**Upper Macungie Township, Lehigh County Annex**

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

|  |  |
| --- | --- |
| **Primary:** | **Alternate:** |
| Peter Christ  Emergency Management Coordinator  8330 Schantz Road, Breinigsville, PA 18031  610-395-4892, Extension: 145  pchrist@uppermac.org | Duane A Dellecker  Building Code Administrator  8330 Schantz Road, Breinigsville, PA 18031  610-395-4892, Extension: 113  ddellecker@uppermac.org |

**Municipal Profile**

Upper Macungie Township is a mixed-use (residential, commercial, industrial) community located in Lehigh County, just west of Allentown. The township is bordered by; Maxatawny and Longswamp Townships (both in Berks County) to the west; Weisenberg and Lowhill Townships to the north; North Whitehall and South Whitehall Townships to the east; and Lower Macungie Township to the south. Based on the 2020 Census its population is 26,377 and covers 26.24 square miles.

The two watersheds that make up the township are the Little Lehigh and Jordan Creeks. The main tributaries are the Breinig Run, Hassen Creek, Iron Run, Little Cedar Creek and the Schaefer Run.

The township’s main corridors running north-south are: Route 100, and Route 309. Running east-west are Interstate 78, Tilghman Street, Route 22 and Hamilton Boulevard.

**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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| Duane A Dellecker, Building Code Administrator  Role: Administrator | Peter Christ, Emergency Management Coordinator  Role: Emergency Management |
| Kal Sostarecz, Assistant Township Manager  Role: Planning | Scott Faust, Director of Works  Role: Public Works |

*\*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.

Good Neighbor Coalition – This group of involved residents will be a valuable resource to assist with identifying problem areas in Upper Macungie Township. Information on this project will be reviewed and shared with a representative of this group.

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: Upper Macungie Township publishes a semi-annual newsletter to keep citizens and friends informed on township happenings. A portion of every issue of this newsletter is dedicated to supplying information on NPDES, MS4, MCM’s and a variety of other subjects related to runoff pollution, storm water management and clean water. The current and past issues of the newsletter are also available on our website at www.uppermac.org for residents 24/7.

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 | FPA - L273: Floodplain Management Course Completed - Feb. 2017 |
| Is floodplain management an auxiliary function? | Community FPA | Yes, FPA primary function to administer building code office. |
| Provide an explanation of NFIP administration services (e.g., permit review, GGIS, education or outreach, inspections, engineering capability) | Community FPA | All permits for construction-related activities are reviewed for compliance. |
| What are the barriers to running an effective NFIP program in the community, if any? | Community FPA | The major barrier to running an effective NFIP program is public education. Many residents are not engaged until other activities adversely affect them. |
| **2. Compliance History** | | |
| Is the community in good standing with the NFIP? | State NFIP Coordinator, FEMA NFIP Specialist, or community records | Unknown |
| 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)? |  | Unknown |
| Is a CAV or CAC scheduled or needed? |  | Unknown |
| **3. Regulation** | | |
| When did the community enter the NFIP? | NFIP Community Status Book | 4/2/1979 |
| Are the Flood Insurance Rate Maps (FIRMs) digital or paper?  How are residents assisted with mapping? | Community FPA | FIRM's are digital. Residents are assisted through permit process. |
| Do floodplain regulations meet or exceed FEMA or State minimum requirements?  If so, in what ways? | Community FPA | Floodplain regulations meet FEMA minimum requirements. |
| Describe the permitting process | Community FPA, State, FEMA NFIP | Elevations are shown on plans for all properties in developments being built. Zoning/building office reviews permits and plans for consistency with approved plans. |
| **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 | 34 policies - |
| 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 | Unknown |
| How many structures are exposed to flood risk within the community? | Community FPA or GIS Analyst | 65 structures |
| Describe any areas of flood risk with limited NFIP policy coverage | Community FPA or  FEMA Insurance Specialist | Unknown |
| **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? |  | There are 18 activities that assign credit points to reduce exposure to floods. Public Info, mapping / regulation, flood damage reduction & flood preparedness. |
| Does the plan include CRS planning requirements? | Community FPA, FEMA CRS Coordinator, or ISO representative | Action item #9 in 2013 plan |

**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.

Mosser Nursing Home – 60 residents (elderly)

Heather Glen Senior Living – 120 residents (elderly)

Country Meadows Nursing Home – 220 residents (elderly)

Atrium of Allentown – 120 residents (elderly)

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

Valley Preferred Cycling Center – Outdoor recreational venue – seating for 450

Grange Park

1. **Economy**

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

Upper Macungie Township is home to several large manufacturing employers, including:

Amazon

Samuel Adams Brewery

U-Line

Ocean Spray

Keurig/Dr. Pepper

Air Products

Blue Triton Brands

Bimbo Bakery

Niagara Bottling

Grim’s Orchard & Family Farm

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.

Upper Macungie Township uses zoning, floodplain and other regulations to protect natural features that can reduce the magnitude of hazardous events; including: Conservation Design Development helps to protect woodlands, wetlands, riparian areas, floodplains, steep slopes, karst features, streams, natural ponds and springs.

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.

Upper Macungie Township has a comprehensive fire inspection program where over 850 commercial occupancies are inspected yearly. Due to this program, we can think of no specific hazards in this category.

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

The transportation system in the township is stressed. Two factors have had a major impact on this increased population and large industrial / warehousing industry.

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

85 facilities in the township report quantities of extremely hazardous substances through the Tier II (SARA Title III) inspection program. A complete list of facilities is maintained at the township office.

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

PA State Police

Integrated Health Campus

St. Luke’s Health Network

3 Township Fire Stations – Fogelsville #8, Schantz Road #56 & Trexlertown #25 Schools – Fogersville Elementary, Fred J Jaindl Elementary, Veterans Memorial Elementary School

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

Grange Park

Rodale Park

Valley Preferred Cycling Center

Lone Lane Park

Route 100 Park

**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 | 2019 |  | Township | S | + | No |  |  |
| Capital Improvement Plan | X | 2019 |  | Public Works |  | + |  |  |  |
| Economic Development Plan |  |  |  |  |  |  |  |  |  |
| Continuity of Operations Plan | X | June 2020 |  | Township | S | + | No |  | Part of Emergency  Operations Plan |
| Stormwater Management Plan / Ordinance | X | May 2020 |  | Township | S | + | No |  | Ordinance |
| Open Space Management Plan (or Parks/Rec., Greenways Plan) | X | 2011 |  | Township | S | + | No |  |  |
| Natural Resource Protection Plan |  |  |  |  |  |  |  |  |  |
| Transportation Plan |  |  |  |  |  |  |  |  |  |
| Historic Preservation Plan |  |  |  |  |  |  |  |  |  |
| Floodplain Management Plan | X | 2/2002 |  | Township | S | + | No |  |  |
| Farmland Preservation | X | 2001, 2011 |  | Township | S | + | No |  |  |
| Evacuation Plan | X | 12/2011 |  | Lehigh County | S | + | No |  |  |
| Disaster Recovery Plan |  |  |  |  |  |  |  |  |  |
| Hazard Mitigation Plan | X | 2018 |  | Lehigh County | S | + | No |  |  |
| Emergency Operations Plan | X | 10/2020 |  | Township | S | + | No |  | 10/1/2020 |
| Zoning Regulations | X | 2020 |  | Township | S | + | No |  |  |
| Floodplain Regulations | X | 2/2002 |  | Township | S | + | No |  |  |
| NFIP Participation |  |  |  |  |  |  |  |  |  |
| Building Code | X | 6/2021 |  | Township | S | + | No |  | 6/3/2021 |
| Fire Code | X | 12/2020 |  | Township | S | + | No |  | 12/3/2020 |
| Other | X | 6/2001 |  | Township | S | + | No |  | SALDO Ordinance |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |  | Community Development | No |  |  |
| Planners or engineers (with natural and / or human-caused hazards knowledge) | X |  | Keystone  Consulting  Engineers | No |  |  |
| Engineers or professionals trained in building and / or infrastructure construction practices (including building inspectors) | X |  | Keystone  Consulting  Engineers | No |  |  |
| Emergency Manager | X |  | Peter Christ | Yes |  |  |
| Floodplain administrator / manager | X |  | Duane A. Dellecker | Yes |  |  |
| Land surveyors | X |  | Keystone  Consulting  Engineers | No |  |  |
| Staff familiar with the hazards of the community | X |  | Fire Inspectors | No |  |  |
| Personnel skilled in Geographical Information Systems (GIS) and / or FEMA’s HAZUS program | X |  | Keystone  Consulting  Engineers/  Township Staff | No |  |  |
| Grant writers or fiscal staff to handle large / complex grants | X |  | Keystone  Consulting  Engineers | No |  |  |
| 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** |
| **3. Financial Resources** | Capital improvement programming |  |  |  |  |  |  |
| Community Development Block Grants (CDBG) |  |  |  |  |  |  |
| Special purposes taxes | X |  | Township | No |  | Local Services Tax |
| Gas / Electricity utility fees |  |  |  |  |  |  |
| Water / Sewer fees | X |  | Township |  |  |  |
| Stormwater utility fees |  |  |  |  |  |  |
| Development impact fees | X |  | Township |  |  |  |
| General obligation, revenue, and / or special tax bonds | X |  | Township |  |  |  |
| Partnering arrangements or intergovernmental agreements | X |  | PennDOT |  |  | Snow Plowing Agreement |
| Other |  |  |  |  |  |  |
| **4. Education & Outreach** | Firewise Communities Certification |  |  |  |  |  |  |
| StormReady Certification | X |  | Lehigh County | No |  |  |
| Natural disaster or safety-related school programs | X |  | Fire Department | No |  |  |
| Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education. | X |  | Upper Macungie Township | No |  | Community Newsletter |
| 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 |  | UMT CERT |  |  |  |
| 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** |
| Blue Barn Estates | Residential | 11 | Blue Barn Road | None | 0% Complete |
| Fallbrooke | Residential | 90 | Schantz Road &  Twin Ponds Road | Breinig Run | In SALDO Process |
| Hidden Meadows | Residential | 66 | Werley Road | None | 25% Complete |
| High Gate | Residential | 353 | Mosser Road | Schaeffer Run Tributary | 80% Complete |
| Lehigh Hills | Residential | 513 | Nursery Street & Rte. 100 | Hassen Creek |  |
| Parkland Fields | Residential | 205 | Schantz Road &  Abigail Lane | None | 50% Complete |
| Park View Court | Residential | 10 | Mosser Road | None | 0% Complete |
| Schaeffer Run Commons | Residential | 168 | Hamilton Boulevard & Schaeffer Run Road | Schaeffer Run &  Spring Creek | In SALDO Process |
| Trexler Fields | Residential | 358 | Hamilton Boulevard & Schaeffer Run Road | Schaeffer Run | 75% complete |
| Valley West Estates | Residential | 47 | Olde Road & Nestle Way | Iron Run | 50% Complete |
| Weiler's Road Twins | Residential | 82 | Weiler's Road | Schaeffer Run | 0% Complete |
| Woodmere | Residential | 189 | Ash Lane | None | 0% Complete |
| Wotring North | Residential | 22 | Ash Lane &  Schaeffer Run Road | None | 0% Complete |
| Wotring II | Residential | 15 | Ash Lane &  Schaeffer Run Road | None | 0% Complete |
| Wrenfield | Residential | 98 | Rt. 100 & Glenlivet Drive | None | Under Construction |
| Hidden Meadows – Phase 3 | Residential: Townhomes | 20 | Werley Road &  Rockrose Lane |  | In SALDO Process |
| Laurel Fields – Phase 5 | Residential: Townhomes | 20 | Werley Road |  | 0% Complete |
| Lehigh Hills – Phase 5 | Residential:  Single-Family Homes | 233 | Fogelsville |  | Under Construction |
| Mosser Road Subdivision | Residential:  Single-Family Homes | 10 | Mosser Road |  | In SALDO Process |
| Schafer Run Commons  (Hamilton Walk) | Residential:  Single-Family Homes | 157 | Weilers Road, Breinigsville |  | Under Construction |
| Trexler Pointe  (Towns at Schafer Run) | Residential: Townhomes | 128 | Weilers Road, Breinigsville |  | In SALDO Process |
| Valley West – Phase 5 & 6 | Residential:  Single-Family Homes | 25 | Schantz Road &  Oldt Road |  | Under Construction |
| Weilers Road Towns  (Parkland Crossing) | Residential: Townhomes | 144 | Weilers Road, Breinigsville |  | Under Construction |
| Glenlivet Drive W Ext. &  Subdivision | Residential:  Single-Family Homes | 52 | Church Street &  Main Street |  | In SALDO Process |
| Carriage East | Residential:  Single-Family Homes | 11 | Schantz Road |  | In SALDO Process |
| Sunset Orchards | Residential:  Townhomes & Twins | 216 | Ruppsville Road, Schantz Road & Bastian Lane |  | In SALDO Process |

**Natural & Non-Natural Event History Specific to Upper Macungie Township**

|  |  |  |
| --- | --- | --- |
| **Type of Event and Date(s)** | **FEMA Disaster #**  **(if applicable)** | **Local Damage(s) or Loss(es)** |
| Winter Storm Jonas – 1/2016 | DR-4267-PA | Jonas snow storm removal and salting |
| 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** | Fogelsville Dam Remediation (see Section J – Additional Comments). |  |  | X |  |  | Dam partially breached by Township |
| **2** | Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.  Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation.  Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability. |  |  |  | X |  | Reconstruction Completed. Action carried through to the 2018 Action Plan. |
| **3** | Purchase, or relocate structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.  Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability. |  |  | X |  |  | New development strategies have resolved many of these issues. |
| **4** | Maintain compliance with and good standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.  Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP- related continued compliance actions identified below. |  |  | X |  |  |  |
| **5** | Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:  - Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.  - Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.  - Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.  - Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. |  |  | X |  |  |  |
| **6** | Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements). | X |  |  |  |  |  |
| **7** | Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. |  | X |  |  |  |  |
| **8** | Have designated NFIP Floodplain  Administrator (FPA) become a Certified Floodplain Manager through the ASFPM and/or pursue relevant continuing education training such as FEMA Benefit-Cost Analysis. |  |  |  | X |  | Building Code Administrator completed FEMA training class in Wilkes-Barre - Feb. 2017. Action carried through to the 2018 Action Plan. |
| **9** | Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community’s current compliance with the NFIP is established. | X |  |  |  |  |  |
| **10** | Obtain and archive elevation certificates for NFIP compliance. |  |  | X |  |  |  |
| **11** | Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. |  |  | X |  |  |  |
| **12** | Complete the ongoing updates of the  Comprehensive Emergency Management Plans. |  |  | X |  |  |  |
| **13** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. |  |  | X |  |  |  |
| **14** | Develop and maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping. | X |  |  |  |  |  |
| **15** | Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers). |  |  | X |  |  |  |

**Notes:**

1. Actions not carried through to the 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** | Fogelsville Dam Remediation (see Section J – Additional Comments). | 24 | Structural Project | Dam  Failure;  Flood | High | High | DEP,  DCNR,  PFBC,  FEMA, Local  Budget | DEP,  Municipality (via  Municipal  Engineer/NFIP Floodplain  Administrator) with support from FEMA | Long-term  (depending on funding) | Existing |
| **2** | Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.  Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation.  Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability. | 1 | 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 on funding) | Existing |
| **3** | Purchase, or relocate structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.  Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability. | 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 on funding) | Existing |
| **4** | Maintain compliance with and good standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.  Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP- related continued compliance actions identified below. | 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 |
| **5** | Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:  - Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.  - Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.  - Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.  - Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. | 4 | Education  & Awareness | All Hazards | High | Low-  Medium | Municipal Budget | Municipality with support  from Planning Partners,  PEMA, FEMA | Short-term | N/A |
| **6** | Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements). | 5 | Local plans & Regulations | Flood | High | Low | Municipal Budget | Via Municipal  Engineer/NFIP Floodplain  Admin. with support from PEMA, FEMA | Short-term | New &  Existing |
| **7** | 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 PA DEP,  PEMA, FEMA | Short-term | N/A |
| **8** | 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 |
| **9** | Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community’s current compliance with the NFIP is established. | 7 | Local plans & Regulations | Flood | High | Low | Municipal Budget | NFIP  Floodplain  Administrator with support  from PA DEP,  PEMA, FEMA | Short-term | N/A |
| **10** | Obtain and archive elevation certificates for NFIP compliance. | 8 | Local plans & Regulations | Flood | Low | Low | Municipal Budget | NFIP  Floodplain  Administrator | Ongoing | N/A |
| **11** | 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, possibly  FEMA  Mitigation  Grant  Funding for 5-year update | Municipality (via mitigation  planning point of contacts)  w/ support  from Planning Partners  (through their  Points of  Contact),  PEMA | Ongoing | New &  Existing |
| **12** | 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 |
| **13** | 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 |
| **14** | Develop and maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping. | 12 | Education  & Awareness | All Hazards | Low | Medium | Municipal budget | Municipality with support from  County, PEMA, FEMA | Short-term | N/A |
| **15** | Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers). | 13 | Education  & Awareness | All Hazards | Medium | Medium | Municipal budget,  FEMA  HMA and  HLS grant programs | Municipality with support from  County, PEMA | Short-term  (depending on funding) | N/A |
| **16** | Work with regional and state agencies (FEMA/PEMA/PA Dept. of Health) to help develop action plans (such as "Shelter in Place" & "Preventive Techniques") dealing with at-risk populations and exposure. | 13 | Education  & Awareness | Pandemic and  Infectious  Disease | Medium | Low | FEMA,  PEMA, PA  Department of Health | FEMA/PEMA/PA  Department of  Health - coordinate with  local emergency services | Short-term  (depending on funding) | N/A |
| **17** | Work with regional agencies (Penn State Cooperative Extension, PA Depts. Of Agriculture & Forestry) to identify invasive species & help develop damage assessment and mitigation techniques. | 13 | Education  & Awareness | Invasive Species | Medium | Medium | FEMA, PA  Departments  of  Agriculture and Forestry | PEMA, PA  Departments of  Agriculture and  Forestry,  County and  Municipal support | Short-term  (depending on funding) | N/A |

**Notes:**

***Estimated Costs:***

* Where actual project costs have been reasonable estimated: Low = < $10,000; Medium = $10,000 to $100,000; High = > $100,000;
* Where actual project costs cannot reasonably be established at this time:

**Low** = Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.

**Medium** = Could budget for under existing work plan, but would require a 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