9.29 Borough of Mountain Lakes

This section presents the jurisdictional annex for the Borough of Mountain Lakes.

9.29.1 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
Name: Richard Sheola, Borough Manager Address: 400 Boulevard, Mountain Lakes, NJ 07046 Phone: 973-334-3131 E-mail: rsheola@mtnlakes.org	Name: Shawn Bennett, Chief of Police, OEM Coordinator Address: 400 Boulevard, Mountain Lakes, NJ 07046 Phone: 973-334-1507 E-mail: sbennett@mtnlakes.org

9.29.2 Municipal Profile

Mountain Lakes is located in north-central New Jersey where the rolling hills of the New Jersey's Piedmont region meet the rocky outcroppings of the Highlands. http://mtnlakes.org The Borough is bordered by the Township of Denville to the west, Boonton Township to the north, and Parsippany Township to the south.

According to the U.S. Census, the 2010 population for the Borough of Mountain Lakes was 4,160. According to the U.S. Census, the Borough has a total area of 2.89 square miles, of which 2.62 square miles is land and 0.27 square miles is water.

Sheltering Facilities: Sheltering in the Borough is supported by the High School (backup power, does not accept pets), and the Lake Drive School (backup power, may accept pets). Further, the Mountain Lakes Club has provided comfort station support, working off backup power from the Lake Drive School. The Borough Hall complex on The Boulevard (includes police and fire) has backup power.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in section 9.X of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.29-1. 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					
Legacy at Mountain Lakes	Res	47	Fanny Road/Morris Avenue	No	Under Construction
Known or Anticipated Development in the Next Five (5) Years					
Villa Hotel Project	Comm./Hotel	132	90 Route 46 East	No	Planning Phase

* Only location-specific hazard zones or vulnerabilities identified.

9.29.3 Natural Hazard Event History Specific to the Municipality

Morris 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 9.29-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
March 12 – April 15, 2010	Severe Storms and Flooding	DR-1897	Yes	Power outage affecting 1,000 for 12 hours (3/12). Damage to roads, culverts and water facility. Police radio system repeater damaged. Approx. 50 residences water damage. $25k Public Assistance (PA) requested for police and DPW (overtime, cleanup and debris removal).
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	$35k PA requested for Police & DPW overtime and Equipment costs
August 26 – September 5, 2011	Hurricane Irene	EM-3332 DR-4021	Yes Yes	Power outage town-wide for 24 hours. Sheltering plan activated. Damage to water treatment delivery system. 75 residences with water/wind damage. $50k Public Assistance (PA) requested for Police, Fire, OEM & DPW overtime.
October 29, 2011	Severe Storm	DR-4048	Yes	Power outages throughout town for 3-5 days. Sheltering plan activated. 100 residences with tree/wind damage. $TBD Public Assistance (PA) requested for Police, Fire, OEM & DPW overtime.
October 26 – November 8, 2012	Hurricane Sandy	EM-3354 DR-4086	Yes Yes	Power outages throughout town for 12 days. Shelters active for 12 days.

9.29.4 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 following summarizes the hazard vulnerabilities and their ranking in the Borough of Mountain Lakes. 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 Borough of Mountain Lakes.

Table 9.29-3. Natural 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]
Drought	Damage estimate not available	Frequent	27	Medium
Dam Failure	Damage estimate not available	Occasional	24	Medium
Earthquake	500-year MRP: $829,216 2,500-year MRP: $17,358,911	Occasional	24	Medium
Extreme Temperature	Damage estimate not available	Frequent	18	Medium
Flood	1% Annual Chance: $0	Rare	6	Low
Geological Hazards	Exposed to Class A and Class B: $0	Rare	6	Low
Severe Storm	100-Year MRP: $1,027,938 500-year MRP: $4,481,180 Annualized: $64,562	Frequent	48	High
Winter Storm	1% GBS: $14,708,336 5% GBS: $73,541,679	Frequent	54	High
Wildfire	Estimated Value Exposed to Extreme, Very High and High: $0	Rare	6	Low

Notes:

a. Building damage ratio estimates based on FEMA 386-2 (August 2001)

b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
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 value of contents.

d Loss estimates for the flood and earthquake hazards represent both structure and contents.

e. The HAZUS-MH earthquake model results are reported by Census Tract.

National Flood Insurance Program (NFIP) Summary

The Borough of Mountain Lakes does not participate in the NFIP.

Critical Facilities

The table below presents HAZUS-MH estimates of the damage and loss of use to critical facilities in the community as a result of a 1- and 0.2-percent annual chance flood events.

Table 9.29-5. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent(1)
No critical facilities are located in the FEMA 1% and 0.2% Flood Hazard Area.						

Source: *HAZUS-MH 2.1*

Note (1): *HAZUS-MH 2.1 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore this will be an indication of the maximum downtime (HAZUS-MH 2.1 User Manual).*

Note (2): *In some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type. Further, HAZUS-MH may estimate potential damage to a facility that is outside the DFIRM because the model generated a depth grid beyond the DFIRM boundaries.*

NA *Not available*

X *Facility located within the DFIRM boundary*

- *Not calculated by HAZUS-MH 2.1*

Other Vulnerabilities Identified

The Borough has limited areas within identified NFIP flood delineations. Water damage to property is generally the result of localized stormwater flooding, and not overbank flooding.

Sheltering Facilities: Sheltering in the Borough is supported by the High School (backup power, does not accept pets), and the Lake Drive School (backup power, may accept pets). Further, the Mountain Lakes Club has provided comfort station support, working off backup power from the Lake Drive School. The Borough Hall complex on The Boulevard (includes police and fire) has backup power.

9.29.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- 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 Borough of Mountain Lakes.

Table 9.29-6. 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	Local	Planning	L.O. 40-43 01-2014
Capital Improvements Plan	Yes	Local	Admin	Yearly
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	Yes	Local	Admin	L.O. 202-6
Open Space Plan	No			
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	Yes	Local	Admin	L.O. 04-14
Economic Development Plan	Yes	Local	Planning/Admin	L.O. 40-43
Comprehensive Emergency Management Plan	Yes	Local	OEM	9-2014
Emergency Response Plan	Yes	Local	OEM	9-2014
Post-Disaster Recovery Plan	Yes	Local	OEM	9-2011
Transportation Plan	Yes	Local	OEM	9-2014
Strategic Recovery Planning Report	Yes	Local	OEM	9-2014
Other Plans:	N/A			
Regulatory Capability				
Building Code	Yes	State & Local		State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Zoning	Various
Subdivision Ordinance	Yes	Local	Planning	L.O. 208-6/208-7
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local		
NFIP: Cumulative Substantial Damages	No			

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.)
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Planning	L.O. 102-8/208/88.8
Stormwater Management Ordinance	Yes	Local	Admin	L.O. 202-6
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Admin	
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)]				

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Borough of Mountain Lakes.

Table 9.29-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Council
Mitigation Planning Committee	Yes	Admin
Environmental Board/Commission	Yes	Council
Open Space Board/Committee		
Economic Development Commission/Committee	Yes	Council
Maintenance Programs to Reduce Risk	Yes	Admin
Mutual Aid Agreements	Yes	Admin
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Admin/Council
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Admin
Planners or engineers with an understanding of natural hazards	Yes	Admin
NFIP Floodplain Administrator	No	Does not participate in NFIP
Surveyor(s)	No	
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	No	

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Emergency Manager	Yes	Admin
Grant Writer(s)	Yes	Admin
Staff with expertise or training in benefit/cost analysis	Yes	Admin/Clerk
Professionals trained in conducting damage assessments	No	

Fiscal Capability

The table below summarizes financial resources available to the Borough of Mountain Lakes.

Table 9.29-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG, CDBG-DR)	Yes – In Limited Cases
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Yes
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
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	No
Open Space Acquisition Funding Programs	No
Other	N/A

Community Classifications

The table below summarizes classifications for community program available to the Borough of Mountain Lakes.

Table 9.29-9. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No		
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	10-2014
Storm Ready	No		
Firewise	No		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	No		

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	No		

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

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 Mountain Lakes capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.29-1. Self-Assessment Capability for the Municipality

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

The Borough of Mountain Lakes does not participate in the NFIP.

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

Prior to land use, zoning changes or development permitting, the Planning Board and ZBA reviews the hazard mitigation plan and other hazard analysis to ensure consistent and compatible land use.

The Borough has plans and regulations that protect natural resources that provide natural hazard risk reduction.

Regulatory and Enforcement

When updating municipal ordinances, the Borough will make hazard mitigation and natural hazard risk reduction a priority.

Operational and Administration

The Borough identifies that hazard mitigation actions in daily operations and all projects will be a goal of the municipality. The Borough continues to maintain practices and operational activities to protect infrastructure (e.g., tree management, drainage protection, etc.

Education and Outreach

The Borough has active and effective programs for public outreach and education/awareness. This includes programs to inform citizens on hazards (e.g., safe practices on using generators, flood hazard information, what to do in an emergency).

The Borough offers training on best practices for hazard mitigation. Several of the jurisdiction's Hazard Mitigation Actions can be implemented as a joint project with the school district.

9.29.6 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 2010 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.

Table 9.29-11. Past Mitigation Initiative Status

Description	Status	Review Comments
Mountain Lakes 1: Backup power (generator) for School Facilities (shelter) (two).	In progress.	To be included in 2015 mitigation strategy. Will work to secure funding; possibly 2015.
Mountain Lakes 2: Backup power (generator) for municipal wells (four).	No progress; lack of resources (funding).	To be included in 2015 mitigation strategy. Will work to secure funding.
Mountain Lakes 3: Storm water runoff system upgrade on Intervale Road.	In progress.	To be included in 2015 mitigation strategy. Will work to complete project.
Mountain Lakes 4: Building code update.	Complete	
Mountain Lakes 5: Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	Complete	

Proposed Hazard Mitigation Initiatives for the Plan Update

The Borough of Mountain Lakes participated in a mitigation action workshop in January 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).

Table 9.29-12 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Mountain Lakes 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.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.29-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.

Table 9.29-12. 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
Mountain Lakes 1	Backup power (generator) for School Facilities (shelter) (two). See Action Worksheet.											
	See above.	Existing	Severe Storm; Severe Winter Storm; Extreme Temperatures	3, 4	Borough Administrator; working with OEM and DPW	High – reduced vulnerability of critical facilities and services to power outages	Medium; est. $190K per location	Borough budget or bonding; grants as available	In progress. Will work to secure funding; possibly 2015.	High	SIP	PP, ES
Mountain Lakes 2	Backup power (generator) for municipal wells (four). See Action Worksheet.											
	See above.	Existing	Severe Storm; Severe Winter Storm	3, 4	Borough Administrator; working with OEM and DPW	High – reduced vulnerability of critical facilities and services to power outages	Medium (per location); est. $160K	Borough budget or bonding; grants as available	Will work to secure funding.	Medium	SIP	PP, ES
Mountain Lakes 3	Storm water runoff system upgrade on Intervale Road. See Action Worksheet.											
	See above.	Existing	Flood, Severe Storm	4	Borough Administrator; working with DPW	Medium – reduced vulnerability of road and property damage	Medium-High	Borough budget/ bonding	Will work to complete project.	Medium	SIP	PP, SP

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:

CAV	*Community Assistance Visit*
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*
RFC	*Repetitive Flood Claims Grant Program*
SRL	*Severe Repetitive Loss Grant 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 9.29-13. 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
Mountain Lakes 1	Backup power for School Facilities - Sheltering	1	0	1	1	1	1	0	1	1	0	1	1	1	1	11	High
Mountain Lakes 2	Backup power for municipal wells	1	0	1	1	1	1	0	0	1	0	1	1	1	1	10	Medium
Mountain Lakes 3	Storm water runoff system upgrade on Intervale Road.	0	1	1	1	1	1	0	0	1	0	1	1	1	1	10	Medium

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

9.29.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.29.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Borough of Mountain Lakes 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 Borough of Mountain Lakes has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.29.9 Additional Comments

None at this time.

Figure 9.29-1. Borough of Mountain Lakes Hazard Area Extent and Location Map 1

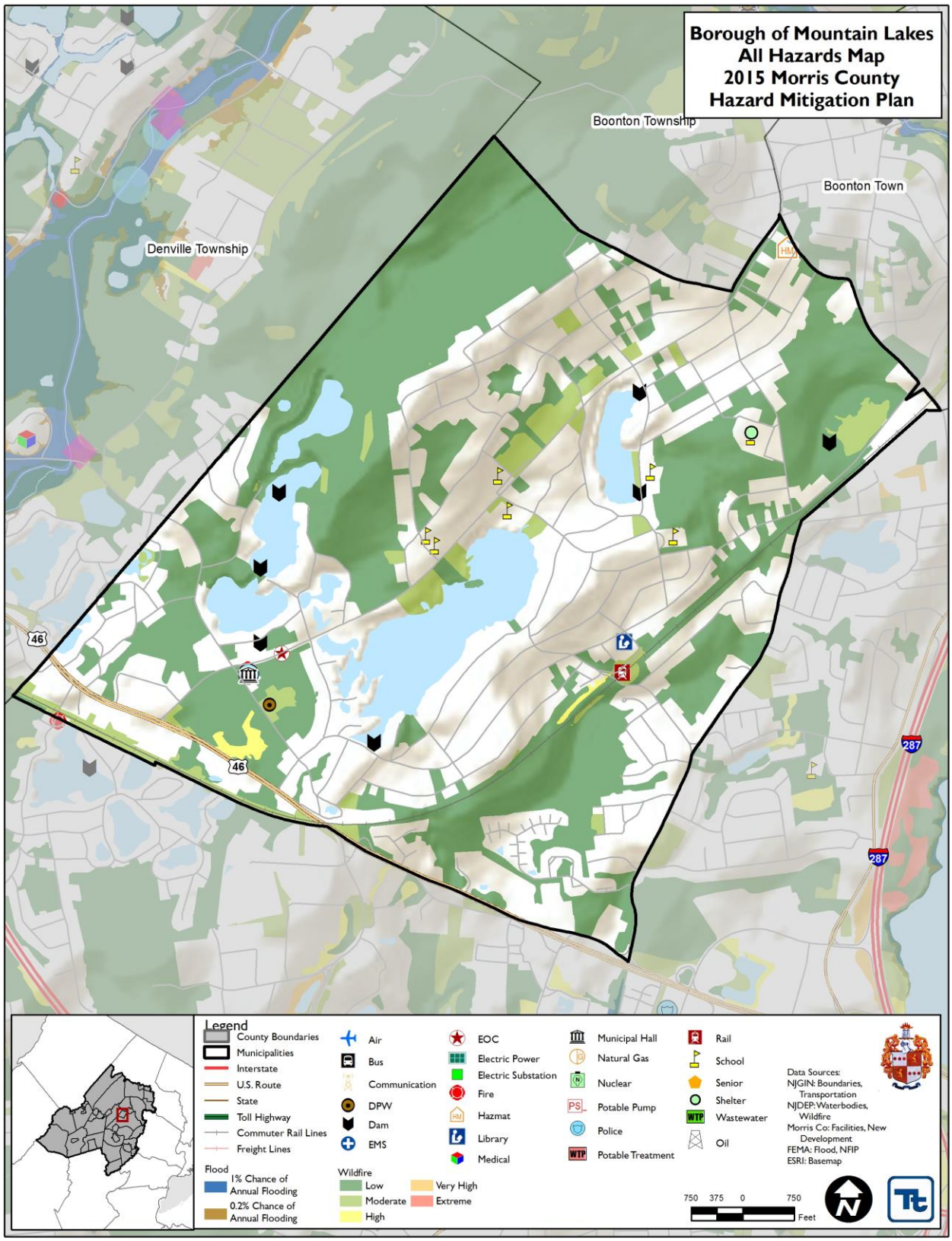
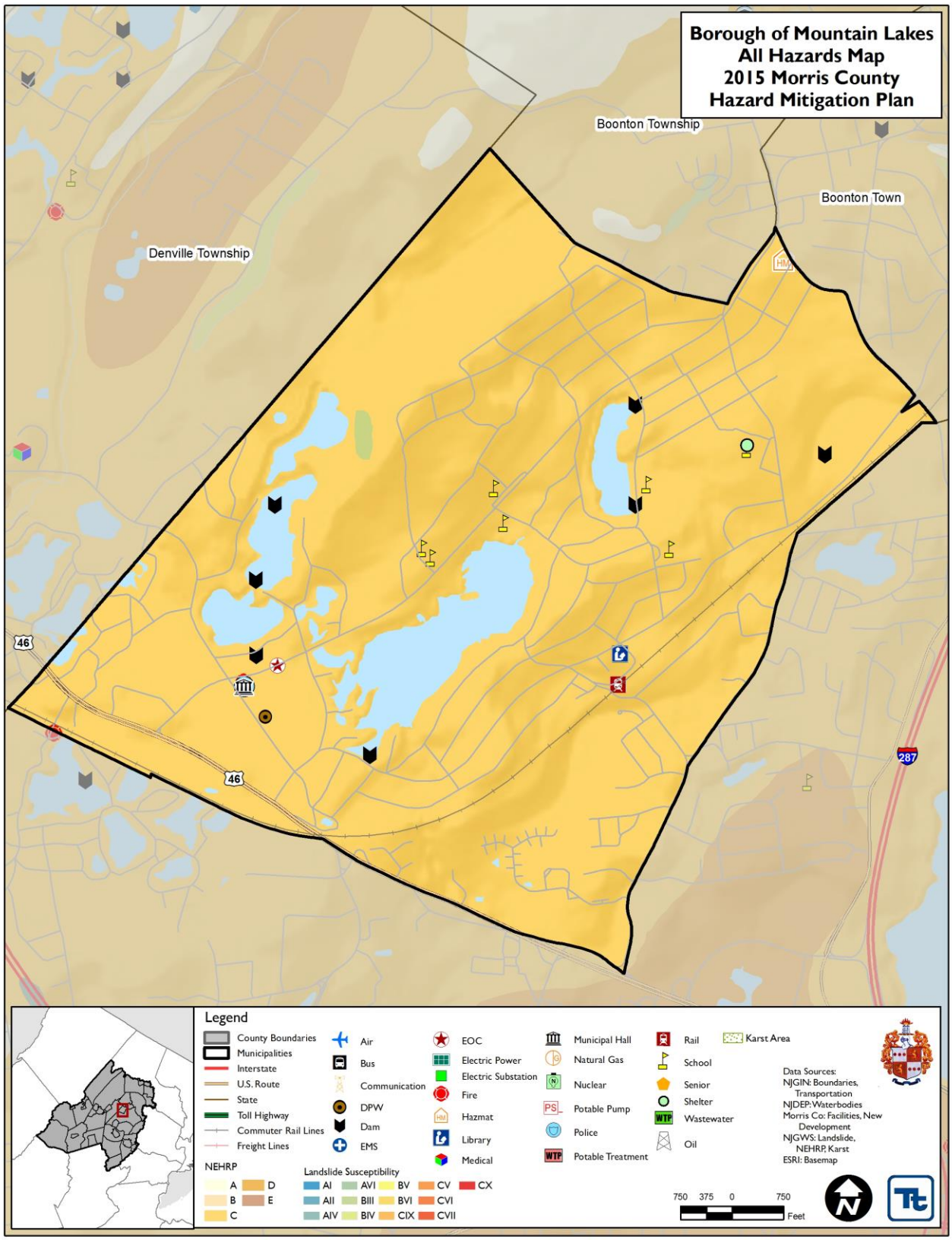


Figure 9.29-2. Borough of Mountain Lakes Hazard Area Extent and Location Map 2



Name of Jurisdiction: Mountain Lakes Borough
Action Number: Mountain Lakes 1
Mitigation Action/Initiative: Backup Power for School Facilities - Shelter

Assessing the Risk	
Hazard(s) addressed:	All hazards resulting in power interruption (e.g. Severe Storm, Severe Winter Storm – as exacerbated by Climate Change); Extreme Temperatures
Specific problem being mitigated:	The following critical and essential facilities in the Borough are vulnerable to power outages resulting in the loss of critical and essential services. • Mountain Lakes High School - Supports sheltering needs • Briarcliff Middle School - Supports sheltering needs
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	With the exception of taking no action and allowing these vulnerabilities to persist, no practical, feasible or cost-effective alternatives to the installation of backup power (natural gas) were identified.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Install backup power at these critical and essential facilities to support the sheltering and comfort station needs of area residents
Action/Project Category	SIP
Goals Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High – Reduced vulnerability of critical facility and critical services to power interruptions; public health and life safety
Estimated Cost	Medium; est. $190K per location
Priority*	High
Plan for Implementation	
Responsible Organization	Borough Administrator; working with OEM, DPW and Board of Education
Local Planning Mechanism	Comprehensive Emergency Management Plan (incl. Sheltering Plan); School District and Local Capital Budgets
Potential Funding Sources	Federal Mitigation Grant Funding; Borough and School District for Local Match
Timeline for Completion	In progress. Will work to secure funding; possibly 2015.
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: Mountain Lakes 1
Mitigation Action/Initiative: Backup Power for School Facilities - Shelter

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Addresses public health/life safety, including vulnerable populations. Would support response and recovery operations.
Property Protection	0	
Cost-Effectiveness	1	Highly cost-effective
Technical	1	Projects can be implemented with existing municipal resources
Political	1	Project is supported politically and by community
Legal	1	Borough and School District have full jurisdiction to implement project
Fiscal	0	Would require grant funding to support implementation
Environmental	1	No environmental impediments to implementation
Social	1	Would benefit all populations equally
Administrative	0	Grant and project implementation could be administered with existing resources
Multi-Hazard	1	Address all hazards that could result in power outages
Timeline	1	Can be readily implemented once funding is secured
Agency Champion	1	
Other Community Objectives	1	Would support community resilience and general emergency management
Total	11	
Priority (High/Med/Low)	High	

Name of Jurisdiction: Mountain Lakes Borough
Action Number: Mountain Lakes 2
Mitigation Action/Initiative: Backup Power for Municipal Potable Wells

Assessing the Risk	
Hazard(s) addressed:	All hazards resulting in power interruption (e.g. Severe Storm, Severe Winter Storm – as exacerbated by Climate Change
Specific problem being mitigated:	The four municipal water supply wells are vulnerable to loss of service during power interruptions and outages.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	With the exception of taking no action and allowing these vulnerabilities to persist, no practical, feasible or cost-effective alternatives to the installation of backup power to service these wells were identified.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Install backup power for the four municipal wells to maintain water supply during power outages.
Action/Project Category	SIP
Goals Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High – Reduced vulnerability of critical facilities and public services to power interruptions; public health and life safety (fire-fighting) concerns
Estimated Cost	Medium (per location); est. $160K
Priority*	Medium
Plan for Implementation	
Responsible Organization	Borough Administrator; working with OEM and DPW
Local Planning Mechanism	Comprehensive Emergency Management Plan; Local Capital Budgets
Potential Funding Sources	Borough budget or bonding; grants as available
Timeline for Completion	Will work to secure funding.
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: Mountain Lakes 2
Mitigation Action/Initiative: Backup Power for Municipal Potable Wells

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Addresses public health and life safety concerns.
Property Protection	0	
Cost-Effectiveness	1	Highly cost-effective
Technical	1	Projects can be implemented with existing municipal resources
Political	1	Project is supported politically and by community
Legal	1	Borough has full jurisdiction to implement project
Fiscal	0	Would require grant funding to support implementation
Environmental	0	No environmental impediments to implementation
Social	1	Would benefit all populations equally
Administrative	0	Grant and project implementation could be administered with existing resources
Multi-Hazard	1	Address all hazards that could result in power outages
Timeline	1	Can be readily implemented once funding is secured
Agency Champion	1	
Other Community Objectives	1	Would support community resilience and general emergency management
Total	10	
Priority (High/Med/Low)	Medium	

Name of Jurisdiction: Mountain Lakes Borough
Action Number: Mountain Lakes 3
Mitigation Action/Initiative: Intervale Road Stormwater Management Upgrades

Assessing the Risk	
Hazard(s) addressed:	Flood; Severe Storm
Specific problem being mitigated:	During severe rain events the roadway experiences localized flooding, and facilities and property damage due to inadequate drainage system/ facilities.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action – vulnerability and attended damage persists
Action/Project Intended for Implementation	
Description of Selected Action/Project	Complete stormwater drainage system upgrades.
Action/Project Category	SIP
Goals Met	4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High - Reduced vulnerability of road and property damage
Estimated Cost	Medium - High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Borough Administrator; working with DPW
Local Planning Mechanism	Stormwater Management Plan (MS4); Local Capital Budgets
Potential Funding Sources	Borough budget
Timeline for Completion	Will work to complete project.
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: Mountain Lakes 3
Mitigation Action/Initiative: Intervale Road Stormwater Management Upgrades

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	Cost-effective
Technical	1	Projects can be implemented with existing municipal resources
Political	1	Project is supported politically and by community
Legal	1	Borough has full jurisdiction to implement project
Fiscal	0	Will be funded through Borough budget
Environmental	0	No environmental impediments to implementation
Social	1	Would benefit all populations equally
Administrative	0	Project implementation could be administered with existing resources
Multi-Hazard	1	
Timeline	1	Can be readily implemented once funding is secured
Agency Champion	1	
Other Community Objectives	1	Supports community resilience and general emergency management
Total	10	
Priority (High/Med/Low)	Medium	