

3.0 MITIGATION STRATEGIES

As the hazard mitigation planning team in Preble County developed mitigation goals and strategies, the intent was to address the identified risks and vulnerabilities for the county and each jurisdiction. As a result, the mitigation strategies in this plan are more comprehensive than those developed in the previous plan.

3.1 STATUS OF PAST MITIGATION EFFORTS

The 2011 Preble County Hazard Mitigation Plan identified mitigation actions for the county and specific jurisdictions that would reduce vulnerability across Preble County. As part of the planning process, the planning team reviewed these 2011 actions and determined the status of each. Table 3-1 identifies each action included in the 2011 plan and its current status. Strategies identified as 'Not Complete' are incorporated into the 2018 plan.

Table 3-1: 2011 Preble County Mitigation Actions

Mitigation Action	Jurisdiction	Status
Provide a reverse notification system.	Preble County	Not Complete
Install generator (with shelter) for three antennas located at the water tower.	Eaton	Delete
Install tornado warning siren.	New Paris	Not Complete
	Lewisburg	Complete
	West Alexandria	Complete
	West Elkton	Complete
	Gasper Township	Not Complete
Install 50 emergency generators at shelters within Preble County.	Preble County	Delete
Additional cell phone sites.	Preble County	Delete
Install a series of dam levies along Four Mile, Seven Mile, and Twin Creeks for flood control.	Preble County	Delete
Clean areas of Whitewater River by treatment plant.	New Paris	Delete
Install emergency generator in the Northwest Fire and Rescue Station (also for Jefferson and Jackson Townships)	New Paris	Complete
Clean out two drainage ditches for better water flow to prevent flooding.	Camden	Complete
Clean/repair applicable storm sewer lines.	Camden	Complete
Construct two shelters/safe rooms for citizen protection at the old football field and the waterworks plant.	Camden	Delete

Mitigation Action	Jurisdiction	Status
Obtain backup generators for power loss to run well pumps and lighting.	Gratis	Delete
Replace old warning siren with battery backup.	Gratis	Delete
Construct a shelter/safe room for citizen protection.	Gratis	Delete
Construct a shelter/safe room for citizen protection.	West Elkton	Delete
Clean out the creek at the south end of town.	Eldorado	Complete
Install a backup power generator at the firehouse, water/sewer plants, school, etc.	Lewisburg	Complete in some locations; Not Complete at sewer plant.
Install a tornado warning siren with battery backup.	Verona	Complete
Construct a shelter/safe room with backup power generator for citizen protection.	Somers Township	Delete
Install four tornado warning sirens with battery backup.	Dixon Township Jackson Township	Delete
Install a tornado warning siren with battery backup.	Gratis Township Jefferson Township New Paris	Complete Delete Delete
Install two backup power generators at churches in Morning Sun and Fairhaven.	Israel Township	Delete
Install an earthen levy on the east bank of Twin Creek from US Route 35 north to Lexington Road.	Twin Township	Delete
Install two tornado warning sirens with battery backup.	Twin Township	Delete
Purchase of brush chipper to be utilized to chip brush and debris following a wind event.	West Alexandria Lewisburg	Not Complete Not Complete
Install backup generator in township building.	Washington Township	Not Complete
Clean out and straighten Paint Creek in the area owned by ODNR from Longman Road to Camden Sugar Valley Road.	Gasper Township	Delete
Update, upgrade, and replace all five existing tornado sirens.	Eaton	Complete
Update, upgrade, and replace generator in city building/dispatch center.	Eaton	Complete
Install generator in township building.	Jefferson Township	Delete
Install generator in village offices.	West Manchester	Delete

Mitigation Action	Jurisdiction	Status
New cell tower in hilly area northeast of New Paris.	Jefferson Township	Delete
Ditch work and tree removal from the East Fork of the Whitewater River at State Route 121 and Guy Murray Road, south on Guy Murray to the bridge at 6599 Guy Murray Road.	Jefferson Township	Complete
Upgrade current tornado siren to enable Preble County Dispatch to activate.	New Paris	Delete
Provide backup power for village office and police department. Village has the generator.	New Paris	Complete
Install additional weather alert system.	New Paris	Delete
Ditch work and tree removal from the East Fork of the Whitewater River at State Route 121 and Wolfrey Road.	Jefferson Township	Delete
Install backup generator at the firehouse and electric office building.	Eldorado	Complete at fire station; Not Complete at utility office.
Obtain two-way radios for internal communications within village.	Eldorado	Not Complete
Install weather alert siren and battery backup near Knollwood Subdivision.	Harrison Township	Complete
Install weather alert siren and battery backup near West Sonora.	Harrison Township	Complete
Install 240 Generator (10KW) at water plant.	Verona	Delete
Install a three-phase generator (45 KW) at sewer plant.	Verona	Delete

3.2 RISK PRIORITIES

The Hazard Identification and Risk Assessment (HIRA) explains the identification of hazards and evaluation of risks in Preble County. It considers numerous potential natural and non-natural hazards, cites the historical frequency and severity of past incidents, and considers the damages that would occur should that type incident strike a jurisdiction within Preble County. After completing this assessment, the planning team was asked to rank proposed mitigation actions from most important to least important. This rank was based on potential damage amounts, placing a higher priority on incidents that required the most costly and extensive repairs, or that reasonably include the loss of life. Participants considered which strategies would benefit the greatest number of people and considered which would be funded by general budgets and those that would require special funding. In the end, participants felt that the mitigation actions, or strategies, that would lessen or prevent damages caused by a jurisdiction's highest concerning hazard should be ranked as most important. Each community and the county as a

whole had already spent significant time determining which hazards were most damaging and most costly and which were mostly an inconvenience. They used a variety of variables to rank the hazards, including possibility, probability, frequency, magnitude, warning time, response duration, and ultimate cost in terms of dollars and lives and felt these results should provide the basis for ranking strategies.

The planning team decided that strategies would be ranked in accordance with the hazard rank. For example, if a community ranked flood as their most concerning hazard, then all the flood strategies should rank highest. Within the set of strategies for flood, participants felt that, in general, actions that were least expensive in terms of dollars would be the most feasible to complete; therefore, the least expensive should rank highest within hazard groups. If cost was not a significant factor, they felt that feasibility in completing the strategy and ease of completion should contribute to high-ranking designations. In general, they felt the most concerning hazards outranked others; the least expensive actions outranked the more expensive, unless funding for a strategy was already identified and guaranteed. The more feasible the strategy to achieve, the higher it should rank.

Communities across the county expressed a strong desire to complete the strategies in the plan. In many cases, collaboration between multiple jurisdictions would give the strategies an advantage and garner more attention. For example, as the rural townships work with the small villages to improve first responder communications, they realized a joint approach would be most successful and provide the most options. They viewed creating a culture of collaboration as a non-monetary benefit of strategy implementation.

The cost of significant mitigation projects is a concern for the small villages as they prioritized strategies. With eight villages of under 2,000 residents and one slightly over, operational budgets are limited. None of the villages have a year-end surplus; some have had to depend on the county to support disaster clean-up efforts in past incidents. Although the mitigation plan would establish eligibility for grant funding, participants were well aware that grants are usually awarded based upon cost-benefit analysis to communities where a large number of citizens are positively impacted. With such low populations, it would be nearly impossible to be awarded grant funds in this competitive arena. Even the City of Eaton with a much larger population felt they are not large enough to be highly competitive in a widely utilized grant program.

Participants were concerned that the ranking activity would mean strategies were required to be implemented in the order in which prioritized and they were concerned that it was impossible to foresee circumstances, incidents, and financial resource availability. They were concerned that a rigid prioritization might become an obstacle in strategy implementation over the years, forcing feasible strategies to be delayed because a higher-ranking strategy could not be funded at that particular time. They were assured by the EMA staff and the Contractor that this was not the case and strategies could be implemented as jurisdictions were able to do so; the ranking would allow them to place more energy in developing those that ranked highest but would certainly not preclude the implementation of the lower ranked strategies in an out-of-order progression.

Using the methodology chosen by the participants, the strategies were ranked as the Contractor wrote that section of the plan, paying special attention to meeting notes for guidance. Participants were asked to pay special attention to the ranking during the review period and to provide feedback if they felt the order was not indicative of local priorities. As the plan sections were developed, they were shared with planning participants to ensure they had more than adequate time to review the prioritization.

3.3 MITIGATION GOALS AND STRATEGIES

Planning Team members, jurisdiction representatives, and stakeholders worked collaboratively to develop appropriate mitigation goals and strategies for Preble County and the incorporated jurisdictions. This section identifies the mitigation goals and strategies along with the priority level, action type, lead agency, timeline, and potential funding source assigned to each.

Strategy Descriptors

Each strategy developed by the jurisdictions is assigned a priority, action type, lead agency, timeline, and potential funding source. These elements are described below. While the specific information in this chart may change prior to the implementation of a strategy, the exercise of assigning timelines required stakeholders to evaluate current resources to determine how to best reduce the effects of disasters. Public information campaigns, plan enhancements, and the establishment of emergency protective measures were the highest priority and generally not significantly expensive. Upgrading communication and notification/warning systems was second because the acquisition of equipment involves procurement and budget process, therefore taking at least one budget year. Collaboration with other groups and comprehensive actions, due to the need to build trust and association between groups, would take longer to accomplish because it involved a two-phase action plan. Last on the completion list were structural project due to design time requirements, budget needs, and dependence upon outside funding sources through applications. The priorities of life safety, incident containment, and property conservation combined with budget and procurement needs were major factors in determining the priority of goals and strategies.

As jurisdictions created strategies to reduce the damage and loss from disasters, the following guidelines were used in describing types of goals and strategies, and in determining what strategies each jurisdiction should develop. Each jurisdiction discussed who would be responsible for championing mitigation efforts, how the work to do that would be funded, how specific actions or projects would be funded, in what order the jurisdiction would address potential actions.

Jurisdictions decided that the mayor or administrative officer (city manager or village administrator) of the municipalities should be the champion of mitigation activities and that the EMA Director should be the county's champion. This would most consistently allow for ongoing discussion and evaluation of progress, problems, or modifications. It would allow for incorporation of mitigation into other community planning efforts because the EMA Director,

mayors and administrative officers when one exists are a part of those activities. Each community’s prioritization of hazards would guide the order in which strategies were undertaken. This would allow for work to be beneficial and cost-effective. By establishing and maintaining this focus on strategy completion, the availability of grant funding and special programs to pay for actions could be monitored and communicated quite easily between the EMA Director and the mayor or administrative officer of the municipality.

Table 3-2: Strategy Descriptors

Element	Definition
<i>Priority</i>	<p>Each jurisdiction has ranked all hazards according to their jurisdiction’s priorities; that result is expressed in a table in the HIRA under each municipal vulnerability statement. In this section of the mitigation plan, all goals and strategies are expressed alphabetically according to hazard for ease of comparison and review and use of the plan. The jurisdictions will address strategies in order of priorities as established in their individual jurisdiction. If the #1 hazard in a community is flood, then the flood strategies will be addressed as the highest priority.</p>
<i>Action Type</i>	<p>The kind of activity described in the strategies Includes these types of actions:</p> <ul style="list-style-type: none"> • NR: Natural Resource Protection – Reduce the impacts of natural hazard by preserving or restoring natural areas and their mitigation functions • PR: Prevention – Avoid hazard problems or stop impact from worsening • PP: Property Protection – Protect structures by modifying or strengthening building to withstand impact • ES: Emergency Services – Provision of and sustainment of capabilities to respond to an emergency with life-saving and sustaining ability. This lessens casualty due to rapid response to neutralize the threat or contain the situation. • PI: Public Information – Advise the public about hazards, hazardous areas, and mitigation techniques to protect people and property • SE: Structurally Engineered Project – Lessen the impact of a hazard by modifying the environment or progression of the hazard event through designed and engineered projects
<i>Lead Agency</i>	<p>The entity charged with championing the strategy and ensuring that jurisdiction officials look for opportunities to complete the strategy over the five-year planning cycle. This agency may not have the authority or power to make a strategy into a project, nor would they necessarily be responsible for project oversight or completion should the strategy develop into an actionable and funded project. Rather, the lead agency is responsible for coordinating the overall effort and plays a key role in championing the project or, by default, is the entity most appropriate to lead project development at the initial stage. If the strategy becomes a feasible project, this agency is not the only entity that would be involved in its execution, nor is it the only entity involved in keeping the strategy on the jurisdiction’s radar. For accountability purposes, the strategy is assigned to a single entity. When the strategy becomes a project, the jurisdiction would identify a project manager who may or may not represent the lead agency assigned in this plan.</p>
<i>Timeline</i>	<p>The timeframe in which a mitigation strategy could realistically be implemented. The actual time frame may vary from what is described in this plan, depending on funding, grant opportunities, or changes in priorities as other critical activities are adjusted to meet evolving community needs. At the time of plan development, these timelines fit logically within each jurisdiction’s resources and support programs.</p>

Element	Definition
<i>Funding Source</i>	<p>The potential funding source(s) for the strategy. Potential funding sources include:</p> <ul style="list-style-type: none"> • GB: General Budget: these strategies will be funded by the operational annual budget of the jurisdiction • GP: Grant Program: the strategies will be funded by a grant program that cannot be pre-identified but may include any of the following grant programs: CDBG – Community Development Block Grants FMA – Flood Mitigation Assistance Grant PDM – Pre-Disaster Mitigation Grant HMGP – Hazard Mitigation Grant Program SRL – Severe Repetitive Loss Grant RFC – Repetitive Flood Claims Program COG – Clean Ohio Grant • ICC – Increased Cost of Compliance (including rate increases or premiums or specific assessments) • LOC – Local Funds – including local sources of funding, generally through a line item in a general budget • ST – State Funds - including special programs and allotments or allowances not administered through a federal grant program • Other (including private funds and non-governmental agency funding)

3.3.1 Preble County

A large portion of Preble County is unincorporated. Rural areas are not densely populated and include the county’s farms and farmsteads. There are a few housing subdivisions, unincorporated neighborhoods, and postal designations across this area. In most villages, houses extend beyond the incorporation limits, and those residences are considered part of the rural community or the “county”. There are businesses in these unincorporated areas, often inside designated commercial or business zones but outside a municipal boundary.

Many of the rural roads are maintained by the Preble County Engineer and the ditches are, in some cases, part of the county’s ditch maintenance program. However, some roads and waterways are maintained by a township or a homeowners’ association. Inside some designated subdivisions, like Lakengren, there is a homeowners’ association that acts in some ways like a unit of government. While they do not collect tax money to do so, they provide basic services for residents like snow plowing, road maintenance, and ditch cleaning.

Law enforcement is provided by the Preble County Sheriff in all rural areas. These residents work with the Preble County EMA and mitigation efforts are coordinated through the Preble County Commissioners by the EMA Director. In most areas of governance, Preble County is responsible for providing services through coordination by the Preble County Commissioners.

The following mitigation goals and strategies are those that affect these rural areas of the county. They also include those mitigation efforts that are intended to be undertaken by county government as a countywide effort because, by nature, the strategies fall within the county’s departmental roles and responsibilities. Some of these departments, such as the Engineer’s

Office, Sheriff's Office, Auditor, and Treasurer, are supervised by another elected county official for operational purposes. The Preble County Commissioners provide budgetary authority over all county expenditures, including expenses of maintenance. Therefore, the following section covers mitigation actions for which Preble County as a jurisdiction of government would be responsible, and that other units of government would not be responsible for implementing.

The mitigation goals and strategies have been assigned to an appropriate position within the county based on statutory authority and responsibility of specific officials and subject-matter expertise. The following abbreviations were used to designate specific positions:

Abbreviation	Position
AO	Administrative Officer (Manager or Administrator)
ED	Emergency Management Agency Director
ENG	County Engineer
FPM	Floodplain Manager
LUM	Land Use Management Director
M	Mayor
PHC	Public Health Commissioner
SC	Soil & Water Conservation District Director

Work on all of these actions will begin with the adoption of the plan, estimated to be approximately January 1, 2019 and will continue through the validity period of the plan, estimated to be through December 31, 2023. This methodology will allow for actions to be completed as funding becomes available and when special grants are established to fund similar projects. It will also allow the county to incorporate mitigation efforts into actions through the budget development process, planning early and including mitigation as a long-term effort to maintain a safe environment in Preble County.

The cost of work by Preble County employees to develop and complete these actions will be funded by the general budget for Preble County. The EMA Director's work to provide leadership, coordination, and communication is included in that job description, which is funded by the Preble County general fund utilizing EMPG funding, other project specific and non-specific grants, and other local assessments. The work of other county officials will be funded by the daily operational budget for their department. The county budget, depending on the department, may be partially funded by tax assessments (ditch maintenance, 911 coverage, etc.), sales tax and other local taxes or shares of taxes, user fees (permit fees, inspection fees, fees for service, and other schedules of payment), or other grants and private funding (economic development fees, CDBG, contracts for service, and other federal programs).

All large projects, including structurally engineered solutions, natural resource preservation, and property protection will be funded by special grant programs. Pre-Disaster Mitigation grants, Hazard Mitigation Grant Program, Flood Mitigation Assistance, and other programs made available through the Robert T. Stafford Act, as amended, will be used whenever feasible.

Because grant program details and focus points change based upon national priorities and needs, these potential funding sources are not specifically assigned to strategies.

Funding to improve air or water quality or to mitigate hazardous materials, pipeline, or other energy components may be funded by a variety of federal and state programs that come from the Environmental Protection Agency, Ohio Department of Natural Resources, or Ohio Department of Health. The Clean Ohio Program is a primary grant source of funding in this area. When utility distribution is provided wholly or in part by a private organization, there may be funding from that entity included in mitigation projects that originally is part of user fees and service charges. There may be funding by conservation groups or districts, watershed organizations, or other private nonprofits that obtain their funds from private sources. Funds may include programs like the Clean Ohio Grant.

Table 3-3: Preble County Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: Preble County will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible.				
1.1 The County will advocate that safety plans which include accurate inundation areas and evacuation plans be developed and put in place for all classified dams and reservoirs in the county.	60	SE	GB	ED
1.2 The County will provide dam safety information to residents, but especially for private unclassified (Class IV) dam owners to advocate for proper maintenance and management of the dam(s) on their property.	58	PI	GB	ED
1.3 The County will develop a list of shelter locations for each inundation area of any dam that includes residential property that would become uninhabitable during a dam breach incident.	59	PP	GB	ED
Goal 2 – Drought/Extreme Heat: Preble County will protect the local source water supplies to increase the likelihood of maintaining available water to residents and businesses, even during drought and extreme heat.				
2.1 The County will identify those areas vulnerable to water supply shortages both during dry spells and due to insufficient ground water sources, and will identify alternate sources of water to be used during a water emergency.	53	ES	GB	PHC
2.2 The County will work to develop a plan that identifies means and methods to provide public water system access to areas where wells are expected to yield less than ten gallons per minute based upon ground water resources mapped by ODNR.	54	PP	GB	PHC
2.3 The County will develop plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents across the county in a timely fashion.	55	ES	GB	ED
2.4 The County will develop local public-private partnerships capable of supplying adequate potable water to communities if water treatment systems experience outages or distribution interruptions.	56	PI	GB	ED
2.5 The County will work with all subdivisions, including cities, villages, and townships to implement appropriate water conservation guidelines to be used if water supplies are interrupted or insufficient.	57	PP	GB	PHC
Goal 3 – Earthquake: Preble County will assess local vulnerability to earthquake damages and establish a safety plan for residents that reflects reasonable community preparedness.				
3.1 The County will assess the earthquake damage potential through a survey of structures and infrastructure, and will identify the properties most likely to be damaged and unable to be used safely.	66	PP	GB	ED
3.2 The County will survey facilities that have potential to be used as shelters after an earthquake, and will create a list of locations that may be appropriate shelters should an earthquake occur.	69	ES	GB	ED

Strategy	Rank	Strategy Type	Funding	Assigned Staff
3.3 The County will work with the municipalities and townships to collect data about at-risk structures and possible shelter locations in each jurisdiction.	67	PP	GB	ED
3.4 The County will work with municipalities to identify at least one potential earthquake shelter in each city or village.	68	ES	GB	ED
Goal 4 – Flood: Preble County will work to lessen flooding and property damage from flooding in all areas of the county.				
4.1 The County will maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	FPM
4.2 The County will enforce existing regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	LUM
4.3 The County will require structurally engineered flooding prevention measures for new development and redevelopment including (but not limited to) installation of retention/detention ponds, floodwalls, channelization, and elevation of roads, bridges, culverts and structures.	5	SE	GB GP	ENG
4.4 The County will identify, acquire, and demolish repetitive loss properties to prevent future damages.	3	P	GP GB	ED
4.5 The County will support, and assist as able to do so, townships to maintain and clear debris, including lawn and crop fodder, dead/diseased trees, wildlife-created obstructions, and excess sediment from waterways to facilitate natural drainage.	11	PP	GB	ENG
4.6 The County will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers.	7	NR	GB GP	ENG
4.7 The County will work to help residents and businesses understand the mechanics of watershed in Preble County, and to help communities improve their collaboration and cooperation with watershed and conservancy groups through an improved understanding of watershed organization purpose and practices.	14	NR	GB	SC
4.8 The County will support jurisdictions as they work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective county-wide management of storm water, and install pumps, upsize culverts, or increase the size of bridge spans where appropriate; and they will render assistance where gaps exist or resolve inconsistencies where possible.	6	SE	GB GP	ENG
4.9 The County will work with farmers and agri-businesses to decrease the incidence of nutrient runoff, manure-contaminated surface drainage, surface runoff from untilled land, and farm facilities that have a compounding effect on flash flooding.	8	NR	GB	SC

Strategy	Rank	Strategy Type	Funding	Assigned Staff
4.10 The County will work with the railroads and pipeline owners to reduce risk due to chemical-contaminated surface runoff or structures or distribution system components that have a negative effect on adjacent and nearby landowners after heavy rainfall or ice melt.	9	PP	GB	SC
4.11 The County will create additional natural habitat and restore wetlands as a means to contain flood waters and allow natural drainage, with emphasis on areas where possible karst characteristics make the property slightly vulnerable to land subsidence as flooding worsens or increases in frequency.	10	NR	GB GP	FPM
4.12 The County will increase the use of temporary signs to mark flooded roadways and areas in an effort to make the county, especially in less-traveled rural areas, safer during floods.	13	ES	GB	ENG
4.13 The County will work to repair county owned and maintained roadways and streets that are damaged by the effects of flash flooding.	12	PP	GB	ENG
4.14 The County will work with the current FEMA floodplain mapping effort to ensure the contractor and hydrologists have the best data available to make floodplain determinations and that the mapping outcomes are correct and adequate.	4	PP	GB	FPM
Goal 5 – Hazardous Materials Incident: Preble County will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
5.1 The County will work to improve signage and traffic indicators on county-owned and maintained roadways as a way to prevent collisions involving vehicles carrying hazardous substances.	29	PP	GB	ENG
5.2 The County will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	28	ES	GB GP	ED
5.3 The County will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction so that the appropriate reporting of hazardous and extremely hazardous materials is done in an accurate and timely fashion, and so that reports of spills and releases are done in a prompt and accurate manner.	30	PI	GB	ED
5.4 The County will work with haulers and transporters of hazardous substances to ensure transportation is done in a safe manner, and so that any spills or releases are promptly and thoroughly cleaned up and disposed of in a proper way.	32	PP	GB UF	ED
5.5 The County will work with potential hazardous substance spillers whose operations are near locations where the aquifer is directly exposed to the environment to decrease the likelihood of a chemical spill in that area.	31	PP	UF IP	ED
Goal 6 – Invasive Species: Preble County will lessen the cost of plant debris caused by invasive species that weaken and destroy trees that cause large amounts of debris requiring removal after storms of various types.				
6.1 The County will work to clear public property of dead or diseased trees that have been affected by invasive species.	38	PP	GB	ENG

Strategy	Rank	Strategy Type	Funding	Assigned Staff
6.2 The County will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection through development of an effective debris management program.	39	ES	GB GP UF	ENG
6.3 The County will establish and maintain a listing of qualified tree trimmers, arborists, and others who are available for hire to trim and/or remove diseased trees on private property.	40	PP	GB	ENG
Goal 7 – Land Subsidence: Preble County will reduce the risk of property damage due to land subsidence in areas that are designated as karst areas by the Ohio Department of Natural Resources Division of Geological Survey maps.				
7.1 The County will provide information to land owners, upon request, about the characteristics, risks, and proper use of land that is identified as a karst area.	64	NR	GB	LUM
7.2 The County will advocate for set aside and use of stream corridors for any land that is at high risk for land subsidence, such as sink holes, to prevent property loss and reduce injury potential.	63	P	GB GP IP	LUM
7.3 The County will work with landowners to counteract the loss of income due to set aside of land highly vulnerable to land subsidence and will support development of financial incentives for mitigation efforts of farmers, with an emphasis on working with farmers whose income is dependent upon the land under threat of deterioration.	65	P	IP	LUM
7.4 The County will attempt to identify those areas with extremely high vulnerability to sink holes or subsidence by working with the Ohio Department of Natural Resources to update and improve geological mapping.	61	NR	GB	ENG
7.5 The County will work to manage the risks from characteristics associated with land subsidence consequences through land use planning and development of standards that include guidelines for setbacks, stream corridors, and other structural accommodations to prevent deterioration.	62	NR	GB UF	LUM
Goal 8 – Wind Storm: Preble County will work to lessen the effects of high wind events.				
8.1 The County will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	27	PP	UF	ENG
8.2 The County will work to support development standards which require underground installation of electric lines in subdivisions and appropriate commercial or industrial neighborhoods.	24	PP	GB	ENG
8.3 The County will help acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings, especially on county-owned or used properties.	25	ES	GB GP	ENG
8.4 The County will work to develop sheltering options for residents whose health conditions require the use of electricity for life-sustaining equipment or environmental control, and for all residents during extended duration outages in extreme weather conditions.	26	ES	GB	ED

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 9 – Severe Thunderstorm: Preble County will lessen the damages suffered from windstorms (derecho or straight-line wind), or severe thunderstorms, including heavy rain, wind, hail, and lightning.				
9.1 The County will encourage the use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	17	PP	GB	LUM
9.2 The County will support the development of community storm centers and safe areas in jurisdictions and neighborhoods to serve as a community-based hub for information, coordination, and communication during storm response and recovery, and will communicate with these centers to relay important response and recovery information during an incident.	18	ES	GB	ED
9.3 The County will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover relevant hazards that may damage their property, and will work to help residents have access to flood insurance information and availability.	19	PP	GB	LUM
9.4 The County will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 9-1-1, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	15	PI	GB GP	ED
9.5 The County will work with rural and unincorporated areas to identify locations where transient populations, including travelers and visitors to the county, may be located and how they might be reached with timely warnings and notifications.	16	PI	GB GP	ED
9.6 The County will work to encourage and support a system of mutual aid procedures between municipalities and townships, as well as adjacent counties, that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls.	20	ES	GB	ED
9.7 The County EMA will work with municipalities and townships to establish and implement a procedure whereby storm damages are reported to the EMA and the EMA is then able to act as a clearinghouse for damage assessment and property casualty after a significant storm or other incident that may not have impacted the entire county.	21	PP	GB	ED
Goal 10 – Tornado: Preble County will reduce the damages suffered from tornadoes.				
10.1 The County will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	33	PP	GP	ED
10.2 The County will support the development of public safe areas and storms shelters for rural residents of mobile homes, homes without basements, transient persons and travelers in the county, and others who need shelter during tornadoes or other severe weather events.	34	ES	GB GP	ED

Strategy	Rank	Strategy Type	Funding	Assigned Staff
10.3 The County will ensure that agreements exist for sheltering rural residents when homes are unlivable due to severe storms and tornadoes and evacuations.	35	ES	GB	ED
10.4 The County will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	36	ES	GB	ED
10.5 The County will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting, insuring that responders can effectively communicate with one another during an incident where effects are felt countywide.	37	ES	GB GP	ED
Goal 11 – Water Quality: Preble County will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
11.1 The County will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures to be utilized if water sources are unable to provide potable water to meet public needs.	41	ES	GB	ED
11.2 The County will support improvements to water treatment systems that enhance the ability to detect and treat harmful contaminants, and help well-water users to know what regular testing of wells should be done.	44	P	GB GP	PHC
11.3 The County will support research to determine the comprehensive cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	51	NR	GB	PHC
11.4 The County will work with farmers to support land stewardship initiatives, including but not limited to river cleaning efforts, pesticide and fertilizer application standards and training, conservation efforts to improve protection of natural resources, and water well testing on homesteads.	45	NR	GB GP	SC
11.5 The County will work with the farm business community to establish enhanced collaboration and participation in programs that protect and preserve agriculture, such as the Agricultural Easement Purchase Program, Current Agricultural Use Valuation, development of agricultural districts, and agricultural zoning for appropriate areas that are best used by production agriculture.	46	PP	GB	LUM
11.6 The County will work with the farm business community to facilitate communication between farmers and commercial and industrial neighbors to evaluate and improve protection of the water supply, conservation of soil, and improved management of chemicals used for production purposes of all types.	47	NR	GB GP	LUM
11.7 The County will work with non-farm residents, homeowner associations, and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between farm and non-farm entities in the effort to preserve and protect natural resources.	48	NR	GB	PHC

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.8 The County will work with farmers and other owners of large parcels to investigate and develop drainage plans and solutions such as widespread drainage tile installation, improved culverts and bridge spans, enhanced ditch cleaning and river maintenance, and will search for financial incentive programs to assist them in the implementation of those actions either privately or publicly.	49	PP	GB TI	SC
11.9 The County will work to identify and acquire funding for improvements to soil and water conservation efforts, including actions at all levels and in all industries as well as on personal property, to lessen contamination of the water through surface runoff and nutrient loss.	50	NR	GB	SC
11.10 The County will identify areas of where an aquifer may be exposed to potential contamination.	52	NR	GB	LUM
11.11 The County will identify and implement the extent possible practices in road maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice roads.	42	PP	GB	ENG
11.12 The County will work with individuals and/or businesses that are potential sources of contamination of the water supply to implement practices that decrease the likelihood of contamination of the aquifers, wells, and other water sources across the county.	43	PP	GB	LUM
Goal 12– Winter Storms: Preble County will lessen damages suffered from severe winter storms and blizzards.				
12.1 The County will work to plow and clear county-maintained roadways to facilitate emergency traffic, necessary travel, and business access.	22	PP	GB	ENG
12.2 The County will work with townships and municipalities to develop and implement de-icing practices that are less harmful to the environment and water table than application of salt to roadways.	23	NR	GB	ENG

3.3.2 Eaton

Eaton is the largest urbanized area in Preble County and is the only city. It is the county seat and home to many businesses and institutions in Preble County. Norfolk Southern Railroad cuts across the city from the central south, curves to the west just north of US 35, and follows a north-westerly pathway into Washington Township. Sevenmile Creek flows through the city from the northwest to the central south, through Crystal Lake on its way to the south. State Routes 35, 127, 122, and 732 cut across the city, all intersecting other streets and highways inside the downtown commercial area.

The strategies identified below will be managed by the City Administrator. The Administrator will work with the city’s mayor and council to make decisions about selection of strategies for action plans and determination of a full group of city employees and

elected officials to be involved in carrying out the project in their respective roles. The timeline for each strategy includes a start date of January 1, 2019 and an end date of December 31, 2023, which is estimated based upon anticipated mitigation plan approval.

These actions will be funded by the city’s operational budget except for where “GP” is listed. That indicates that the action will be funded by a grant program that will be determined upon eligibility and grant guidance at the time of application. In those cases, special grants like Pre-Disaster Mitigation Program, Flood Mitigation Assistance, Hazard Mitigation Grant Program, Community Development Block Grants, Ohio EPA grant funds, Clean Ohio Grant Program, or other programs available to cities will be used in whole or in part to fund the project, and appropriate match will be funded by the required local share according to grant guidance.

Table 3-4: Eaton Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The City of Eaton will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible				
1.1 The City will ensure that safety plans are in place for the dam on Crystal Lake that includes accurate inundation areas and evacuation plans.	40	SE	GB	AO
Goal 2 – Drought/Extreme Heat: The City of Eaton will assess the reliability of water supplies during drought and extreme heat.				
2.1 The City will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	34	PP	GB	AO
Goal 3 – Earthquake: The City of Eaton will assess damage potential from earthquake and establish a safety plan for residents.				
3.1 The City will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	41	PP	GB	AO
Goal 4 – Flood: The City of Eaton will work to lessen flooding and property damage from flooding in the village.				
4.1 The City will maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	AO
4.2 The City will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	AO
4.3 The City will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls, channelization, and elevation of roads, bridges, culverts and structures.	3	SE	GB	AO

Strategy	Rank	Strategy Type	Funding	Assigned Staff
4.4 The City will identify, acquire, and demolish repetitive loss properties to prevent future damages.	6	P	GP	AO
4.5 The City will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	4	NR	GB	AO
4.6 The City will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.	11	NR	GB GP	AO
4.7 The City will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	5	SE	GB GP	AO
4.8 The City will work with agriculture and transportation businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	10	NR	GB	AO
4.9 The City will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	7	NR	GB GP	AO
4.10 The City will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.	9	PP	GB	AO
4.11 The City will work to repair roadways and streets that are damaged by the effects of flash flooding.	8	PP	GB	AO
4.12 The City will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	12	PI	GB	AO
Goal 5 – Hazardous Materials Incident: The City of Eaton will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
5.1 The City will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	29	PP	GB	AO
5.2 The City will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	30	PP	GB GP	AO
5.3 The City will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	31	PP	GB	AO
Goal 6 – Invasive Species: The City of Eaton will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the city that cause large amounts of debris to require removal after storms of various types.				
6.1 The City will work to clear public property of dead or diseased trees that have been affected by invasive species.	38	PP	GB	AO

Strategy	Rank	Strategy Type	Funding	Assigned Staff
6.2 The City will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	39	PP	GB GP	AO
Goal 7 – Land Subsidence: The City of Eaton will work to lessen damages from land subsidence.				
7.1 The City will support programs that reduce land subsidence damages along Seven Mile Creek where property deterioration or disappearance is caused by reduced riverbank instability.	42	PP	GB	AO
7.2 The City will advocate for slope protection along Seven Mile Creek to reduce vulnerability to property owners with homes and other structures along the riverbanks.	43	PP	GB	AO
Goal 8 – Wind Storm: The City of Eaton will work to eliminate damages from severe windstorms.				
8.1 The City will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	28	P	GB	AO
8.2 The City will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	27	P	GB TI	AO
8.3 The City will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	24	PP	GB GP	AO
8.4 The City will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	25	PP	GB	AO
8.5 The City will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	26	P	GB	AO
Goal 9 – Severe Thunderstorm: The City of Eaton will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
9.1 The City will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	15	PP	GB GP	AO
9.2 The City will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	13	PP	GB	AO
9.3 The City will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 9-1-1, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	14	PI	GB GP	AO

Strategy	Rank	Strategy Type	Funding	Assigned Staff
9.4 The City will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	16	PP	GB	AO
9.5 The City will work to lessen the number and duration of railroad crossing blockages to enable first responders and other time-critical resources to respond quickly and to maintain access to all areas of their coverage areas.	17	PP	GB	AO
Goal 10 – Tornado: The City of Eaton will reduce the damages suffered from tornadoes.				
10.1 The City will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	19	PP	GP	AO
10.2 The City will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	20	PP	GP GB	AO
10.3 The City will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	23	PP	GB	AO
10.4 The City will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	22	PI	GB	AO
10.5 The City will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	21	PP	GB GP	AO
Goal 11 – Water Quality: The City of Eaton will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
11.1 The City will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	35	PP	GB	AO
11.2 The City will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	37	SE	GB	AO
11.3 The City will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	36	NR	GB	AO
11.4 The City will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	32	NR	GB	AO

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.5 The City will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	33	NR	GB GP	AO
Goal 12 – Winter Storm: The City of Eaton will lessen damages suffered from severe winter storms and blizzards.				
12.1 The City will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	18	PP	GB	AO

3.3.3 Villages

The villages in Preble County include Camden, Eldorado, Gratis, Lewisburg, New Paris, Verona, West Alexandria, West Elkton, and West Manchester. (College Corner is located on the Preble-Butler county line. College Corner does not participate in the Preble County hazard mitigation planning process; they choose to participate in the Butler County activities.) The communities are located in rural areas of Preble County. Of the nine villages, only Camden, Lewisburg, and New Paris have over 1,500 residents. The remaining six have between 197 and 1,340 residents. None of the villages are served by a large paid staff of workers but some have limited full time employees and others have minimal part-time workers. The elected officials work as volunteers and all have a mayor and council form of municipal government. These communities are addressed individually because they have ranked hazards in a very different way based upon their perception of disaster effects on their particular village.

The villages have all experienced severe storms with damages that have severely strained municipal finances because their budgets are not sufficient to cover the response and recovery cost of severe disaster events. They share the same challenges and vulnerabilities in being truly prepared for disasters and in sustaining resilient communities on a regular basis. They lack the funding they need to do this and their manpower is stretched to accomplish all the things they are charged with doing due to staffing limitations.

All strategies listed for villages will be managed by the mayor, designated as “M”. The mayor will begin implementation on January 1, 2019 (in anticipation of plan approval at approximately that time) and will end the strategy work at the end of the mitigation plan effective period, approximately December 31, 2023. Many strategies will take that entire time for achieving results because the community leaders have limited time to work on behalf of the village, and their budgets are extremely limited. They all work very

closely with Preble County Commissioners and other county departments to identify and use grant funding, special programs, and other allotments to improve their village property and services.

Most strategies will be funded by local funding as a part of regular operation of the jurisdiction. Some may utilize special programs like the Pre-Disaster Mitigation Program, Flood Mitigation Assistance, Hazard Mitigation Grant Program, Community Development Block Grants, or other federal and/or state grant programs intended for a compatible purpose.

Table 3-8: Camden Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The Village of Camden will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible				
1.1 The Village will ensure that safety plans are in place for areas dams that include accurate inundation areas and evacuation plans.	32	SE	GB	M
Goal 2 – Drought/Extreme Heat: The Village of Camden will assess the reliability of water supplies during drought and extreme heat.				
2.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	33	PP	GB	M
Goal 3 – Earthquake: The Village of Camden will assess damage potential from earthquake and establish a safety plan for residents.				
3.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	34	PP	GB	M
Goal 4 – Flood: The Village of Camden will work to lessen flooding and property damage from flooding in the village.				
4.1 The Village will maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	23	P	GB	M
4.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	24	P	GB	M
4.3 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	25	NR	GB	M
4.4 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	26	SE	GB GP	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
4.5 The Village will work with agriculture to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	27	NR	GB	M
4.6 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	28	PI	GB	M
Goal 5 – Hazardous Materials Incident: The Village of Camden will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	22	PP	GB	M
5.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	20	ES	GB GP	M
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	21	PP	GB	M
Goal 6 – Invasive Species: The Village of Camden will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	29	PP	GB	M
6.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	30	PP	GB GP	M
Goal 7 – Land Subsidence: The Village of Camden will work to lessen damages from land subsidence.				
7.1 The Village will support programs that reduce land subsidence damages along Seven Mile Creek where property deterioration or disappearance is caused by reduced riverbank instability.	18	PP	GB	M
7.2 The Village will advocate for slope protection along Seven Mile Creek to reduce vulnerability to property owners with homes and other structures along the riverbanks.	19	PP	GB	M
Goal 8 – Wind Storm: The Village of Camden will work to eliminate damages from severe windstorms.				
8.1 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	1	PP	GB GP	M
8.2 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	2	PP	GB	M
8.3 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	3	P	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 9 – Severe Thunderstorm: The Village of Camden will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
9.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	9	PP	GB GP	M
9.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	10	PP	GB	M
9.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 9-1-1, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	11	PI	GB GP	M
9.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	12	ES	GB	M
Goal 10 – Tornado: The Village of Camden will reduce the damages suffered from tornadoes.				
10.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	4	PP	GP	M
10.2 The Village will support the development of public safe rooms and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	5	PP	GP GB	M
10.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	6	PP	GB	M
10.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	7	PI	GB	M
10.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	8	ES	GB GP	M
Goal 11 – Water Quality: The Village of Camden will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
11.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	14	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	16	SE	GB	M
11.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	17	NR	GB	M
11.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	15	NR	GB	M
11.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	13	NR	GB GP	M
Goal 12 – Winter Storm: The Village of Camden will lessen damages suffered from severe winter storms and blizzards.				
12.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	31	ES	GB	M

Table 3-8: Eldorado Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Drought/Extreme Heat: The Village of Eldorado will assess the reliability of water supplies during drought and extreme heat.				
1.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	25	PP	GB	M
Goal 2 – Earthquake: The Village of Eldorado will assess damage potential from earthquake and establish a safety plan for residents.				
2.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	35	PP	GB	M
Goal 3 – Flood: The Village of Eldorado will work to lessen flooding and property damage from flooding in the village.				
3.1 The Village will resolve sanctions and establish good standing participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	26	P	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
3.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	27	P	GB	M
3.3 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.	32	P	GP	M
3.4 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	33	NR	GB	M
3.5 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, and creeks in the jurisdiction.	31	NR	GB GP	M
3.6 The Village will work to improve drainage by improving the storm sewer system, installing pumps or storm basins, or by increasing the size of culverts or bridge spans where appropriate.	34	SE	GB GP	M
3.7 The Village will work with businesses to decrease damages incurred related to industrial runoff, hazardous or contaminated wastewater, and structures that have a compounding effect on flash flooding.	28	NR	GB	M
3.8 The Village will work to repair streets and infrastructure that are damaged by the effects of flash flooding.	30	PP	GB	M
3.9 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	29	PI	GB	M
Goal 4 – Hazardous Materials Incident: The Village of Eldorado will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
4.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	19	PP	GB	M
4.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	17	ES	GB GP	M
4.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	18	PP	GB	M
Goal 5 – Invasive Species: The Village of Eldorado will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
5.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	10	PP	GB	M
5.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	11	PP	GB GP	M
Goal 6 – Land Subsidence: The Village of Eldorado will work to lessen damages from land subsidence.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
6.1 The Village will support programs that reduce land subsidence damages along Price’s Creek and its tributaries where property deterioration or land disappearance is caused by reduced instability.	11	PP	GB	M
6.2 The Village will advocate for slope protection along Price’s Creek and its tributaries to reduce vulnerability to property owners with homes and other structures along the riverbanks.	11	PP	GB	M
Goal 7 – Wind Storm: The Village of Eldorado will work to eliminate damages from severe windstorms.				
7.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	8	P	GB	M
7.2 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	6	PP	GB GP	M
7.3 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	7	PP	GB	M
7.4 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	9	P	GB	M
Goal 8 – Severe Thunderstorm: The Village of Eldorado will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
8.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	1	PP	GB GP	M
8.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	2	PP	GB	M
8.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	3	PI	GB GP	M
8.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	4	ES	GB	M
Goal 9 – Tornado: The Village of Eldorado will reduce the damages suffered from tornadoes.				
9.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	12	PP	GP	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
9.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	13	PP	GP GB	M
9.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	14	PP	GB	M
9.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	15	PI	GB	M
9.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	16	ES	GB GP	M
Goal 10 – Water Quality: The Village of Eldorado will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
10.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	21	PP	GB	M
10.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	22	SE	GB	M
10.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	20	NR	GB	M
10.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	24	NR	GB	M
10.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	23	NR	GB GP	M
Goal 11 – Winter Storm: The Village of Eldorado will lessen damages suffered from severe winter storms and blizzards.				
11.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	5	ES	GB	M

Table 3-8: Gratis Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The Village of Gratis will advocate that all dams and reservoirs near the village are well maintained and pose as little risk to the community as possible.				
1.1 The Village will ensure that safety plans are in place for area privately owned dams that include accurate inundation areas and evacuation plans.	37	SE	GB	M
Goal 2 – Drought/Extreme Heat: The Village of Gratis will assess the reliability of water supplies during drought and extreme heat.				
2.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	28	PP	GB	M
Goal 3 – Earthquake: The Village of Gratis will assess damage potential from earthquake and establish a safety plan for residents.				
3.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	36	PP	GB	M
Goal 4 – Flood: The Village of Gratis will work to lessen flooding and property damage from flooding in the village.				
4.1 The Village will resolve sanctions and then maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	M
4.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	M
4.3 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, and creeks in the jurisdiction.	3	NR	GB GP	M
4.4 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	5	SE	GB GP	M
4.5 The Village will work with businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	9	NR	GB	M
4.6 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	4	NR	GB GP	M
4.7 The Village will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.	7	PP	GB	M
4.8 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.	8	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
4.9 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	6	PI	GB	M
Goal 5 – Hazardous Materials Incident: The Village of Gratis will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	25	PP	GB	M
5.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	26	ES	GB GP	M
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	27	PP	GB	M
Goal 6 – Invasive Species: The Village of Gratis will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	34	PP	GB	M
6.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	35	PP	GB GP	M
Goal 7 – Land Subsidence: The Village of Gratis will work to lessen damages from land subsidence.				
7.1 The Village will support programs that reduce land subsidence damages along Twin Creek and Elk Creek and the tributaries of both where property deterioration or disappearance is caused by reduced riverbank instability.	38	NR	GB	M
7.2 The Village will advocate for slope protection along Twin Creek, Elk Creek, Aukerman Creek, and all tributaries to reduce vulnerability to property owners with homes and other structures along the riverbanks.	39	PP	GB	M
Goal 8 – Wind Storm: The Village of Gratis will work to eliminate damages from severe windstorms.				
8.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	17	P	GB	M
8.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	18	P	GB TI	M
8.3 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	15	PS	GB GP	M
8.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	16	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
8.5 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	19	P	GB	M
Goal 9 – Severe Thunderstorm: The Village of Gratis will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
9.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	10	PP	GB GP	M
9.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	12	PP	GB	M
9.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	11	PI	GB GP	M
9.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	13	ES	GB	M
Goal 10 – Tornado: The Village of Gratis will reduce the damages suffered from tornadoes.				
10.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	20	PP	GP	M
10.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	21	PP	GP GB	M
10.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	22	PP	GB	M
10.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	23	PI	GB	M
10.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	24	ES	GB GP	M
Goal 11 – Water Quality: The Village of Gratis will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	30	PP	GB	M
11.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	32	SE	GB	M
11.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	33	NR	GB	M
11.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	31	NR	GB	M
11.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	29	NR	GB GP	M
Goal 12 – Winter Storm: The Village of Gratis will lessen damages suffered from severe winter storms and blizzards.				
12.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	14	PP	GB	M

Table 3-8: Lewisburg Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The Village of Lewisburg will work to ensure all dams and reservoirs near the community are well maintained and pose as little risk to the community as possible				
1.1 The Village will ensure that safety plans are in place for nearby dams that include accurate inundation areas and evacuation plans.	42	SE	GB	AO
Goal 2 – Drought/Extreme Heat: The Village of Lewisburg will assess the reliability of water supplies during drought and extreme heat.				
2.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	31	PP	GB	AO
Goal 3 – Earthquake: The Village of Lewisburg will assess damage potential from earthquake and establish a safety plan for residents.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
3.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	41	PP	GB	AO
Goal 4 – Flood: The Village of Lewisburg will work to lessen flooding and property damage from flooding in the village.				
4.1 The Village will resolve sanctions and then maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	AO
4.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	AO
4.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls, channelization, and elevation of roads, bridges, culverts and structures.	6	SE	GB	AO
4.4 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.	3	P	GP	AO
4.5 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	5	NR	GB	AO
4.6 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.	11	NR	GB GP	AO
4.7 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	4	SE	GB GP	AO
4.8 The Village will work with businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	7	NR	GB	AO
4.9 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	9	NR	GB GP	AO
4.10 The Village will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.	10	PP	GB	AO
4.11 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.	8	PP	GB	AO
4.12 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	12	PI	GB	AO
Goal 5 – Hazardous Materials Incident: The Village of Lewisburg will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	15	PP	GB	AO
5.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	13	ES	GB GP	AO
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	14	PP	GB	AO
Goal 6 – Invasive Species: The Village of Lewisburg will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	33	PP	GB	AO
6.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	32	PP	GB GP	AO
Goal 7 – Land Subsidence: The Village of Lewisburg will work to lessen damages from land subsidence.				
7.1 The Village will support programs that reduce land subsidence damages along Twin Creek and its tributaries where property deterioration or disappearance is caused by reduced riverbank instability.	34	PP	GB	AO
7.2 The Village will advocate for slope protection along Twin Creek to reduce vulnerability to property owners with homes and other structures along the riverbanks.	35	PP	GB	AO
Goal 8 – Wind Storm: The Village of Lewisburg will work to eliminate damages from severe windstorms.				
8.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	20	P	GB	AO
8.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	18	P	GB TI	AO
8.3 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	16	PP	GB GP	AO
8.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	17	PP	GB	AO
8.5 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	19	P	GB	AO
Goal 9 – Severe Thunderstorm: The Village of Lewisburg will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
9.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	22	PP	GB GP	AO
9.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	24	PP	GB	AO
9.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	21	PI	GB GP	AO
9.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	23	ES	GB	AO
Goal 10 – Tornado: The Village of Lewisburg will reduce the damages suffered from tornadoes.				
10.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	26	PP	GP	AO
10.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	27	PP	GP GB	AO
10.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	28	PP	GB	AO
10.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	29	PI	GB	AO
10.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	30	ES	GB GP	AO
Goal 11 – Water Quality: The Village of Lewisburg will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
11.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	36	PP	GB	AO
11.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	39	SE	GB	AO

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	40	NR	GB	AO
11.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	37	NR	GB	AO
11.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	38	NR	GB GP	AO
Goal 12 – Winter Storm: The Village of Lewisburg will lessen damages suffered from severe winter storms and blizzards.				
12.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	25	PP	GB	AO

Table 3-8: New Paris Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The Village of New Paris will work to advocate that all dams and reservoirs near the village are well maintained and pose as little risk to the community as possible.				
1.1 The Village will ensure that safety plans are in place for the dams near the village that include accurate inundation areas and evacuation plans.	41	SE	GB	M
Goal 2 – Drought/Extreme Heat: The Village of New Paris will assess the reliability of water supplies during drought and extreme heat.				
2.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	39	PP	GB	M
Goal 3 – Earthquake: The Village of New Paris will assess damage potential from earthquake and establish a safety plan for residents.				
3.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	40	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 4 – Flood: The Village of New Paris will work to lessen flooding and property damage from flooding in the village.				
4.1 The Village will maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	M
4.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	M
4.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls, and channelization.	9	SE	GB	M
4.4 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	3	NR	GB	M
4.5 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.	11	NR	GB GP	M
4.6 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	4	SE	GB GP	M
4.7 The Village will work with agriculture and transportation businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	5	NR	GB	M
4.8 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	10	NR	GB GP	M
4.9 The Village will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.	8	PP	GB	M
4.10 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.	6	PP	GB	M
4.11 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	7	PI	GB	M
Goal 5 – Hazardous Materials Incident: The Village of New Paris will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	32	PP	GB	M
5.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	33	PP	GB GP	M
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	31	PP	GB	M
Goal 6 – Invasive Species: The Village of New Paris will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	27	PP	GB	M
6.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	28	PP	GB GP	M
Goal 7 – Land Subsidence: The Village of New Paris will work to lessen damages from land subsidence.				
7.1 The Village will support programs that reduce land subsidence damages along East Little Creek and near the abandoned quarries where property deterioration or disappearance is caused by reduced structural stability.	29	PP	GB	M
7.2 The Village will advocate for slope protection along Whitewater River and Little Creek and other ditches and streams to reduce vulnerability to property owners with homes and other structures along the streambanks.	30	PP	GB	M
Goal 8 – Wind Storm: The Village of New Paris will work to eliminate damages from severe windstorms.				
8.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	19	P	GB	M
8.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	20	P	GB TI	M
8.3 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	17	PP	GB GP	M
8.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	18	PP	GB	M
8.5 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	21	P	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 9 – Severe Thunderstorm: The Village of New Paris will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
9.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	15	PP	GB GP	M
9.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	16	PP	GB	M
9.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	13	PI	GB GP	M
9.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	14	ES	GB	M
Goal 10 – Tornado: The Village of New Paris will reduce the damages suffered from tornadoes.				
10.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	24	PP	GP	M
10.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	25	PP	GP GB	M
10.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	23	PP	GB	M
10.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	22	PI	GB	M
10.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	26	ES	GB GP	M
Goal 11 – Water Quality: The Village of New Paris will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	34	PP	GB	M
11.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	37	SE	GB	M
11.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	38	NR	GB	M
11.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	36	NR	GB	M
11.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	35	NR	GB GP	M
Goal 12 – Winter Storm: The Village of New Paris will lessen damages suffered from severe winter storms and blizzards.				
12.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	12	PP	GB	M

Table 3-8: Verona Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Drought/Extreme Heat: The Village of Verona will assess the reliability of water supplies during drought and extreme heat.				
1.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	39	PP	GB	M
Goal 2 – Earthquake: The Village of Verona will assess damage potential from earthquake and establish a safety plan for residents.				
2.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	40	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 3 – Flood: The Village of Verona will work to lessen flooding and property damage from flooding in the village.				
3.1 The Village will resolve sanctions and then join NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	M
3.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	M
3.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls, channelization, and elevation of roads, bridges, culverts and structures.	12	SE	GB	M
3.4 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.	3	P	GP	M
3.5 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	4	NR	GB	M
3.6 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.	11	NR	GB GP	M
3.7 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	5	SE	GB GP	M
3.8 The Village will work with businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	6	NR	GB	M
3.9 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	10	NR	GB GP	M
3.10 The Village will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.	7	PP	GB	M
3.11 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.	8	PP	GB	M
3.12 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	9	PI	GB	M
Goal 4 – Hazardous Materials Incident: The Village of Verona will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
4.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	24	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
4.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	26	PP	GB GP	M
4.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	25	PP	GB	M
Goal 5 – Invasive Species: The Village of Verona will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
5.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	37	PP	GB	M
5.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	38	PP	GB GP	M
Goal 6 – Wind Storm: The Village of Verona will work to eliminate damages from severe windstorms.				
6.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	35	P	GB	M
6.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	34	P	GB TI	M
6.3 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	32	PP	GB GP	M
6.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	33	PP	GB	M
6.5 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	36	P	GB	M
Goal 7 – Severe Thunderstorm: The Village of Verona will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
7.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	14	PP	GB GP	M
7.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	16	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
7.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	13	PI	GB GP	M
7.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	15	ES	GB	M
Goal 8– Tornado: The Village of Verona will reduce the damages suffered from tornadoes.				
8.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	18	PP	GP	M
8.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	19	PP	GP GB	M
8.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	20	PP	GB	M
8.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	21	PI	GB	M
8.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	22	ES	GB GP	M
Goal 9 – Water Quality: The Village of Verona will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
9.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	27	PP	GB	M
9.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	30	SE	GB	M
9.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	31	NR	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
9.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	28	NR	GB	M
9.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	29	NR	GB GP	M
Goal 10 – Winter Storm: The Village of Verona will lessen damages suffered from severe winter storms and blizzards.				
10.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	17	PP	GB	M

Table 3-8: West Alexandria Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The Village of West Alexandria will work to ensure all nearby dams and reservoirs are well maintained and pose as little risk to the community as possible				
1.1 The Village will ensure that safety plans are in place for area dams that includes accurate inundation areas and evacuation plans.	30	SE	GB	M
Goal 2 – Drought/Extreme Heat: The Village of West Alexandria will assess the reliability of water supplies during drought and extreme heat.				
2.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	29	PP	GB	M
Goal 3 – Earthquake: The Village of West Alexandria will assess damage potential from earthquake and establish a safety plan for residents.				
3.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	31	PP	GB	M
Goal 4 – Flood: The Village of West Alexandria will work to lessen flooding and property damage from flooding in the village.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
4.1 The Village will maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	M
4.2 The Village will maintain regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	M
4.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls and elevation of roads, bridges, culverts and structures.	8	SE	GB	M
4.4 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	3	NR	GB	M
4.5 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	4	SE	GB GP	M
4.6 The Village will work with businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	5	NR	GB	M
4.7 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	7	NR	GB GP	M
4.8 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.	6	PP	GB	M
Goal 5 – Hazardous Materials Incident: The Village of West Alexandria will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
5.1 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	9	PP	GB GP	M
Goal 6 – Invasive Species: The Village of West Alexandria will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	27	PP	GB	M
6.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	28	PP	GB GP	M
Goal 7 – Wind Storm: The Village of West Alexandria will work to eliminate damages from severe windstorms.				
7.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	20	P	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
7.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	21	P	GB TI	M
7.3 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	18	PP	GB GP	M
7.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	19	PP	GB	M
Goal 8 – Severe Thunderstorm: The Village of West Alexandria will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
8.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	16	PP	GB GP	M
8.2 The Village will work to lessen the number and duration of railroad crossing blockages to enable first responders and other time-critical resources to respond quickly and to maintain access to all areas of their coverage areas.	17	PP	GB	M
Goal 9 – Tornado: The Village of West Alexandria will reduce the damages suffered from tornadoes.				
9.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	11	PP	GP	M
9.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	12	PP	GP GB	M
9.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	10	PP	GB	M
9.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	13	PI	GB	M
9.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	14	ES	GB GP	M
Goal 10 – Water Quality: The Village of West Alexandria will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
10.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	22	PP	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
10.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	23	SE	GB	M
10.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	26	NR	GB	M
10.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	24	NR	GB	M
10.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	25	NR	GB GP	M
Goal 11 – Winter Storm: The Village of West Alexandria will lessen damages suffered from severe winter storms and blizzards.				
11.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	15	PP	GB	M

Table 3-8: West Elkton Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Dam Failure: The Village of West Elkton will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible.				
1.1 The Village will ensure that safety plans are in place for any dams on area waterways that include accurate inundation areas and evacuation plans.	40	SE	GB	M
Goal 2 – Drought/Extreme Heat: The Village of West Elkton will assess the reliability of water supplies during drought and extreme heat.				
2.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	31	PP	GB	M
Goal 3 – Earthquake: The Village of West Elkton will assess damage potential from earthquake and establish a safety plan for residents.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
3.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	39	PP	GB	M
Goal 4 – Flood: The Village of West Elkton will work to lessen flooding and property damage from flooding in the village.				
4.1 The Village will join/resolve sanctions/maintain participation in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	1	P	GB	M
4.2 The Village will adopt and enforce regulations, including zoning, construction regulations, floodplain regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	2	P	GB	M
4.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls, channelization, and elevation of roads, bridges, culverts and structures.	3	SE	GB	M
4.4 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.	4	P	GP	M
4.5 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	5	NR	GB	M
4.6 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.	6	NR	GB GP	M
4.7 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	7	SE	GB GP	M
4.8 The Village will work with agriculture and transportation businesses to decrease damages incurred in municipalities related to industrial runoff, hazardous or contaminated drainage, and elevated structures that have a compounding effect on flash flooding.	8	NR	GB	M
4.9 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	9	NR	GB GP	M
4.10 The Village will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.	10	PP	GB	M
4.11 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.	11	PP	GB	M
4.12 The Village will participate in a public awareness campaign to make landowners and renters aware of the need for adequate insurance, including flood and sewer back-up coverage.	12	PI	GB	M
Goal 5 – Hazardous Materials Incident: The Village of West Elkton will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	28	PP	GB	M
5.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	29	PP	GB GP	M
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.	30	PP	GB	M
Goal 6 – Invasive Species: The Village of West Elkton will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	32	PP	GB	M
6.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	33	PP	GB GP	M
Goal 7 – Land Subsidence: The Village of West Elkton will work to lessen damages from land subsidence.				
7.1 The Village will support programs that reduce land subsidence damages along Clear Creek tributaries where property deterioration or disappearance is caused by reduced riverbank instability.	40	PP	GB	M
7.2 The Village will advocate for slope protection along Clear Creek tributaries to reduce vulnerability to property owners with homes and other structures along the riverbanks.	41	PP	GB	M
Goal 8 – Wind Storm: The Village of West Elkton will work to eliminate damages from severe windstorms.				
8.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	23	P	GB	M
8.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	24	P	GB TI	M
8.3 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	25	PP	GB GP	M
8.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	26	PP	GB	M
8.5 The Village will support the encouraged use of wind resistant construction materials such as metal roofs and wind-resistant siding in both residential and commercial construction, renovation, and maintenance.	27	P	GB	M
Goal 9 – Severe Thunderstorm: The Village of West Elkton will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
9.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	14	PP	GB GP	M
9.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	15	PP	GB	M
9.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	16	PI	GB GP	M
9.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	17	PP	GB	M
Goal 10 – Tornado: The Village of West Elkton will reduce the damages suffered from tornadoes.				
10.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	18	PP	GP	M
10.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	19	PP	GP GB	M
10.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	20	PP	GB	M
10.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	21	PI	GB	M
10.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	22	PP	GB GP	M
Goal 11 – Water Quality: The Village of West Elkton will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				
11.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	34	PP	GB	M
11.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	35	SE	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
11.3 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	36	NR	GB	M
11.4 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	37	NR	GB	M
11.5 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	38	NR	GB GP	M
Goal 12 – Winter Storm: The Village of West Elkton will lessen damages suffered from severe winter storms and blizzards.				
12.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	13	PP	GB	M

Table 3-8: West Manchester Mitigation Goals and Strategies

Strategy	Rank	Strategy Type	Funding	Assigned Staff
Goal 1 – Drought/Extreme Heat: The Village of West Manchester will assess the reliability of water supplies during drought and extreme heat.				
1.1 The Village will review plans for a secondary potable water supply in case the primary supply is unavailable and will determine how to communicate this to residents in the village at the needed time.	29	PP	GB	M
Goal 2 – Earthquake: The Village of West Manchester will assess damage potential from earthquake and establish a safety plan for residents.				
2.1 The Village will assess the damage potential through a survey of critical structures and will determine the estimated safest local area for sheltering residents and others after an incident.	32	PP	GB	M
Goal 3 – Flood: The Village of West Manchester will work to lessen flooding and property damage from flooding in the village.				
3.1 The Village will join NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.	15	P	GB	M
3.2 The Village will adopt and enforce regulations, including zoning, construction regulations, subdivision rules, and local and state regulations pertaining to new or renovated construction and community development projects.	16	P	GB	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
3.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, floodwalls, channelization to resolve flood vulnerability.	20	SE	GB	M
3.4 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.	17	NR	GB	M
3.5 The Village will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.	21	NR	GB GP	M
3.6 The Village will work to maintain, upgrade, repair or replace storm sewers, culverts and storm basins to facilitate effective management of storm water and install pumps or increase the size of bridge spans where appropriate.	18	SE	GB GP	M
3.7 The Village will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.	19	NR	GB GP	M
Goal 4 – Hazardous Materials Incident: The Village of West Manchester will work to lessen both the number of spills, leaks, and releases from hazardous materials sources, as well as lessen the damages from such incidents.				
4.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	23	PP	GB	M
4.2 The Village will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.	22	PP	GB GP	M
Goal 5 – Invasive Species: The Village of West Manchester will lessen the cost of plant debris caused by invasive species that weaken and destroy trees in the village that cause large amounts of debris to require removal after storms of various types.				
5.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.	30	PP	GB	M
5.2 The Village will work to identify reasonably priced and adequate debris disposal options after storms cause an exceptional amount of debris to be scattered and will identify a source of funding for this debris collection.	31	PP	GB GP	M
Goal 6– Wind Storm: The Village of West Manchester will work to eliminate damages from severe windstorms.				
6.1 The Village will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.	7	P	GB	M
6.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	8	P	GB TI	M
863 The Village will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.	5	PP	GB GP	M

Strategy	Rank	Strategy Type	Funding	Assigned Staff
6.4 The Village will develop procedures to remove tree, lawn, crop, and structural debris scattered by windstorms from roadways, highways and public property to facilitate rapid clean up and recovery.	6	PP	GB	M
Goal 7 – Severe Thunderstorm: The Village of West Manchester will lessen the damages suffered from severe thunderstorms, including heavy rain, wind, hail, and lightning.				
7.1 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, temporary refuge and communication during storm response and recovery.	1	PP	GB GP	M
7.2 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover the hazards that may damage their property, including hail, wind, lightning, and flooding.	4	PP	GB	M
7.3 The Village will promote the continuation, improvement of, and filling of gap areas with redundant warning and notification systems that could include outdoor sirens, wireless notification options, social media warnings, reverse 911, and opt-in calling systems, broadband and wireless access, and any other warning system that would inform the public of impending life-threatening conditions.	2	PI	GB GP	M
7.4 The Village will work to establish a system of mutual aid procedures that allows for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls due to severe storms.	3	ES	GB	M
Goal 8 – Tornado: The Village of West Manchester will reduce the damages suffered from tornadoes.				
8.1 The Village will support the development of safe rooms for community and residential structures including support of safe room grant opportunities.	12	PP	GP	M
8.2 The Village will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient person in the county, and others who need shelter during tornadoes or other severe weather events.	13	PP	GP GB	M
8.3 The Village will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.	9	PP	GB	M
8.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.	10	PI	GB	M
8.5 The Village will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	11	ES	GB GP	M
Goal 9 – Water Quality: The Village of West Manchester will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.				

Strategy	Rank	Strategy Type	Funding	Assigned Staff
9.1 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.	28	SE	GB	M
9.2 The Village will support additional research to determine the complete cause of source water contamination and the creation of financial assistance programs to implement cause-based solutions and corrective actions.	25	NR	GB	M
9.3 The Village will work with residents and businesses to identify any contribution to the contamination of the water supply through nutrient runoff or other disposal practices, and to facilitate cooperation between all parties in the effort to preserve and protect natural resources.	26	NR	GB	M
9.4 The Village will identify and implement to the extent possible practices in street maintenance that reduce the use of road salt in areas where the aquifer is exposed to potential contamination by using sand or other products to de-ice streets.	27	NR	GB GP	M
Goal 10 – Winter Storm: The Village of West Manchester will lessen damages suffered from severe winter storms and blizzards.				
10.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.	14	PP	GB	M

3.4 IMPLEMENTATION

The identified mitigation strategies are general actions that could be taken to reduce the negative impact of disasters and large-scale emergencies. For a strategy to become an actionable item, it must be converted to a specific project with funding, action steps, timelines, and project goals. For example, if a repetitive loss property is to be acquired and demolished, the project must begin by identifying the specific property to be acquired as well as funding to conduct the project. The property owner must agree to accept the buy-out and use the money to purchase another home. The jurisdiction must accept its share of cost, planning responsibility, and project management roles. Only then can the actual project be executed. A similar process must be followed for any of the strategies identified here to become projects that reduce disaster loss.

The Preble County EMA will monitor the implementation of these strategies through ongoing communication with county and jurisdiction officials and stakeholders. When mitigation grant opportunities arise, reasonable efforts will be made to apply for funding. For strategies that must be funded through local budgets, jurisdictions will work diligently to identify local funding sources that can be used to address their disaster vulnerability. When funding is secured, a detailed project timeline will be developed and actionable steps taken to complete the project. Upon completion, the project's effectiveness will be evaluated and findings shared with the EMA and planning team for consideration in developing future projects.

The greatest value in these strategies is the process, knowledge, and reasoning stakeholders utilized in their development. The mitigation planning process required stakeholders to collaborate to evaluate hazards and risks in their community. They were required to examine the local community, predict where and under what conditions damages could occur, and identify how to reduce or eliminate potential damages. The solutions, in the form of mitigation goals and actions that will ultimately develop into projects, had to be developed to maximize benefit to the community while minimizing cost. This process required whole community involvement so that the community was appropriately represented in the planning process.

Through this project, the planning team developed a set of comprehensive, thoroughly considered, relevant, and effective solutions to problems that are likely to arise in Preble County. As stakeholders considered how to solve potential problems, they used a collaborative spirit to address community-wide problems. These strategies were original thoughts to reduce disaster vulnerability and loss at the local level.

Given the availability of funding, personnel, and support, Preble County and its jurisdictions are positioned to move forward and implement these strategies to the best of their ability to accomplish their goals. Whatever mitigation activities are achieved will be well thought out, logical, and reasonable because of the community-wide hazard mitigation planning process.