

## 9.51 PLAINFIELD TOWNSHIP

This section presents the jurisdictional annex for Plainfield Township.

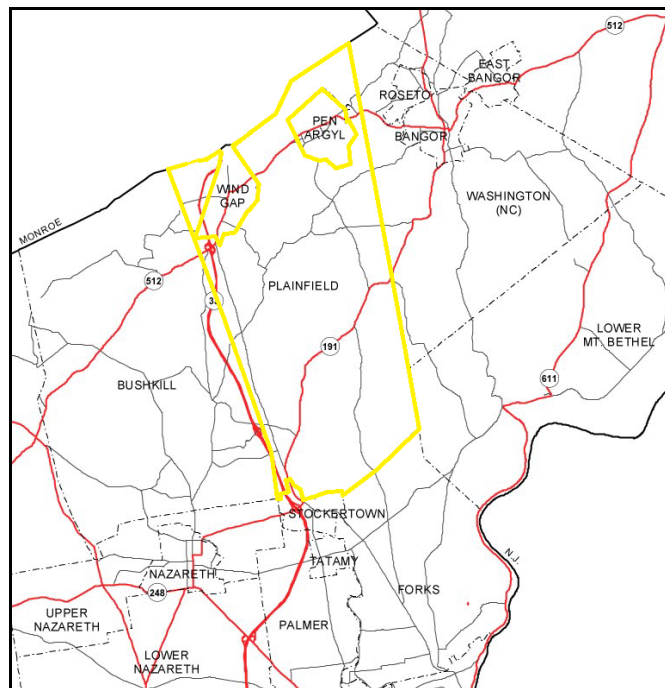
### A. HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact		Alternate Point of Contact	
<u>Name</u>	A.J. Olszewski II	<u>Name</u>	
<u>Title/</u>	Plainfield Township Emergency	<u>Title/</u>	
<u>Department</u>	Management Coordinator	<u>Department</u>	
<u>Address</u>	6292 Sullival Trail, Nazareth, PA 18064	<u>Address</u>	
<u>Telephone</u>	610-759-6944, 610-972-5791(cell)	<u>Telephone</u>	
<u>Fax</u>	610-759-1999	<u>Fax</u>	
<u>Email</u>	<a href="mailto:plainfieldtwpemc@gmail.com">plainfieldtwpemc@gmail.com</a>	<u>Email</u>	

### B. MUNICIPAL PROFILE

Plainfield Township is a rural township located in the northeastern part of Northampton County, on the border with Monroe County. It encompasses an area of approximately 24.8 square miles, and has a population of 6,138 (2010 Census). As shown in Figure 1, the township is bordered by Bushkill Township in the west, Upper Nazareth Township and Stockertown Borough in the southwest, Forks Township in the south, Lower Mount Bethel Township in the southeast, Washington Township in the east, Hamilton Township (Monroe County) in the north, and Ross Township (Monroe County) in the northwest. Plainfield Township surrounds Pen Argyl Borough in the northeast part of the township, and nearly surrounds Wind Gap Borough in the northwest part of the township.

**Figure 1**



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

No major streams run through or border the township. However, there are numerous small bodies of standing water throughout the township.

PA Route 512 (Moorestown Road/Pennsylvania Avenue/Blue Valley Drive) traverses the township in the north, travelling east-west from Bushkill Township through Wind Gap and Pen Argyl Boroughs and the boroughs in northern Washington Township. PA Route 191 (Bangor Road) also crosses the township, from the southwest corner northeast towards Bangor Borough. Church Road/Delabole Road/State Route 1016 crosses east-west roughly halfway between PA Route 512 and PA Route 191, terminating in Bangor Borough. PA Route 33 weaves north-south into and out of the township along its western border, intersecting with PA Route 512 south of Wind Gap, moving into Bushkill Township, then back into Plainfield Township in its far southwest corner. State Route 115/Sullivan Trail travels north-south just inside the western border, travelling from Stockertown Borough to PA Route 512 just south of Wind Gap.

**B.1 Known or Anticipated Future Development**

No known or anticipated development identified at this time.

**C. NATURAL HAZARD EVENT HISTORY SPECIFIC TO PLAINFIELD TOWNSHIP**

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

**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	2	3	3	2.5
MODERATE	Radon Exposure	4	1	2	1	4	2.4
	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
	Earthquake	1	1	4	4	1	1.9
LOW	Subsidence / Sinkholes	2	1	1	2	1	1.4
	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	2006, undergoing 2012 update		Municipality with Northampton County Emergency Management Services (EMS)	0	+	
Emergency Operations Plan	X	2012		Board of Supervisors (BOS) / Emergency Management Coordinator	0	+	
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP	X			Zoning	0	+	
NFIP – Community Rating System							Not participating
Floodplain Regulations (spec. NFIP Flood Damage Prevention Ordinance)	X	Updated 4-11-01		Zoning	+	+	
Floodplain Management Plan			X				
Zoning Regulations	X	Updated 2-9-00		Zoning	+	+	
Subdivision Regulations	X	Updated 3-6-91		Planning	+	+	
Comprehensive Land Use Plan	X	Updated 9-8-04		Planning	+		
Open Space Management	X	3-10-10		EAC	+	+	

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				
Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance	X	Updated 3-4-05		Planning	+	+	
Natural Resource Protection Plan	X	8-12-09		Planning	0		
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation	X	6-26-07		EAC	+	+	
Building Code	X						
Fire Code							
Other							

**E.2 Administrative and Technical Capability**

Staff/Personnel Resources	Yes	No	Department/Agency	Comments
Planners (with land use / land development knowledge)	X		Planning / Zoning	Urban Resource & Development Corp. (URDC)
Planners or engineers (with natural and/or human caused hazards knowledge)	X		Planning / Zoning	Keystone Consulting Engineers, Inc. (KCE)
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	X		Planning / Zoning	KCE
Emergency Manager	X		BOS	
NFIP Floodplain Administrator	X			
Land Surveyors	X		Planning / Zoning	KCE
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		Planning / Zoning	KCE
Grant writers or fiscal staff to handle large/complex grants	X		BOS	URDC
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		BOS	On a limited basis for low/medium income – individual surveys required
Special Purpose Taxes	X		BOS	EIT
Gas / Electric Utility Fees		X		
Water / Sewer Fees		X		
Stormwater Utility Fees		X		
Development Impact Fees	X		BOS	Recreation Fees
General Obligation, Revenue, and/or Special Tax Bonds		X		
Partnering Arrangements or Intergovernmental Agreements	X		BOS	Joint Comprehensive Plan; Inter-Municipal Sewer Agreement
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 following table summarizes progress on the mitigation strategy identified by the Township in the 2006 plan.

2006 Initiative		Status	Review Comments
Description	Location		
Repair bridge/restore or enlarge waterway under bridge	Raselytown Rd. Bridge	Continuous	Carry forward in update.
Repair bridge/restore or enlarge waterway under bridge	Jones Hill Rd. Bridge	Continuous	Carry forward in update.
Repair bridge/restore or	Edelmans Bridge at SR191	Completed.	

enlarge waterway under bridge			
Repair bridge/restore or enlarge waterway under bridge	Books Hill Rd. Bridge	Continuous	Carry forward in update.
Wildfire control	Blue Mountain	Continuous	Carry forward in update.

## F.2 Hazard Vulnerabilities Identified

It is estimated that in Plainfield Township, 66 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 2.7% is located within the 1% annual chance flood area. \$11,914,046 (1.1%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 6 NFIP policies in the community. While there are 26 structures located within the 1% annual chance flood area, there is only 1 policy issued in the 1% annual chance flood area. FEMA has not identified any Repetitive Loss (RL) properties in the municipality.

HAZUS-MH estimates that for a 1% annual chance flood, \$1,401,605 (0.1%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 71 people may be displaced, 4 people may seek short-term sheltering, and an estimated 59 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):

- Wildfires on the mountain
- Transportation emergency

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	Bridge Retrofits - Repair bridge/restore or enlarge waterway under bridge at the following: <ul style="list-style-type: none"> <li>Raselytown Road</li> <li>Jones Hill Road</li> <li>Books Hill Road</li> </ul>	Property Protection; Structural Projects	Flood	High	High	Mitigation Grant Funding;	Municipal Engineering	Long Term DOF	Existing
2	Blue Mountain Wildfire Control – piping to supply water for firefighting capabilities	Property Protection	Wildfire	Medium	High	Local budget	Municipal Fire Department	Long Term	N/A
3	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	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Long Term DOF	Existing
4	Purchase, or relocate structures located in hazard-	Property Protection	Flood	Medium-High*	High	FEMA Mitigation	Municipality (via Municipal	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>prone areas to protect structures from future damage, with 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>					Grant Programs and local budget (or property owner) for cost share	Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA		
5	<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 actions identified below.</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
6	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to								

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>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.</p>								
	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
7	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).	Prevention	Flood; Subsidence / Sinkholes	High	Low	Municipal Budget	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Short Term	New & Existing
8	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
9	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
10	Participate in the Community Rating System (CRS) to further manage flood risk and	Prevention, Property Protection,	Flood	Medium	Low	Municipal Budget	NFIP Floodplain Administrator	Short Term	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*
	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.	Public Education and Awareness					with support from PADEP, PEMA, FEMA		
11	Archive elevation certificates	Public Education and Awareness	Flood	High	Low	Municipal Budget	NFIP Floodplain Administrator	On-going	N/A
12	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
13	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
14	Create/enhance/ maintain mutual aid agreements with neighboring communities for continuity of operations.	Emergency Services	All Hazards	High	Low	Municipal Budget	Municipality with support from Surrounding municipalities and County	On-going	New & Existing
15	Identify and develop	Public	All Hazards	Medium	Medium	Municipal	Municipality	Short	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*
	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	Education and Awareness, Emergency Services				Budget	with support from County, PEMA, FEMA		
16	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	Bridge Retrofits	-	-	+	+	-	+	+	+	+	-	+	-	+	-	N	N	N	+	+	N	+	+	13(+) 6(-) 4(N)	15(+) 8(-) 4(N)
2	Blue Mountain Wildfire Control	+	N	+	+	-	+	+	+	+	N	+	+	N	+	-	-	+	N	N	N	+	+	14(+) 3(-) 6(N)	20(+) 3(-) 6(N)
3	Retrofit Vulnerable Structures	+	+	+	-	-	+	+	+	+	+	+	+	+	-	+	+	+	N	+	N	+	+	18 (+) 3 (-) 2 (N)	22 (+) 3 (-) 2 (N)
4	Retrofit Vulnerable Structures	+	+	+	-	-	-	+	-	+	+	+	+	+	-	+	+	+	+	+	N	+	+	17 (+) 5 (-) 1 (N)	21 (+) 5 (-) 1 (N)

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





## 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 Plainfield Township to illustrate the probable areas impacted within Plainfield Township. 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 Plainfield Township 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.

