

**2018 State Hazard Mitigation Plan Update  
State Planning Team  
Draft Plan Review Meeting**

PEMA Headquarters

May 23, 2018

9:00 AM to 12:00 PM

- 1. Welcome and Introductions**
  
- 2. Review of Draft SHMP by Section**
  - Introduction and State Profile
  - Planning Process
  - Risk Assessment
  - ***ACTIVITY: Risk Factor Review***
  - Capability Assessment
  - Mitigation Strategy
  - ***ACTIVITY: Mitigation Action Prioritization Review***
  - Plan Maintenance and Plan Adoption
  
- 3. Next Steps**
  
- 4. Wrap-up and Adjourn**

**Visit the project website at:**

[www.pahmp.com](http://www.pahmp.com)

**Please review and comment on the plan by May 25, 2018!**

Risk Factor Comment Form

The first table shows the criteria that go into the risk factor analysis and the second table shows the risk factor rankings for the 2018 SHMP.

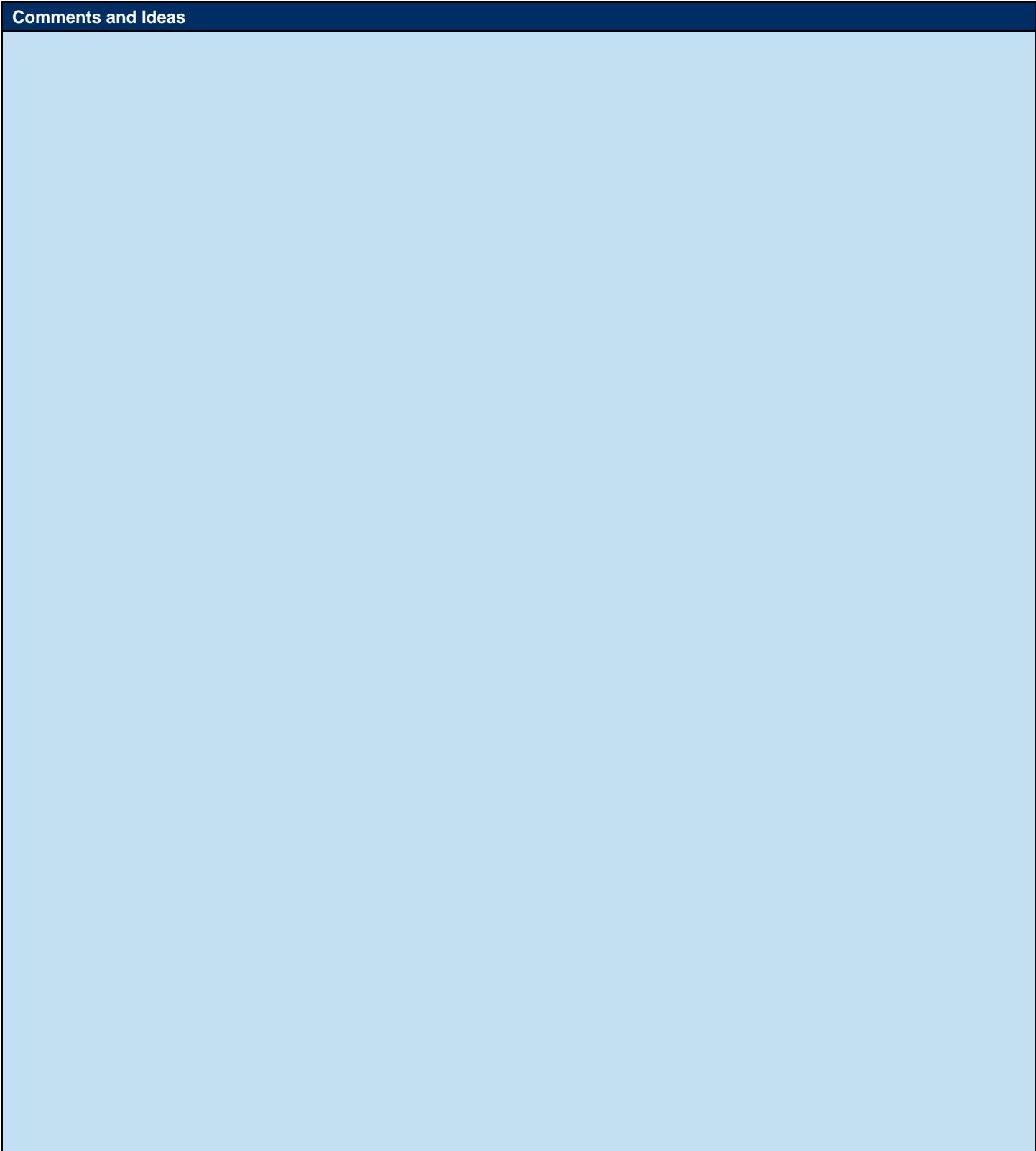
Summary of Risk Factor approach used to rank hazard risk.				
RISK ASSESSMENT CATEGORY	DEGREE OF RISK			WEIGHT VALUE
	LEVEL	CRITERIA	INDEX	
<b>PROBABILITY</b> <i>What is the likelihood of a hazard event occurring in a given year?</i>	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 49.9% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 50 & 90% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY	4	
<b>IMPACT</b> <i>In terms of injuries, damage, death, and economic impact, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?</i>	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 ONE WEEK.	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> <i>How large of an area could be impacted by a hazard event? Are impacts localized or regional?</i>	NEGLIGIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
<b>WARNING TIME</b> <i>Is there usually some lead time associated with the hazard event? Have warning measures been implemented?</i>	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> <i>How long does the hazard event usually last?</i>	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	

Risk Factor Comment Form

Ranking results by hazard for Pennsylvania using the Risk Factor methodology.							
HAZARD NATURAL(N) OR MAN- MADE(M)	RISK ASSESSMENT CATEGORY					RISK FACTOR (RF)	COMMENT
	PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
Flood, Flash Flood, Ice Jam (N)	4	3	3	4	3	3.4	
Winter Storm (N)	4	2	4	2	3	3.1	
Utility Interruption (M)	4	2	2	4	2	2.8	
Hurricane, Tropical Storm, Nor'easter (N)	2	3	3	1	4	2.6	
Cyber-terrorism (M)	2	3	2	4	2	2.5	
EH - Hazardous Materials Release (M)	4	2	1	3	2	2.5	
Dam Failure (M)	1	3	2	4	4	2.4	
Nuclear Incident (M)	1	3	2	4	4	2.4	
Transportation Accident (M)	4	1	2	4	1	2.4	
Wildfire (N)	4	1	2	3	2	2.4	
Extreme Temperature (N)	4	1	2	1	3	2.3	
Coastal Erosion (N)	4	1	1	1	4	2.2	
EH - Coal Mining (M)	2	2	2	3	3	2.2	
EH - Gas and Liquid Pipelines (M)	2	2	2	3	3	2.2	
EH - Unconventional Oil and Gas Wells (M)	2	2	2	3	3	2.2	
EH - Conventional Oil and Gas Wells (M)	2	2	2	3	3	2.2	
Landslide (N)	4	1	1	4	1	2.2	
Lightning Strike (N)	4	1	1	4	1	2.2	
Opioid Addiction Response (M)	3	2	1	4	1	2.2	
Tornado, Wind Storm (N)	3	2	1	4	1	2.2	
Invasive Species (N)	2	2	2	1	4	2.1	
Radon Exposure (N)	3	1	2	1	4	2.1	
Civil Disturbance (M)	3	1	1	4	2	2	
Drought (N)	2	1	3	1	4	2	
Pandemic (N)	2	1	3	1	4	2	
Terrorism (M)	1	3	1	4	2	2	
Building and Structure Collapse (M)	3	1	1	1	4	1.9	
Earthquake (N)	2	2	1	4	1	1.9	
Hailstorm (N)	3	1	1	4	1	1.9	
Urban Fire and Explosion (M)	2	2	1	4	1	1.9	
Levee Failure (M)	1	2	1	3	3	1.7	
Mass Food/Animal Feed Contamination (M)	1	2	2	2	2	1.7	
Subsidence, Sinkhole (N)	3	1	1	2	1	1.7	

## Risk Factor Comment Form

Comments and Ideas



### Mitigation Action Prioritization Comment Form

Multi-Objective Mitigation Action Prioritization Criteria was reviewed and agreed to in the 2013 update. In the last plan both the old PA STEELE technique and new SPT methodology were used. The 2018 update uses just the Multi-Objective Mitigation Action Prioritization Criteria. Please comment on rankings in blue column or comment box at the end. The criteria and ranking follow:

Multi-Objective Mitigation Action Prioritization Criteria		
MITIGATION ACTION RANKING CRITERIA	CRITERIA DESCRIPTION	WEIGHT VALUE
Effectiveness	The extent to which an action reduces the vulnerability of people and property.	20%
Efficiency	The extent to which time, effort, and cost is well used as a means of reducing vulnerability.	30%
Multi-Hazard Mitigation	The action reduces vulnerability for more than one hazard.	20%
Addresses High Risk Hazard	The action reduces vulnerability for people and property from a hazard(s) identified as high risk.	15%
Addresses Critical Communications/ Critical Facilities	The action pertains to the maintenance of critical functions and structures such as transportation, supply chain management, data circuits, etc.	15%

Scores of 0, 1, 2, or 3 were assigned for each multi-objective mitigation action prioritization criterion where 0 does not meet the criteria and 3 overwhelmingly meets the criteria. Actions were then prioritized using the cumulative score assigned to each. Each mitigation action was given a priority ranking (Low, Medium, and High) based on the following scale:

- High Priority: 2.5 – 3
- Medium Priority: 1.9 – 2.4
- Low Priority: 0 – 1.8

Multi-Objective Mitigation Action Ranking Criteria							
MITIGATION ACTIONS	CRITERIA					PRIORITY	COMMENT
	EFFECTIVE-NESS	EFFICIENCY	MULTI-HAZARD MITIGATION	HIGH RISK HAZARD	ADDRESSES CRITICAL COMM./ CI		
Action 1-1a. Support the maintenance of existing flood protection projects and construction.	2	2	1	3	1	1.8	
Action 1-1b. Participate in discussions about potential solutions/policy changes regarding farm land flooding due to stream impediments.	2	2	2	3	2	2.15	

**2018 State Hazard Mitigation Plan Update**

<b>Multi-Objective Mitigation Action Ranking Criteria</b>							
<b>MITIGATION ACTIONS</b>	<b>CRITERIA</b>					<b>PRIORITY</b>	<b>COMMENT</b>
	<b>EFFECTIVE-NESS</b>	<b>EFFICIENCY</b>	<b>MULTI-HAZARD MITIGATION</b>	<b>HIGH RISK HAZARD</b>	<b>ADDRESSES CRITICAL COMM./ CI</b>		
Action 1-1c. Target SRL and RL properties for mitigation (including demolition, acquisition, and elevation) during annual HMA project review and prioritization process.	3	3	2	3	2	<b>2.65</b>	
Action 1-2a. Maximize use of FEMA HMA grant and other programs to support all-hazard mitigation as well as acquisition/ demolition, elevation, and relocation of flood-prone residences along with flood-proofing of non-residential structures.	3	3	2	3	2	<b>2.65</b>	
Action 1-2b. Increase FEMA HMGP Section 404 funding and identify Public Assistance Program Section 406 projects.	3	3	3	0	2	<b>2.4</b>	
Action 1-2c. Mitigate buildings and structures, including historic structures, at risk from the impacts of natural and human-made hazards.	3	3	3	0	3	<b>2.55</b>	
Action 1-3a. Define critical infrastructure/key resources (CI/KR) in terms of mitigation.	2	2	3	0	3	<b>2.05</b>	
Action 1-3b. Establish and sustain a business, industry and infrastructure subcommittee to advance the identification of CI/KR and interdependencies of CI/KR providing essential services.	2	2	3	0	3	<b>2.05</b>	
Action 1-3c. Leverage support of the nine Regional Task Forces to support critical infrastructure mitigation.	1	2	3	0	3	<b>1.85</b>	

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	EFFECTIVE-NESS	EFFICIENCY	MULTI-HAZARD MITIGATION	HIGH RISK HAZARD	ADDRESSES CRITICAL COMM./ CI		
Action 1-3d. Identify insurable state-owned flood-prone buildings and appropriate mitigation methods if located in the special flood hazard area (SFHA).	2	2	2	3	2	2.15	
Action 1-3e. Evaluate state-owned structures for mitigation options for non-flood related high-priority hazards.	2	2	3	3	2	2.35	
Action 1-3f. Provide emergency electrical backup generation to key state, county, and municipal critical infrastructure.	2	3	3	3	3	2.8	
Action 1-3g. Add internet interruption to the list of reportable incidents in Knowledge Center.	1	2	2	3	3	2.1	
Action 1-4a. Support the sustainment and enhancement of Commonwealth fusion centers.	1	2	3	3	3	2.3	
Action 1-4b. Promote reverse notification systems in high-hazard areas.	2	2	3	3	2	2.35	
Action 1-4c. Increase participation in PA Alert.	2	2	3	0	2	1.9	
Action 1-4d. Establish Water Monitoring Council Action to improve stream gauge coordination in Commonwealth.	2	2	2	3	2	2.15	
Action 1-4e. Complete flood inundation mapping for high risk and high population centers.	2	2	1	3	2	1.95	
Action 1-5a. Re-examine impacts of federal levee guidance and identify necessary actions.	2	2	2	3	2	2.15	

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Action 1-5b. Support non-state and non-federal levee owners, identified in the National Levee Inventory, with information on compliance with the National Levee Safety Program and appropriate funding streams.	2	1	2	3	2	1.85	
Action 1-5c. Update emergency action plan guidelines for flood protection projects to assist project sponsors with developing project specific EAPs including inundation maps.	2	2	2	3	2	2.15	
Action 1-5d. Identify and work with local sponsors of state levee systems, given an unacceptable or minimally acceptable rating, to bring them back up to acceptable rating.	2	2	2	3	2	2.15	
Action 1-5e. Encourage local, state, and federal levee system sponsors to develop Emergency Action Plans.	2	2	2	3	2	2.15	
Action 1-6a. Continue to conduct statewide training for construction code officials.	2	3	3	0	2	2.2	
Action 1-6b. Provide briefings for code association and county officials on damage assessment expectations following a disaster.	2	3	3	0	2	2.2	
Action 1-6c. Invite the PA Association of Building Code Officials, PA Association of Code Officials, and Council of Government organizations (COG) to outreach meetings related to building resiliency and mitigation of structures.	2	2	3	0	2	1.9	



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Action 1-7a. Build on DEP's initiative to require dam owners to complete a dam break analysis and map inundation areas for dams of high hazard potential.	3	3	2	3	2	2.65	
Action 1-7b. Identify and implement mitigation actions based on Silver Jacket meeting results.	2	2	2	3	2	2.15	
Action 1-7c. Evaluate and enforce appropriate remediation of dams.	3	2	2	3	2	2.35	
Action 1-7d. Ensure that all high hazard dams have an Emergency Action Plan, as required.	3	3	2	3	2	2.65	
Action 1-8a. Continue to track floodplain management ordinance information including adopted building code(s), other relevant ordinance(s), code(s), regulation(s), etc., and the incorporation of any more restrictive requirements.	2	2	3	3	2	2.35	
Action 1-8b. Conduct effective outreach with municipalities to explain value of floodplain ordinances and adopting more restrictive requirements.	2	2	3	3	2	2.35	
Action 1-8c. Explore the possibility of providing legal support for floodplain management ordinance enforcement to municipalities.	1	1	3	3	1	1.7	
Action 1-9a. Conduct formal statewide community risk assessment using Risk Assessment Mitigation Strategies database.	2	2	1	0	2	1.5	
Action 1-9b. Work with FIREWISE communities to complete grant applications for outreach and fuels reduction projects.	2	2	1	0	2	1.5	

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Action 1-10a. Support effort to complete subsidence mapping in the Commonwealth.	2	3	1	0	2	1.8	
Action 1-11a. Identify mitigation options for identified impacts and consequences associated with shale gas formation extraction and distribution.	2	3	1	0	2	1.8	
Action 1-11b. Encourage attendance at training courses that enable counties and local governments to mitigate the negative impacts of shale gas formation extraction and distribution.	2	3	2	0	2	2	
Action 1-11c: Support the development of a Hazmat and Pipeline Training facility in Pennsylvania in collaboration with a college or university.	3	3	1	0	3	2.15	
Action 1-11d: Promote awareness of new pipeline safety guidelines enacted as part of passage of PA Act 50 of 2017.	3	3	2	0	3	2.35	
Action 1-12a. Report the successes of flood-related projects in the annual SSAHMP update and provide a summary in the triennial plan update. Draft annual report by October 15th and finalize for submittal to FEMA no later than October 31st of the report year.	2	3	1	3	2	2.25	
Action 1-12b. Annually review the progress of SRL and RL property mitigation to ensure accuracy of BureauNet. Submit BureauNet updates as needed, particularly for location and mitigation status.	2	3	1	3	2	2.25	

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Action 1-13a. Identify cooperative funding opportunities for natural system protection projects.	2	2	2	3	2	2.15	
Action 1-14a. Take steps to protect Pennsylvania's communities from cyber security attacks.	3	3	1	3	3	2.6	
Action 1-14b. Work with industry and government to improve the cyber security position of control systems within critical infrastructure.	3	3	1	3	3	2.6	
Action 2-1a. Identify and prioritize critical government facilities and infrastructure that require back-up systems.	2	2	3	3	3	2.5	
Action 2-1b. Conduct outreach to privately-owned businesses and infrastructure that provide critical services in post-disaster situations to encourage them to develop COOP or Business Recovery Plans.	2	2	3	2	3	2.35	
Action 2-2a. Integrate local (county level) risk assessment data into the State Plan updates and vice versa to ensure consistency between state and local plans with respect to the best available data.	2	2	3	0	2	1.9	
Action 2-2b. Support Silver Jackets work to identify current policies, plans, regulations, and laws that should include mitigation.	2	2	3	0	2	1.9	
Action 2-2c. Identify highest priority action items for counties that do not currently have a highest priority mitigation action identified in Section 6.3.2.	2	2	3	0	1	1.75	
Action 2-3a. Develop a comprehensive list of types of hazard mitigation data that decision-makers might need by December 2020.	2	2	3	0	2	1.9	

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Action 2-3b. Represent the interests of hazard mitigation on the Pennsylvania State Geospatial Coordinating Board (GeoBoard).	2	2	3	0	2	<b>1.9</b>	
Action 2-3c. Re-evaluate state GIS database to ensure datasets include hazard mitigation, planning, and critical asset identification to enable the prioritization of mitigation projects.	2	3	3	0	3	<b>2.35</b>	
Action 2-3d. Continue to use and improve GIS capability to prioritize hazard/critical infrastructure for mitigation.	2	3	3	0	3	<b>2.35</b>	
Action 2-3e. Acquire remotely sensed data, specifically, ortho-photography, as specified in the Commonwealth's Geospatial Strategic Plan.	2	3	3	0	3	<b>2.35</b>	
Action 2-3f. Improve electronic data sharing between municipalities, counties, PA SHPO and PEMA to ensure statewide data remains current on historic properties and may be used for risk analysis.	2	2	3	0	2	<b>1.9</b>	
Action 2-3g. Designate/develop a reporting mechanism and process that allows local data to be tracked and reported regarding costs and resources associated with the opioid epidemic in order to better understand, quantify and respond to impacts.	2	3	1	0	3	<b>1.95</b>	
Action 2-4a. Maintain planning, emergency management, and GIS/data management contacts lists and expand contacts to include conservation districts.	2	3	3	0	1	<b>2.05</b>	

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Action 2-4b. Bring county leads and planning champions together for regular meetings, knowledge exchanges, and trainings.	2	3	3	0	1	2.05	
Action 2-4c. Involve appropriate county mitigation plan team members in hazard mitigation implementation activities.	3	3	3	2	2	2.7	
Action 2-4d. Meet regularly to implement projects that tie-in goals and initiatives of multiple State Planning Team member agencies.	3	3	3	2	2	2.7	
Action 2-4e. Develop County Hazard Mitigation Suggested Curriculum.	3	3	3	0	2	2.4	
Action 2-5a. Improve cooperation/ coordination of agencies with real time data (gauge station data, program availability, etc.).	2	3	3	0	2	2.2	
Action 2-5b. Reach out to agencies that were invited but did not participate in 2018 planning process.	2	3	3	0	1	2.05	
Action 2-5c. Identify strategic locations to deploy USACE Power Teams after a disaster.	2	3	3	0	3	2.35	
Action 2-6a. Develop County Recovery Plans following the template designed in State Disaster Recovery Plan process.	2	3	3	0	2	2.2	
Action 2-6b. Develop a Pennsylvania Resilience Strategy using the Smart Growth America model.	2	3	3	0	2	2.2	
Action 3-1a. Maintain a comprehensive list of relevant regional agencies, including Councils of Government (COGs), River Basin Commissions, and Metropolitan Planning Organizations (MPOs).	2	3	3	0	1	2.05	

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Action 3-1b. Continue to support Pennsylvania Department of Education (PDE) in its multi-hazard school planning efforts.	2	3	3	0	3	<b>2.35</b>	
Action 3-1c. Identify and encourage involvement of key business, industry, and infrastructure stakeholders and stakeholder associations in mitigation.	2	3	3	0	2	<b>2.2</b>	
Action 3-1d Work with hazard mitigation stakeholders to provide increased support to Floodplain Managers.	2	3	3	3	2	<b>2.65</b>	
Action 3-1e. Coordinate with USDA on the mass food contamination analysis phase.	2	3	1	0	3	<b>1.95</b>	
Action 3-2a. Maintain and improve Pennsylvania's Standard Operating Guide and other tools.	2	3	3	0	3	<b>2.35</b>	
Action 3-2b. Assist communities and counties in identifying funding streams to support the implementation of mitigation projects.	2	3	3	0	2	<b>2.2</b>	
Action 3-2c. Update training courses regarding planning, project tools, as well as FEMA eGrants trainings.	2	3	3	0	1	<b>2.05</b>	
Action 3-2d. Promote training and project tours for new members of hazard mitigation planning community, including personnel at universities, businesses, and regional organizations.	2	3	3	0	1	<b>2.05</b>	
Action 3-2e. Promote Hazard mitigation project tours to showcase successful flood mitigation projects.	2	3	3	3	2	<b>2.65</b>	
Action 3-2f. Explore funding for County EMAP accreditation.	2	2	3	0	1	<b>1.75</b>	

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Action 4-1a. Facilitate tours for local, county, and state legislative officials focusing on mitigation projects or areas where mitigation efforts are needed.	2	3	3	0	2	2.2	
Action 4-1b. Develop and disseminate relevant information on hazard mitigation programs.	3	3	3	1	2	2.55	
Action 4-1c. Document and share in-state success stories and best practices.	3	3	3	1	2	2.55	
Action 4-1d. Collect more detailed building information for mitigation projects to improve "Losses Avoided" analysis in SHMP.	3	3	3	3		2.55	
Action 4-1e. Press for Act 166 and 167 funding to be allocated.	2	3	1	3	1	2.1	
Action 4-1f. Provide legislator webinar to explain disaster declaration and hazard mitigation funding process.	2	2	3	3	1	2.2	
Action 4-2a. Expand working relationship with professional organizations including: NEMA, IAEM, ASFPM, KEMA, League of Cities, and Code Enforcement Officers.	2	3	3	0	1	2.05	
Action 4-2b. Encourage PA-based professional organizations to be involved in the Silver Jackets Program.	2	3	3	0	2	2.2	
Action 4-2c. Promote designation as an Accredited Chapter.	2	3	1	3	1	2.1	
Action 4-2d. Develop a working relationship with private insurance and financial sector companies.	2	3	3	0	1	2.05	
Action 4-2e. Outreach to utilities to develop ideas to mitigate utility damage outside of easements or rights of way.	2	3	2	3	3	2.6	

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Action 4-3a. Identify statutory, regulatory or other barriers that currently exist with respect to mitigation efforts and build consensus and plan integration with partners and decision makers.	2	3	3	0	2	<b>2.2</b>	
Action 4-3b. Assist county and regional planning organizations to integrate preservation priorities into plans for economic growth, revitalization, natural resource, hazard mitigation and emergency management planning.	2	3	3	0	1	<b>2.05</b>	
Action 4-3c. Encourage counties and local municipalities to develop land bank authorities for the purpose of converting vacant or tax-delinquent properties at risk from the impacts of natural and human-made hazards into productive use.	2	3	2	0	2	<b>2</b>	
Action 4-4a. Support new state-funded flood protection and prevention projects.	3	3	1	3	1	<b>2.3</b>	
Action 4-4b Provide non-federal match to project sponsors for FEMA Hazard Mitigation Assistance, NRCS, USACE and other federal funding sources.	2	2	1	3	1	<b>1.8</b>	
Action 4-4c. Consider tax incentives and bonds for mitigation.	2	2	3	0	1	<b>1.75</b>	
Action 4-2d. Identify funding for sinkhole mitigation.	3	3	1	0	2	<b>2</b>	
Action 5-1a. Develop and provide presentations on hazard mitigation programs and sponsor conference booths (exhibits).	2	3	3	0	3	<b>2.35</b>	



**2018 State Hazard Mitigation Plan Update**

<b>Multi-Objective Mitigation Action Ranking Criteria</b>							
<b>MITIGATION ACTIONS</b>	<b>CRITERIA</b>					<b>PRIORITY</b>	<b>COMMENT</b>
	<b>EFFECTIVE-NESS</b>	<b>EFFICIENCY</b>	<b>MULTI-HAZARD MITIGATION</b>	<b>HIGH RISK HAZARD</b>	<b>ADDRESSES CRITICAL COMM./ CI</b>		
Action 5-1b. Schedule workshops and outreach sessions with local jurisdictions and invite home and business owners of mitigated structures to speak and share their experience with potential applicants.	2	3	3	0	1	<b>2.05</b>	
Action 5-1c. Work with the Citizen Corps Program to educate the public on hazard mitigation and preparedness.	2	3	3	0	1	<b>2.05</b>	
Action 5-1d. Conduct a public information campaign through various media outlets.	2	3	3	0	2	<b>2.2</b>	
Action 5-1e. Collaborate with the business community to implement hazard mitigation information and strategies.	2	3	3	0	2	<b>2.2</b>	
Action 5-1f. Collaborate with non-profit, non-governmental and civic organizations to help inform their constituents about hazard mitigation.	2	3	3	0	2	<b>2.2</b>	
Action 5-1g. Collaborate with higher education institutions to incorporate hazard mitigation into relevant curricula.	2	3	3	0	2	<b>2.2</b>	
Action 5-1h. Prepare hazard mitigation information to disseminate to specific audiences (i.e. multi-lingual, special needs).	2	3	3	0	2	<b>2.2</b>	
Action 5-1i. Develop and conduct education efforts that increase residential and business owners' knowledge and awareness of mitigation grants by conducting various outreach activities.	2	3	1	3	2	<b>2.25</b>	
Action 5-1j. Work with county and municipal officials to educate property owners about grandfathering and revisions to the NFIP program.	2	3	1	3	2	<b>2.25</b>	

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<b>MITIGATION ACTIONS</b>	<b>CRITERIA</b>					<b>PRIORITY</b>	<b>COMMENT</b>
	<b>EFFECTIVE-NESS</b>	<b>EFFICIENCY</b>	<b>MULTI-HAZARD MITIGATION</b>	<b>HIGH RISK HAZARD</b>	<b>ADDRESSES CRITICAL COMM./ CI</b>		
Action 5-1k. Increase Pennsylvania participation in the CRS program through a State education strategy.	2	3	1	3	2	<b>2.25</b>	
Action 5-1l. Increase public and private awareness about cyber threats.	3	3	1	3	3	<b>2.6</b>	
Action 5-1m. Work with Pennsylvania Department of Health to increase awareness about treating and preventing opioid addiction.	2	3	1	0	3	<b>1.95</b>	
Action 5-1n. Brief emergency management officials on resources available to respond to opioid addiction in their community.	2	3	1	0	3	<b>1.95</b>	
Action 5-1o. Include recovery and resiliency planning as an outreach topic over the planning period.	2	3	3	0	1	<b>2.05</b>	
Action 5-1p. Include the impact of flooding on the agricultural sector as a training and outreach topic over the planning period.	2	3	3	3	2	<b>2.65</b>	
Action 5-1q. Increase awareness about the impacts of Climate Change.	2	3	3	0	1	<b>2.05</b>	
Action 5-2a. Increase outreach to the 110 priority communities impacted by flooding as identified by PEMA.	2	3	1	3	2	<b>2.25</b>	
Action 5-2b. Conduct one meeting annually in each region of the state targeting RL and SRL community officials who serve as HMA grant sponsors.	3	3	1	3	3	<b>2.6</b>	
Action 5-2c. Use the RL/SRL marketing and implementation program successes in PA communities as a platform for outreach efforts to other RL/SRL communities.	2	3	1	3	1	<b>2.1</b>	

Multi-Objective Mitigation Action Ranking Criteria							
MITIGATION ACTIONS	CRITERIA					PRIORITY	COMMENT
	EFFECTIVE-NESS	EFFICIENCY	MULTI-HAZARD MITIGATION	HIGH RISK HAZARD	ADDRESSES CRITICAL COMM./ CI		
Action 5-2d. Provide an update on SRL and RL mitigation strategies and accomplishments at the annual Commonwealth of Pennsylvania Emergency Management Conference.	2	3	1	3	1	2.1	
<b>Comments and Ideas</b>							