9.47 NORTH CATASAUQUA BOROUGH

This section presents the jurisdictional annex for North Catasauqua Borough.

A. HAZARD MITIGATION PLAN POINT OF CONTACT

<table>
<thead>
<tr>
<th>Primary Point of Contact</th>
<th>Alternate Point of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>Title/Department</td>
<td>Title/Department</td>
</tr>
<tr>
<td>Address</td>
<td>Address</td>
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<tr>
<td>Telephone</td>
<td>Telephone</td>
</tr>
<tr>
<td>Fax</td>
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<tr>
<td>Email</td>
<td>Email</td>
</tr>
</tbody>
</table>

B. MUNICIPAL PROFILE

North Catasauqua Borough is located in the western part of Northampton County. It encompasses an area of approximately 0.8 square miles, and has a population of 2,849 (2010 Census). As shown in Figure 1, the borough borders Northampton Borough to the north, Allen Township to the north and north and east, Catasauqua Borough (Lehigh County) to the south, and Whitehall Township (Lehigh County) to the west.

![Figure 1](http://www.lvpc.org/pdf/maps/baseMap-LehighNorthamptonCounties.pdf)

The Lehigh River forms the borough’s western border with Whitehall Township (Lehigh County), and the Catasaqua Creek forms its eastern border with Allen Township, as it passes through the Willow Brook Golf Course.

There are no state highways in North Catasauqua. Howertown Road travels north-south through the center of the borough. 4th Street enters the western part of the borough from the south, and travels...
northwest to Main Street, which travels north-south into Northampton Borough. Lehigh Street crosses the Lehigh River east-west at approximately the middle of the borough. Grove Street is another notable east-west road in the borough.
B.1 Known or Anticipated Future Development

The following table summarizes major residential/commercial development and major infrastructure development that are identified for the next five (5) to ten (10) years in the municipality. Refer to the map at the end of this annex which illustrates the hazard areas within the municipality.

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Type (Residential or Commercial)</th>
<th>Number of Structures</th>
<th>Location</th>
<th>Known Hazard Zone*</th>
<th>Description / Status</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

* Only location-specific hazard zones or vulnerabilities identified. With the exception of flood, wildfire, landslides, and land subsidence/sinkholes, all locations within the Lehigh Valley are exposed to the natural hazards addressed in this plan.
C. NATURAL HAZARD EVENT HISTORY SPECIFIC TO NORTH CATASAUQUA BOROUGH

<table>
<thead>
<tr>
<th>Type of Event and Date</th>
<th>FEMA Disaster # (if applicable)</th>
<th>Local Damage and Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
### D. NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

The following relative ranking of natural and non-natural hazard risks in this municipality was developed using PEMA’s Risk Factor methodology described in Section 4, “Risk Assessment”

<table>
<thead>
<tr>
<th>HAZARD RISK</th>
<th>NATURAL HAZARDS</th>
<th>RISK ASSESSMENT CATEGORY</th>
<th>RISK FACTOR (RF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>Winter Storm</td>
<td>Probability 3 Impact 2 Spatial Extent 4 Warning Time 1 Duration 3</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Flood</td>
<td>Probability 3 Impact 2 Spatial Extent 2 Warning Time 3 Duration 3</td>
<td>2.5</td>
</tr>
<tr>
<td>MODERATE</td>
<td>Radon Exposure</td>
<td>Probability 4 Impact 1 Spatial Extent 2 Warning Time 1 Duration 4</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Subsidence / Sinkholes</td>
<td>Probability 2 Impact 2 Spatial Extent 4 Warning Time 2 Duration 1</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>Extreme Temperatures</td>
<td>Probability 4 Impact 1 Spatial Extent 2 Warning Time 1 Duration 3</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>Drought</td>
<td>Probability 2 Impact 1 Spatial Extent 4 Warning Time 1 Duration 4</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Wildfire</td>
<td>Probability 3 Impact 1 Spatial Extent 2 Warning Time 3 Duration 3</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Hailstorm</td>
<td>Probability 3 Impact 1 Spatial Extent 3 Warning Time 2 Duration 1</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>Wind, incl. Tornado</td>
<td>Probability 1 Impact 3 Spatial Extent 2 Warning Time 4 Duration 1</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>Lightning</td>
<td>Probability 4 Impact 1 Spatial Extent 1 Warning Time 2 Duration 1</td>
<td>2</td>
</tr>
<tr>
<td>LOW</td>
<td>Earthquake</td>
<td>Probability 1 Impact 1 Spatial Extent 4 Warning Time 4 Duration 1</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>Landslide</td>
<td>Probability 1 Impact 1 Spatial Extent 1 Warning Time 4 Duration 1</td>
<td>1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAZARD RISK</th>
<th>MAN-MADE HAZARDS</th>
<th>RISK ASSESSMENT CATEGORY</th>
<th>RISK FACTOR (RF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>Fire (Urban/Structural)</td>
<td>Probability 4 Impact 2 Spatial Extent 1 Warning Time 4 Duration 2</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Environmental Hazard and</td>
<td>Probability 3 Impact 2 Spatial Extent 2 Warning Time 4 Duration 3</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Utility Interruption</td>
<td>Probability 3 Impact 1 Spatial Extent 3 Warning Time 4 Duration 3</td>
<td>2.5</td>
</tr>
<tr>
<td>MODERATE</td>
<td>Transportation Accident</td>
<td>Probability 4 Impact 1 Spatial Extent 1 Warning Time 4 Duration 1</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Mass Gathering and Civil Disturbance</td>
<td>Probability 3 Impact 1 Spatial Extent 1 Warning Time 4 Duration 2</td>
<td>2</td>
</tr>
<tr>
<td>LOW</td>
<td>Terrorism</td>
<td>Probability 1 Impact 3 Spatial Extent 1 Warning Time 4 Duration 1</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>Building Collapse</td>
<td>Probability 1 Impact 3 Spatial Extent 1 Warning Time 4 Duration 1</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>Dam Failure</td>
<td>Probability 1 Impact 2 Spatial Extent 2 Warning Time 4 Duration 2</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>Nuclear Incident</td>
<td>Probability 1 Impact 1 Spatial Extent 1 Warning Time 4 Duration 2</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Levee Failure</td>
<td>Probability 0 Impact 0 Spatial Extent 0 Warning Time 0 Duration 0</td>
<td>0</td>
</tr>
</tbody>
</table>
E. CAPABILITY ASSESSMENT

This section identifies the following capabilities of the local jurisdiction:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification.
### E.1 Planning and Regulatory Capability

<table>
<thead>
<tr>
<th>Tool / Program</th>
<th>In Place</th>
<th>Status</th>
<th>Dept./Agency Responsible</th>
<th>Effect on Loss Reduction:</th>
<th>Change Since Last Plan:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ Support</td>
<td>+ Positive</td>
<td>Updating 2012</td>
</tr>
<tr>
<td>Hazard Mitigation Plan</td>
<td>X</td>
<td>2006</td>
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<tr>
<td>Emergency Operations Plan</td>
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<tr>
<td>Disaster Recovery Plan</td>
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<tr>
<td>Evacuation Plan</td>
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<tr>
<td>Continuity of Operations Plan</td>
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<td>NFIP</td>
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<tr>
<td>NFIP – Community Rating System</td>
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<tr>
<td>Floodplain Regulations (spec. NFIP Flood Damage</td>
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<tr>
<td>Prevention Ordinance</td>
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<tr>
<td>Floodplain Management Plan</td>
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<tr>
<td>Zoning Regulations</td>
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<tr>
<td>Subdivision Regulations</td>
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<tr>
<td>Comprehensive Land Use Plan (or General, Master or</td>
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<tr>
<td>Growth Mgt. Plan</td>
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<tr>
<td>Open Space Management Plan (or Parks/Rec or</td>
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<tr>
<td>Greenways Plan</td>
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<tr>
<td>Stormwater Management Plan / Ordinance</td>
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<tr>
<td>Natural Resource Protection Plan</td>
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</table>
### Tool / Program

<table>
<thead>
<tr>
<th>Tool / Program</th>
<th>In Place</th>
<th>Date Adopted or Updated</th>
<th>Under Development</th>
<th>Dept./Agency Responsible</th>
<th>Effect on Loss Reduction:</th>
<th>Change Since Last Plan:</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Capital Improvement Plan</td>
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<td>+ Support</td>
<td>+ Positive</td>
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<td>Economic Development Plan</td>
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<td>O Neutral</td>
<td>+ Positive</td>
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<td>Historic Preservation Plan</td>
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<td>- Hinder</td>
<td>- Negative</td>
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<td>Farmland Preservation</td>
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<td>Building Code</td>
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<td>Fire Code</td>
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<tr>
<td>Other</td>
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</tbody>
</table>
### E.2 Administrative and Technical Capability

<table>
<thead>
<tr>
<th>Staff/Personnel Resources</th>
<th>Yes</th>
<th>No</th>
<th>Department/Agency</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planners (with land use / land development knowledge)</td>
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<tr>
<td>Planners or engineers (with natural and/or human caused hazards knowledge)</td>
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<tr>
<td>Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)</td>
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<tr>
<td>Emergency Manager</td>
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<tr>
<td>NFIP Floodplain Administrator</td>
<td></td>
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<tr>
<td>Land Surveyors</td>
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<tr>
<td>Scientists or staff familiar with the hazards of the community</td>
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<tr>
<td>Personnel skilled in Geographic Information Systems (GIS) and/or FEMA’s HAZUS program</td>
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<tr>
<td>Grant writers or fiscal staff to handle large/complex grants</td>
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<tr>
<td>Staff with expertise or training in Benefit-Cost Analysis</td>
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<tr>
<td>Other</td>
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</tbody>
</table>
### E.3 Fiscal Capability

<table>
<thead>
<tr>
<th>Financial Resources</th>
<th>Yes</th>
<th>No</th>
<th>Department/Agency</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Capital Improvement Programming</td>
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<tr>
<td>Community Development Block Grants (CDBG)</td>
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<tr>
<td>Special Purpose Taxes</td>
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<tr>
<td>Gas / Electric Utility Fees</td>
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<tr>
<td>Water / Sewer Fees</td>
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<tr>
<td>Stormwater Utility Fees</td>
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<tr>
<td>Development Impact Fees</td>
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<tr>
<td>General Obligation, Revenue, and/or Special Tax Bonds</td>
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<tr>
<td>Partnering Arrangements or Intergovernmental Agreements</td>
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<tr>
<td>Other</td>
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</table>
E.4 Community Classifications

<table>
<thead>
<tr>
<th>Program</th>
<th>Classification</th>
<th>Date Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Rating System (CRS)</td>
<td>NP</td>
<td>N/A</td>
</tr>
<tr>
<td>Building Code Effectiveness Grading Schedule (BCEGS)</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Public Protection</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Storm Ready</td>
<td>NP</td>
<td>N/A</td>
</tr>
<tr>
<td>Firewise</td>
<td>NP</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = Not applicable. NP = Not participating. - = Unavailable.

The classifications listed above relate to the community’s effectiveness in providing services that may impact it’s vulnerability to the natural hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class one (1) being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:
- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at http://www.isomitigation.com/ppc/0000/ppc0001.html
- The National Firewise Communities website at http://firewise.org/

F. MITIGATION STRATEGY

F.1 Past Mitigation Activities/Efforts

- None identified at this time.

F.2 Hazard Vulnerabilities Identified

It is estimated that in North Catasauqua Borough, no residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 8.4% is located within the 1% annual chance flood area. $0 (0%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 0 NFIP policies in the community. There are 3 parcels located within the 1% annual chance flood area. FEMA has identified 0 Repetitive Loss (RL) including 0 Severe Repetitive Loss (SRL) properties in the municipality.
HAZUS-MH estimates that for a 1% annual chance flood, $1,877,000 (0.5%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 31 people may be displaced, 4 people may seek short-term sheltering, and an estimated 221 tons of debris could be generated.

The following vulnerabilities have been identified by the community, within the risk assessment, or in other plan, reports and documents (e.g. FEMA Flood Insurance Studies, Act 167 Stormwater Management Plans):

- None identified at this time.

Please refer to the Hazard Profiles for additional vulnerability information relevant to this jurisdiction.
### F.3 Hazard Mitigation Strategy

Note some of the identified mitigation initiatives in Table F are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.

<table>
<thead>
<tr>
<th>Action No.</th>
<th>Action</th>
<th>Mitigation Technique Category</th>
<th>Hazard(s) Addressed</th>
<th>Priority (H/M/L)</th>
<th>Estimated Cost</th>
<th>Potential Funding Sources</th>
<th>Lead Agency / Department</th>
<th>Implementation Schedule</th>
<th>Applies to New and/or Existing Structures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.</td>
<td>Property Protection</td>
<td>Flood, Severe Storm, Earthquake</td>
<td>Medium-High*</td>
<td>High</td>
<td>FEMA Mitigation Grant Programs and local budget (or property owner) for cost share</td>
<td>Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA</td>
<td>Long-term DOF</td>
<td>Existing</td>
</tr>
<tr>
<td>2</td>
<td>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.</td>
<td>Property Protection</td>
<td>Flood</td>
<td>Medium-High*</td>
<td>High</td>
<td>FEMA Mitigation Grant Programs and local budget (or property owner) for cost share</td>
<td>Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA</td>
<td>Long-term DOF</td>
<td>Existing</td>
</tr>
<tr>
<td>Action No.</td>
<td>Action</td>
<td>Mitigation Technique</td>
<td>Hazard(s) Addressed</td>
<td>Priority (H/M/L)</td>
<td>Estimated Cost</td>
<td>Potential Funding Sources</td>
<td>Lead Agency / Department</td>
<td>Implementation Schedule</td>
<td>Applies to New and/or Existing Structures*</td>
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<tr>
<td>3</td>
<td>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. Furthermore, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified below.</td>
<td>Property Protection</td>
<td>Flood, Severe Storms</td>
<td>High</td>
<td>Low - Medium</td>
<td>Local Budget</td>
<td>Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, ISO FEMA</td>
<td>Ongoing</td>
<td>New &amp; Existing</td>
</tr>
<tr>
<td>4</td>
<td>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.</td>
<td>Public Education</td>
<td>All Hazards</td>
<td>High</td>
<td>Low-Medium</td>
<td>Municipal Budget with support</td>
<td>Municipality with support</td>
<td>Short</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### SECTION 9.47: NORTH CATASAUQUA BOROUGH

<table>
<thead>
<tr>
<th>Action No.</th>
<th>Action</th>
<th>Mitigation Technique Category</th>
<th>Hazard(s) Addressed</th>
<th>Priority (H/M/L)</th>
<th>Estimated Cost</th>
<th>Potential Funding Sources</th>
<th>Lead Agency / Department</th>
<th>Implementation Schedule</th>
<th>Applies to New and/or Existing Structures*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Begin the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements) and sinkhole risk (e.g. carbonate bedrock standards).</td>
<td>Prevention</td>
<td>Flood; Subsidence / Sinkholes</td>
<td>High</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA</td>
<td>Short</td>
<td>New &amp; Existing</td>
</tr>
<tr>
<td>6</td>
<td>Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.</td>
<td>Prevention, Property Protection</td>
<td>Flood, Severe Storms</td>
<td>Medium</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>NFIP Floodplain Administrator with support from PADEP, PEMA, FEMA</td>
<td>Short (year 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>7</td>
<td>Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM, and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.</td>
<td>Public Education and Awareness</td>
<td>Flood, Severe Storms</td>
<td>High</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>NFIP Floodplain Administrator</td>
<td>Short (DOF)</td>
<td>N/A</td>
</tr>
<tr>
<td>8</td>
<td>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</td>
<td>Prevention, Property Protection, Public Education and Awareness</td>
<td>Flood, Severe Storms</td>
<td>Medium</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>NFIP Floodplain Administrator with support from PADEP, PEMA, FEMA</td>
<td>Short (year 1)</td>
<td>NA</td>
</tr>
<tr>
<td>Action No.</td>
<td>Action</td>
<td>Mitigation Technique Category</td>
<td>Hazard(s) Addressed</td>
<td>Priority (H/M/L)</td>
<td>Estimated Cost</td>
<td>Potential Funding Sources</td>
<td>Lead Agency / Department</td>
<td>Implementation Schedule</td>
<td>Applies to New and/or Existing Structures*</td>
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</tr>
<tr>
<td>9</td>
<td>Archive elevation certificates</td>
<td>Public Education and Awareness</td>
<td>Flood, Severe Storm</td>
<td>High</td>
<td>Low</td>
<td>Local Budget</td>
<td>NFIP Floodplain Administrator</td>
<td>On-going</td>
<td>NA</td>
</tr>
<tr>
<td>10</td>
<td>Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0</td>
<td>All Categories</td>
<td>All Hazards</td>
<td>High</td>
<td>Low – High (for 5-year update)</td>
<td>Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update</td>
<td>Municipality (via mitigation planning point of contacts) with support from Planning Partners (through their Points of Contact), PEMA</td>
<td>Ongoing</td>
<td>New &amp; Existing</td>
</tr>
<tr>
<td>11</td>
<td>Complete the ongoing updates of the Comprehensive Emergency Management Plans</td>
<td>Emergency Services</td>
<td>All Hazards</td>
<td>High</td>
<td>Low</td>
<td>Local Budget</td>
<td>Municipality with support from PEMA</td>
<td>Ongoing</td>
<td>New &amp; Existing</td>
</tr>
<tr>
<td>12</td>
<td>Create/Enhance/Maintain Mutual Aid Agreements with Neighboring Communities for Continuity of Operations.</td>
<td>Emergency Services</td>
<td>All Hazards</td>
<td>High</td>
<td>Low</td>
<td>Local Budget</td>
<td>Municipality with support from Surrounding Municipalities and County</td>
<td>Ongoing</td>
<td>New &amp; Existing</td>
</tr>
<tr>
<td>14</td>
<td>Identify and develop agreements with entities that can provide support with FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record-keeping</td>
<td>Public Education and Awareness, Emergency Services</td>
<td>All Hazards</td>
<td>Medium</td>
<td>Medium</td>
<td>Local budget</td>
<td>Municipality with support from County, PEMA, FEMA</td>
<td>Short</td>
<td>NA</td>
</tr>
<tr>
<td>14</td>
<td>Work with regional agencies (i.e. County and PEMA) to</td>
<td>Public Education</td>
<td>All Hazards</td>
<td>Medium</td>
<td>Medium</td>
<td>Local budget,</td>
<td>Municipality with support</td>
<td>Short – Long-term DOF</td>
<td>NA</td>
</tr>
</tbody>
</table>
### Action No.

**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).**

<table>
<thead>
<tr>
<th>Mitigation Technique Category</th>
<th>Hazard(s) Addressed</th>
<th>Priority (H/M/L)</th>
<th>Estimated Cost</th>
<th>Potential Funding Sources</th>
<th>Lead Agency / Department</th>
<th>Implementation Schedule</th>
<th>Applies to New and/or Existing Structures*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>and Awareness, Emergency Services</td>
<td></td>
<td></td>
<td>FEMA HMA and HLS grant programs</td>
<td>from County, PEMA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (NA) is inserted if this does not apply.

**Costs:**

Where actual project costs cannot reasonably be established at this time:

- Low = < $10,000
- Medium = $10,000 to $100,000
- High = > $100,000

**Potential FEMA HMA Funding Sources:**

- PDM = Pre-Disaster Mitigation Grant Program
- FMA = Flood Mitigation Assistance Grant Program
- RFC = Repetitive Flood Claims Grant Program
- SRL = Severe Repetitive Loss Grant Program
- HMGP = Hazard Mitigation Grant Program

**Timeline:**

- Short = 1 to 5 years
- Long Term= 5 years or greater
- OG = On-going program
- DOF = Depending on funding
### G. ANALYSIS OF MITIGATION ACTIONS

Municipal mitigation actions were evaluated and prioritized primarily using the PA STEEL methodology discussed in Section 6 of this plan. Per the cost-benefit weighted PA STEEL methodology, those actions receiving 20 or more favorable ratings were generally considered high-priority actions. However, other factors beyond the PA STEEL numeric ranking may have been considered by the municipality during project prioritization. For example, a project might be assigned a medium priority because of the uncertainty of a funding source, and could be changed to high once a funding source has been identified such as a grant.

<table>
<thead>
<tr>
<th>Mitigation Action</th>
<th>PA STEEL CRITERIA CONSIDERATIONS</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(+) Favorable</td>
<td>(-) Less favorable</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>Retrofit Vulnerable Structures</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Acquire Vulnerable Structures</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Maintain NFIP compliance</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Public Education and Outreach</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
<td>Rating</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>5</td>
<td>Higher Regulatory Standards</td>
<td>6 (N)</td>
</tr>
<tr>
<td>6</td>
<td>Community Assistance Visit</td>
<td>6 (N)</td>
</tr>
<tr>
<td>7</td>
<td>NFIP FPA become a Certified Floodplain Manager</td>
<td>6 (N)</td>
</tr>
<tr>
<td>8</td>
<td>Join Community Rating System</td>
<td>6 (N)</td>
</tr>
<tr>
<td>9</td>
<td>Archive Elevation Certificates</td>
<td>6 (N)</td>
</tr>
<tr>
<td>10</td>
<td>Support Plan Maintenance and Update</td>
<td>6 (N)</td>
</tr>
<tr>
<td>11</td>
<td>Update CEMP</td>
<td>6 (N)</td>
</tr>
<tr>
<td>12</td>
<td>Enhance Mutual Aid Agreements</td>
<td>6 (N)</td>
</tr>
<tr>
<td>13</td>
<td>Identify Post-Disaster Capabilities</td>
<td>6 (N)</td>
</tr>
<tr>
<td>14</td>
<td>Develop Post-Disaster Capabilities</td>
<td>6 (N)</td>
</tr>
</tbody>
</table>
H. FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

A more detailed flood loss analysis could be conducted on a structural level (versus the Census block analysis conducted for the HMP). The location of each building, details regarding the building (see additional data needed below) and the assessed or fair market value could be included in HAZUS-MH. The FEMA DFIRM boundaries, FEMA Flood Insurance Study detailed studies, base flood elevations and available Light Detection and Ranging (LiDAR) data or digital elevation models (DEM) could be used to generate a more accurate flood depth grid and then integrated into the HAZUS model. The flood depth-damage functions could be updated using the U.S. Army Corps of Engineer damage functions for residential building stock to better correlate HAZUS-MH results with FEMA benefit-cost analysis models. HAZUS-MH would then estimate more accurate potential losses per structure.

Additional data needed to perform the analysis described above:

- Specific building information – first-floor elevation (elevation certificates), number of stories, foundation type, basement, square footage, occupancy type, year built, type of construction etc.
- Assessed or fair market value of structure
- LiDAR or high resolution DEM

I. HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been generated and is provided below for North Catasauqua Borough to illustrate the probable areas impacted within North Catasauqua Borough. This map is based on the best available data at the time of the preparation of this Plan, and is considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which North Catasauqua Borough has significant exposure. Regional risk maps are provided in the hazard profiles within Section 4, Volume I of this Plan.

J. ADDITIONAL COMMENTS

No additional comments at this time.