**City of Allentown, Lehigh County Annex**

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

|  |  |
| --- | --- |
| **Primary:** | **Alternate:** |
| Lee T. Laubach Jr.  Fire Chief/ Emergency Management Coordinator  641 South 10th Street, Allentown, PA 18103  610-437-7765  Lee.laubach@allentownpa.gov | 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 125,845 (2020 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 the 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.

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| --- | --- |
| Lee T. Laubach Jr., Fire Chief/Emergency Management Coordinator  Role: Primary Point-of-Contact | Efrain Agosto, Fire Chief/Deputy Emergency Management Coordinator  Role: Secondary Point-of-Contact |
| William Harvey, Director – Building Standards & Safety  Role: Emergency Management Agency | Mark Geosits, City Engineer, Engineering  Role: Bridges |
| Fred Andrayko, Zoning Director, Planning & Zoning  Role: Borough Manager | 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: Mayor | Hannah Hart, Floodplain Manager  Role: NFIP Coordinator |
| Matthew Wojaczyk, Building Inspections Supervisor, Building Standards and Safety  Role: Building Inspections Supervisor, Building Standards and Safety | |

*\*please update table as needed*

1. 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.

1. Describe how the public **will be engaged** in the current planning process (examples, newsletters, social media, etc.), **and how they were engaged** since the 2018 Hazard Mitigation Plan.

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

Past: Same

**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 | N/A |
| 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 hold 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 Reported 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. |
| **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 | Approximately 332 as of September 2021 |
| Describe any areas of flood risk with limited NFIP policy coverage | Community FPA or  FEMA Insurance Specialist | N/A |
| **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) | N/A |
| What categories and activities provide CRS points and how can the Class be improved? |  | N/A |
| Does the plan include CRS planning requirements? | Community FPA, FEMA CRS Coordinator, or ISO representative | N/A |

**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.

1. **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

1. **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.

1. **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, changes.

**Capability Assessment**

| **Capability** | * **Regulatory** * **Tools** * **Programs** | **Status** | | | **Department /**  **Agency**  **Responsible** | **Effect on Hazard Loss Reduction:**  **-Supports**  **-Neutral**  **-Hinders** | **Change since 2018 Plan?**  **+ Positive**  **- Negative** | **Has the 2018 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 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 |  |  |  |  |  |  |  |  |  |
| Farmland Preservation |  |  |  |  |  |  |  |  |  |
| Evacuation Plan | X | 2011 |  | Emergency Management Agency |  |  |  |  |  |
| Disaster Recovery Plan |  |  | X |  |  |  |  |  |  |
| Hazard Mitigation Plan | X | 2018 |  | Lehigh County | + | + |  |  |  |
| 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 and Safety and Standards |  |  |  |  |  |
| Fire Code | X | Ongoing |  | Fire Administration |  |  |  |  |  |
| Other |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Capability** | * **Staff** * **Personnel** * **Resources** | **Yes** | **No** | **Department / Agency** | **Change since 2018 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 | X |  | Emergency Manager |  |  |  |
| 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 Resource | No |  | Benefit Cost Analysis |
| **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** | * **Staff** * **Personnel** * **Resources** | **Yes** | **No** | **Department / Agency** | **Change since 2018 Plan?**  **+ Positive**  **- Negative** | **How can these capabilities be expanded and improved to reduce risk?** | **Additional Comments** |
| **4. Education & Outreach** | Firewise Communities Certification |  |  |  |  |  |  |
| StormReady Certification |  |  |  |  |  |  |
| 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. |  |  |  |  | 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 2018 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 the 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. |
| Snowstorm Jonas – 1/2016 | DR-4267-PA | Downed trees and powerlines, historic snowfall that crippled the city. |
| Pennsylvania COVID-19 Pandemic – 1/2020 | DR-4506-PA | Emergency Protective measures to combat COVID-19 Pandemic. |

**2018 Municipal Action Plan Status**

| **Existing Mitigation Action**  **(from 2018 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. Ensure 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. Ensure 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 & 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 |  |  |  |  |  |
| **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 & 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). |  | 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 |  |  |  |  |  |
| **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. | X |  |  |  |  |  |
| **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. | X |  |  |  |  |  |
| **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. | X |  |  |  |  |  |
| **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. | X |  |  |  |  |  |
| **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). | X |  |  |  |  |  |
| **16** | Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. | X |  |  |  |  |  |
| **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. | X |  |  |  |  |  |
| **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. | X |  |  |  |  |  |
| **19** | Obtain and archive elevation certificates for NFIP compliance. | X |  |  |  |  |  |
| **20** | Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. |  | X |  |  |  |  |
| **21** | Complete the ongoing updates of the Comprehensive Emergency Management Plans. |  |  | X |  |  |  |
| **22** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. |  |  | X |  |  |  |
| **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. |  |  | X |  |  |  |
| **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). |  |  | X |  |  |  |

**Notes:**

1. Actions not carried through to the 2023 Action Plan are so noted.
2. To maintain National Flood Insurance Program (NFIP) compliance, actions related to the NFIP were carried through to the 2023 Action Plan even if identified by the municipality as completed.

**2023 Mitigation Action Plan**

| **Mitigation Action** | | **Regional Action Category** | **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. Ensure the water filtration plant remains running 24/7 under the most adverse conditions (from 2006 Plan). | 16 | 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. Ensure the plant remains running 24/7 under the most adverse conditions (from 2006 Plan). | 18 | 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). | 18 | 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 |
| **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). | 18 | 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). | 18 | 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 |
| **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). | 18 | 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). | 18 | 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 |
| **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). | 18 | 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). | 18 | 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). | 18 | 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 |
| **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. | 1 | 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 |
| **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. | 2 | 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 |
| **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. | 3 | 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 |
| **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. | 4 | Education and Awareness | All Hazards | High | Low-Medium | Municipal Budget | Municipality with support  from Planning Partners,  PEMA, FEMA | N/A | N/A |
| **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). | 5 | 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 | N/A | N/A |
| **16** | Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. | 3 | Local Plans and Regulations | Flood | High | Low | Municipal Budget | NFIP  Floodplain  Administrator with support  from PA DEP,  PEMA, FEMA | N/A | 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. | 6 | Local Plans and Regulations | Flood | Medium | Low | Municipal Budget | NFIP  Floodplain  Administrator | N/A | 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. | 7 | Local Plans and Regulations | Flood | High | Low | Municipal Budget | NFIP  Floodplain  Administrator with support  from PA DEP,  PEMA, FEMA | N/A | N/A |
| **19** | Obtain and archive elevation certificates for NFIP compliance. | 8 | Local Plans and Regulations | Flood | Low | Low | Local Budget | NFIP Floodplain Administrator | N/A | N/A |
| **20** | Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. | 9 | 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 | N/A | N/A |
| **21** | Complete the ongoing updates of the Comprehensive Emergency Management Plans. | 10 | Local Plans and Regulations | All Hazards | Medium | Low | Local Budget | Municipality with support from PEMA | N/A | N/A |
| **22** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. | 11 | All Categories | All Hazards | Medium | Low | Local Budget | Municipality with support  From surrounding municipalities and County | N/A | N/A |
| **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. | 12 | Education and Awareness | All Hazards | Low | Medium | Local Budget, FEMA HMA Grant Vision | Municipality with support  from County,  PEMA, FEMA | N/A | N/A |
| **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). | 13 | 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 andCommunities
* **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