City of Allentown, Lehigh County Annex

Hazard Mitigation Plan Points-of-Contact

Primary:

Lee T. Laubach, Jr.
Fire Chief / Emergency Management Coordinator
641 South 10th Street, Allentown, PA 18103
610-437-7765
Lee.laubach@allentownpa.gov

Alternate:

Efrain Agosto
Fire Chief / Deputy Emergency Management Coordinator
641 South 10th Street, Allentown, PA 18103
610-437-7765
Efrain.Agosto@allentownpa.gov

Municipal Profile

With an estimated population of 118,032 (2010 Census), the City of Allentown is the third largest city in Pennsylvania, and is the county seat of Lehigh County. Located on the Lehigh River in southeastern Lehigh County, Allentown is the largest of three adjacent cities creating the urban core of the Lehigh Valley, encompassing an area of approximately 18 square miles. The City is bordered by the City of Bethlehem and Fountain Hill Borough to the east; Salisbury Township and Emmaus Borough to the south; Upper Macungie Township to the west; and South Whitehall Township, Whitehall Township, and Coplay Borough to the north.

The Jordan Creek and its tributary, the Little Lehigh Creek, join within the city limits and empty into the Lehigh River. Other bodies of water within the city limits include Lake Muhlenberg in Cedar Creek Parkway and a pond in Trexler Park.

The City is served by four major expressways, and is connected to the Interstate Highway System by Interstates 78 and 476, which run adjacent to the City, as well as the Northeast Extension of the Pennsylvania Turnpike. U.S. Route 22, the Lehigh Valley Thruway, also provides a limited access east-west highway connection to the Interstate Highway System to the northern parts of the city. There are nine major inbound roads going into Allentown, with Lehigh Street and SR 145 (MacArthur Road) being the primary north-south roadways, and SR 222 (Hamilton Boulevard) and SR 1002 (Tilghman Street) serving as main east-west corridors. Other major roadways through the City include Airport Road, Cedar Crest Boulevard, Fullerton Avenue, Mauch Chunk Road, and Union Boulevard.

Lehigh Valley International Airport is located three miles northeast of Allentown in Hanover Township, serving as the City's primary airport. Allentown is a regional center for commercial freight rail traffic, and is home to Norfolk Southern's primary hump classification yards. The city is also served by the R.J. Corman Railroad Group.

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.

William Harvey, Director – Building Standards & Safety Role:	Mark Geosits, City Engineer, Engineering Role: Bridges
Fred Andrayko, Zoning Director, Planning & Zoning Role: Floodplain Administrator	Mark Shahda, Streets Superintendent Role: Streets
Craig Messinger, Director of Public Works Role: Deputy Emergency Management Coordinator for Public Works	Nelson Varughese, Traffic Superintendent Role: Traffic Signals, Street Lights, Signs
Richard Rasch, Associate Utility Engineer, Dept. of Public Works Role: Stormwater Engineer	Hannah Hart, Floodplain Manager Role: NFIP Compliance
Matthew Wojaczyk, Building Inspections Supervisor, Building Standards and Safety Role:	

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.

   Same as before, but we will be engaging with City Center as well.

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.

   We are looking into a community notification system, such as Everbridge, to provide updates on meetings as well as using social media.

Compliance with the National Flood Insurance Program (NFIP)

Topic	Identify source of information, if different from the one listed.	Additional Comments
1. Staff Resources		
Is the Community Floodplain Administrator (FPA) or NFIP Coordinator certified?	Community FPA	No
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	Permit reviews, consultations, land development reviews, inspections, public outreach.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	Floodplain permitting is not currently in Eden so permits are sometimes released without flood control review.
2. Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, or community records	Yes – CAV Close-Out letter dated September 28, 2022.
Are there any outstanding compliance issues (i.e., current violations)?		Minor – unpermitted activity – permits holds on noncompliant properties.
When was the most recent Community Assistance Visits (CAV) or Community Assistance Contact (CAC)?		CAV visit performed on 6/11/2015.
Is a CAV or CAC scheduled or needed?		No – CAV Close-Out letter dated September 28, 2022.
3. Regulation		
When did the community enter the NFIP?	NFIP Community Status Book	1982 – CAV Report dated June 11, 2015.
Are the Flood Insurance Rate Maps (FIRMs) digital or paper? How are residents assisted with mapping?	Community FPA	Digital and paper
Do floodplain regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Flood Control Ordinance adopted in February, 2022 includes high standards.
Describe the permitting process	Community FPA, State, FEMA NFIP	Alerts are on all floodplain parcels in Eden. Permit techs and Zoning Officers are required to submit all building/zoning permits to the Floodplain Manager for review prior to issuing any permits. The Planning Director also provides Land Development Plans to the Floodplain Manager for review. Floodplain Development Permits are reviewed and issued by the Floodplain Manager. The Floodplain Manager may also have the City Engineer review permit applications.

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

Topic	Identify source of information, if different from the one listed.	Additional Comments
4. Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	Policies = 148; premium = $241,157; total coverage = $30,284,600 (from 2015 CAV; p. 13-14)
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	Claims = 299; total paid = $3,726,425; substantial damage claims = 11 (from 2015 CAV; p. 13-14)
How many structures are exposed to flood risk within the community?	Community FPA or GIS Analyst	Approx. 332 as of September, 2021.
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA or FEMA Insurance Specialist	
5. Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, or FEMA NFIP	No (2015 CAV; p.8)
If so, what is the community's CRS Class Ranking?	Flood Insurance Manual (http://www.fema.gov/floodinsurancemanual.gov)	
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.

     No changes
   - Types of visiting populations where large numbers of people are concentrated such as visitors for special events and students.

     No changes, with the exception of the arena

Community Assets – *continued*

2. **Economy**

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

   Arena and City Center 2 and 3
   Other than that, no changes

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.

   No changes

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.

     No changes

   - Infrastructure systems such as water and wastewater facilities, power utilities, transportation systems, communication systems, energy pipelines and storage.

     No changes

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

     No changes

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

     No changes

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

     PPL Arena. Other than that, no changes.

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	2013		Lehigh County	+	+	Updating in 2018		
	Capital Improvement Plan	X	2017		Administration	+	+	Updating in 2018		
	Economic Development Plan	X		X	Department of Community and Economic Development					
	Continuity of Operations Plan	X	2011		Emergency Management Agency	+	+			
	Stormwater Management Plan / Ordinance	X	2018		Public Works					
	Open Space Management Plan (or Parks/Rec., Greenways Plan)	X	Ongoing		Parks and Recreation					
	Natural Resource Protection Plan									
	Transportation Plan									
	Historic Preservation Plan	X	Ongoing		Historic SEC					
	Floodplain Management Plan									Remove from plan
	Farmland Preservation									
	Evacuation Plan	X	2011		Emergency Management Agency	0	0			
	Disaster Recovery Plan			X						

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	2013		Lehigh County	+	+	N/A		
	Emergency Operations Plan	X	2017		Emergency Management Agency	+	+			
	Zoning Regulations	X	Ongoing		City Zoning					
	Floodplain Regulations	X	2/2022		Floodplain Manager (Planning / Zoning)		+			Updated: 2/16/2022
	NFIP Participation	X	1982		Floodplain Manager (Planning / Zoning)		+			
	Building Code	X	Ongoing		Building Safety and Standards					
	Fire Code	X	Ongoing		Fire Administration					
	Other									

Capability Assessment – *continued*

Capability	✓ Staff ✓ Personnel ✓ Resources	Yes	No	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		Public Works	No		
	Planners or engineers (with natural and / or human-caused hazards knowledge)	X		Public Works	No		
	Engineers or professionals trained in building and / or infrastructure construction practices (including building inspectors)	X		Public Works	No		
	Emergency Manager	X		Fire	No		
	Floodplain administrator / manager	X		Planning / Zoning	+		City added the position of Floodplain Manager
	Land surveyors						
	Staff familiar with the hazards of the community						
	Personnel skilled in Geographical Information Systems (GIS) and / or FEMA's HAZUS program	X		Public Works	No		
	Grant writers or fiscal staff to handle large / complex grants	X		City Administration	No		
	Other	X		Human Resources	No		Benefit Cost Analysis

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
3. Financial Resources	Capital improvement programming	X		Economic Development	No Change		
	Community Development Block Grants (CDBG)	X		Economic Development	No Change		
	Special purposes taxes	X		Economic Development	No Change		
	Gas / Electricity utility fees	X		Finance	No Change		
	Water / Sewer fees	X		Public Works	No Change		
	Stormwater utility fees	X		Public Works	No Change		
	Development impact fees	X		Public Works	No Change		
	General obligation, revenue, and / or special tax bonds	X		Finance	No Change		
	Partnering arrangements or intergovernmental agreements	X		City Administrator	No Change		
	Other						

Capability Assessment – *continued*

Capability	✓ Program ✓ Organization	Yes	No	Department / Agency	Change since 2013 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
4. Education & Outreach	Firewise Communities Certification		X				
	StormReady Certification		X				
	Natural disaster or safety-related school programs	X		Emergency Management Agency Team	Yes	We have expanded from schools to health care facilities as well.	
	Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education.	X		Emergency Management Agency Team	Yes	Adding responsible water use in 2018	
	Public-private partnership initiatives addressing disaster related issues.		X			Working to formulate this partnership	
	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	X		Emergency Management Agency Team	Yes	Using VOAD and CERT groups to assist	
	Other						

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		X		No change	
	Administrative and Technical		X		No change	
	Financial		X		No change	
	Education and Outreach		X		No change	

Known or Anticipated Future Development / Redevelopment

Development / Property Name	Type of Development	Number of Structures	Location	Known Hazard Zone	Description / Status
River Front	Commercial	Unknown	1 Pump Place	Yes	Planning and Under Construction
5 City Center	Commercial	Unknown	7th to 8th Streets / Walnut to Hamilton Streets	No	Planning and Under Construction

Natural & Non-Natural Event History Specific to City of Allentown

Type of Event and Date(s)	FEMA Disaster # (if applicable)	Local Damage(s) or Loss(es)
Hurricane Sandy – 10/2012	DR-4099-PA	Structural damage, downed trees and power lines, local flooding
Snow storm Jonas – 1/2016	DR-4267-PA	Downed trees and power lines, historic snowfall that crippled the city.
Pennsylvania COVID-19 Pandemic – 1/2020	DR-4506-PA	Emergency Protective measures to combat COVID-19 Pandemic.

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	Water Filtration Plant, 1300 MLK Blvd.: Increase the structural stability and drainage around the water plant. Insure the water filtration plant remains running 24/7 under the most adverse conditions (from 2006 Plan).	X					Working with Lehigh County Authority to try to achieve this goal.
2	Wastewater Plant – 101 Union Street: Increase the structural stability and drainage around the wastewater plant. Insure the plant remains running 24/7 under the most adverse conditions (from 2006 Plan).	X					
3	Lehigh Street and Mill Road Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Lehigh Street and Mill Road to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the residential properties along this street. Lehigh Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan). This project will address flooding at the Nursing Home at 401 Lehigh Street and 600 Mill Road (specific projects identified in the 2006 Plan).		X				Minimal progress
4	3rd and Union Streets Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Union Street and 3rd Street to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business properties along this Street. Union Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	X					
5	300 to 2200 MLK Boulevard: Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along MLK Blvd. to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties along this street. MLK Blvd. is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	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	
6	2100 Walnut Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Walnut Street and Elm Street to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties along this street. Walnut Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	X					
7	3400 Tilghman Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Tilghman Street and some type of work along the small streams in the golf course to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties and golf course along this street. Tilghman Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	X					
8	2200 to 2207 Hamilton Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Hamilton Street and some type of work along the small stream to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties along this street. Hamilton Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).		X				Minimal progress
9	640 Dixon Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Dixon Street and some type of work along the small stream to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties along this street (from 2006 Plan).	X					
10	1-66 Adams Island Drainage Improvements and Structural Elevations: Increase the structural stability and drainage; attempt to elevate the residents on the Island (from 2006 Plan).	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	
11	Work with Lehigh County EMA to install backup power at the City of Allentown Fire Station, 164 West Susquehanna Avenue. This project part of the Lehigh Countywide Generator Project, funded through 2008 LPDM.				X		Not carried through to 2018 Action Plan.
12	Retrofit (e.g. elevate) structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Specifically identified are the following: Residential Structures on Adams Island 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					
13	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					
14	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	
15	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					
16	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					
17	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	X					
18	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					
19	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					
20	Archive elevation certificates	X					
21	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0		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	
22	Complete the ongoing updates of the Comprehensive Emergency Management Plans.		X				
23	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.		X				
24	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				
25	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	Water Filtration Plant, 1300 MLK Blvd.: Increase the structural stability and drainage around the water plant. Insure the water filtration plant remains running 24/7 under the most adverse conditions (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
2	Wastewater Plant – 101 Union Street: Increase the structural stability and drainage around the wastewater plant. Insure the plant remains running 24/7 under the most adverse conditions (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
3	Lehigh Street and Mill Road Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Lehigh Street and Mill Road to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the residential properties along this street. Lehigh Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan). This project will address flooding at the Nursing Home at 401 Lehigh Street and 600 Mill Road (specific projects identified in the 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	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
4	3rd and Union Streets Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Union Street and 3rd Street to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business properties along this Street. Union Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
5	300 to 2200 MLK Boulevard: Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along MLK Blvd. to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road & flooding the business and residential properties along this street. MLK Blvd. is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	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
6	2100 Walnut Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Walnut Street and Elm Street to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties along this street. Walnut Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
7	3400 Tilghman Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Tilghman Street and some type of work along the small streams in the golf course to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties and golf course along this street. Tilghman Street is a main artery through the area and is identified as a critical evacuation and response route (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	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
8	2200 to 2207 Hamilton Street Drainage Improvements: Increase the structural stability & drainage capacity of the culvert along Hamilton Street & some type of work along the small stream to alleviate stormwater & small stream flooding. The increased capacity will prevent excess water from undermining the road & flooding the business & residential properties along this street. Hamilton Street is a main artery through the area & is identified as a critical evacuation & response route (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
9	640 Dixon Street Drainage Improvements: Increase the structural stability and drainage capacity of the culvert along Dixon Street and some type of work along the small stream to alleviate stormwater and small stream flooding. The increased capacity will prevent excess water from undermining the road and flooding the business and residential properties along this street (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
10	1-66 Adams Island Drainage Improvements and Structural Elevations: Increase the structural stability and drainage; attempt to elevate the residents on the Island (from 2006 Plan).	Structure and Infrastructure	Flood	High	High	FEMA HMA Grant Funding with City budget or bonding for match	Public Works	Long-term (depending upon funding)	Existing
Per the City of Allentown (2022 Update) this Action Item needs to be re-evaluated									

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	Retrofit (e.g. elevate) structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Specifically identified are the following: --Residential Structures on Adams Island 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 and Infrastructure	Flood	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 upon funding)	Existing
Per the City of Allentown (2022 Update) this Action Item needs to be re-evaluated									
12	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 and Infrastructure	Flood	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 upon funding)	Existing
Per the City of Allentown (2022 Update) this Action Item needs to be re-evaluated									

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
13	Maintain compliance with & good standing in the NFIP including adoption & enforcement of floodplain management requirements (e.g. regulating all new & substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, & 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.	Structure and Infrastructure, Local Plans and Regulations	Flood	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
14	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.	Education and 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
15	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 and Regulations	Flood; Subsidence/ Sinkholes	High	Low	Municipal Budget	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA. LVPC for Carbonate Bedrock Standard model ordinance.	Short-term	New & Existing
16	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	Local Plans and Regulations	Flood	Medium	Low	Municipal Budget	NFIP Floodplain Administrator with support from PA DEP, PEMA, FEMA	Short-term (1 year)	N/A
17	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 and Regulations	Flood	High	Low	Municipal Budget	NFIP Floodplain Administrator	Short-term (depending upon funding)	N/A
18	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 and Regulations	Flood	Medium	Low	Municipal Budget	NFIP Floodplain Administrator with support from PA DEP, PEMA, FEMA	Short-term (1 year)	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
19	Obtain and archive elevation certificates for NFIP compliance.	Local Plans and Regulations	Flood	High	Low	Local Budget	NFIP Floodplain Administrator	Ongoing	N/A
20	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
21	Complete the ongoing updates of the Comprehensive Emergency Management Plans.	Local Plans and Regulations	All Hazards	High	Low	Local Budget	Municipality with support from PEMA	Ongoing	New & Existing
22	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
23	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 and Awareness	All Hazards	High	Medium	Local budget	Municipality with support from County, 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
24	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 and Awareness	All Hazards	Medium	Medium	Local budget, FEMA HMA grant programs	Municipality with support from County, PEMA	Short-, Long-term (depending upon 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 reapportionment 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