

9.54 STOCKERTOWN BOROUGH

This section presents the jurisdictional annex for Stockertown Borough.

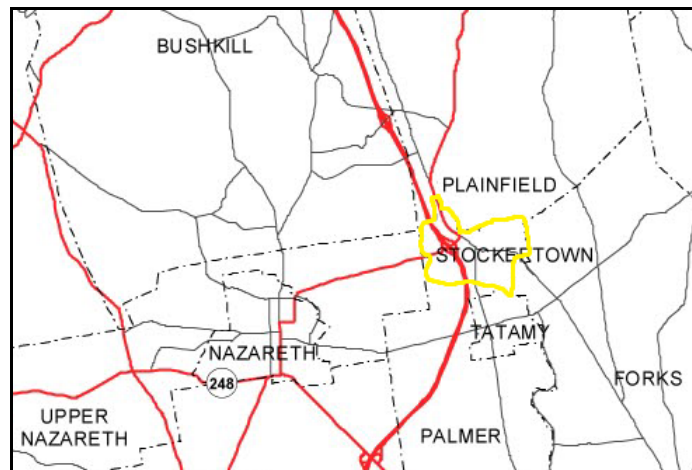
A. HAZARD MITIGATION PLAN POINT OF CONTACT

| Primary Point of Contact | | Alternate Point of Contact | |
|--------------------------|--|----------------------------|--|
| <u>Name</u> | Amy J. Richard | <u>Name</u> | Alex Soloe |
| <u>Title/</u> | Borough Council President | <u>Title/</u> | Emergency Management Coordinator |
| <u>Department</u> | Stockertown Borough Council | <u>Department</u> | Stockertown Borough |
| <u>Address</u> | 209 Main Street, Stockertown, PA | <u>Address</u> | 301 State Street, Stockertown, PA |
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B. MUNICIPAL PROFILE

Stockertown Borough is located in the central part of Northampton County. It encompasses an area of approximately 1.0 square mile, and has a population of 927 (2010 Census). As shown in Figure 1, the borough is bordered by Plainfield Township to the north, Forks Township to the east, Tatamy Borough and Palmer Township to the south, and Upper Nazareth Township to the west.

Figure 1



(Source: <http://www.lvpc.org/pdf/maps/baseMap-LehighNorthamptonCounties.pdf>)

The Bushkill Creek forms most of the borough's western and southern border with Palmer Township. The Little Bushkill Creek runs roughly parallel to the Bushkill Creek in the northwestern part of the borough, then turns southeast to the middle of the borough, where it flows south to its confluence with the Bushkill Creek. There are a few small ponds along the Little Bushkill Creek, used by the Stockertown Rod & Gun Club.

PA Route 33 runs north-south through the western half of the borough. It interchanges with PA Route 191 (East Lawn Road/Industrial Boulevard). PA Route 191 runs east-west from near the midpoint of the borough's western border, and follows Main Street north after crossing PA Route 33. Main Street also travels southeast from the intersection of Industrial Boulevard.

B.1 Known or Anticipated Future Development

No known or anticipated development identified at this time

C. NATURAL HAZARD EVENT HISTORY SPECIFIC TO STOCKERTOWN BOROUGH

| Type of Event and Date | FEMA Disaster # (if applicable) | Local Damage and Losses |
|------------------------|------------------------------------|-------------------------|
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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"

| HAZARD RISK | NATURAL HAZARDS | RISK ASSESSMENT CATEGORY | | | | | RISK FACTOR (RF) |
|-------------|------------------------|--------------------------|--------|----------------|--------------|----------|------------------|
| | | PROBABILITY | IMPACT | SPATIAL EXTENT | WARNING TIME | DURATION | |
| HIGH | Winter Storm | 3 | 2 | 4 | 1 | 3 | 2.7 |
| | Flood | 3 | 2 | 3 | 3 | 3 | 2.7 |
| MODERATE | Radon Exposure | 4 | 1 | 2 | 1 | 4 | 2.4 |
| | Subsidence / Sinkholes | 2 | 2 | 4 | 2 | 1 | 2.3 |
| | Extreme Temperatures | 4 | 1 | 2 | 1 | 3 | 2.3 |
| | Drought | 2 | 1 | 4 | 1 | 4 | 2.2 |
| | Wildfire | 3 | 1 | 2 | 3 | 3 | 2.2 |
| | Hailstorm | 3 | 1 | 3 | 2 | 1 | 2.1 |
| | Wind, incl. Tornado | 1 | 3 | 2 | 4 | 1 | 2.1 |
| | Lightning | 4 | 1 | 1 | 2 | 1 | 2 |
| LOW | Earthquake | 1 | 1 | 4 | 4 | 1 | 1.9 |
| | Landslide | 1 | 1 | 1 | 4 | 1 | 1.3 |

| HAZARD RISK | MAN-MADE HAZARDS | RISK ASSESSMENT CATEGORY | | | | | RISK FACTOR (RF) |
|-------------|--------------------------------------|--------------------------|--------|----------------|--------------|----------|------------------|
| | | PROBABILITY | IMPACT | SPATIAL EXTENT | WARNING TIME | DURATION | |
| HIGH | Fire (Urban/Structural) | 4 | 2 | 1 | 4 | 2 | 2.6 |
| | Environmental Hazard and | 3 | 2 | 2 | 4 | 3 | 2.6 |
| | Utility Interruption | 3 | 1 | 3 | 4 | 3 | 2.5 |
| MOD-ERATE | Transportation Accident | 4 | 1 | 1 | 4 | 1 | 2.2 |
| | Mass Gathering and Civil Disturbance | 3 | 1 | 1 | 4 | 2 | 2 |
| LOW | Terrorism | 1 | 3 | 1 | 4 | 1 | 1.9 |
| | Building Collapse | 1 | 3 | 1 | 4 | 1 | 1.9 |
| | Dam Failure | 1 | 2 | 2 | 4 | 2 | 1.9 |
| | Nuclear Incident | 1 | 1 | 1 | 4 | 2 | 1.4 |
| | Levee Failure | 0 | 0 | 0 | 0 | 0 | 0 |

E. CAPABILITY ASSESSMENT

This section identifies the following capabilities of the local jurisdiction:

- Planning and Regulatory capability
- Administrative and Technical capability
- Fiscal capability
- Community classifications

E.1 Planning and Regulatory Capability

| Tool / Program | Status | | | Dept./Agency Responsible | Effect on Loss Reduction: + Support O Neutral - Hinder | Change Since Last Plan: + Positive - Negative | Comments |
|---|----------|-------------------------|-------------------|--|---|---|-----------------------------------|
| | In Place | Date Adopted or Updated | Under Development | | | | |
| Hazard Mitigation Plan | X | 1/1/2006 | | Northampton County Emergency Management Agency (EMA) | + | + | Updating 2012 |
| Emergency Operations Plan | X | 4/1/2012 | | EMA Coordinator | + | + | |
| Disaster Recovery Plan | | | X | EMA Coordinator | | | |
| Evacuation Plan | | | X | EMA Coordinator | | | |
| Continuity of Operations Plan | | | | | | | |
| NFIP | | | | | | | |
| NFIP – Community Rating System | | | | | | | |
| Floodplain Regulations (spec. NFIP Flood Damage Prevention Ordinance) | | | | | | | |
| Floodplain Management Plan | X | 10/1/2012 | | | | | All ordinances codified 10/1/2012 |
| Zoning Regulations | X | 10/1/2012 | | Zoning | + | + | |
| Subdivision Regulations | X | 10/1/2012 | | Zoning | + | + | |
| Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan) | | | | | | | No growth due to sewer moratorium |

| Tool / Program | Status | | | Dept./Agency Responsible | Effect on Loss Reduction: + Support O Neutral - Hinder | Change Since Last Plan: + Positive - Negative | Comments |
|---|----------|-------------------------|-------------------|--------------------------|---|---|----------|
| | In Place | Date Adopted or Updated | Under Development | | | | |
| Open Space Management Plan (or Parks/Rec or Greenways Plan) | | | X | | | | |
| Stormwater Management Plan / Ordinance | X | 10/1/2012 | | | | | |
| Natural Resource Protection Plan | | | X | | | | |
| Capital Improvement Plan | | | | | | | |
| Economic Development Plan | | | | | | | |
| Historic Preservation Plan | | | | | | | |
| Farmland Preservation | | | | | | | |
| Building Code | X | 10/1/2012 | | | | | |
| Fire Code | X | 10/1/2012 | | | | | |
| Carbonate Bedrock Standards | X | | | | + | + | |

E.2 Administrative and Technical Capability

| Staff/Personnel Resources | Yes | No | Department/Agency | Comments |
|--|-----|----|-----------------------------|----------|
| Planners (with land use / land development knowledge) | X | | Borough Planning Commission | |
| Planners or engineers (with natural and/or human caused hazards knowledge) | X | | Keystone Engineers | |
| Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors) | X | | Keystone Engineers | |
| Emergency Manager | X | | Borough EMC | |
| NFIP Floodplain Administrator | | X | | |
| Land Surveyors | X | | Keystone Engineers | |
| Scientists or staff familiar with the hazards of the community | | X | | |
| Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program | | X | | |
| Grant writers or fiscal staff to handle large/complex grants | | X | | |
| Staff with expertise or training in Benefit-Cost Analysis | | X | | |
| Other | | | | |

E.3 Fiscal Capability

| Financial Resources | Yes | No | Department/Agency | Comments |
|---|-----|----|---------------------|----------|
| Capital Improvement Programming | | X | | |
| Community Development Block Grants (CDBG) | | X | | |
| Special Purpose Taxes | | X | | |
| Gas / Electric Utility Fees | | X | | |
| Water / Sewer Fees | X | | Borough Sewer Fund | |
| Stormwater Utility Fees | | X | | |
| Development Impact Fees | X | | Stockertown Borough | |
| General Obligation, Revenue, and/or Special Tax Bonds | | X | | |
| Partnering Arrangements or Intergovernmental Agreements | | X | | |
| Other | | | | |

E.4 Community Classifications

| Program | Classification | Date Classified |
|--|----------------|-----------------|
| Community Rating System (CRS) | NP | N/A |
| Building Code Effectiveness Grading Schedule (BCEGS) | TBD | TBD |
| Public Protection | TBD | TBD |
| Storm Ready | NP | N/A |
| Firewise | NP | N/A |

N/A = Not applicable. NP = Not participating. TBD = To Be Determined.

The classifications listed above relate to the community's effectiveness in providing services that may impact its 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. StormReady communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness.

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 Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

F. MITIGATION STRATEGY

F.1 Past Mitigation Activities/Efforts

- The Borough adopted Carbonate Bedrock Standards to mitigate the risk of sinkholes on new construction.
- The Borough raised the berm on Pond 2 at the wastewater treatment plant to mitigate overflows due to power outages and/or severe rains

F.2 Hazard Vulnerabilities Identified

It is estimated that in Stockertown Borough, 10 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 14% is located within the 1% annual chance flood area. \$4,601,284 (1.5%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 4 NFIP policies in the community. While there are 4 structures located within the 1% annual chance flood area, there is only 1 policy issued to a property owner in the 1% annual chance flood area. No Repetitive Loss (RL) properties have been identified in the municipality.

HAZUS-MH estimates that for a 1% annual chance flood, \$17,592 (0.0%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 73 people may be displaced, 47 people may seek short-term sheltering, and an estimated 97 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):

- Sinkholes, specific locations include:
 - Bushkill Street
 - Winona Street
 - Buzzi Unicem property

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.

| Action No. | Action | Mitigation Technique Category | Hazard(s) Addressed | Priority (H/M/L) | Estimated Cost | Potential Funding Sources | Lead Agency / Department | Implementation Schedule | Applies to New and/or Existing Structures* |
|------------|---|-------------------------------|---------------------|------------------|----------------|--|--|-------------------------|--|
| 1 | Purchase and installation of an audible siren and community electronic sign to warn residents and provide emergency information. | Emergency Services | All Hazards | High | Medium | Municipal Budget; Emergency Management grant programs | Borough EMC | Short Term DOF | N/A |
| 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. | Property Protection | 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 DOF | Existing |
| 3 | Purchase, or relocate structures located in hazard-prone areas to protect structures from future damage, with | Property Protection | Flood | Medium-High* | High | FEMA Mitigation Grant Programs and | Municipality (via Municipal Engineer/NFIP Floodplain Administrator) | Long Term DOF | Existing |

| Action No. | Action | Mitigation Technique Category | Hazard(s) Addressed | Priority (H/M/L) | Estimated Cost | Potential Funding Sources | Lead Agency / Department | Implementation Schedule | Applies to New and/or Existing Structures* |
|------------|--|-------------------------------|---------------------|------------------|----------------|---|--|-------------------------|--|
| | <p>repetitive loss and severe repetitive loss properties as priority</p> <p>Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.</p> <p>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.</p> | | | | | local budget (or property owner) for cost share | with support from PEMA, FEMA | | |
| 4 | <p>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.</p> <p>Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance</p> | Property Protection | Flood | High | Low - Medium | Municipal Budget | Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, ISO FEMA | On-going | New & Existing |

| Action No. | Action | Mitigation Technique Category | Hazard(s) Addressed | Priority (H/M/L) | Estimated Cost | Potential Funding Sources | Lead Agency / Department | Implementation Schedule | Applies to New and/or Existing Structures* |
|------------|--|---------------------------------|---------------------|------------------|----------------|---------------------------|--|-------------------------|--|
| | actions identified below. | | | | | | | | |
| 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: <ul style="list-style-type: none"> • 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. | | | | | | | | |
| | See above. | Public Education and Awareness | All Hazards | High | Low-Medium | Municipal Budget | Municipality with support from Planning Partners, PEMA, FEMA | Short Term | N/A |
| 6 | Begin the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements). | Prevention | Flood | High | Low | Municipal Budget | Municipality (via Municipal Engineer/NFIP Floodplain Administrator) 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. | Prevention, Property Protection | Flood | Medium | Low | Municipal Budget | NFIP Floodplain Administrator with support from PADEP, PEMA, FEMA | Short Term | N/A |
| 8 | 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. | Public Education and Awareness | Flood | High | Low | Municipal Budget | NFIP Floodplain Administrator | Short Term DOF | N/A |

| Action No. | Action | Mitigation Technique Category | Hazard(s) Addressed | Priority (H/M/L) | Estimated Cost | Potential Funding Sources | Lead Agency / Department | Implementation Schedule | Applies to New and/or Existing Structures* |
|------------|--|---|---------------------|------------------|--------------------------------|--|--|-------------------------|--|
| 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. | Prevention, Property Protection, Public Education and Awareness | Flood | Medium | Low | Municipal Budget | NFIP Floodplain Administrator with support from PADEP, PEMA, FEMA | Short Term | NA |
| 10 | Archive elevation certificates | Public Education and Awareness | Flood | High | Low | Municipal Budget | NFIP Floodplain Administrator | On-going | N/A |
| 11 | 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) | Municipal 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 | On-going | New & Existing |
| 12 | Complete the ongoing updates of the Comprehensive Emergency Management Plans | Emergency Services | All Hazards | High | Low | Municipal Budget | Municipality with support from PEMA | On-going | New & Existing |
| 13 | Create/enhance/ maintain mutual aid agreements with neighboring | Emergency Services | All Hazards | High | Low | Municipal Budget | Municipality with support from | On-going | New & Existing |

| Action No. | Action | Mitigation Technique Category | Hazard(s) Addressed | Priority (H/M/L) | Estimated Cost | Potential Funding Sources | Lead Agency / Department | Implementation Schedule | Applies to New and/or Existing Structures* |
|------------|---|--|---------------------|------------------|----------------|---|---|-------------------------|--|
| | communities for continuity of operations. | | | | | | Surrounding municipalities and County | | |
| 14 | 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 | Public Education and Awareness, Emergency Services | All Hazards | Medium | 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). | Public Education and Awareness, Emergency Services | All Hazards | Medium | Medium | Municipal Budget, FEMA HMA and HLS grant programs | Municipality with support from County, PEMA | Short/Long Term DOF | N/A |

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.

| Mitigation Action | | PA STEEL CRITERIA CONSIDERATIONS | | | | | | | | | | | | | | | | | | | | Results | | | |
|-------------------|--------------------------------|----------------------------------|----------|--------------------|--------------------------|----------------------|---------------------------------|-----------------------|--------------------|-------------------|------------------------|---------------------|-------------------------------|--------------------------|------------------------|------------------------------|-------------------------------|---|----------------------------|-----------------|--------------------------|---------------------------|---|------------------------------|---|
| | | (+) Favorable | | | | | | (-) Less favorable | | | | | | (N) Not Applicable | | | | | | | | | | | |
| | | P Political | | | A Administrative | | | S Social | | T Technical | | | E Economic | | | E Environmental | | | | | L Legal | | | SUMMARY (EQUAL WEIGHTING) | SUMMARY (BENEFITS & COSTS PRIORITIZED) |
| Political Support | Local Champion | Public Support | Staffing | Funding Allocation | Maintenance / Operations | Community Acceptance | Effect on Segment of Population | Technically Feasible | Long-Term Solution | Secondary Impacts | Benefit of Action (x3) | Cost of Action (x3) | Contributes to Economic Goals | Outside Funding Required | Effect on Land / Water | Effect on Endangered Species | Effect on HAZMAT / Waste Site | Consistent w/ Community Environmental Goals | Consistent w/ Federal Laws | State Authority | Existing Local Authority | Potential Legal Challenge | | | |
| 1 | Emergency Warning System | + | + | - | N | + | + | N | N | + | + | N | + | + | N | + | N | N | N | + | N | + | N | 11+ | 17+ |
| | | | | | | | | | | | | | | | | | | | | | | | | 1- | 1- |
| | | | | | | | | | | | | | | | | | | | | | | | | 11N | 11N |
| 2 | Retrofit Vulnerable Properties | + | + | + | - | - | + | + | + | + | + | + | + | + | - | + | + | + | N | + | N | + | + | 18 (+) | 22 (+) |
| | | | | | | | | | | | | | | | | | | | | | | | | 3 (-) | 3 (-) |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 (N) | 2 (N) |
| 3 | Acquire Vulnerable Properties | + | + | + | - | - | - | + | - | + | + | + | + | + | - | + | + | + | + | + | N | + | + | 17 (+) | 21 (+) |
| | | | | | | | | | | | | | | | | | | | | | | | | 5 (-) | 5 (-) |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 (N) | 1 (N) |
| 4 | Maintain NFIP compliance | + | + | + | + | + | - | + | + | + | + | + | + | + | + | + | + | N | + | + | N | + | - | 19 (+) | 23 (+) |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 (-) | 2 (-) |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 (N) | 2 (N) |

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|----|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------------|--------------------------|
| 5 | Public Education and Outreach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | N | N | N | N | N | N | + | + | 17 (+) 0 (-) 6 (N) | 21 (+) 0 (-) 6 (N) |
| 6 | Higher Regulatory Standards | + | + | - | + | + | - | - | - | + | + | + | + | + | + | + | + | N | N | + | + | + | + | - | 16 (+) 5 (-) 2 (N) | 20 (+) 5 (-) 2 (N) |
| 7 | Community Assistance Visit | + | + | + | + | + | - | + | + | + | N | N | + | + | + | + | N | N | N | N | + | N | + | - | 14 (+) 2 (-) 7 (N) | 18 (+) 2 (-) 7 (N) |
| 8 | NFIP FPA become a Certified Floodplain Manager | + | + | + | + | - | + | + | + | + | N | + | + | + | + | + | N | N | N | N | N | N | + | + | 15 (+) 1 (-) 7 (N) | 19 (+) 1 (-) 7 (N) |
| 9 | Join Community Rating System | + | + | + | + | - | - | + | + | + | + | + | + | + | + | + | + | + | N | + | + | N | + | + | 19 (+) 2 (-) 2 (N) | 23 (+) 2 (-) 2 (N) |
| 10 | Archive Elevation Certificates | + | + | + | + | + | + | + | + | + | N | + | + | + | N | + | N | N | N | N | + | N | + | + | 16 (+) 0 (-) 7 (N) | 20 (+) 0 (-) 7 (N) |
| 11 | Support Plan Maintenance and Update | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | N | N | N | N | + | + | + | + | 19 (+) 0 (-) 4 (N) | 23 (+) 0 (-) 4 (N) |
| 12 | Update CEMP | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | N | N | + | N | + | + | + | + | 20 (+) 0 (-) 3 (N) | 24 (+) 0 (-) 3 (N) |
| 13 | Enhance Mutual Aid Agreements | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | N | N | + | N | + | N | + | + | 19 (+) 0 (-) 3 (N) | 23 (+) 0 (-) 3 (N) |
| 14 | Identify Post-Disaster Capabilities | + | + | + | + | - | + | + | + | + | + | + | + | + | + | + | + | N | N | N | + | N | + | + | 18 (+) 1 (-) 4 (N) | 22 (+) 4 (-) 4 (N) |
| 15 | Develop Post-Disaster Capabilities | + | + | + | - | - | + | + | + | + | + | + | + | - | + | - | + | N | N | N | + | N | + | + | 15 (+) 4 (-) 4 (N) | 17 (+) 6 (-) |



| | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| | | | | | | | | | | | | | | | | | | | | | | | 4 (N) |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|



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 Stockertown Borough to illustrate the probable areas impacted within Stockertown 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 Stockertown 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.

