**Hellertown Borough, Northampton County Annex**

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

|  |  |
| --- | --- |
| **Primary:** | **Alternate:** |
| Cathy Hartranft  Borough Manager  685 Main Street, Hellertown, PA 18055  610-838-7041  c.hartranft@hellertownborough.org | Bryan Smith  Engineer Representative  85 S. Route 100 & Kessler Lane, Allentown, PA 18104 610-398-0904  bsmith@barryisett.com |

**Municipal Profile**

Hellertown Borough is located in the southwestern part of Northampton County. It encompasses an area of approximately 1.3 square miles and has a population of 6,132 (2020 Census). The Borough is nearly surrounded by Lower Saucon Township and is bordered to the north by Bethlehem City. Hellertown is bordered to the west by the Saucon Creek.

Interstate 78 passes east-west through the northern part of the borough. Other major east-west roads include Friedensville Road / Water Street in the center of the Borough, and Skibo Road / East Walnut Street in the southern part of the borough. PA Route 412 (Main Street) passes north south through the western part of the borough, and Easton Road extends from the center of the borough northeast across the borough’s northeastern border. Main Street is the main vehicular route for residents as well as neighboring municipalities from the south to I-78.

**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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| --- | --- |
| Cathy Hartranft, Borough Manager  Role: Primary Contact | Brian Smith, Engineer Representative  Role: Engineer Representative |
| Christopher Scherer, Emergency Management Coordinator  Role: Emergency Management Services | Kris Russo, Code/Zoning Officer  Role: Floodplain Manager |
| Barry Yonney, Public Works Director  Role: Public Works | Barry Isett & Associates, Borough Engineer Role: Engineer |

*\*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.

Hellertown – Lower Saucon Chamber of Commerce

Lehigh Valley Health Network

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: Newsletter/website updates, social media – borough/police Facebook pages, Community events, Public meetings

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 | Yes |
| Provide an explanation of NFIP administration services (e.g., permit review, GGIS, education or outreach, inspections, engineering capability) | Community FPA | Review permit applications for compliance with NFIP. Follow-up inspection |
| What are the barriers to running an effective NFIP program in the community, if any? | Community FPA | None |
| **2. Compliance History** | | |
| Is the community in good standing with the NFIP? | State NFIP Coordinator, FEMA NFIP Specialist, or community records | Yes |
| 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)? |  | N/A |
| Is a CAV or CAC scheduled or needed? |  | No |
| **3. Regulation** | | |
| When did the community enter the NFIP? | NFIP Community Status Book | 2/8/1973 |
| Are the Flood Insurance Rate Maps (FIRMs) digital or paper?  How are residents assisted with mapping? | Community FPA | Digital & Paper. The Borough has GIS mapping and PDF copies of the FEMA maps overlaid with tax parcel data, so when residents ask, they can be provided either an image or print of their property. |
| Do floodplain regulations meet or exceed FEMA or State minimum requirements?  If so, in what ways? | Community FPA | They just meet the minimum requirements |
| Describe the permitting process | Community FPA, State, FEMA NFIP | Building and land development plans submitted to the borough and reviewed prior to issuance of a permit. |
| **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 | 26 policies; $46,814 premium;  $5,821,700 coverage |
| 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 | 16 total; 12 paid; $252,654; 4 substantial |
| How many structures are exposed to flood risk within the community? | Community FPA or GIS Analyst | N/A |
| Describe any areas of flood risk with limited NFIP policy coverage | Community FPA or  FEMA Insurance Specialist | Silver Creek Corridor |
| **5. Community Rating System (CRS)** | | |
| Does the community participate in CRS? | Community FPA, State, or FEMA NFIP | No |
| 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.

Front Street Apartments

Saucon Valley Manor

Saucon Manor

* Types of visiting populations where large numbers of people are concentrated such as visitors for special events and students.

Visitors for special events at Dimmick Park; 200 – 2,000

Visitors for special events at Water Street Park; 50 – 300

Visitors to Dimmick Park Pool; 50 – 1,000

Meetings / events at Borough Hall; 20 – 150

Meetings / events at Dewey Fire Hall; 20 – 150

1. **Economy**

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

Town Center, Main Street (SR 412)

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.

Hellertown Marsh

Thomas Iron Site Open Space

Tuminello Park

Borough Parks

Silver Creek Corridor

Saucon Creek Corridor

Palk Valley Run Corridor

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.

Buildings and structures abutting and covering Silver Creek and buildings and structures abutting Polk Valley Run.

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

Public water and sewer

Stormwater system

SR 412 Main Street (north/south) connector

Saucon Rail-trail

Overhead electric and communication lines

Cell towers

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

None known

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

Dewey Fire Hall

Borough Hall

Saucon Valley Manor

Lehigh Valley Health Network Center

Public Works

Saucon Valley School Campus

Library

Post Office

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

Dimmick Park

Water Street Park

Borough Hall

Grist Mill

Hellertown Pool

Lost Cavern

Saucon Creek Greenway

Historic homes along Main Street

Pony Bridge @ Grist Mill

Old Jail

**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 | 2021 |  | Joint Borough and Township |  |  | Comp Plan predated Hazard Mitigation Plan 2013 | Incorporate Hazard Mitigation in Comp Plan Update (2019-2020) |  |
| Capital Improvement Plan |  |  |  |  |  |  |  |  |  |
| Economic Development Plan |  |  |  |  |  |  |  |  |  |
| Continuity of Operations Plan |  |  |  |  |  |  |  |  |  |
| Stormwater Management Plan / Ordinance | X | 3/21/05 |  | Planning |  |  | Ordinance predated Hazard Mitigation Plan of 2013 | Incorporate Hazard Mitigation in any updates |  |
| Open Space Management Plan (or Parks/Rec., Greenways Plan) | X | 2006 |  | Planning |  |  | Plan predated Hazard Mitigation Plan of 2013 | Incorporated Hazard Mitigation in any updates |  |
| Natural Resource Protection Plan |  |  |  |  |  |  |  |  |  |
| Transportation Plan | X | 2009 |  | Planning |  |  | Transportation plan predated Hazard Mitigation Plan of 2013 | Incorporate Hazard Mitigation in any updates |  |
| Historic Preservation Plan |  |  |  |  |  |  |  |  |  |
| Floodplain Management Plan | X | 2022 |  | Borough Engineer |  |  |  |  |  |
| Farmland Preservation |  |  |  |  |  |  |  |  |  |
| Evacuation Plan | X | 2015 |  | Borough | Supports |  |  |  | Borough Hall |
| Disaster Recovery Plan |  |  |  |  |  |  |  |  |  |

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| **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** |
|  | Hazard Mitigation Plan | X | 2018 |  | Zoning/Emergency Management Services |  |  | N/A |  |  |
| Emergency Operations Plan | X | 10/2019 |  | Emergency Management Services |  |  |  |  |  |
| Zoning Regulations | X | 9/17/12 |  | Zoning |  |  | Plan predated Hazard Mitigation Plan of 2013 | Incorporate Hazard Mitigation in any updates |  |
| Floodplain Regulations | X | 3/3/14 |  | Zoning |  |  | Hazard Mitigation Incorporated in last update of 2014 | Incorporate Hazard Mitigation in any updates |  |
| NFIP Participation | X |  |  |  |  |  |  |  |  |
| Building Code | X | 6/21/04 |  | Zoning |  |  | Plan predated Hazard Mitigation Plan of 2013 | Incorporate Hazard Mitigation in any updates | Uniform Construction Code |
| Fire Code | X | 6/16/14 |  | Zoning |  |  | International Fire Code Adopted | Incorporate Hazard Mitigation in any updates |  |
| Other |  |  |  |  |  |  |  |  |  |

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| **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 |  |  | No change |  | Use Borough engineering firm |
| 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 |  | Zoning/Codes | No change |  |  |
| Emergency Manager | X |  | EMS Coordinator | No change | Continue coordination with other staff |  |
| Floodplain administrator / manager | X |  | Zoning Officer | No change | Continue coordinator with other staff |  |
| Land surveyors |  |  |  | No change |  | Use Borough engineering firm |
| Staff familiar with the hazards of the community | X |  | Zoning Officer, Police Chief and EMS Coordinator |  |  |  |
| Personnel skilled in Geographical Information Systems (GIS) and / or FEMA’s HAZUS program | X |  |  |  |  | Use borough engineer firm |
| Grant writers or fiscal staff to handle large / complex grants | X |  |  |  |  | Use Borough engineering firm |
| Other |  |  |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **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** |
| **3. Financial Resources** | Capital improvement programming | X |  | Council and Manager | No | Develop Specific Projects Which Mitigate Current Issues |  |
| Community Development Block Grants (CDBG) | X |  | Manager | No | Additional funding made available |  |
| Special purposes taxes | X |  | Council |  |  |  |
| Gas / Electricity utility fees |  |  |  |  |  |  |
| Water / Sewer fees | X |  | Borough Authority | No | Coordinate with borough on capital projects |  |
| Stormwater utility fees |  |  |  |  |  |  |
| Development impact fees |  |  |  |  |  |  |
| General obligation, revenue, and / or special tax bonds | X |  | Council |  |  |  |
| Partnering arrangements or intergovernmental agreements | X |  | Council and Planning | No |  | Saucon Valley Partnership – Lower Saucon, Hellertown and Saucon Valley School District |
| Other |  |  |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |  |  |  |  |  |  |
| Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education. | X |  | Borough |  |  | MS4/Stormwater, handouts and forms, websites |
| 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. | X |  | Saucon Creek Watershed | No |  |  |
| Other |  |  |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
| **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 |  |
| Administrative and Technical |  | X |  | No |  |
| Financial | X |  |  | No |  |
| Education and Outreach |  | X |  | No |  |

**Known or Anticipated Future Development / Redevelopment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Development /**  **Property Name** | **Type of Development** | **Number of Structures** | **Location** | **Known Hazard Zone** | **Description / Status** |
| Saucon Valley Country Club Housing Project | Residential subdivision | 50+ | East side of Borough/Lower Saucon Township | Silver Creek Watershed | Planning Stage.  Stormwater runoff will directly impact Borough stormwater systems. |
| Champion Spark Plug Building | Commercial | 1 | North end of Borough | None Known | Planning Stage. Re-use of  former superfund site for commercial use. |
| Saucon Valley Manor Expansion | Elderly Care | 120 units | Center of Borough, Front and Thomas Streets | None Known | Phased development. New residential units to expand  existing elderly housing facility. |
| Clauser Street Development | Residential | 70 units | NW corner of the Borough | None | Preliminary Plan |
| Neighbors Redevelopment | Redevelopment | Unknown | SW corner of the Borough | None | For Sale |

**Natural & Non-Natural Event History Specific to Hellertown Borough**

|  |  |  |
| --- | --- | --- |
| **Type of Event and Date(s)** | **FEMA Disaster #**  **(if applicable)** | **Local Damage(s) or Loss(es)** |
| Hurricane Andrew – 1992 | (Not Declared) | Unknown |
| Hurricane Ivan – 9/17/2004 | DR-1557-PA | Depot Street Culvert collapsed, bridge abutments and streambank erosion, temporary closure of several streets |
| Hurricane Irene – 8/26/2011 – 8/30/2011 | DR-4025-PA  EM-3340 | Depot Street Culvert collapsed, bridge abutments and streambank erosion, temporary closure of several streets |
| Tropical Storm Lee – 9/3/2011 – 10/15/2011 | DR-4030-PA  EM-3340 | Heavy accumulation of debris and sediment in the Silver Creek, floodwaters close Water Street / Front Street. |
| October Snowstorm – 2011 | (Not Declared) | Temporary road closures due to fallen trees, debris, and wires. Loss of power to Borough up to 7 days following event. |
| 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 |

**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** | Silver Creek Corridor Stabilization and Clearing (Borough Line (east) to confluence of Saucon Creek (west)) – Excavation and clearing of deposited sediment and debris and stabilization of the streambank and  bridge abutment. |  |  | X |  |  |  |
| **2** | Thomas Iron Site Floodplain Restoration - In the early 1900’s, the Thomas Iron site was a steel processing facility which supported neighboring Bethlehem Steel. The site is largely a low-lying area in the oxbow of the Saucon Creek. This area was filled with slag, an aggregate by-product of the steel extraction process. The fill material has reduced the historic floodplain of the Saucon Creek, just below the confluence of Silver Creek.  The removal of this material and restoration of the floodplain will significantly increase the holding capacity of the Saucon Creek and reduce upstream flooding of the Silver Creek and Borough. Work to include removal of slag material, restoration of the floodplain vegetation and stream bank  stabilization. | X |  |  |  |  |  |
| **3** | Polk Valley Run east and west of Main Street - This shallow stream corridor frequently overruns its banks, causing significant damage to neighboring properties. In addition, the Borough Authority’s sewer pumping station is often flooded. Long-term channelization of the stream corridor and re- construction of the culvert under Main Street is needed to expand the  streams capacity and contain flows. | X |  |  |  |  |  |
| **4** | Easton Road and Cherry Lane Stormwater - Recent development of the downstream area, outside the Borough, has restricted stormwater flow from this upper drainage area. The result has been flooding of the drainage channel and neighboring streets. Easton Road is the only other north/east bound road exiting the Borough, except Main Street. As a result, it is vital this roadway remain clear and passable at all times. Expanded stormwater improvements are required to capture and convey stormwater off the street and into the system downstream. In addition, temporary above and below grade storage is needed to prevent flooding surges. | X |  |  |  |  |  |
| **5** | Stormwater Improvements - The Borough Hall, public works facility & police station, neighboring private properties, state, & Borough streets of Water, Main & Front Street flood to a condition of being impassable. The floods & street closures create significant life & safety concerns for the community during heavy rainfall events. Closure of State Route 412 (Main Street) cuts off a main north-south route for local & regional residents looking to reach Interstate I78 & the City of Bethlehem.  Water Street, is one of only two east- west routes, which provide possible evacuation routes for Borough residents to higher elevations. The Borough’s main stormwater system is a combination of inlets & pipes which outlet & utilizes the Silver Creek as the main trunk line to the Saucon Creek. Almost 60% of the Borough, which includes the most densely developed area, surrounds the Silver Creek & uses this corridor to carry away stormwater flows.  The Borough proposes to make a number of improvements to the stormwater system, which will alleviate the volume of stormwater reaching the Silver Creek. Several by-pass stormwater systems would be constructed to capture & convey upstream neighborhoods, & convey  them directly to the Saucon Creek. |  | X |  |  |  | Stormwater improvements completed at Borough Hall (Main and Easton Road). Additional improvements required to the surrounding stormwater systems. |
| **6** | Stormwater System Maintenance - Annual maintenance of the system is required to remove sediment, debris and trash, which collected in the stormwater inlets, pipes and stream corridors. This material, if not removed, reduces capacity and increased potential local and surrounding area flooding. Following larger events, cleanup of the deposited debris is  required. |  |  | X |  |  |  |
| **7** | Retrofit 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:  -Rentzheimer Street Bridge  -Northampton Street Bridge  -Main Street Culvert (Silver Creek)  -Harris Street Bridge  -Front Street Bridge  -Main Street Bridge (Polk Valley Stream)  -Water Street Bridge  -Rail Trail Culvert (Silver Creek) 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 |  |  |  | A: Bridge repairs underway and to be completed in 2018. |
| **8** | 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.  Specifically identified are the following:  - None at this time.  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 |  |  |  |  |  |
| **9** | 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 as  Initiatives (below). |  |  | X |  |  |  |
| **10** | 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 |  |  |  |  |  |
| **11** | 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 |  |  |  |
| **12** | Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. | X |  |  |  |  |  |
| **13** | 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 |  |  |  |  |  |
| **14** | 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 |  |  |  |  |  |
| **15** | Obtain and archive elevation certificates for NFIP compliance. | X |  |  |  |  |  |
| **16** | Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. |  |  | X |  |  |  |
| **17** | Complete the ongoing updates of the Comprehensive Emergency  Management Plans. |  |  | X |  |  |  |
| **18** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. |  |  | X |  |  |  |
| **19** | 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, recordkeeping. |  |  | X |  |  |  |
| **20** | 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 |  |  |  |
| **21** | Amend stormwater management ordinances to regulate development of upland areas in order to reduce stormwater runoff - coordinate with  Lower Saucon Township. |  |  | X |  |  |  |
| **22** | Develop standards and protocols for storage, management, transport and inventory of hazardous materials  within the Borough. |  |  | X |  |  |  |
| **23** | Coordinate with the County Emergency Management Agency and PA Department of Health, which is responsible for setting up points of distribution and providers for  immunizations. |  |  | X |  |  |  |
| **24** | Devise an employee vaccination and immunization plan to prevent an outbreak within the municipal  employee ranks. |  |  | X |  |  |  |
| **25** | Devise a municipal continuity of operations plan to keep essential services running in the event that a significant portion of the workforce is  affected. |  |  | X |  |  |  |
| **26** | Devise a public education and outreach plan regarding disease prevention. |  |  | X |  |  |  |
| **27** | Provide education and outreach to residents regarding how to prevent the spread of invasive species, including quarantine procedures. |  |  | X |  |  |  |
| **28** | Develop a neighborhood cleanup plan designed to remove potential breeding habitat, such as discarded tires, trash and other items in which standing water can form. |  |  | X |  |  |  |
| **29** | Provide training and education for first responders to ensure effective  emergency care. |  |  | X |  |  |  |
| **30** | Provide education and outreach,  especially in K-12, regarding drug abuse prevention. |  |  | 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** | | **Mitigation 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** | Silver Creek Corridor Stabilization and Clearing (Borough Line (east) to confluence of Saucon Creek (west)) – Excavation and clearing of deposited sediment and debris and stabilization of the streambank and  bridge abutment. | 15 | Structure & Infrastructure | Flood | Medium | High | FEMA Mitigation Grants with local budget for cost share | Hellertown Borough | Short-term | Existing |
| **2** | Thomas Iron Site Floodplain Restoration - In the early 1900’s, the Thomas Iron site was a steel processing facility which supported neighboring Bethlehem Steel. The site is largely a low-lying area in the oxbow of the Saucon Creek. This area was filled with slag, an aggregate by-product of the steel extraction process. The fill material has reduced the historic floodplain of the Saucon Creek, just below the confluence of Silver Creek.  The removal of this material and restoration of the floodplain will significantly increase the holding capacity of the Saucon Creek and reduce upstream flooding of the Silver Creek and Borough. Work to include removal of slag material, restoration of the floodplain vegetation and stream bank  stabilization. | 15 | Structure & Infrastructure | Flood | Medium | High | FEMA Mitigation Grants with local budget | Hellertown Borough | Short-term | Existing |
| **3** | Polk Valley Run east and west of Main Street - This shallow stream corridor frequently overruns its banks, causing significant damage to neighboring properties. In addition, the Borough Authority’s sewer pumping station is often flooded. Long-term channelization of the stream corridor and re- construction of the culvert under Main Street is needed to expand the streams capacity and contain flows. | 16 | Structure & Infrastructure | Flood | High | High | FEMA Mitigation Grants with local budget for cost share | Hellertown Borough (with support from private, Borough Authority, PennDOT) | Long-term | Existing |
| **4** | Easton Road and Cherry Lane Stormwater - Recent development of the downstream area, outside the Borough, has restricted stormwater flow from this upper drainage area. The result has been flooding of the drainage channel and neighboring streets. Easton Road is the only other north/east bound road exiting the Borough, except Main Street. As a result, it is vital this roadway remain clear and passable at all times. Expanded stormwater improvements are required to capture and convey stormwater off the street and into the system downstream. In addition, temporary above and below grade storage is  needed to prevent flooding surges. | 15 | Structure & Infrastructure | Flood | Medium | High | FEMA Mitigation Grants with local budget for cost share | Hellertown Borough (with support from PennDOT, City of Bethlehem private) | Long-term (depending on funding) | Existing |
| **5** | Stormwater Improvements - The Borough Hall, public works facility & police station, neighboring private properties, state, & Borough streets of Water, Main & Front Street flood to a condition of being impassable. The floods & street closures create significant life & safety concerns for the community during heavy rainfall events. Closure of State Route 412 (Main Street) cuts off a main north-south route for local & regional residents looking to reach Interstate I78 & the City of Bethlehem.  Water Street, is one of only two east- west routes, which provide possible evacuation routes for Borough residents to higher elevations. The Borough’s main stormwater system is a combination of inlets & pipes which outlet & utilizes the Silver Creek as the main trunk line to the Saucon Creek. Almost 60% of the Borough, which includes the most densely developed area, surrounds the Silver Creek & uses this corridor to carry away stormwater flows.  The Borough proposes to make a number of improvements to the stormwater system, which will alleviate the volume of stormwater reaching the Silver Creek. Several by-pass stormwater systems would be constructed to capture & convey upstream neighborhoods, & convey  them directly to the Saucon Creek. | 14 | Structure & Infrastructure | Flood | Medium | High | FEMA Mitigation Grants with local budget for cost share | Hellertown Borough (with support from PennDOT) | Long-term (depending upon funding) | Existing |
| **6** | Stormwater System Maintenance - Annual maintenance of the system is required to remove sediment, debris and trash, which collected in the stormwater inlets, pipes and stream corridors. This material, if not removed, reduces capacity and increased potential local and surrounding area flooding. Following larger events, cleanup of the deposited debris is  required. | 14 | Structure & Infrastructure | Flood | Medium | Medium | Annual Borough Budget | Hellertown Borough (with support from PennDOT, City of Bethlehem private) | Ongoing | Existing |
| **7** | Retrofit 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:  -Rentzheimer Street Bridge  -Northampton Street Bridge  -Main Street Culvert (Silver Creek)  -Harris Street Bridge  -Front Street Bridge  -Main Street Bridge (Polk Valley Stream)  -Water Street Bridge  -Rail Trail Culvert (Silver Creek) 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 & Infrastructure | Flood | High | High | FEMA Mitigation Grant Programs and local budget (or properly owner) for cost share | Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA | Long-term (depending upon funding) | Existing |
| **8** | 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.  Specifically identified are the following:  - None at this time.  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 & 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 |
| **9** | 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 as  Initiatives (below). | 3 | Local plans & Regulations | Flood | High | Low-Medium | Municipal Budget | Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, ISO FEMA | Ongoing | New & Existing |
| **10** | 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 & Awareness | All Hazards | High | Low-Medium | Municipal Budget | Municipality with support from Planning Partners, PEMA, FEMA | Short-term | N/A |
| **11** | 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 & Regulations | Flood; Subsidence/  Sinkholes | High | Low | Municipal Budget | Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA | Short-term | New & Existing |
| **12** | Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. | 3 | Local plans  & Regulations | Flood | High | Low | Municipal Budget | NFIP  Floodplain  Administrator with support  from PADEP,  PEMA, FEMA | Short-term | N/A |
| **13** | 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  & Regulations | Flood | Medium | Low | Municipal Budget | NFIP  Floodplain  Administrator | Short-term  (depending on funding) | N/A |
| **14** | 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  & Regulations | Flood | High | Low | Municipal Budget | NFIP  Floodplain  Administrator with support  from PADEP,  PEMA, FEMA | Short-term | N/A |
| **15** | Obtain and archive elevation certificates for NFIP compliance. | 8 | Local plans  & Regulations | Flood | Low | Low | Municipal Budget | NFIP  Floodplain  Administrator | Ongoing | N/A |
| **16** | 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) | Municipal Budget | Municipality (via mitigation planning point of contacts)  with support  from Planning  Partners  (through their Points of  Contact),  PEMA | Ongoing | New &  Existing |
| **17** | Complete the ongoing updates of the Comprehensive Emergency  Management Plans. | 10 | Local plans  & Regulations | All Hazards | Medium | Low | Municipal Budget | Municipality with support from PEMA | Ongoing | New &  Existing |
| **18** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. | 11 | All  categories | All Hazards | Medium | Low | Municipal Budget | Municipality with support from surrounding  municipalities and County | Ongoing | New &  Existing |
| **19** | 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, recordkeeping. | 12 | Education  & Awareness | All Hazards | Low | Medium | Municipal Budget | Municipality with support  from County,  PEMA, FEMA | Short-term | N/A |
| **20** | 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  & 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 |
| **21** | Amend stormwater management ordinances to regulate development of upland areas in order to reduce stormwater runoff - coordinate with  Lower Saucon Township. | 14 | Local plans  & Regulations | Flood | Medium | $10,000 | Unknown | Planning/Zoning | 2 to 3 years | N/A |
| **22** | Develop standards and protocols for storage, management, transport and inventory of hazardous materials  within the Borough. | 23 | Education  & Awareness | Environmental  Hazards/  Explosion | High | $30,000 | Unknown | EMS/Planning/ Zoning | 5 years | N/A |
| **23** | Coordinate with the County Emergency Management Agency and PA Department of Health, which is responsible for setting up points of distribution and providers for immunizations. | 11 | Local plans  & Regulations | Pandemic and  Infectious  Disease | Medium | Low | Municipal Budget | Municipality, working with  County EMA and PA  Department of Health | Ongoing | N/A |
| **24** | Devise an employee vaccination and immunization plan to prevent an outbreak within the municipal  employee ranks. | 27 | Local plans  & Regulations | Pandemic and  Infectious  Disease | High | Low | Municipal Budget | Municipality | Short-term | N/A |
| **25** | Devise a municipal continuity of operations plan to keep essential services running in the event that a significant portion of the workforce is affected. | 11 | Local plans  & Regulations | Pandemic and  Infectious  Disease | Medium | Low | Municipal Budget | Municipality | Short-term | N/A |
| **26** | Devise a public education and outreach plan regarding disease prevention. | 27 | Education  & awareness | Pandemic and  Infectious  Disease | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **27** | Provide education and outreach to residents regarding how to prevent the spread of invasive species, including quarantine procedures. | 27 | Education  & awareness | Invasive Species | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **28** | Develop a neighborhood cleanup plan designed to remove potential breeding habitat, such as discarded tires, trash and other items in which standing water can form. | 12 | Education  & Awareness | Invasive Species | Medium | Low | Municipal Budget | Municipality | Short-term | N/A |
| **29** | Provide training and education for first responders to ensure effective emergency care. | 27 | Local plans  & Regulations | Drug  Overdose  Crisis | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **30** | Provide education and outreach,  especially in K-12, regarding drug abuse prevention. | 27 | Education  & Awareness | Drug  Overdose  Crisis | High | Low | Municipal Budget | Municipality/ School  District | Ongoing | 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