



9.20 BOROUGH OF MENDHAM

This section presents the jurisdictional annex for the Borough of Mendham. The annex includes a general overview of the Borough of Mendham; an assessment of the Borough of Mendham’s risk, vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to natural hazards.

9.20.1 Hazard Mitigation Planning Team

The following individuals are the Borough of Mendham’s identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

Table 9.20-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Gary Lynch, OEM Coordinator 2 West Main Street, Mendham, NJ 07945 917-796-3052 mboem@mendhamnj.org	John Camoia, Chief of Police/ OEM 2 West Main Street, Mendham, NJ 07945 973-543-2993 camoia@mendhamnj.org
NFIP Floodplain Administrator	
Paul Ferriero, Borough Engineer 2 West Main Street, Mendham, NJ 07945 908-879-6209 Paul.ferriero@ferrieroengineering.com	

9.20.2 Jurisdiction Profile

Mendham Borough is located in suburban Morris County, New Jersey and is located 40 miles west of mid-Borough Manhattan. Incorporated as a borough by an Act of the New Jersey Legislature on May 15, 1906. Known for its rich historic charm and quaintness, Mendham Borough is known for noted landmarks such as the Phoenix House which serves as the Borough's Municipal Building and the Black Horse Inn. The Borough is bordered by Mendham Township to the north, east and west and Bernardsville Borough (Somerset County) to the south. According to the U.S. Census, the Borough has a total area of 6.00 square miles, of which 5.95 square miles is land and 0.05 square miles are water. Mendham Borough lies in the headwaters of three (3) major river systems: the Whippany River, North Branch of the Raritan River, and the Passaic River. (Comprehensive Plan)

The Borough of Mendham is located within the NJ Highlands Region which is an area of 859,358 acres located in the northwest part of the State. The NJ Highlands Planning Act (Highlands Act, P.L. 2004, c.120) provided the statutory authority for the development of the Highlands Regional Plan which established specific boundaries as the Preservation Area and the Planning Area within the Highlands Region with the goal of protecting the natural and cultural resources of the Highlands Region while striving to accommodate a sustainable economy. The fundamental difference between these two areas is that municipal and county conformance with the Regional Plan is required for communities in the Preservation Area but voluntary for those in the Planning Area. The plan provides minimum standards governing municipal master planning, development regulations, and other regulations concerning the development and use of land, including standards for minimum lot sizes and stream setbacks, construction on steep slopes, maximum appropriate population densities, and regulated or prohibited uses for specific portions of the Preservation Area. The Borough’s 3,827 acres are entirely located in the Highlands Planning Area.



According to the U.S. Census, the 2010 population for the Borough of Mendham was 4,981. The estimated 2017 population was 4,992, a 0.2% increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 4.6% of the population is 5 years of age or younger and 22% is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.20.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.20-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.20-1 and 9.20-2 at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development.

Table 9.20-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single Family	1	1	2	6	0
Multi-Family	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	2	2	2
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
Sisters of Christian Charity	New nursing facility	New building with 300 rooms	Hilltop Road	None	Complete
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Industry Residential	Apartments	75	801/20	None	Pending

* Only location-specific hazard zones or vulnerabilities identified.

9.20.4 Capability Assessment

The Borough of Mendham performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community's adaptive capacity for the impacts of climate change.

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, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. The





Borough of Mendham identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

PLANNING, LEGAL AND REGULATORY CAPABILITY

The table below summarizes the legal and regulatory tools that are available to the Borough of Mendham and where hazard mitigation has been integrated.

Table 9.20-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Codes, Ordinances, & Requirements					
Building Code	Yes	Local	Yes	No	-
<i>Comment: State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14. Administered by the Planning Board. Chapter 105 Construction Codes, Uniform. Code Official implements building codes as applicable for included hazards. Reference Ch. 9 of municipal code for Uniform Construction Codes.</i>					
Zoning Code	Yes	Local	Yes	No	-
<i>Comment: Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan. Reference C. 215 in the municipal code. Adopted by the Mayor and Council of the Borough of Mendham 12-18-1978 by Ord. No. 18-78 (Ch. 103 of the 1974 Code). Administered by the Zoning Board. Includes chapters addressing steep slope development and stormwater management.</i>					
Subdivisions	Yes	Local	Yes	No	-
<i>Comment: Chapter 195 Subdivision of Land and Site Plans. Adopted by the Mayor and Council of the Borough of Mendham 11-20-1978 by Ord. No. 16-78 (Ch. 90 of the 1974 Code). Administered by the Planning Board.</i>					
Stormwater Management	Yes	Local	Yes	No	-
<i>Comment: Title 7 of the NJ Administrative Code (N.J.A.C. 7:8); Chapter 172 Stormwater Control, administered by the DPW. Stormwater Management planning is implemented by the Borough Engineer.</i>					
Post-Disaster Recovery	No	-	-	-	-
<i>Comment:</i>					
Real Estate Disclosure	Yes	State – Division of Consumer Affairs	Yes	Yes	-
<i>Comment: N.J.A.C. 13:45A-29.1; Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.</i>					
Growth Management	Yes	-	Yes	-	-



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Comment: State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development & Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.					
Shoreline Development	No	-	Yes	-	-
Comment: NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone Management Rules N.J.A.C. 7:7E-1 et seq.					
Site Plan Review	Yes	Local	Yes	No	-
Comment: Administered by the Planning Board. Reference Ch. 195 of municipal code for site plan review.					
Environmental Protection	Yes	State and Local	Yes	No	-
Comment: The rules that are utilized by the NJDEP and other environmental agencies are codified at Title 7 of the NJ Municipal Administrative Code Chapter 50 Open Space, Recreation, and Farmland and Historic Preservation Trust Fund, Municipal. Chapter 141 Littering and Property Maintenance. Chapter 169 Soil Disturbance. Chapter 170 Soil and Plant Fertilizers. Chapter 186 Tree Removal. Chapter 199 Water. Reference Ch. 179 of municipal code for soil erosion and sediment control.					
Flood Damage Prevention	No	State and Local	Yes	-	-
Comment: The rules that are utilized by the NJ Department of Environmental Protection and other environmental agencies are codified at Title 7 of the NJ Municipal Administrative Code. Adopted by the Borough Council of the Borough of Mendham 7-21-2008 by Ord. No. 12-08.					
Wellhead Protection	Yes	Local	-	-	-
Comment: Chapter 176 Subdivision of Land and Site Plans Art XIV Submission Requirements for Development within Highlands Area.					
Emergency Management	Yes	Local	-	No	-
Comment: Chapter 20, Fire Department Adopted by the Mayor and Council of the Borough of Mendham 11-4-1974 as Ch. 14 of the 1974 Code; and Chapter 38, Police Department adopted by the Mayor and Council of the Borough of Mendham 11-4-1974 as Ch. 28 of the 1974 Code. Per the NJ Civilian Defense and Disaster Control Act (App.A:9-43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years. See Emergency Operations Plans below.					
Climate Change	No	-	-	-	-
Comment:					
Disaster Recovery Ordinance	No	-	-	-	-
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	-



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Comment:					
Hazardous Material Ordinance	Yes	Local	-	-	-
Comment: Chapter 118 Hazardous Materials adopted by the Mayor and Council of the Borough of Mendham 4-1-1985 by Ord. No. 5-85 (Ch. 63 of the 1974 Code . This article finds that the groundwater underlying the Borough of Mendham is the sole source of its existing and future potable water supply. Accidental spills or discharge of petroleum products, such as gasoline and benzene and other toxic and hazardous materials, could threaten the quality of such groundwater supplies, posing potential public health and safety hazards and threatening economic losses to the community. Unless preventive measures are adopted to prohibit discharge of toxic and hazardous materials and to control their storage, further spills or discharge of such materials could predictably occur with greater frequency and degree of hazard by reason of increased construction, development, population and traffic. The feasibility of restoring an acceptable quality of groundwater, once contaminated, to a safe potable condition is highly doubtful, except over a long period of time and at high cost.					
Soil Erosion and Sediment Control	Yes	Local	-	-	-
Comment: Chapter 170 Soil Erosion and Sediment Control. The purpose of this chapter is to provide measures to control, minimize and protect against soil erosion and resulting sedimentation which can occur during periods of land disturbance.					
Planning Documents					
Comprehensive / Master Plan	Yes	Local	Yes	Yes	-
Comment: Comment: Per NJSA: Yes, if planning board (40:55D-28) and must be re-examined every ten years (40:55D-89.1); County: Yes (40:27-2). Adopted October 10, 2006. The Plan includes maps for existing land use, community facilities, environmental features, proposed historic expansion, bedrock geology, soils, slopes, floodprone areas, land use overview and sewer service areas.					
Capital Improvement Plan	Yes	Local	Allowed	Yes	-
Comment: Per NJSA 40:55D-29 the governing body is authorized to direct the planning board to prepare a CIP with at least a six year planning horizon. Administered by the Administration.					
Disaster Debris Management Plan	No	-	No	-	-
Comment:					
Floodplain or Watershed Plan	No	-	No	-	-
Comment:					
Stormwater Management Plan	Yes	Local and State	Yes	No	-
Comment: Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s). Code Chapter 172, #8-07. Administered by Borough Planning Board.					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Stormwater Pollution Prevention Plan	Yes	Local and State	Yes	No	-
<i>Comment: Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s). Administered by the Borough Mayor and Council.</i>					
Urban Water Management Plan	No		No	-	-
<i>Comment:</i>					
Habitat Conservation Plan	No		No	-	-
<i>Comment: May develop a conservation plan element in master plan per NJSA 40:5D-28b (8).</i>					
Economic Development Plan	No	-	No	-	-
<i>Comment: Per NJSA 40:55D-28b. (9) There can be a generic Economic Development Element of the County Comprehensive Plan. Municipality can establish Economic Development Commission that can facilitate incentive programs (façade programs, low-interest loans, etc.). The Borough has a strategic economic development plan on its website, administered by the Local Economic Development Committee. The purpose of the Local Economic Development Committee is to evaluate the status of our small business community here in the Borough and determine what we can do to help keep our businesses as healthy and prosperous as possible, and in turn keep our Main Street and commercial areas vibrant. The Committee's discovery and determinations are reported to Borough Council with the intent of receiving approval.</i>					
Shoreline Management Plan	No		No	-	-
<i>Comment:</i>					
Community Wildfire Protection Plan	No	Federal	No	-	-
<i>Comment:</i>					
Community Forest Management Plan	Yes		No	-	-
<i>Comment: Comment: Approved through 2025. Optional accreditation for county and municipalities for reduction of liability, New Jersey Urban and Community Forestry Program (NJUCF).</i>					
Transportation Plan	No	-	No	-	-
<i>Comment:</i>					
Agriculture Plan	No	-	No	-	-
<i>Comment:</i>					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Climate Action Plan	No	-	No	-	-
<i>Comment:</i>					
Tourism Plan	No	-	No	-	-
<i>Comment:</i>					
Business Development Plan	No	-	No	-	-
<i>Comment:</i>					
Other: Historic Preservation	Yes	State	-	-	-
<i>Comment:</i> 40:32-6. Acquisition and preservation of historical buildings and data - Any county may acquire, by gift or purchase, any real estate or any interests therein, together with any and all buildings thereon within the limits of the county for historical purposes, or for the purpose of preserving therein or thereon historical data and objects of historical interest. Administered by the Mendham Borough Planning Committee under the authority of the State Historic Preservation Office.					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	No	No
<i>Comment:</i> CEMP updated 2020 approved by State Police. Per the NJ Civilian Defense and Disaster Control Act (App.A:9 _43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Local	No	-	-
<i>Comment:</i>					
Post-Disaster Recovery Plan	No	Local	No	-	-
<i>Comment:</i>					
Continuity of Operations Plan	No	Local	No	-	-
<i>Comment:</i>					
Public Health Plan	No	Local	No	-	-
<i>Comment:</i>					
Other	No	-	-	-	-

**Table 9.20-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes Engineering
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	No The Borough is 85% built out to zoning standards.

ADMINISTRATIVE AND TECHNICAL CAPABILITY

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

Table 9.20-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Borough Engineer/Planning
Mitigation Planning Committee	No	
Environmental Board / Commission	Yes	-
Open Space Board / Committee	Yes	-
Economic Development Commission / Committee	Yes	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	RAVE and AlertMendham through Morris County
Maintenance program to reduce risk	Yes	Have water reclamation plan for sewer system in the Borough which includes maintenance plan, tree trimming by power lines
Mutual aid agreements	Yes	Mayor's Shared Services Committee
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Borough Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Borough Engineer
Planners or engineers with an understanding of natural hazards	Yes	Borough Engineer
Staff with training in benefit/cost analysis	Yes	Borough Engineer
Staff with training in green infrastructure	Yes	Borough Engineer
Staff with education/knowledge/training in low impact development	Yes	Borough Engineer
Surveyor	Yes	Borough Engineer



Staff/Personnel Resource	Available?	Department/Agency/Position
Stormwater engineer	Yes	Borough Engineer
Personnel skilled or trained in GIS applications	Yes	Borough Engineer
Local or state water quality professional	Yes	Borough Engineer
Scientist familiar with natural hazards in local area	Yes	Borough Engineer
Emergency manager	Yes	OEM Coordinator in Police Department (Gary Lynch) and Mayor
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other	No	-

FISCAL CAPABILITY

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

Table 9.20-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	N/A
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes
Other	-

EDUCATION AND OUTREACH CAPABILITY

The table below summarizes the education and outreach resources available to the Borough of Mendham.

Table 9.20-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes. Chief, Mayor, Administrator
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	Yes- Website is used to disseminate hazards related information as needed. Have updates on developing or in process hazard events (es. COVID-19)
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	Website is used to disseminate hazards related information as needed.



Criterion	Response
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	Boro OEM Gary Lynch
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	Public Access TV (Mendham TV), social media, email lists, Have worked with the Bernards Township Health Department for public outreach on pandemic and health risks.
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Yes. Lisa Smith Cit-E-Net, RAVE Alert & Alert Mendham

COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to the Borough of Mendham.

Table 9.20-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	-	-
Public Protection (Fire ISO Protection Class)	Yes	4/4X	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-

ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.20-9. Adaptive Capacity

Criterion	Response
Does the municipality have access to resources to determine the possible impacts of climate change upon the municipality?	No
Is the administrative supportive of integrating climate change in policies or actions?	Yes
Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the municipality?	Yes

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Dam Failure	High
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Medium



Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Geologic	Low
Harmful Algal Bloom	Medium
Hazardous Substances	Medium
Infestation	Medium
Severe Weather	Medium
Severe Winter Weather	High
Wildfire	Medium

NATIONAL FLOOD INSURANCE PROGRAM

This section provides specific information on the management and regulation of the regulatory floodplain.

Table 9.20-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Borough Engineer by authority of Borough Zoning Officer
Who is your floodplain administrator? (name, department/position)	Paul Ferriero, Borough Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	7/21/2008
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	None
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<input type="checkbox"/> If so, what type of assistance/training is needed?	-
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No
How many flood insurance policies are in force in your jurisdiction?*	13
• What is the insurance in force?	\$3,457,000
• What is the premium in force?	9262
How many total loss claims have been filed in your jurisdiction?*	1
• How many claims are still open or were closed without payment?	\$31,376.78
• What were the total payments for losses?	
Do you maintain a list of properties that have been damaged by flooding?	N/A
Do you maintain a list of property owners interested in flood mitigation?	N/A

*According to FEMA statistics as of July 2019



ADDITIONAL AREAS OF EXISTING INTEGRATION

- The Borough's site plan review process includes consideration of natural hazard risk (e.g. floodplains, steep slopes, etc.). Further, through the site plan review and development permitting process, the Borough requires developers to take additional actions to manage natural hazard risk (e.g. undergrounding utilities, stormwater detention, creating easements in areas/zones of natural hazard risk).
- The Borough prepared an Environmental Resources Inventory (ERI) as part of the Comprehensive/Master Plan process, which included geology, topography, surface water, soils, ground water hydrology and resources, floodplains, wetlands, vegetation, wildlife, and open space. This document and the other background studies provide a basis for decisions by the Planning Board, Board of Adjustment, Environmental Commission, and other interested groups involved with land development in the Borough.
- Wetlands: Wetlands serve many important functions. They provide flood storage and stream flow attenuation during wet periods Mendham Borough should continue to obtain conservation easements on all wetlands and transition areas when land is subdivided. All conservation easement boundaries on newly approved sites should be recorded on the deed, delineated with permanent markers, and a system for monitoring conservation easements should be established.
- The Borough has a Local Emergency Preparedness Committee (LEPC) that supports natural hazard risk preparedness, response and mitigation.
- The Borough has a Capital Improvements Budget that includes funding for projects to harden critical facilities and infrastructure.
- The Borough has an active public education and outreach program (municipal website, social media, e-mail lists) that includes information about personal preparedness and mitigation.
- The Borough has an environmental commission charged to conduct research into the use and possible use of the open land areas of the Borough.
- The Borough has an Open Space Committee shall, from time to time, submit written recommendations to the Borough Council as to:
 - (1) Which parcels of land should be acquired for recreation and conservation purposes and whether such parcels should be acquired in fee or only by acquisition of development rights;
 - (2) Which of the lands acquired for those purposes should be developed and/or maintained;
 - (3) Which farmland should be acquired for farmland preservation purposes and whether such farmland should be acquired in fee or only by acquisition of development rights; and
 - (4) Which historic properties, structures, facilities, sites, areas, or objects should be acquired for historic preservation purposes.
- The Borough has a Shade Tree Advisory Committee whose purpose is to prepare programs and plans for consideration by the governing body and the Superintendent of Public Works with respect to the purchase, planting, care, rearing, trimming, preserving and control of the shade and ornamental trees of the Borough.

9.20.5 Hazard Event History Specific to the Jurisdiction

Morris County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.4 (Hazard Profiles) and includes a chronology of events that affected Morris County and its jurisdictions. The Borough of Mendham's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Morris County. Table 9.20-11 provides details regarding municipal-specific loss and



damages the Borough experienced during hazard events. Information provided in the table below is based on reference material or local sources.

Table 9.20-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Morris County Designated?	Summary of Event	Summary of Local Damages and Losses
January 21-24, 2016	Severe Winter Storm and Snowstorm (DR-4264)	Yes	An impulse from the west coast traversed the midsection of the country, then developed into a low pressure system as it tracked across the Gulf states before intensifying along the Carolina coast into a major nor'easter, producing record snowfall in parts of New Jersey on January 23rd. It then moved out to sea after passing by the mid-Atlantic coast early on January 24th. Wind gusts up to 60 MPH produced blizzard conditions as visibilities dropped to one-quarter mile or less in spots. Snow began during the evening hours on the 22nd, then continued, heavy at times through the 23rd before ending early on the 24th. Snowfall totals included 30.0 inches in Long Valley, 29.0 inches in Madison, 26.0 inches in Budd Lake, 25.3 inches in Green Pond, 22.5 inches in Butler, and 21.0 inches in Chatham. At one point during the storm, up to 270,000 customers were without power.	Clean up from Storm- Snow Removal, plowing roads, labor-OT, Equipment, Rock Salt.
March 6-7, 2018	Severe Winter Storm and Snowstorm (DR-4368)	Yes	Precipitation gradually overspread the region during the overnight hours of March 6th to the 7th. 12 to 24 inches was observed across large parts of Morris County. The snow contained large amounts of liquid, making it heavy and wet. This resulted in downed trees, limbs, and wires, leading to numerous power outages across portions of New Jersey, especially where the heaviest snow was reported. Many customers were still without power from the previous storm when this storm struck. Governor Murphy estimated	Clean up from Storm- Snow Removal, plowing roads, labor-OT, Equipment, Rock Salt.



Date(s) of Event	Event Type (disaster declaration if applicable)	Morris County Designated?	Summary of Event	Summary of Local Damages and Losses
			about 350,000 customers state-wide lost power as a result of this second storm. Governor Phil Murphy declared a state of emergency which went into effect at 8 PM Tuesday March 6th.	

9.20.6 Jurisdiction-Specific Vulnerabilities and Hazard ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant’s vulnerability to the identified hazards. Table 9.20-12 summarizes the Borough of Mendham risk assessment results and data used to determine the hazard ranking.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.



Table 9.20-12. Summary of Risk Assessment Results

Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Dam Failure	Partial or complete failure of a dam There are 5 dams in the Borough, according to NJDEP.	Population impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		The number of building impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		Economic impacts include dam/building/infrastructure repairs; debris removal/disposal; utility impacts.		Low
Disease Outbreak	Disease Outbreaks which include: Mosquito-Borne Diseases, Tick-Borne Diseases, Campylobacteriosis, Influenza, Mumps, Ebola	Population impacted is dependent on the disease and severity of the outbreak; in some cases immuno-compromised persons are more vulnerable.		Structural impacts due to disease outbreak would be limited.		Economic losses can include County financial impacts to monitor/address outbreaks; lost wages or commercial interruptions; depends on the severity and type of disease outbreak.		Low
Drought	Prolonged drought event - The County is serviced by water supplies who primarily get water from groundwater sources; some surface water sources.	Entire population exposed. Population on surface water supplies may be impacted first; water restrictions/contamination; increased wildfire risk.		Droughts are not expected to cause direct damage to buildings.		Losses include aesthetic, landscape/nursery/agricultural industry impacts.		Low
Earthquake	"100, 500-, 2,500-Year Mean Return Period (MRP) Events evaluated NEHRP Soils D&E (soft soils that amplify ground shaking are present in the County"	NEHRP D&E:	0	NEHRP D&E:	0	100-year Loss:	\$0	High
		Liquefaction Class 4:	0	Liquefaction Class 4:	0	500-year Loss:	\$848,874	
						2,500-year Loss:	\$14,115,107	
Extreme Temperature	Extreme temperature event (heat or cold)	Over 65 Population:	1,100	Physical impacts due to extreme temperatures would be limited.		Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or power failures.		Low
		Population Below Poverty Level:	185					
Flood	100- and 500-Year Mean Return Period Event	100-year	11	100-year	7	100-year Loss:	\$4,216,933	High
		500-year	14	500-year	9			
Geological	High Landslide Susceptibility Areas and Areas developed over carbonate rock	Class A:	0	Class A:	0	Class A:	0	Moderate
		Class B:	14	Class B:	5	Class B:	\$5,985,022	
		Carbonate Bedrock:	3	Carbonate Bedrock:	7	Carbonate Bedrock:	\$1,846,877	



Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Harmful Algal Bloom	Any body of water or area adjacent that is susceptible to harmful algal bloom.	Population in contact (e.g., swimming) or drinking water from surface water impacted can result in a range of health effects		General building stock impacts due to harmful algal bloom are not anticipated. Critical facilities (i.e., water treatment plants) could lead to plant closures.		Economic impacts range from recreational closure of impacted waterbodies; cost to sample/monitor/remediate.		Low
Hazardous Substance	Release of a hazardous substance from a fixed site.	Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site.		The degree of damages to a building depends on the scale of the incident.		The degree of damages depends on the scale of the incident.		Low
Infestation	Infestation including: Insects [e.g. Gypsy Moth, Mosquitoes, Spotted Lanternfly, Emerald Ash Borer], White-Tailed Deer, Rodents	Population impacted will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Physical impacts will be limited to indirect impacts from invasive species which affect crops and vegetation.		Economic impact will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		High
Severe Weather	Severe Weather Event	Entire population exposed; The degree of impact to the population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		Annualized Loss:	\$21,718	High
						100 -Year Loss:	\$546,883	
						500-year Loss:	\$3,044,778	
Severe Winter Weather	Severe Winter Weather Event	All residents/commuters/visitors are exposed; socially-vulnerable populations may be at increased risk.		All buildings are exposed; the degree of impact depends on the scale of the incident.		The cost of snow and ice removal and repair of roads/infrastructure can impact operating budgets.		Low
Wildfire	Wildfire Fuel Hazard areas (High, Very High, Extreme)	Wildfire:	8	Wildfire:	3	Wildfire:	\$2,872,025	Moderate



REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Mendham.

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

Source: FEMA BureauNet, 2019

Note: RL and SRL as of 04/26/2019; The number of SRL properties excludes RL properties and includes properties that have been verified only (SRL_Indicator = V)

CRITICAL FACILITIES

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain.

Table 9.20-13. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure		Status of Mitigation
		1% Event	0.2% Event	
There are no critical facilities located in the floodplain.				

ADDITIONAL IDENTIFIED VULNERABILITIES

The jurisdiction has identified the following vulnerabilities within their community:

- Mountain Valley Dam has been totally reconstructed with extra spillways.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Borough of Mendham 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 adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Borough of Mendham has significant exposure. Refer to Figures 9.20-1 and 9.20-2.

HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.3 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Morris County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community factoring in their capabilities to withstand impacts and rebound after the event. The table below summarizes the hazard rankings of potential natural hazards for the Borough of Mendham. The Borough of Mendham has reviewed the Morris County hazard ranking table, as well as its individual results, to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard ranking, the Borough of Mendham indicated the following:



- Mountain Valley Dam has been totally reconstructed with extra spillways and dam failure hazard was reduced to low.
- Hazardous Substances Hazard has been adjusted to Medium to Low ranking due to the lack of hazardous materials sources in the Borough.

Table 9.20-14. Borough of Mendham Hazard Ranking Input

Dam Failure	Drought	Earthquake	Extreme Temperature	Flood	Geological Hazard
Low	Medium	Medium	Medium	Low	Low

Harmful Algal Bloom	Severe Storm	Severe Winter Storm	Wildfire	Hazardous Substances	Disease Outbreak	Infestation
Low	High	High	Low	Medium to Low	High	Medium

9.20.7 Mitigation Strategy and Prioritization

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

PAST MITIGATION INITIATIVE STATUS

The following table summarizes the jurisdiction's progress on their mitigation strategy identified in the 2015 HMP. 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 can also be found under 'Capability Assessment' presented previously in this annex.

Table 9.20-15. Status of Previous HMP Mitigation Actions

2015 Action Number Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
			Check if Yes	Enter 2020 HMP Action #
Mendham Boro 1: Complete upgrades to Mountain Valley Park dam	Borough Engineer	Complete	-	-
Mendham Boro 2: Backup Power for Critical Facilities	Borough OEM and Board of Education	Partially Complete: Garabrant Center on Wilson Street	Yes, with modifications. New HVAC System Boro Hall	2020-Mendham Borough-002
Mendham Boro 3: All-Hazards Public Education and Outreach Program	Borough Administrator	Complete – distributing flyers and information on municipal website	Yes, with modifications	Mendham Borough 001

In addition to the above progress, the Borough of Mendham identified the following mitigation projects/activities that were completed but not identified in the 2015 HMP mitigation strategy:

- Initiated a MOA for shared services with Chester Township, Chester Borough and Mendham Township for use of equipment and manpower when an individual town is in need such as debris.



- Harvested/removed ash along the Route 24 right of way, Dean Road, Talmadge Road to mitigate damages from emerald ash borer.
- American Water installed new water lines for Phase 1 (West Main St to Hilltop Road and Hilltop to Bernardsville Road) and will install Phase 2 to update the water system to increase the water capacity to the Borough.
- Cooperated with the Bernards Township Health Department to address a hepatitis outbreak in 2019. The Township is continuing to Coordinate with Bernards Township on the corona virus to provide educational outreach to employees, schools, workplaces, residents, etc. via flyers, emails to schools, website, Planning/preparing an action plan for potential pandemic outbreak.
- Have worked to confirm that all diesel facilities are secured and have fail safe systems to prevent leakage and contamination.

PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Borough of Mendham reviewed the detailed information provided regarding community assets exposed and vulnerable to the identified hazards of concern. In addition, the Borough of Mendham participated in a mitigation action workshop in March 3, 2019 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Morris County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; and 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). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.2-16 summarizes the comprehensive range of specific mitigation initiatives the Borough of Mendham would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the 4 FEMA mitigation action categories and the 6 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 (Mitigation Strategy), 14 criteria were used to evaluate each action, including an evaluation of the benefits and costs. For each new mitigation action, a numeric rank was assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of this evaluation, in addition to input from the jurisdiction, were then used to prioritize the mitigation initiatives as 'High', 'Medium', or 'Low.' Table 9.20-17 summarizes the evaluation of each mitigation initiative and the resulting priority, listed by Action Number.



Table 9.20-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Mendham Borough -001	All-Hazards Public Education Program	There is a need to protect residents from harmful potential natural hazards on private property and to educate the public on the impacts/mitigation of natural hazards.	Develop a multi-pronged educational outreach program to provide critical information to residents on methods to reduce their vulnerability to natural hazards such as vegetation management, ash tree removal, etc.	Yes	All	1.A, 3.E	Borough Administrator	Operating budget, HMA funding	High	Low	Short	High	EAP	PI
2020-Mendham Borough -002	Borough Hall Critical Facility Back-Up Power Project	The Borough Hall is a designated critical and lifeline facility and does not have back up power for uninterrupted power supply for frequent power outages during which necessitates administrative shutdown at these times.	The Borough Engineer will research what size generator is necessary to supply backup power the Borough Hall building. The Borough will then purchase and install a generator Municipal Hall.	Existing	All	1A, 3G	Borough Engineer with support of Borough Administrator	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	Medium	Short	Medium	SIP	PR
2020-Mendham	Debris Management Permit/Plan	At present the Borough does not have a	The Borough administrator will contract	Existing	Severe Storm, Severe	2A, 3F	Borough Administrator	Operating Budget	Low	Low	Short	High	LPR	PR



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
Borough -003		debris management permit or debris management plan to activate in the event of a debris producing event. Without such a plan, there is a potential for an extended period of unsafe conditions caused by the existence of woody or household debris.	with a consultant to review the existing conditions in the community, determine the potential extent of debris generated by hazard events and prepare a plan and contingent permit to address the impacts of a debris generating event.		Winter Storm, Earthquake									
2020-Mendham Borough -004	Green Infrastructure	Downstream communities experience frequent flooding	Design and install green infrastructure/rain gardens to alleviate downstream flooding.	New	Flooding	3A, 5A, 5B	Borough Engineer	Operating budget, The New Jersey Infrastructure Bank (NJDEP), New Jersey Water Bank (NJDEP), NJ Highlands Environmental and Economic Sustainability Grant	Medium	Low	Short	Medium	NSP	NR



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
								Awards Program						
2020-Mendham Borough-005	Municipal Message Board	The Borough needs an effective method to distribute information during hazard events when internet and utilities down.	Purchase a variable message board trailer to deploy in affected areas.	New	All	1A, 3G	Borough DPW	Operating Budget	Low	Low	Short	High	EAP	PI

Notes:

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
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

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

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 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. 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 preserve or restore the functions of natural systems. 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. 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 9.20-17. Summary of Evaluation and Action Priorities

Initiative Number	Mitigation Initiative Name	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
2020-Mendham Borough-001	All-Hazards Public Education Program	1	1	1	1	0	0	0	1	1	1	1	0	0	1	8	High
2020-Mendham Borough-002	Borough Hall Critical Facility Back-Up Power Project	1	1	1	0	0	1	0	1	1	1	1	0	0	1	9	High
2020-Mendham Borough-003	Debris Management Permit/Plan	1	0	1	1	1	0	0	1	1	1	1	1	0	0	9	High
2020-Mendham Borough-004	Green Infrastructure	1	1	0	0	0	0	0	1	1	1	0	0	0	1	6	Medium
2020-Mendham Borough-005	Municipal Message Board	1	0	1	1	0	0	0	1	1	1	1	1	0	1	9	High

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.



Table 9.20-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Dam Failure			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001; 003
Disease Outbreak			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001
Drought			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001
Earthquake	Mendham Borough-003		Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001; 003
Extreme Temperature			Mendham Borough-001; 005		Mendham Borough-002; 005	Mendham Borough-002		Mendham Borough-001
Flood			Mendham Borough-001; 005	Mendham Borough-004	Mendham Borough-005	Mendham Borough-002	Mendham Borough-004	Mendham Borough-001; 003
Geological			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001
Harmful Algal Bloom			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001
Hazardous Substance			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001
Infestation			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001
Severe Weather	Mendham Borough-003		Mendham Borough-001; 005		Mendham Borough-002; 005	Mendham Borough-002		Mendham Borough-001; 003
Severe Winter Weather	Mendham Borough-003		Mendham Borough-001; 005		Mendham Borough-002; 005	Mendham Borough-002		Mendham Borough-001; 003
Wildfire			Mendham Borough-001; 005		Mendham Borough-005	Mendham Borough-002		Mendham Borough-001; 003

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

RED = high ranked hazard

ORANGE = medium ranked hazard

YELLOW = low ranked hazard

9.20.8 Staff and Local Stakeholder Involvement in Annex Development

The Borough of Mendham followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. The following table summarizes who participated and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).



Table 9.20-19. Contributors to the Annex

Entity	Title	Method of Participation
John Camoia	Chief of Police	Teleconference annex review, Jurisdictional Annex Workshop
Paul Ferriero	Borough Engineer	Provided annex data and review
Jeff Cooper	Superintendent of DPW	Provided annex data and review
Joyce Bushman	Borough Administrator	Provided annex data and review
Gary Lynch	Borough OEM	Provided annex data and review
Jeff Cooper	DPW Superintendent	Provided annex data and review



Figure 9.20-1. Borough of Mendham Hazard Area Extent and Location Map

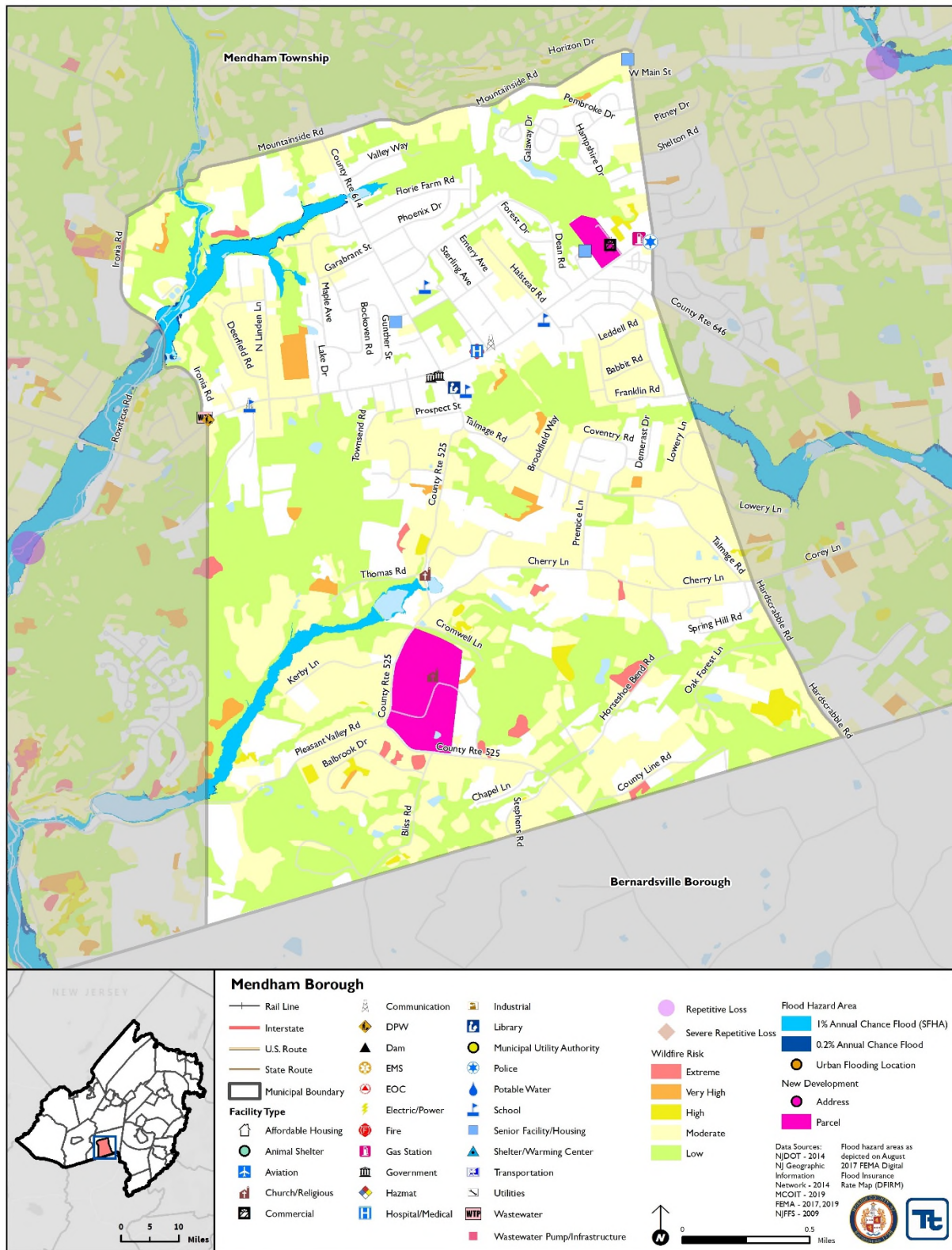
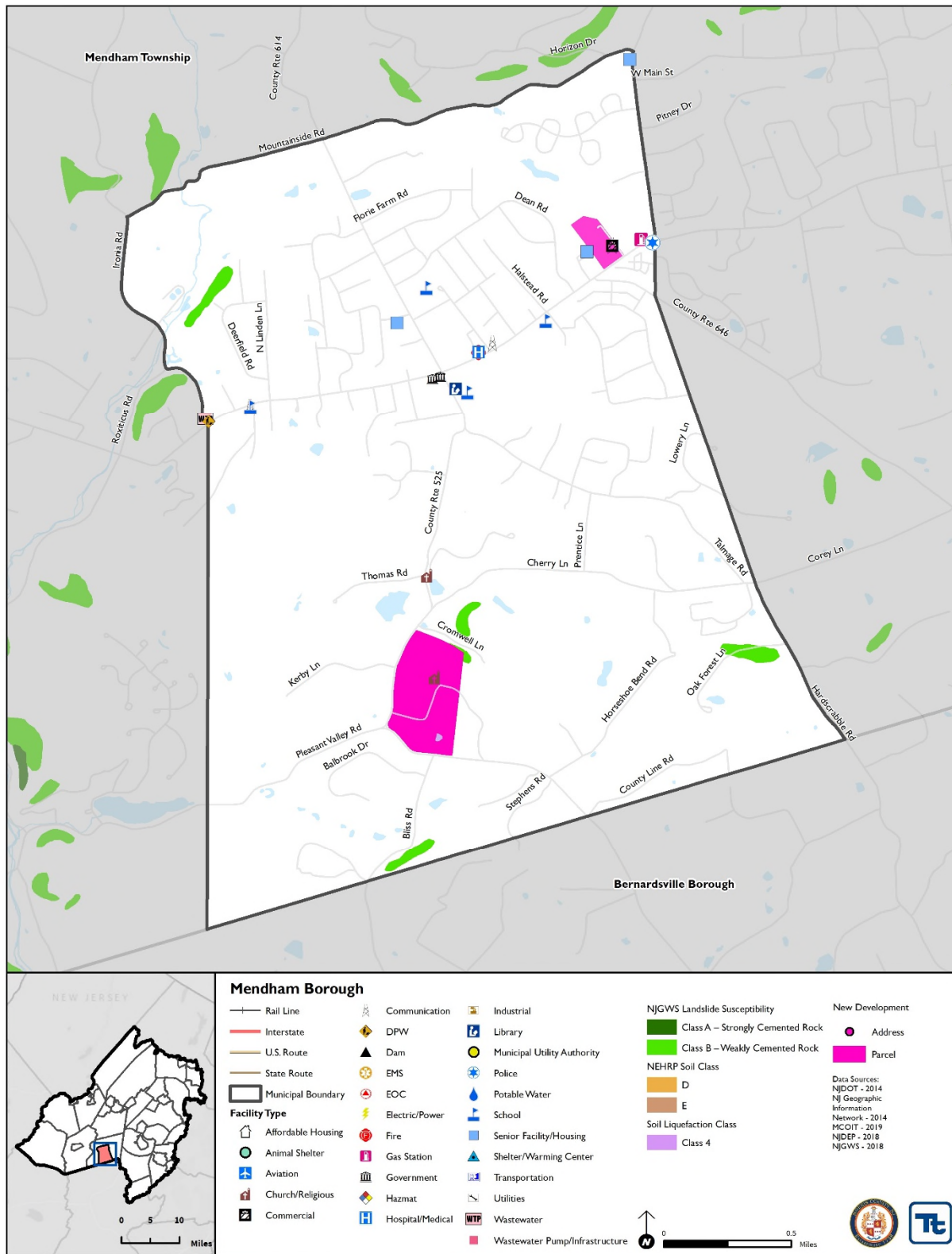




Figure 9.20-2. Borough of Mendham Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	Multi-Hazard Public Education and Outreach		
Project Number:	2020 Mendham Borough-001		
Risk / Vulnerability			
Hazard(s) of Concern:	All		
Description of the Problem:	Dying ash trees present life Safety and utility interruptions on private property as well as in public recreation areas. There is a need to protect residents from harmful potential natural hazards on private property and to educate the public on the impacts/mitigation of natural hazards.		
Action or Project Intended for Implementation			
Description of the Solution:	Provide educational information regarding the identification, inoculation or removal of ash trees on private property to mitigation life safety and utility issues. Develop a multi-pronged educational outreach program to provide critical information to residents on methods to reduce their vulnerability to natural hazards such as vegetation management, ash tree removal, etc.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Not applicable.	Estimated Benefits (losses avoided):	Not quantifiable.
Useful Life:	Not applicable	Goals Met:	1A, 3E
Estimated Cost:	~\$5,000	Mitigation Action Type:	EAP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	1 to 2 years
Estimated Time Required for Project Implementation:	One year	Potential Funding Sources:	Operating budget, FEMA HMA, local match
Responsible Organization:	Borough Administrator	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues, vulnerable populations do not have access to safe areas.
	Municipal removal of trees	Estimated at greater than \$1000 per tree	Cost prohibitive
	Municipal funding of inoculation of trees	Estimated at greater than \$700 per tree	Cost prohibitive
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Multi-Hazard Public Education and Outreach	
Project Number:	2020 Mendham Borough-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Supports safe activities
Property Protection	1	Mitigates property losses
Cost-Effectiveness	1	Low cost, through operating budget and existing resources
Technical	0	
Political	0	
Legal	0	
Fiscal	0	
Environmental	1	Supports environmental stewardship
Social	1	Improves social awareness and decreases vulnerability
Administrative	1	Can be implemented with current administrative resources
Multi-Hazard	1	Can support educational outreach and good practices for multiple hazards
Timeline	0	
Agency Champion	0	
Other Community Objectives	1	Can support educational outreach and good practices for multiple hazards
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Critical Facility Back-up Generator		
Project Number:	2020 Mendham Borough 002		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Severe Winter Storm		
Description of the Problem:	During extended utility interruptions, a cooling/warming center is needed to address needs of vulnerable populations.		
Action or Project Intended for Implementation			
Description of the Solution:	Install a permanent generator to provide an uninterrupted power supply to the facility.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	Not applicable	Estimated Benefits (losses avoided):	Ensures continuity of operations; provides a warming center for residents
Useful Life:	20 years	Goals Met:	1A, 3G
Estimated Cost:	\$65,000	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately after funding is received or about 1-2 years
Estimated Time Required for Project Implementation:	1-2 years	Potential Funding Sources:	FEMA HMA, local match
Responsible Organization:	Boro Administrator	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues, vulnerable populations do not have access to safe areas.
	Build new heating/cooling center	\$1M	Cost prohibitive
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Critical Facility Back-up Generator	
Project Number:	2020 Mendham Borough 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Community Center.
Property Protection	1	Project will protect Community Center from power loss.
Cost-Effectiveness	1	
Technical	0	
Political	0	
Legal	1	The town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	This supports all segments of the population equally.
Administrative	1	This can be implemented using current resources
Multi-Hazard	1	All hazards
Timeline	0	1-2 years
Agency Champion	0	
Other Community Objectives	1	Improves town's capabilities of supporting the needs of vulnerable populations
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Debris Management Permit/Plan		
Project Number:	2020 Mendham Borough-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Severe Winter Storm, Earthquake		
Description of the Problem:	At present the Borough does not have a debris management permit or debris management plan to activate in the event of a debris producing event. Without such a plan, there is a potential for an extended period of unsafe conditions caused by the existence of woody or household debris.		
Action or Project Intended for Implementation			
Description of the Solution:	The Borough administrator will contract with a consultant to review the existing conditions in the community, determine the potential extent of debris generated by hazard events and prepare a plan and contingent permit to address the impacts of a debris generating event.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Not applicable.	Estimated Benefits (losses avoided):	Ensures that debris will be removed from roadways and properties on a timely basis.
Useful Life:	Not applicable	Goals Met:	2A, 3F
Estimated Cost:	\$75,000	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Operating Budget
Responsible Organization:	Borough Administrator	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, Emergency Operations Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Potential debris conditions continue to exist threatening health and safety.
	Develop a debris management plan	\$75,000	Supports effective performance of debris management in the event of a significant hazard event.
	Enter into a mutual aid agreement with a neighboring community	In kind services	While this could provide a potential solution, services may not be prioritized.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Debris Management Permit/Plan	
Project Number:	2020 Mendham Borough-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The plan will prevent life threatening conditions caused by debris as well as minimize impacts on evacuation and safety routes.
Property Protection	0	
Cost-Effectiveness	1	Minimal cost
Technical	1	Based on Hazus debris generation model
Political	1	Political support
Legal	0	
Fiscal	0	
Environmental	1	Avoids negative environmental impacts
Social	1	This supports all segments of the population equally
Administrative	1	Can be addressed by current administrative staff
Multi-Hazard	1	Multi-hazard
Timeline	1	Short timeline
Agency Champion	0	
Other Community Objectives	0	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Green Infrastructure		
Project Number:	2020 Mendham Borough-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	Downstream communities experience frequent flooding		
Action or Project Intended for Implementation			
Description of the Solution:	Design and install green infrastructure/rain gardens to alleviate downstream flooding.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	10 year flood	Estimated Benefits (losses avoided):	Reduce the impact of localized floodings well as flooding in the downstream watershed; in addition, improve the aesthetics of the community
Useful Life:	10 years	Goals Met:	3A, 5A, 5B
Estimated Cost:	\$50,000	Mitigation Action Type:	NSP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Operating budget, The New Jersey Infrastructure Bank (NJDEP), New Jersey Water Bank (NJDEP), NJ Highlands Environmental and Economic Sustainability Grant Awards Program
Responsible Organization:	Borough Engineer	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan Highlands Master Plan Stormwater Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Local and downstream flooding continues
	Identify and construct green infrastructure to reduce flooding	\$50,000	Local and downstream flooding reduced
	Create detention basin	\$75,000	Inadequate locations in the Borough
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Green Infrastructure	
Project Number:	2020 Mendham Borough-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduces flooding locally and downstream
Property Protection	1	Reduces flooding locally and downstream
Cost-Effectiveness	0	
Technical	0	
Political	0	
Legal	0	
Fiscal	0	
Environmental	1	Improves aesthetics and ecological issues. Can also engage high school youth to support and as an educational opportunity
Social	1	Supports all sectors of the population equally
Administrative	1	Borough has the administrative capabilities to address this
Multi-Hazard	0	
Timeline	0	
Agency Champion	0	
Other Community Objectives	1	Improves flood issues, aesthetics and supports youth education
Total	6	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Municipal Message Board		
Project Number:	Mendham Borough-005		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Borough needs an effective method to distribute information during hazard events when internet and utilities down.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase a variable message board trailer to deploy in affected areas.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Not Applicable	Estimated Benefits (losses avoided):	Provide timely information to residents and businesses during hazard events combined with internet outages.
Useful Life:	10 years	Goals Met:	1A, 3G
Estimated Cost:	\$20,000	Mitigation Action Type:	EAP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMA, local match
Responsible Organization:	Borough DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, Emergency Operations Plan, Operating Budget
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Public communication interruptions
	Vehicle mounted bull horn system	\$5,000	Only available during short periods of time as vehicle travels through town
	Mobile mounted message board	\$20,000	Provides consistent and reliable messaging 24/7 for public information
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Municipal Message Board	
Project Number:	Mendham Borough-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provides 24/7 communication of urgent messages to public
Property Protection	0	
Cost-Effectiveness	1	Best alternative for low tech communication
Technical	1	Technically feasible
Political	0	
Legal	0	
Fiscal	0	
Environmental	1	No adverse environmental impacts
Social	1	Provides support to all sectors of the population, increases public safety
Administrative	1	Borough has the administrative capability to implement
Multi-Hazard	1	Multi-hazard
Timeline	1	Short timeline
Agency Champion	0	
Other Community Objectives	1	Can also be used for announcement of community events.
Total	9	
Priority (High/Med/Low)	High	