



# 2018 State Hazard Mitigation Plan Comments Form

We want to hear from you! The Commonwealth of Pennsylvania is updating the 2018 State Hazard Mitigation Plan. We want to hear from you- what went well with the last process and what needs to be updated? What content has changed. Please let us know if there are people, documents, or other tools you think should be included in this planning process to help your agency support a more resilient future.

<b>Agency/ Organization:</b>	
<b>Name:</b>	

1. Do you have a general comment on the 2018 Pennsylvania State Hazard Mitigation Plan? Please provide your comment(s).

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2. Do you have a specific question or comment about the 2018 Pennsylvania State Hazard Mitigation Plan? If so, please provide the section and page number in addition to your comment.

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3. Are there any other identifiers you would be willing to share? (i.e., Agency, County/Municipality of Residence or Work)

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4. Have you participated in the Hazard Mitigation Plan Update Process previously? If yes, in what capacity?

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5. Would you like to receive more information about the Hazard Mitigation Plan Update process?

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6. What is the best way for us to share further information about the Hazard Mitigation Plan Update process with you?

- State website
- Social media
- In Person Meeting
- Webinar
- Other (please specify): \_\_\_\_\_

Thank you for your participation. For additional questions or comments, please email [PAHMP2023@mbakerintl.com](mailto:PAHMP2023@mbakerintl.com).












# Hazard Action Comment Form

The State Hazard Mitigation Plan must include actions identified to mitigate the hazards that impact the Commonwealth. Please complement the group discussion with additional ideas for mitigation here.









Agency/ Organization:	
Name:	

What hazards would have the largest consequence on your agency or organization?	
Natural Hazards	
 Coastal Erosion	
 Drought	
 Earthquake	
 Extreme Temperature	
 Floods	
 Hailstorms	

What hazards would have the largest consequence on your agency or organization?



 <p>Hurricanes</p>	
 <p>Invasive Species</p>	
 <p>Landslide</p>	
 <p>Lightning Strike</p>	
 <p>Pandemic/ Infectious Disease</p>	
 <p>Radon Exposure</p>	
 <p>Subsidence</p>	
 <p>Tornado/ Wind</p>	
 <p>Wildfire</p>	

What hazards would have the largest consequence on your agency or organization?

 <p>Winter Storm</p>	
<b>Human-Made Hazards</b>	
 <p>Building Collapse</p>	
 <p>Civil Disturbance</p>	
 <p>Cyber-Terrorism</p>	
 <p>Dam Failure</p>	
 <p>Food/Feed Contamin.</p>	
 <p>Levee Failure</p>	
 <p>Nuclear Incidents</p>	

What hazards would have the largest consequence on your agency or organization?	
 <p>Opioid Addiction</p>	
 <p>Terrorism</p>	
 <p>Transport. Accidents</p>	
 <p>Urban Fire /Explosion</p>	
 <p>Utility Interruption</p>	
<b>Environmental Hazards</b>	
 <p>Coal Mining</p>	
 <p>Conventional Oil/Gas Wells</p>	
 <p>Gas/Liquid Pipelines</p>	

What hazards would have the largest consequence on your agency or organization?

 <p>Hazardous Materials</p>	
 <p>Unconvent'l Wells</p>	



# Hazard Risk Form

Agency/Organization: \_\_\_\_\_

Name \_\_\_\_\_

Risk Assessment Category	Level	Degree of Risk Criteria	Index	Weight Value
<b>PROBABILITY</b> What is the likelihood of a hazard event occurring in a given year?	UNLIKELY	Less than 1% annual probability	1	30%
	POSSIBLE	Between 1 & 10% annual probability	2	
	LIKELY	Between 10 & 100% annual probability	3	
	HIGHLY LIKELY	100% annual probability	4	
<b>IMPACT</b> In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?	MINOR	Very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	1	30%
	LIMITED	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	
	CRITICAL	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than two weeks.	3	
	CATASTROPHIC	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4	
<b>SPATIAL EXTENT</b> How large of an area could be impacted by a hazard event? Are impacts localized or regional?	NEGLIGIBLE	Less than 10% of area affected	1	20%
	SMALL	Between 10% & 25% of area affected	2	
	MODERATE	Between 25% & 50% of area affected	3	
	LARGE	More than 50% of area affected	4	
<b>WARNING TIME</b> Is there usually some lead time associated with the hazard event? Have warning measures been implemented?	MORE THAN 24 HRS	Self-defined	1	10%
	12 TO 24 HRS	Self-defined	2	
	6 TO 12 HRS	Self-defined	3	
	LESS THAN 6 HRS	Self-defined	4	
<b>DURATION</b> This category may be defined as "boots on the ground," or the time period of response to a hazard, or event.	LESS THAN 6 HRS	Self-defined	1	10%
	LESS THAN 24 HRS	Self-defined	2	
	LESS THAN 1 WEEK	Self-defined	3	
	MORE THAN 1 WEEK	Self-defined	4	





According to the default weighting scheme applied, the highest possible RF value is 4.0. Due to the inherent errors possible in any disaster risk assessment, the results of the risk assessment should only be used for planning purposes and in developing projects to mitigate potential losses. A strong analysis includes both quantitative and qualitative methodologies. For instance, geographic information systems (GIS)-based analysis and local knowledge are both important inputs to identifying vulnerabilities. As part of this hazard vulnerability analysis, the following steps should be considered:

- ✓ Inventory and summarize vulnerable assets
- ✓ Characterize repetitive flood loss properties
- ✓ Estimate loss
- ✓ Develop risk factor for each profiled hazard
- ✓ Describe asset vulnerability to future development

	Natural Hazards	Probability	Impact	Spatial Extent	Warning Time	Duration	Risk Factor Rating
1	Coastal Erosion						
2	Drought						
3	Earthquake						
4	Extreme Temperatures						
5	Flood, Flash Flood, Ice Jam						
6	Hailstorm						
7	Hurricane, Tropical Storm, Nor'easter						
8	Invasive Species						
9	Landslide						
10	Lightning Strike						
11	Pandemic and Infectious Disease						
12	Radon Exposure						
13	Subsidence, Sinkhole						
14	Tornado, Windstorm						
15	Wildfire						
16	Winter Storm						



	Human-Made Hazards	Probability	Impact	Spatial Extent	Warning Time	Duration	Risk Factor Rating
1	Building and Structure Collapse						
2	Civil Disturbance						
3	Cyber-Terrorism						
4	Dam Failure						
5	Food/Feed Contamination						
6	Levee Failure						
7	Nuclear Incidents						
8	Opioids						
9	Terrorism						
10	Transportation Incidents						
11	Urban Fire/Explosion						
12	Utility Interruption						

	Environmental Hazards	Probability	Impact	Spatial Extent	Warning Time	Duration	Risk Factor Rating
1	Coal Mining						
2	Conventional Oil and Gas Wells						
3	Gas and Liquid Pipeline						
4	Hazardous Materials Release						
5	Unconventional Wells						



Agency/Organization: \_\_\_\_\_

Name \_\_\_\_\_

This form includes an evaluation of any changes to the hazards that were profiled in the 2018 State Hazard Mitigation Plan. Fill out the form to provide an evaluation of the change in hazards by identifying if the risk of hazard has increased, decreased, or remained the same in Pennsylvania.

	Natural Hazards	Increase/ Decrease/ No Change	Notes
1	Coastal Erosion		
2	Drought		
3	Earthquake		
4	Extreme Temperatures		
5	Flood, Flash Flood, Ice Jam		
6	Hailstorm		
7	Hurricane, Tropical Storm, Nor'easter		
8	Invasive Species		
9	Landslide		
10	Lightning Strike		
11	Pandemic and Infectious Disease		
12	Radon Exposure		
13	Subsidence, Sinkhole		
14	Tornado, Windstorm		
15	Wildfire		
16	Winter Storm		



	Human-Made Hazards	Increase/ Decrease/ No Change	Notes
1	Building and Structure Collapse		
2	Civil Disturbance		
3	Cyber-Terrorism		
4	Dam Failure		
5	Food/Feed Contamination		
6	Levee Failure		
7	Nuclear Incidents		
8	Opioids		
9	Terrorism		
10	Transportation Incidents		
11	Urban Fire/Explosion		
12	Utility Interruption		

	Environmental Hazards	Increase/ Decrease/ No Change	Notes
1	Coal Mining		
2	Conventional Oil and Gas Wells		
3	Gas and Liquid Pipeline		
4	Hazardous Materials Release		
5	Unconventional Wells		



## Planning Mechanisms Addressed in 2018 State HMP for Review

Please review the following table that contains the capabilities from the 2018 plan to improve the capability assessment in the State Hazard Mitigation Plan. Note items that have been updated or changed or new plans or programs to address in plan.

Summary of local, state, and federal capabilities addressed in 2018 HMP			
Capability	Lead Agency/Agencies	Date of Approval	Notes
Act 537 Sewage Facilities-Planning Authorizations	DEP	24-Jan-66	
CDBG Disaster Recovery Assistance	DCED	Continuous	
Commonwealth Critical Infrastructure Protection Program	Governor's Office of Homeland Security	2009	
Comprehensive Land Use Plans	Counties, Municipalities, Regions	Varies	
Comprehensive Plan for the Water Resources of the Susquehanna River Basin	Susquehanna River Basin Commission (SRBC)	June 2021	
Delaware River Basin Baseline Monitoring and Characterization	DRBC	May 2010	
Delaware River Basin Interstate Flood Mitigation Task Force	DRBC	July 2007	
Disaster-Resistant Universities	FEMA	August 2003	

Summary of local, state, and federal capabilities addressed in 2018 HMP			
Capability	Lead Agency/Agencies	Date of Approval	Notes
Federal Energy Regulatory Commission (FERC) Dam Plans	FERC	Various	
Firewise	DCNR BOF	Ongoing	
Flood Protection Program	DEP	Ongoing	
Floodplain Land Use Assistance Program	DCED	Ongoing	
Floodplain Management Services Program, Section 22 Program, Civil Works Program	USACE	Ongoing	
Hazard Mitigation Assistance Program	FEMA	Ongoing	
Heat Wave Plan	PEMA	2008	
Keystone Principles and Criteria for Growth, Investment, and Resource Conservation	Interagency Effort	Ongoing	
Land Use Planning and Technical Assistance Program	DCED	Ongoing	
Levees and the National Flood Insurance Program: Improving Policies and Practices	National Research Council of the National Academy of Sciences	March 2013	
Local Hazard Mitigation Planning	County Officers	Various	

Summary of local, state, and federal capabilities addressed in 2018 HMP			
Capability	Lead Agency/Agencies	Date of Approval	Notes
National Flood Insurance Program/Proof of Loss/Claims Filed	FEMA	2012	
NFIP and State Floodplain Management Program	DCED	Ongoing	
Nuclear/Radiological Plan	DEP, PEMA	2008	
Pennsylvania Chapter 106 – Floodplain Management	PA DEP & FEMA	September 1996	
Pennsylvania Climate Change Act (Act 70)	PA DEP	2008	
Pennsylvania Climate Change Action Plan	PA DEP	September 2021	
Coastal Zone Enhancement Grants Program Assessment and Strategy	PA DEP	June 2021	
Pennsylvania Dam Safety Program	DEP	Ongoing	
Pennsylvania Drought Management Plan	PEMA & PA DEP	March 2012	
Pennsylvania Energy Harvest Program	Pennsylvania Office of Energy and Technology	2003	
Pennsylvania Greenways Initiative	DCNR	2001-2012 (Varies by county)	
Pennsylvania Invasive Species Management Plan	Governor's Council on Invasive Species; PA DCNR	2016	
Pennsylvania Active Transportation Plan	PennDOT	2019	

Summary of local, state, and federal capabilities addressed in 2018 HMP			
Capability	Lead Agency/Agencies	Date of Approval	Notes
Pennsylvania Pandemic Influenza Outbreak Plan	Department of Health (DOH)	2010	
Pennsylvania Radon Mitigation Standards	DEP	November 1997	
Pennsylvania State Plan on Aging	PA Department of Aging	October 1, 2020	
Pennsylvania's Management of State Homeland Security Program	Governor's Office of Homeland Security	September 2012	
Pennsylvania's Statewide Historic Preservation Plan 2018-2023	Pennsylvania Historical & Museum Commission, Bureau of Historic Preservation	2018	
Philadelphia Heat Island Initiative	City of Philadelphia, EPA, The Energy Coordinating Agency (ECA) of Philadelphia, and Public Health Department	Varies	
Silver Jackets	USACE	July 2011	
SRBC Water Resources Program	SRBC	Fiscal Years 2021-2024	
State Emergency Operations Plan	PEMA	September 2021	
Pennsylvania Statewide Comprehensive Outdoor Recreation Plan	DCNR	2020	
State Water Plan	DEP	March 2009	



Summary of local, state, and federal capabilities addressed in 2018 HMP			
Capability	Lead Agency/Agencies	Date of Approval	Notes
Stream gauging in Pennsylvania	USGS Pennsylvania Water Science Center (PaWSC)	1894 (beginning of stream gauging program in U.S.)	
Threat and Hazard Identification and Risk Assessment	FEMA	2019	
Uniform Construction Code	Local governments or PA Department of Labor and Industry (if local governments opt out)	2017	
USACE Dam Safety Program	USACE	Various	
USACE Levee Safety Program	USACE	Various	
Winter Services Strategic Plan (WSSP)	PennDOT	2021	
<b>Insert new planning mechanisms below</b>			





# Goals and Objectives Review Form

As part of the State Hazard Mitigation Plan update, the Planning Team must review and evaluate the existing Mitigation Goals and Objectives. Use the comment boxes to suggest modifications/revisions to any of the proposed goals or objectives, or to provide feedback on progress. You may also suggest new objectives in the blank rows provided in the table below.

<b>Agency/Organization:</b>	
<b>Name:</b>	

Goals and Objectives	Comments
<b>Goal 1: Protect lives, property, environmental quality, and resources of the Commonwealth, including high-risk properties.</b>	
<b>Objective 1-1:</b> By 2021, reduce flood-related losses (with an emphasis on reducing NFIP identified repetitive loss and severe repetitive loss properties by 5%) through promotion of the Commonwealth’s flood protection program through local, county, state, and federal partners.	
<b>Objective 1-2:</b> Increase by 5% the number of projects implemented by the Commonwealth that will mitigate the most vulnerable structures against hazards by 2023.	
<b>Objective 1-3:</b> Identify and work toward implementation of five feasible and cost-effective projects related to the mitigation of critical buildings, state facilities, and infrastructure.	
<b>Objective 1-4:</b> Identify projects related to advanced warning within the Commonwealth by 2023.	
<b>Objective 1-5:</b> Minimize risk to communities posed by levee structures by increasing participation with Federal standards developed by the Federal Emergency Management Agency and the United States Army Corps of Engineers, focusing on planning and certification if feasible.	

## 2023 State Hazard Mitigation Plan Update

Goals and Objectives	Comments
<b>Objective 1-6:</b> Continue to provide outreach and training opportunities for local building code enforcers throughout the Commonwealth.	
<b>Objective 1-7:</b> Increase coordination, prioritization, and funding availability to address community needs for dam hazards.	
<b>Objective 1-8:</b> Encourage aggressive enforcement of floodplain and storm water management ordinances and other all-hazards regulations within the Commonwealth to reduce losses in high risk areas.	
<b>Objective 1-9:</b> Promote increased implementation of urban-wild land interface (wildfire) mitigation projects by local communities by 2023.	
<b>Objective 1-10:</b> Enhance Commonwealth efforts to address mine/quarry related hazards by increasing inter-agency cooperation.	
<b>Objective 1-11:</b> Support the Department of Environmental Protection in addressing hazards associated with shale gas formation extraction and distribution.	
<b>Objective 1-12:</b> Ensure reports and databases are updated annually to reflect Repetitive Loss and Severe Repetitive Loss mitigation.	
<b>Objective 1-13:</b> Promote Natural Systems Protection mitigation in the Commonwealth between 2019 and 2023.	
<b>Objective 1-14:</b> Encourage measures to protect Pennsylvanian's from cyber-terrorism attacks.	
<b>Objective 1-15:</b> Increase the capacity and effectiveness of Commonwealth NFIP management.	
<i>New:</i>	
<i>New:</i>	
<b>Goal 2: Enhance consistent coordination, collaboration, and communications among stakeholders.</b>	
<b>Objective 2-1:</b> Promote development of COOP and COG plans for critical infrastructure within the Commonwealth, focusing on water treatment, water supply, and critical goods and services suppliers.	
<b>Objective 2-2:</b> Promote integration of mitigation goals, objectives, and actions where appropriate in other federal, state and local planning initiatives by 2023.	

## 2023 State Hazard Mitigation Plan Update

Goals and Objectives	Comments
<b>Objective 2-3:</b> Support the collection, update, and dissemination of datasets useful for hazard mitigation planning and implementation.	
<b>Objective 2-4:</b> Identify local Hazard Mitigation Officers and increase participation by local community representatives in the Commonwealth's Mitigation Planning Team by 50% between 2019 and 2023.	
<b>Objective 2-5:</b> Continue to support coordination between mitigation, planning, preparedness, and response personnel throughout the Commonwealth to ensure effectiveness in all-hazard mitigation planning.	
<b>Objective 2-6:</b> Support recovery and resiliency planning across the Commonwealth.	
<i>New:</i>	
<i>New:</i>	
<b>Goal 3: Provide a framework for active hazard mitigation planning and implementation.</b>	
<b>Objective 3-1:</b> Identify opportunities for regional organizations, businesses, and academia to be engaged in hazard mitigation planning.	
<b>Objective 3-2:</b> Enable the Pennsylvania Emergency Management Agency to encourage each participating jurisdiction to secure funding and initiate one mitigation action by 2023.	
<i>New:</i>	
<i>New:</i>	
<b>Goal 4: Build legislative and other organizational support and leverage funding for mitigation efforts.</b>	
<b>Objective 4-1:</b> Provide opportunities for Pennsylvania Emergency Management Agency and County Emergency Management Agencies	

## 2023 State Hazard Mitigation Plan Update

Goals and Objectives	Comments
to educate State, county and local government officials, and legislators about hazard risk and mitigation by 2023.	
<b>Objective 4-2:</b> Expand working relationships with at least two volunteer and professional organizations to improve mitigation efforts within the Commonwealth.	
<b>Objective 4-3:</b> Identify statutory, regulatory, or other barriers to completing mitigation efforts within the Commonwealth, and leverage support against these barriers to implement mitigation actions by 2023.	
<b>Objective 4-4:</b> Encourage the use of state funding for hazard mitigation for projects and plans.	
<i>New:</i>	
<i>New:</i>	
<b>Goal 5: Increase awareness, understanding, and preparedness across all sectors.</b>	
<b>Objective 5-1:</b> Support all-hazards mitigation and preparedness programs to educate private and public stakeholders, academia, government employees and elected officials on the hazards pertinent to the Commonwealth.	
<b>Objective 5-2:</b> Prioritize outreach efforts that will result in a 10% increase in RL and SRL related grant applications between 2019 and 2023.	
<i>New:</i>	
<i>New:</i>	