

### 3.0 MITIGATION STRATEGIES

As the hazard mitigation planning team in Wood County developed mitigation goals and strategies, the intent was to address the identified risks and vulnerabilities for the county as a whole and each specific jurisdiction. As a result, the mitigation strategies in this plan are significantly more detailed and comprehensive than those developed in the previous plan. While some jurisdictions identified similar goals and strategies, stakeholders from each community expressed their unique circumstances and developed strategies to address those specific issues. The result is a set of comprehensive and customized mitigation goals and strategies that address hazard mitigation across Wood County.

#### 3.1 STATUS OF PAST MITIGATION EFFORTS

The 2011 Wood County Pre-Disaster Mitigation Plan identified mitigation goals and activities on a countywide basis. The county and political subdivisions worked together to identify strategic actions that would reduce risk and vulnerability across Wood County. As part of the planning process, the planning team reviewed the 2011 goals and activities and determined the status of each. Table 3-1 includes each goal and activity included in the 2011 plan and identifies its current status. Many of the concepts have been continued in the 2018 plan with a modified methodology or an updated focus.

**Table 3-1: 2011 Wood County Mitigation Goals**

Goals and Activities	Status
<b>MULTI-HAZARD</b>	
<b><i>Goal 1: Enhance public information and educational programs for both pre-disaster and post-disaster situations.</i></b>	
Activity 1: Update and distribute, as necessary, existing public educational materials that relate to the mitigation of natural disasters to include references to the Wood County Mitigation Plan and public participation in the planning effort. These educational materials include safety and other relevant information specifically directed toward tornado safety tips, safe rooms as shelters, flood-damaged property, precautions during sever winter weather, and others.	Completed

Goals and Activities	Status
<p>Activity 2: Disseminate updated natural disaster mitigation educational materials to citizens residing within the following political subdivisions:</p> <ul style="list-style-type: none"> <li>• City of Northwood</li> <li>• City of Rossford</li> <li>• City of Perrysburg</li> <li>• Village of Milton Center</li> <li>• Village of Custar</li> <li>• Village of Hoytville</li> <li>• Village of Bairdstown</li> <li>• Village of Cygnet</li> <li>• Village of West Millgrove</li> <li>• Village of Luckey</li> <li>• Village of Jerry City</li> <li>• Village of Risingsun</li> <li>• Village of Portage</li> <li>• Village of Millbury</li> <li>• Village of Grand Rapids</li> <li>• Village of Walbridge</li> </ul>	<p>Completed</p>
<p><b><i>Goal 2: Strengthen existing partnerships among all public and private sectors within and beyond Wood County.</i></b></p>	
<p>Activity: Expand the understanding of existing partnerships to include knowledge of Wood County mitigation planning, increasing the potential for cooperative mitigation initiatives.</p>	<p>Completed</p>
<p><b><i>Goal 3: Integrate, as necessary, mitigation components within the existing Wood County plans whose provisions are influenced by the mitigation of natural disasters.</i></b></p>	
<p>Activity: Modify existing Wood County plans and integrate needed mitigation considerations.</p>	<p>Partially Completed</p>
<p><b><i>Goal 4: Identify and pursue opportunities for funding of mitigation projects.</i></b></p>	
<p>Activity: Improve natural disaster mitigation impacting Wood County critical facilities, as necessary.</p>	<p>Completed</p>
<p><b><i>Goal 5: Solidify mitigation initiatives directed towards critical facilities (schools, medical facilities, emergency services, etc.).</i></b></p>	
<p>Activity: Install fuel-powered electrical generators in the following locations:</p> <ul style="list-style-type: none"> <li>• Village of North Baltimore</li> <li>• Village of Tontogony (including Washington Township)</li> <li>• Village of Bloomdale</li> <li>• Village of Haskins</li> </ul>	<p>Not Completed</p>

Goals and Activities	Status
<b><i>Goal 6: Enhance sheltering of citizens during a tornado or severe winter storm.</i></b>	
Activity: Construct a basement area for a new Bradner Fire Department building to serve as a shelter for the community (contingent upon the construction of a new fire station).	Not Completed
<b>TORNADO</b>	
<b><i>Goal 7: Enhance early warning systems to maximize public notification.</i></b>	
Activity: Install new or upgraded tornado sirens with battery backup within the following political subdivisions: <ul style="list-style-type: none"> <li>• City of Bowling Green (4)</li> <li>• Village of Weston (3)</li> <li>• Village of North Baltimore (also for Henry Township)</li> <li>• Village of Pemberville (also for Freedom Township_</li> <li>• Village of Wayne</li> <li>• Village of Bloomdale</li> <li>• Village of Haskins</li> <li>• Portage Township</li> <li>• Weston Township (2)</li> <li>• Troy Township</li> <li>• Perrysburg Township (3)</li> <li>• Jackson Township</li> </ul>	Completed in Weston Township, Jerry City, Walbridge only
<b>FLOOD</b>	
<b><i>Goal 8: Minimize flood losses to structures and properties within Wood County.</i></b>	
Activity 1: Mitigate, as necessary, all repetitive loss structures within Wood County.	Not Completed
Activity 2: Mitigate, as necessary, repetitive flood-loss agricultural properties within Wood County.	Not Completed
Activity 3: Obtain portable water dams for protecting downtown Pemberville.	Not Completed
Activity 4: Relocate Grand Rapids Township Fire Department out of Maumee River floodplain.	Completed

**3.2 RISK PRIORITIES**

The Hazard Identification and Risk Assessment explains in detail the identification of hazards and evaluation of risks in Wood County. That section 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 Wood 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. 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 to match hazard ranking. 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. The more feasible the strategy to achieve, the higher it should rank.

Communities across the county expressed solid 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 implementation was a significant concern for the small villages as they prioritized strategies. With nineteen villages of under two thousand residents, operational budgets are limited. None of the villages has a year-end surplus and many have had to depend upon 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 cities with much larger population felt they are not large enough to be highly competitive in a highly attractive competition for funding.

Participants were concerned that the ranking activity would mean strategies were required to be implemented in the order in which prioritized and were concerned that it was impossible to foresee circumstances, incidents, and financial resource availability to the extent that a rigid ranking effort might become an obstacle in strategy implementation over the years. They were assured by the EMA staff and the Contractor that this was not the case; strategies could be implemented as they 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 the county and incorporated jurisdictions. Mitigation strategies were drafted based on the input provided by these stakeholders and presented to the Planning Team and community for review and comment. This section identifies the mitigation goals and strategies for the county and each incorporated jurisdiction, along with the priority level, action type, lead agency, timeline, and potential funding source assigned to each action. Strategies for incorporated jurisdictions vary from the countywide in priority of the problem and the potential solution.

#### *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 goals 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 mayors 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 as well because the EMA Director and the mayors are a part of those processes county wide. Each community's prioritized 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 mayors.

**Table 3-2: Strategy Descriptors**

<b>Element</b>	<b>Definition</b>
<i>Priority</i>	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.
<i>Action Type</i>	The kind of activity described in the strategies Includes these types of actions: <ul style="list-style-type: none"> <li>• Natural Resource Protection – Reduce the impacts of natural hazard by preserving or restoring natural areas and their mitigation functions</li> <li>• Prevention – Avoid hazard problems or stop impact from worsening</li> <li>• Property Protection – Protect structures by modifying or strengthening building to withstand impact</li> <li>• Public Information – Advise the public about hazards, hazardous areas, and mitigation techniques to protect people and property</li> <li>• Structurally Engineered Project – Lessen the impact of a hazard by modifying the environment or progression of the hazard event through designed and engineered projects</li> </ul>
<i>Lead</i>	The lead agency 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.
<i>Timeline</i>	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

Element	Definition
	evolving community needs. At the time of plan development, these timelines fit logically within each jurisdiction’s resources and support programs.
<i>Funding</i>	The potential funding source(s) for the strategy. Potential funding sources include: <ul style="list-style-type: none"> <li>• CDBG – Community Development Block Grants</li> <li>• FMA – Flood Mitigation Assistance Grant</li> <li>• PDM – Pre-Disaster Mitigation Grant</li> <li>• HMGP – Hazard Mitigation Grant Program</li> <li>• SRL – Severe Repetitive Loss Grant</li> <li>• RFC – Repetitive Flood Claims Program</li> <li>• COG – Clean Ohio Grant</li> <li>• ICC – Increased Cost of Compliance (including rate increases or premiums)</li> <li>• LOC – Local Funds</li> <li>• ST – State Funds</li> <li>• Other (including private funds and non-governmental agency funding)</li> </ul>

**3.3.1 Wood County**

A large portion of Wood County is unincorporated. Most of this area is not densely populated and includes the county’s agricultural areas. There are housing sub-divisions, unincorporated neighborhoods, and postal designations across this area. Many of the roads are maintained by the Wood 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 different government or private entity. Law enforcement is provided by the Wood County Sheriff. These residents work with the Wood County EMA and mitigation efforts are coordinated through the Wood County Commissioners.

The following mitigation goals and strategies are those that affect the aforementioned areas of the county. They also include those mitigation efforts that are intended to be undertaken by county government, not cities and villages. Therefore, the following section covers mitigation actions for which Wood County as a jurisdiction of government would be responsible, and that other units of government would not be held responsible.

All of these mitigation goals and strategies will be assigned to the Wood County Emergency Management Agency Director. The EMA Director may work with and through other county officials to accomplish the work when another department would logically perform the job duties, but the central clearing house for the efforts will be the EMA. The EMA will track the status of each effort and will be responsible for annual updating and status assessment of all goals and strategies.

Work on 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.

The cost of work by Wood County employees to develop and complete these actions will be funded by the general budget for Wood County. The EMA Director's work to provide leadership, coordination, and communication is included in that job description, which is funded by the Wood County general fund, EMPG funding, and other local assessments. The work of other county officials will be funded by the daily operational budget for their department. The county budget, dependent upon the department, may be partially funded by tax assessments (ditch maintenance, 911 coverage, etc.), 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 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.

**Table 3-3: Wood County Mitigation Goals and Strategies**

Priority	Action Type	Lead	Start Date	End Date	Funding
<b>Goal 1 – Dam/Levee Failure: Wood County will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible</b>					
1.1 The County will ensure that safety plans are in place for all dams and reservoirs that include accurate inundation areas and evacuation plans.					
49	Prevention	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 2 – Drought/Extreme Heat: Wood County will assess the reliability of water supplies during drought and extreme heat.</b>					
2.1 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.					
46	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
2.2 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.					
48	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
2.3 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.					
47	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 3 - Earthquake: Wood County will assess damage potential from earthquake and establish a safety plan for residents.</b>					
3.1 The County will assess the damage potential through a survey of structures in unincorporated areas of the county and will determine the estimated safest local area for sheltering after an incident.					
53	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
3.2 The County will work with the municipalities and townships to collect data about at-risk structures in each jurisdiction.					
54	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 4 – Flood: Wood County will work to lessen flooding and property damage from flooding in all areas of the county.</b>					

Priority	Action Type	Lead	Start Date	End Date	Funding
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.					
18	Prevention	EMA Director	01/01/2019	12/31/2023	LOC
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.					
19	Prevention	EMA Director	01/01/2019	12/31/2023	LOC
4.3 The County will require structurally engineered flooding prevention measures for new development and redevelopment including installation of retention/detention ponds, floodwalls, channelization, and elevation of roads, bridges, culverts and structures.					
20	Structurally Engineered Projects	EMA Director	01/01/2019	12/31/2023	PDM, FMA, HMGP, ICC
4.4 The County will identify, acquire, and demolish repetitive loss properties to prevent future damages.					
21	Prevention	EMA Director	01/01/2019	12/31/2023	PDM, RFC, SRL
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, animal-created obstructions, and excess sediment from waterways to facilitate natural drainage.					
26	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, ICC
4.6 The County will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers.					
22	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC
4.7 The County will work to help residents and businesses understand watershed in Wood County, and to help communities improve their collaboration and cooperation with watershed and conservancy groups through an improved understanding of watershed mechanics and practices.					
27	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC
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 management of storm water and install pumps or increase the size of bridge spans where appropriate and will provide assistance to fill gaps in capabilities or resolve inconsistencies where possible.					
28	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, ICC, Other
4.9 The County will work with farmers and agri-businesses to decrease damages incurred due to nutrient runoff, manure-contaminated drainage, and farm equipment or structures that have a compounding effect on flash flooding.					
23	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
4.10 The County will work with the railroads and pipeline owners to decrease damage potential due to surface runoff, hazardous chemicals that become part of flood water, and or structures/components that have a negative effect on adjacent and nearby landowners after heavy rainfall or ice melt.					
29	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC,
4.11 The County will create additional natural habitat and restore wetlands as a means to contain flood waters and to allow natural drainage.					

Priority	Action Type	Lead	Start Date	End Date	Funding
30	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
4.12 The County will increase the use of temporary signs to mark flooded streets and areas in an effort to make the county, especially rural areas, safer during floods.					
24	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
4.13 The County will work to repair county owned and maintained roadways and streets that are damaged by the effects of flash flooding.					
25	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 5 – Hazardous Materials Incident: Wood 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.</b>					
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.					
16	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
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.					
17	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
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.					
12	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
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.					
15	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, Other
5.6 The County will work with businesses and residents to encourage proper pre-digging procedures are used before any excavation or disruption of the soil occurs to prevent the breach of pipelines and underground hazardous substance management systems.					
<b>13</b>	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
5.7 The County will work with pipeline companies to ensure pipelines are installed in the safest way possible, that safety data is created and maintained, and that the air and water is monitored to detect any contamination so emergency procedures are activated appropriately.					
14	Prevention	EMA Director	01/01/2019	12/31/2023	LOC, Other
<b>Goal 6 – Invasive Species: Wood 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.</b>					
6.1 The County will work to clear public property of dead or diseased trees that have been affected by invasive species.					
56	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
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.					
55	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 7 - Landslide/Mudslide: Wood County will support efforts to lessen damages from landslide and mudslide along the Maumee River.</b>					

Priority	Action Type	Lead	Start Date	End Date	Funding
7.1 The County will support programs that identify risk and reduce landslide and sedimentation along the Maumee River to lessen the property deterioration caused when riverbank structures have reduced stability.					
31	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
7.2 The County will advocate for slope protection actions along the Maumee River to reduce vulnerability to property owners with homes and other structures along the riverbanks.					
32	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 8 – Power Outage: Wood County will work to eliminate power outages by working with providers to harden electrical service utilities.</b>					
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.					
51	Prevention	EMA Director	01/01/2019	12/31/2023	LOC, ICC, Other
8.2 The County will work to support development standards which require underground installation of electric lines in sub-divisions and appropriate commercial or industrial neighborhoods.					
50	Prevention	EMA Director	01/01/2019	12/31/2023	LOC
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.					
52	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, Other
<b>Goal 9 – Severe Thunderstorm: Wood County will lessen the damages suffered from windstorms (derecho or straight-line wind) or severe thunderstorms, including heavy rain, wind, hail, and lightning.</b>					
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.					
37	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, ICC
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.					
38	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
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.					
36	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
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.					
33	Public Information	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
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.					
34	Public Information	EMA Director	01/01/2019	12/31/2023	LOC

Priority	Action Type	Lead	Start Date	End Date	Funding
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.					
39	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
9.7 The County will work with railroads in the area 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.					
35	Public Information	EMA Director	01/01/2019	12/31/2023	LOC, Other
<b>Goal 10 – Tornado: Wood County will reduce the damages suffered from tornadoes.</b>					
10.1 The County will support the development of safe rooms for single and multi-family residential structures including support of safe room grant opportunities.					
42	Property Protection	EMA Director	01/01/2019	12/31/2023	PDM, HMGP
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 person in the county, and others who need shelter during tornadoes or other severe weather events.					
41	Property Protection	EMA Director	01/01/2019	12/31/2023	PDM, HMGP
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.					
40	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
10.4 The County will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.					
43	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
10.5 The County will support the implementation of communication systems 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.					
44	Public Information	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 11 – Water Quality: Wood County will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.</b>					
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.					
1	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC
11.2 The County will support improvements to water treatment systems that enhance the ability to detect and treat harmful contaminants.					
4	Prevention	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
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.					
5	Prevention	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
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.					
7	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other

Priority	Action Type	Lead	Start Date	End Date	Funding
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.					
8	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
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.					
10	Public Information	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
11.7 The County will work with non-farm 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 farm and non-farm entities in the effort to preserve and protect natural resources.					
11	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
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.					
9	Structurally Engineered Project	EMA Director	01/01/2019	12/31/2023	LOC, ST, Other
11.9 The County will support the creation of a multi-jurisdictional collaborative water authority to manage water treatment and delivery systems as they apply to Wood County and to address contamination of the source water that may endanger local water.					
2	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC, ST, ICC, Other
11.10 The County will support development of inter-connected and redundant water supplies that are readily available to quickly replace a contaminated water supply through standard distribution systems.					
3	Structurally Engineered Project	EMA Director	01/01/2019	12/31/2023	LOC, ST, ICC, Other
11.11 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.					
6	Natural Resource Protection	EMA Director	01/01/2019	12/31/2023	LOC
<b>Goal 12 – Winter Storms: Wood County will lessen damages suffered from severe winter storms and blizzards.</b>					
12.1 The County will work to plow and clear county-maintained roadways to facilitate emergency traffic, necessary travel, and business access.					
45	Property Protection	EMA Director	01/01/2019	12/31/2023	LOC

### 3.3.2 Cities

*Cities include Bowling Green, Northwood, Perrysburg, and Rossford.*

These cities comprise most of the urbanized area in Wood County. In the past decade, each has significantly developed retail and industrial areas and increased residential housing. All the cities exist in the shadow of the City of Toledo and Lucas County and are vulnerable to the consequences of regional decisions and actions that are much larger than Wood County alone.

These cities have shared their desire for smart development, containing the cost of urban sprawl and retaining the benefit of suburban living. All cities have said, in their own words, that development standards have helped them grow in a sustainable manner and regulation has been an asset when considering resiliency in light of growth.

Bowling Green is the largest of these four municipalities, with a population just over 30,000. Bowling Green State University is located inside the city. Perrysburg has just over 20,600 residents and is a major metropolitan retail and service area. Rossford, at 6,293 residents, and Northwood, at 5,265 residents, are much smaller. Both are located in the suburban sprawl of northern Wood County. These cities share similar concerns, face the same challenges, and approach disaster mitigation in a similar fashion.

The strategies identified below will be managed by the City Administrator in each city. These officials are all full-time, appointed employees. 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.

Many of these actions will be funded by the city’s operational budget. Others will be funded by special grants, such as Pre-Disaster Mitigation Program, Flood Mitigation Assistance, Hazard Mitigation Grant Program, or state and private funding.

**Table 3-4: City Mitigation Goals and Strategies**

Priority								
Bowling Green	Northwood	Perrysburg	Rossford	Action Type	Lead	Start Date	End Date	Funding Source
<b>Goal 1 – Dam/Levee Failure: The City will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible</b>								
1.1 The City will ensure that safety plans are in place for all dams and reservoirs that include accurate inundation areas and evacuation plans.								
N/A	N/A	37	N/A	Prevention	City Administrator	01/01/2019	12/31/2023	LOC

Priority				Action Type	Lead	Start Date	End Date	Funding Source
Bowling Green	Northwood	Perrysburg	Rossford					
<b>Goal 2 – Drought/Extreme Heat: The City will assess the reliability of water supplies during drought and extreme heat.</b>								
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.								
37	34	35	36	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 3 – Earthquake: The City will assess damage potential from earthquake and establish a safety plan for residents.</b>								
3.1 The City will assess the damage potential through a survey of structures and will determine the estimated safest local area for sheltering after an incident.								
38	35	40	37	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 4 – Flood: The City will work to lessen flooding and property damage from flooding in the village.</b>								
4.1 The City 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.								
16	16	21	1	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
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.								
17	17	22	2	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
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.								
18	18	23	3	Structurally Engineered Projects	City Administrator	01/01/2019	12/31/2023	PDM, FMA, LOC, ST, Other
4.4 The City will identify, acquire, and demolish repetitive loss properties to prevent future damages.								
19	20	29	8	Prevention	City Administrator	01/01/2019	12/31/2023	PDM, FMA
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.								
22	19	28	7	Prevention	City Administrator	01/01/2019	12/31/2023	LOC, ICC, Other
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.								
25	24	30	11	Prevention	City Administrator	01/01/2019	12/31/2023	LOC, ICC, Other

Bowling Green	Priority			Action Type	Lead	Start Date	End Date	Funding Source
	Northwood	Perrysburg	Rossford					
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.								
23	21	25	6	Property Protection	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
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.								
26	23	N/A	5	Natural Resource Protection	City Administrator	01/01/2019	12/31/2023	LOC
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.								
24	N/A	24	9	Natural Resource Protection	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
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.								
21	22	27	10	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
4.11 The City will work to repair roadways and streets that are damaged by the effects of flash flooding.								
20	N/A	26	4	Property Protection	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 5 – Hazardous Materials Incident: The City 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.</b>								
5.1 The City will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.								
6	1	6	14	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
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.								
7	4	10	15	Prevention	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
5.3 The City will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.								
9	3	N/A	13	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
5.4 The City will work with businesses and residents to encourage proper pre-digging procedures are used before any excavation or disruption of the soil occurs to prevent the breach of pipelines and underground hazardous substance management systems.								
8	2	8	12	Prevention	City Administrator	01/01/2019	12/31/2023	LOC

Priority								
Bowling Green	Northwood	Perrysburg	Rossford	Action Type	Lead	Start Date	End Date	Funding Source
<b>Goal 6 – Invasive Species: The City 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.</b>								
6.1 The City will work to clear public property of dead or diseased trees that have been affected by invasive species.								
36	30	9	37	Property Protection	City Administrator	01/01/2019	12/31/2023	LOC
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.								
35	29	7	36	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 7 – Landslide/Mudslide: The City will work to lessen damages from landslide and mudslide along the Maumee River.</b>								
7.1 The City will support programs that reduce landslide and sedimentation along the Maumee River to reduce the property deterioration caused when riverbank structures have reduced stability.								
N/A	N/A	38	38	Natural Resource Protection	City Administrator	01/01/2019	12/31/2023	LOC
7.2 The City will advocate for slope protection actions along the Maumee River to reduce vulnerability to property owners with homes and other structures along the riverbanks.								
N/A	N/A	39	39	Natural Resource Protection	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 8 – Power Outage: The City will work to eliminate power outages by hardening electrical service utilities.</b>								
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.								
32	33	33	34	Prevention	City Administrator	01/01/2019	12/31/2023	LOC, Other
8.2 The City will work to support development that requires underground installation of electric lines in sub-divisions and appropriate industrial neighborhoods.								
33	31	32	33	Property Protection	City Administrator	01/01/2019	12/31/2023	LOC, Other
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.								
34	32	34	35	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 9 – Severe Thunderstorm: The City will lessen the damages suffered from windstorms (derecho or straight-line wind), or severe thunderstorms, including heavy rain, wind, hail, and lightning.</b>								
9.1 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.								

Bowling Green	Priority			Action Type	Lead	Start Date	End Date	Funding Source
	Northwood	Perrysburg	Rossford					
10	9	13	17	Property Protection	City Administrator	01/01/2019	12/31/2023	LOC, ICC, Other
9.2 The City will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, and communication during storm response and recovery.								
11	5	11	16	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
9.3 The City will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover relevant hazards that may damage their property.								
14	8	12	18	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
9.4 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.								
12	7	15	21	Public Information	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
9.5 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.								
15	10	14	20	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
9.6 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.								
13	6	N/A	19	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
<b>Goal 10 – Tornado: The City will reduce the damages suffered from tornadoes.</b>								
10.1 The City will support the development of safe rooms for single and multi-family residential structures including support of safe room grant opportunities.								
28	28	5	26	Property Protection	City Administrator	01/01/2019	12/31/2023	PDM
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.								
27	26	2	22	Property Protection	City Administrator	01/01/2019	12/31/2023	PDM
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.								
29	27	3	25	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
10.4 The City will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.								

Bowling Green	Priority			Action Type	Lead	Start Date	End Date	Funding Source
	Northwood	Perrysburg	Rossford					
31	29	1	23	Public Information	City Administrator	01/01/2019	12/31/2023	LOC
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.								
30	30	4	24	Public Information	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 11 – Water Quality: The City will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.</b>								
11.1 The City will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.								
1	14	16	29	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
11.2 The City will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.								
2	13	17	27	Prevention	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
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.								
5	15	20	31	Prevention	City Administrator	01/01/2019	12/31/2023	LOC
11.4 The City will support the creation of a multi-jurisdictional collaborative water authority to manage water treatment and delivery systems as they apply to Wood County and to address contamination of the source water that may endanger local water.								
4	12	19	30	Natural Resource Protection	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
11.5 The City will support development of inter-connected and redundant water supplies that are readily available to quickly replace a contaminated water supply through standard distribution systems.								
3	11	18	28	Structurally Engineered Projects	City Administrator	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 12 – Winter Storm: The City will lessen damages suffered from severe winter storms and blizzards.</b>								
12.1 The City will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.								
36	25	31	32	Prevention	City Administrator	01/01/2019	12/31/2023	LOC

### 3.3.3 Developing Townships

*Developing townships include Lake, Middleton, and Perrysburg Townships.*

These three townships are contiguous to the cities located in northern Wood County. All three are quickly developing, fast-paced growth centers where overflow from the cities of Perrysburg, Toledo, Maumee, and Oregon lands. Residential neighborhoods are growing rapidly as workers from nearby cities choose homes in the suburbs. Business growth is huge as entrepreneurs and franchise owners put down stakes in a budding community of urban consumers.

All three townships are zoned, with the exception of an approximately 1-mile wide strip of Perrysburg Township along the south and east boundary lines. Voters in this small area have rejected zoning options at the polls several times. As an area of high and rapid growth, the door is open for businesses that are desirable as well as those who find difficulty in obtaining zoning approvals. The un-zoned land is currently farmland, but the challenge will be to keep it that way.

The identified mitigation actions and strategies will be managed by Township Trustees. The start date for township mitigation efforts will be January 1, 2019 and the end date will be December 31, 2023.

Funding will come from a variety of sources. In many grant programs, the Wood County Commissioners act as fiscal agent on behalf of all townships. That may be the case here. When it is allowed, the townships may choose to apply directly for a grant from an identified fund. Some actions, especially those that tend to be maintenance or operational, will be funded by the township budget. Funds like mitigation grants and CDBG funding are generally administered by the Wood County Commissioners. The Township Trustees will work with the Wood County Commissioners to identify special funding programs and to decide who and how the grant funds or special project dollars will be administered.

**Table 3-5: Developing Township Mitigation Goals and Strategies**

Lake Township	Priority Middleton Township	Perrysburg Township	Action Type	Lead	Start Date	End Date	Funding
<b>Goal 1 – Dam/Levee Failure: The Township will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible</b>							
1.1 The Township will ensure that safety plans are in place for all dams and reservoirs that include accurate inundation areas and evacuation plans.							
N/A	31	N/A	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 2 – Drought/Extreme Heat: The Township will assess the reliability of water supplies during drought and extreme heat.</b>							

Lake Township	Priority Middleton Township	Perrysburg Township	Action Type	Lead	Start Date	End Date	Funding
2.1 The Township 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.							
35	36	37	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 3 – Earthquake: The Township will assess damage potential from earthquake and establish a safety plan for residents.</b>							
3.1 The Township will assess the damage potential through a survey of structures and will determine the estimated safest local area for sheltering after an incident.							
36	35	37	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 4 – Flood: The Township will work to lessen flooding and property damage from flooding in the village.</b>							
4.1 The Township 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.							
6	24	6	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ICC
4.2 The Township 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.							
7	25	7	Structurally Engineered Projects	Township Trustees	01/01/2019	12/31/2023	PDM, FMA, LOC, Other
4.3 The Township will identify, acquire, and demolish repetitive loss properties to prevent future damages.							
N/A	29	11	Prevention	Township Trustees	01/01/2019	12/31/2023	PDM
4.4 The Township 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.							
8	28	10	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ICC, Other
4.5 The Township will collaborate with watershed organizations, conservancy groups, and conservation organizations to maintain, clean, and improve ditches, streams, creeks, and rivers in the jurisdiction.							
12	30	14	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ICC, Other
4.6 The Township 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.							
9	26	8	Property Protection	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
4.7 The Township will use creation of natural habitat and restoration of wetlands as a means to contain flood waters and to allow natural drainage.							

Lake Township	Priority Middleton Township	Perrysburg Township	Action Type	Lead	Start Date	End Date	Funding
13	N/A	12	Natural Resource Protection	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
4.8 The Township will increase the use of temporary signs to mark flooded streets and areas in an effort to make the community safer when flooded.							
11	N/A	13	Natural Resource Protection	Township Trustees	01/01/2019	12/31/2023	LOC
4.9 The Township will work to repair roadways and streets that are damaged by the effects of flash flooding.							
10	27	9	Property Protection	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 5 – Hazardous Materials Incident: The Township 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.</b>							
5.1 The Township will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.							
20	7	20	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
5.2 The Township will identify and acquire funding for first responder training so that when hazardous materials are spilled or released, response is rapid and effective.							
21	9	21	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
5.3 The Township will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.							
23	10	23	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
5.4 The Township will work with businesses and residents to encourage proper pre-digging procedures are used before any excavation or disruption of the soil occurs to prevent the breach of pipelines and underground hazardous substance management systems.							
22	8	22	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 6 – Invasive Species: The Township 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.</b>							
6.1 The Township will work to clear public property of dead or diseased trees that have been affected by invasive species.							
30	34	32	Property Protection	Township Trustees	01/01/2019	12/31/2023	LOC, Other
6.2 The Township 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.							
29	33	31	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 7 – Landslide/Mudslide Goal: The Township will work to lessen damages from landslide and mudslide along the Maumee River.</b>							

Lake Township	Priority Middleton Township	Perrysburg Township	Action Type	Lead	Start Date	End Date	Funding
7.1 The Township will support programs that reduce landslide and sedimentation along the Maumee River to reduce the property deterioration caused when riverbank structures have reduced stability.							
N/A	37		Natural Resource Protection	Township Trustees	01/01/2019	12/31/2023	LOC
7.2 The Township will advocate for slope protection actions along the Maumee River to reduce vulnerability to property owners with homes and other structures along the riverbanks.							
N/A	38		Natural Resource Protection	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 8 – Power Outage: The Township will work to eliminate power outages by hardening electrical service utilities.</b>							
8.1 The Township will work with electric providers to harden electrical service through installation of resilient substations, transformers, and poles that are wind and ice resistant.							
34	17	34	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, Other
8.2 The Township will work to support development that requires underground installation of electric lines in sub-divisions and appropriate industrial neighborhoods.							
33	18	33	Property Protection	Township Trustees	01/01/2019	12/31/2023	LOC, Other
8.3 The Township will acquire adequate generators to power critical services during power outages, including shelters, pump stations, and public safety and administration buildings.							
32	16	35	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 9 – Severe Thunderstorm: The Township will lessen the damages suffered from windstorms (derecho or straight-line wind), or severe thunderstorms, including heavy rain, wind, hail, and lightning.</b>							
9.1 The Township 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	2	26	Property Protection	Township Trustees	01/01/2019	12/31/2023	LOC, ICC, Other
9.2 The Township will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, and communication during storm response and recovery.							
15	1	25	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
9.3 The Township will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover relevant hazards that may damage their property.							
18	3	27	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC

Lake Township	Priority Middleton Township	Perrysburg Township	Action Type	Lead	Start Date	End Date	Funding
9.4 The Township 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	4	29	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
9.5 The Township 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.							
17	5	28	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
9.6 The Township 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.							
16	6	24	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
<b>Goal 10 – Tornado: The Township will reduce the damages suffered from tornadoes.</b>							
10.1 The Township will support the development of safe rooms for single and multi-family residential structures including support of safe room grant opportunities.							
4	23	4	Property Protection	Township Trustees	01/01/2019	12/31/2023	PDM
10.2 The Township will support the development of public safe areas and storms shelters for residents of mobile homes, homes without basements, transient persons in the county, and others who need shelter during tornadoes or other severe weather events.							
1	19	5	Property Protection	Township Trustees	01/01/2019	12/31/2023	PDM
10.3 The Township will ensure that agreements exist for sheltering the village residents when homes are unlivable due to severe storms and tornadoes and evacuations.							
5	20	1	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
10.4 The Township will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.							
3	21	2	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC
10.5 The Township will support the implementation of communication system that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.							
2	22	3	Public Information	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 11 – Water Quality: The Township will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.</b>							
11.1 The Township will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.							

Lake Township	Priority Middleton Township	Perrysburg Township	Action Type	Lead	Start Date	End Date	Funding
28	14	19	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC
11.2 The Township will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.							
25	13	17	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
11.3 The Township 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.							
27	15	18	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
11.4 The Township will support the creation of a multi-jurisdictional collaborative water authority to manage water treatment and delivery systems as they apply to Wood County and to address contamination of the source water that may endanger local water.							
26	11	16	Natural Resource Protection	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
11.5 The Township will support development of inter-connected and redundant water supplies that are readily available to quickly replace a contaminated water supply through standard distribution systems.							
24	12	15	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 12 – Winter Storm: The Township will lessen damages suffered from severe winter storms and blizzards.</b>							
12.1 The Township will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.							
31	32	30	Prevention	Township Trustees	01/01/2019	12/31/2023	LOC

### 3.3.4 Special Flood Risk Villages

*Villages with exceptional flood risk include Grand Rapids, Millbury, Pemberville, and Walbridge.*

These four villages significantly higher flood risk than others in the county. Each village floods regularly, sometimes more than annually and on occasion multiple times in a year. All are located on waterways that contribute to their flood risk. Grand Rapids is located on the Maumee River at Providence and Grand Rapids dams on the far northwestern border of Wood and Henry counties; Millbury is located on the eastern border with Ottawa County and is encircled by Henry, Ayers, and Crane Creeks as they flow into the Toussaint River watershed; Pemberville sits at the juncture of the North and South Branches of the Portage River before it flows into Sandusky County; and Walbridge is inundated by the waters of Cedar Creek and Dry Creek in a low-lying area that drains slowly

and ineffectively. Flooding in these communities is bad enough and frequent enough that residents think about flooding every time it rains. It only takes a few inches of rain over a couple days for these communities to experience water where it shouldn't be.

With just over 3,000 residents, Walbridge is the most populated of the four villages. Many are elderly life-long residents whose children have moved away. This railroad community is home to the CSX operations that serve the Port of Toledo; many elderly residents are retired railroad workers or refinery workers from the local petroleum industry. Pemberville and Millbury are populated by 1,371 and 1,200 residents, respectively. Like Walbridge, they are home to many people who have lived there for decades. Residents are skilled and unskilled laborers, service providers and professionals. Grand Rapids is the smallest at just under 1,000 residents but boasts of a robust and well-known historical downtown and the Providence and Grand Rapids dams.

These communities are located a convenient distance from urbanized areas and have ready access to the goods and services not available locally - when there is no flooding. When floodwaters cover the villages, they are cut off from access to these goods and services. Businesses are inundated with water and shop owners spend their days bailing water and removing water-logged debris. Homeowners transform to house-savers who run sump pumps, sandbag exteriors, and move treasures to safety to the extent possible. While they all experience other incidents and weather events, flooding is their greatest fear.

The identified mitigation actions and strategies will be managed by the Mayor of each village. The start date for these mitigation efforts will be January 1, 2019 and the end date will be December 31, 2023.

Many of the identified mitigation strategies will be funded by local funding as a part of regular operation of the jurisdiction. Some will be funded through the Pre-Disaster Mitigation Program, Flood Mitigation Assistance, Hazard Mitigation Grant Program, Community Development Block Grants, or other public or private sources.

**Table 3-6: Special Flood Risk Village Mitigation Goals and Strategies**

Priority									
Grand Rapids	Millbury	Pemberville	Walbridge	Action Type	Lead	Start Date	End Date	Funding	
<b>Goal 1 – Dam/Levee Failure: The Village will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible.</b>									
1.1 The Village will ensure that safety plans are in place for all dams and reservoirs that include accurate inundation areas and evacuation plans.									
24	N/A	N/A	N/A	Prevention	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 2 – Drought/Extreme Heat: The Village will assess the reliability of water supplies during drought and extreme heat.</b>									

Priority									
Grand Rapids	Millbury	Pemberville	Walbridge	Action Type	Lead	Start Date	End Date	Funding	
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.									
27	36	34	33	Prevention	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 3 – Earthquake: The Village will assess damage potential from earthquake and establish a safety plan for residents.</b>									
3.1 The Village will assess the damage potential through a survey of structures and will determine the estimated safest local area for sheltering after an incident.									
23	37	35	34	Prevention	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 4 – Flood: The Village will work to lessen flooding and property damage from flooding in the village.</b>									
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	1	1	1	Prevention	Mayor	01/01/2019	12/31/2023	LOC	
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	2	2	2	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ICC	
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	3	8	3	Structurally Engineered Projects	Mayor	01/01/2019	12/31/2023	PDM, HMGP, LOC, ST, Other	
4.4 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.									
8	9	3	5	Prevention	Mayor	01/01/2019	12/31/2023	PDM, FMA	
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.									
4	4	4	6	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ICC, Other	
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.									
N/A	10	5	4	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ICC, Other	

Priority									
Grand Rapids	Millbury	Pemberville	Walbridge	Action Type	Lead	Start Date	End Date	Funding	
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	8	9	7	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, ICC, Other	
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.									
9	7	7	8	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
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.									
N/A	11	6	N/A	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
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.									
6	6	11	N/A	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
4.11 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.									
5	5	10	9	Property Protection	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 5 – Hazardous Materials Incident: The Village 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.</b>									
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.									
N/A	N/A	22	23	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
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.									
N/A	25	19	22	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.									
N/A	24	21	21	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
5.4 The Village will work with businesses and residents to encourage proper pre-digging procedures are used before any excavation or disruption of the soil occurs to prevent the breach of pipelines and underground hazardous substance management systems.									
22	23	20	24	Public Information	Mayor	01/01/2019	12/31/2023	LOC	

Priority									
Grand Rapids	Millbury	Pemberville	Walbridge	Action Type	Lead	Start Date	End Date	Funding	
<b>Goal 6 – Invasive Species: The Village 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.</b>									
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.									
26	32	12	29	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, Other	
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.									
25	31	13	28	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 7 – Landslide/Mudslide: The Village will work to lessen damages from landslide and mudslide along the Maumee River.</b>									
7.1 The Village will support programs that reduce landslide and sedimentation along the Maumee River to reduce the property deterioration caused when riverbank structures have reduced stability.									
33	N/A	N/A	N/A	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC	
7.2 The Village will advocate for slope protection actions along the Maumee River to reduce vulnerability to property owners with homes and other structures along the riverbanks.									
32	N/A	N/A	N/A	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 8 – Power Outage: The Village will work to eliminate power outages by hardening electrical service utilities.</b>									
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.									
29	35	35	N/A	Prevention	Mayor	01/01/2019	12/31/2023	LOC, Other	
8.2 The Village will work to support development that requires underground installation of electric lines in sub-divisions and appropriate industrial neighborhoods.									
30	33	34	32	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, Other	
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.									
28	34	N/A	31	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
<b>Goal 9 – Severe Thunderstorm: The Village will lessen the damages suffered from windstorms (derecho or straight-line wind), or severe thunderstorms, including heavy rain, wind, hail, and lightning.</b>									
9.1 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.									
11	14	16	20	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, Other	

Priority									
Grand Rapids	Millbury	Pemberville	Walbridge	Action Type	Lead	Start Date	End Date	Funding	
9.2 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, and communication during storm response and recovery.									
N/A	13	15	15	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
9.3 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover relevant hazards that may damage their property.									
N/A	12	14	19	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
9.4 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.									
10	15	18	18	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
9.5 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.									
12	17	17	17	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
9.6 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.									
13	16	N/A	16	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
<b>Goal 10 – Tornado Goal: The Village will reduce the damages suffered from tornadoes.</b>									
10.1 The Village will support the development of safe rooms for single and multi-family residential structures including support of safe room grant opportunities.									
15	19	29	11	Property Protection	Mayor	01/01/2019	12/31/2023	PDM	
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.									
N/A	18	30	12	Property Protection	Mayor	01/01/2019	12/31/2023	PDM	
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.									
14	20	32	10	Public Information	Mayor	01/01/2019	12/31/2023	LOC	
10.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.									
16	21	31	13	Public Information	Mayor	01/01/2019	12/31/2023	LOC	

Priority									
Grand Rapids	Millbury	Pemberville	Walbridge	Action Type	Lead	Start Date	End Date	Funding	
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.									
17	22	33	14	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
<b>Goal 11 – Water Quality: The Village will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.</b>									
11.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.									
18	28	24	N/A	Prevention	Mayor	01/01/2019	12/31/2023	LOC	
11.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.									
N/A	27	23	25	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
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.									
20	30	25	N/A	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
11.4 The Village will support the creation of a multi-jurisdictional collaborative water authority to manage water treatment and delivery systems as they apply to Wood County and to address contamination of the source water that may endanger local water.									
21	29	27	27	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
11.5 The Village will support development of inter-connected and redundant water supplies that are readily available to quickly replace a contaminated water supply through standard distribution systems.									
19	26	26	26	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other	
<b>Goal 12 – Winter Storm: The Village will lessen damages suffered from severe winter storms and blizzards.</b>									
12.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.									
31	12	28	30	Prevention	Mayor	01/01/2019	12/31/2023	LOC	

### 3.3.5 Special Hazardous Materials Risk Villages

*Villages with exceptional hazardous materials incident risk include Luckey and North Baltimore.*

These two villages have exceptional risk for hazardous materials incidents; environmental contamination is high on their list of concerns. North Baltimore is located on the southern border with Hancock County and sits just east of the CSX Intermodal Rail yard in Henry Township. Railroad tracks cut the village in half horizontally and State Route 18 creates the southern boundary of the village. The railroad tracks are travelled continually by trains entering the intermodal yard. The rail cars carry an immeasurable variety of hazardous substances as CSX is one of the largest railroads in the United States and operates as a Class I railroad.

Luckey is the site of a United States Army Corps of Engineers FUSRAP (Formerly Utilized Sites Remedial Action Program) site. In 1942, the facility was built as a magnesium producing plant by the United States government. In 1949, Brush Beryllium Company produced beryllium oxide, beryllium hydroxide, and beryllium pebbles there for shipment to other facilities for processing. Over the years, the plant has changed ownership multiple times. Today, it is owned by a salvage company that says it no longer wants to own or use the property. In 2006, the USACE signed a record of decision that the site contains beryllium, lead, and radionuclide (radium-226, thorium-230, uranium-234, uranium-235 and uranium-238). USACE is currently initiating a project to excavate and dispose of the contaminated soils and other materials from the site. Although contaminated soils extend to the Toussaint Creek, the USACE has determined that the creek does not have environmental concerns due to the site. In 2008, USACE determined that groundwater below the site was contaminated. As the soils are removed, it is believed the groundwater contamination will dissipate. Dubbed a “long story at best”, the site clean-up resources were mobilized in late 2016. By the spring of 2018, the contractor was beginning to complete site infrastructure setup activities and begin cleanup of the site (USACE Buffalo District report March 2018).

North Baltimore has a population of 3, 432. Luckey is much smaller with just over 1,000 residents. Both villages are several miles from municipalities and retail centers and incur similar other hazards and storms. These strategies will be managed and carried out by the mayor of each village. The start date will be January 1, 2019 and the end date will be December 31, 2023. Funding for most strategies will come from the village’s operational budget. Some will be funded by Pre-Disaster Mitigation Program, Flood Mitigation Program, Hazard Mitigation Grant Program, Community Development Block Grants, or other public and private sources.

**Table 3-7: Special Hazardous Materials Risk Village Mitigation Goals and Strategies**

Priority		Action Type	Lead	Start Date	End Date	Funding
Luckey	North Baltimore					
<b>Goal 1 – Dam/Levee Failure: The Village will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible.</b>						
1.1 The Village will ensure that safety plans are in place for both reservoirs that include accurate inundation areas and evacuation plans.						
34	16	Prevention	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 2 – Drought/Extreme Heat: The Village will assess the reliability of water supplies during drought and extreme heat.</b>						
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.						
32	37	Prevention	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 3 – Earthquake: The Village will assess damage potential from earthquake and establish a safety plan for residents.</b>						
3.1 The Village will assess the damage potential through a survey of structures and will determine the estimated safest local area for sheltering after an incident.						
33	36	Prevention	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 4 – Flood: The Village will work to lessen flooding and property damage from flooding in the village.</b>						
4.1 The Village will establish participation and resolve sanction (Luckey) or maintain participation (North Baltimore) in NFIP to facilitate maximum understanding of and prevention of flood concerns as well as providing an array of insurance alternatives to property owners.						
13	5	Prevention	Mayor	01/01/2019	12/31/2023	LOC
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.						
14	6	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ICC
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.						
20	15	Structurally Engineered Projects	Mayor	01/01/2019	12/31/2023	LOC, ICC, Other
4.4 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.						
19	13	Prevention	Mayor	01/01/2019	12/31/2023	PDM, FMA
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.						
15	7	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ICC, Other
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.						
23	14	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ICC, Other

Priority		Action Type	Lead	Start Date	End Date	Funding
Lucky	North Baltimore					
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.						
16	8	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
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.						
21	11	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
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.						
22	12	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
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.						
18	10	Public Information	Mayor	01/01/2019	12/31/2023	LOC
4.11 The Village will work to repair roadways and streets that are damaged by the effects of flash flooding.						
17	9	Property Protection	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 5 – Hazardous Materials Incident: The Village 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.</b>						
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.						
3	3	Public Information	Mayor	01/01/2019	12/31/2023	LOC
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.						
2	4	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the jurisdiction.						
1	1	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
5.4 The Village will work with businesses and residents to encourage proper pre-digging procedures are used before any excavation or disruption of the soil occurs to prevent the breach of pipelines and underground hazardous substance management systems.						
4	2	Public Information	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 6 – Invasive Species: The Village 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.</b>						
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by invasive species.						
28	33	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, Other
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.						

Priority		Action Type	Lead	Start Date	End Date	Funding
Lucky	North Baltimore					
27	32	Public Information	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 7 – Power Outage: The Village will work to eliminate power outages by hardening electrical service utilities.</b>						
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.						
30	35	Prevention	Mayor	01/01/2019	12/31/2023	LOC, Other
7.2 The Village will work to support development that requires underground installation of electric lines in sub-divisions and appropriate industrial neighborhoods.						
N/A	N/A	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, Other
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.						
29	34	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 8 – Severe Thunderstorm: The Village will lessen the damages suffered from windstorms (derecho or straight-line wind) or severe thunderstorms, including heavy rain, wind, hail, and lightning.</b>						
8.1 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.						
N/A	N/A	Property Protection	Mayor	01/01/2019	12/31/2023	LOC, Other
8.2 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, and communication during storm response and recovery.						
5	17	Public Information	Mayor	01/01/2019	12/31/2023	LOC
8.3 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover relevant hazards that may damage their property.						
7	19	Public Information	Mayor	01/01/2019	12/31/2023	LOC
8.4 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.						
6	18	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
8.5 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.						
N/A	20	Public Information	Mayor	01/01/2019	12/31/2023	LOC
8.6 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.						

Priority		Action Type	Lead	Start Date	End Date	Funding
Lucky	North Baltimore					
N/A		Public Information	Mayor	01/01/2019	12/31/2023	LOC
<b>Goal 9 – Tornado: The Village will reduce the damages suffered from tornadoes.</b>						
9.1 The Village will support the development of safe rooms for single and multi-family residential structures including support of safe room grant opportunities.						
10	23	Property Protection	Mayor	01/01/2019	12/31/2023	PDM
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.						
8	21	Property Protection	Mayor	01/01/2019	12/31/2023	PDM
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.						
9	22	Public Information	Mayor	01/01/2019	12/31/2023	LOC
9.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, and emergency help.						
11	24	Public Information	Mayor	01/01/2019	12/31/2023	LOC
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.						
12	25	Public Information	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 10 – Water Quality: The Village will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.</b>						
10.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.						
N/A	30	Prevention	Mayor	01/01/2019	12/31/2023	LOC
10.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants.						
N/A	29	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
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.						
24	28	Prevention	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
10.4 The Village will support the creation of a multi-jurisdictional collaborative water authority to manage water treatment and delivery systems as they apply to Wood County and to address contamination of the source water that may endanger local water.						
26	27	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
10.5 The Village will support development of inter-connected and redundant water supplies that are readily available to quickly replace a contaminated water supply through standard distribution systems.						

Priority		Action Type	Lead	Start Date	End Date	Funding
Lucky	North Baltimore					
25	26	Natural Resource Protection	Mayor	01/01/2019	12/31/2023	LOC, ST, Other
<b>Goal 11 – Winter Storm: The Village will lessen damages suffered from severe winter storms and blizzards.</b>						
11.1 The Village will work to plow and clear village roadways to facilitate emergency traffic, necessary travel, and business access.						
31	31	Prevention	Mayor	01/01/2019	12/31/2023	LOC

**3.3.6 Rural Villages**

*Villages of <1,600 residents located in rural, non-urbanized areas include Bairdstown, Bloomdale, Bradner, Custar, Cygnet, Haskins, Hoytville, Jerry City, Milton Center, Portage, Risingsun, Tontogany, Wayne, West Millgrove, and Weston.*

These communities are all small villages of less than 1,600 residents located in rural areas of Wood County. Of the fifteen villages, only two (Weston and Haskins) have over 1,000 residents. Eight of the remaining thirteen have under 500 residents. None of the villages are served by a large paid staff of workers, but some have one or two employees and others have minimal part-time workers. The elected officials work as volunteers. These communities have been addressed together because they share common vulnerability, have common characteristics of the population and property at risk, hold common financial capability as jurisdictions to address mitigation strategies, and share common opinion of the strategies that will have a positive effect on disaster damage.

These villages share common vulnerabilities from common hazards. Most have experienced severe storms with damages that have required assistance from Wood County because their budgets are not sufficient to cover the response and recovery cost of costly disaster events. They share the same challenges and vulnerabilities in being truly prepared for disasters and in sustaining resilient communities on a regular basis.

All strategies listed below will be managed by the mayor in each of the villages. The mayor will begin implementation on approximately January 1, 2019 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 Wood 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 as part of regular operation of the jurisdiction. Select strategies will be funded through the Pre-Disaster Mitigation Program, Flood Mitigation Assistance, Hazard Mitigation Grant Program, Community Development Block Grants, or other public and private sources.

**Table 3-8: Rural Village Mitigation Goals and Strategies**

Strategy	Priority															
	Action Type		Lead Agency			Start Date	End Date	Funding								
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston	
<b>Goal 1 – Dam Failure: The Village will work to ensure all dams and reservoirs are well maintained and pose as little risk to the community as possible.</b>																
1.1 The Village will ensure that safety plans are in place for all dams and reservoirs that include accurate inundation areas and evacuation plans.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	N/A	N/A
	Prevention		Mayor			01/01/2019	12/31/2023	LOC								
<b>Goal 2 – Drought/Extreme Heat: The Village will assess the reliability of water supplies during drought and extreme heat.</b>																
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	28	34	21	9	32	20	30	29	24	36	33	32	33	36	
	Prevention		Mayor			01/01/2019	12/31/2023	LOC								
<b>Goal 3 – Earthquake: The Village will assess damage potential from earthquake and establish a safety plan for residents.</b>																
3.1 The Village will assess the damage potential through a survey of structures and will determine the estimated safest local area for sheltering after an incident.	34	29	35	23	12	34	21	31	30	25	37	34	33	34	35	
	Prevention		Mayor			01/01/2019	12/31/2023	LOC								
<b>Goal 4 – Flood: The Village will work to lessen flooding and property damage from flooding in the village.</b>																
4.1 The Village will establish (E)/maintain(M)/resolve (R) 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.	E	E	--	E	M	--	R	E	E	M	E	R	E	R	E	
	Prevention		Mayor			01/01/2019	12/31/2023	LOC								
4.2 The Village will adopt and/or enforce regulations,	21	12	17	10	1	1	1	1	15	10	23	15	1	10	11	

Strategy	Priority														
	Action Type			Lead Agency			Start Date			End Date			Funding		
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston
including zoning, construction regulations, floodplain regulations, subdivision rules, and other local and state regulations pertaining to new or renovated construction and community development projects.	Prevention			Mayor			01/01/2019			12/31/2023			LOC, ICC, Other		
4.3 The Village will require structurally engineered flooding prevention measures for new development including installation of retention/detention ponds, channelization, and elevation of roads, bridges, and culverts. *	28	21	22		2	2	2	8	20	14	31		7	14	12
	Structurally Engineered Projects			Mayor			01/01/2019			12/31/2023			PDM, HMGP, Other		
4.4 The Village will identify, acquire, and demolish repetitive loss properties to prevent future damages.	22	20	18				--	--	16	--	24	19	8	13	19
	Prevention			Mayor			01/01/2019			12/31/2023			PDM, FMA		
4.5 The Village will maintain and clear debris, including lawn and crop fodder, dead/diseased trees, animal-borne obstructions, and excess sediment from waterways to facilitate natural drainage.	23	13	19	11	3	3		2	17	11	25	16		11	13
	Prevention			Mayor			01/01/2019			12/31/2023			LOC, ICC, Other		
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.	29	19	X				6	3	22	16		23	9	18	20
	Prevention			Mayor			01/01/2019			12/31/2023			LOC, ICC, Other		
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.	24	14	20	12		4		4	18	12	26	17	2	12	14
	Property Protection			Mayor			01/01/2019			12/31/2023			LOC, ST, Other		
4.8 The Village will work with agriculture and transportation	25	15	21				--	5	19	15	27	18	3	--	15

Strategy	Priority														
	Action Type			Lead Agency			Start Date			End Date			Funding		
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston
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.	Natural Resource Protection			Mayor			01/01/2019			12/31/2023			LOC, ST, Other		
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.	27	18	24			--	7	21	--	30	22	6	15	18	
	Natural Resource Protection			Mayor			01/01/2019			12/31/2023			LOC, ST, Other		
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.	26	17	--			5	6	--	--	28	21	4	17	16	
	Public Information			Mayor			01/01/2019			12/31/2023			LOC		
4.11The village will work to repair roadways and streets that are damaged by the effects of flash flooding.	--	16	23			--	--	--	13	29	20	5	16	17	
	Property Protection			Mayor			01/01/2019			12/31/2023			LOC		
<b>Goal 5 – Hazardous Materials Incident: The Village will work to lessen both the number of spills, leaks and releases from hazardous materials incidents, as well as lessen the damages from such spills, leaks, and releases.</b>															
5.1 The Village will work to improve signage and traffic indicators as a way to prevent collisions involving vehicles carrying hazardous substances.	2	5	10	14	3	8	11	--	2	17	11	1	--	21	21
	Public Information			Mayor			01/01/2019			12/31/2023			LOC		
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.	3	3	9	13	4	7	10	12	1	18	12	2	15	19	22
	Public Information			Mayor			01/01/2019			12/31/2023			LOC, ST, Other		
5.3 The Village will develop and maintain collaborative relationships with businesses and organizations who transport, use, and distribute hazardous substances in the county.	4	4	8	15		9	13	3	--	13		16	20	23	
	Public Information			Mayor			01/01/2019			12/31/2023			LOC		
5.4 The Village will work with businesses and residents to	1	2								14	3				

Strategy	Priority														
	Action Type				Lead Agency			Start Date			End Date			Funding	
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston
encourage proper pre-digging procedures are used before any excavation or disruption of the soil occurs to prevent the breach of pipelines and underground hazardous substance management systems.	Public Information				Mayor			01/01/2019			12/31/2023			LOC	
<b>Goal 6 – Invasive Species: The Village will lessen the cost of plant debris caused by invasive species that infest and destroy trees in the village and create large amounts of tree debris to be removed after storms fell the weakened trees.</b>															
6.1 The Village will work to clear public property of dead or diseased trees that have been affected by Emerald Ash Borer or other invasive species.	18	22	2	20	7	27	25	31	20	16	25	18	23	34	
	Property Protection				Mayor			01/01/2019			12/31/2023			LOC, ICC, Other	
6.2 The Village will work to identify reasonably priced and adequate debris disposal sites after storms that cause diseased trees to fall in huge numbers, and to identify a source to pay for the debris disposal.	19	23	1	19	8	26	19	24	30	19	15	24	17	22	33
	Public Information				Mayor			01/01/2019			12/31/2023			LOC	
<b>Goal 7 – Power Outage: The Village will work to harden electrical service by eliminating power outages.</b>															
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.	31	25	32	17	31	15	28	27	--	34	27	--	31	30	
	Prevention				Mayor			01/01/2019			12/31/2023			LOC, Other	
7.2 The Village will work to support development that requires underground installation of electric lines in subdivisions and appropriate industrial neighborhoods.	32	26	33	18	30	16	27	--	22	32	26	--	32	31	
	Property Protection				Mayor			01/01/2019			12/31/2023			LOC, Other	
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. *	30	24	31	16	10	29	17	26	--	21	33	28	30	30	29
	Prevention				Mayor			01/01/2019			12/31/2023			LOC, ST, Other	

Strategy	Priority														
	Action Type				Lead Agency			Start Date			End Date			Funding	
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston
<b>Goal 8 – Severe Thunderstorm: The Village will lessen the damages suffered from windstorms (derecho or straight-line wind), or severe thunderstorms, including heavy rain, wind, hail, and lightning.</b>															
8.1 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.	11	9	7			13		11	14	3	5	14	23	4	3
	Property Protection				Mayor			01/01/2019			12/31/2023			LOC, Other	
8.2 The Village will support the development of community storm centers and safe areas to serve as a local hub for information, coordination, and communication during storm response and recovery.	--	7	3	1	5	10	3	10	10		4	10	19	3	4
	Property Protection				Mayor			01/01/2019			12/31/2023			LOC	
8.3 The Village will advocate that all property owners, public and private, carry adequate and appropriate insurance to cover relevant hazards for the property.	12	6	6	3		11	4		11	4	3	13	22	1	2
	Public Information				Mayor			01/01/2019			12/31/2023			LOC	
8.4 The Village will promote the continuation and improvement of 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.	10	5	4	2	6	12	5	9	12	1	1	11	20	2	1
	Public Information				Mayor			01/01/2019			12/31/2023			LOC, ST, Other	
8.5 The Village will work to establish a system of mutual aid procedures that allow for rapid and effective deployment of mutual aid when local forces are unable to reach victims or are overwhelmed by the volume of calls.	13	8	5			14			13	2	2	12	21	--	5
	Public Information				Mayor			01/01/2019			12/31/2023			LOC	
<b>Goal 9 – Tornado: The village will lessen the damages suffered from tornadoes.</b>															
9.1 The Village will support the development of safe rooms	14	10	11	5	7	15	6	19	4	5	17	4	24	5	6

Strategy	Priority														
	Action Type				Lead Agency			Start Date		End Date			Funding		
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston
for single and multi-family residential structures including support of safe room grant opportunities.	Property Protection				Mayor			01/01/2019		12/31/2023			PDM		
9.2 The Village will support the development of public safe areas and storm shelters for residents of mobile homes, homes without basements, transient persons in the county, and others who need shelter during tornadoes or other severe weather events.	--	11	14	6	16	7	21	5	6	18	5	25	6	7	
	Property Protection				Mayor			01/01/2019		12/31/2023			PDM		
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.	--		12	7	8	17	22	6		20	7	27	9	9	
	Public Information				Mayor			01/01/2019		12/31/2023			LOC		
9.4 The Village will educate the public about emergency procedures, including but not limited to evacuation, shelter-in-place, 9-1-1 and emergency help.	15		13	4	18	8	23	7	7	19	6	26	7	8	
	Public Information				Mayor			01/01/2019		12/31/2023			LOC		
9.5 The Village will support the implementation of communication systems that enable communication between responders across the county in a multi-jurisdictional and multi-discipline setting.	16		15	8	9	19	9	20	8	8	21	8	28	8	10
	Public Information				Mayor			01/01/2019		12/31/2023			LOC, ST, Other		
9.6 The Village will work to establish rapid means to compensate for railroad crossing blockages, either through roadway improvements like overpasses, or through mutual aid agreements.	17		16	9	20			9	9	22	9	--	--	--	
	Public Information				Mayor			01/01/2019		12/31/2023			LOC		
<b>Goal 10 – Water Quality: The Village will work to improve the safety of the water supply whether it is sourced from private wells or water treatment systems.</b>															
10.1 The Village will establish and maintain an emergency water supply plan that includes alternate sources of potable water and conservation procedures.	5	24	25	25	10	21	12	18	--	X	6	29	10	24	24
	Prevention				Mayor			01/01/2019		12/31/2023			LOC		

Strategy	Priority														
	Action Type			Lead Agency			Start Date			End Date			Funding		
	Bairdstown	Bloomdale	Bradner	Custar	Cygnets	Haskins	Hoytville	Jerry City	Milton Center	Portage	Risingsun	Tontogany	Wayne	West Millgrove	Weston
10.2 The Village will support improvements to water treatment systems to increase the ability to detect and treat harmful contaminants. *	7		26	24		22	13	17	23	X	7	30	11	25	25
		Prevention				Mayor			01/01/2019		12/31/2023			LOC, ST, Other	
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. *	9		27			25		16	24	X	8		12	26	26
		Prevention				Mayor			01/01/2019		12/31/2023			LOC, ST, Other	
10.4 The Village will support the creation of a multi-jurisdictional collaborative water authority to manage water standards as they apply to Wood County and to address spills and leaks into the water supply that may endanger local water.	6		29			23		14	25	X	9	31	13	27	27
		Natural Resource Protection				Mayor			01/01/2019		12/31/2023			LOC, ST, Other	
10.5 The Village will support development of inter-connected and redundant water supplies that are readily available to quickly replace a contaminated water supply through standard distribution systems.	8		28			24	14	15	26	X	10		14	28	28
		Natural Resource Protection				Mayor			01/01/2019		12/31/2023			LOC, ST, Other	
<b>Goal 11 – Winter Storms: The Village will lessen damages suffered from winter storms and blizzards.</b>															
11.1 The Village will work to plow and maintain passage on village roadways to facilitate emergency traffic, necessary travel, and business travel.	20	27	30	20	11	28	18	29	28	23	35	32	29	29	32
		Prevention				Mayor			01/01/2019		12/31/2023			LOC	

### **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 any given 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 and the property owner relocated, that project must begin with the identification of the specific property to be acquired and the funding to be utilized for 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 in Wood County.

The EMA will monitor the implementation of these strategies through ongoing communication with officials and stakeholders. When grant opportunities arise, reasonable efforts will be made to secure 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 disaster vulnerability. When funding is secured, a detailed project timeline will be developed and actionable steps taken to complete the project. Upon completion, effectiveness will be evaluated by the jurisdiction 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 during 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 would 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.

Ultimately, Wood County developed a set of comprehensive, thoroughly considered, relevant, and effective solutions to problems that are likely to arise. As stakeholders considered how to solve potential problems, they utilized 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, Wood 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.