



SECTION 6 MITIGATION STRATEGY

This section describes the process by which the Fulton County Steering Committee will reduce or eliminate potential losses from the natural and non-natural hazards identified in Section 4.2 of this Hazard Mitigation Plan (HMP). The mitigation strategy focuses on existing and potential future mitigation actions to alleviate the effects of hazards on Fulton County’s population, economy, and general building stock.

This section provides a summary of the 2020 HMP update process, outlines the mitigation goals and objectives set forth in the 2020 HMP update, describes the process for identifying and analyzing mitigation techniques, and provides the mitigation action plan.

6.1 UPDATE PROCESS SUMMARY

The goals and objectives listed in the 2015 Fulton County HMP were examined in each of the annual review meetings conducted by Fulton County. For the 2020 update, the Steering Committee first examined the 2015 goals and objectives through the dispersal of the Mitigation Strategy 5-Year Plan Review Worksheet (Mitigation Review Worksheet). During the 5-year review, Steering Committee members were afforded the opportunity to comment on the goals, objectives, and actions that were listed in the existing HMP.

The general mitigation planning approach used to develop this plan is based on (1) the Federal Emergency Management Agency (FEMA) publication, “Local Mitigation Planning Handbook” (FEMA 2013), and (2) the Pennsylvania Emergency Management Agency’s (PEMA) All-Hazard Mitigation Planning Standard Operating Guide (SOG) (PEMA 2013). The process steps are summarized below:

1. **Review of Existing Mitigation Plan Goals, Objectives, and Mitigation Action Plan:** Existing mitigation goals and objectives and the 2015 HMP mitigation actions were first examined at the Steering Committee Kickoff Meeting in May 2019 and revisited during the Mitigation Strategy Workshop in January 2020. These meetings were open to members of the Steering Committee and stakeholders. The Steering Committee thoroughly reviewed and updated the mitigation goals and objectives, utilizing the latest information gathered through the hazard profiles, vulnerability assessments, and the risk assessment. The mitigation goals and objectives were also compared to the Pennsylvania HMP goals and objectives. The updated goals and objectives were then presented at the Mitigation Strategy Workshop for final review and approval. Plan participants continued to review and provide progress on the 2015 mitigation actions throughout the planning process.
2. **Develop and Update Mitigation Strategies:** Mitigation actions were identified based on the risk assessment, mitigation goals and objectives, existing policies, and input from the Steering Committee and planning partners.
3. **Mitigation Strategy Prioritization and Implementation:** The potential mitigation actions were qualitatively evaluated and are described in more detail in Section 6.4 of this HMP. Mitigation actions were prioritized into three categories: high, medium, and low. High-priority and medium-priority mitigation actions are recommended for implementation before low-priority actions; however, based on county and municipal-specific needs, cost estimation, and available funding, some low-priority mitigation actions may be addressed first.
4. **Document the Mitigation Planning Process:** The entire mitigation planning process is documented throughout this HMP, and in detail specifically in Section 3, Planning Process.

This section summarizes past mitigation goals and past mitigation action status and provides an update of mitigation strategies and additional past mitigation accomplishments.



6.1.1 Review of the Past Mitigation Goals

The mitigation goals and objectives identified in the 2015 version of the HMP are listed below:

- **Goal 1:** Prevent hazards from impacting the community.
 - **Objective 1A:** Work with the municipalities to create and/or update land use regulations (e.g., zoning, subdivision, and land development).
 - **Objective 1B:** Address areas of roadways that are vulnerable to hazard impacts.
- **Goal 2:** Protect the people, property, and environment in hazard areas.
 - **Objective 2A:** Examine property protection measures and their applicability to the community.
 - **Objective 2B:** Identify hazard areas in which property protection measures would be most effective.
- **Goal 3:** Maintain and enhance emergency services capabilities in the community.
 - **Objective 3A:** Ensure adequate communications capabilities among emergency response organizations.
 - **Objective 3B:** Continue to train municipal Emergency Management Coordinators, relevant personnel, and interested members of the community on hazard protection, preparedness, and response.
 - **Objective 3C:** Ensure adequate water supply to fight urban and wildland fires.
- **Goal 4:** Protect natural resources within the hazard areas.
 - **Objective 4A:** Continue working with the Conservation District to ensure that the county’s natural resources are protected.
 - **Objective 4B:** Maintain environmental education programs that the conservation and extension offices conduct, and perhaps create new ones.
- **Goal 5:** Ensure that stakeholder groups have necessary information to mitigate against hazard impacts.
 - **Objective 5A:** Continue StormReady program participation.
 - **Objective 5B:** Update and maintain the county website with current information from all departments.

Table 6-1 shows the results of the Steering Committee review of the 2015 goals and objectives for the 2020 HMP update.

Table 6-1. Steering Committee Evaluation of 2015 Goals and Objectives

2015 Fulton County Hazard Mitigation Plan Goals and Objectives		Evaluation
Goal 1	Prevent hazards from impacting the community.	Updated to new Goal 2
Objective 1A	Work with the municipalities to create and/or update land use regulations (e.g., zoning, subdivision, and land development).	Updated to new Objective 2A
Objective 1B	Address areas of roadways that are vulnerable to hazard impacts.	Updated to new Objective 2B
Goal 2	Protect the people, property, and environment in hazard areas.	Updated to new Goal 1
Objective 2A	Examine property protection measures and their applicability to the community.	Updated to new Objective 1A
Objective 2B	Identify hazard areas in which property protection measures would be most effective.	Updated to new Objective 1B
Goal 3	Maintain and enhance emergency services capabilities in the community.	Incorporated into new Goal 3
Objective 3A	Ensure adequate communications capabilities among emergency response organizations.	Kept Objective



2015 Fulton County Hazard Mitigation Plan Goals and Objectives		Evaluation
Objective 3B	Continue to train municipal Emergency Management Coordinators, relevant personnel, and interested members of the community on hazard protection, preparedness, and response.	Kept Objective
Objective 3C	Ensure adequate water supply to fight urban and wildland fires.	Kept Objective
Goal 4	Protect natural resources within the hazard areas.	Deleted
Objective 4A	Continue working with the Conservation District to ensure that the county's natural resources are protected.	Deleted
Objective 4B	Maintain environmental education programs that the conservation and extension offices conduct, and perhaps create new ones.	Deleted
Goal 5	Ensure that stakeholder groups have necessary information to mitigate against hazard impacts.	Updated to new Goal 4
Objective 5A	Continue StormReady program participation.	Deleted
Objective 5B	Update and maintain the county website with current information from all departments.	Deleted

6.1.2 Past Mitigation Action Status and Update of Mitigation Strategies

In the 2015 HMP, Fulton County identified 52 actions and initiatives to support an improved understanding of hazard risk and vulnerability, to enhance mitigation capabilities, and/or to reduce vulnerability of infrastructure. Progress on the 2015 mitigation actions was evaluated during the annual review meetings and throughout the 2020 update process.

Fulton County provided the Steering Committee with a Mitigation Action Plan Review Worksheet identifying all of the county and municipal actions and initiatives from the 2015 HMP. The respondents were asked to indicate the status of each action (“No Progress/Unknown,” “In Progress/Not Yet Complete,” “Continuous,” “Completed,” or “Discontinued”) and provide review comments on each.

The results of the completed Mitigation Action Plan Review Worksheet are provided in Table 6-2. Projects and initiatives identified as “Complete” and “Discontinued” have been removed from this plan update. The actions that the county has identified as “No Progress/Unknown” or “In Progress/Not Yet Complete” have been carried forward in the updated mitigation strategies identified in Table 6-4 (unless otherwise determined by the county to be a discontinued project). Actions from the 2015 HMP that reflect continuously maintaining capabilities have also been removed. The language in some actions being carried over has been adjusted to reflect changes to County needs and capabilities. Some actions were also merged to reduce redundant efforts on behalf of the county and its municipalities.



Table 6-2. Past Mitigation Action Status

Description	Status	Review Comments
FC-1. County - Develop and conduct refresher courses and trainings for citizens involved with former County Community Emergency Response Team (CERT) and Citizen Corps. Sample supplemental activities could include website, e-blast, and flyers to advertise opportunities.	Continuous/Discontinued	<ul style="list-style-type: none"> This training is constantly updated and considered a capability.
FC-2. County - Begin the process to review and revise existing subdivision and land development regulations to minimize flood risk, subsidence/sinkhole risk, and other hazard risks as appropriate. This effort may be multi-municipal/regional, as interest and priorities allow. County can consider public outreach activities (newsletters, e-blasts, and public presentations) to demonstrate inclusiveness, transparency, and multi-municipal/regional collaboration.	Completed	<ul style="list-style-type: none"> The county participated in a 6-county regional comprehensive plan through the Southern Alleghenies Planning and Development Commission. Local regulations are being updated to reflect the comprehensive plan.
FC-3. County and All Municipalities - Develop and implement an enhanced all-hazards, public outreach/education/mitigation information program on natural hazard risks and a non-technical explanation of what residents can do in the way of mitigation and preparedness, including flood insurance.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-4. County and All Municipalities - Encourage cross-training of existing personnel or utilize county personnel resources, as timing and funding permit, to enhance local administrative and technical ability. Areas for further professional development may include planning expertise, floodplain administration, hazard/risk management, grant writing and funding, and cost/benefit analysis.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability. The county marked this as “continuous.” Bethel Township marked this as “in progress.”
FC-5. County - Evaluate the need for a voluntary animal waste/manure/fertilizer self-reporting program for farmers, CAFO facilities, and other relevant organizations to utilize so that the county can more accurately estimate the amount of hazardous biological waste transported through the county and so that additional mitigation/safety measures may be implemented, if necessary.	Continuous	<ul style="list-style-type: none"> The PSU Cooperative Extension should be involved. This action will remain an action for implementation.
FC-6. County - Create and maintain a web-based inventory of the county's special needs population to strengthen emergency response and evacuation operations.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> This action will remain an action for implementation.



Description	Status	Review Comments
FC-7. County - Ensure all applicable private industrial, commercial, and public utility service providers have a current Environmental Emergency Response Plan per the Federal Clean Water Act the Pennsylvania Clean Streams Law (35 P.S. §§691.1-691.1001), the Pennsylvania Solid Waste Management Act, the Pennsylvania Storage Tank Act, the Oil Pollution Act, and regulations promulgated thereunder.	No Progress	<ul style="list-style-type: none"> This action will remain an action for implementation.
FC-8. County - Strengthen the county's domestic animal health surveillance by familiarizing the Fulton County agricultural community with the list of reportable diseases and conditions related to animal health per the World Organisation for Animal Health (OIE) and the Pennsylvania Domestic Animal Act (Act 100 of 1996).	In Progress/Not Yet Complete	<ul style="list-style-type: none"> The Pennsylvania State University (PSU) Cooperative Extension should be involved. This action will remain an action for implementation.
FC-9. County - Work with the county's agricultural community to develop and implement the County Animal Response Team (CART) to strengthen the county's comprehensive emergency management program.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> The PSU Cooperative Extension should be involved. This action will remain an action for implementation.
FC-10. County - Collaborate with the Pennsylvania Department of Environment Protection (PA DEP) Bureau of Radiation Protection to ensure the State's Radon Awareness Campaign and public service announcements are disseminated throughout Fulton County. This could include collateral and website development/links, County public service announcements, and social media development.	Continuous/Discontinued	<ul style="list-style-type: none"> Press releases about radon are issued. Collaboration occurs on a continuous basis. This action will be considered a capability.
FC-11. Dublin Township - Obtain an engineering study to redesign the intersection at Taylor Road and Waterfall Road in Dublin Township. Currently, emergency vehicles have difficulty making the turn at this intersection.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> The township received preliminary drawings and will be speaking with the landowner about obtaining the necessary land.
FC-12. Dublin Township - Research corrective actions needed to improve the condition of Tannery Road Bridge in Dublin Township, and implement appropriate weight limit controls and other follow-up actions.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> This project is on the Transportation Improvement Program (TIP) for construction in 2020.
FC-13. Dublin Township - Research corrective action to prevent flooding of Park Road in Dublin Township, and implement, if feasible.	Discontinued	<ul style="list-style-type: none"> This project can be removed, as discussed at the December 2016 annual review meeting.
FC-14. Belfast Township - In Belfast Township, cut the bank back at 278 Black Bear Road to improve sight distance and to allow more space on the road.	Completed	<ul style="list-style-type: none"> Belfast Township marked this complete.



Description	Status	Review Comments
FC-15. Union Township - In Union Township, continue to pursue political channels and collaboration with state agencies (e.g., Pennsylvania Department of Transportation [PennDOT]) to study and maintain the slide area on T-366 (Old 126).	In Progress/Not Yet Complete	<ul style="list-style-type: none"> Old Route 126 was closed for safety in 2019. The township applied for grant funding in 2019 and 2020 for an engineering study to be completed to identify solutions to the problem.
FC-16. Ayr Township - In Ayr Township, identify and implement response to manage stormwater runoff along Route 16, from True Value to Citgo Station.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> This project is on the TIP with the PA Route 16 paving project. The project will be completed in 2021.
FC-17. County and All Municipalities - Conduct workshops and training for municipal officials on the benefits of land use regulations to protect new and existing structures and infrastructure.	Continuous/Discontinued	<ul style="list-style-type: none"> Workshops are conducted as needed. This is considered a capability.
FC-18. County - Conduct, sponsor, or facilitate grant-writing trainings for municipal officials and other relevant personnel.	Continuous/Discontinued	<ul style="list-style-type: none"> Training sessions are conducted as needed. This is considered a capability.
FC-19. Todd Township - Replace three tiles on Johnstons Drive, in Todd Township, with one squash tile.	Discontinued	<ul style="list-style-type: none"> The township supervisors do not feel that a squash tile will remedy the situation.
FC-20. Licking Creek Township - Construct a bridge on Creek Road (T-388) in Licking Creek Township over the creek fording.	No Progress	<ul style="list-style-type: none"> The township reported no progress.
FC-21. Bethel Township - Increase visibility at the intersection of Great Cove Road (US-522) and Alpine Road in Bethel Township.	No Progress	<ul style="list-style-type: none"> Bethel Township noted that no progress had been made.
FC-22. Bethel Township - Increase visibility at the intersection of Great Cove Road (US-522) and Bethel Church Road in Bethel Township.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> Bethel Township marked this project as “in progress.”
FC-23. Bethel Township - Increase visibility at the intersection of SR-643 and Spring Road in Bethel Township.	No Progress	<ul style="list-style-type: none"> Bethel Township noted that no progress had been made.
FC-24. Bethel Township - Increase visibility at the intersection of Stoney Break Road and Black Oak Road in Bethel Township.	No Progress	<ul style="list-style-type: none"> Bethel Township noted that no progress had been made.
FC-25. Bethel Township - Increase visibility at the intersection of Buck Valley Road and Mays Chapel Road in Bethel Township.	No Progress	<ul style="list-style-type: none"> Bethel Township noted that no progress had been made.



Description	Status	Review Comments
FC-26. County and All Municipalities - Comply with floodplain ordinance regulations by continuing to obtain information on existing and proposed new structures in the areas with the highest relative vulnerability to determine the best property protection methods. The following information should be obtained: <ul style="list-style-type: none"> • Lowest floor elevation • Number of stories • Presence of a basement • Market or replacement value 	Continuous/Discontinued	<ul style="list-style-type: none"> • This is continuously implemented and considered a capability.
FC-27. All Municipalities - Comply with floodplain ordinance regulations by continuing to obtain information for all existing and proposed new structures in the 1-percent chance floodplain to determine the best property protection methods to promote with individual property owners.	Continuous/Discontinued	<ul style="list-style-type: none"> • This is continuously implemented and considered a capability.
FC-28. All Municipalities - Comply with floodplain ordinance and building code regulations by requiring anchor straps and improved roofing shingles on new and existing manufactured homes and residences of the county.	Continuous/Discontinued	<ul style="list-style-type: none"> • This is continuously implemented and considered a capability.
FC-29. County - Establish a Firewise Program in the county, especially around the Meadow Grounds Lake, Cowans Gap State Park, and Breezewood Park. Part of this initiative could include visual development of impacted areas, public service announcements, and educational outreach to farmers, hunters, campers, hikers, school children, and homeowners in the wildland-urban interface.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> • Fulton County EMA will work with the Department of Forestry to determine what is required.
FC-30. County - Identify and apply for funding to enhance the county's radio system.	Completed	<ul style="list-style-type: none"> • This has been completed.
FC-31. County and All Municipalities - Identify and apply for funding to upgrade emergency responders' radio equipment.	Continuous/Discontinued	<ul style="list-style-type: none"> • This is continuously implemented and considered a capability.
FC-32. Belfast Township - Install dry hydrant locations along PA-655 to assist the Needmore Fire Company.	Completed	<ul style="list-style-type: none"> • Belfast Township marked this "complete."
FC-33. County - Protect natural wetlands that may absorb floodwaters. The benefits of this action would be described in other collateral developed for related initiatives.	Continuous/Discontinued	<ul style="list-style-type: none"> • This is continuously implemented and considered a capability.
FC-34. County - Implement programs deemed necessary by the Conservation District.	Continuous/Discontinued	<ul style="list-style-type: none"> • This is continuously implemented and considered a capability.



Description	Status	Review Comments
FC-35. County - Coordinate with the conservation and extension offices to provide education and training to emergency responders, managers, and municipal officials. Topic focuses could include modules from the Emergency Operations Plan, Crisis Communications, volunteer management, and recovery/resilience strategies.	Continuous/Discontinued	<ul style="list-style-type: none"> Education and training are provided as needed. This is considered a capability.
FC-36. County and All Municipalities - Encourage major employers and other facilities to participate in the secondary StormReady programs. Such encouragement could occur through digital and print collateral, personal outreach, and speaking events at local service organizations (e.g., Rotary or Chamber events).	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-37. County and All Municipalities - Seek relevant input from all departments during the pre-impact, impact, and post-impact phases of an emergency.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-38. County and All Municipalities - Identify and fill gaps in information needed to conduct vulnerability analysis in hazard areas.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-39. County and All Municipalities - Evaluate existing road capacity with concern to increased truck and other traffic on local roads, and implement road improvements, as applicable.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-40. Thompson Township - In Thompson Township, upgrade and realign the intersection of Dent Road (T-343) and Timber Ridge Road (S.R. 2005) to allow for the passage of emergency vehicles.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> Thompson Township has applied for multi-modal funds to implement this project.
FC-41. Taylor Township - In Taylor Township, conduct road improvements on Davis Lane (T-423).	Completed	<ul style="list-style-type: none"> The project was completed in 2019.
FC-42. Taylor Township - In Taylor Township, conduct intersection improvements and cut the bank back at Frick Road and Waterfall Road.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> The county reported that this project is in progress.
FC-43. Union Township - In Union Township, conduct intersection improvements at Harmonia Road (S.R. 3002) and Lehman Road (T-308).	No Progress	<ul style="list-style-type: none"> The township reported no progress.
FC-44. Union Township - In Union Township, conduct intersection improvements at Harmonia Road (S.R. 3002) and Stahle Road (T-314).	No Progress	<ul style="list-style-type: none"> The township reported no progress.
FC-45. Dublin Township - In Dublin Township, conduct intersection improvements at Waterfall Road (S.R. 475) and Battle Ridge Road (T-426).	No Progress	<ul style="list-style-type: none"> Township supervisors are monitoring the situation.



Description	Status	Review Comments
FC-46. Ayr Township - In Ayr Township, identify correction actions on Great Cove Road (S.R. 522) by Whipporwill Lane to alleviate transportation accidents and dangerous bus stop conditions to road curve.	Discontinued	<ul style="list-style-type: none"> Ayr Township marked this project “to be discontinued.”
FC-47. Taylor Township - In Taylor Township, identify and coordinate with PennDOT to implement infrastructure improvements to the two state bridges along 655 between Waterfall Road and Hustontown.	No Progress	<ul style="list-style-type: none"> Taylor Township reported no progress.
FC-48. Thompson Township - In Thompson Township, replace the corrugated metal culvert carrying West Orchard Road (T-305) over Ditch Run.	In Progress/ Not Yet Complete	<ul style="list-style-type: none"> The township reported that this action is in progress.
FC-49. Union Township - In Union Township, maintain and upgrade Bridge No. 3 on Zachs Ridge Road (T-330), as needed.	In Progress/Not Yet Complete	<ul style="list-style-type: none"> The underpinning and scour protection have been completed. The project remains on the TIP.
FC-50. All Municipalities - Consider promoting or adopting higher regulatory and zoning standards to manage flood hazard risk, specifically through the following sample actions: <ul style="list-style-type: none"> Support planning board of adjustment variances in cases where appeals are directly tied to compliance with the intent of floodplain regulations (e.g., overall building height, set-backs for inclined walkways). Develop and adopt a cumulative substantial damage/improvements ordinance. 	No Progress	<ul style="list-style-type: none"> No progress was reported by any municipality.
FC-51. County and All Municipalities - Continue to promote future growth and development in the county in areas outside of determined hazard zones, where possible.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-52. County - Request digital copies of Emergency Action Plans (EAP) and inundation maps when high-hazard dam EAPs are next updated.	Continuous/Discontinued	<ul style="list-style-type: none"> This is continuously implemented and considered a capability.
FC-53. Mill Road Bridge	In Progress/Not Yet Complete	<ul style="list-style-type: none"> Licking Creek Township received multi-modal funding for this project in 2018. It will begin in summer 2020.



6.1.3 Additional Past Mitigation Accomplishments

Fulton County and its municipalities are dedicated to mitigation activities and comprehensive all-hazards planning. To that end, the county has engaged in mitigation activities beyond those identified in its 2015 HMP. The Mill Road Bridge action (FC-53) was added in December 2016, and the township received multi-modal funding in 2018 to implement the project.

6.2 MITIGATION GOALS AND OBJECTIVES

This section describes the mitigation goals and objectives set forth in the 2020 HMP update.

6.2.1 2020 Mitigation Goals

The Steering Committee reviewed the 2015 HMP goals to determine their continuing applicability to county mitigation needs and decided to update them. The updated goals and objectives were distributed at the Mitigation Strategy Workshop. The Steering Committee reviewed and approved the updated goals for the 2020 HMP. The 2020 HMP county goals are in line with Commonwealth mitigation goals, embody the overarching needs and concerns of the county and participating municipalities, and address both natural and non-natural hazard risk reduction.

The 2020 HMP county goals are listed below:

1. **Goal 1:** Protect the people, property, and environment in hazard areas.
2. **Goal 2:** Prevent hazards from impacting the community.
3. **Goal 3:** Enhance awareness, understanding, and preparedness among local, county, state, and federal emergency management personnel to protect public health and safety.
4. **Goal 4:** Ensure that stakeholder groups have necessary information to mitigate against hazard impacts.

6.2.2 2020 Mitigation Objectives

The goals listed above were used to develop relevant objectives. The objectives address the results of the vulnerability assessment in more specific terms and reflect the possible effects that can be mitigated for the identified hazards, as well as existing limitations in available data and information. The objectives that were originally identified during the 2015 HMP update process were reviewed by the Steering Committee and updated to reflect changes in county priorities and capabilities since the previous HMP was approved in 2015. The revised and updated objectives were presented at the January 2020 Mitigation Strategy Workshop. Objectives related to each of the goals are listed below (Table 6-1 summarizes the evaluation of all goals and objectives from the 2015 HMP).

Goal 1: Protect the people, property, and environment in hazard areas.

- Objective 1.A Examine property protection measures and their applicability to the community.
- Objective 1.B Protect critical facilities in hazard areas.
- Objective 1.C Acquire, relocate, elevate, and/or retrofit existing structures, including repetitive loss properties, located in hazard areas.
- Objective 1.D Encourage homeowners, renters, and businesses to insure their properties against all hazards, including flood coverage under the National Flood Insurance Program (NFIP).
- Objective 1.E Protect the county’s natural resources.



Goal 2: Prevent hazards from impacting the community.

Objective 2.A Work with the municipalities to create and/or update land use regulations (e.g., zoning, subdivision, and land development).

Objective 2.B Address areas of roadways that are vulnerable to hazard impacts.

Goal 3: Enhance awareness, understanding, and preparedness among local, county, state, and federal emergency management personnel to protect public health and safety.

Objective 3.A: Ensure adequate communications capabilities among emergency response organizations.

Objective 3.B: Continue to train municipal Emergency Management Coordinators, relevant personnel, and interested members of the community on hazard protection, preparedness, and response.

Objective 3.C: Ensure adequate water supply to fight urban and wildland fires.

Goal 4: Ensure that stakeholder groups have necessary information to mitigate against hazard impacts.

Objective 4.A: Develop public education and outreach programs on hazards and hazard mitigation.

Objective 4.B: Educate property owners in hazard-risk areas regarding their risks and the precautions they can take.

Objective 4.C: Encourage residents to implement hazard mitigation and preparedness measures on their properties.

6.3 IDENTIFICATION AND ANALYSIS OF MITIGATION TECHNIQUES

Concerted efforts were made to ensure that the county and its municipalities developed updated mitigation strategies. Updated strategies included activities and initiatives covering the range of mitigation action types described in recent FEMA planning guidance, “Local Mitigation Planning Handbook” (FEMA 2013). Mitigation action types listed in the FEMA guidance include the following:

1. **Local Plans and Regulations:** These actions include government authorities, policies, or codes that influence the way land and buildings are being developed and built.
2. **Structure and Infrastructure Projects:** These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. These project types could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
3. **Natural Systems Protection:** These actions minimize damage and losses and also preserve or restore the functions of natural systems.
4. **Education and Awareness Programs:** These actions involve informing and educating citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as NFIP and Community Rating System, StormReady (National Oceanic and Atmospheric Administration [NOAA]), and Firewise (National Fire Protection Association [NFPA]) Communities (FEMA 2013).

The participants in the Mitigation Strategy Workshop and the Steering Committee identified actions that relate to the techniques listed above. Table 6-3 identifies which mitigation techniques are applicable for the hazards included in the 2020 HMP. In some cases, the mitigation techniques identified for a particular hazard reflect ongoing mitigation capabilities, not specific projects included in the updated HMP. Natural Systems Protection



actions were considered, but not determined to be appropriate to address the problems identified throughout the county.

Table 6-3. Mitigation Technique Matrix

Hazard	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs
Dam Failure	✓	✓	✓
Drought	✓	✓	✓
Earthquake	✓	✓	✓
Environmental Hazards	✓	✓	✓
Flood, Flash Flood, and Ice Jam	✓	✓	✓
Hailstorm	✓	✓	✓
Landslides	✓	✓	✓
Radon Exposure	✓	✓	✓
Subsidence and Sinkholes	✓	✓	✓
Tornadoes and Windstorms	✓	✓	✓
Transportation Accidents	✓	✓	✓
Wildfire	✓	✓	✓
Winter Storm	✓	✓	✓

6.4 MITIGATION ACTION PLAN

Representatives from the county and all participating municipalities selected mitigation strategies and initiatives to pursue until the next plan update. These actions also include some actions identified during the 2015 update that are still relevant or in progress. This section describes 2020 mitigation initiatives, mitigation strategy prioritization and implementation, and prioritization of mitigation actions.

6.4.1 2020 Mitigation Initiatives

Table 6-4 summarizes the updated mitigation strategies identified by the county and all municipalities, including the following information:

- Mitigation actions for individual and multiple hazards
- Mitigation action type
- Department or agency primarily responsible for project initiation and/or implementation
- Estimated cost for the mitigation action and identification of known or potential sources of funding
- Implementation schedule
- Implementation priority

The updated mitigation actions were documented using the Mitigation Action Worksheet distributed at the Mitigation Strategy Workshop. Appendix G includes a blank version of the Mitigation Action Worksheet and Appendix H provides copies of the completed worksheets. Specific mitigation actions were identified to prevent future losses; however, current funding is not identified for all of these actions at present. Section 5 of this HMP



indicates potential funding sources to support future implementation. The county and municipalities have limited resources to take on new responsibilities or projects. The implementation of these mitigation actions is dependent on the approval of the local elected governing body and the ability of the jurisdiction to obtain funding from local or outside sources.

The Steering Committee prioritized proposed mitigation actions during the Mitigation Action Worksheet documentation process. In general, mitigation actions ranked as highest priorities should be addressed first within each jurisdiction, depending on funding. However, medium or low-priority mitigation actions will be considered for implementation as funding becomes available. Therefore, the ranking levels should be considered as a preliminary rankings that will evolve based on prevailing priorities and discretion of local governments, the public, PEMA, and FEMA, as the plan update is implemented.

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Table 6-4. Hazard Mitigation Strategy

Note: Some of the identified mitigation initiatives in Table 6-4 are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in county or municipal priorities. Actions that have been carried over from the 2015 version of the HMP may have been reworded and given a new initiative designation to conform to current needs and procedures. The countywide actions apply to the county as an entity as well as participating municipalities. For most countywide actions, the action applies to all participating municipalities. Appendix H provides action worksheets that specify the municipalities to which other countywide actions apply.

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
Countywide (Multiple Municipalities)												
FultonC-1	Acquire vacant, abandoned, or unsafe structures, especially those in hazard areas, and turn into open space.	Existing	Flood, Flash Flood, and Ice Jams; Landslide; Subsidence and Sinkholes; Dam Failure; Environmental Hazards	2	EMA	Municipal EMCs	High	High	FEMA HMGP, PDM, FMA; PA DCED FMP	Long	Med.	SIP
FultonC-2	Educate the designated NFIP Floodplain Administrator and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	N/A	Flood, Flash Flood, and Ice Jams	2	Planning and Mapping	Municipal FPAs	Med.	Low	Operating Budget	Short	Low	LPR
FultonC-3	Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	N/A	All Hazards	2	LEPC	County EMA and Municipal EMCs	High	Med.	Act 165 Funds	Short	High	LPR



Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
FultonC-4	Work with police departments in each municipality to ensure their emergency plans are updated, and inform them of the hazard areas in which they are located.	N/A	All Hazards	2	EMA		High	Med.	Operating Budget	Short	Low	LPR
FultonC-5	Work with daycare owners/operators in each municipality to ensure their emergency plans are updated, and inform them of the hazard areas in which they are located.	N/A	All hazards	2	Municipal EMCs		High	Med.	Operating Budget	Short	Low	LPR
FultonC-6	Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	N/A	All hazards	2	EMA	Municipal EMCs	High	Med.	Operating Budget	Short	High	LPR
FultonC-7	Develop and distribute educational information on hazards and emergency preparedness.	N/A	All hazards	2	Municipal		Med.	Low	Operating Budget	Short	Med.	LPR



Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
FultonC-8	Partner with community groups and local organizations, including civic, business, town watch, faith-based, senior, advocacy and tenant associations, to promote emergency preparedness and mitigation efforts.	New	All hazards	2	County EMA	Municipal EMCs	Med.	Low	Operating Budget	Short	Med.	EAP
FultonC-9	Procure and maintain redundant power sources (portable generators).	New	Tornado, Windstorm, and Winter Storms	2	EMA	Municipal EMCs	High	Med.	FEMA HMGP, PDM; RACP	Short	Med.	SIP
FultonC-10	Purchase or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss properties as a priority.	Existing	All hazards	2	Municipal CEO	Municipal FPAs	High	High	FEMA HMGP, PDM, FMA; RACP	Long	High	SIP
FultonC-11	Encourage homeowners to install appropriate devices to alleviate radon concentrations within homes.	N/A	Radon Exposure	3	EMA	Municipal CEOs; EMCs	Med.	Low	Operating Budget	Short	Low	EAP
FultonC-12	Work with facility operators to protect critical facilities in the wildland-urban interface from wildfires.	Existing	Wildfires	3	Municipal EMCs		High	Med.	Operating Budget	Short	High	SIP



Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
FultonC-13	Work with facility operators to protect critical facilities in areas prone to sinkholes.	Existing	Sinkholes	3	Municipal EMCs		High	Med.	Operating Budget	Short	High	SIP
FultonC-14	Establish a Firewise Program, especially around the Meadow Grounds Lake, Cowans Gap State Park, and Breezewood Park. Part of this initiative could include visual development of impacted areas, public service announcements, and educational outreach to farmers, hunters, campers, hikers, school children, and homeowners in the Wildland-Urban Interface.	New	Wildfire	2	County EMA	PA DCNR	Med.	Low	Operating Budget	Short	Med.	EAP



Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
FultonC-15	Evaluate the need for a voluntary animal waste/manure/fertilizer self-reporting program for farmers, CAFO facilities, and other relevant organizations to utilize so that the county can more accurately estimate the amount of hazardous biological waste transported through the county and so that additional mitigation/safety measures may be implemented, if necessary.	N/A	All hazards	2	Planning and Mapping	PSU Cooperative Exension	Med.	Low	Operating Budget	Short	Med.	EAP
FultonC-16	Create and maintain a web-based inventory of the county's population with access and functional needs to strengthen emergency response and evacuation operations.	N/A	All hazards	3	EMA		Med.	Low	Operating Budget	Short	Med.	LPR



Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
FultonC-17	Ensure all applicable private industrial, commercial, and public utility service providers have a current Environmental Emergency Response Plan per the Federal Clean Water Act the Pennsylvania Clean Streams Law (35 P.S. §§691.1-691.1001), the Pennsylvania Solid Waste Management Act, the Pennsylvania Storage Tank Act, the Oil Pollution Act, and regulations promulgated thereunder.	N/A	All hazards	2	LEPC	EMA; Fire Depts.	Low	Low	Act 165 Funds; Operating Budget	Short	Low	LPR
FultonC-18	Strengthen the county's domestic animal health surveillance by familiarizing the Fulton County agricultural community with the list of reportable diseases and conditions related to animal health per the OIE and the Pennsylvania Domestic Animal Act (Act 100 of 1996).	Existing	Environmental Hazards	2	Planning and Mapping	PSU Cooperative Extension	Med.	Low	Operating Budget; USDA Grants	Short	Low	EAP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
FultonC-19	Work with the county's agricultural community to develop and implement the CART to strengthen the county's comprehensive emergency management program	N/A	All hazards	2	Planning and Mapping	PSU Cooperative Extension	Med.	Low	Operating Budget	Short	Low	LPR
FultonC-20	Consider promoting or adopting higher regulatory and zoning standards to manage flood hazard risk	N/A	Flood, Flash Flood, and Ice Jams	2	Municipal FPAs	Municipal CEOs	Med.	Low	Operating Budget	Short	Low	LPR
FultonC-21	Work with dam owners and the population located downstream about dam failure.	Existing	Flood, Flash Flood, and Ice Jams	2	Municipal DPWs	Dam Facility Owners	Med.	Low	Operating Budget	Short	Low	EAP
FultonC-22	Educate the public on the hazards they face.	Existing	All hazards	3	Municipal EMCs		Low	Low	Operating Budget	Short	Low	EAP
Ayr Township												
AyrT-1	Identify and implement response to manage stormwater runoff along Route 16, from True Value to Citgo Station.	Exisitng	Flood, Flash Flood, and Ice Jams	2	Municipal CEO	FPA; Municipal EMC	High	Med.	Operating Budget	Short	Med.	SIP
Belfast Township												
BelfastT-1	Assess and determine best action to reduce vulnerability to hazmat incidents at the Horse Shoe turn on Route 522.	Existing	Transportaion Accidents	2	Planning and Mapping	PennDOT; LEPC	Med.	Low	Act 165 Funds	Short	Med.	SIP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
BelfastT-2	Install a backup generator at the Water Supply Facility.	New	Tornado, Windstorm, and Winter Storms	2	DPW		Med.	Low	FEMA HMGP, PDM	Short	Med.	SIP
BelfastT-3	Protect Needmore Water Supply to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	FPA; Municipal EMCs	High	High	FEMA HMGP, PDM, FMA; PA DCED FMP	Short	High	SIP
Bethel Township												
BethelT-1	Increase visibility at the intersection of Buck Valley Road and Mays Chapel Road.	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
BethelT-2	Increase visibility at the intersection of SR-643 and Spring Road.	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
BethelT-3	Increase visibility at the intersection of Great Cove Road (US-522) and Alpine Road.	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
BethelT-4	Increase visibility at the intersection of Great Cove Road (US-522) and Bethel Church Road.	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
BethelT-5	Increase visibility at the intersection of Stoney Break Road and Black Oak Road.	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
BethelT-6	Work with AT&T to protect the Wireless Cell Tower to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	Municipal FPA		High	High	FEMA HMGP, PDM, FMA; PA DCED; Operating Budget	Short	Med.	SIP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
BethelT-7	Protect Bethel Township Sewer Authority to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	Sewer Authority	Municipal FPA, DPW	High	Med.	FEMA HMGP, PDM, FMA; PA DCED; Operating Budget	Short	High	SIP
BethelT-8	Work with Global Tower Partners to protect the tower in Bethel Township from landslides.	Existing	Landslides	2	DPW	Municipal EMC	High	High	FEMA HMGP, PDM	Short	High	SIP
Dublin Township												
DublinT-1	Research corrective actions needed to improve the condition of Tannery Road Bridge in Dublin Township, and implement appropriate weight limit controls and other follow-up actions.	Existing	Transportation Accidents	2	DPW	Municipal EMC; Planning and Mapping	Med.	Med.	Operating Budget	Short	Med.	SIP
DublinT-2	Conduct intersection improvements at Waterfall Road (S.R. 475) and Battle Ridge Road (T-426).	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
DublinT-3	Install generator and circuit for Township Building.	New	Tornado, Windstorm, and Winter Storms	2	DPW	EMA	Med.	Med.	FEMA HMGP, PDM; Operating Budget	Short	High	SIP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
DublinT-4	Obtain an engineering study to redesign the intersection at Taylor Road and Waterfall Road in Dublin Township.	Existing	Transportation Accidents	2	DPW	PennDOT	Med.	Med.	TIP; PennDOT	Short	Med	SIP
Licking Creek Township												
LickingCreekT-1	Construct a bridge on Creek Road (T-388) in Licking Creek Township over the creek fording.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	Municipal FPA	High	High	TIP; Operating Budget	Long	Low	SIP
LickingCreekT-2	Protect Valley Rural Electric – Route 30 Substation to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	Municipal FPA	Municipal EMC	High	High	FEMA HMGP, PDM; Operating Budget	Long	High	SIP
LickingCreekT-3	Protect Valley Rural Electric located at 11563 Pleasant Ridge Road to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	Municipal FPA	Municipal EMC	High	High	FEMA HMGP, PDM, FMA; PA DCED FMP	Short	High	SIP
LickingCreekT-4	Reconstruct Mill Road Bridge.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	PennDOT	High	High	PA DCED; PennDOT; Operating Budget	Long	Low	SIP
Taylor Township												
TaylorT-1	Conduct intersection improvements and cut the bank back at Frick Road and Waterfall Road.	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
TaylorT-2	Identify and coordinate with PennDOT to implement infrastructure improvements to the two state bridges along 655 between Waterfall Road and Hustontown.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	PennDOT	High	High	FEMPA HMGP, PDM; PA DCED; Operating Budget	Long	Low	SIP
TaylorT-3	Protect the Hustontown Post Office facility to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	USPS; FPA, Municipal EMC	High	High	FEMA HMGP, PDM, FMA; PA DCED FMP	Short	High	SIP
TaylorT-4	Protect Valley Rural Electric Clear Ridge Substation to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	Municipal FPA	Municipal EMC	High	High	FEMA HMGP, PDM, FMA; PA DCED FMP	Short	High	SIP
TaylorT-5	Protect the Waterfall Post Office facility to the 0.2-percent annual chance flood level.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	USPS; FPA, Municipal EMC	High	High	FEMA HMGP, PDM, FMA; PA DCED FMP	Short	High	SIP
Thompson Township												
ThompsonT-1	Replace the corrugated metal culvert carrying West Orchard Road (T-305) over Ditch Run.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		Med.	Med.	FEMA HMGP, PDM, PA DCED FMP; Capital Improvement Budget	Short	Med.	SIP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
ThompsonT-2	Upgrade and realign the intersection of Dent Road (T-343) and Timber Ridge Road (S.R. 2005) to allow for the passage of emergency vehicles.	Existing	All Hazards	2	DPW	PennDOT	Med.	Med.	FEMA HMGP, PDM, PA DCED FMP; Capital Improvement Budget	Short	Med.	SIP
Todd Township												
ToddT-1	Assess and determine best action to mitigate flooding and address deficiencies of Narrows Road Bridge.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	Municipal FPA	Med.	Med.	Operating Budget	Short	Low	SIP
ToddT-2	Improve drainage in Coldspring development.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		Med.	Med.	Capital Improvement Budget	Short	High	SIP
ToddT-3	Improve drainage along Lion's Park Drive.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		Med.	Med.	Capital Improvement Budget	Short	High	SIP
ToddT-4	Improve drainage along Cloverleaf Court.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		Med.	Med.	Capital Improvement Budget	Short	High	SIP
ToddT-5	Improve drainage in the fairgrounds.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		Med.	Med.	Capital Improvement Budget	Short	High	SIP
ToddT-6	Improve drainage along Lincoln Way West.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		Med.	Med.	Capital Improvement Budget	Short	High	SIP



SECTION 6: MITIGATION STRATEGY

Initiative*	Mitigation Initiative	Applies to New and/or Existing Structures**	Hazard(s) Mitigated	Goals Met	Lead Agency	Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
Union Township												
UnionT-1	Continue to pursue political channels and collaboration with state agencies (e.g., PennDOT) to study and maintain the slide area on T-366 (Old 126).	Existing	Landslides	2	Municipal CEO	PennDOT; PEMA	Med.	Low	Operating Budget	Short	Med.	EAP
UnionT-2	Maintain and upgrade Bridge No. 3 on Zach's Ridge Road (T-330), as needed.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW		High	High	FEMA HMGP, PDM; PA DCED FMP; Operating Budget; TIP	Long	Low	SIP
UnionT-3	Obtain an engineering study and geological study for repair of Old Route 126.	Existing	Landslides	2	DPW	PennDOT	High	High	PennDOT	Med.	Med	SIP
UnionT-4	Replace culvert over Indian Grave Creek.	Existing	Flood, Flash Flood, and Ice Jams	2	DPW	Municipal FPA	Med.	High	FEMA HMGP, PDM; Capital Improvements Budget; Operating Budget	Short	Low	SIP
UnionT-5	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Lehman Road (T-308).	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP
UnionT-6	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Stahle Road (T-314).	Existing	Transportation Accidents	2	DPW	PennDOT	High	High	TIP; PennDOT	Long	Med.	SIP



Notes:

* The letters associated with the initiative number indicate the lead agency (i.e., Fulton County or municipality).

** Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

- CAFO = Consolidated Animal Feeding Operation
- CART = County Animal Response Team
- CEO = Code Enforcement Officer
- Depts. = Departments
- DPW = Department of Public Works
- EMA = Emergency Management Agency
- EMC = Emergency Management Coordinator
- EMS = Emergency Medical Services
- FEMA = Federal Emergency Management Agency
- FMA = Flood Mitigation Assistance [grant]
- FMP = Flood Mitigation Program
- FPA = Floodplain Administrator
- Hazmat = Hazardous Materials
- HMGP = Hazard Mitigation Grant Program
- LEPC = Local Emergency Planning Committee
- Med. = Medium
- NFIP = National Flood Insurance Program
- OIE = World Organisation for Animal Health
- PA DCED = Pennsylvania Department of Community and Economic Development
- PA DCNR = Pennsylvania Department of Conservation and Natural Resources
- PDM = Pre-Disaster Mitigation Program
- PEMA = Pennsylvania Emergency Management Agency
- PennDOT = Pennsylvania Department of Transportation
- PSU = Penn State University
- RACP = Redevelopment Assistance Capital Program
- TIP = Transportation Improvement Program
- USDA = United States Department of Agriculture
- USPS = United States Postal Service

Costs:

These rough estimates should be used where actual project costs cannot reasonably be established at this time:

- Low = < \$10,000
- Medium = \$10,000 to \$100,000
- High = > \$100,000

Timeline:

- Short Term = 1 to 2 years
- Medium Term = 2 to 5 years
- Long Term = 5 years or greater

Mitigation Category:

- Education and Awareness Programs (EAP) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.
- Local Plans and Regulations (LPR) - Actions include government authorities, policies, or codes that influence the way land and buildings are being developed and built.
- Natural Systems Protection (NSP) - Actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Structure and Infrastructure Project (SIP) - Actions that involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.



6.4.2 Mitigation Strategy Prioritization and Implementation

Section 201.6(c) (3) (iii) of Title 44 *Code of Federal Regulations* (44 CFR) requires the prioritization of the action plan to emphasize the extent to which benefits are maximized according to a cost-benefit review of the proposed projects and their associated costs. This allows the jurisdictions to select the most cost-effective actions for implementation first, to not only use resources efficiently, but also to make a realistic start toward mitigating risks.

Mitigation benefits are defined as future damages and losses that would be eliminated and/or reduced by implementing the proposed mitigation project and take into consideration physical damage to structures and infrastructure, loss of service or function, and emergency management costs. Particularly for physical (“shovel-in-the-ground”) mitigation projects, jurisdictions were encouraged to estimate project costs as well as to identify the anticipated benefits. Where exact project costs and potential benefits were not available, ranges were identified (high, medium, low) for each, allowing a qualitative evaluation of project cost-effectiveness.

PEMA has developed a mitigation actions evaluation and prioritization process to provide a consistent, uniform approach for counties and jurisdictions to use to consider, in a systematic way, the best mitigation strategies for their communities (PEMA 2013). Jurisdictions first evaluate feasibility of mitigation actions by using the following ten evaluation criteria:

- **Life Safety:** The Steering Committee assesses to what extent a mitigation action will protect individuals from being injured or killed by a hazard.
- **Property Protection:** The Steering Committee assesses to what extent the action will protect property, including homes, businesses, and critical infrastructure.
- **Technical:** It is important to determine whether the proposed action is technically feasible, will help to reduce losses in the long term, and has minimal secondary impacts. Here, the Steering Committee determines whether the alternative action is a whole or partial solution, or not a solution at all.
- **Political:** Understanding current opinions of community and state political leadership regarding issues related to the environment, economic development, safety, and emergency management will provide valuable insight into the level of political support offered for mitigation activities and programs. Proposed mitigation objectives sometimes fail because of a lack of political acceptability.
- **Legal:** Without the appropriate legal authority, the action cannot lawfully be undertaken. When considering this criterion, the Steering Committee determines whether a jurisdiction has the legal authority at the state, tribal, or local level to implement the action, or whether the jurisdiction must pass new laws or regulations. Each level of government operates under a specific source of delegated authority. As a general rule, most local governments operate under enabling legislation that gives them the power to engage in different activities. Jurisdictions should identify the unit of government undertaking the mitigation action and include an analysis of the inter-relationships between local, regional, state, and federal governments. Legal authority is likely to have a significant role later in the process when the state, tribe, or community determines the ways in which mitigation activities can best be carried out, and the extent to which mitigation policies and programs can be enforced.
- **Environmental:** Impact on the environment is an important consideration because of public desire for sustainable and environmentally healthy communities. In addition, many statutory considerations (such as the National Environmental Policy Act [NEPA]) should be counted when using federal funds. When implementing mitigation actions, jurisdictions need to evaluate the potential negative consequences to environmental assets such as threatened and endangered species, wetlands, and other protected natural resources.
- **Social:** The public must support the overall implementation strategy and specific mitigation actions. Therefore, the projects have to be evaluated in terms of community acceptance. Likewise, the Steering Committee should determine whether implementing a mitigation action will have a beneficial or negative effect on a particular segment of the population.



- **Administrative:** Under this part of the evaluation criteria, the Steering Committee examines the anticipated staffing, funding, and maintenance requirements for the mitigation action to determine whether the jurisdiction has the personnel and administrative capabilities necessary to implement the action or whether outside help will be necessary.
- **Local Champion:** Having an individual who will lead the implementation of a project, particularly a complex project, is essential for implementing it.
- **Other Community Objectives:** The Steering Committee evaluates to what extent implementing the mitigation action supports other community objectives, such as increasing parks and recreation, quality of life, and economic development.

Table 6-5 shows the feasibility evaluation for each identified mitigation action. For each criterion, the feasibility or effectiveness of the action according to the above criteria was indicated with a “+” (highly effective or feasible), “N” (neutral or not applicable), or a “-” (ineffective or not feasible). All actions were deemed feasible.

Table 6-5. Evaluation of Mitigation Actions

Initiative	Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
FultonC-1	Acquire vacant, abandoned, or unsafe structures, especially those in hazard areas, and turn into open space.	N	+	+	+	N	N	+	+	N	+	6 (+) 4 (N) 0 (-)
FultonC-2	Educate the designated NFIP Floodplain Administrator and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	N	N	+	+	+	N	+	+	N	N	5 (+) 5 (N) 0 (-)
FultonC-3	Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
FultonC-4	Work with police departments in each municipality to ensure their emergency plans are updated, and inform them of the hazard areas in which they are located.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
FultonC-5	Work with daycare owners/operators in each municipality to ensure their emergency plans are updated, and inform them of the hazard areas in which they are located.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
FultonC-6	Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
FultonC-7	Develop and distribute educational information on hazards and emergency preparedness.	N	+	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
FultonC-8	Partner with community groups and local organizations, including civic, business, town watch, faith-based, senior, advocacy and tenant associations, to promote emergency preparedness and mitigation efforts.	N	+	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
FultonC-9	Procure and maintain redundant power sources (portable generators).	+	+	+	+	+	N	+	N	N	+	7 (+) 3 (N) 0 (-)



SECTION 6: MITIGATION STRATEGY

Initiative	Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
FultonC-10	Purchase or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss properties as a priority.	+	+	+	+	+	N	-	N	N	+	6 (+) 3 (N) 1 (-)
FultonC-11	Encourage homeowners to install appropriate devices to alleviate radon concentrations within homes.	+	N	+	+	+	+	N	N	+	N	6 (+) 4 (N) 0 (-)
FultonC-12	Work with facility operators to protect critical facilities in the wildland-urban interface from wildfires.	+	+	+	+	+	N	+	+	+	N	8 (+) 2 (N) 0 (-)
FultonC-13	Work with facility operators to protect critical facilities in areas prone to sinkholes.	+	+	+	+	+	N	+	+	+	N	8 (+) 2 (N) 0 (-)
FultonC-14	Establish a Firewise Program, especially around the Meadow Grounds Lake, Cowans Gap State Park, and Breezewood Park. Part of this initiative could include visual development of impacted areas, public service announcements, and educational outreach to farmers, hunters, campers, hikers, school children, and homeowners in the wildland-urban interface.	N	+	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
FultonC-15	Evaluate the need for a voluntary animal waste/manure/fertilizer self-reporting program for farmers, CAFO facilities, and other relevant organizations to utilize so that (1) the county can more accurately estimate the amount of hazardous biological waste transported through the county and (2) additional mitigation/safety measures may be implemented, if necessary.	N	N	+	+	+	+	+	+	N	N	6 (+) 4 (N) 0 (-)
FultonC-16	Create and maintain a web-based inventory of the county's population with access and functional needs to strengthen emergency response and evacuation operations.	+	N	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
FultonC-17	Ensure all applicable private industrial, commercial, and public utility service providers have a current Environmental Emergency Response Plan per the Federal Clean Water Act the Pennsylvania Clean Streams Law (35 P.S. §§691.1-691.1001), the Pennsylvania Solid Waste Management Act, the Pennsylvania Storage Tank Act, the Oil Pollution Act, and regulations promulgated thereunder.	N	N	+	+	+	+	+	+	N	N	6 (+) 4 (N) 0 (-)
FultonC-18	Strengthen the county's domestic animal health surveillance by familiarizing the Fulton County agricultural community with the list of reportable diseases and conditions related to animal health per the OIE and the Pennsylvania Domestic Animal Act (Act 100 of 1996).	N	N	+	+	+	N	+	+	N	N	5 (+) 5 (N) 0 (-)
FultonC-19	Work with the county's agricultural community to develop and implement the CART to strengthen the county's comprehensive emergency management program.	N	N	+	+	+	N	+	+	N	N	5 (+) 5 (N) 0 (-)
FultonC-20	Consider promoting or adopting higher regulatory and zoning standards to manage flood hazard risk.	N	+	+	+	+	N	+	N	N	N	4 (+) 5 (N) 0 (-)



SECTION 6: MITIGATION STRATEGY

Initiative	Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
FultonC-21	Work with dam owners and the population located downstream about dam failure.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
FultonC-22	Educate the public on the hazards they face.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
AyrT-1	Identify and implement response to manage stormwater runoff along Route 16, from True Value to Citgo Station.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BelfastT-1	Assess and determine best action to reduce vulnerability to hazmat incidents at the Horse Shoe turn on Route 522.	+	+	+	+	+	N	+	N	N	N	6 (+) 4 (N) 0 (-)
BelfastT-2	Install a backup generator at the Water Supply Facility.	+	+	+	+	+	N	+	N	N	N	6 (+) 4 (N) 0 (-)
BelfastT-3	Protect Needmore Water Supply to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-1	Increase visibility at the intersection of Buck Valley Road and Mays Chapel Road.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-2	Increase visibility at the intersection of SR-643 and Spring Road.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-3	Increase visibility at the intersection of Great Cove Road (US-522) and Alpine Road.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-4	Increase visibility at the intersection of Great Cove Road (US-522) and Bethel Church Road.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-5	Increase visibility at the intersection of Stoney Break Road and Black Oak Road.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-6	Protect AT&T Wireless Cell Tower to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-7	Protect Bethel Township Sewer Authority to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
BethelT-8	Work with Global Tower Partners to protect the tower in Bethel Township from landslides.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
DublinT-1	Research corrective actions needed to improve the condition of Tannery Road Bridge in Dublin Township, and implement appropriate weight limit controls and other follow-up actions.	N	+	+	+	+	N	+	N	N	N	5 (+) 5 (N) 0 (-)
DublinT-2	Conduct intersection improvements at Waterfall Road (S.R. 475) and Battle Ridge Road (T-426).	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
DublinT-3	Install generator and circuit for Township Building.	+	+	+	+	+	N	+	N	+	N	7 (+) 3 (N) 0 (-)



SECTION 6: MITIGATION STRATEGY

Initiative	Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
DublinT-4	Obtain an engineering study to redesign the intersection at Taylor Road and Waterfall Road in Dublin Township.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
Licking CreekT-1	Construct a bridge on Creek Road (T-388) in Licking Creek Township over the creek fording.	N	+	+	+	+	N	+	N	N	N	5 (+) 5 (N) 0 (-)
Licking CreekT-2	Protect Valley Rural Electric – Route 30 Substation to the 0.2-percent annual chance flood level.	N	+	+	+	+	N	+	+	N	+	7 (+) 3 (N) 0 (-)
Licking CreekT-3	Protect Valley Rural Electric located at 11563 Pleasant Ridge Road to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
Licking CreekT-4	Reconstruct Mill Road Bridge.	N	+	+	+	+	N	+	N	N	N	5 (+) 5 (N) 0 (-)
TaylorT-1	Conduct intersection improvements and cut the bank back at Frick Road and Waterfall Road.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
TaylorT-2	Identify and coordinate with PennDOT to implement infrastructure improvements to the two state bridges along 655 between Waterfall Road and Hustontown.	N	+	+	+	+	N	+	N	N	N	5 (+) 5 (N) 0 (-)
TaylorT-3	Protect the Hustontown Post Office facility to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
TaylorT-4	Protect Valley Rural Electric Clear Ridge Substation to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
TaylorT-5	Protect the Waterfall Post Office facility to the 0.2-percent annual chance flood level.	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
Thomps onT-1	Replace the corrugated metal culvert carrying West Orchard Road (T-305) over Ditch Run.	N	+	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
Thomps onT-2	Upgrade and realign the intersection of Dent Road (T-343) and Timber Ridge Road (S.R. 2005) to allow for the passage of emergency vehicles.	N	+	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
ToddT-1	Assess and determine best action to mitigate flooding and address deficiencies of Narrows Road Bridge.	N	+	+	+	+	N	+	+	+	N	7 (+) 3 (N) 0 (-)
ToddT-2	Improve drainage in Coldspring development.	N	+	+	+	+	N	+	+	+	N	7 (+) 3 (N) 0 (-)
ToddT-3	Improve drainage along Lion's Park Drive.	N	+	+	+	+	N	+	+	+	N	7 (+) 3 (N) 0 (-)
ToddT-4	Improve drainage along Cloverleaf Court.	N	+	+	+	+	N	+	+	+	N	7 (+) 3 (N) 0 (-)
ToddT-5	Improve drainage in the Fairgrounds.	N	+	+	+	+	N	+	+	+	N	7 (+) 3 (N) 0 (-)



Initiative	Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
ToddT-6	Improve drainage along Lincoln Way West.	N	+	+	+	+	N	+	+	+	N	7 (+) 3 (N) 0 (-)
UnionT-1	Continue to pursue political channels and collaboration with state agencies (e.g., PennDOT) to study and maintain the slide area on T-366 (Old 126).	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
UnionT-2	Maintain and upgrade Bridge No. 3 on Zach's Ridge Road (T-330), as needed.	N	+	+	+	+	N	+	N	N	N	5 (+) 5 (N) 0 (-)
UnionT-3	Obtain an engineering study and geological study for repair of Old Route 126.	+	+	+	+	+	N	+	+	+	N	8 (+) 2 (N) 0 (-)
UnionT-4	Replace culvert over Indian Grave Creek.	N	+	+	+	+	N	+	+	N	N	6 (+) 4 (N) 0 (-)
UnionT-5	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Lehman Road (T-308).	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (N) 0 (-)
UnionT-6	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Stahle Road (T-314).	+	+	+	+	+	N	+	+	N	N	7 (+) 3 (-) 0 (-)

6.4.3 Prioritization of Mitigation Actions

Actions that are deemed feasible (i.e., receive a positive evaluation score) were then compared and prioritized using another set of criteria (PEMA 2013), described below:

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

Scores in each criterion range from 0 to 3. The action’s priority is determined by using a formula based on the criteria values and weights. Priority values range from 0 to 3 as well. An action’s priority is then determined using the following scale (PEMA 2013):

- Low priority = 0 – 1.8
- Medium priority = 1.9 – 2.4
- High priority = 2.5 – 3

Table 6-6 shows the prioritization scores for the identified, feasible mitigation actions. Municipal officials reviewed and updated the prioritization values based on local needs.



Table 6-6. Prioritization Scoring of Mitigation Actions

Initiative	Mitigation Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High-Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Priority
FultonC-1	Acquire vacant, abandoned, or unsafe structures, especially those in hazard areas, and turn into open space.	2	3	1	3	0	2.0
FultonC-2	Educate the designated NFIP Floodplain Administrator and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	1	1	1	2	2	1.3
FultonC-3	Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	2	2	1	2	0	1.5
FultonC-4	Work with police departments in each municipality to ensure their emergency plans are updated, and inform them of the hazard areas in which they are located.	2	2	1	2	0	1.5
FultonC-5	Work with daycare owners/operators in each municipality to ensure their emergency plans are updated, and inform them of the hazard areas in which they are located.	2	2	1	2	0	1.5
FultonC-6	Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	2	2	1	2	0	1.5
FultonC-7	Develop and distribute educational information on hazards and emergency preparedness.	1	1	1	1	1	1.0
FultonC-8	Partner with community groups and local organizations, including civic, business, town watch, faith-based, senior, advocacy and tenant associations, to promote emergency preparedness and mitigation efforts.	1	1	1	1	1	1.0
FultonC-9	Procure and maintain redundant power sources (portable generators).	2	2	1	3	3	2.1
FultonC-10	Purchase or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss properties as a priority.	2	2	1	3	3	2.1
FultonC-11	Encourage homeowners to install appropriate devices to alleviate radon concentrations within homes.	0	2	3	1	2	1.8
FultonC-12	Work with facility operators to protect critical facilities in the wildland-urban interface from wildfires.	2	2	1	2	3	2.0
FultonC-13	Work with facility operators to protect critical facilities in areas prone to sinkholes.	2	2	1	2	3	2.0
FultonC-14	Establish a Firewise Program, especially around the Meadow Grounds Lake, Cowans Gap State Park, and Breezewood Park. Part of this initiative could include visual development of impacted areas, public service announcements, and educational outreach to farmers, hunters, campers, hikers, school children, and homeowners in the wildland-urban interface.	1	1	1	1	1	1.0
FultonC-15	Evaluate the need for a voluntary animal waste/manure/fertilizer self-reporting program for farmers, CAFO facilities, and other relevant organizations to utilize so that (1) the county can more accurately estimate the amount of hazardous biological waste transported through the county and (2) additional mitigation and safety measures may be implemented, if necessary.	2	2	1	1	0	1.4
FultonC-16	Create and maintain a web-based inventory of the county's population with access and functional needs to strengthen emergency response and evacuation operations.	2	2	1	1	0	1.4



Initiative	Mitigation Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High-Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Priority
FultonC-17	Ensure all applicable private industrial, commercial, and public utility service providers have a current Environmental Emergency Response Plan per the Federal Clean Water Act the Pennsylvania Clean Streams Law (35 P.S. §§691.1-691.1001), the Pennsylvania Solid Waste Management Act, the Pennsylvania Storage Tank Act, the Oil Pollution Act, and regulations promulgated thereunder.	2	2	1	1	0	1.4
FultonC-18	Strengthen the county's domestic animal health surveillance by familiarizing the Fulton County agricultural community with the list of reportable diseases and conditions related to animal health per the OIE and the Pennsylvania Domestic Animal Act (Act 100 of 1996).	2	2	1	1	0	1.4
FultonC-19	Work with the county's agricultural community to develop and implement the CART to strengthen the county's comprehensive emergency management program.	2	2	1	1	0	1.4
FultonC-20	Consider promoting or adopting higher regulatory and zoning standards to manage flood hazard risk.	2	2	1	3	1	1.8
FultonC-21	Work with dam owners and the population located downstream about dam failure.	1	1	1	1	1	1.0
FultonC-22	Educate the public on the hazards they face.	1	1	1	1	1	1.0
AyrT-1	Identify and implement response to manage stormwater runoff along Route 16, from True Value to Citgo Station.	3	3	1	3	3	2.6
BelfastT-1	Assess and determine best action to reduce vulnerability to hazmat incidents at the Horse Shoe turn on Route 522.	2	2	1	3	3	2.1
BelfastT-2	Install a backup generator at the Water Supply Facility.	2	2	1	3	3	2.1
BelfastT-3	Protect Needmore Water Supply to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
BethelT-1	Increase visibility at the intersection of Buck Valley Road and Mays Chapel Road.	2	2	1	2	1	1.7
BethelT-2	Increase visibility at the intersection of SR-643 and Spring Road.	2	2	1	2	1	1.7
BethelT-3	Increase visibility at the intersection of Great Cove Road (US-522) and Alpine Road.	2	2	1	2	1	1.7
BethelT-4	Increase visibility at the intersection of Great Cove Road (US-522) and Bethel Church Road.	2	2	1	2	1	1.7
BethelT-5	Increase visibility at the intersection of Stoney Break Road and Black Oak Road.	2	2	1	2	1	1.7
BethelT-6	Protect AT&T Wireless Cell Tower to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
BethelT-7	Protect Bethel Township Sewer Authority to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
BethelT-8	Work with Global Tower Partners to protect the tower in Bethel Township from landslides.	3	3	1	3	3	2.6
DublinT-1	Research corrective actions needed to improve the condition of Tannery Road Bridge in Dublin Township, and implement appropriate weight limit controls and other follow-up actions.	2	2	1	3	1	1.8
DublinT-2	Conduct intersection improvements at Waterfall Road (S.R. 475) and Battle Ridge Road (T-426).	2	2	1	2	1	1.7
DublinT-3	Install generator and circuit for Township Building.	2	2	1	3	3	2.1
DublinT-4	Obtain an engineering study to redesign the intersection at Taylor Road and Waterfall Road in Dublin Township.	2	2	1	2	1	1.7
LickingCreekT-1	Construct a bridge on Creek Road (T-388) in Licking Creek Township over the creek fording.	2	2	1	3	1	1.8



Initiative	Mitigation Action	Effectiveness	Efficiency	Multi-Hazard Mitigation	Addresses High-Risk Hazard	Addresses Critical Communications/ Critical Infrastructure	Priority
LickingCreekT-2	Protect Valley Rural Electric – Route 30 Substation to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
LickingCreekT-3	Protect Valley Rural Electric located at 11563 Pleasant Ridge Road to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
LickingCreekT-4	Reconstruct Mill Road Bridge.	2	2	1	3	1	1.8
TaylorT-1	Conduct intersection improvements and cut the bank back at Frick Road and Waterfall Road.	2	2	1	2	1	1.7
TaylorT-2	Identify and coordinate with PennDOT to implement infrastructure improvements to the two state bridges along 655 between Waterfall Road and Hustontown.	2	2	1	3	1	1.8
TaylorT-3	Protect the Hustontown Post Office facility to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
TaylorT-4	Protect Valley Rural Electric Clear Ridge Substation to the 0.2- chance annual flood level.	3	3	1	3	3	2.6
TaylorT-5	Protect the Waterfall Post Office facility to the 0.2-percent annual chance flood level.	3	3	1	3	3	2.6
ThompsonT-1	Replace the corrugated metal culvert carrying West Orchard Road (T-305) over Ditch Run.	2	2	1	3	1	1.8
ThompsonT-2	Upgrade and realign the intersection of Dent Road (T-343) and Timber Ridge Road (S.R. 2005) to allow for the passage of emergency vehicles.	2	2	1	3	1	1.8
ToddT-1	Assess and determine best action to mitigate flooding and address deficiencies of Narrows Road Bridge.	2	2	1	3	1	1.8
ToddT-2	Improve drainage in Coldspring development.	2	2	1	3	1	1.8
ToodT-3	Improve drainage along Lion’s Park Drive.	2	2	1	3	1	1.8
ToddT-4	Improve drainage along Cloverleaf Court.	2	2	1	3	1	1.8
ToddT-5	Improve drainage in the fairgrounds.	2	2	1	3	1	1.8
ToddT-6	Improve drainage along Lincoln Way West.	2	2	1	3	1	1.8
UnionT-1	Continue to pursue political channels and collaboration with state agencies (e.g., PennDOT) to study and maintain the slide area on T-366 (Old 126).	2	2	1	1	1	1.5
UnionT-2	Maintain and upgrade Bridge No. 3 on Zach’s Ridge Road (T-330), as needed.	2	2	1	3	1	1.8
UnionT-3	Obtain an engineering study and geological study for repair of Old Route 126.	2	2	1	2	1	1.7
UnionT-4	Replace culvert over Indian Grave Creek.	2	2	1	3	1	1.8
UnionT-5	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Lehman Road (T-308).	2	2	1	2	1	1.7
UnionT-6	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Stahle Road (T-314).	2	2	1	2	1	1.7



The actions in Table 6-7 are listed in order of priority, with the high-priority actions first. This list of actions is the result of the planning effort led by the Steering Committee and represents actions that the county and municipalities consider most important. Any actions (including projects) to be implemented will have benefits outweighing their associated costs (i.e., the benefit-cost ratio would be greater than 1).

A blank Mitigation Action Worksheet template is included in Appendix G. The set of completed action worksheets and a table summarizing the worksheets by jurisdiction are presented in Appendix H.

Table 6-7. Prioritized Mitigation Actions

Mitigation Action		Score
High Priority		
AyrT-1	Identify and implement response to manage stormwater runoff along Route 16, from True Value to Citgo Station.	2.6
BelfastT-3	Protect Needmore Water Supply to the 0.2-percent annual chance flood level.	2.6
BethelT-6	Protect AT&T Wireless Cell Tower to the 0.2-percent annual chance flood level.	2.6
BethelT-7	Protect Bethel Township Sewer Authority to the 0.2-percent annual chance flood level.	2.6
BethelT-8	Work with Global Tower Partners to protect the tower in Bethel Township from landslides.	2.6
LickingCreekT-2	Protect Valley Rural Electric – Route 30 Substation to the 0.2-percent annual chance flood level.	2.6
LickingCreekT-3	Protect Valley Rural Electric located at 11563 Pleasant Ridge Road to the 0.2-percent annual chance flood level.	2.6
TaylorT-3	Protect the Hustontown Post Office facility to the 0.2-percent annual chance flood level.	2.6
TaylorT-4	Protect Valley Rural Electric Clear Ridge Substation to the 0.2-percent annual chance flood level.	2.6
TaylorT-5	Protect the USPS facility to the 0.2-percent annual chance flood level.	2.6
Medium Priority		
BelfastT-1	Assess and determine best action to reduce vulnerability to hazmat incidents at the Horse Shoe turn on Route 522.	2.1
BelfastT-2	Install a backup generator at the Water Supply Facility.	2.1
DublinT-3	Install generator and circuit for Township Building.	2.1
FultonC-9	Procure and maintain redundant power sources (portable generators).	2.1
FultonC-10	Purchase or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss properties as a priority.	2.1
FultonC-1	Acquire vacant, abandoned, or unsafe structures, especially those in hazard areas, and turn into open space.	2.0
FultonC-12	Work with facility operators to protect critical facilities in the wildland-urban interface from wildfires.	2.0
FultonC-13	Work with facility operators to protect critical facilities in areas prone to sinkholes.	2.0
Low Priority		
DublinT-1	Research corrective actions needed to improve the condition of Tannery Road Bridge in Dublin Township, and implement appropriate weight limit controls and other follow-up actions.	1.8
FultonC-11	Encourage homeowners to install appropriate devices to alleviate radon concentrations within homes.	1.8
FultonC-20	Consider promoting or adopting higher regulatory and zoning standards to manage flood hazard risk.	1.8
LickingCreekT-1	Construct a bridge on Creek Road (T-388) in Licking Creek Township over the creek fording.	1.8
LickingCreekT-4	Reconstruct Mill Road Bridge.	1.8
TaylorT-2	Identify and coordinate with PennDOT to implement infrastructure improvements to the two state bridges along 655 between Waterfall Road and Hustontown.	1.8
ThompsonT-1	Replace the corrugated metal culvert carrying West Orchard Road (T-305) over Ditch Run.	1.8



Mitigation Action		Score
ThompsonT-2	Upgrade and realign the intersection of Dent Road (T-343) and Timber Ridge Road (S.R. 2005) to allow for the passage of emergency vehicles.	1.8
ToddT-1	Assess and determine best action to mitigate flooding and address deficiencies of Narrows Road Bridge.	1.8
ToddT-2	Improve drainage in Coldspring development.	1.8
ToddT-3	Improve drainage along Lion's Park Drive.	1.8
ToddT-4	Improve drainage along Cloverleaf Court.	1.8
ToddT-5	Improve drainage in the fairgrounds.	1.8
ToddT-6	Improve drainage along Lincoln Way West.	1.8
UnionT-2	Maintain and upgrade Bridge No. 3 on Zach's Ridge Road (T-330), as needed.	1.8
UnionT-4	Replace culvert over Indian Grave Creek.	1.8
BethelT-1	Increase visibility at the intersection of Buck Valley Road and Mays Chapel Road.	1.7
BethelT-2	Increase visibility at the intersection of SR-643 and Spring Road.	1.7
BethelT-3	Increase visibility at the intersection of Great Cove Road (US-522) and Alpine Road.	1.7
BethelT-4	Increase visibility at the intersection of Great Cove Road (US-522) and Bethel Church Road.	1.7
BethelT-5	Increase visibility at the intersection of Stoney Break Road and Black Oak Road.	1.7
DublinT-2	Conduct intersection improvements at Waterfall Road (S.R. 475) and Battle Ridge Road (T-426).	1.7
DublinT-4	Obtain an engineering study to redesign the intersection at Taylor Road and Waterfall Road in Dublin Township.	1.7
TaylorT-1	Conduct intersection improvements and cut the bank back at Frick Road and Waterfall Road.	1.7
UnionT-3	Obtain an engineering study and geological study for repair of Old Route 126.	1.7
UnionT-5	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Lehman Road (T-308).	1.7
UnionT-6	Conduct intersection improvements at Harmonia Road (S.R. 3002) and Stahle Road (T-314).	1.7
FultonC-3	Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	1.5
FultonC-4	Work with police departments in each municipality to ensure their emergency plans are updated and inform them of the hazard areas in which they are located.	1.5
FultonC-5	Work with daycare owners/operators in each municipality to ensure their emergency plans are updated and inform them of the hazard areas in which they are located.	1.5
FultonC-6	Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	1.5
UnionT-1	Continue to pursue political channels and collaboration with state agencies (e.g., PennDOT) to study and maintain the slide area on T-366 (Old 126).	1.5
FultonC-15	Evaluate the need for a voluntary animal waste/manure/fertilizer self-reporting program for farmers, CAFO facilities, and other relevant organizations to utilize so that (1) the county can more accurately estimate the amount of hazardous biological waste transported through the county and (2) additional mitigation/safety measures may be implemented, if necessary.	1.4
FultonC-16	Create and maintain a web-based inventory of the county's population with access and functional needs to strengthen emergency response and evacuation operations.	1.4
FultonC-17	Ensure all applicable private industrial, commercial, and public utility service providers have a current Environmental Emergency Response Plan per the Federal Clean Water Act the Pennsylvania Clean Streams Law (35 P.S. §§691.1-691.1001), the Pennsylvania Solid Waste Management Act, the Pennsylvania Storage Tank Act, the Oil Pollution Act, and regulations promulgated thereunder.	1.4
FultonC-18	Strengthen the county's domestic animal health surveillance by familiarizing the Fulton County agricultural community with the list of reportable diseases and conditions related to animal health per the OIE and the Pennsylvania Domestic Animal Act (Act 100 of 1996).	1.4
FultonC-19	Work with the county's agricultural community to develop and implement the CART to strengthen the county's comprehensive emergency management program.	1.4
FultonC-2	Educate the designated NFIP Floodplain Administrator and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	1.3



Mitigation Action		Score
FultonC-7	Develop and distribute educational information on hazards and emergency preparedness.	1.0
FultonC-8	Partner with community groups and local organizations, including civic, business, town watch, faith-based, senior, advocacy and tenant associations, to promote emergency preparedness and mitigation efforts.	1.0
FultonC-14	Establish a Firewise Program, especially around the Meadow Grounds Lake, Cowans Gap State Park, and Breezewood Park. Part of this initiative could include visual development of impacted areas, public service announcements, and educational outreach to farmers, hunters, campers, hikers, school children, and homeowners in the wildland-urban interface.	1.0
FultonC-21	Work with dam owners and the population located downstream about dam failure.	1.0
FultonC-22	Educate the public on the hazards they face.	1.0

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