**South Whitehall, Lehigh County Annex**

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

|  |  |
| --- | --- |
| **Primary:** | **Alternate:** |
| Thomas Petrucci  Township Manager  4444 Walbert Avenue, Allentown, PA 18104  610-398-0401  petruccit@southwhitehall.com | John G. Frantz  Fire Marshal  4444 Walbert Avenue, Allentown, PA  610-398-0401  frantzj@southwhitehall.com |

**Municipal Profile**

South Whitehall is a suburban township located in Lehigh County. It covers a land area of 17.2 square miles and has a population of 21,080 (2020 Census). The township is bordered by North Whitehall Township to the north; Whitehall Township to the northeast; Allentown to the east and southeast; Salisbury Township and Lower Macungie Township to the south; and Upper Macungie Township to the west.

South Whitehall Township is drained by the Cedar Creek, running east through the southern part of the township, and by Jordan Creek, flowing east from the northwest corner of the township to the eastern border into Whitehall Township. Both of these creeks empty into the Lehigh River.

South Whitehall is home to the Lehigh Valley Interchange of Interstate 476 and U.S. Route 22 in the western part of the township, and to the Northeast Extension of the PA Turnpike. Route 309 also travels north-south, paralleling Route 476 through the western part of the township, and crossing that same route midway through the area. Cedar Crest Boulevard (SR 1019) is a primary local arterial, running north-south in the eastern part of the township, and Mauch Chunk road (SR 1017), which runs northwest-southeast from Allentown to the northern part of South Whitehall Township. Other significant local east-west thoroughfares are Walbert Avenue (SR 1006), north of US 22, and Tilghman Street (SR 1002) south of US 22. US Route 22 also cuts east-west through the southern-most section of the township, connecting Lower Macungie, South Whitehall, and Allentown. The township is also crossed southeast northwest by a section of the Norfolk Southern rail line.

**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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| --- | --- |
| John G. Frantz, Fire Marshal  Role: Coordinate information, EMA | Jeff Kelly, Emergency Management Coordinator  Role: Responsible for Emergency Management (EMA) related activities |
| Thomas Petrucci, Floodplain Administrator  Role: Responsible for floodplain administration | Ricardo Diaz, Fire Chief, Cetronia Fire Company  Role: Fire operations |
| The Pidcock Company, Township Engineer  Role: Responsible for engineering activities | Glen Dorney, Chief of Police  Role: Law Enforcement, Assist with EMA activities |
| Thomas Petrucci, Township Manager  Role: Responsible for overall Township operations | Andrew Garger, Fire Chief, Greenawalds Fire Department  Role: Fire operations |
| Dave Manhardt, Manager, Community Development  Role: Responsible for planning activities | Herb Bender, Director of Operations – Public Works Department  Role: Responsible for water and sewer systems |
| Brian Neas, Chief, Tri-Clover Fire Company  Role: Fire operations | Robert Mateff, Chief Executive Officer, Cetronia Ambulance Corps  Role: Emergency medical service |
| Barry Search, Fire Chief, Woodlawn Fire Department  Role: Fire operations |  |

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.

Red Cross – Disaster Services

Lehigh Valley Health Network – Healthcare

St. Luke’s Health Network – Healthcare

Parkland School District – school safety and transportation management

Cedar Fair (Dorney park) – park safety and public vehicle access

Cedarbrook Nursing Home – health care

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: Emergency management and disaster preparedness / recovery information has been disseminated to the public at specifically planned public events. South Whitehall Township police disseminate information via Facebook and at planned public events.

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 | Permit Review, GIS, Education (through website and availability of resources), records, and archiving. |
| What are the barriers to running an effective NFIP program in the community, if any? | Community FPA | N/A |
| **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)? |  | Community Assistance Visit on September 23rd, 2014 |
| Is a CAV or CAC scheduled or needed? |  | No |
| **3. Regulation** | | |
| When did the community enter the NFIP? | NFIP Community Status Book | 5/19/1977 |
| Are the Flood Insurance Rate Maps (FIRMs) digital or paper?  How are residents assisted with mapping? | Community FPA | Both. Floodplain Coordinator is available for questions. |
| Do floodplain regulations meet or exceed FEMA or State minimum requirements?  If so, in what ways? | Community FPA | Exceeds. See information under this worksheet. |
| Describe the permitting process | Community FPA, State, FEMA NFIP | Permit is received. Reviewed for completeness. Accepted. Reviewed by Floodplain Coordinator. Forwarded to Township Engineer for further review, if necessary. Approved or Denied, as applicable. Issued, if applicable. |
| **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 | 51 policies.  Total Premiums: $74,999.00  Total Coverage: $12,223,400.00 |
| 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 | Total Number of Closed Paid Losses: 46  Total Amount of Closed Paid Losses: $346,928.00  Total Substantial Damage Claims Paid: 3 |
| How many structures are exposed to flood risk within the community? | Community FPA or GIS Analyst | Estimated approximately 200 structures |
| Describe any areas of flood risk with limited NFIP policy coverage | Community FPA or  FEMA Insurance Specialist | King George Inn area |
| **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.

Cedarbrook County Home (Nursing Home)

Luthercrest Retirement Community (Nursing Home)

Lehigh Valley Health Network Tilghman (short-stay surgery)

Lehigh Valley Health Network (Coordinated Health) Allentown (short-stay surgery)

Fresenius Kidney Care Center (in-patient dialysis)

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

Jewish Day School

Datzyk Montessori School

St. Joseph the Worker School

Dorney Park and Wildwater Kingdom (Amusement Park)

Parkland School District – Parkland High School, Orefield Middle School, Springhouse Middle, Kratzer Elementary School, Cetronia Elementary School, Parkway Manor Elementary School, Parkland School District Stadium

1. **Economy**

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

Dorney Park and Wildwater Kingdom

Nestle Purnia Pet Care

PPL Electric Utilities Lehigh Service Center

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.

Protection of floodplain and floodway

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.

None

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

Aqua Pennsylvania Water Facilities

PPL Electric Utilities Substation

Lehigh County Authority Water Facilities

Norfolk Southern – C&F Secondary

Cellular Towers (numerous)

PJM Interconnection – 500 KV Transmission Line

Pennsylvania Turnpike Comission – Northeast Extension / I-476

Pennsylvania Department of Transportation – US Route 22

LANTA – Public Transportation

Buckeye Partners also Energy Partners – Pipelines (2)

South Whitehall Township Water Facilities – Storage \_ Water Tower, Huckleberry Reservoir, Control – Auto Con Production Wells – K-Mart, Luthercrest, Dorney, Cornerstone, Cedarbrook and others. Booster/Chlorination – Springhouse West, Winchester Heights, Pheasant Hill, Winchester West, and other locations.

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

GEO Specialty Chemicals

Nestle Purina Pet Care

Ach Street Dam

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

Lehigh Valley Health Network Tilghman

Fresenius Kidney Care Center

St. Joseph the Worker School

Datzyk Montessori School

Lehigh Valley Health Network (Coordinated Health)

St. Luke’s Health System

South Whitehall Township Police Department

Jewish Day School

Cetronia Fire Company Fire Company, Greenawalds Fire Company, Woodlawn Fire Department

Joint Operations Center – Cetronia Ambulance Corps/Lehigh County Special Operations and Coroner/South Whitehall Township EOC

Parkland School District – Parkland High School, Orefield Middle School, Springhouse Middle School, Kratzer Elementary School, Parkway Manor Elementary School

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

Lehigh County Soccer Field

Parkland School District Stadium

Sieger’s Covered Bridge

Peter Troxell House

Romig’s Mill

Iron Bridge

Blumer House

South Whitehall Township Covered Bridge Park

Guth’s Covered Bridge

Dorney Crossroads Settlement

Lime Kilns (multiple)

Guth House

Daniel Troxell House and Blacksmith Shop

**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 | 3/15/23 |  | Township, LVPC | S | Yes |  |  |  |
| Capital Improvement Plan |  |  |  |  |  |  |  |  |  |
| Economic Development Plan |  |  |  |  |  |  |  |  |  |
| Continuity of Operations Plan | X | 4/20/16 |  | Township | S | No |  |  | Functional checklist & logistics contained in Emergency Operations Plan |
| Stormwater Management Plan / Ordinance | X | 4/18/07 |  | Township | S | No |  |  |  |
| Open Space Management Plan (or Parks/Rec., Greenways Plan) | X | 11/4/09 |  | Township | S | No |  |  |  |
| Natural Resource Protection Plan |  |  |  |  |  |  |  |  |  |
| Transportation Plan |  |  |  |  |  |  |  |  |  |
| Historic Preservation Plan |  |  |  |  |  |  |  |  |  |
| Floodplain Management Plan | X | 4/15/15 |  | Township Community Development Department | S |  |  |  |  |
| Farmland Preservation |  |  |  |  |  |  |  |  |  |
| Evacuation Plan | X | 4/20/16 |  |  | S |  |  |  | Site specific plans listed in Appendix C of Emergency Operations Plan |
| Disaster Recovery Plan | X | N/A |  |  | S |  |  |  |  |
| Hazard Mitigation Plan | X | 2021 |  | Township | S |  |  |  | Site specific emergency plan referenced in Emergency Operations Plan, floodplain regulations and zoning ordinance regulations |
| Emergency Operations Plan | X | 1/2023 |  | Township | S |  |  |  |  |
| Zoning Regulations | X | 9/1/20 |  | Township Community Development Department | S |  |  |  |  |
| Floodplain Regulations | X | 4/15/15 |  | Township Community  Development Department | S |  |  |  |  |
| NFIP Participation | X | 12/7/16 |  | Township | S |  |  |  | Date indicates Adoption of re-codified Township Ordinances. Floodplain Ordinance adopted 4/15/2015. |
| Building Code | X | 2/14/22 |  | Township Community Development Department | S |  |  |  | 2018 IBC/IRC |
| Fire Code | X | 11/16/22 |  | Township Community Development Department | S |  |  |  | 2018 IFC |
| Other | X | 6/15/22 |  | Township Community Development Department |  |  |  |  | 2018 IPMC |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |  | Township Community Development  Department |  |  |  |
| 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 |  | Township Community Development  Department |  |  |  |
| Emergency Manager | X |  | Emergency Management Agency |  |  |  |
| Floodplain administrator / manager | X |  | Township |  |  |  |
| Land surveyors | X |  | Township Engineer |  |  |  |
| Staff familiar with the hazards of the community | X |  | Township |  |  |  |
| Personnel skilled in Geographical Information Systems (GIS) and / or FEMA’s HAZUS program | X |  | Township Community Development & Public Works |  |  |  |
| Grant writers or fiscal staff to handle large / complex grants | X |  | Township |  |  |  |
| 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 |  | Township Staff | No |  |  |
| Community Development Block Grants (CDBG) | X |  | Human Services. | No |  |  |
| Special purposes taxes | X |  | Township Finance Department | Yes |  | Fire Service Tax |
| Gas / Electricity utility fees |  | X | . | No |  |  |
| Water / Sewer fees | X |  | Township Finance Department | No |  |  |
| Stormwater utility fees | X |  | Township Community Development Department | No |  |  |
| Development impact fees | X |  | Township Finance Department | No |  |  |
| General obligation, revenue, and / or special tax bonds | X |  | Township Finance Department | No |  |  |
| Partnering arrangements or intergovernmental agreements | X |  | Township Community Development Department/Police and Fire | No |  |  |
| 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 |  | X |  |  |  |  |
| StormReady Certification | X |  | Lehigh County Emergency Management Agency |  |  |  |
| Natural disaster or safety-related school programs | X |  | Township |  |  |  |
| Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education. | X |  | Township |  |  |  |
| Public-private partnership initiatives addressing disaster related issues. | X |  | Township, Parkland School District, Dorney Park |  |  |  |
| Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. | X |  | Township |  |  |  |
| 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 |  |  |
| Administrative and Technical |  |  | X |  |  |
| Financial |  |  | X |  |  |
| Education and Outreach |  |  | X |  |  |

**Known or Anticipated Future Development / Redevelopment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Development /**  **Property Name** | **Type of Development** | **Number of Structures** | **Location** | **Known Hazard Zone** | **Description / Status** |
| Blue Barn Meadows (2002-114) | Residential | 213 Townhomes | 1400 Block of Blue Barn Road | Karst Geology | Under Construction |
| Estates at Pheasant Hills II (2006-101) | Residential | 12 Singles | Orefield Road at Ritter Road | Karst Geology | Under Construction |
| Cedarpointe 1641 North Cedar Crest Boulevard (2007-101) | Commercial | Construct a four-story 91,200 ft² office building | 1641 North Cedar Crest Boulevard | Karst Geology | Phase 1 (parking) completed, Phase 2 (building) not started |
| The Hills at Winchester (2011-103) | Mixed-use – Residential/Commercial | 43 singles, 118 over-55 singles, 88 over-55 twins, 1 restaurant | 3951 Walbert Avenue | Karst Geology | Under Construction |
| KRE/Springview (2012-103) | Mixed-use – Residential/Commercial | 3 commercial pads, ten 45-unit apartment buildings, 1 clubhouse | 500 Block of Cetronia Road | Karst Geology | Under Construction |
| Rhue Subdivision (2013-201) | Residential | 4 singles | 2400 Block of Huckleberry Road | Karst Geology | Under Review |
| 30 West Twins (2015-103) | Residential | 16 twins | 3000 Block of Washington Street | Karst Geology | Under Construction |
| Tilghman Square Shopping Center Improvements (2015-106 | Commercial | 1 commercial pad, 3 tenants | 4600 Block of Broadway | Karst Geology | Complete |
| Hotel Hamilton (2015-107) | Commercial | 2 commercial pads, 1 hotel | Northeast corner of Hamilton Boulevard and North Cedar crest Boulevard | Karst Geology | Under Review |
| Hamilton Animal Care (2016-102) | Commercial | 1 commercial pad | 4500 Block of Tilghman Street | Karst Geology | Under Construction |
| St. George’s Orthodox Church (2016-106) | Institutional | 6 new buildings | Southwest corner of Orefield Road and North Cedar Crest Boulevard | Karst Geology | Under Review |
| Ridge Farm (2017-101) | Mixed-use – residential/commercial | 80 singles, 124 twins, 350 apartment units, 70 over-55 singles, 120 over-55 twins, 6 commercial pads, 3 clubhouses | North Cedar Crest Boulevard and Walbert Avenue | Karst Geology | Under Review and Construction |
| Dorney Park Project 2018 (2017-102) | Commercial | Replacement of existing building | 3830 Dorney Park Road | Karst Geology | Under Construction |

**Natural & Non-Natural Event History Specific to South Whitehall Township**

|  |  |  |
| --- | --- | --- |
| **Type of Event and Date(s)** | **FEMA Disaster #**  **(if applicable)** | **Local Damage(s) or Loss(es)** |
| Winter Storm Stella – 3/2017 | N/A | N/A |
| Winter Storm Jonas – 1/2016 | DR-4267-PA | Snowstorm |
| Pennsylvania COVID-19 Pandemic – 1/2020 | DR-4506-PA | Emergency Protective measures to combat COVID-19 Pandemic. |
| Tropical Storm Isaias – 8/2020 | N/A | Flooding |
| Tropical Storm Ida – 9/2021 | DR-4618 | Flooding |

**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** | Flooding Cedar Crest and Hamilton;  Major route to area Trauma Center LVHN. | X |  |  |  |  | Awaiting pending adjacent property development |
| **2** | Flood control - roadway flooding: Cedar  Crest Blvd (0-100) & Broadway Rd (3100-3300)/ |  |  |  | X |  | City of Allentown/PENNDOT |
| **3** | Roadway flooding: Glick Ave. and Birch Ave. | X |  |  |  |  | Township Public Works |
| **4** | Storm drainage improvements:  Crackersport Rd. between Country Lane & Bulldog Dr. | X |  |  |  |  | Township Public Works |
| **5** | Storm drainage improvements:  Broadway Rd. and Schaeffer St. |  |  |  | X |  | Township Public Works |
| **6** | Retrofit structures located in hazard prone areas to protect structures from future damage, with 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 |  |  |  |  |  |
| **7** | Purchase, or relocate structures located in hazard-prone areas to protect structures from future damage, with 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 |  |  |  |  |  |
| **8** | 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 |  |  |  |
| **9** | 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 |  |  |  |
| **10** | Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. |  |  | X |  |  |  |
| **11** | Complete the ongoing updates of the  Comprehensive Emergency Management Plans. |  |  | X |  |  |  |
| **12** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. |  |  | X |  |  |  |
| **13** | 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 |  |  | Through Lehigh County Emergency Management Agency and Local Emergency Management Agency |
| **14** | 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 |  |  | Through Lehigh County Emergency Management Agency and Local Emergency Management Agency. Continuing education programs |
| **15** | Develop preparedness and response to active-aggressor incidents. |  |  | X |  |  |  |
| **16** | Address utility interruption of critical infrastructure. Provide permanent generators and portable generator connections at water stations. |  |  | X |  |  |  |
| **17** | Coordinate with and support the Lehigh County Emergency Management Agency and PA Department of Health for setting up points of distribution and providers for immunizations. |  |  | X |  |  |  |
| **18** | Assist with dissemination of information concerning pandemic and infectious diseases. |  |  | X |  |  |  |
| **19** | Assist in dissemination of information to residents regarding how to prevent the spread of invasive species. |  |  | X |  |  |  |
| **20** | Maintain and enforce property maintenance ordinances regarding junk items that can serve as breeding areas for invasive insects. |  |  | X |  |  |  |
| **21** | Train and equip first responders with overdose-countering medication. |  |  | X |  |  |  |
| **22** | Continue DARE program in elementary and middle schools. |  |  | X |  |  |  |
| **23** | Continue support of intervention programs to address overdose reoccurrence. |  |  | X |  |  |  |
| **24** | Continue support of prescription take-back program. |  |  | 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 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** | Flooding Cedar Crest and Hamilton.  Major route to area Trauma Center LVHN | Structure & Infrastructure | Flood | High | High |  | PENNDOT |  | Existing |
| **2** | Roadway flooding: Glick Ave. and Birch Ave. | Structure & Infrastructure | Flood | Medium | High |  | Township Public Works | Depending on funding | Existing |
| **3** | Storm drainage improvements:  Crackersport Rd. between Country Lane & Bulldog Dr. | Structure & Infrastructure | Flood | Medium | High |  | Township Public Works | Depending on funding | Existing |
| **4** | Retrofit structures located in hazard prone areas to protect structures from future damage, with repetitive loss properties as priority.  Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation. Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability. | Structure & Infrastructure | Flood,  Windstorm/  Tornado,  Winter  Storm,  Earthquake | Medium- High | High | FEMA  Mitigation Grant  Programs and local  budget (or property  owner) for cost share | Municipality  (via Municipal  Engineer/NFIP Floodplain  Administrator) with support from PEMA,  FEMA | Long-term  (depending on funding) | Existing |
| **5** | Purchase, or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss properties as priority. Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.  Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability. | Structure & Infrastructure | Flood | Medium- High | High | FEMA  Mitigation Grant  Programs and local  budget (or property  owner) for cost share | Municipality  (via Municipal  Engineer/NFIP Floodplain  Administrator) with support from PEMA,  FEMA | Long-term  (depending on funding) | Existing |
| **6** | Maintain compliance with and good standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.  Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP related continued compliance actions identified below. | Local plans & Regulations | Flood,  Windstorm/  Tornado,  Winter  Storm | High | Low -  Medium | Local Budget | Municipality  (via Municipal  Engineer/NFIP Floodplain  Administrator) with support from PEMA,  ISO FEMA | Ongoing | New &  Existing |
| **7** | Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.  Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. | Education  & Awareness | All Hazards | High | Low-  Medium | Municipal Budget | Municipality with support  from Planning Partners,  PEMA, FEMA | Short-term | N/A |
| **8** | Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0 | All  Categories | All Hazards | High | Low – High (for  5-year update) | Local Budget, possibly  FEMA  Mitigation  Grant  Funding for 5-year update | Municipality (via mitigation planning point of contacts)  with support  from Planning  Partners  (Through their Points of Contact), PEMA | Ongoing | New &  Existing |
| **9** | Complete the ongoing updates of the  Comprehensive Emergency Management Plans | Local plans  & Regulations | All Hazards | High | Low | Local Budget | Municipality with support from PEMA | Ongoing | New &  Existing |
| **10** | Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations. | All  Categories | All Hazards | High | Low | Local Budget | Municipality with support from  surrounding  municipalities and County | Ongoing | New &  Existing |
| **11** | Develop and maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping. | Education & Awareness | All Hazards | Medium | Medium | Local budget | Municipality with support  from County,  PEMA, FEMA | Short-term | N/A |
| **12** | Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers). | Education & Awareness | All Hazards | Medium | Medium | Local budget,  FEMA HMA grant programs | Municipality with support  from County,  PEMA | Short-, long-term (depending on funding) | N/A |
| **13** | Develop preparedness and response to active-aggressor incidents | Local plans & Regulations | Mass  Gathering /  Civil  Disturbance | High | High | Federal and State grants,  Municipal budget | Township and  Lehigh County  Emergency  Management | Immediate/ ongoing | N/A |
| **14** | Address utility interruption of critical infrastructure. Provide permanent generators and portable generator connections at water stations. | Structure & Infrastructure | Multiple  Natural  Hazards;  Utility  Interruption | High | High | Municipal Budget | Township | Immediate/ ongoing | Existing |
| **15** | Coordinate with and support the Lehigh County Emergency Management Agency and PA Department of Health for setting up points of distribution and providers for immunizations. | Local plans & Regulations | Pandemic and  Infectious Disease | Medium | Low | Municipal Budget | Municipality, working with  County EMA and PA  Department of Health | Ongoing | N/A |
| **16** | Assist with dissemination of information concerning pandemic and infectious diseases. | Education & Awareness | Pandemic and  Infectious Disease | Medium | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **17** | Assist in dissemination of information to residents regarding how to prevent the spread of invasive species. | Education  & Awareness | Invasive Species | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **18** | Maintain and enforce property maintenance ordinances regarding junk items that can serve as breeding areas for invasive insects. | Education  & Awareness | Invasive Species | High | Low | Municipal Budget | Municipality | Short-term | N/A |
| **19** | Train and equip first responders with overdose-countering medication. | Local plans  & Regulations | Drug  Overdose  Crisis | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **20** | Continue DARE program in elementary and middle schools. | Education  & Awareness | Drug  Overdose  Crisis | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **21** | Continue support of intervention programs to address overdose reoccurrence. | Education  & Awareness | Drug  Overdose  Crisis | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **22** | Continue support of prescription take-back program. | Education  & Awareness | Drug  Overdose  Crisis | High | Low | Municipal Budget | Municipality | Ongoing | N/A |
| **23** | Storm drainage improvements, Winchester Road area east of Manchester Road including neighborhood between Leicester Place and N. 33rd Street. | 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 |

**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