



9.15 Township of Liberty

This section presents the jurisdictional annex for the Township of Liberty.

9.15.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
John E. Inscho, Mayor / OEM Coordinator 349 Mountain Lake Road, Great Meadows, NJ 07838 (908) 783-8343 John.inscho@comcast.net	Ronald W. Petersen, Committeeperson 349 Mountain Lake Road, Great Meadows, NJ 07838 (908) 637-8531 clerk@libertytownship.org

9.15.2 Municipal Profile

The Township of Liberty is located in central Warren County and covers a total area of 11.9 square miles. According to the U.S. Census, the 2010 population for Township of Liberty was 2,942. Mountain Lake, Denville, Great Meadows and Townsbury are all unincorporated communities in the Township. The Township is bordered to the north by the Townships of Hope and Frelinghuysen, to the south by White Township, to the east by Mansfield Township and Independence Township, and to the west by White Township. Liberty Township is located within the New Jersey Highlands Region, with over 7,000 acres in the Preservation Area and 543 acres in the Planning Area.

Growth/Development Trends

The Township of Liberty did not note any recent residential/commercial development since 2010 or any major residential or commercial development, or major infrastructure development planned for the next five years in the municipality.

Table 9.15-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2010 to present					
None identified as the date of this HMP Update.					
Known or Anticipated Development in the Next Five (5) Years					
None identified as the date of this HMP Update.					

** Only location-specific hazard zones or vulnerabilities identified.*

9.15.3 Natural Hazard Event History Specific to the Municipality

Warren County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the range and impact of hazard events in the community.



Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.15-1. Hazard Event History

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26 – September 5, 2011	Hurricane Irene	DR-4021	Yes	Lakeside Drive West was impassable due to mudslide. Lewis Lane was closed 2° to stability determination.
September 28 – October 6, 2011	Remnants of Tropical Storm Lee	DR-4039	Yes	During Tropical Storm Lee, there were numerous road closures and power outages in the Township. Lakeside Drive West Road was damaged and closed, Lewis Lane was closed and Mountain Lake beach front eroded. A municipal structure identified as 'casino' was demolished and removed. A municipal structure identified as 'garage' was cleaned up and restored. Mud and debris was removed from Lakeside Drive West due to a mudslide in this area. The mudslide destroyed two private structures and one public structure. The Township received assistance from WCOEM, NRCS, New Jersey Soil Conservation, FEMA, Warren County Pollution Control Financing Authority, New Jersey Initial Response Team, and Mountain Lake Fire Company. Other losses/costs to the Township included: man hours/services from Mountain Lake Fire Company, Liberty Township DPW overtime, debris/mud removal, construction of temporary access ramp to beach front, rental of safety fencing and specialty equipment, and engineering plans/designs, bore testing, surveying for movement and stability of Lewis Lane.

9.15.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The risk ranking methodology is presented in Section 5.3. However, each municipality had the opportunity to adjust the final ranking based on municipal feedback. The following summarizes the hazard vulnerabilities and their ranking in the Township of Liberty. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Liberty.



Table 9.15-1. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Dam Failure	Damage estimate not available	Occasional	24	Medium
Drought	Damage estimate not available	Frequent	30	Medium
Earthquake	100-Year GBS: \$0.00 500-Year GBS: \$275,333.00 2,500-Year GBS: \$4,284,294.00	Occasional	28	Medium
Flood	1% Annual Chance: \$3,275,640.00	Frequent	18	Medium
Geologic	RCV Exposed to Carbonate Rock Areas: \$47,882,448.00	Frequent	36	High
Hurricane	100-year MRP: \$81,088.00 500-year MRP: \$400,459.00 Annualized: \$5,764.00	Frequent	48	High
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Storm	100-Year MRP: \$81,088.00 500-year MRP: \$400,459.00 Annualized: \$5,764.00	Frequent	48	High
Severe Winter Storm	1% GBS: \$1,687,351.59 5% GBS: \$8,436,757.95	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$6,417,180.00	Occasional	22	Medium
Hazardous Materials	Damage estimate not available	Frequent	36	High

Notes:

GBS = General building stock; MRP = Mean return period.

- a. The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- b. High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH 2.2 and the 2011 FEMA DFIRM for the 1-percent annual chance event. For the geologic and wildfire hazards, the improved value and estimated contents of buildings located within the identified hazard zones is provided.



National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Liberty.

Table 9.15-3. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Flood Boundary (3)
Liberty, Township of	6	13	\$860,018	0	0	1

Source: FEMA Region 2, 2014

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 11/30/2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 11/30/14.
- (2) Total building and content losses from the claims file provided by FEMA Region 2.
- (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.
 A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.
 Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude.

Critical Facilities

There are no critical facilities located in the FEMA 1% or 0.2% annual chance boundary.

Other Vulnerabilities Identified by Municipality

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. Further, mitigation projects have been identified that may more specifically detail vulnerabilities in the community. There are no additional vulnerabilities identified at this time.



9.15.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education/Outreach and Community classification
- Self-Assessment of Capability
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of Liberty.

Table 9.15-4. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes, 2009	Municipal	Land Use Board	Master Plan
Capital Improvements Plan	NEED INFO	NEED INFO	NEED INFO	NEED INFO
Floodplain Management / Basin Plan				
Stormwater Management Plan	Yes, 2005	State	Environmental Commission	Liberty Township Municipal Stormwater Management Plan
Open Space Plan	Yes, 2009	Municipal	Land Use Board	Master Plan
Stream Corridor Management Plan				
Watershed Management or Protection Plan				
Economic Development Plan				
Comprehensive Emergency Management Plan	Yes	County and Local	OEM	Emergency Operations Plan (EOP)
Emergency Response Plan	Yes	Local		Emergency Operations Plan (EOP)
Post-Disaster Recovery Plan				
Transportation Plan	Yes, 2009	Local, County, State	Land Use Board	Master Plan
Strategic Recovery Planning Report				
Other Plans:				
Regulatory Capability				
Building Code	Yes	State	Township	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) Chapter 44 – Construction Codes, Uniform
Zoning Ordinance	Yes, 2014	Municipal	Land Use Board	Chapter 105



Table 9.15-4. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Subdivision Ordinance	Yes, 2010	Municipal	Land Use Board	Chapter 90
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Zoning Official	Chapter 61 – Flood Damage Prevention
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local	Zoning	N.J.A.C 7:13 Flood Hazard Area Control Act
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes, 2010	Municipal	Land Use Board	Chapter 90
Stormwater Management Ordinance	Yes, 2007	State	Township Committee	Chapter 87A
Municipal Separate Storm Sewer System (MS4)	No			
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local		Chapter 56 – Environmental Regulations

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Liberty.

Table 9.15-5. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	Environmental Commission
Open Space Board/Committee	Yes	Environmental Commission
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	No	
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Planner and Engineer





Table 9.15-5. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Engineer
Planners or engineers with an understanding of natural hazards	Yes	Planner & Engineer
NFIP Floodplain Administrator	Yes	Planner
Surveyor(s)	Yes	Engineer
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Engineer, Environmental Commission
Scientist familiar with natural hazards	Yes	Engineer & Planner
Emergency Manager	Yes	Mayor
Grant Writer(s)	No	
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	No	

Fiscal Capability

The table below summarizes financial resources available to the Township of Liberty.

Table 9.15-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG, CDBG-DR)	Can apply
Capital Improvements Project Funding	At Township Committee discretion
Authority to Levy Taxes for specific purposes	
User fees for water, sewer, gas or electric service	n/a
Impact Fees for homebuyers or developers of new development/ homes	
Stormwater Utility Fee	no
Incur debt through general obligation bonds	At Township Committee discretion
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	
Open Space Acquisition Funding Programs	Can apply
Other	

Education/Outreach and Community Classifications

The table below summarizes education/outreach programs the community participates in and the classifications for community program available to the Township of Liberty.

Table 9.15-7. Education/Outreach and Community Classifications

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A





Table 9.15-7. Education/Outreach and Community Classifications

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Building Code Effectiveness Grading Schedule (BCEGS)	TBD	TBD	TBD
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Mountain Lake Fire Company	TBD
Storm Ready	No	NP	N/A
Firewise	No	NP	N/A
Disaster/Safety Programs in/for Schools	Yes	Mountain Lake Fire Company	
Organizations with Mitigation Focus (advocacy group, non-government)	Yes		
Public Education Program/Outreach (through website, social media)	TBD	TBD	TBD
Public-Private Partnerships	TBD	TBD	TBD

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the 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 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 Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Township of Liberty’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.15-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and Regulatory Capability			X





Table 9.15-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Administrative and Technical Capability			X
Fiscal Capability		X	
Community Political Capability			X
Community Resiliency Capability			X
Capability to Integrate Mitigation into Municipal Processes and Activities.			X

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Eric Snyder, Planner

Flood Vulnerability Summary

The Township does not maintain lists/inventories of properties that have been damaged by floods. Structures were not damaged during Hurricane Sandy. The FPA does not make Substantial Damage estimates. Currently, there are no properties interested in mitigation (elevation or acquisition).

Resources

NFIP administration services and functions provided by the Township's FPA include permit review. Outreach to the community regarding flood hazards/risk and flood risk reduction is provided by website postings from the Warren County OEM and FEMA. The FPA is unaware of any barriers to running an effective floodplain management program and feels adequately supported and trained. The FPA would consider attending continuing education and/or certification training on floodplain management if offered.

Compliance History

The Township is currently in good-standing with the NFIP. It is unknown as to when the most recent compliance audit was conducted.

Regulatory

The Township's floodplain management regulations/ordinances do not exceed the FEMA and state minimum requirements. There are other local ordinances, plans and programs that support floodplain management and include the Planning Board considering floodproofing if relevant to an application. The Township has not considered joining the CRS program.

Community Rating System

The Township of Liberty does not participate in the Community Rating System (CRS) program.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In





addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

Liberty Township in Warren County has 7,090 acres in the Preservation Area and 543 acres in the Planning Area of the Highlands Region. The Township submitted a Petition for Plan Conformance for its Preservation Area lands only which was deemed administratively complete by the Highlands Council.

The 2003 Master Plan is part of the Township's continuing effort to maintain currency in its planning activities and reflects changes both within the Township, the region and statewide. The 2003 plan reflects the changes in zoning. The 2003 plan includes eight elements: population, housing, existing land use, conservation, circulation, community facilities services, historical and land use.

The 2005 Stormwater Management Plan documents the strategy for Liberty Township to address stormwater-related impacts. The goals of the plan are to:

- Reduce flood damage, including to life and property;
- Minimize, to the extent practical, any increase in stormwater runoff from any new development;
- Reduce soil erosion from any development or construction project;
- Assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures;
- Maintain groundwater recharge;
- Prevent, to the greatest extent feasible, an increase in non-point source pollution;
- Maintain the integrity of stream channels for their biological functions, as well as for drainage;
- Minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and others uses of water;
- Protect public safety through the proper design and operation of stormwater basins; and
- Minimize breeding sites for mosquito species.

The Liberty Township Open Space Advisory Committee, after gaining input from the Environmental Commission, the Recreation Commission, and two public surveys, has targeted properties in the Township to acquire. These lands will provide recreational opportunities, multi-use trails, athletic fields, golf courses, and farmland preservation.

Regulatory and Enforcement (Ordinances)

The Township has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the NFIP Flood Damage Prevention Ordinance, a stormwater management ordinance, a soil removal ordinance, and a fire prevention ordinance. When updating these and other ordinances, hazard mitigation is a priority.

The Township limits development in high hazard areas and when reviewing permits it includes the addressing of hazards. The Township's rezoning procedures recognizes hazard areas as limits on zoning changes.

Operational and Administration

The Township has established a Land Use Board, Environmental Commission, Open Space Advisory Committee and an Open Space Committee that aid in planning decisions to support the conservation and preservation of the Township's critical environmental features.



Functions of the Environmental Commission include review of development plans that come before the Land Use Board, recommending environmental ordinances to the Township Committee, and most importantly, offering public education on environmental issues. A series of educational brochures has been developed, and presentations by experts are offered on a quarterly basis.

Employee job descriptions in the Township include hazard mitigation.

The Township has plans and practices in place to protect natural resources.

Funding

The Township has established an Open Space, Recreation and Farmland and Historic Preservation Trust Fund.

Education and Outreach

The Township posts information regarding preparedness for emergency events, such as snow storms or severe winter weather, on its website's homepage. The Office of Emergency Management also provides information regarding emergency events and power outage information from JCP&L.

The Environmental Commission provides public outreach throughout the year. The Commission participates in Liberty Township Community each year, manning a public education booth. The Commission also provides "Welcome to the Watershed" tote bags containing brochures and flyers on environmental issues and other Township information are distributed to new residents.

Training on best practices for hazard mitigation and hazard identified is offered by the Township. Other training in relation to hazard mitigation is also offered.



9.15.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2011 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.

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Table 9.15-9. Past Mitigation Initiative Status

2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP, Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Liberty 1: Back-up generator for the Liberty Elementary School located on Mountain Lake Road. Facility is primary emergency shelter.	OEM Coordinator	No Progress	1. 0% Complete 2. Due to funding constraints, this project has not been completed.	Include in 2016 HMP	Back-up generator for the Liberty Elementary School located on Mountain Lake Road. Facility is primary emergency shelter.
Liberty 2: Stream bank stabilization along Mountain Lake Brook by intersection of Lake Side Drive North and Lake Side Drive East.	OEM Coordinator	No Progress	1. 0% Complete 2. Due to funding constraints, this project has not been completed.	Include in 2016 HMP	Stream bank stabilization along Mountain Lake Brook by intersection of Lake Side Drive North and Lake Side Drive East.
Liberty 3: Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	WCOEM, OEM Coordinator	In Progress	The Township and its various departments and commissions provide outreach to residents. Additionally, the Township uses its website and other forms to provide information to residents.	Include in 2016 HMP	Continue to enhance and develop public education and outreach program for hazard mitigation and preparedness.



Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

There are no additional mitigation projects/activities identified that have also been completed but were not identified in the previous mitigation strategy in the 2011 Plan.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township participated in a mitigation action workshop in March 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013). In May 2015, the Township participated in a second workshop led by FEMA Region 2 and NJOEM and was provided the results to the risk assessment to further assist with the identification of mitigation actions.

Table 9.15-10 summarizes the comprehensive-range of specific mitigation initiatives the Borough would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ Table 9.15-11 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.15-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Liberty Twp-1	Support continuity of operations at critical facilities. At this time, the following project has been identified: Purchase and install a back-up generator for the Liberty Elementary School located on Mountain Lake Road. Facility is primary emergency shelter.	Existing	All	1, 2, 6	OEM, Engineer, Board of Education	Medium	High	HMGP with local cost share	Short Term / DOF	High	SIP	PP
Liberty Twp-2	Stream bank stabilization along Mountain Lake Brook by intersection of Lake Side Drive North and Lake Side Drive East.	Existing	Flood, Severe Weather, Severe Winter Weather	2	DPW, Engineer	Medium	Medium	Municipal Budget	Short Term / DOF	Medium	SIP	PP
Liberty Twp-3	Continue to enhance and develop public education and outreach program for hazard mitigation and preparedness.	N/A	All	All	Township Administration	High	Low	Municipal Budget	Ongoing	High	EAP, LPR	PI, PR
Liberty Twp-4	Have designated NFIP Floodplain Administrator (FPA), and other local officials who would benefit, become a Certified Floodplain Manager (CFM) through the Association of State Floodplain Managers (ASFPM) and New Jersey Association for Floodplain Management (NJAFM), and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis (BCA) and Substantial Damage Estimation (SDE).	N/A	Flood	3, 4	NFIP FPA	Medium	Low	Municipal Budget	Short (DOF)	High	LPR, EAP	PR, PI

Notes:

Not all acronyms and abbreviations defined below are included in the table.

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

Acronyms and Abbreviations:

CRS Community Rating System

DPW Department of Public Works

FEMA Federal Emergency Management Agency

FPA Floodplain Administrator

HMA Hazard Mitigation Assistance

N/A Not applicable





NFIP National Flood Insurance Program
NJDEP New Jersey Department of Environmental Protection

NJOEM New Jersey Office of Emergency Management
OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program
HMGP Hazard Mitigation Grant Program
PDM Pre-Disaster Mitigation Grant Program
HMA Hazard Mitigation Assistance Program

Timeline:

Short 1 to 5 years
Long Term 5 years or greater
OG On-going program
DOF Depending on funding

Costs:

Where actual project costs have been reasonably 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.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

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

Where numerical project benefits cannot reasonably be established at this time:

Low Long-term benefits of the project are difficult to quantify in the short term.
Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
High Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities





Table 9.15-11. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Liberty Twp-1	Support continuity of operations at critical facilities - Back-up generator for the Liberty Elementary School located on Mountain Lake Road. Facility is primary emergency shelter.	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	High
Liberty Twp-2	Stream bank stabilization along Mountain Lake Brook by intersection of Lake Side Drive North and Lake Side Drive East.	0	1	1	1	1	1	1	1	0	0	1	1	0	0	9	Medium
Liberty Twp-3	Continue to enhance and develop public education and outreach program for hazard mitigation and preparedness.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
Liberty Twp-4	Have designated NFIP Floodplain Administrator (FPA), and other local officials who would benefit, become a Certified Floodplain Manager (CFM).	0	0	1	1	1	1	1	0	0	1	1	1	0	0	8	High

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



9.15.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.15.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Liberty that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are 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 the Township of Liberty has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.15.9 Additional Comments

None at this time.

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Figure 9.15-1. Township of Liberty Hazard Area Extent and Location Map 1

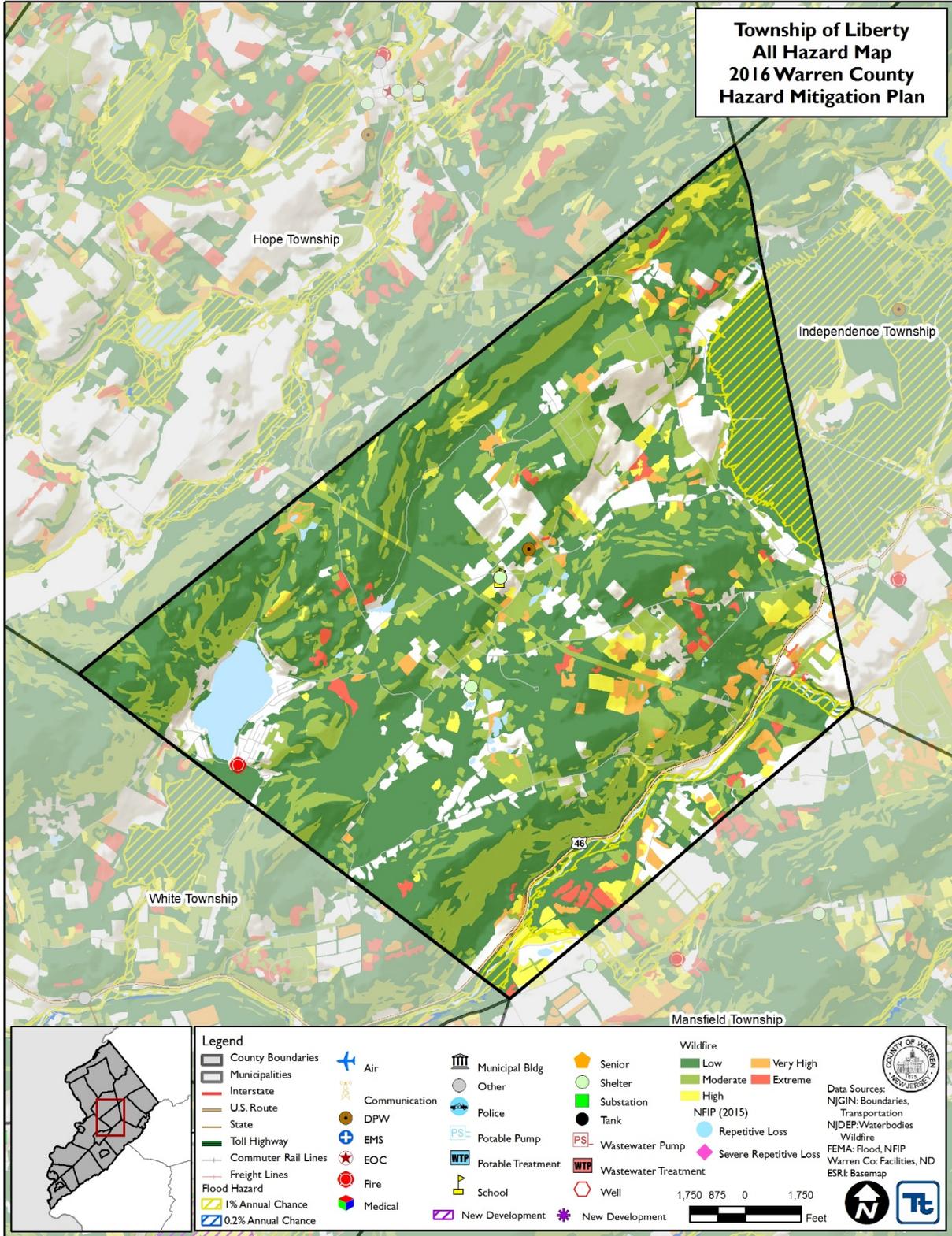
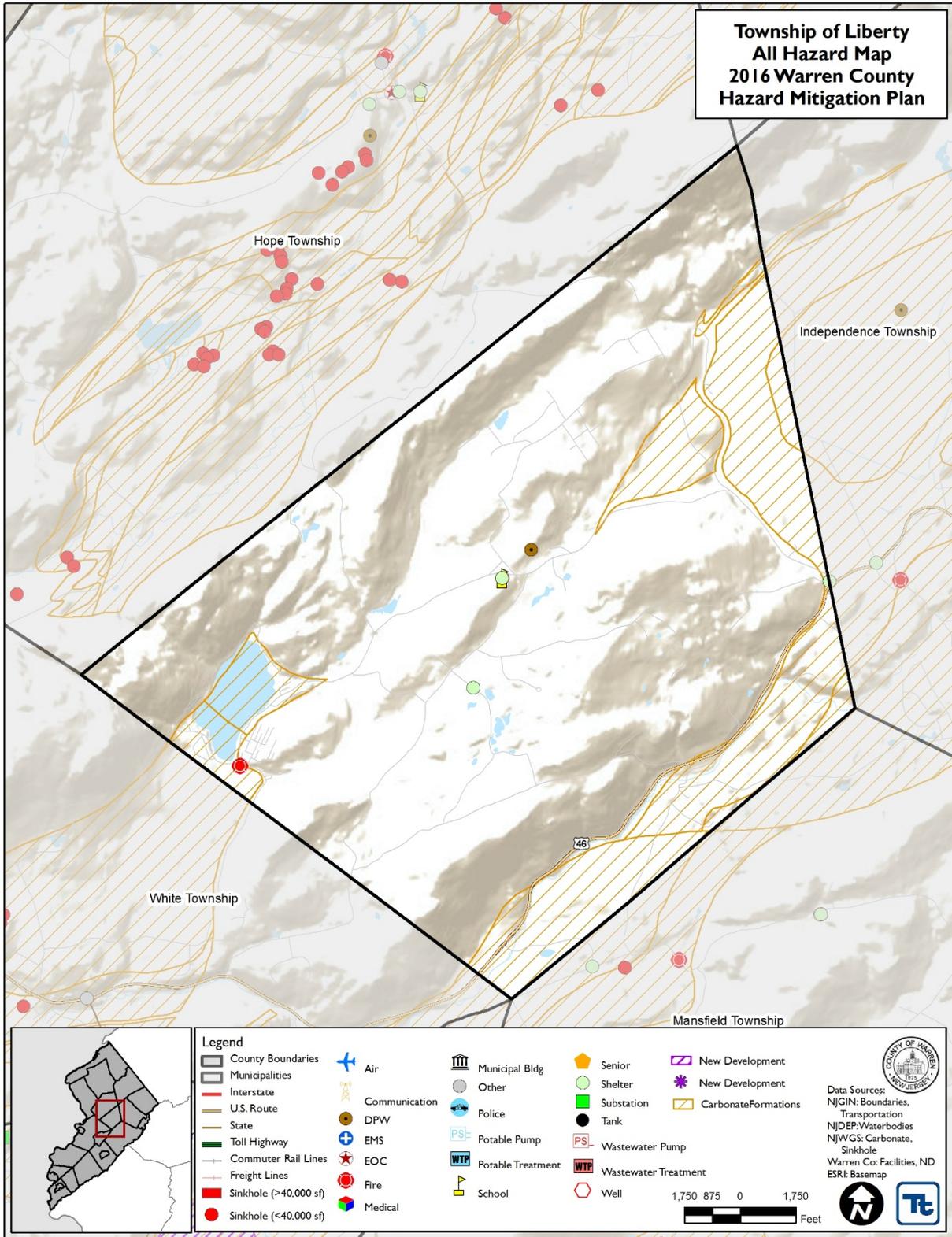




Figure 9.15-2. Township of Liberty Hazard Area Extent and Location Map 2





Action Number: Liberty Twp-1
Mitigation Action/Initiative: Support the continuity of operations at critical facilities - Purchase and install a generator for the Township municipal building

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Loss of power to the municipal building during power outages prevents the Township from conducting day-to-day and emergency operations
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Purchase and install a generator for the Township municipal building
	2. Purchase portable generator – not feasible for longer power outages
	3. Do nothing – current problem continues
Action/Project Intended for Implementation	
Description of Selected Action/Project	Support the continuity of operations at critical facilities - Purchase and install a generator for the Township municipal building
Action/Project Category	SIP
Goals/Objectives Met	1, 2, 6
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible/Lead Agency/Department	OEM, Engineer, Board of Education
Local Planning Mechanism	Capital Improvement, Emergency Operations
Potential Funding Sources	HMGP with local cost share
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: Liberty Twp-1

Mitigation Action/Initiative: Purchase and install a generator for the Township municipal building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provide shelter for those in need
Property Protection	1	Allow building to function during power outages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Local Champion	0	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	



Action Number: Liberty Twp-2

Mitigation Action/Initiative: Stream bank stabilization along Mountain Lake Brook

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather, Severe Winter Weather
Specific problem being mitigated:	Stream bank needs to be stabilized along Mountain Lake Brook
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Stream bank stabilization along Mountain Lake Brook by intersection of Lake Side Drive North and Lake Side Drive East.
	2. Purchase portable generator – not feasible for longer power outages
	3. Do nothing – current problem continues
Action/Project Intended for Implementation	
Description of Selected Action/Project	Stream bank stabilization along Mountain Lake Brook by intersection of Lake Side Drive North and Lake Side Drive East.
Action/Project Category	SIP
Goals/Objectives Met	2
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible/Lead Agency/Department	DPW, Engineer
Local Planning Mechanism	Stormwater Management, Capital Improvement
Potential Funding Sources	Municipal Budget
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: Liberty Twp-2

Mitigation Action/Initiative: Stream bank stabilization along Mountain Lake Brook

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protect roadways in this area from damage
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	Use municipal budget to fund this project
Environmental	1	
Social	0	
Administrative	0	
Multi-Hazard	1	
Timeline	1	
Local Champion	0	
Other Community Objectives	0	
Total	9	
Priority (High/Med/Low)	Medium	