



Pike County Hazard Mitigation Plan (HMP) 2022 Update

Mitigation Strategy Workshop | January 19, 2022

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Agenda



- Welcome
- Project Status – where we are in the process
- Municipal Participation
- Municipal Risk Factor Analysis
- Develop the Updated Mitigation Strategy
- Next Steps
- Questions



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Project Schedule Review

- | | |
|---|--|
| ✓ June/July 2021 | Kick-Off Meetings |
| ✓ July-September 2021 | Data Collection |
| ✓ November 10, 2021 | Risk Assessment Presentation |
| ✓ October-November 2021 | Update Hazard Profiles – <i>County reviewing</i> |
| <input type="checkbox"/> January 19, 2022 | Mitigation Strategy Workshop – TODAY! |
| <input type="checkbox"/> June 2021 – March 2022 | Plan Development |
| <input type="checkbox"/> March 2022 | Review Draft Plan |
| <input type="checkbox"/> April 2022 | Plan Submitted to PEMA |
| <input type="checkbox"/> May 2022 | Plan Submitted to FEMA |



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Worksheet Completion Status

- Received worksheets from all 13 jurisdictions – great job!
 - Tetra Tech will follow-up with the municipalities to fill in any missing gaps
- Providing information and attending meetings is a participation requirement for the HMP
 - Lack of participation in this HMP planning process can prevent funding eligibility



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Municipal Participation Status

Jurisdiction	Worksheet 1 - Hazard ID	Worksheet 2 - Capabilities	Worksheet 3 - NFIP	Worksheet 4 - Previous Actions	Risk Ranking Review
Pike County	X	X	N/A	X	X
Blooming Grove Township	X	X	X	X	X
Delaware Township	X	X	X	X	
Dingman Township	X	X	X	X	X
Greene Township	X	X			X
Laekawaxen Township	X	X	X	X	
Lehman Township	X	X	X	X	X
Matamoras Borough	X	X	X	X	
Milford Borough	X	X	X	X	X
Milford Township	X	X	X	X	X
Palmyra Township	X	X	X	X	
Porter Township	X	X	X	X	X
Shohola Township	X	X	X	X	
Westfall Township	X	X	X	X	X

Public Outreach and Engagement

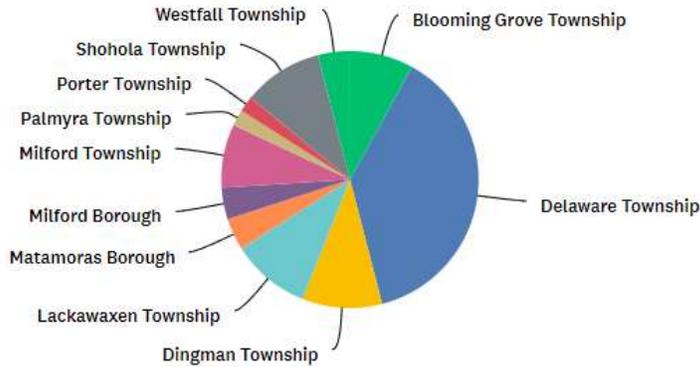


- Stakeholder and neighboring county surveys were distributed – 7 responses to date
- To date, we have received over 50 responses to the public survey
- Public Engagement – County and municipalities were sent different tools they can use to help – please continue to share!
 - HMP website <https://www.pikecountypahmp.com/>
 - Social Media announcements – Facebook and Twitter
 - Let Tetra Tech know when you post about the HMP so we can include in the HMP





Public Survey Feedback



Residents

TO: All Pike County Residents

Published on: HMP Website and Social Media; Municipal and Department Websites

52 responses received



Public Responses and Feedback

- Public Outreach – 49% of responses said that the local programs are not effective at informing the public and 21% said they do not know of any programs in place
- Top hazards experienced in the last 5 years:
 - Winter Storm
 - Pandemic and Infectious Disease
 - Hurricane/Tropical Storm/Nor’Easter
 - Invasive Species
 - Tornado/Windstorm
- Identified issues:
 - Power outages
 - Downed trees
 - Poor drainage issues
 - Flooding
- Top three choices for how the County can reduce hazard damages:
 - 80%: Work on improving the damage resistance of utilities (electricity, communications, water/wastewater facilities etc.)
 - 64%: Improve and strengthen infrastructure (e.g., elevating roads, improve drainage systems)
 - 49%: Improve and strengthen critical facilities such as police, schools, hospitals





Risk Factor Analysis

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Risk Assessment Results



Hazard Risk	Hazards	Risk Assessment Category					Risk Factor (RF)
		Probability	Impact	Spatial Extent	Warning Time	Duration	
High	Flood	4	3	3	2	3	3.2
	Radon	4	2	4	1	4	3.1
	Severe Weather	4	2	4	3	2	3.1
	Environmental Hazards	4	2	3	4	2	3
	Severe Winter Weather	4	2	4	2	2	3
	Utility	4	2	2	4	4	3
	Drought	3	2	4	1	4	2.8
	Extreme Temperatures	3	2	4	2	3	2.8
	Invasive Species	4	1	4	1	4	2.8
	Wildfire	4	1	3	4	3	2.8
Disease Outbreak	2	3	3	1	4	2.6	
Moderate	Transportation	4	2	1	4	1	2.5
	Drowning	4	1	1	4	1	2.2
	Hurricane/Nor'Easter	2	2	3	1	3	2.2
	Terrorism	2	1	2	4	4	2.1
	Nuclear Incidents	1	1	3	4	4	2
Low	Urban Fire	2	2	1	4	2	2
	Earthquake	1	1	4	4	1	1.9
	Geologic	2	1	1	4	1	1.6

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Risk Assessment Results

• Municipal Risk Factor Analysis – what do you think is your municipality's ranking?

Municipality	Disease Outbreak	Drought	Drowning	Earthquake	Environmental Hazards	Extreme Temperatures	Flood	Geologic	Hurricane, Nor' Easter	Invasive Species	Nuclear Incidents	Radon	Severe Weather	Severe Winter Weather	Terrorism	Transportation	Urban Fire	Utility	Wildfire
Blooming Grove Township	2.8	2.6	2.2	1.9	3	2.8	3.2	1.6	2.2	2.8	2	3.1	3.1	3	2.1	2.5	2	3	2.8
Delaware Township																			
Dingman Township																			
Greene Township																			
Lackawaxen Township																			

- > Your municipality's risk from this hazard is greater than the County's risk as a whole
- < Your municipality's risk from this hazard is less than the County's risk as a whole
- = Your municipality's risk from this hazard is about the same as the County's risk as a whole

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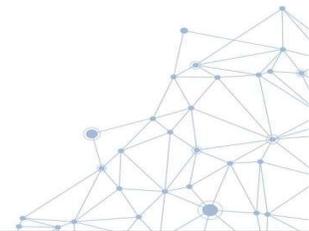
Mitigation Strategy

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2022 HMP Hazards of Concern

- Disease Outbreak
- Drought
- Drowning
- Earthquake
- Environmental Hazards
- Extreme Temperature
- Flood
- Geologic Hazards
- Hurricane/Tropical Storm/Nor'Easter
- Invasive and Nuisance Species
- Nuclear Incidents
- Terrorism
- Severe Weather
- Severe Winter Weather
- Transportation
- Urban Fire
- Utility Failure
- Wildfire

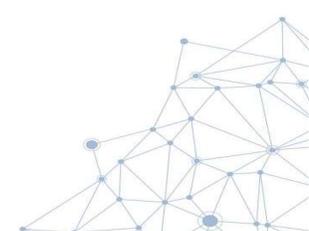


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Risk Reduction



- How do you reduce risk for a hazard?
 - Manipulate the Hazard
 - Structural flood control
 - Reduce/Eliminate Exposure
 - Acquire floodprone properties
 - Reduce Vulnerability
 - Retrofit (floodproofing)
 - Increase Capability
 - \$, preparation, technical assistance, planning enforcement



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Using Your Mitigation Strategy to Reduce Risk

- What is a **Mitigation Strategy**?
 - A group of projects or actions to reduce the impacts of the hazards of concern on your community
 - Plans and Regulations
 - Structure and Infrastructure Studies and Projects
 - Natural Systems Protection Studies and Projects
 - Education and Awareness Programs
- Terms to describe the Mitigation Strategy include:
 - **Mitigation Action Plan** or **Action Plan**
 - **Mitigation Projects** or **Initiatives** or **Actions**



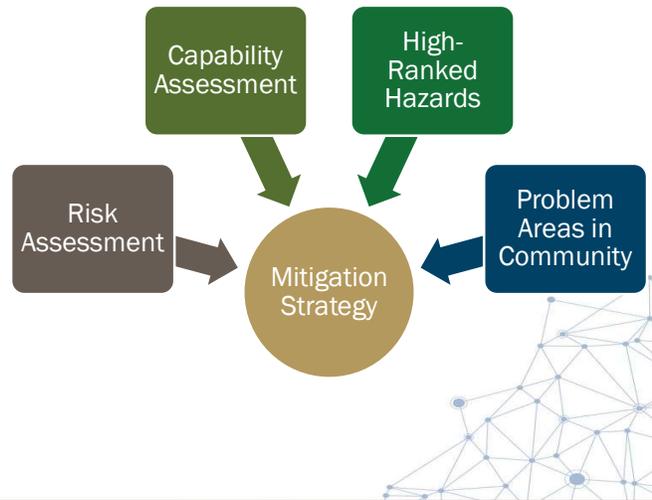
Requirements for the Mitigation Strategy Update

- A minimum of one action per hazard of concern
 - An action can address more than one hazard of concern and count towards the minimum
- NFIP-Related Actions –
 - If you participate in the NFIP or have Special Flood Hazard Areas in your community, you need to have at least one specific action that relates to continued compliance with the NFIP.
- 2017 Projects
 - If a project is not finished and still a priority, include in 2022 HMP
- Complete one action worksheet for each mitigation strategy identified



Connecting to the Mitigation Strategy

- Need a clear connection between vulnerability and proposed mitigation actions.
- Capability assessment provides insight into challenges and opportunities for the mitigation strategy.
- Provides the factual basis for activities proposed in the mitigation strategy.



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Update the Mitigation Strategy

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Update the Mitigation Strategy

- Purpose of the Mitigation Strategy
 - Reduce likelihood of hazard impacts
 - Lessen impacts of hazards
- Review the Goals and Objectives of the HMP
- Identify new Mitigation Actions/Projects/Strategies
- Modify incomplete projects from the 2017 HMP
 - **More specific** or to **address different aspects of the original problem**
- Start with problems (look at the problem areas worksheet)
 - Turn challenges/obstacles/gaps into mitigation actions
 - Examine historic impacts
 - Review the risk and capability assessment results
 - RL/SRL properties
 - Stormwater flooding areas
 - Critical facilities and lifelines located in a hazard area (if feasible)
 - Additional areas of vulnerability
 - Previous FEMA HMA submitted projects - awarded/unawarded



Mitigation Action Types



Plans and regulations include government authorities, policies, or codes that encourage risk reduction, such as building codes and state planning regulations. This may also include planning studies.



Structure and infrastructure projects involve modifying existing structures and infrastructure or constructing new structures to reduce the impact of hazards.



Natural systems protection projects minimize losses while also preserving or restoring the function of natural systems.



Education and awareness programs include long-term, sustained programs to inform and educate citizens and stakeholders about hazards and mitigation options. This category could also include training.





Range of Mitigation Actions

- Primary types of mitigation actions to reduce long-term vulnerabilities include:

Local Plans and Regulations

- Zoning codes
- Ordinances
- Open space plan
- Debris management plan

Structural Projects

- Elevation
- Drainage improvements
- Property acquisitions

Natural Systems Protection

- Stream and wetland restoration
- Erosion control

Education and Outreach

- Public awareness
- Education programs



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Getting Started...



- If you had all the time and money in the world, what would you do to protect your community from future disasters?
- Ask yourself these questions -
 - What plans or regulations does your municipality need?
 - What information must you provide to your residents and visitors?
 - What property and products can be insured?
 - What additional staff do you need?
 - Where are your problem areas? What can be done about them?
 - What critical facilities need backup power generators?



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Mitigation Action Examples

- All Hazards
 - Public outreach to increase awareness of hazards and actions people can take
- Disease Outbreak
 - Increase PPE stockpile to distribute as needed
 - Continuity planning
- Drought
 - Emergency plans
 - Schedule to monitor/report conditions
- Earthquake
 - Adopt and enforce updated building codes to reduce earthquake risk
- Critical facilities vulnerable to hazmat releases
 - Outreach to make owners/operators aware
 - HVAC system retrofits
- Extreme Temperatures
 - Establish heating/cooling centers; ensure backup power is at the centers
- Wind damage
 - Tree maintenance programs
 - Retrofit structures
- Steep Slopes
 - Assess property as a whole
 - Retrofit
- Carbonate bedrock/karst topography
 - Assess risk at specific property
 - Acquisition/relocation



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Develop the Updated Mitigation Strategy

- Wildland-Urban Interface
 - Assess property
 - Clear brush from near structure(s)
- Lack of backup power
 - Generators at critical facilities
 - Alternative energy sources
- Terrorism
 - Work with private and public sectors to improve cyber security for critical infrastructure
 - Increase public awareness
- Urban/Structural Fire
 - Mitigate buildings and structures, including historic structures, at risk from structural fires
- Dam Failure
 - Assess risk at specific properties
 - Create EAPs for all high hazard dams
 - Adopt special land use codes in dam inundation areas
- Poor water/sewer infrastructure
 - System upgrades
 - Enhance maintenance
- Special Flood Hazard Areas
 - Acquisition/relocation
 - Elevation
 - Fill basements
 - Floodproofing
 - Protect/restore wetlands
 - Enhanced regulations
- Stormwater Management Issues
 - Upgrade culverts, bridges, road drainage
 - Enhanced regulations



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Mitigation Action Worksheet

Municipality(ies):	Action
Action Number:	
Location (address, lat/long)	
Mitigation Technique Category	
Hazard(s) Addressed	
Priority (High, Medium, Low)	
Estimated Cost	
Potential Funding Streams	
Timeline	
Lead Agency/Department	
Support Agency(ies)/ Department(s)	
Project Point of Contact	
Name	
Title	
Agency/Department	
Phone	
E-mail	

Guidance to Complete the Mitigation Action Worksheet

The following provides additional guidance on how to complete the mitigation action worksheet. **A minimum of one mitigation action must be identified for each hazard. Each participating jurisdiction in the planning process must identify at least one specific mitigation action for which it will be responsible.**

- If you participate in the NFIP or have identified Special Flood Hazard Areas (SFHAs), you must have at least one specific action that related to continued compliance with the NFIP. The action must be specific and an implementable measure to enhance the municipality's compliance.

Action Worksheet

Action Number: 2022-Jurisdiction-001

Action: Include a detailed description of the action. Describe the physical area (project limits) to be affected, both by direct work and by the project's effects; how the action would address the existing conditions previously identified; proposed construction methods, including any excavation and earth-moving activities; where you are in the development process (e.g., are studies and/or drawings complete), etc., the extent of any analyses or studies performed (attach any reports or studies).

Municipality: List the municipalities that this action cover

Location (address, lat/long): Provide the address/location of the proposed action

Mitigation Action Category: List the category that the action falls under (can be more than one):

- Local Plans and Regulations (LPR)** – These actions include government authorities, policies, or codes that influence the way land and buildings are

Mitigation Action Worksheet

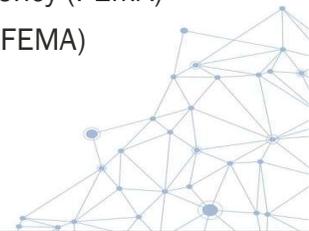


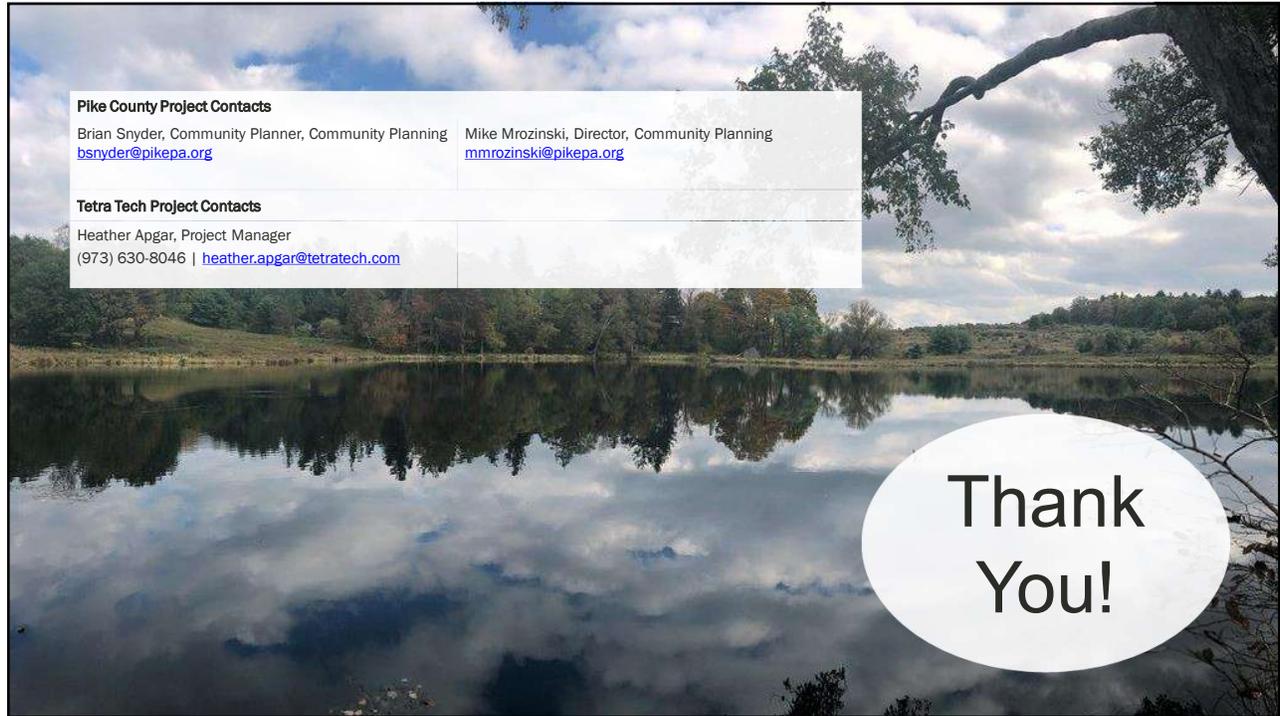
Municipality(ies):	Action
Blooming Grove	The Township will develop a hazardous tree management program that will include routine inspections of trees, identify at-risk trees, and implement a schedule to maintain or remove. Once the inspections and schedule are complete, the Township will work on removing the identified trees. In the event the trees are located on or along power lines, the Township will work with the utility companies to request removal or trimming.
Action Number:	
2022-Blooming Grove-01	
Location (address, lat/long)	Throughout Township
Mitigation Technique Category	Local Plans and Regulations; Natural Systems Protection
Hazard(s) Addressed	Hurricane/Tropical Storm; Severe Weather; Severe Winter Weather; Utility Failure; Wildfire
Priority (High, Medium, Low)	High
Estimated Cost	Low to Medium
Potential Funding Streams	Municipal Budget
Timeline	Short/On-Going
Lead Agency/Department	Township Supervisor
Support Agency(ies)/ Department(s)	N/A



Next Steps

- Complete Municipal Worksheets
- Identify and submit mitigation actions by Wednesday, February 9th
- Finalize the draft HMP
- Provide public comment period
- Conduct draft review meeting
- Submit Plan Update to Pennsylvania Emergency Management Agency (PEMA)
- Submit Plan Update to Federal Emergency Management Agency (FEMA)





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Thank
You!