




 TETRA TECH

Pike County Hazard Mitigation Plan (HMP) 2022 Update

HMP Draft Review Webinar | June 1, 2022



complex world | CLEAR SOLUTIONS™

1



Agenda

- Welcome
- Project Schedule Review
- Review the Planning Process
- Section Contents
- 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 |
| ✓ January 19, 2022 | Mitigation Strategy Workshop |
| ✓ June 2021 – May 2022 | Plan Development |
| ☐ June, 1 2022 | Review Draft Plan – TODAY! |
| ☐ July 2022 | Plan Submitted to PEMA |
| ☐ August 2022 | Plan Submitted to FEMA |



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Review the Planning Process

- Planning Team Kickoff Meeting
 - **July 1, 2021**
- Municipal Support Meetings
 - **September – October 2021**
- Risk Assessment Update
 - **August – October 2021**
- Mitigation Strategy Update
 - **December 2021 – January 2022**
- Develop the HMP document
 - **September 2021 – May 2022**
- Public Review Period
 - **June – July 2022**



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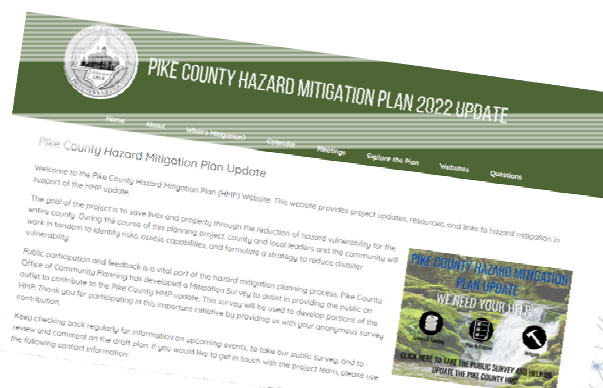
Review the Planning Process

- Core Planning Team Meetings
 - Ongoing through planning process
- Municipal Support Meetings
 - September – October 2021
- Supervisors Meeting
 - October 1, 2021
- Risk Assessment Meeting
 - November 10, 2021
- Mitigation Strategy Workshop
 - January 19, 2022
- Draft Plan Presentation
 - June 1, 2022

Public Outreach and Engagement



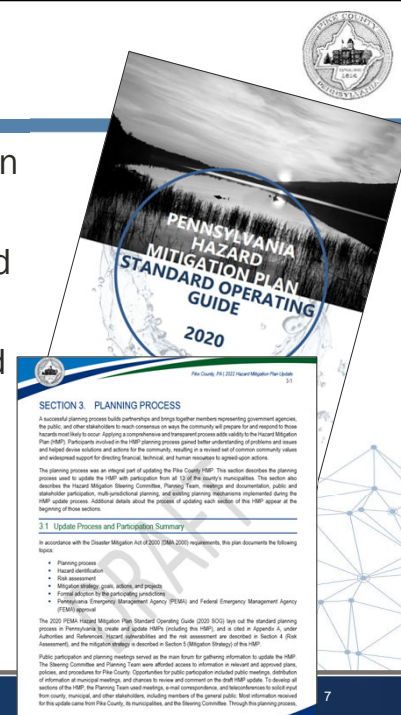
- Public Engagement – County and municipalities were sent different tools they can use to help – please continue to share!
 - HMP website
<https://www.pikecountypahmp.com/>
 - Social Media announcements – Facebook and Twitter
 - Let Tetra Tech know when you post about the HMP so we can include in the HMP
- Tetra Tech will send out additional tools to use to let the public know the draft plan is available for review.





What's New in the 2022 Update?

- Followed the 2020 Pennsylvania Hazard Mitigation Plan Standard Operating Guide
- New look to the 2022 Pike County HMP – updated style
- Critical facilities – updated inventory and included community lifelines
- Hazards of concern – incorporated new hazards, concise hazard profiles, included recent events



Section Contents

- **Section 1 – Introduction**
 - Background
 - Purpose
 - Scope
- **Section 2 – County Profile**
 - Geography and Environment
 - Community Facts
 - Population and Demographics
 - Land Use and Development
 - Data Sources and Limitations

Phase 1: Organize Resources

The Planning Team is developed; resources are identified and obtained; public involvement is initiated. Technical, regulatory, and planning experts are identified to support the planning process.

Phase 2: Assess Risk

The Planning Team, with appropriate input, identifies potential hazards, collects data, and evaluates the characteristics and potential consequences of the natural and man-made hazards on a community.

Phase 3: Develop a Mitigation Plan

The Planning Team uses the risk assessment process and stakeholder input to understand the risk posed by all hazards, determine what its mitigation priorities should be, and identify options to avoid or minimize undesired effects. The results are a hazard mitigation plan update, including updated mitigation strategies and a plan for implementation.

Phase 4: Implement the Plan and Monitor Progress

The Planning Team brings the plan to life in a variety of ways including implementing specific mitigation projects; changing the day-to-day operations of Pike County and its jurisdictions, as necessary, to support mitigation goals; track mitigation action progress; and updating plan over time.

HAZUS-MH was applied to help Pike County:

- Identify Hazards (Phase 2)
- Profile Hazards (Phase 2)
- Perform A Vulnerability Assessment (Phase 2)

including:

- ✓ Inventory Assets
- ✓ Estimate Loss
- ✓ Evaluate Development Trends
- ✓ Present Results of Risk Assessment

• The results provide an input to phase 3



Section Contents



•Section 3 – Planning Process

- Update Process and Participation Summary
- The Planning Team
- Meetings and Documentation
- Public and Stakeholder Participation
- Multi-Jurisdictional Planning

Pike County Jurisdictions				
Blooming Grove Township	Delaware Township	Dingman Township	Greene Township	Lackawaxen Township
Lehman Township	Matamoras Borough	Milford Borough	Milford Township	Palmyra Township
Porter Township	Shohola Township	Westfall Township		
Educational Institutions				
Delaware Valley School District	East Stroudsburg School District	Penn State Cooperative Extension	Pocono Environmental Education Center	Wallenpaupack Area School District
Hospitals and Health Care				
Carbon-Monroe-Pike Mental Health and Developmental Services	American Red Cross Northeastern PA Chapter			
Police Departments				
Pike County Sheriff's Office				
Utilities Agencies				
Brookfield Energy Partners	Orange & Rockland Utilities	Pennsylvania Power & Light	Pike Co Light & Power/Corning Gas	Lake Wallenpaupack Watershed District
Milford Water Authority	UGI	Westfall Sewer Authority		
Neighboring Jurisdictions				
Monroe County, PA	Orange County, NY	Sullivan County, NY	Sussex County, NJ	Warren County, NJ
Wayne County, PA				
Government Stakeholders				
National Park Service - Delaware Water Gap National Recreation Area	National Park Service - Upper Delaware Scenic & Recreational River	PA DCNR	PA DCNR Forestry - Delaware District Office	PA DEP Northeast Regional Office
PA Game Commission	PA House of Representatives 139th District	PA House of Representatives 189th District	PA Senate 20th District	PEMA Eastern Area Office
PEMA	PennDOT District 4-4	Pike County Economic Development Authority	Pike County Transportation	
Other Stakeholders				
Pocono Mountain Vacation Bureau	Twin and Walker Creeks Conservancy	Upper Delaware Council	Pike County Chamber of Commerce	

Section Contents



•Section 4 – Risk Assessment

- Section 4.1 – Update Process Summary
- Section 4.2 – Hazard Identification
- Section 4.3 – Hazard Profiles
- Section 4.4 – Hazard Vulnerability Summary

Natural Hazards

- Disease Outbreak
- Drought
- Earthquake
- Extreme Temperature
- Flood
- Geologic Hazards (landslide, sinkholes)
- Hurricane, Tropical Storm, Nor'easter
- Invasive Species
- Radon Exposure
- Severe Weather
- Tornado and Windstorm
- Wildfire
- Winter Storm

Non-Natural Hazards

- Dam Failure
- Drowning
- Environmental Hazards
- Nuclear Incidents
- Terrorism
- Transportation Accidents
- Structural Fire and Explosion
- Utility Interruption

Hazard Risk	Hazards	Risk Assessment Category					Risk Factor (RF)
		Probability	Impact	Spatial Extent	Warning Time	Duration	
High	Flood	4	3	3	2	3	3.4
	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
	Extreme Temperatures	3	2	4	2	3	2.8
	Invasive Species	4	1	4	1	4	2.6
	Disease Outbreak	2	3	3	1	4	2.4
	Hurricane/Nor'Easter	3	2	3	1	3	2.4
	Transportation	4	2	1	4	1	2.8
Moderate	Drought	2	2	3	1	4	2.3
	Radon	3	1	3	1	4	2.3
	Drowning	4	1	1	4	1	2.2
	Terrorism	2	1	2	4	4	2.1
	Wildfire	1	1	1	4	3	2.1
Low	Nuclear Incidents	1	1	3	4	4	2
	Urban Fire	2	2	1	4	2	2
	Earthquake	1	1	4	4	1	1.9
	Geologic	2	1	1	4	1	1.6



Section Contents



•Section 5 – Capability Assessment

- Update Process Summary
- Capability Assessment Findings
 - Planning and Regulatory
 - Administrative and Technical
 - Financial
 - Education and Outreach
 - Self-Assessment
 - Plan Integration

Jurisdiction	Hazard Mitigation Plan	LUP	Disaster Recovery Plan	Evacuation Plan	COOP Plan	MFP	NIP - CDS	Floodplain Regulations	Floodplain Mgmt. Plan	Zoning Regulations	Subdivision Regulations	Comprehensive Land Use Plan (or General, Master, or Growth Mgmt. Plan)	Open Space Mgmt. Plan	Climate Resilient Plan/Ordinance	Natural Resources Protection Plan	Capital Improvements Plan	Economic Dev. Plan	Historic Preservation Plan	Farmland Preservation	Building Code	Fire Code	Other
Blooming Grove Township	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	-	-	-	-	-	X	-
Delaware Township	X	X	X	X	X	X	-	X	NA	X	X	X	X	X	X	-	-	-	-	X	X	-
Dingman Township	X	X	-	-	X	X	-	X	-	X	X	X	-	X	-	-	-	-	-	X	X	-
Greene Township	X	X	-	X	X	X	-	X	-	-	X	X	X	X	X	-	-	-	-	X	X	-
Lackawanna Township	X	X	X	X	X	X	-	X	-	X	X	X	X	-	X	X	X	X	X	X	X	-
Lehman Township	X	X	X	X	X	X	-	X	X	X	X	X	X	X	-	-	-	-	-	X	-	-
Matamoras Borough	X	X	UD	UD	UD	X	-	X	-	X	X	X	X	-	-	-	-	-	-	X	X	-
Milford Borough	X	X	X	X	X	X	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-	*
Milford Township	X	X	-	-	-	X	-	X	-	X	X	X	X	-	-	-	-	-	-	X	X	X
Palmyra Township	X	X	-	-	X	-	X	-	X	X	X	X	-	X	-	-	-	-	-	X	X	X
Porter Township	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	-	-	-	-	X	X	-
Shohola Township	X	X	-	-	-	X	-	X	-	X	X	X	X	X	-	-	-	-	-	X	-	-
Westfall Township	X	X	-	X	-	X	-	X	X	X	X	X	X	X	-	-	-	-	-	X	-	-
Pike County	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-

Section Contents



•Section 6 – Mitigation Strategy

- Update Process Summary
- Mitigation Goals and Objectives
- Identification and Analysis of Mitigation Techniques
- Mitigation Action Plan

2022 Goals

1. Provide for properly managed and environmentally sound growth and disaster-resistant development.
2. Reduce the potential impact of natural and human made hazards on property.
3. Enhance and improve emergency services provided to the growing population of Pike County.
4. Reduce vulnerability including loss of life and damage to assets and the environment from natural and human-made hazards.
5. Conserve, protect, restore, and enhance existing natural systems and water resources that serve a natural hazard mitigation function.
6. Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education, training, and outreach activities.
7. Address long-term vulnerabilities from high hazard dams.



Section Contents



•Section 7 - Plan Maintenance Procedures

- Monitoring, Evaluating, and Updating the Plan
 - Information Requests
 - Worksheets
 - Annual Review Meeting
- Continued Public Involvement

•Section 8 - Plan Adoption

Task	Approach	Timeline	Lead Responsibility	Support Responsibility
Monitoring	Preparation of status updates and action implementation tracking as part of submission for Annual Progress Report.	Meet annually or upon major update to comprehensive plan or major disaster declaration	Jurisdictional points of contact identified in Section 3 (Planning Process)	Jurisdictional implementation lead identified in Section 3 (Planning Process)
Integration	In order for integration of mitigation principles action to become an organic part of the ongoing county and municipal activities, the County will incorporate the distribution of the FEMA 386-4 guidance worksheets for annual review and update by all participating jurisdictions.	August each year with interim email reminders to address integration in county and municipal activities.	HMP Coordinator and jurisdictional points of contact identified in Section 3 (Planning Process)	HMP Coordinator
Evaluation	Review the status of previous actions as submitted by the monitoring task lead and support to assess the effectiveness of the plan; compile and finalize the Annual Progress Report.	Finalized progress report completed by January 31st of each year	Planning Partnership; Plan Maintenance element	Jurisdictional points of contacts identified in Section 3 (Planning Process)
Update	Reconvene the planning partners, at a minimum, every 5 years to guide a comprehensive update to review and revise the plan.	Every 5 years or upon major update to Master Plan or major disaster	Pike County HMP Coordinator	Jurisdictional points of contacts identified in Section 3 (Planning Process)

Section Contents



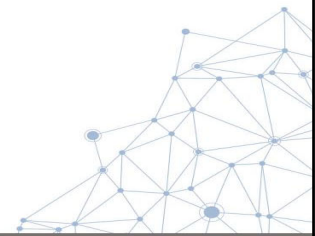
•Appendices

- A – References
- B – Plan Review Tool
- C – Meeting Documentation
- D – Municipal Flood Maps
- E – Critical Facilities (will be redacted for the public review period)
- F – Public and Stakeholder Outreach
- G – Mitigation Action and Capability Worksheets
- H – Municipal Adoptions



Next Steps

- Finishing touches
 - June 1 – June 8, 2022
- Posting for Public Review
 - June 8 – July 8, 2022
- Submission to PEMA
 - On or about July 9, 2022
- Submission to FEMA Region III
 - On or about August 9, 2022



The background of the slide is a photograph of a white metal truss bridge spanning a calm river. The bridge and the surrounding trees are reflected in the water. A large, light gray oval bubble with the text 'Thank You!' is positioned in the lower right area of the image.

Pike County Project Contacts	
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