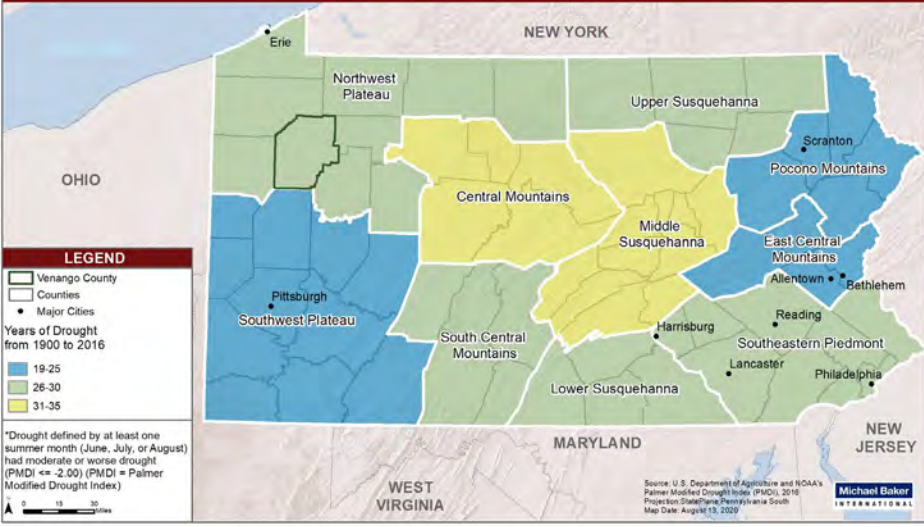
VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Pennsylvania Average Annual Snowfall



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:
Land Use by Parcel



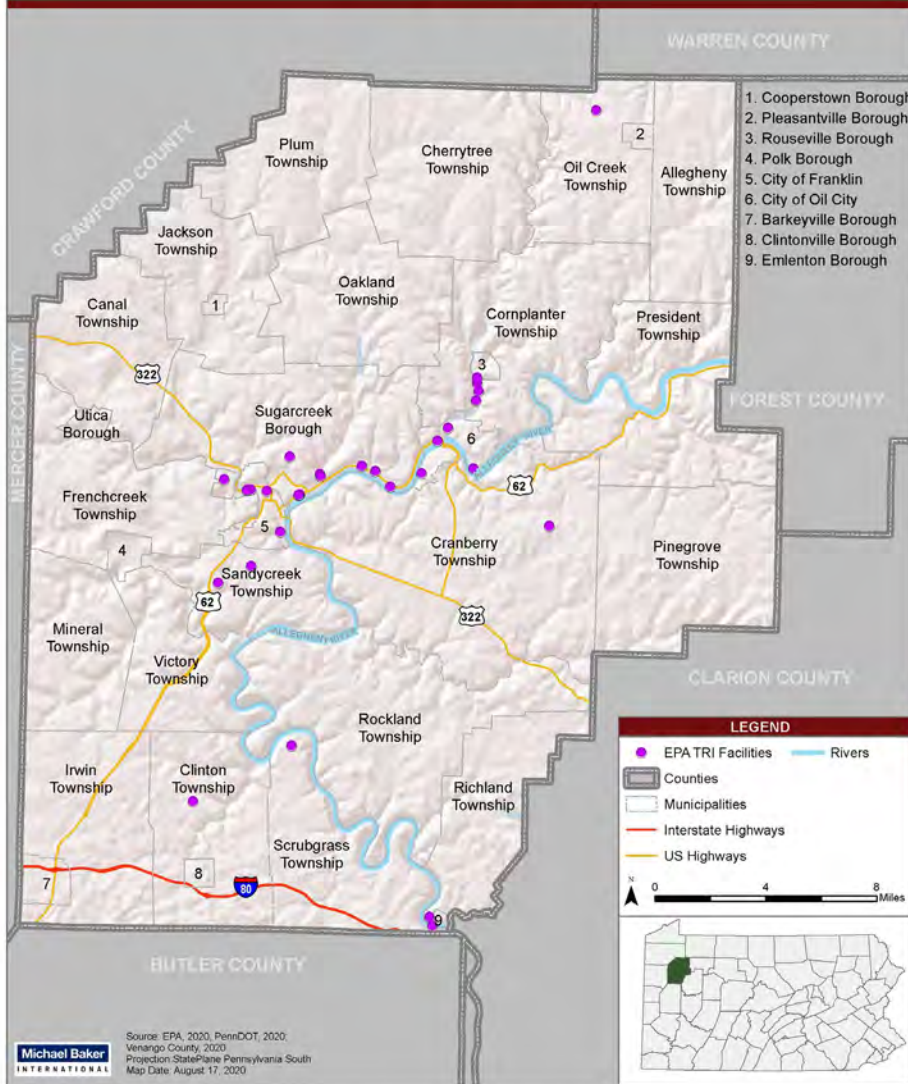
VENANGO COUNTY HAZARD MITIGATION PLAN 2020:
Drought Frequency in Venango County (1900-2016)



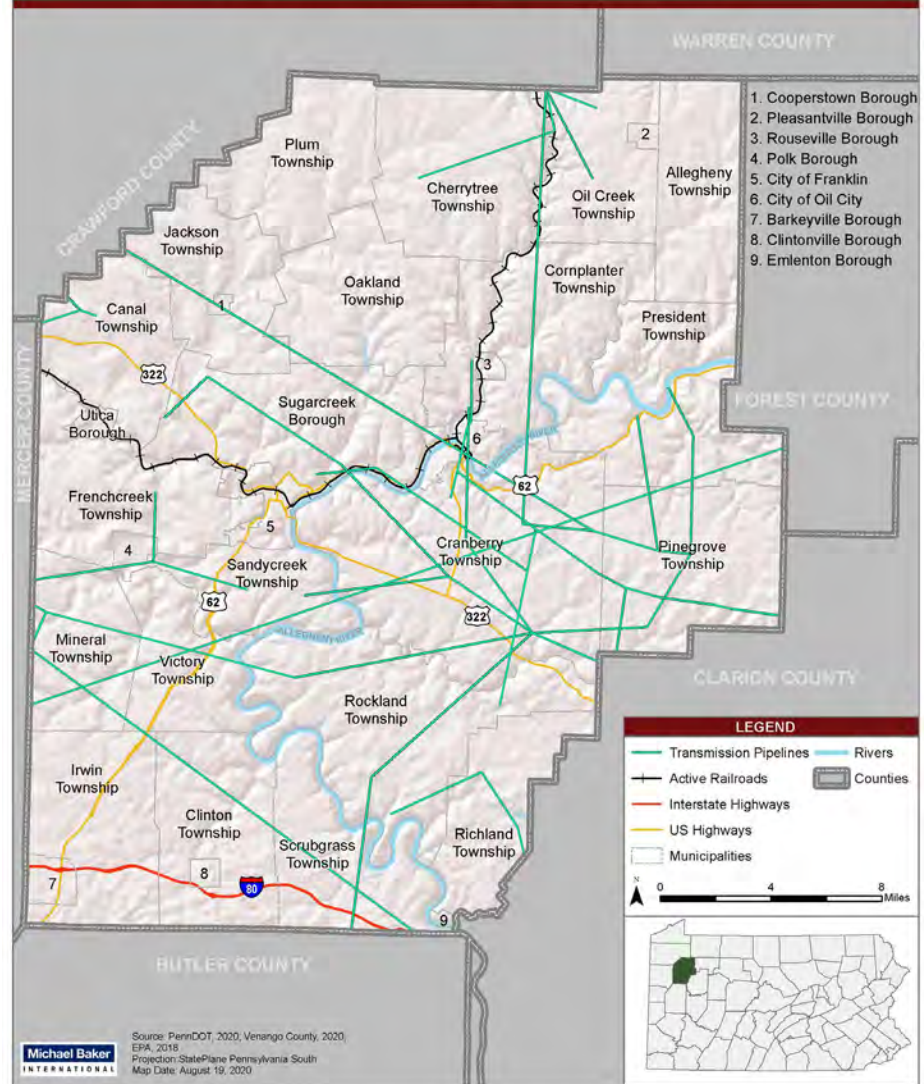
- Much of Venango County landcover is agricultural
- Heavily forested areas can also be negatively affected
- Venango County has not had a severe drought since 2000

Hazard Review: Environmental Hazards

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: EPA TRI Facilities

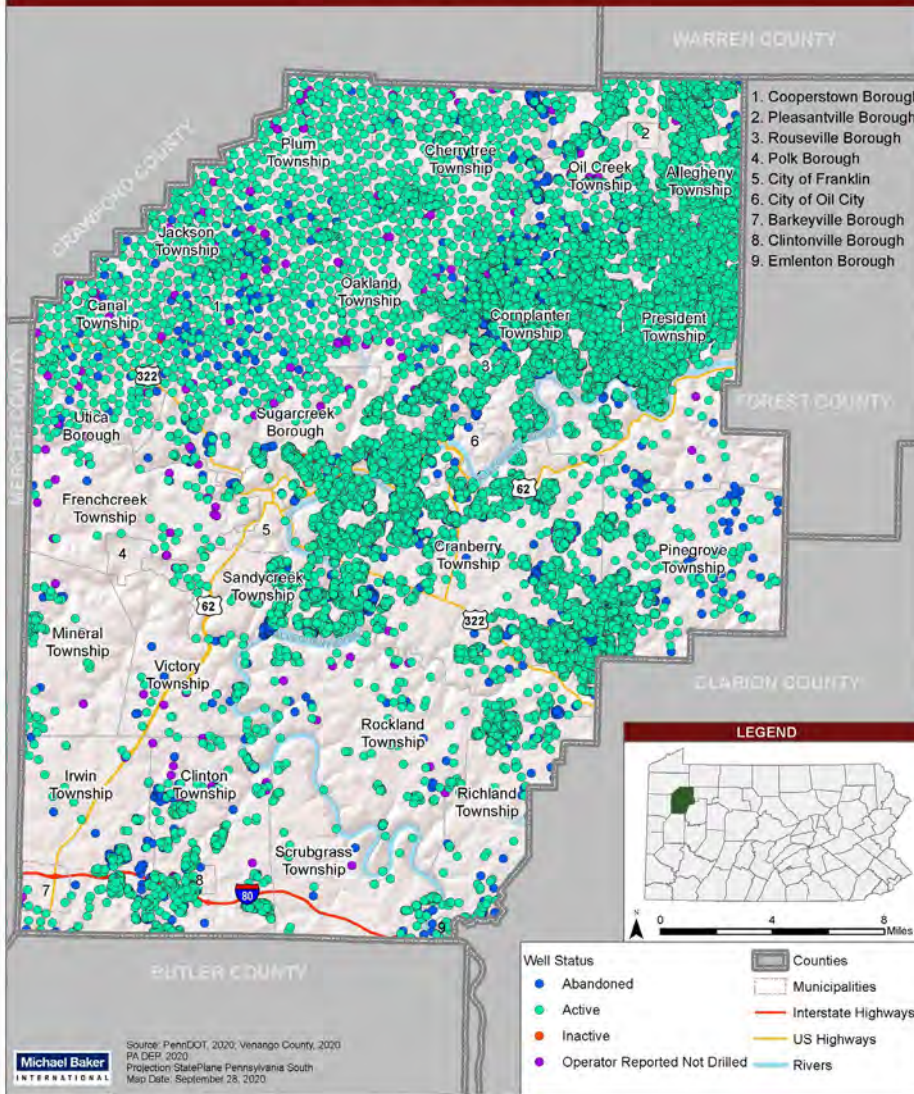


VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Transmission Gas Pipelines and Active Railroads

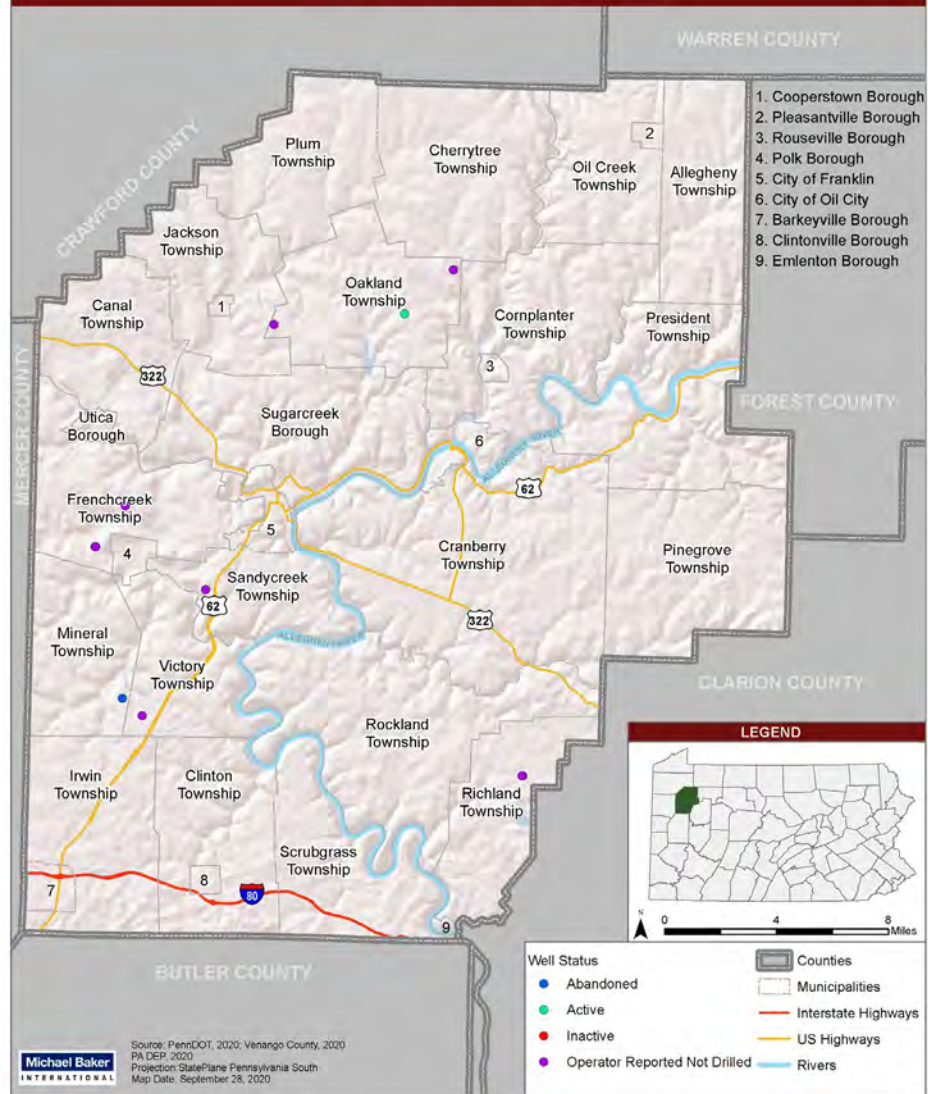


Hazard Review: Environmental Hazards

VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Conventional Oil and Gas Wells



VENANGO COUNTY HAZARD MITIGATION PLAN 2020: Unconventional Oil and Gas Wells





- Venango County Comprehensive Plan (2005)
- Seven municipalities: Southern Venango County Regional Comprehensive Plan (2007)
 - Barkeyville Borough, Clinton Township, Clintonville Borough, Emlenton Borough, Richland Township, Scrubgrass Township and Victory Township
- Zoning Ordinances and Subdivision Regulations
- Emergency Operations Plan
- Stormwater Management Plan (2010)



Venango County
2004 Comprehensive Development Plan
Executive Summary (Vol. I)
Adopted 1/5/05



Venango County Regional Planning Commission
1168 Liberty Street, P.O. Box 413
Franklin, PA 16323
Phone: 814-425-5689

The Plan was partially funded with a grant from the Pennsylvania Department of Community and Economic Development.



VENANGO COUNTY
REGIONAL PLANNING COMMISSION

Venango County
Act 167 County-Wide
Stormwater Management Plan
Page 8

June 22, 2010



BUILDING RELATIONSHIPS,
DESIGNING SOLUTIONS.

200 West Kensington Drive, Suite 400 • Cranberry Township, PA 16864 • 724.779.4777 [online]

- **NFIP:** All municipalities except Pleasantville Borough, participate.
- **Community Rating System (CRS):** 10 CRS classes that provide varied reduction in insurance premiums for property owners in both the SFHA and non-SFHA. Floodplain management programs go beyond the NFIP requirements. No Communities in Venango County Participate in CRS

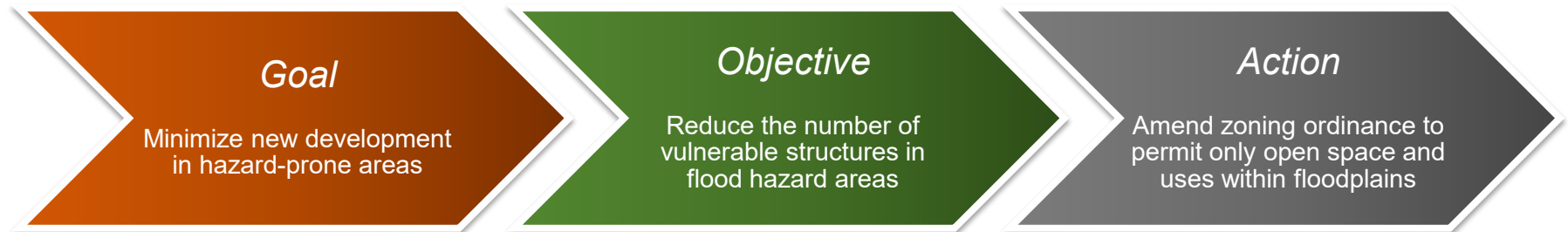
- County reports limited administrative and technical staff needed to conduct hazard mitigation activities
 - Individuals tasked with participating and executing hazard mitigation planning hold one or additional positions
- Many contract engineering resources from consulting firms
- Sandycreek and Frenchcreek share an EMC, as do Allegheny, Oil Creek and Pleasantville
- Administrative and technical capability varies between the municipalities due mainly to population size and resources



- Goals and Objectives
- Mitigation Progress Report
- Mitigation Techniques
- Mitigation Action Plan



- **Goals:** General guidelines that describe what your community would like to achieve.
- **Objectives:** Define strategies that must be implemented to achieve the identified goal.
- **Actions:** The specific activities a community will take to reduce or eliminate risks.



Mitigation Progress

Oil City carried out a full-scale exercise of a 'mega-shelter' at the Oil City High School in conjunction with the Red Cross in 2018. They are continuing to work with the American Red Cross towards upgrading all shelter resources and establishing new shelters.

Cranberry Township completed the removal of repetitive loss structures along Sage Run.

Richland Township and Emlenton Borough will continue to encourage municipal offices to review regulations pertaining to their jurisdiction to make sure that adequate zoning regulations are in place to reduce future development in high hazard areas.

Oil City is continuing to produce and submit mitigation projects for high-risk structures. The Brody Block in downtown Oil City was demolished as were several houses along Union Street.

Utica Borough is also continuing to produce and submit mitigation projects for high-risk structures and areas such as the bridge maintenance and upkeep that regularly occurs, as well as drain, culvert, and ditch clean outs.

Rouseville Borough completed work on the action to hold a series of public meetings with the owners of repetitive loss properties in high-risk areas and identify high-risk properties in the unincorporated areas of the county.

Rouseville Borough completed work with FEMA and PEMA to update repetitive loss information on properties within the county.

2020 HMP Goals:

1. Increase Public Awareness regarding natural and manmade hazard risks, preparedness and mitigation.
2. Ensure that adequate shelter is available to current and future populations.
3. Identify all repetitive loss structures throughout the county.
4. Develop better hazard data for Venango County and the municipalities.
5. Attempt to reduce the current and future risk of flood damage in Venango County.
6. Reduce or redirect the impact of natural disasters (especially floods) away from at-risk population areas.
7. Protect existing natural resources and open space, including parks and wetlands, within the floodplain and watershed to improve their flood control function



Local Plans and Regulations

Government authorities, policies, or codes that influence the way land and buildings are developed



Structure and Infrastructure Projects

Modifying existing structures or infrastructure to remove from a hazard area or construction of new structures to reduce impacts of hazards



Natural Systems Protection

Actions that minimize damage and losses and preserve or restore the functions of natural systems



Education and Awareness Programs

Sustained programs to educate the public and decision-makers about hazard risks and community mitigation programs

Mitigation Technique	Action
Structure and Infrastructure Projects	Replace damaged culverts, add catch basins, and install cross pipes to relieve stormwater. – Clinton Township
Education and Awareness Programs	Clearly post signage at popular recreational areas where cell phone coverage is poor or non-existent” (this is aimed to reduce lost/disorientated hikers, recreationists, etc.) – DCNR Bureau of Forestry
Education and Awareness Programs	Incorporate emergency preparedness into school curriculum. Increase exposure of middle/high school students to first responder opportunities and careers. – DCNR Bureau of Forestry
Local Plans and Regulations	Develop a shelter in place plan. – Utica Borough
Education and Awareness Programs	Increase public awareness and more effectively publicize wildfire danger times and threats.



Submit Information!

There's still time!

- Capability Assessment
- Mitigation Progress
- New Actions



**Submit by
October 23rd!**

<https://www.pennsylvaniahmp.com/venango-hmp>

Review the Draft HMP

October 7, 2020 – November 7, 2020

- Review the Draft HMP
- Submit Comments
- Disseminate information to residents

<https://www.pennsylvaniiahmp.com/venango-hmp>

Task	Dates
Kick-Off Meeting	July 7, 2020`
Risk Assessment/Mitigation Solutions Workshop	August 27, 2020
Draft Plan Review Meeting	October 7, 2020
Draft Plan Submitted to PEMA/FEMA	November 10, 2020
Receive FEMA Approval	NLT December 31, 2020

We are Here



Send an email to:

madeleine.fincham@mbakerintl.com

Or

kevin.brown@mbakerintl.com

Include your name, municipality/ organization, and position.



**Proof of Publication in The Derrick
UNDER ACT NO. 587, APPROVED MAY 16, 1929**

STATE OF PENNSYLVANIA

ss:

COUNTY OF VENANGO

Tricia N. Baker, of Venango Newspapers, of the County and State aforesaid, being duly sworn, deposes and says that THE DERRICK, newspaper of general circulation published at Oil City, Pa., County and State aforesaid was established in 1871, since which time THE DERRICK has been regularly issued in said county, and that the printed notice or publication attached hereto is exactly the same as printed in the regular edition and issue of the said THE DERRICK on the following dates, viz:

3rd of October, 2020

Affiant further deposes that she is authorized by VENANGO NEWSPAPERS, agent for said THE DERRICK to verify the foregoing statement under oath, and affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character or publication are true.

COPY OF NOTICE OF PUBLICATION

PUBLIC NOTICE

Notice is hereby given that Venango County Regional Planning Commission, in cooperation with Venango County Department of Public Safety, is in the process of updating the Venango County Hazard Mitigation Plan. The Draft Venango County Hazard Mitigation Plan will be available for public review and comment from October 7 - November 7, 2020. Interested persons may access the Draft Plan and other informational materials by visiting the project website at www.pennsylvaniahmp.com/venango-county-hmp.

Questions may be directed to Jason Ruggiero, Executive Director, Venango County Regional Planning Commission, at jruggiero@co.venango.pa.us or 814-432-9682, or Madeleine Fincham, Mitigation Planner, at madeleine.fincham@mbakerintl.com or 412-269-6093.

Tricia N. Baker

Sworn to and subscribed before me this
5th day of October, 2020

Michelle M. Schwab

Commonwealth of Pennsylvania - Notary Seal
MICHELLE M. SCHWAB, Notary Public
Venango County
My Commission Expires December 8, 2022
Commission Number 1259422

STATEMENT OF ADVERTISING COST

Michael Baker International 1818 Market Street Ste 3110 Philadelphia PA 19103	#5607280
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The VENANGO NEWSPAPERS, Dr. Agent for The Derrick For publishing the notice or publication attached hereto on the above dates	234.60
Probating same	11.00
Total	245.60

Publisher's Receipt for Advertising Costs

VENANGO NEWSPAPERS, agent for THE DERRICK hereby acknowledges receipt of the aforesaid notice and publication costs, and certifies that the same have been duly paid.

By *Tricia N. Baker*

**Proof of Publication of Notice in THE News-Herald
UNDER ACT NO. 587, APPROVED MAY 16, 1929**

STATE OF PENNSYLVANIA

ss:

COUNTY OF VENANGO

Tricia N. Baker, of Venango Newspapers, of the County and State aforesaid, being duly sworn, deposes and says that The NEWS-HERALD, newspaper of general circulation publishing at Franklin, Pa., County and State aforesaid, was established in 1878, since which time THE NEWS-HERALD has been regularly issued in the said County, and that the printed notice of publication attached hereto is exactly the same as printed in the regular edition and issue of the said THE NEWS-HERALD on the following dates, viz:

3rd of October, 2020

Affiant further deposes that she is authorized by VENANGO NEWSPAPERS, agent for said THE NEWS-HERALD to verify the foregoing statement under oath, and affiant is not interested in the subject matter or the aforesaid notice of advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.

COPY OF NOTICE OF PUBLICATION

Tricia N Baker

Sworn to and subscribed before me this
5th day of October, 2020

Michelle M Schwab

Commonwealth of Pennsylvania - Notary Seal
MICHELLE M. SCHWAB, Notary Public
Venango County
My Commission Expires December 8, 2022
Commission Number 1259422

PUBLIC NOTICE

Notice is hereby given that Venango County Regional Planning Commission, in cooperation with Venango County Department of Public Safety, is in the process of updating the Venango County Hazard Mitigation Plan. The Draft Venango County Hazard Mitigation Plan will be available for public review and comment from October 7 - November 7, 2020. Interested persons may access the Draft Plan and other informational materials by visiting the project website at www.pennsylvaniiahmp.com/venango-county-hmp.

Questions may be directed to Jason Ruggiero, Executive Director, Venango County Regional Planning Commission, at jruggiero@co.venango.pa.us or 814-432-9682, or Madeleine Fincham, Mitigation Planner, at madeleine.fincham@mbakerintl.com or 412-269-6093.

STATEMENT OF ADVERTISING COST

Michael Baker International 1818 Market Street Ste 3110 Philadelphia PA 19103	#5607280
To VENANGO NEWSPAPERS, Dr. Agent for The News-Herald For publishing the notice or publication attached hereto on the above dates	234.60
Probating same	11.00
Total	245.60

Publisher's Receipt for Advertising Costs

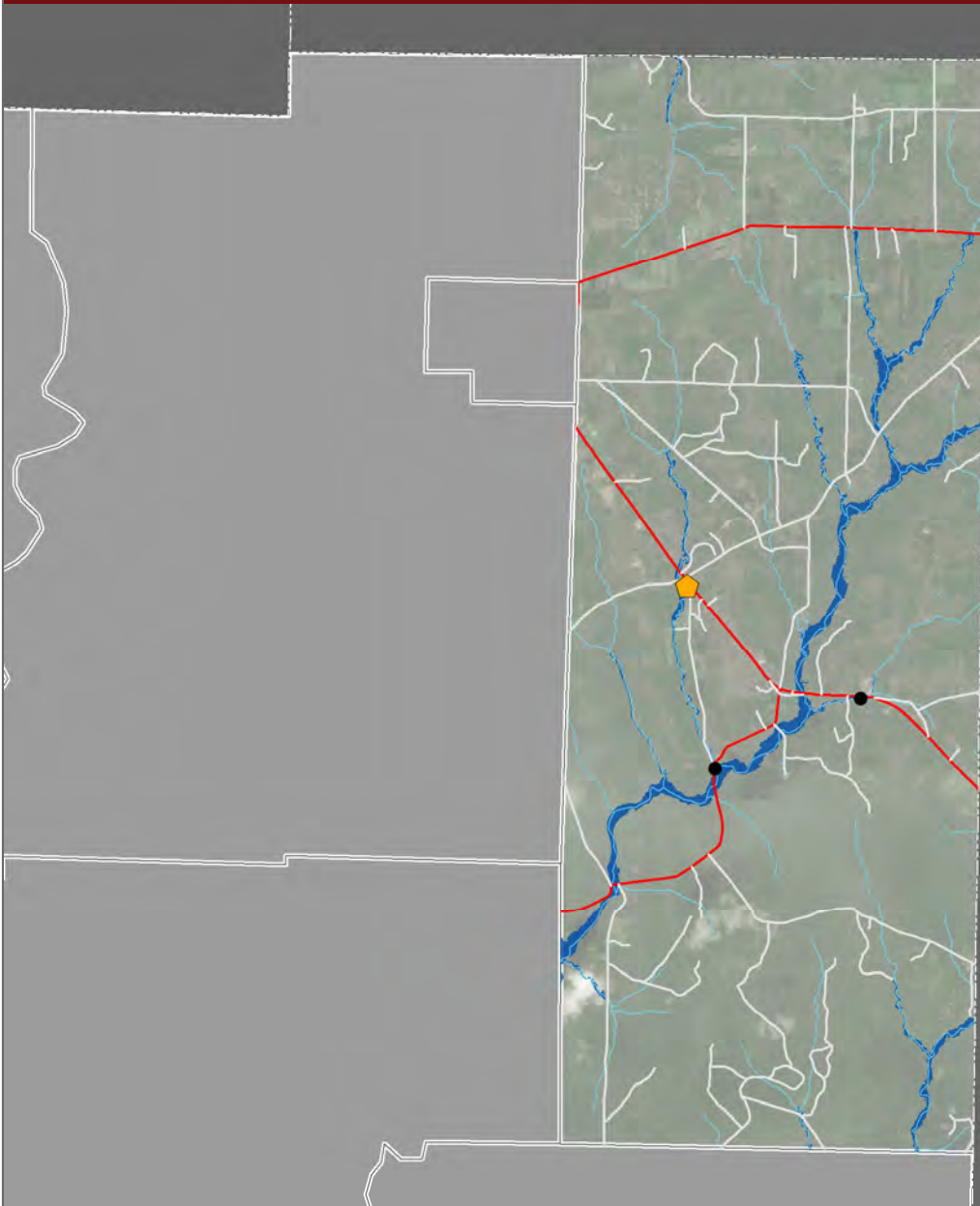
VENANGO NEWSPAPERS, agent for THE NEWS-HERALD hereby acknowledges receipt of the aforesaid notice and publication costs, and certifies that the same have been duly paid.

Tricia N Baker

Appendix D Local Municipality Flood Vulnerability Maps

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Allegheny



LEGEND

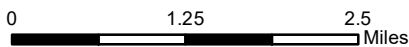
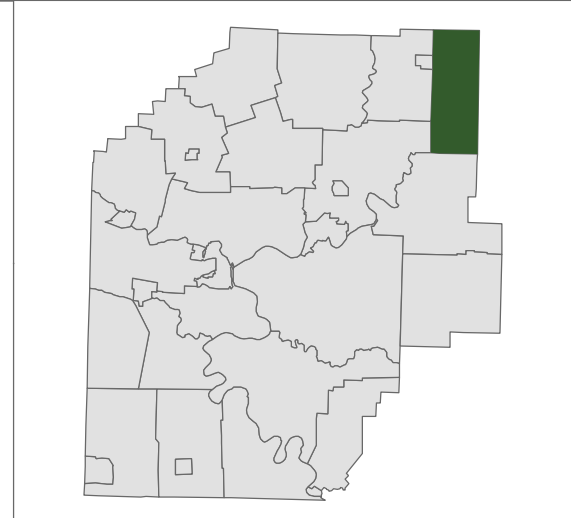
- Structures in SFHA
- Other Counties
- Local Roadways
- Major Roadways
- Rivers and Waterbodies
- Other Municipalities

Flood Zone

- A
- AE

Critical Facilities

- Airports
- Cell Towers
- County Buildings
- Day Care Centers
- Emergency Operation Centers
- Fire Stations
- Hospitals / Ambulance / EMS Stations
- Municipal Buildings
- Nursing Homes
- Police Stations
- Schools



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Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Barkeyville



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

■ Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

📶 Cell Towers

🏛 County Buildings

🏠 Day Care Centers

🚑 Emergency Operation Centers

🚒 Fire Stations

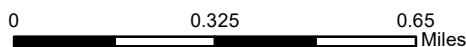
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

🏠 Nursing Homes

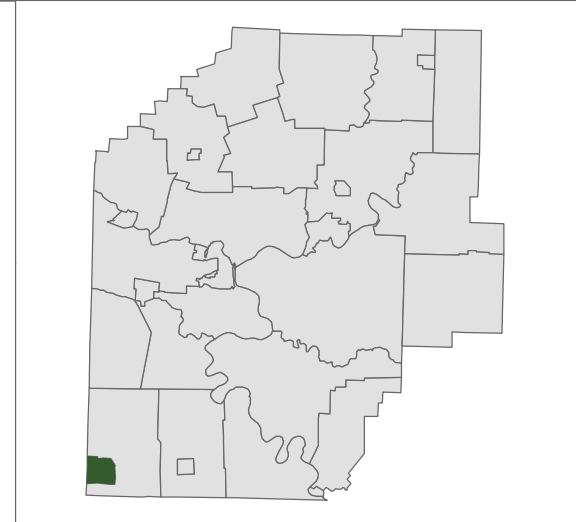
🚓 Police Stations

🎓 Schools



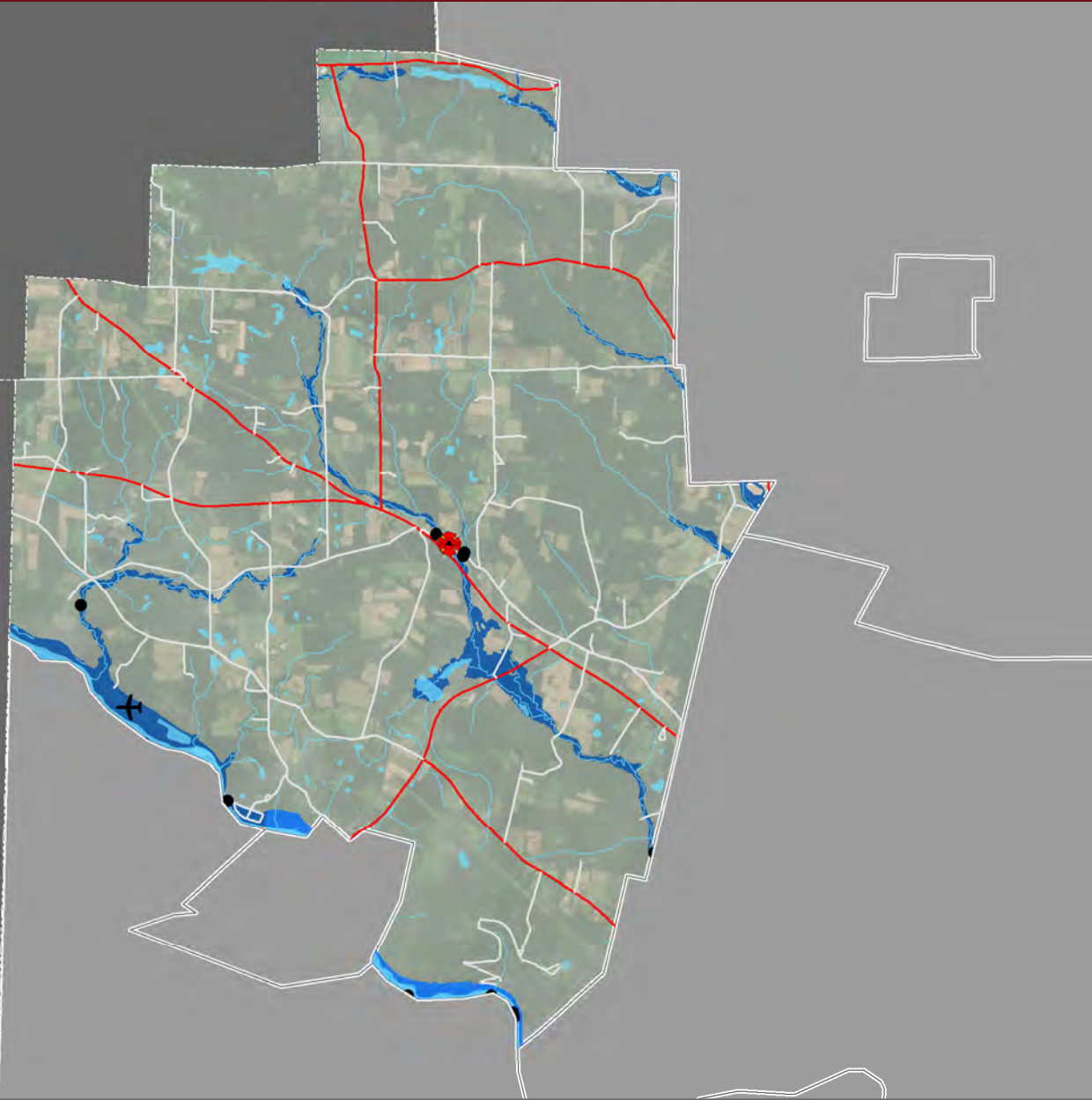
Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Canal



LEGEND

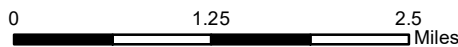
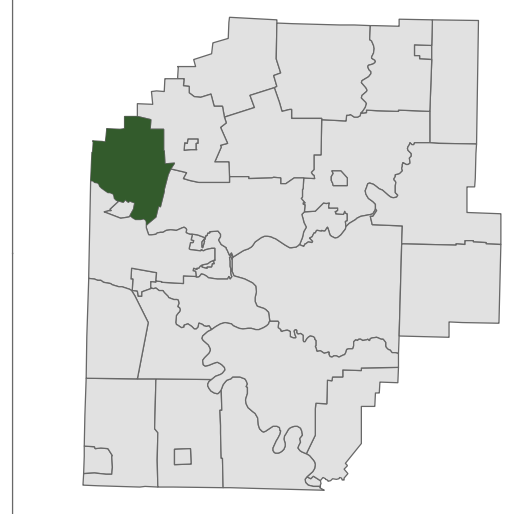
- Structures in SFHA
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Flood Zone

- A
- AE

Critical Facilities

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- 🚒 Fire Stations
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- 🏠 Nursing Homes
- 🚓 Police Stations
- 🚓 Schools



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Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Cherrytree



LEGEND

● Structures in SFHA

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— Local Roadways

— Major Roadways

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■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

📶 Cell Towers

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🚑 Emergency Operation Centers

🚒 Fire Stations

🏥 Hospitals / Ambulance / EMS Stations

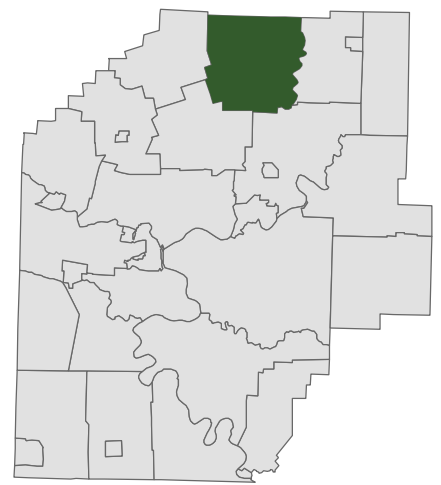
🏛 Municipal Buildings

🏠 Nursing Homes

🚓 Police Stations

🎓 Schools

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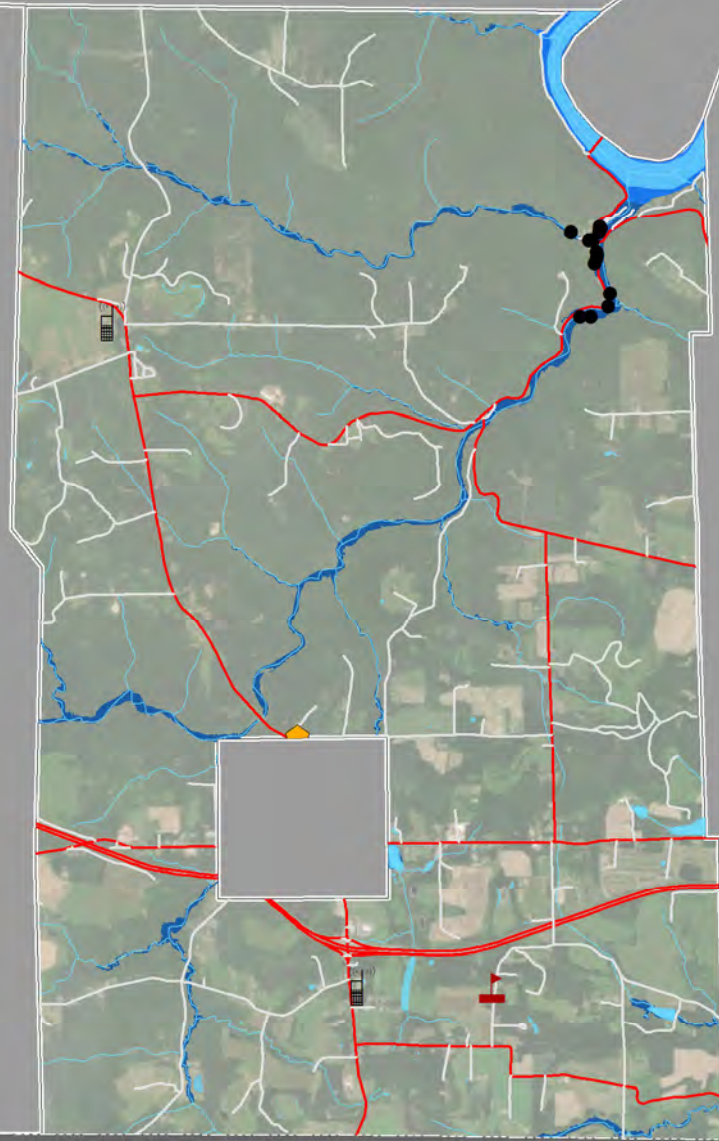


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Clinton



LEGEND

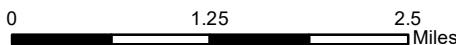
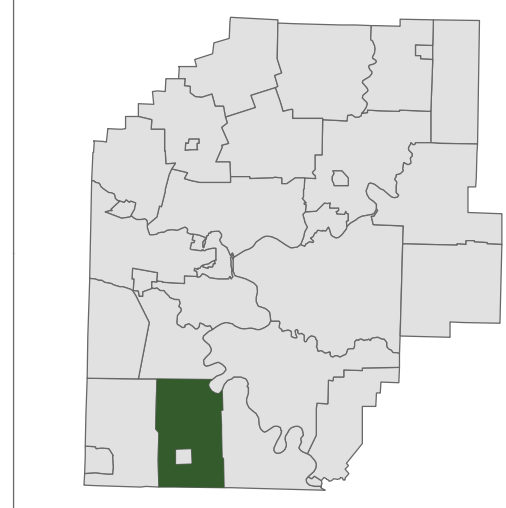
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Flood Zone

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- 🚓 Schools



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Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Clintonville



LEGEND

● Structures in SFHA

■ Other Counties

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Flood Zone

■ A

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Critical Facilities

✈ Airports

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🚒 Fire Stations

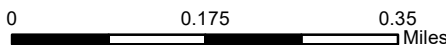
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

🏠 Nursing Homes

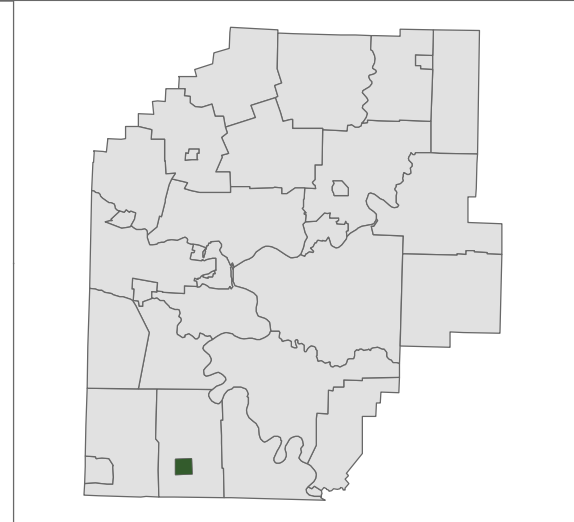
🚓 Police Stations

🎓 Schools



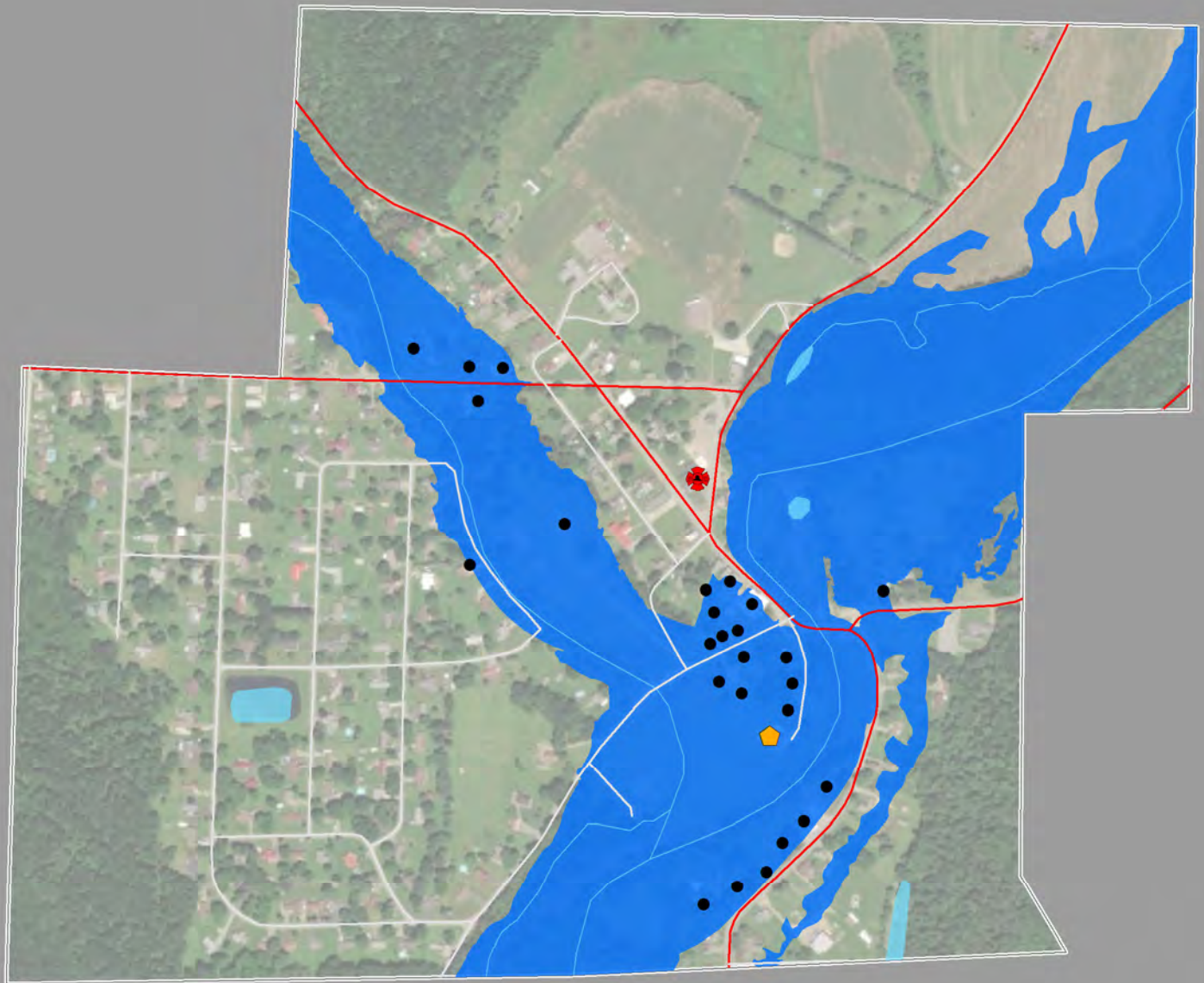
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Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Cooperstown



LEGEND

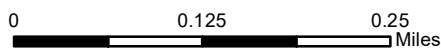
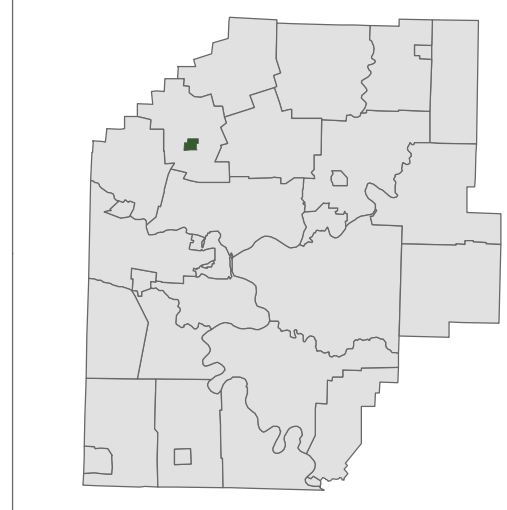
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- Other Municipalities

Flood Zone

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Critical Facilities

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- 🏠 Nursing Homes
- 🚓 Police Stations
- 🚓 Schools

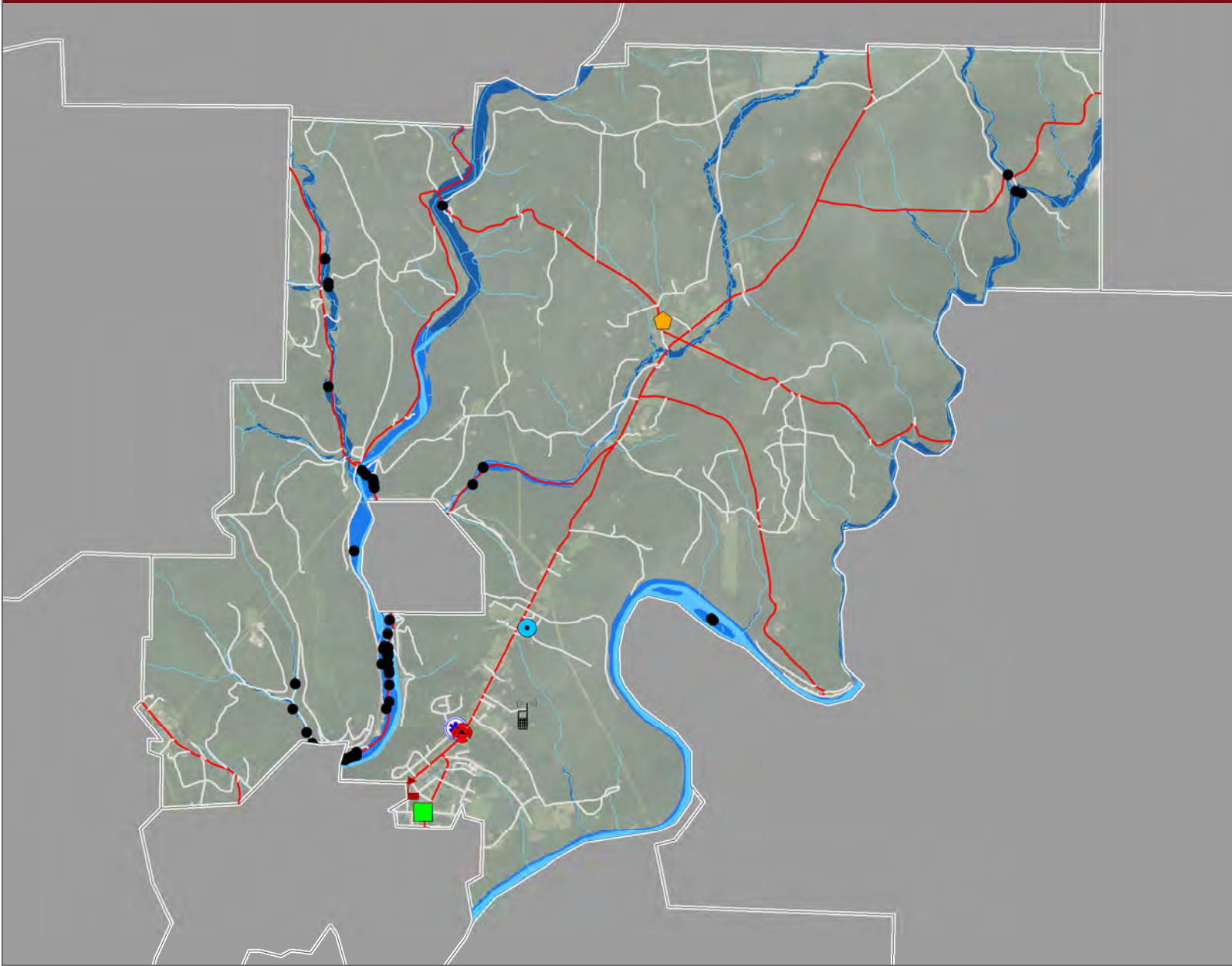


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Cornplanter



LEGEND

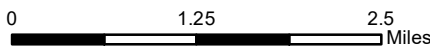
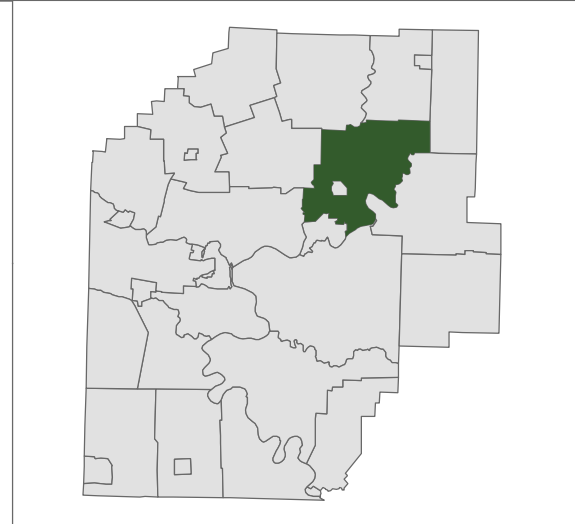
- Structures in SFHA
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Flood Zone

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- ▭ AE

Critical Facilities

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- 🏠 Nursing Homes
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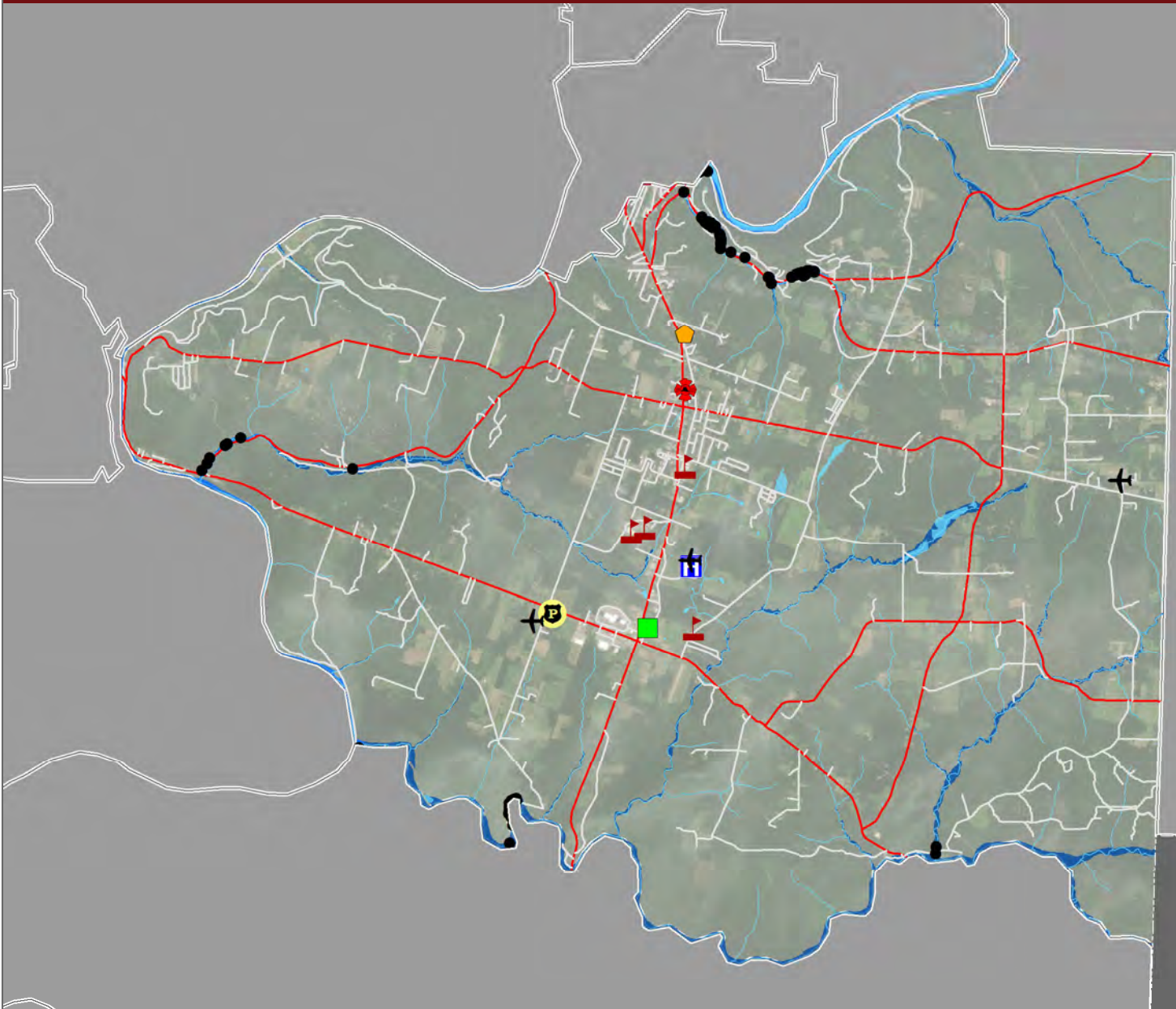


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Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Cranberry



LEGEND

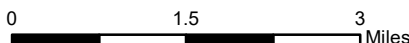
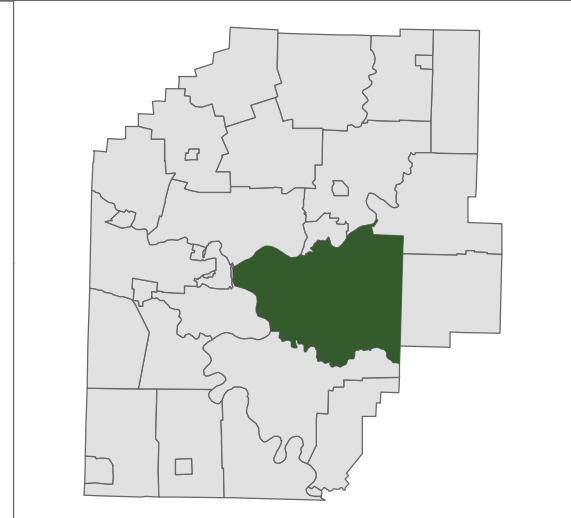
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Flood Zone

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Critical Facilities

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- 🚓 Schools



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Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Emlenton



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

■ Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

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Critical Facilities

✈ Airports

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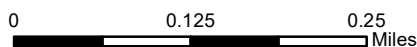
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🏠 Nursing Homes

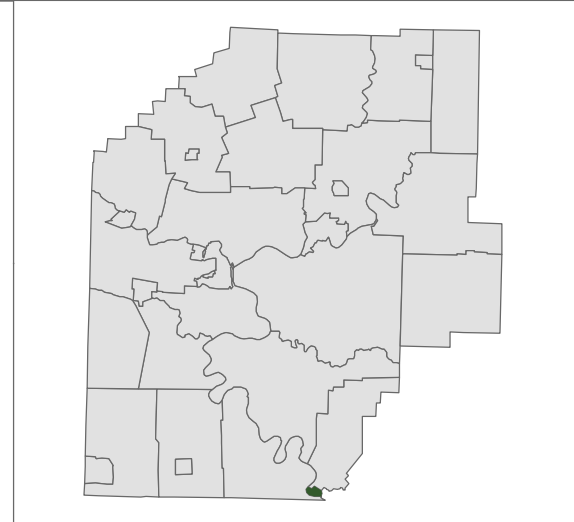
🚓 Police Stations

🏫 Schools



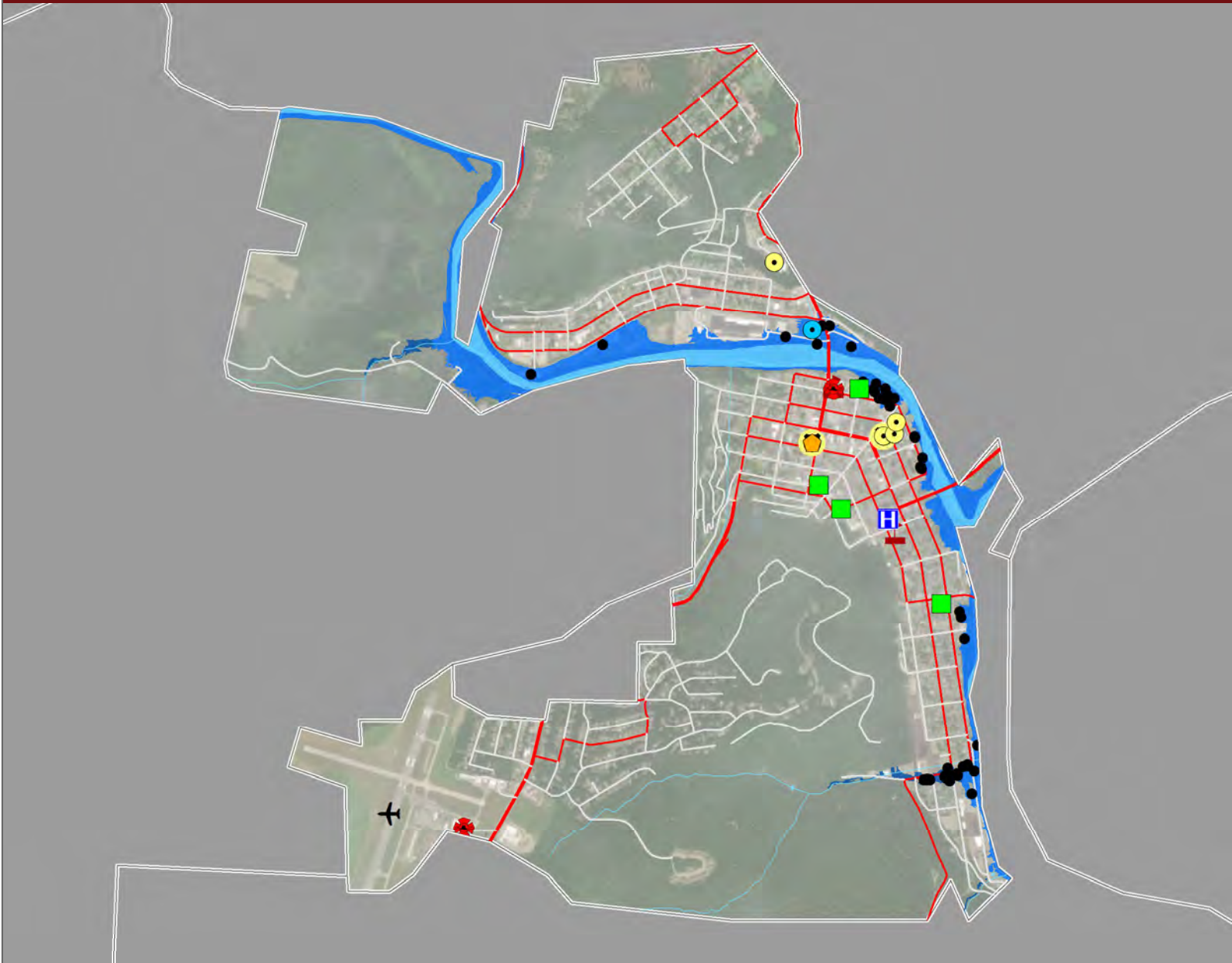
Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Franklin



LEGEND

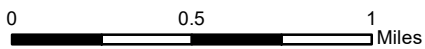
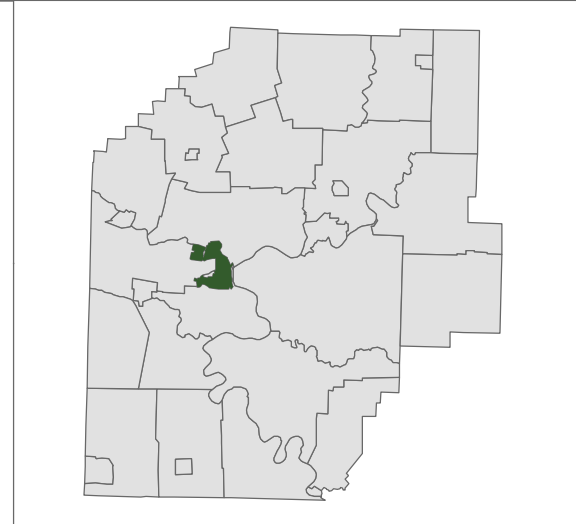
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- ▭ Rivers and Waterbodies
- ▭ Other Municipalities

Flood Zone

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- 🚓 Schools



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INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Frenchcreek



LEGEND

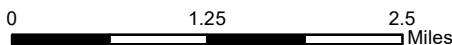
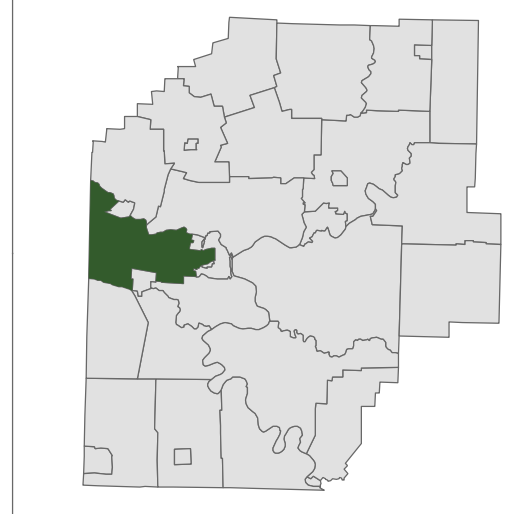
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- Rivers and Waterbodies
- Other Municipalities

Flood Zone

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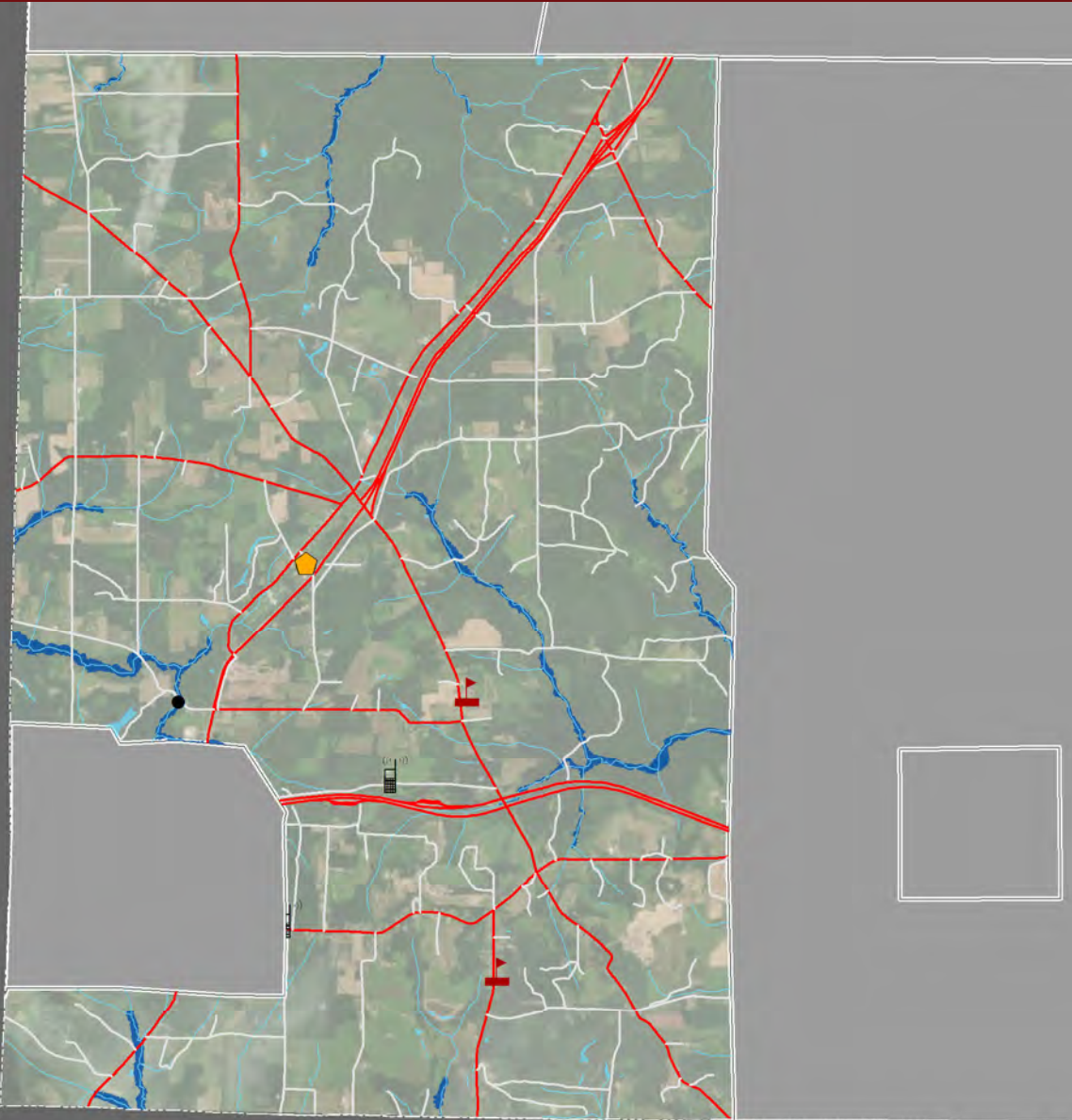


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Irwin



LEGEND

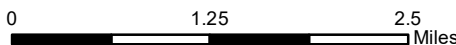
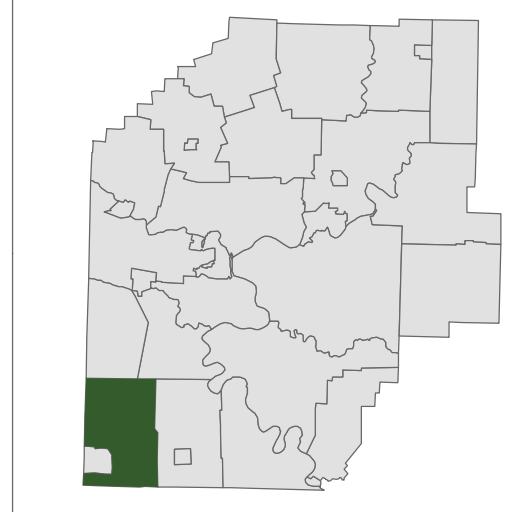
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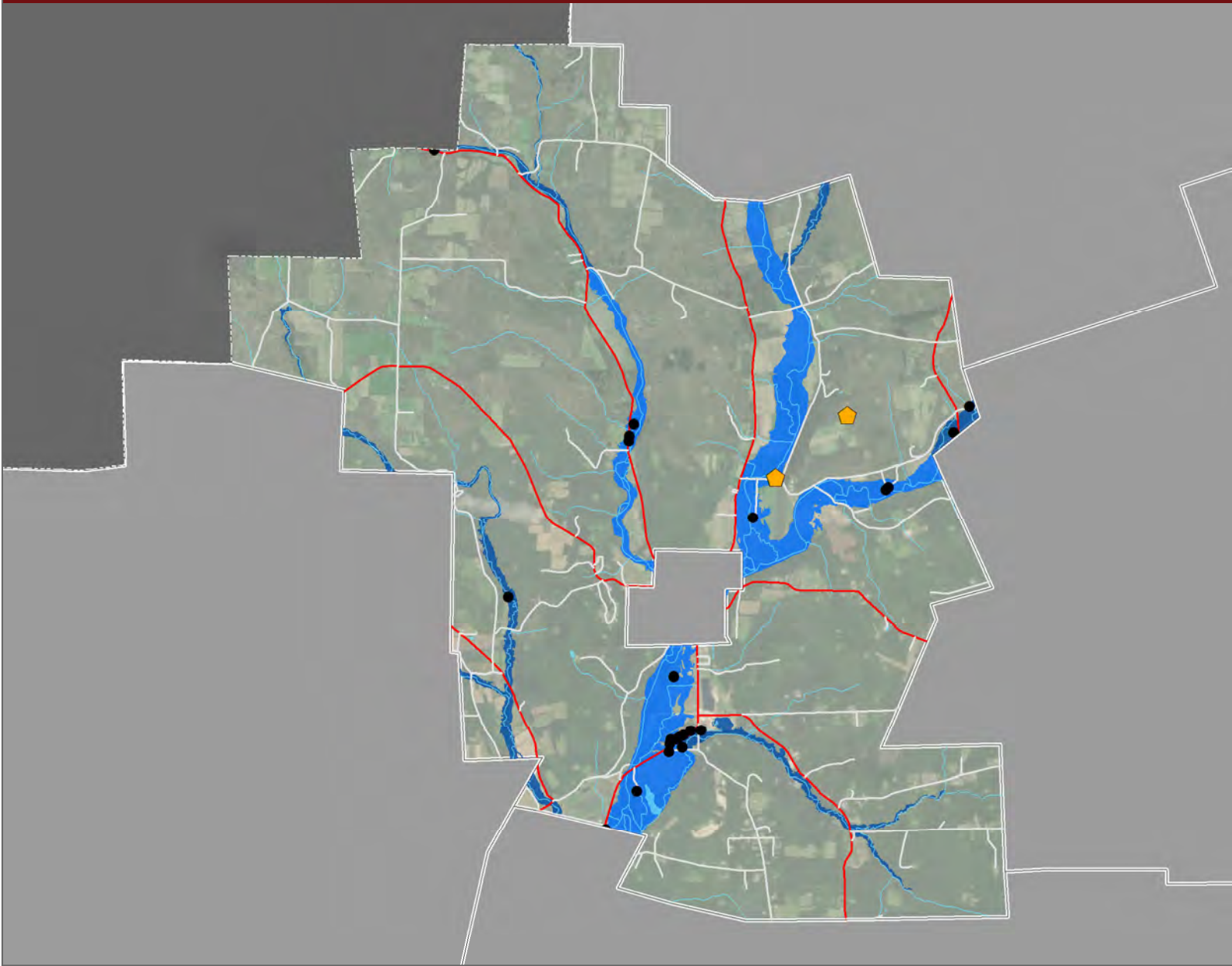


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Jackson



LEGEND

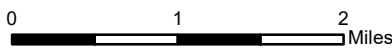
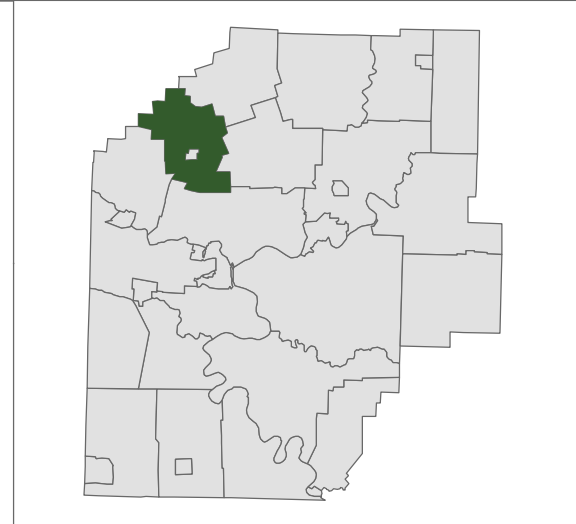
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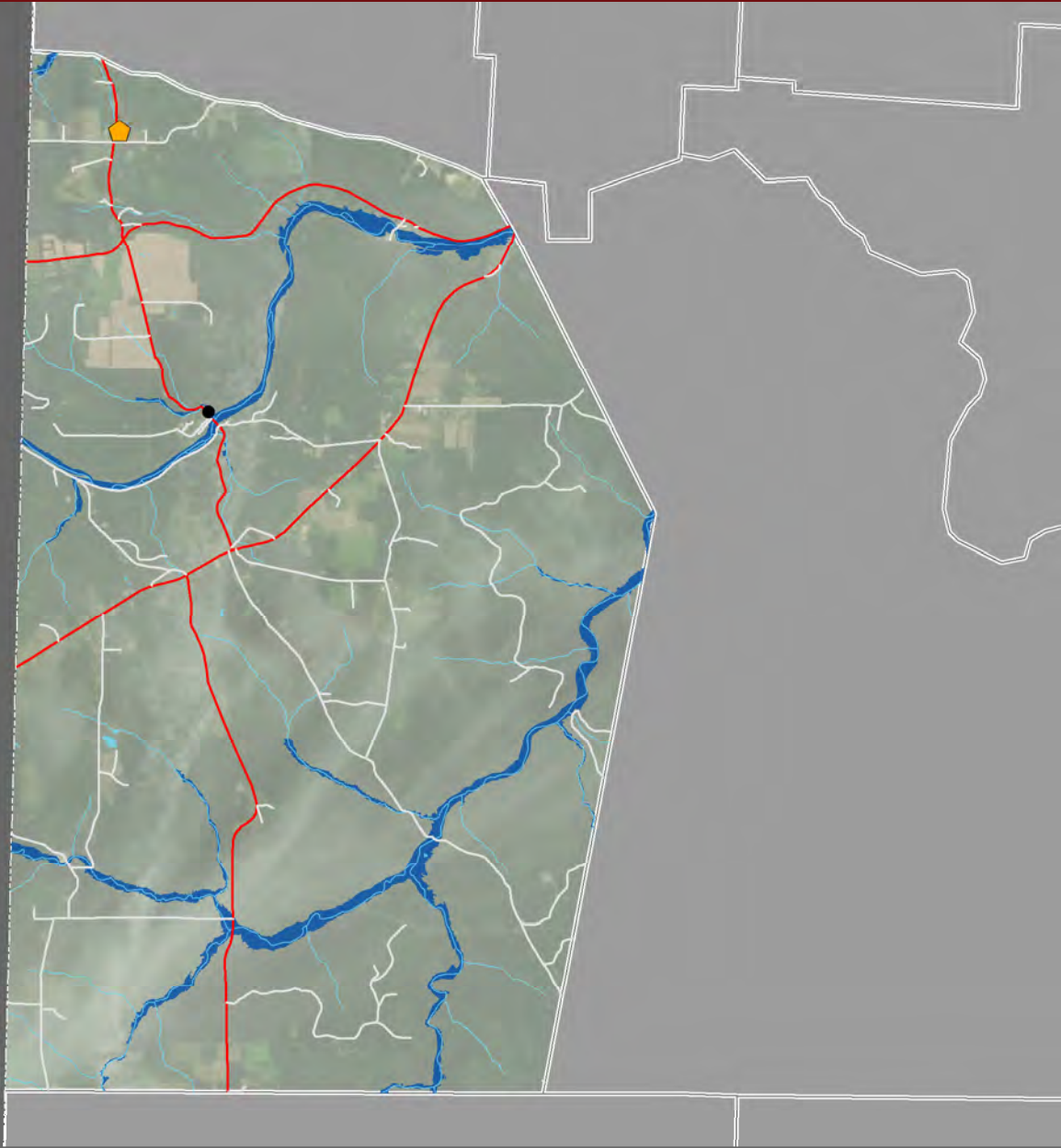


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
 FEMA, 2020
 Projection: StatePlane Pennsylvania South
 Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Mineral



LEGEND

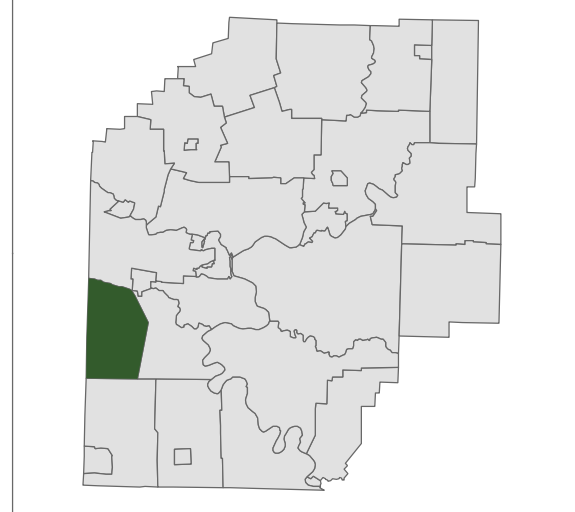
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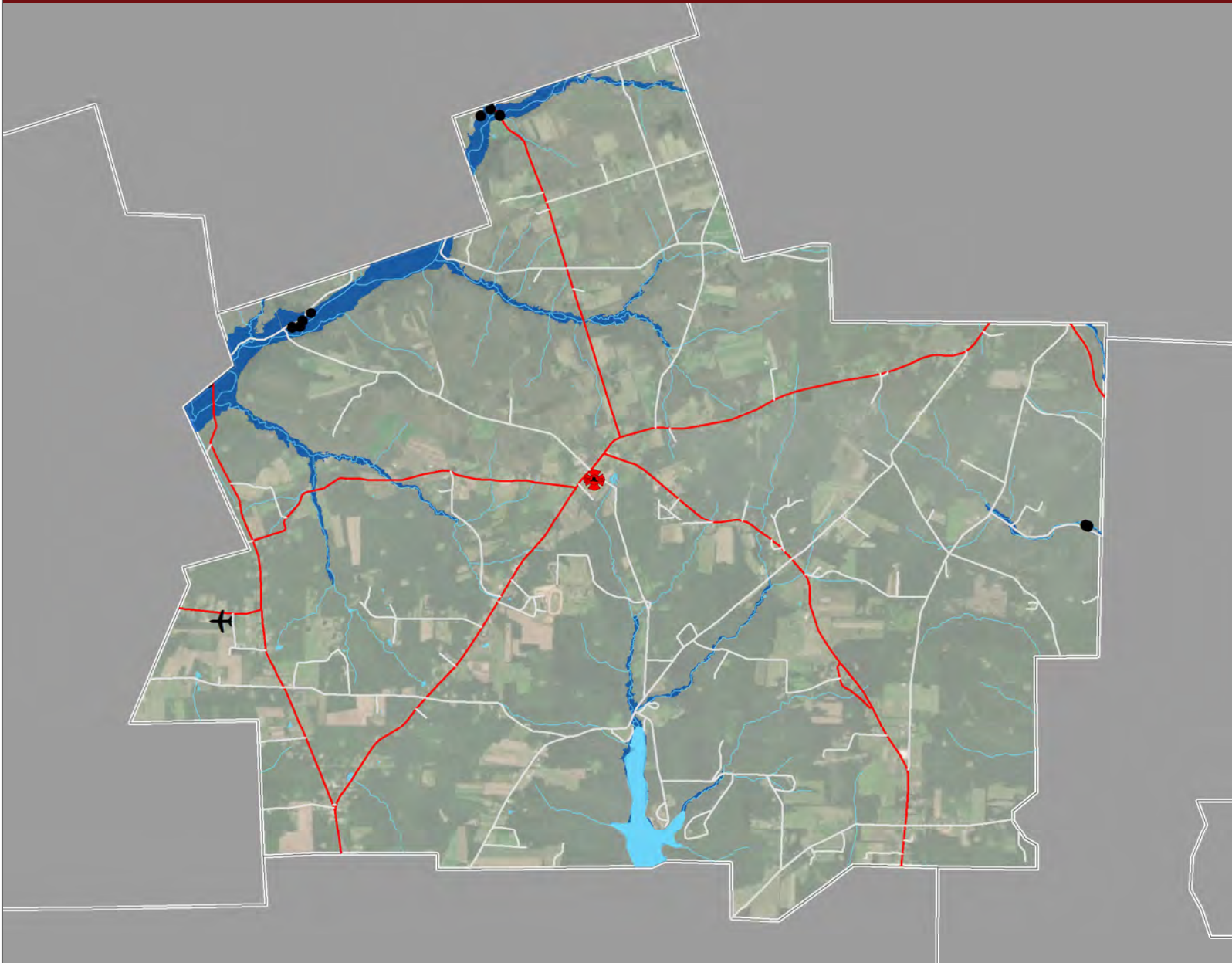


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Oakland



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

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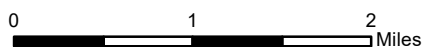
🏥 Hospitals / Ambulance / EMS Stations

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🏠 Nursing Homes

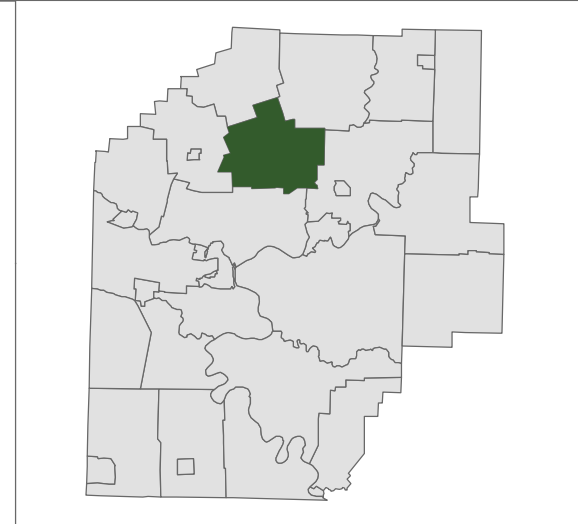
🚓 Police Stations

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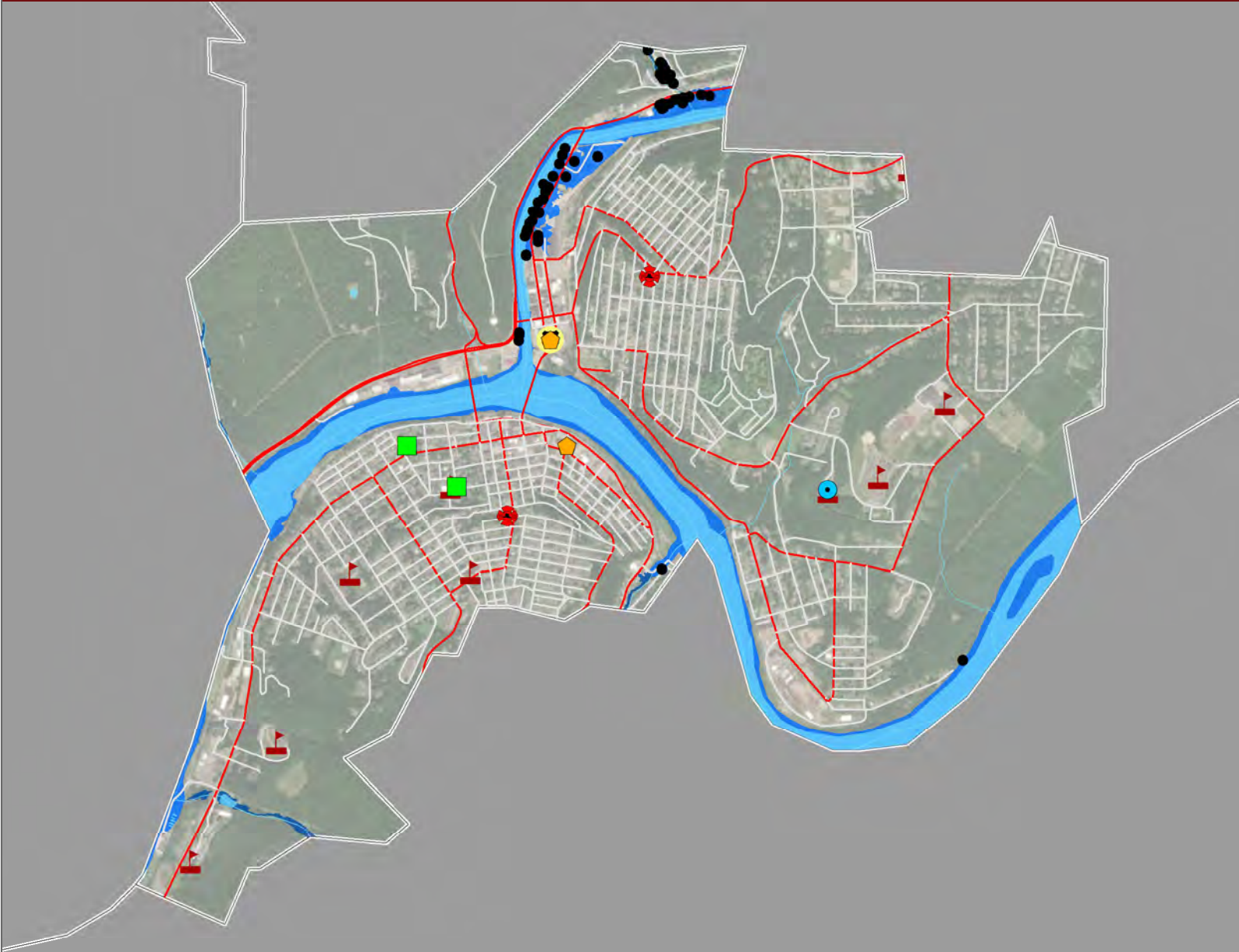
Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Oil City



LEGEND

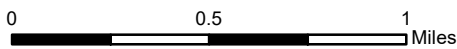
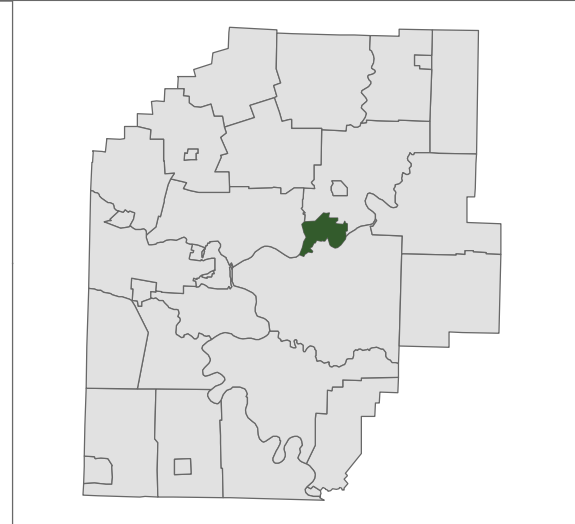
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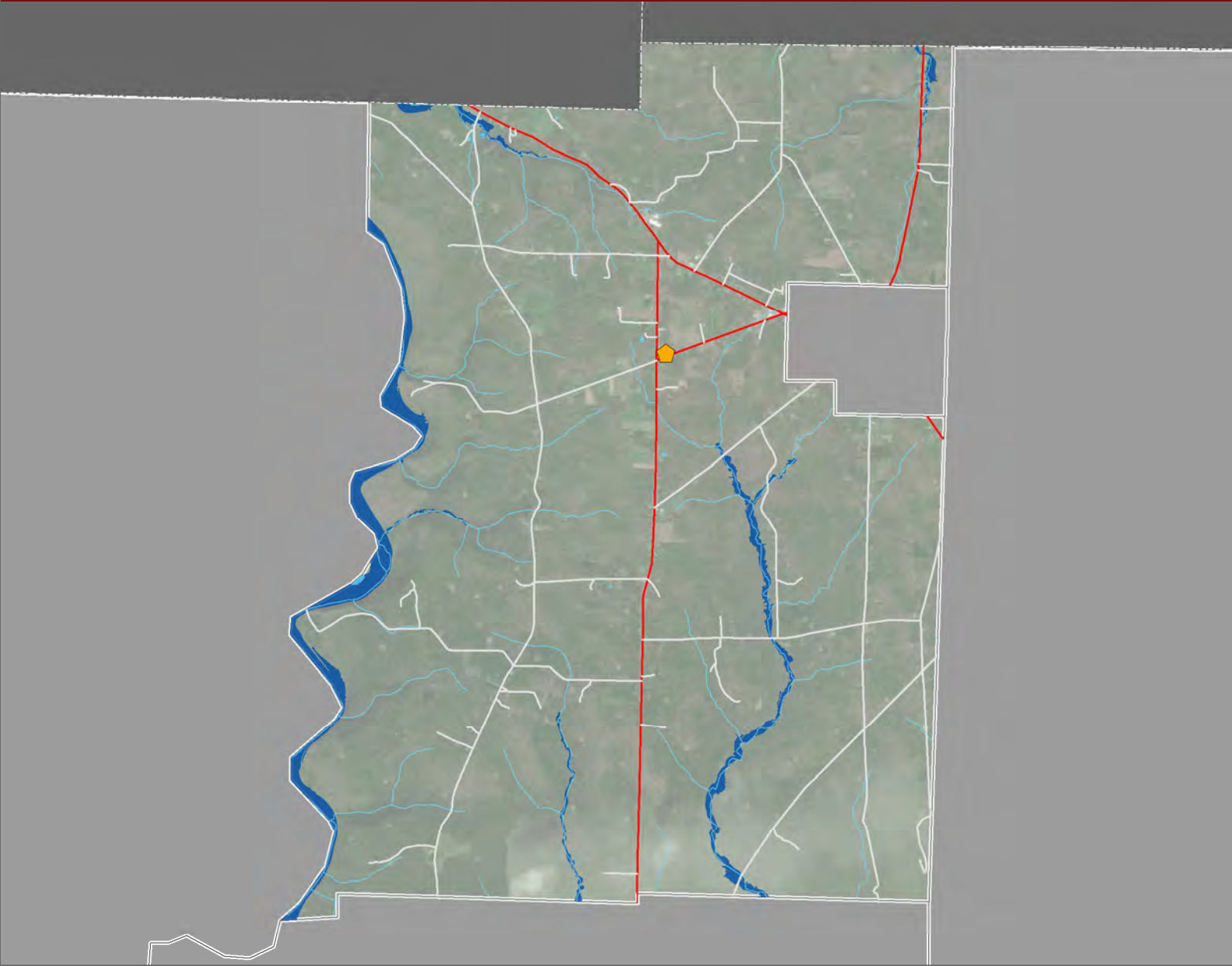


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Oil Creek



LEGEND

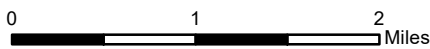
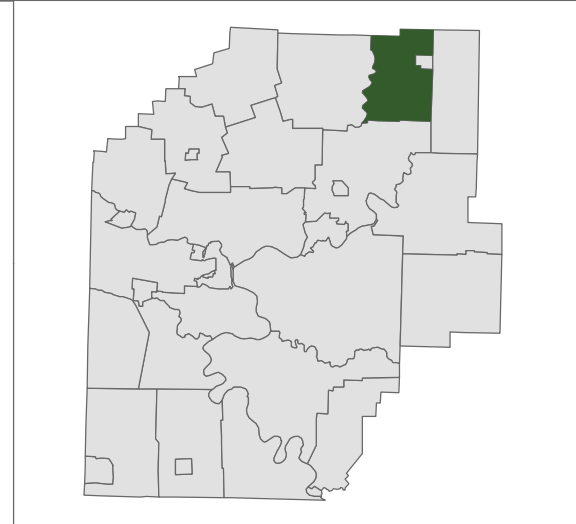
- Structures in SFHA
- Other Counties
- Local Roadways
- Major Roadways
- Rivers and Waterbodies
- Other Municipalities

Flood Zone

- A
- AE

Critical Facilities

- ✈ Airports
- 📶 Cell Towers
- 🏛 County Buildings
- 🟩 Day Care Centers
- 🚑 Emergency Operation Centers
- 🚒 Fire Stations
- 🏥 Hospitals / Ambulance / EMS Stations
- 🏛 Municipal Buildings
- 🏠 Nursing Homes
- 🚓 Police Stations
- 🚓 Schools



Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Pleasantville



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

📶 Cell Towers

● County Buildings

■ Day Care Centers

🚑 Emergency Operation Centers

🚒 Fire Stations

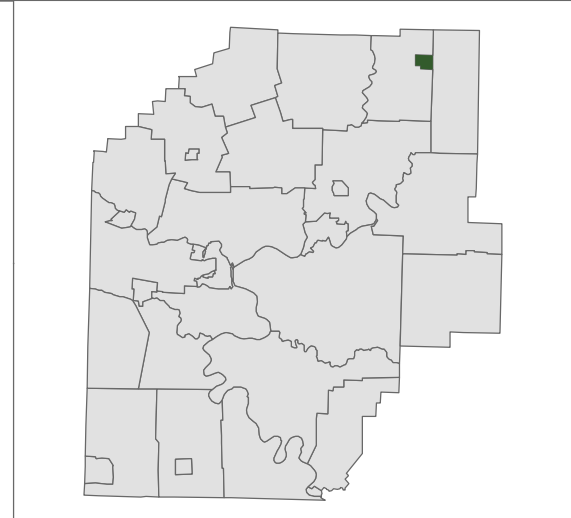
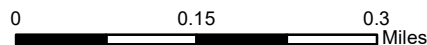
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

🏠 Nursing Homes

🚓 Police Stations

🚓 Schools



Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Plum



LEGEND

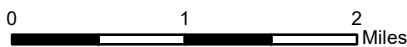
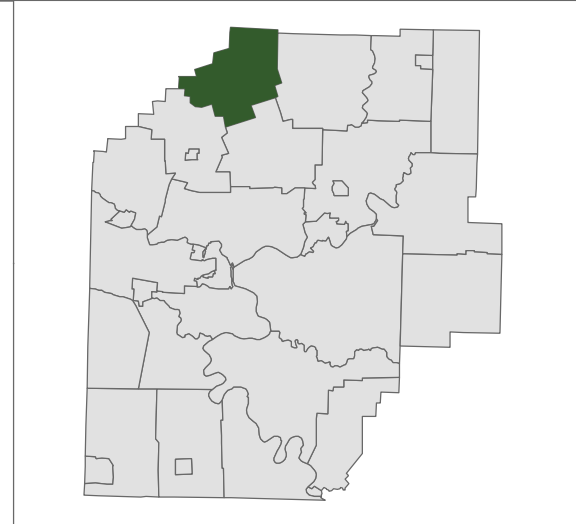
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- Rivers and Waterbodies
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Flood Zone

- A
- AE

Critical Facilities

- ✈ Airports
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- 🚒 Fire Stations
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- 🏛 Municipal Buildings
- 🏠 Nursing Homes
- 🚓 Police Stations
- 🎓 Schools

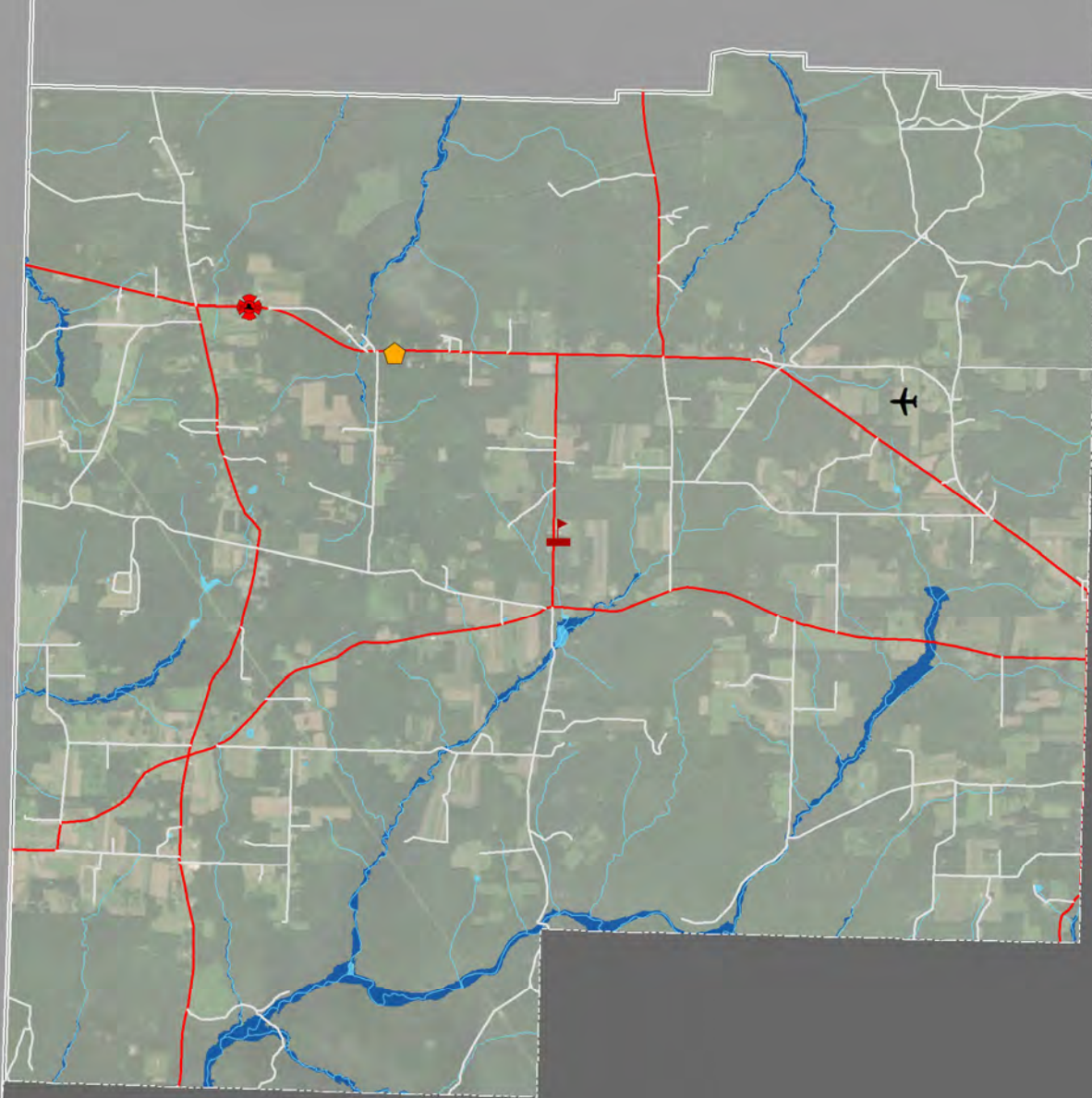


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Pinegrove



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

📶 Cell Towers

🏛 County Buildings

🏠 Day Care Centers

🚑 Emergency Operation Centers

🔥 Fire Stations

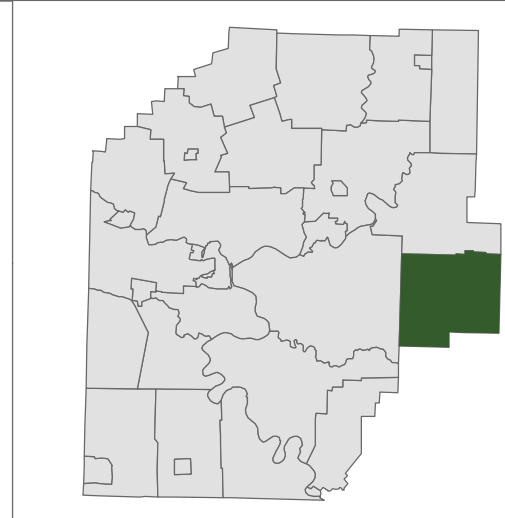
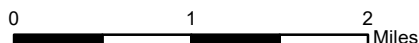
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

🏠 Nursing Homes

🚓 Police Stations

🚓 Schools

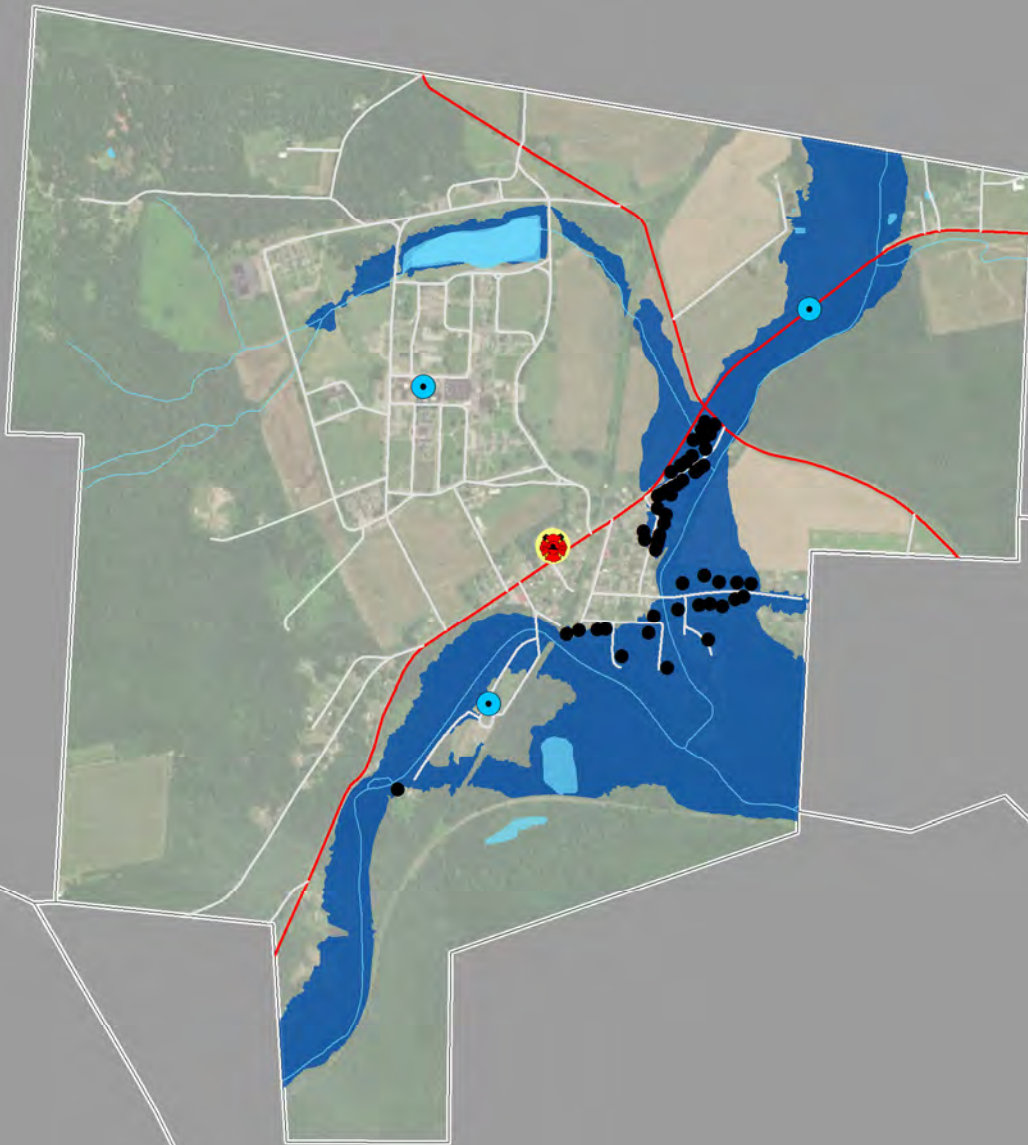


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Polk



LEGEND

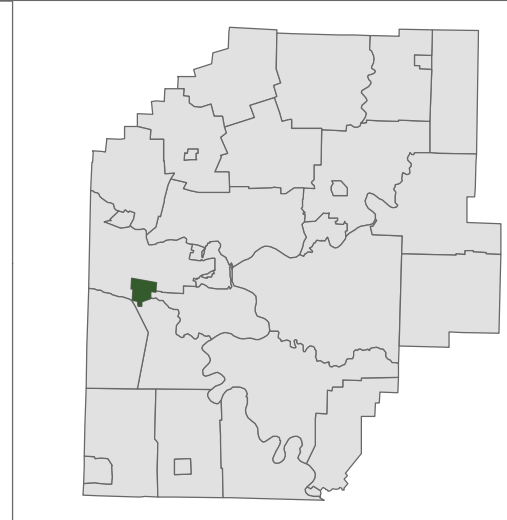
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Flood Zone

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- AE

Critical Facilities

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- 🏛 Municipal Buildings
- 🏠 Nursing Homes
- 🚓 Police Stations
- 🚓 Schools



0 0.325 0.65 Miles

Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: President



LEGEND

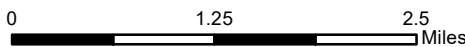
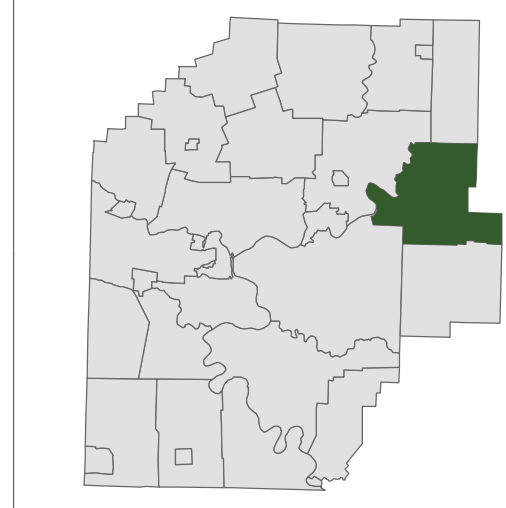
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Flood Zone

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Critical Facilities

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- 🚓 Police Stations
- 🚓 Schools



Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Richland



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

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🏛 County Buildings

🏠 Day Care Centers

🚑 Emergency Operation Centers

🚒 Fire Stations

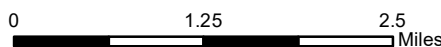
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

🏠 Nursing Homes

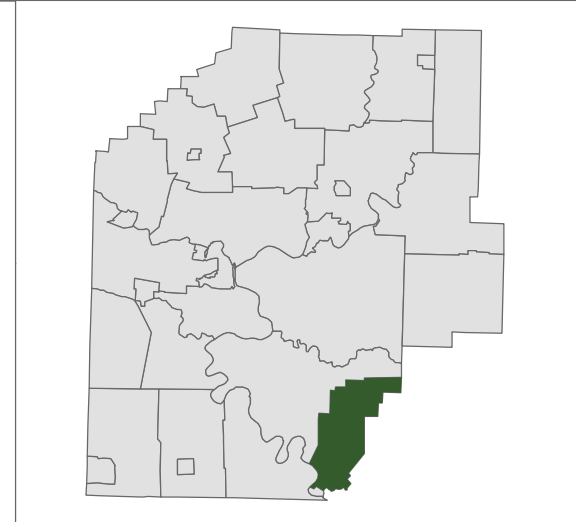
🚓 Police Stations

🚓 Schools



Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Rockland



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

📶 Cell Towers

● County Buildings

■ Day Care Centers

⚕ Emergency Operation Centers

★ Fire Stations

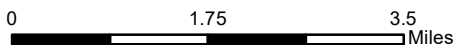
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

👮 Nursing Homes

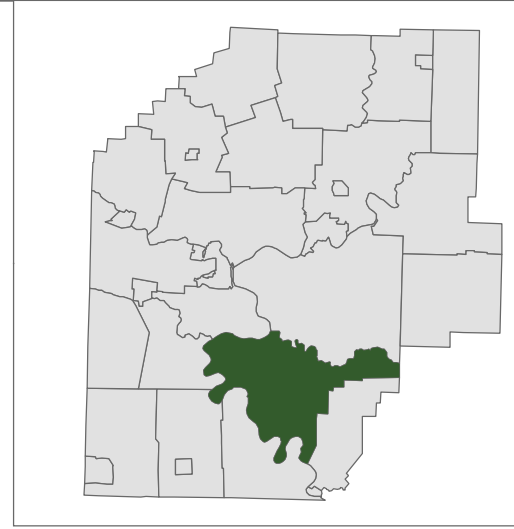
👮 Police Stations

🚓 Schools



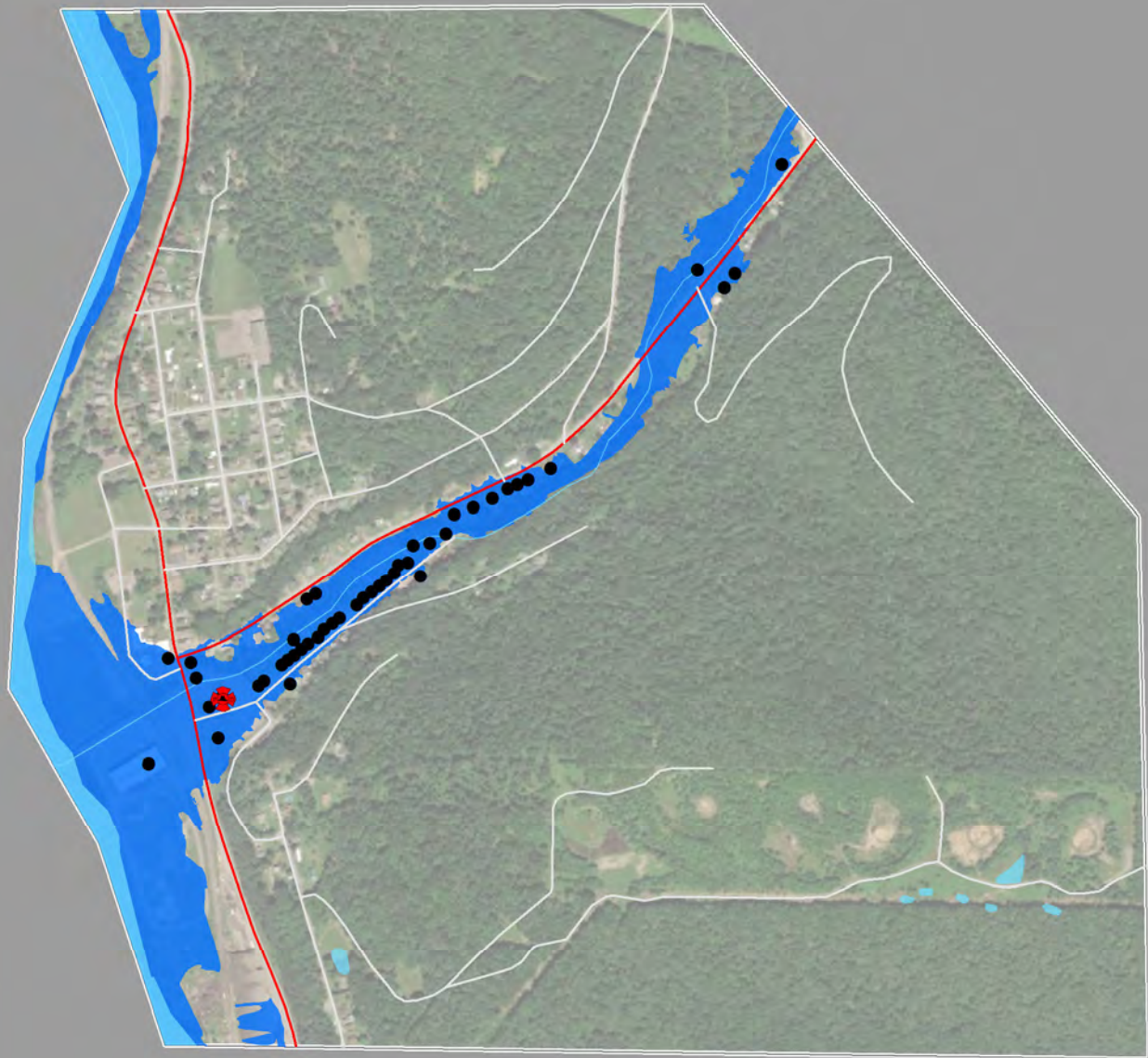
Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Rouseville



LEGEND

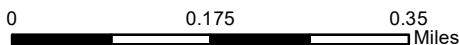
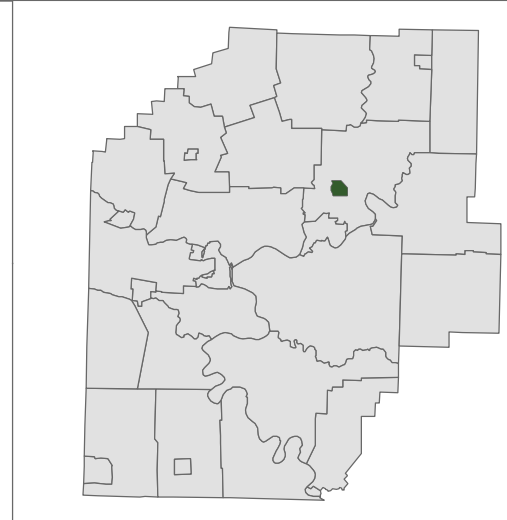
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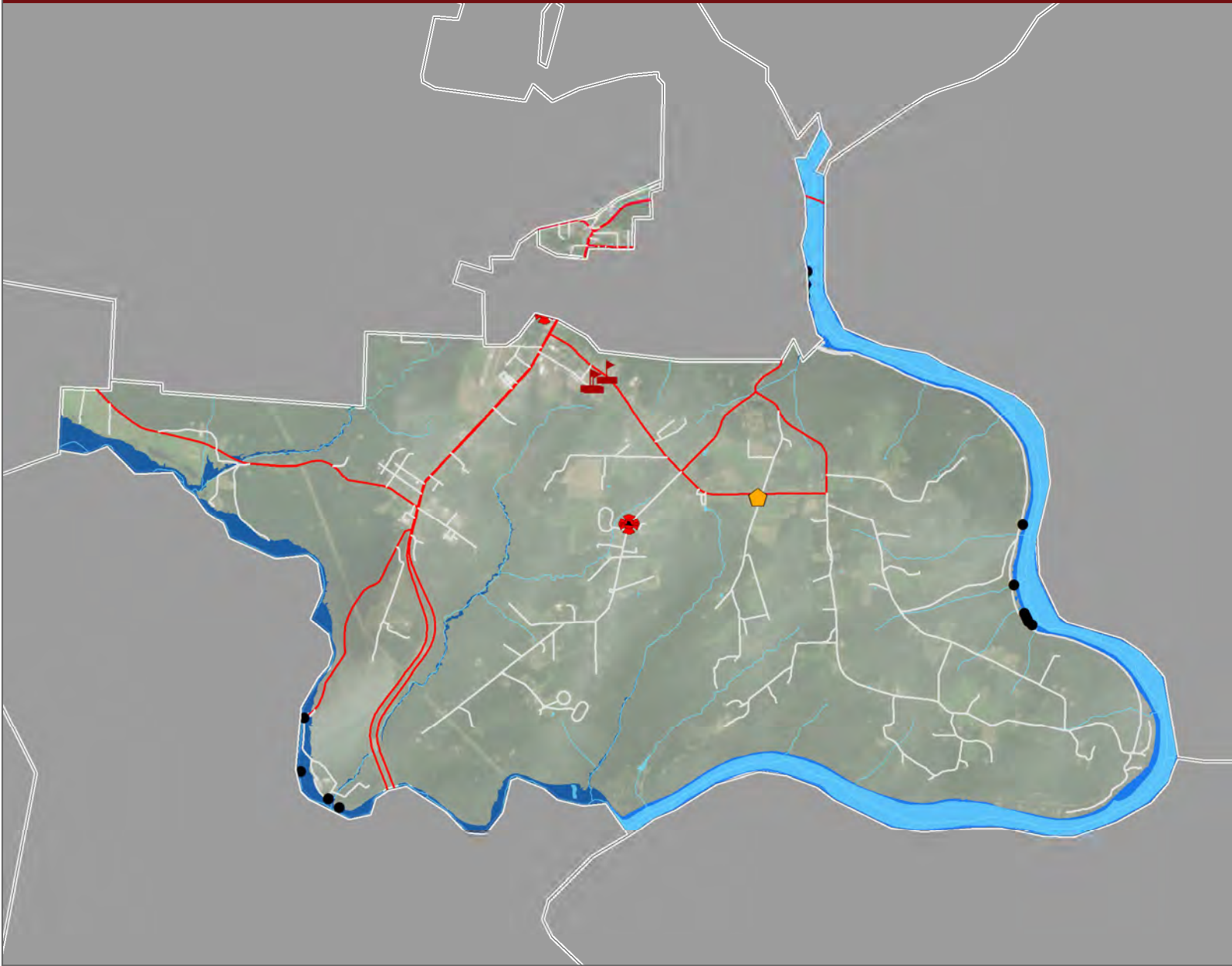


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Sandycreek



LEGEND

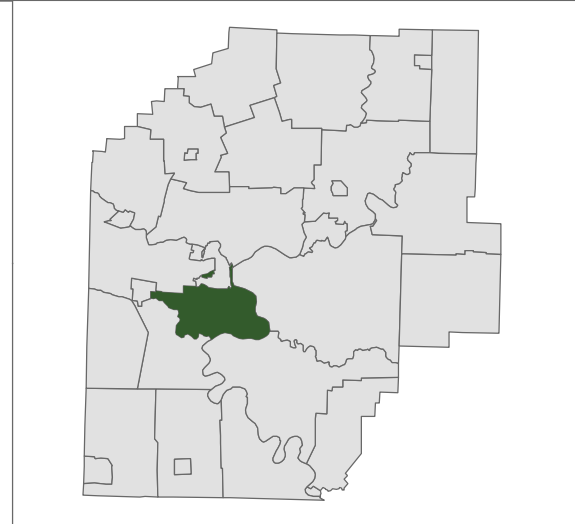
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- AE

Critical Facilities

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- 🏛 Municipal Buildings
- 🏠 Nursing Homes
- 🚓 Police Stations
- 🚓 Schools

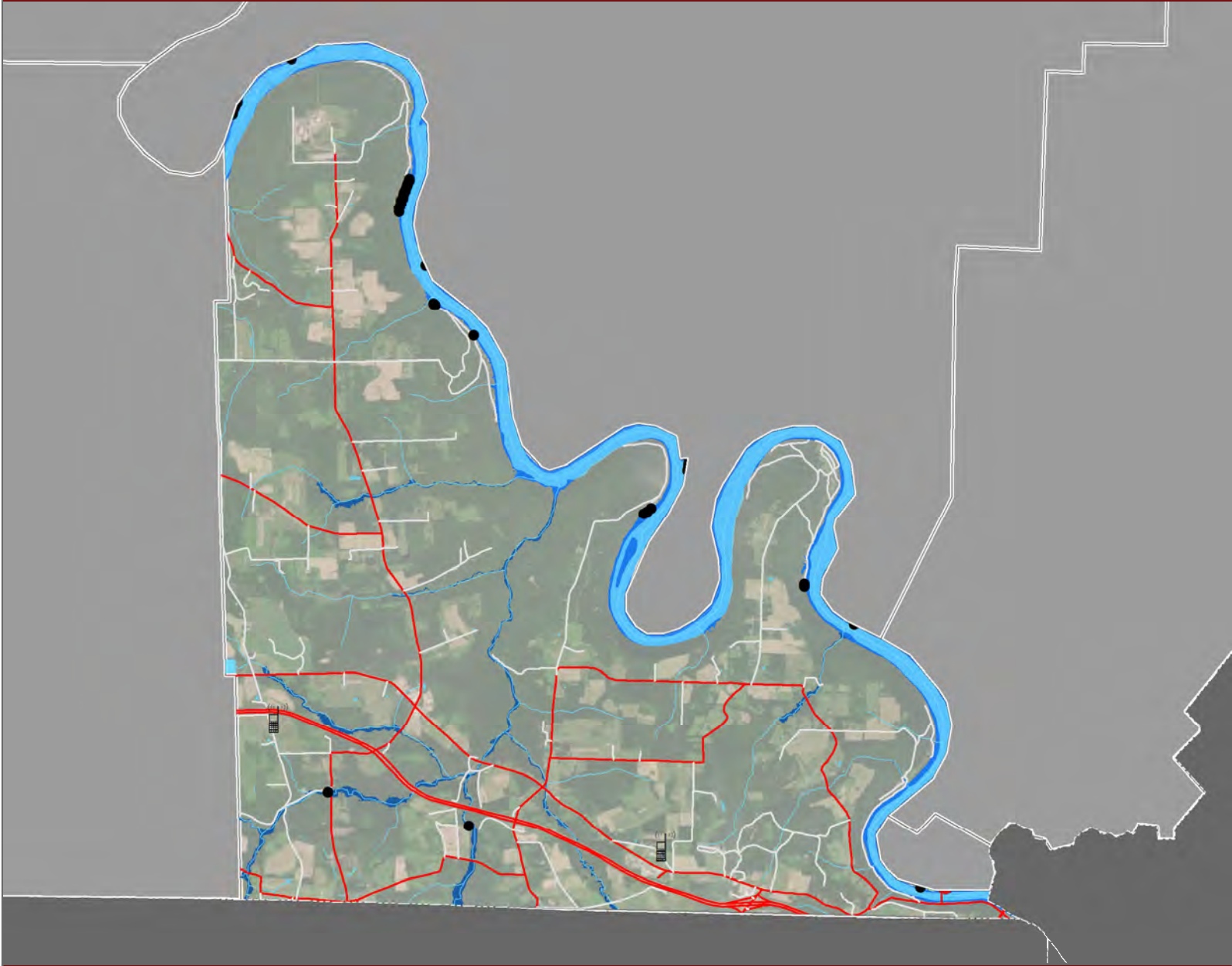


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Scrubgrass



LEGEND

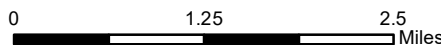
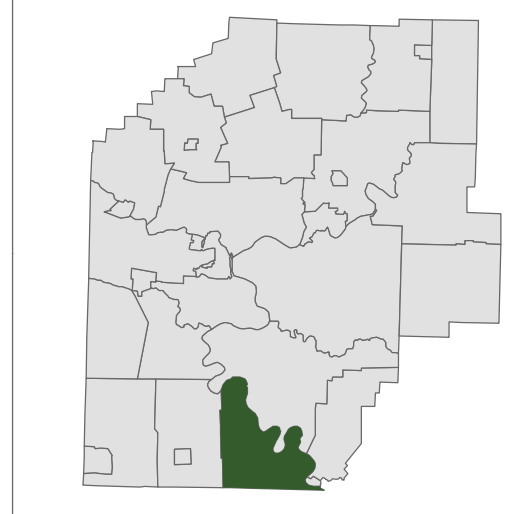
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- Rivers and Waterbodies
- Other Municipalities

Flood Zone

- A
- AE

Critical Facilities

- ✈ Airports
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- 🏛 Municipal Buildings
- 🏠 Nursing Homes
- 🚓 Police Stations
- 🚓 Schools

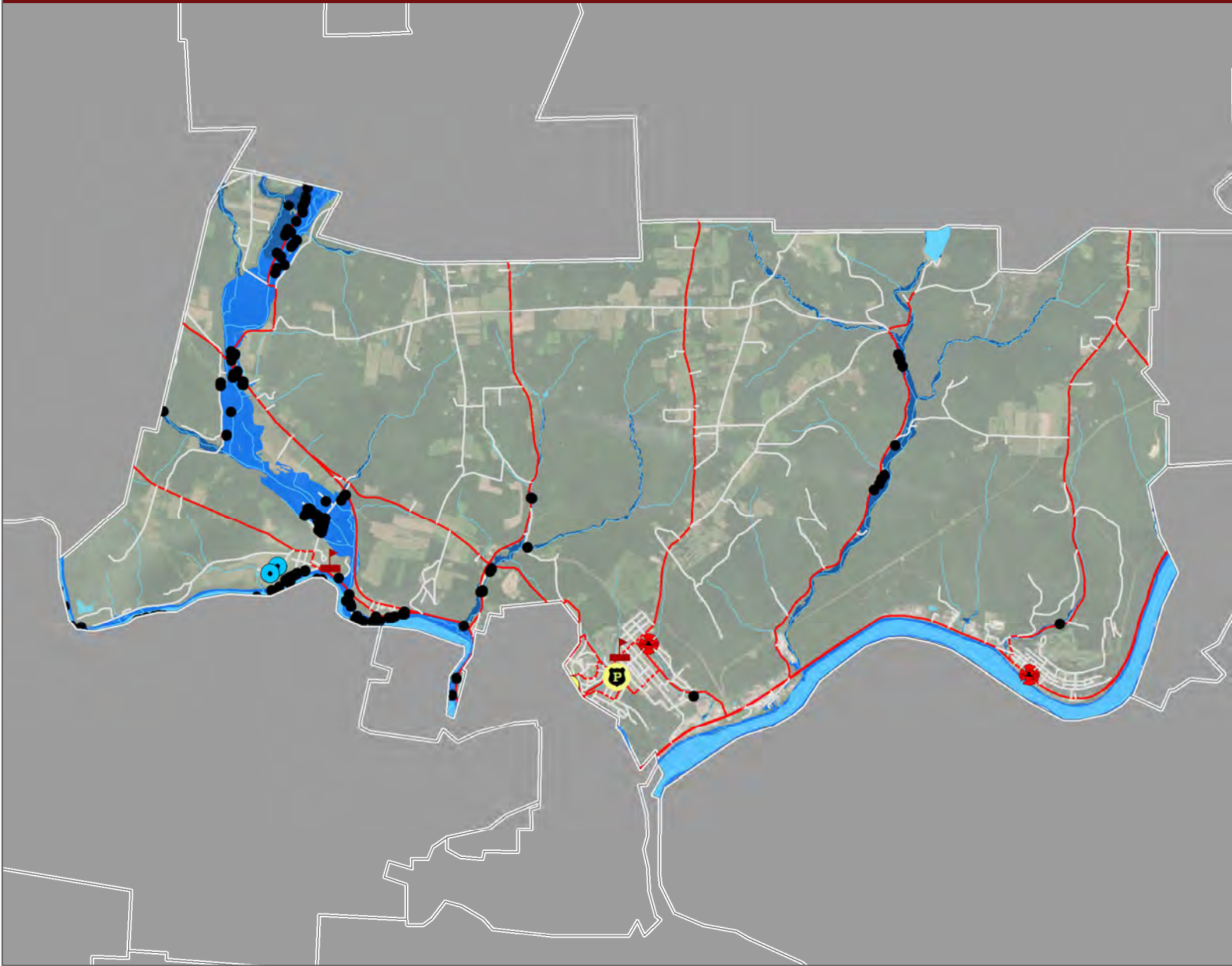


Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Sugarcreek



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

📶 Cell Towers

🏛 County Buildings

🏠 Day Care Centers

🚑 Emergency Operation Centers

🚒 Fire Stations

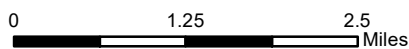
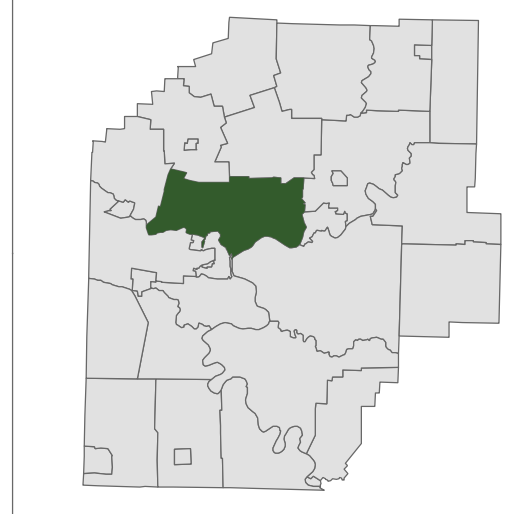
🏥 Hospitals / Ambulance / EMS Stations

🏛 Municipal Buildings

🏠 Nursing Homes

🚓 Police Stations

🎓 Schools



Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Utica



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

✈ Airports

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🏛 County Buildings

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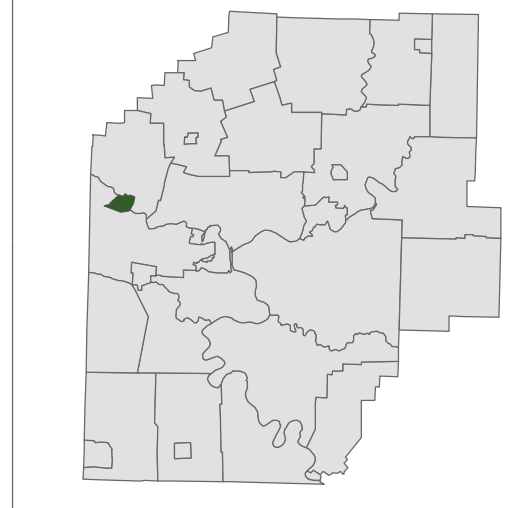
🚓 Police Stations

🏫 Schools



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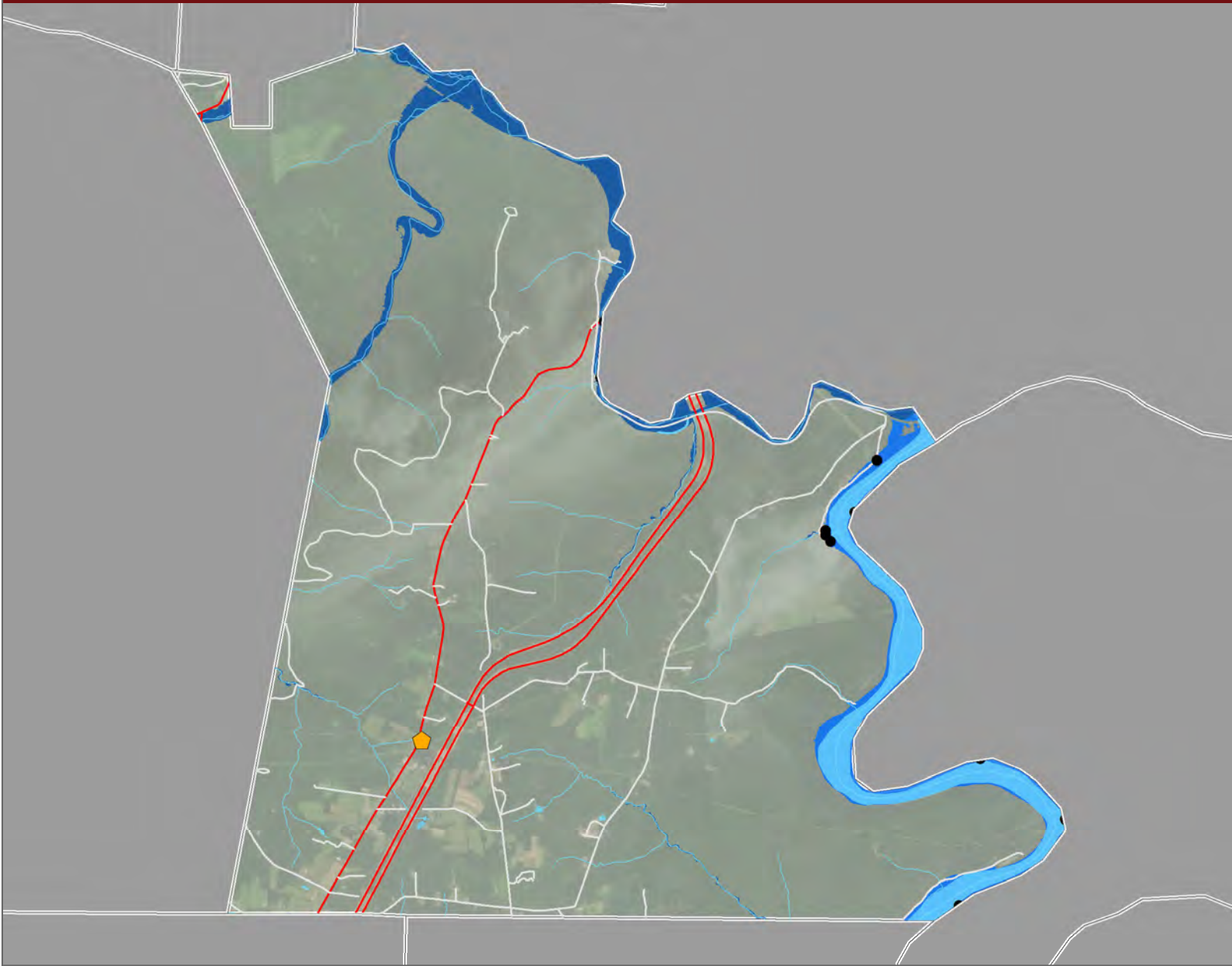
Michael Baker
INTERNATIONAL



Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020

VENANGO COUNTY HAZARD MITIGATION PLAN 2020:

Community Flood Vulnerability: Victory



LEGEND

● Structures in SFHA

■ Other Counties

— Local Roadways

— Major Roadways

— Rivers and Waterbodies

■ Other Municipalities

Flood Zone

■ A

■ AE

Critical Facilities

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🏠 Day Care Centers

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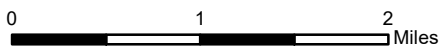
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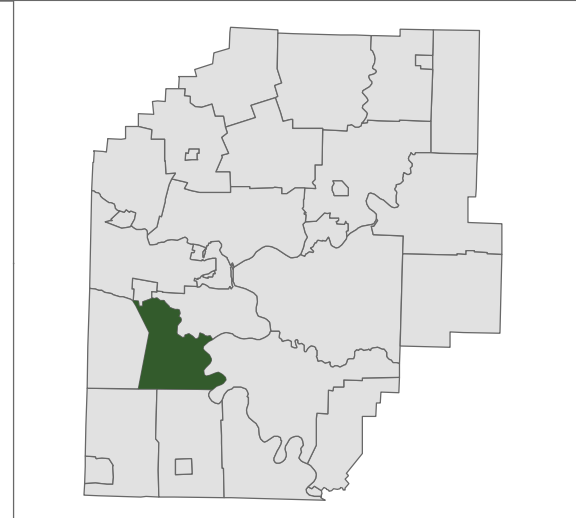
🚓 Police Stations

🚓 Schools



Michael Baker
INTERNATIONAL

Source: PennDOT, 2020; Venango County, 2020
FEMA, 2020
Projection: StatePlane Pennsylvania South
Map Date: August 26, 2020



Appendix E Critical Facilities

The following table lists all critical facilities in Venango County by type and municipality, as well as each facility’s vulnerability.

Name	Type	Address	Municipality	Flood	Wildfire	TRI Facility	Major Road	Rail	Airport	Landslide	Gas Transmission Pipeline
EAKIN	Airports	687 BUCKTAIL RD	Cranberry				Y		Y	Y	
FISHER	Airports	173 FISHER LN	Oakland		Y		Y		Y		
GREENVILLE MOUNTAIN	Airports	749 MOUNTAIN RD.	Cranberry			Y			Y	Y	
MC CAULEY'S	Airports	138 AIRPORT DR	Pinegrove						Y	Y	
SHRIVER	Airports	RT 3	Cherrytree			Y			Y		
THE FARM	Airports	2675 STONY HILL RD	Canal	Y				Y	Y		
TITUSVILLE	Airports	2572 SUITE 1 MEADVILLE ROAD	Cherrytree						Y		
UPMC NORTHWEST	Airports	200 LOTHROP ST	Cranberry						Y	Y	
VENANGO RGNL	Airports	VENANGO COUNTY COURT HOUSE	Franklin			Y			Y		
NEW CINGULAR WIRELESS PCS, LLC	Cell Towers	3880 STATE ROUTE 308	Clinton				Y			Y	
NEW CINGULAR WIRELESS PCS, LLC	Cell Towers	535 GIBB ROAD	Irwin				Y			Y	
NEW CINGULAR WIRELESS PCS, LLC	Cell Towers	717 HELPER ROAD	Rockland							Y	
NEW CINGULAR WIRELESS PCS, LLC	Cell Towers	1030 EAKIN RD	Scrubgrass				Y			Y	
PENNSYLVANIA RSA 1 LIMITED PARTNERSHIP	Cell Towers	1418 CLINTONVILLE RD	Barkeyville		Y		Y			Y	
PENNSYLVANIA RSA 1 LIMITED PARTNERSHIP	Cell Towers	1.5 MILES E OF I/S RT. 8 & RT. 308	Clinton			Y	Y			Y	
PENNSYLVANIA RSA 1 LIMITED PARTNERSHIP	Cell Towers	THOMAS ROAD	Cornplanter		Y	Y					
PENNSYLVANIA RSA 1 LIMITED PARTNERSHIP	Cell Towers	OLD RT 208 BOX 11	Scrubgrass			Y	Y			Y	
Human Services Complex	County Buildings	1 Dale Avenue	Franklin			Y	Y	Y			
Venango County Courthouse	County Buildings	1168 Liberty Street	Franklin			Y	Y	Y			
Venango County Courthouse Annex	County Buildings	1174 Elk Street	Franklin			Y	Y	Y			

Venango County 2020 Hazard Mitigation Plan Update

Name	Type	Address	Municipality	Flood	Wildfire	TRI Facility	Major Road	Rail	Airport	Landslide	Gas Transmission Pipeline
Venango County Prison	County Buildings	1186 Elk Street	Franklin			Y	Y	Y			
COMMUNITY CHRISTIAN DAY CARE	Day Care Centers	511 HILL STREET	Emlenton			Y	Y			Y	
CRANBERRY CHILD DVPT CTR	Day Care Centers	180 SALINA RD	Cranberry				Y			Y	
FRANKLIN CHILD DEVELOPMENT CTR.	Day Care Centers	1215 RAILROAD ST	Franklin			Y	Y				
FRANKLIN SCHOOL-AGE CHILD DEVELOPMENT CENTER	Day Care Centers	614 11TH ST	Franklin			Y	Y				
HASSON HEIGHTS CHILD DEVELOPMENT CENTER	Day Care Centers	255 PARK AVE	Cornplanter			Y	Y				
OIL CITY YMCA-ST.STEPHEN SCHOOL	Day Care Centers	214 REED ST	Oil City			Y	Y	Y			Y
THE SALVATION ARMY	Day Care Centers	737 ELK ST	Franklin			Y	Y				
YMCA LEARNING CENTER	Day Care Centers	111 W PARK ST	Franklin			Y	Y	Y			
YMCA YOUNGER DAYS PRE-SCHOOL CTR	Day Care Centers	316 W 1ST ST	Oil City			Y	Y	Y			Y
Venango County Emergency Management / 911 Center	Emergency Operation Centers	1052 Grandview Road	Cornplanter			Y	Y				
CHAPMANVILLE VOLUNTEER FIRE DEPARTMENT	Fire Stations	458 MEADVILLE ROAD	Plum				Y				
CHERRYTREE TOWNSHIP VOLUNTEER FIRE DEPARTMENT	Fire Stations	1311 CHERRYTREE ROAD	Cherrytree				Y				Y
CLINTONVILLE VOLUNTEER FIRE AND RELIEF ASSOCIATION	Fire Stations	501 EMLENTON STREET	Clintonville				Y			Y	
COOPERSTOWN VOLUNTEER FIRE DEPARTMENT STATION 5	Fire Stations	152 NORTH MAIN STREET	Cooperstown				Y				Y
CORNPLANTER VOLUNTEER FIRE DEPARTMENT	Fire Stations	1050 GRANDVIEW ROAD	Cornplanter			Y	Y				
EMLENTON FIRE DEPARTMENT STATION 55	Fire Stations	410 MAIN STREET	Emlenton			Y	Y			Y	
FRANKLIN FIRE DEPARTMENT	Fire Stations	430 13TH STREET	Franklin			Y	Y	Y			
OAKLAND TOWNSHIP VOLUNTEER FIRE DEPARTMENT STATION 13	Fire Stations	779 SPEER ROAD	Oakland				Y				
OIL CITY FIRE DEPARTMENT STATION 1 - HEADQUARTERS	Fire Stations	404 CENTRAL AVENUE	Oil City			Y	Y				Y

Venango County 2020 Hazard Mitigation Plan Update

Name	Type	Address	Municipality	Flood	Wildfire	TRI Facility	Major Road	Rail	Airport	Landslide	Gas Transmission Pipeline
OIL CITY FIRE DEPARTMENT STATION 3	Fire Stations	362 BISSELL AVENUE	Oil City			Y	Y				Y
PINEGROVE TOWNSHIP VOLUNTEER FIRE DEPARTMENT	Fire Stations	2369 STATE HIGHWAY 157	Pinegrove				Y			Y	
PLEASANTVILLE VOLUNTEER FIRE DEPARTMENT	Fire Stations	153 WEST STATE STREET	Pleasantville				Y				
POLK FIRE AND RESCUE INCORPORATED	Fire Stations	710 MAIN STREET	Polk				Y				
PRESIDENT TOWNSHIP VOLUNTEER FIRE DEPARTMENT	Fire Stations	3849 UNITED STATES HIGHWAY 62	President				Y				
RENO VOLUNTEER FIRE DEPARTMENT	Fire Stations	10 4TH STREET	Sugarcreek			Y	Y	Y			Y
ROCKLAND TOWNSHIP VOLUNTEER FIRE DEPARTMENT	Fire Stations	995 PITTSVILLE ROAD	Rockland				Y			Y	
ROCKY GROVE VOLUNTEER FIRE DEPARTMENT	Fire Stations	29 SHUFFSTALL STREET	Sugarcreek			Y	Y				
ROUSEVILLE VOLUNTEER FIRE DEPARTMENT	Fire Stations	7 MECHANIC STREET	Rouseville	Y		Y	Y	Y			
SANDYCREEK TOWNSHIP VOLUNTEER FIRE DEPARTMENT	Fire Stations	624 CONGRESS HILL ROAD	Sandycreek			Y					
SENECA VOLUNTEER FIRE DEPARTMENT	Fire Stations	3490 STATE HIGHWAY 257	Cranberry				Y				Y
UTICA VOLUNTEER FIRE COMPANY STATION 1	Fire Stations	3860 ACADEMY STREET	Utica				Y				
UTICA VOLUNTEER FIRE COMPANY STATION 2	Fire Stations	1689 OLD UNITED STATES HIGHWAY 322	Canal				Y				
VENANGO REGIONAL AIRPORT AIRCRAFT RESCUE AND FIRE FIGHTING	Fire Stations	1560 AIRPORT ROAD	Franklin			Y	Y				
Community Ambulance Services	Hospitals / Ambulance / EMS Stations	1010 Buffalo Street	Franklin			Y	Y				
UPMC NORTHWEST - SENECA	Hospitals / Ambulance / EMS Stations	100 FAIRFIELD DRIVE	Cranberry						Y	Y	
Allegheny Township Building	Municipal Buildings	15969 Tionesta Road	Allegheny				Y				
Barkeyville Borough Building	Municipal Buildings	5404 Pittsburgh Road	Barkeyville				Y			Y	
Canal Township Building	Municipal Buildings	1689 Old Route 322	Canal				Y				
Cherrytree Township Building	Municipal Buildings	1311 Cherrytree Road	Cherrytree				Y				Y

Venango County 2020 Hazard Mitigation Plan Update

Name	Type	Address	Municipality	Flood	Wildfire	TRI Facility	Major Road	Rail	Airport	Landslide	Gas Transmission Pipeline
City of Franklin Building	Municipal Buildings	430 13th Street	Franklin			Y	Y				
City of Oil City Building	Municipal Buildings	21 Seneca Street	Oil City			Y	Y	Y			
Clinton Township Building	Municipal Buildings	123 Donaldson Road	Clinton				Y			Y	
Clintonville Borough Building	Municipal Buildings	109 Franklin Street	Clintonville				Y			Y	
Cooperstown Borough Building	Municipal Buildings	142 Riverside Drive	Cooperstown	Y			Y				Y
Cornplanter Township Building	Municipal Buildings	136 Petroleum Center Road	Cornplanter				Y				
Cranberry Township Building	Municipal Buildings	3726 State Route 257	Cranberry				Y				Y
Emlenton Borough Building	Municipal Buildings	511 Hill Street	Emlenton			Y	Y			Y	
Frenchcreek Township Building	Municipal Buildings	4507 Georgetown Road	Frenchcreek				Y				
Irwin Township Building	Municipal Buildings	132 Irwin Road	Irwin				Y				
Jackson Township Building	Municipal Buildings	217 Creek Road	Jackson	Y							
Mineral Township Building	Municipal Buildings	1304 Raymilton Road	Mineral				Y				
Oakland Township Building	Municipal Buildings	2122 Creek Road	Oakland								
Oil Creek Township Building	Municipal Buildings	16835 Shreve Run Road	Oil Creek			Y	Y				
Pinegrove Township Building	Municipal Buildings	2758 State Route 157	Pinegrove				Y			Y	
Pleasantville Borough Building	Municipal Buildings	114 West State Street	Pleasantville				Y				
Plum Township Building	Municipal Buildings	2360 Sunville Road	Plum								
Polk Borough Building	Municipal Buildings	710 Main Street	Polk				Y				
President Township Building	Municipal Buildings	139 Henrys Bend Road	President				Y				
Richland Township Building	Municipal Buildings	1740 Richland-Nickelville Road	Richland				Y			Y	
Rockland Township Building	Municipal Buildings	1115 Rockland Township Road	Rockland							Y	
Rouseville Borough Building	Municipal Buildings	64 Main Street	Rouseville			Y	Y	Y			Y
Sandycreek Township Building	Municipal Buildings	878 Pone Lane	Sandycreek			Y	Y				
Scrubgrass Township Building	Municipal Buildings	173 McNany Road	Scrubgrass		Y					Y	
Sugarcreek Borough Building	Municipal Buildings	212 Fox Street	Sugarcreek		Y					Y	
Utica Borough Building	Municipal Buildings	3854 Academy Street	Utica				Y				

Venango County 2020 Hazard Mitigation Plan Update

Name	Type	Address	Municipality	Flood	Wildfire	TRI Facility	Major Road	Rail	Airport	Landslide	Gas Transmission Pipeline
Victory Township Building	Municipal Buildings	2794 Old Route 8	Victory				Y				
Kennerdell VFD	Nursing Homes	264 Main Street	Polk	Y			Y				Y
OAKWOOD HEIGHTS OF PRESBY SENIORCARE	Nursing Homes	10 VO-TECH DRIVE	Oil City			Y	Y				
OIL CITY HEALTHCARE AND REHAB CENTER	Nursing Homes	1293 GRANDVIEW ROAD	Cornplanter			Y	Y				
Polk Center	Nursing Homes	PO Box 94	Polk								
SUGAR CREEK STATION SKILLED NSG & REHAB	Nursing Homes	351 CAUSEWAY DRIVE	Sugarcreek				Y	Y			
Sugar Valley Lodge - Hickory Acres	Nursing Homes	190 Sugar Valley Lane	Franklin					Y			
Sugar Valley Lodge - Polk	Nursing Homes	196 Church Street	Polk				Y				Y
Sugar Valley Lodge - Silver Oaks	Nursing Homes	158 Sugar Valley Lane	Franklin					Y			
Sugar Valley Lodge - Wispering Pines	Nursing Homes	178 Sugar Valley Lane	Franklin					Y			
THE CARING PLACE	Nursing Homes	103 NORTH 13TH STREET	Franklin	Y		Y	Y	Y			
UPMC NORTHWEST TRANSITIONAL CARE UNIT	Nursing Homes	100 FAIRFIELD DRIVE	Cranberry						Y	Y	
City of Franklin Police Department	Police Stations	430 13th Street #B2	Franklin			Y	Y				
Emlenton Police Department	Police Stations	511 Hill Street	Emlenton			Y	Y			Y	
Oil City Police Department	Police Stations	21 Seneca Street	Oil City			Y	Y	Y			
Pennsylvania State Police -Franklin Barracks	Police Stations	6724 US 322	Cranberry				Y		Y	Y	
Polk Police Department	Police Stations	710 Main Street	Polk				Y				
Sugarcreek Borough Police Department	Police Stations	212 Fox Street	Sugarcreek			Y	Y				
Venango County Sheriffs Office	Police Stations	1168 Liberty Street, 1st Floor Courthouse	Franklin			Y	Y	Y			
CENTRAL EL SCH	Schools	1276 OTTER ST	Franklin			Y	Y	Y			
CHRISTIAN LIFE ACADEMY	Schools	224 S MAIN ST	Cranberry				Y			Y	Y
COAL VALLEY SCHOOL	Schools	253 BAILEY RD	Clinton				Y			Y	
CRANBERRY AREA JSHS	Schools	1 EDUCATION DR	Cranberry							Y	Y
CRANBERRY EL SCH	Schools	3 EDUCATION DR	Cranberry				Y			Y	Y
FAITH CHRISTIAN ACADEMY	Schools	235 HORSECREEK RD	Cranberry		Y					Y	Y
FRANKLIN AREA HS	Schools	246 PONE LN	Sandycreek			Y	Y				

Venango County 2020 Hazard Mitigation Plan Update

Name	Type	Address	Municipality	Flood	Wildfire	TRI Facility	Major Road	Rail	Airport	Landslide	Gas Transmission Pipeline
FRANKLIN AREA MS	Schools	246 PONE LN	Sandycreek			Y	Y				
Glad Run Luthern Services	Schools	3823 ACADEMY ST	Utica				Y				
HASSON HEIGHTS SCH	Schools	833 GRANDVIEW RD	Cornplanter			Y	Y				
MEADOW VIEW SCHOOL	Schools	775 FARREN SURRENA RD	Irwin				Y			Y	
OIL CITY AREA MS	Schools	8 LYNCH BLVD	Oil City			Y	Y				
OIL CITY SHS	Schools	10 LYNCH BLVD	Oil City			Y	Y				
PINEGROVE EL SCH	Schools	278 PINEGROVE SCHOOL RD	Pinegrove				Y			Y	Y
PLEASANTVILLE EL SCH	Schools	374 NORTH MAIN ST	Pleasantville				Y				
ROCKY GROVE JSHS	Schools	403 ROCKY GROVE AVE	Sugarcreek			Y	Y				
SANDYCREEK EL SCH	Schools	297 PONE LN	Sandycreek			Y	Y				
SEVENTH STREET SCH	Schools	102 WEST 7TH ST	Oil City			Y	Y				
SMEDLEY STREET SCH	Schools	310 SMEDLEY ST	Oil City			Y	Y				
ST PATRICK ELEMENTARY SCHOOL	Schools	952 BUFFALO ST	Franklin			Y	Y				
ST STEPHEN ELEMENTARY SCHOOL	Schools	214 REED ST	Oil City			Y	Y	Y			Y
VALLEY GROVE EL SCH	Schools	389 SUGARCREEK DR	Sugarcreek			Y	Y	Y			
VENANGO CATHOLIC HIGH SCHOOL	Schools	1505 W 1ST ST	Oil City			Y	Y	Y			
Venango College of Clarion University	Schools	1801 West 1st Street	Oil City			Y	Y				
VENANGO TECHNOLOGY CENTER	Schools	ONE VO TECH DR	Oil City			Y	Y				
VICTORY EL SCH	Schools	1819 GEORGETOWN RD	Irwin				Y			Y	

Appendix F Hazus Methodology and Results Report

The Venango County HMP used an enhanced Hazus run to model the 1% annual-chance-flood. Enhancements to the model focused on improving two aspects of the model:

- Demographic data
- Flood depth grids

DEMOGRAPHIC DATA

Hazus's databases by default use the 2000 Census data. However, Venango County's population is changing, as are the racial and economic characteristics of the County. Using up-to-date Census information allows the model to have more realistic results for how many people will be impacted by hazard events. The demographics updated include population, households, group quarters, male population by age, female population by age, and population by race at both the Census tract and block level. However, income, housing tenure by housing type, housing vacancy by housing type, age of structures, average cash rent, median home value, and educational enrollment were not updated at the Census tract level only because this data is not available at the Census block level geography. This demographic data matches the values used in the 2013 Standard State All-Hazard Mitigation Plan.

DEPTH GRIDS

The Venango County Hazus model used the 1%-annual-chance depth grid generated as a part of the County's most recent flood study (Effective January 16, 2014). The depth grid was provided by FEMA Region III via PASDA, Pennsylvania's geospatial data clearinghouse. As downloaded from PASDA, the project team determined that the cell values in the grid were inverted. Where the math should have been:

$$\text{Flood Depth} = \text{Water Surface Elevation} - \text{Ground Elevation}$$

the depth grid used:

$$\text{Flood Depth} = \text{Ground Elevation} - \text{Water Surface Elevation.}$$

The project team corrected the error and successfully imported the grid into Hazus for use as the 1%-annual-chance depth grid. This allows the HMP to leverage other flood risk products and FEMA investments.

The following pages show the Hazus Global Summary Report associated with this analysis.

Hazus-MH: Flood Event Report

Region Name: Venango HMP

Flood Scenario: 1 PCT HMP

Print Date: Monday, May 11, 2015

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social

Table of Contents

Section	Page #
General Description of the Region	3
Building Inventory	4
General Building Stock	
Essential Facility Inventory	
Flood Scenario Parameters	5
Building Damage	6
General Building Stock	
Essential Facilities Damage	
Induced Flood Damage	8
Debris Generation	
Social Impact	8
Shelter Requirements	
Economic Loss	9
Building-Related Losses	
Appendix A: County Listing for the Region	10
Appendix B: Regional Population and Building Value Data	11

General Description of the Region

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

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

- Pennsylvania

Note:

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

The geographical size of the region is 675 square miles and contains 2,382 census blocks. The region contains over 19 thousand households and has a total population of 47,672 people (2000 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 25,913 buildings in the region with a total building replacement value (excluding contents) of 4,145 million dollars (2006 dollars). Approximately 93.70% of the buildings (and 71.01% of the building value) are associated with residential housing.

General Building Stock

Hazus estimates that there are 25,913 buildings in the region which have an aggregate total replacement value of 4,145 million (2006 dollars). Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure (\$1000)	Percent of Total
Residential	2,943,141	71.0%
Commercial	677,874	16.4%
Industrial	191,390	4.6%
Agricultural	15,106	0.4%
Religion	115,247	2.8%
Government	57,327	1.4%
Education	144,555	3.5%
Total	4,144,640	100.00%

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure (\$1000)	Percent of Total
Residential	1,259,310	75.2%
Commercial	194,345	11.6%
Industrial	91,522	5.5%
Agricultural	8,845	0.5%
Religion	40,736	2.4%
Government	20,757	1.2%
Education	58,602	3.5%
Total	1,674,117	100.00%

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 173 beds. There are 34 schools, 24 fire stations, 6 police stations and 1 emergency operation center.

Flood Scenario Parameters

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

Study Region Name:	Venango HMP
Scenario Name:	1 PCT HMP
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

General Building Stock Damage

Hazus estimates that about 50 buildings will be at least moderately damaged. This is over 34% of the total number of buildings in the scenario. There are an estimated 30 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5.3 of the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Table 3: Expected Building Damage by Occupancy

Occupancy	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	0	0.00	0	0.00	0	0.00	11	22.00	9	18.00	30	60.00
Total	0		0		0		11		9		30	

Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		Substantially	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
ManufHousing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	6	100.00
Masonry	0	0.00	0	0.00	0	0.00	2	25.00	1	12.50	5	62.50
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	0	0.00	0	0.00	0	0.00	9	25.00	8	22.22	19	52.78

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 173 hospital beds available for use. On the day of the scenario flood event, the model estimates that 173 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate	At Least Substantial	Loss of Use
Fire Stations	24	1	0	1
Hospitals	2	0	0	0
Police Stations	6	0	0	0
Schools	34	1	0	1

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

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

Induced Flood Damage

Debris Generation

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

The model estimates that a total of 10,142 tons of debris will be generated. Of the total amount, Finishes comprises 34% of the total, Structure comprises 36% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 406 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 1,319 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 2,536 people (out of a total population of 47,672) will seek temporary shelter in public shelters.

Economic Loss

The total economic loss estimated for the flood is 72.84 million dollars, which represents 4.35 % of the total replacement value of the scenario buildings.

Building-Related Losses

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

The total building-related losses were 72.25 million dollars. 1% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 46.40% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
<u>Building Loss</u>						
	Building	21.44	5.80	2.27	1.49	31.00
	Content	12.33	15.56	4.88	7.39	40.16
	Inventory	0.00	0.26	0.80	0.03	1.09
	Subtotal	33.77	21.62	7.95	8.91	72.25
<u>Business Interruption</u>						
	Income	0.01	0.07	0.00	0.02	0.09
	Relocation	0.01	0.01	0.00	0.01	0.03
	Rental Income	0.00	0.01	0.00	0.00	0.01
	Wage	0.01	0.09	0.00	0.35	0.46
	Subtotal	0.03	0.18	0.00	0.38	0.59
ALL	Total	33.80	21.81	7.95	9.28	72.84

Appendix A: County Listing for the Region

Pennsylvania

- Venango

Appendix B: Regional Population and Building Value Data

	Building Value (thousands of dollars)			Total
	Population	Residential	Non-Residential	
Pennsylvania				
Venango	47,672	2,943,141	1,201,499	4,144,640
Total	47,672	2,943,141	1,201,499	4,144,640
Total Study Region	47,672	2,943,141	1,201,499	4,144,640

4.

Appendix G Dam Failure Profile



4.3.11. Dam Failure

4.3.11.1. Location and Extent

A dam is a barrier across flowing water that obstructs, directs, or slows down water flow. Dams provide benefits such as flood protection, power generation, drinking water, irrigation, and recreation. Failure of these structures results in an uncontrolled release of impounded water. Failures are relatively rare, but immense damage and loss of life is possible in downstream communities when such events occur. Aging infrastructure, hydrologic, hydraulic and geologic characteristics, population growth, and design and maintenance practices should be considered when assessing dam failure hazards.

Dam failures most often occur during or after a massive rainfall, flooding, or spring thaws, sometimes with little to no warning. Depending on the size of the water body where the dam is constructed, water contributions may come from distant upstream locations.

Today there are approximately 3,200 dams and reservoirs throughout Pennsylvania (Pennsylvania Department of Environmental Protection, 2009). According to the PA DEP, there are a total of 8 dams in Venango County, both publicly and privately owned. These 8 dams include *high-hazard*, *significant*, and *low-hazard potential* ratings as defined by the Pennsylvania Code (see Section 4.3.11.5).

Dams that meet the definition of a 'High Hazard Potential Dam' (HHPD) are a subset of the dams managed by the Pennsylvania DEP's Dam Safety Program. Following FEMA's definition, a HHPD meets the following guidelines:

- Dam is located in a state with a state dam safety program
- Dam is classified as "high hazard potential" by the state dam safety program
- Dam has an Emergency Action Plan (EAP) approved by the state dam safety program
- Dam fails to meet minimum state dam safety standards and poses an unacceptable risk to the public (as determined by the state)
- Dam is not:
 - Federally owned,
 - A hydroelectric dam licensed by the FERC, or
 - Built under the authority of the Secretary of Agriculture.

The Pennsylvania Code classifies dams based on impoundment storage, dam height, loss of life, and economic loss (Tables 4.3.11-2 and 4.3.11-3). Class (A, B, or C) depicts size and

Category (1, 2, 3, or 4) defines Hazard Potential. The Pennsylvania DEP's Dam Safety Program considers all dams in Categories 1 and 2 to be "high hazard potential". There are two dams regulated by the DEP in the County are classified as high hazard potential dams requiring an Emergency Action Plan (EAP):

Two Mile Run Dam: This is a B-1 dam owned by Venango County is located at the southern end of Justus Lake in Sugarcreek Borough. In the event of a failure of the Two Mile Run Dam, 1500 persons would be vulnerable.

Clarion University - Venango Campus West End Dam: This C1 dam is owned by Clarion University and located in Oil City. In the event of a failure of the Clarion U. Venango Campus West End Dam zero persons would be vulnerable.

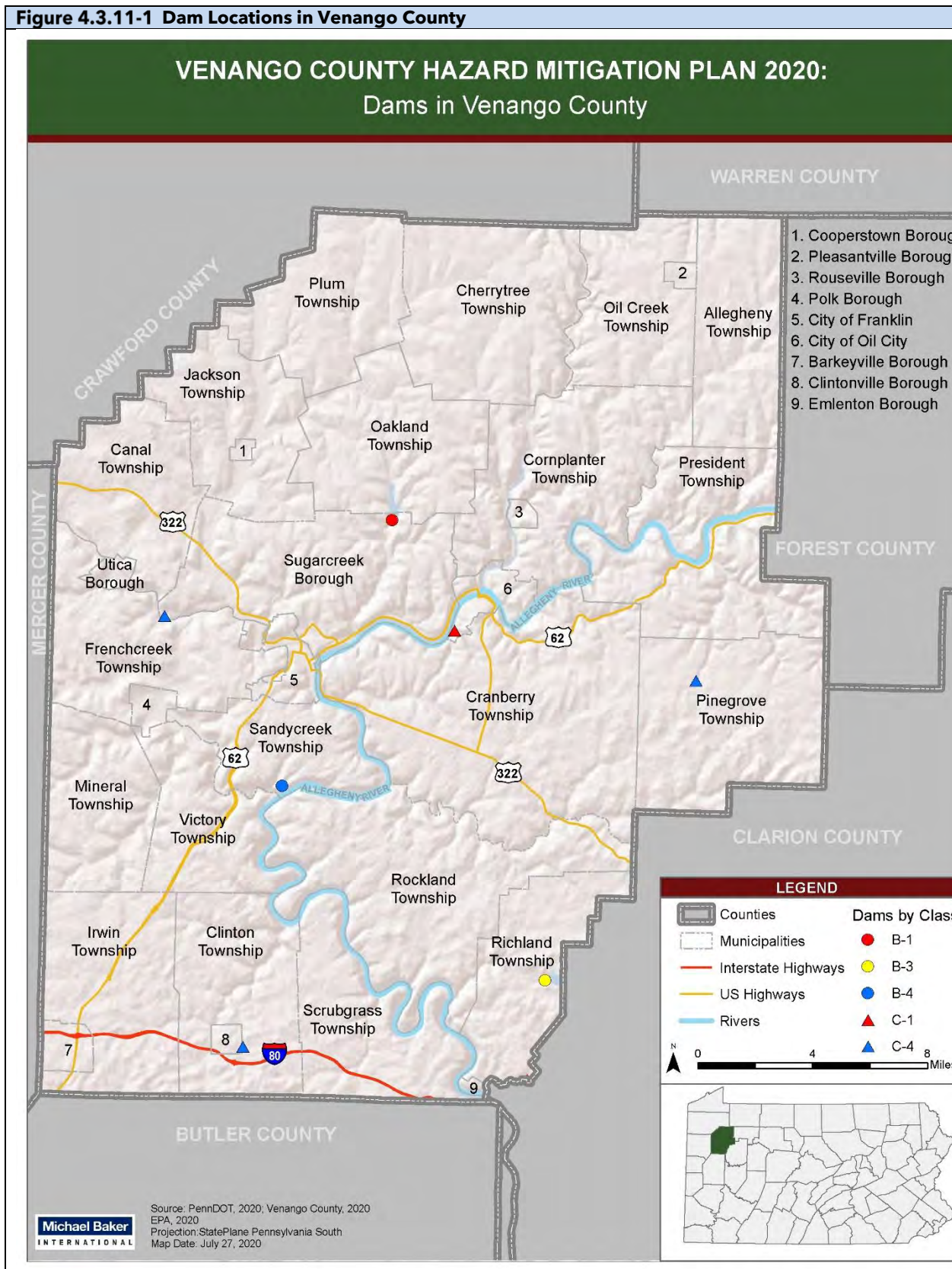
Table 4.3.11-1 provides information, including the name, classification, owner, and location of all dams in Venango County. Figure 4.3.11-1 below shows the locations and classifications of dams within Venango County. This map does not illustrate digitized inundation areas, as this data was unavailable for Venango County at the time of this plan

Venango County 2020 Hazard Mitigation Plan Update

Table 4.3.11-1 VENANGO COUNTY DAMS					
DAM #	DAM NAME	STREAM	CLASS	OWNER	MUNICIPALITY
61-003	CARSON	PORCUPINE CREEK	C-4	TERRY LEE & KRISTINE J. CARSON	PINEGROVE TOWNSHIP
61-024	CLARION U.- VENANGO CAMPUS WEST END	TR ALLEGHENY RIVER	C-1	CLARION UNIVERSITY OF PA	OIL CITY
61-018	CULBERTSON	TR FRENCH CREEK	C-4	TIMOTHY R. CULBERTSON	SUGARCREEK BOROUGH
61-023	FT CHARLES YOUNG	TR ALLEGHENY RIVER	B-4	VISIONQUEST, INC.	SANDYCREEK TOWNSHIP
61-020	KAHLE LAKE	MILL CREEK	B-3	PA FISH & BOAT COMMISSION	RICHLAND TOWNSHIP
*10-127	*SCHULTIES	UNT N BRANCH SLIPPERY ROCK CRK	C-1	JAMES SCHULTIES	MERCER TOWNSHIP
61-017	SPRING RUN	SCRUBGRASS CREEK	C-4	EDWARD M. & DEBORAH C. PETRICCA	CLINTON TOWNSHIP
61-019	TWO MILE RUN	TWO MILE RUN	B-1	VENANGO COUNTY COMMISSIONERS	SUGARCREEK BOROUGH

Rows highlighted in red are high hazard potential dams.
 * Indicates Dam located outside of the county and not pictured in Figure 4.3.11-1

Figure 4.3.11-1 Dam Locations in Venango County



4.3.11.2. Range of Magnitude

Dam failures can pose a serious threat to communities located downstream from major dams. The impact of a dam failure is dependent on dam and reservoir characteristics and the amount and distance of population or assets located downstream. Catastrophic failures are characterized by the sudden, rapid, and uncontrolled release of impounded water or any other fluid or semi-fluid from a dammed impoundment or water body. The DEP defines a high hazard dam as “any dam so located as to endanger populated areas downstream by its failure” [Def. added May 16, 1985, P.L.32, No. 15]. High hazard dams receive two inspections each year - once by a professional engineer on behalf of the owner and once by a DEP inspector (PADEP, 2008).

Dam failures may or may not leave enough time for evacuation of people and property, depending on their abruptness. Seepage in earth dams usually develop gradually, and, if the embankment damage is detected early, downstream residents have at least a few hours or days to evacuate. Failures of concrete or masonry dams tend to occur suddenly, sending a wall of water and debris down the valley at more than 100 miles per hour. Survival would be a matter of having the good fortune not to be in the flood path at the time of the break. Dam failures due to overtopping of a dam normally give sufficient lead time for evacuation. Dam failures may also be intentional, as their potential to cause serious destruction may make them a potential terrorism target.

The environmental impacts of dam failures can be devastating. Depending on the size of the event and number or type structures located in the inundation area, water contamination from hazardous material facilities could occur. Water velocities could result in total destruction of trees and other vegetation. Severe erosion both during and after the failure event are probable. Additionally, if the dam’s purpose is water supply, downstream communities will lose access to potable water. In addition, all of the environmental impacts expected during a flood are possible during a dam failure (see Section 4.3.2).

The worst dam failure event in Pennsylvania and all of the U.S. is the Johnstown Flood of 1889. The notorious Johnstown Flood is one of America’s best-known disasters. The disaster occurred when an unusually large amount of rain fell over western Pennsylvania in May of 1889. Consequently, the earthen South Fork Dam breached on May 31, 1889 and released 20 million tons of water into the Conemaugh River Valley, Cambria County. As the water rushed through the valley it swept away part of the community of South Fork and the communities of Mineral Point, Woodvale, Franklin, East Conemaugh, and finally, Johnstown. The dam had been known to be leaking and gave way when it was overtopped by the floodwaters. The narrow valley and the dense build-up along the Conemaugh floodplain downstream from the dam aggravated the flood catastrophe. When the flood was over, 16,000 people were homeless and 2,209 were dead.

The worst-case scenario for dam failure in Venango County would occur at the dam with the highest hazard potential, which is Two Mile Run dam in Sugarcreek Borough. As seen in

Table 4.3.11-4, failure of this dam has the potential for substantial loss of life and excessive economic loss.

4.3.11.3. Past Occurrence

There have been no known dam failures in Venango County. There have been three significant dam failures in Pennsylvania: the Johnstown Flood of 1889, discussed above, the Bayliss Dam break in 1911 in Potter County, and the 1977 failure of the Laurel Run Dam in Johnstown, PA.

4.3.11.4. Future Occurrence

Provided that adequate engineering and maintenance measures are in place, high hazard dam failures are *unlikely* in Venango County, according to the Risk Factor criteria (See Section 4.1). The DEP inventories and generally regulates all dams that meet one of the following criteria (PADEP, 2008):

- Impound water from a drainage area of greater than 100 acres;
- Have a maximum water depth greater than 15 feet;
- Have a maximum storage capacity of 50 acre-feet or greater.

The construction, operation, maintenance, modification and abandonment of dams regulated by the DEP is reviewed and monitored by the Department's Program of Dam Safety. Dams are evaluated based on categories such as slope stability, undermining seepage and spillway adequacy. The presence of structural integrity and inspection programs significantly reduces the potential for major dam failure events to occur. Minor dam failures are more common since low hazard structures are minimally regulated, but the impact of these events is minimal.

Dam Emergency Action Plans drafted in accordance with the Federal Guidelines for Dam Safety identify the risk related information include the inundation area and the time lapse between failure and flooding reaching specific destinations downstream. These plans are also reviewed and approved by PEMA.

4.3.11.5. Vulnerability Assessment

Dam vulnerability is defined by identifying the location of dams having high hazard potential, as defined by The Pennsylvania Code (§ 105.91 Classification of dams and reservoirs). Specifically, those dams in Categories 1 and 2 in which loss of life is possible should a failure occur and/or where economic loss would be excessive to extensive for residential, commercial, or agricultural resources and would cause substantial public inconvenience. Notably, in 2011, the provisions for dam hazard potential classification changed; a fourth category (Category 4) of dam hazard was added to capture instances where there might be damage to property but not loss of human life.

Property and populations located downstream from any dam are vulnerable to dam failure. The Pennsylvania Code classifies dams based on impoundment storage, dam height, loss of life, and economic loss (Table 4.3.11.-3 and 4.3.11-4). Vulnerability is defined by identifying

the location of dams having high hazard potential, as defined by The Pennsylvania Code (§ 105.91 Classification of dams and reservoirs). Specifically, Category 1 dams were identified, indicating that the loss of life would be substantial or that economic loss would be excessive to extensive residential, commercial, agricultural and cause substantial public inconvenience. Notably, in 2011, the provisions for dam hazard potential classification changed; a fourth category of dam was added to capture instances where there might be damage to property but not loss of human life.

Table 4.3.11-2 Dam Size Classification (The Pennsylvania Code).

CLASS	IMPOUNDMENT STORAGE (acre feet)	DAM HEIGHT (feet)
A	Equal to or greater than 50,000	Equal to or greater than 100
B	Less than 50,000 but greater than 1000	Less than 100 but greater than 40
C	Equal to or less than 1000	Equal to or less than 40

Table 4.3.11-3 Dam Hazard Potential Classification- Extent of Development (The Pennsylvania Code, amended 2011).

CATEGORY	LOSS OF LIFE	ECONOMIC LOSS
1	Substantial (Numerous homes or small businesses or a large business or school)	Excessive such as extensive residential, commercial, or agricultural damage, or substantial public inconvenience.
2	Few (A small number of homes or small businesses.)	Appreciable such as limited residential, commercial, or agricultural damage, or moderate public inconvenience.
3	None expected (no permanent structures for human habitation or employment.)	Significant damage to private or public property and short duration public inconvenience such as damage to storage facilities or loss of critical stream crossings.
4	None expected (no permanent structures for human habitation or employment.)	Minimal damage to private or public property and no significant public inconvenience.

Flood inundation studies for dams are required as part of the development of Emergency Action Plans (EAPs). EAPs are required for category 1 and category 2 dams. According to DEP, dam permittees are responsible for having the dam breach analysis and inundation mapping done. Frequently, inundation areas are submitted as both printed and electronic images, but not as a GIS layer. The extent of downstream inundation areas vary based on dam and reservoir characteristics. In addition, while dams of any size may fail and cause damage, smaller dams do not have inundation areas delineated and reported to the DEP. In addition, the digitalization of dam inundation areas is a continuously evolving dataset being developed by DEP’s Office of Dam Safety and at the time of this plan, the dataset for Venango County had yet to be digitized. Without this dataset, a full vulnerability assessment that includes an analysis of the vulnerable structures within the dam inundation area cannot be completed at this time.

However, the total vulnerable population downstream for each dam is assessed by DEP and provided within EAPs. The vulnerable population includes all populations at risk for dam failure, which can cross municipal and county boundaries. Table 4.3.11-4 provides the population vulnerable to high-hazard dam failure for all dams in Venango County. With a vulnerable population of 1,500 people, Two-Mile Run in Sugarcreek Borough has the highest population downstream. Given size of the impacted population in the event of dam failure, Two Mile Run have the potential to be the most damaging in terms of loss of human life.

Table 4.3.11-4 Vulnerable population to dam failure for dams in Venango County (PA DEP, 2014)

NAME	COMMUNITY	VULNERABLE POPULATION
SPRING RUN	CLINTON TOWNSHIP	0
SCHULTIES	MERCER TOWNSHIP	0
CLARION U.-VENANGO CAMPUS WEST END	OIL CITY	0
CARSON	PINEGROVE TOWNSHIP	0
KAHLE LAKE	RICHLAND TOWNSHIP	0
FT CHARLES YOUNG	SANDYCREEK TOWNSHIP	0
CULBERTSON	SUGARCREEK BOROUGH	0
TWO MILE RUN	SUGARCREEK BOROUGH	1,500
TOTAL		1,500

High Hazard Potential Dams, like the Two Mile Run Dam and the Clarion University Venango Campus West End Dam, are a priority when assigning funds for mitigation projects. Given the vulnerable population living in the Two Mile Run Dam inundation area, mitigation projects aimed at addressing that dam will be the priority for the County.