

## **Moore Township, Northampton County Annex**

### **Hazard Mitigation Plan Points-of-Contact**

#### **Primary:**

Jon Mann  
Local Emergency Management Coordinator – Acting  
2491 Community Drive, Bath, PA 18014  
610-759-9449

#### **Alternate:**

Kevin Horvath  
Keystone Consulting Engineers, Inc.  
2870 Emrick Boulevard, Bethlehem, PA 18018  
610-865-4555  
khorvath@kceinc.com

### **Municipal Profile**

Moore Township is a rural township located in the northwestern portion of Northampton County. It encompasses an area of 37.5 square miles, and has an approximate population of 9,198 (2010 Census). The township is bordered by Lehigh Township to the west, Allen Township to the southwest, East Allen Township to the south, Upper Nazareth Township to the southeast, Bushkill Township to the east, Ross Township (Monroe County) to the northwest, Eldred Township (Monroe County) to the north, and Lower Towamensing Township (Carbon County) to the northwest. Moore Township also surrounds Chapman Borough in the township's southeast region.

The Hokendauqua Creek begins in the western part of the township and flows southwest into Lehigh Township. The Monocacy Creek begins in the south-central portion of the township and flows south through Chapman Borough and parallel to PA Route 987 into East Allen Township. The Bushkill Creek begins along the northern part of the eastern border of the township and flows east into Bushkill Township.

PA Route 248 (Pheasant Drive) enters the township from Lehigh Township along the southern part of the township's western border, and travels southeast to exit the township near the midpoint of the southern border with East Allen Township. PA Route 946 (Mountain View Drive) enters the township from Lehigh Township along the northern part of the township's western border, travels southeast to the middle of the township, then travels east as Community Drive to just inside the eastern border with Bushkill Township, where it turns south and exits (as Nazareth Drive) into Bushkill Township at the southern end of the border with Bushkill Township. PA Route 987 (Monocacy Drive) enters the township near the middle of the township's southern border with East Allen Township and travels north to its termination at PA Route 946. PA Route 512 (Moorestown Road) also enters the township near the middle of the township's southern border with East Allen Township, and travels northeast, exiting the township near the middle of its eastern border with Bushkill Township.

## Municipal Participation

1. Identify municipal stakeholders to be involved in the planning process such as, floodplain administrator, public works, emergency management, engineers, planners, etc., and include their specific role in the process.

Jason Harhart, Zoning Officer  
Role: Floodplain Administration

Kevin Horvath, Engineer  
Role: Engineer

Jon Mann, Fire Chief  
Role: Fire Chief

Richard Gable, Secretary / Treasurer  
Role: Township Supervisor

2. Identify community stakeholders such as; neighborhood groups, religious groups, major employers / businesses, etc., that will be informed and / or involved in the planning process and describe how they will be involved.

Klecknersville Rangers Fire Company

3. Describe how the public **will be engaged** in the current planning process examples, newsletters, social media, etc., **and how they were engaged** since the 2013 Hazard Mitigation Plan.

Social media  
Township Newsletters

## Compliance with the National Flood Insurance Program (NFIP)

Topic	Identify source of information, if different from the one listed.	Additional Comments
<b>1. Staff Resources</b>		
Is the Community Floodplain Administrator (FPA) or NFIP Coordinator certified?	Community FPA	
Is floodplain management an auxiliary function?	Community FPA	
Provide an explanation of NFIP administration services (e.g., permit review, GGIS, education or outreach, inspections, engineering capability)	Community FPA	
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	

**Compliance with the National Flood Insurance Program (NFIP) – *continued***

Topic	Identify source of information, if different from the one listed.	Additional Comments
<b>2. Compliance History</b>		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, or community records	
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visits (CAV) or Community Assistance Contact (CAC)?		
Is a CAV or CAC scheduled or needed?		No
<b>3. Regulation</b>		
When did the community enter the NFIP?	NFIP Community Status Book	
Are the Flood Insurance Rate Maps (FIRMs) digital or paper? How are residents assisted with mapping?	Community FPA	
Do floodplain regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	
Describe the permitting process	Community FPA, State, FEMA NFIP	
<b>4. Insurance Summary</b>		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	
How many claims have been paid in the community? What is the total amount of paid claims? How many substantial damage claims have there been?	FEMA NFIP or Insurance Specialist	
How many structures are exposed to flood risk within the community?	Community FPA or GIS Analyst	
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA or FEMA Insurance Specialist	
<b>5. Community Rating System (CRS)</b>		
Does the community participate in CRS?	Community FPA, State, or FEMA NFIP	
If so, what is the community's CRS Class Ranking?	Flood Insurance Manual ( <a href="http://www.fema.gov/floodinsurancemanual.gov">http://www.fema.gov/floodinsurancemanual.gov</a> )	
What categories and activities provide CRS points and how can the Class be improved?		
Does the plan include CRS planning requirements?	Community FPA, FEMA CRS Coordinator, or ISO representative	

## Community Assets

Community assets are defined to include anything that is important to the character as well as the function of a community, and can be described in four categories, they are; people, economy, natural environment and built environment. Please identify the community assets and location under each category.

### 1. People

- Concentrations of vulnerable populations such as the elderly, physically or mentally disabled, non-English speaking, and the medically or chemically dependent.
- Types of visiting populations where large numbers of people are concentrated such as visitors for special events and students.

Soccer tournaments  
Recreation Center  
Community Days events

### 2. Economy

Major employers, primary economic sectors such as agriculture and commercial centers where losses would have a severe impact on the community.

### 3. Natural Environment

Those areas / features that can provide protective functions that reduce the magnitude of hazard events such as, wetlands or riparian areas, and other environmental features important to protect.

### 4. Built Environment

- Existing structures such as, concentrations of buildings that may be more vulnerable to hazards based on location, age, construction type and / or condition of use.
- Infrastructure systems such as water and wastewater facilities, power utilities, transportation systems, communication systems, energy pipelines and storage.

Possible construction of PennEast Gas Pipeline through Moore Township.

- High potential loss facilities such as, dams, locations that house hazardous materials, military and / or civilian defense installations.

**Community Assets – continued**

- Critical facilities such as, hospitals, medical facilities, police and fires stations, emergency operations centers, shelters, schools and airports / heliports.

Klecknersville Rangers Fire Company  
Township Municipal & Police Building

- Cultural / historical resources such as, museums, parks, stadiums, etc.

**Capability Assessment**

Capability	✓ Regulatory ✓ Tools ✓ Programs	Status			Department / Agency Responsible	Effect on Hazard Loss Reduction: -Supports -Neutral -Hinders	Change since 2013 Plan? + Positive - Negative	Has the 2013 Plan been integrated into the Regulatory Tool/Program ? If so, how?	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
		In Place	Date Adopted or Updated	Under Development						
1. Planning & Regulatory	Comprehensive Plan	X								
	Capital Improvement Plan	X								
	Economic Development Plan									
	Continuity of Operations Plan									
	Stormwater Management Plan / Ordinance	X								
	Open Space Management Plan (or Parks/Rec., Greenways Plan)	X								
	Natural Resource Protection Plan									
	Transportation Plan									
	Historic Preservation Plan			X						
	Floodplain Management Plan	X								
	Farmland Preservation	X								
	Evacuation Plan									
	Disaster Recovery Plan									

**Capability Assessment – continued**

Capability	✓ Regulatory ✓ Tools ✓ Programs	Status			Department / Agency Responsible	Effect on Hazard Loss Reduction: - Supports - Neutral - Hinders	Change since 2013 Plan? + Positive - Negative	Has the 2013 Plan been integrated into the Regulatory Tool/Program? If so, how?	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
		In Place	Date Adopted or Updated	Under Development						
1. Planning & Regulatory	Hazard Mitigation Plan	X	11/2018	X				N/A		
	Emergency Operations Plan	X	4/2020							
	Zoning Regulations	X								
	Floodplain Regulations	X								
	NFIP Participation									
	Building Code									
	Fire Code									
	Other									

Capability	✓ Staff ✓ Personnel ✓ Resources			Department / Agency	Change since 2013 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
2. Administrative & Technology	Planners (with land use / land development knowledge)	X		Planning Commission			
	Planners or engineers (with natural and / or human-caused hazards knowledge)	X					
	Engineers or professionals trained in building and / or infrastructure construction practices (including building inspectors)	X					
	Emergency Manager	X					
	Floodplain administrator / manager	X					
	Land surveyors	X					
	Staff familiar with the hazards of the community	X					
	Personnel skilled in Geographical Information Systems (GIS) and / or FEMA's HAZUS program	X					
	Grant writers or fiscal staff to handle large / complex grants						
	Other						

**Capability Assessment – continued**

Capability		Yes	No	Department / Agency	Change since 2013 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
<b>3. Financial Resources</b>	Capital improvement programming						
	Community Development Block Grants (CDBG)						
	Special purposes taxes						
	Gas / Electricity utility fees						
	Water / Sewer fees						
	Stormwater utility fees						
	Development impact fees						
	General obligation, revenue, and / or special tax bonds						
	Partnering arrangements or intergovernmental agreements						
	Other						

Capability	<ul style="list-style-type: none"> <li>✓ Program</li> <li>✓ Organization</li> </ul>	Yes	No	Department / Agency	Change since 2013 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
<b>4. Education &amp; Outreach</b>	Firewise Communities Certification						
	StormReady Certification						
	Natural disaster or safety-related school programs						
	Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education.						
	Public-private partnership initiatives addressing disaster related issues.						
	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.						
	Other						

**Capability Assessment – continued**

Capability		Degree of Capability			Change since the 2013 Hazard Mitigation Plan? If so, how?	Additional Comments
		Limited	Moderate	High		
5. Self – Assessment	Planning and Regulatory					
	Administrative and Technical					
	Financial					
	Education and Outreach					

**Known or Anticipated Future Development / Redevelopment**

Development / Property Name	Type of Development	Number of Structures	Location	Known Hazard Zone	Description / Status
None identified at this time.					

**Natural & Non-Natural Event History Specific to Moore Township**

Type of Event and Date(s)	FEMA Disaster # (if applicable)	Local Damage(s) or Loss(es)
Pennsylvania COVID-19 Pandemic – 1/2020	DR-4506-PA	Emergency Protective measures to combat COVID-19 Pandemic.
Remnants of Hurricane Ida	DR-4618-PA	Assistance to eligible individuals and families affected by this disaster.



### 2013 Municipal Action Plan Status

Existing Mitigation Action (from 2013 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
1	Replace undersized stormwater culverts – locations to be provided.	X					
2	Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation. Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.	X					
3	Purchase, or relocate structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting. Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.	X					
4	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP- related continued compliance actions identified below.	X					

**2013 Municipal Action Plan Status – continued**

Existing Mitigation Action (from 2013 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
5	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: - Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. - Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. - Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. - Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.	X					
6	Begin the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements) and sinkhole risk (e.g. carbonate bedrock standards).	X					
7	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	X					
8	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM, and pursue relevant continuing education training such as FEMA Benefit Cost Analysis.	X					
9	Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.	X					
10	Archive elevation certificates	X					
11	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	X					
12	Complete the ongoing updates of the Comprehensive Emergency Management Plans	X					

**2013 Municipal Action Plan Status – *continued***

Existing Mitigation Action (from 2013 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
13	Create/enhance/ maintain mutual aid agreements with neighboring communities for continuity of operations.	X					
14	Identify and develop agreements with entities that can provide support with FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record-keeping	X					
15	Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	X					

**Notes:**

1. Actions not carried through to the 2018 Action Plan are so noted.
2. To maintain National Flood Insurance Program (NFIP) compliance, actions related to the NFIP were carried through to the 2018 Action Plan even if identified by the municipality as completed.

**2018 Mitigation Action Plan**

Mitigation Action		Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
1	Replace undersized stormwater culverts – locations to be provided.	Structure & Infrastructure	Flood	High	High	Local budgets; FEMA mitigation grants as applicable	Township Engineering and Public Works	Long-term (depending on funding)	Existing
2	Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation. Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.	Structure & Infrastructure	Flood, Windstorm/ Tornado, Winter Storm, Earthquake	Medium-High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Long-term (depending on funding)	Existing
3	Purchase, or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting. Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.	Structure & Infrastructure	Flood	Medium-High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Long-term (depending on funding)	Existing

**2018 Mitigation Action Plan – continued**

	<b>Mitigation Action</b>	<b>Mitigation Technique Category</b>	<b>Hazard(s) Addressed</b>	<b>Priority (H / M / L)</b>	<b>Estimated Cost</b>	<b>Potential Funding</b>	<b>Lead Agency / Department</b>	<b>Implementation Schedule</b>	<b>Applies to New and / or Existing Structures</b>
<b>4</b>	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP- related continued compliance actions identified below.	Local plans & Regulations	Flood, Windstorm/ Tornado, Winter Storm	High	Low - Medium	Local Budget	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, ISO FEMA	Ongoing	New & Existing

**2018 Mitigation Action Plan – continued**

Mitigation Action	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
<p><b>5</b> Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:</p> <ul style="list-style-type: none"> <li>- Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.</li> <li>- Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.</li> <li>- Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.</li> <li>- Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.</li> </ul>	Education & Awareness	All Hazards	High	Low-Medium	Municipal Budget	Municipality with support from Planning Partners, PEMA, FEMA	Short-term	N/A

**2018 Mitigation Action Plan – continued**

Mitigation Action		Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
<b>6</b>	Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements) and sinkhole risk (e.g. carbonate bedrock standards).	Local plans & Regulations	Flood; Subsidence/ Sinkholes	High	Low	Municipal Budget	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Short-term	New & Existing
<b>7</b>	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	Local plans & Regulations	Flood, Windstorm/ Tornado, Winter Storm	Medium	Low	Municipal Budget	NFIP Floodplain Administrator with support from PA DEP, PEMA, FEMA	Short-term (year 1)	N/A
<b>8</b>	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM and/or pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	Local plans & Regulations	Flood, Windstorm/ Tornado, Winter Storm	High	Low	Municipal Budget	NFIP Floodplain Administrator	Short-term (depending on funding)	N/A
<b>9</b>	Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.	Local plans & Regulations	Flood, Windstorm/ Tornado, Winter Storm	Medium	Low	Municipal Budget	NFIP Floodplain Administrator with support from PA DEP, PEMA, FEMA	Short-term (year 1)	N/A
<b>10</b>	Obtain and archive elevation certificates for NFIP compliance.	Local plans & Regulations	Flood, Windstorm/ Tornado, Winter Storm	High	Low	Local Budget	NFIP Floodplain Administrator	Ongoing	N/A

**2018 Mitigation Action Plan – continued**

Mitigation Action		Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
11	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	All Categories	All Hazards	High	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Municipality (via mitigation planning point of contacts) with support from Planning Partners (through their Points of Contact), PEMA	Ongoing	New & Existing
12	Complete the ongoing updates of the Comprehensive Emergency Management Plans	Local plans & Regulations	All Hazards	High	Low	Local Budget	Municipality with support from PEMA	Ongoing	New & Existing
13	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.	All Categories	All Hazards	High	Low	Local Budget	Municipality with support from Surrounding municipalities and County	Ongoing	New & Existing
14	Develop and maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping.	Education & Awareness	All Hazards	Medium	Medium	Local budget	Municipality with support from County, PEMA, FEMA	Short-term	N/A
15	Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	Education & Awareness	All Hazards	Medium	Medium	Local budget, FEMA HMA grant programs	Municipality with support from County, PEMA	Short-, long-term (depending on funding)	N/A



**Notes:****Estimated Costs:**

- Where actual project costs have been reasonable estimated: Low = < \$10,000; Medium = \$10,000 to \$100,000; High = > \$100,000;
- Where actual project costs cannot reasonably be established at this time:
  - Low** = Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
  - Medium** = Could budget for under existing work plan, but would require a reappropriation of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
  - High** = Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

**Potential Funding (FEMA HMA):**

- **BRIC** = Building Resilient Infrastructure and Communities
- **FMA** = Flood Mitigation Assistance Grant Program
- **HMGP** = Hazard Mitigation Grant Program
- **HSGP** = Homeland Security Grant Program
- **EMPG** = Emergency Management Performance Grant

**Implementation Schedule:**

- **Short Term** = 1 to 5 years
- **Long Term** = 5 years or greater
- **DOF** = Depending on Funding

**Applies to New and/or Existing Structures:**

- **N/A** = Not Applicable