



## 9.20 Borough of Stanhope

This section presents the jurisdictional annex for the Borough of Stanhope.

### 9.20.1 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
Brian McNeilly, Borough Administrator 77 Main Street, Stanhope, NJ 07874 Phone: (973) 347-8042 Email: <a href="mailto:bmcneilly@stanhopenj.gov">bmcneilly@stanhopenj.gov</a>	Eric Keller, Borough Engineer 77 Main Street, Stanhope, NJ 07874 Phone: (973) 291-2919 Email: <a href="mailto:ekeller@bowmanconsulting.com">ekeller@bowmanconsulting.com</a>

### 9.20.2 Municipal Profile

The Borough of Stanhope is located at the southern tip of Sussex County. It has a total area of 2.2 square miles and is bordered to the north and west by Byram Townships, to the north and east by Hopatcong Borough and to the south by Morris County. According to the U.S. Census, the 2010 population for the Borough of Stanhope was 3,610. Lake Musconetcong is a large lake located in the southeastern portion of the Borough. Tributaries of the Musconetcong River flow through the Borough.

### Growth/Development Trends

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

### 9.20.3 Natural Hazard Event History Specific to the Municipality

Sussex 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 9.20-1. Hazard Event History

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
February 12-13, 2008	Winter Storm	N/A	N/A	DPW overtime for snow removal. Cost of materials applied to the road surface.
October 28, 2008	Heavy Snow and Strong Winds	N/A	N/A	DPW and Police overtime due to sporadic power loss for traffic control and debris removal.
February 1-2, 2011	Winter Storm	N/A	N/A	DPW overtime for snow removal. Cost of materials applied to the road surface.
August 26 – September 5, 2011	Hurricane Irene	DR-4021	Yes	DPW and Police overtime due to sporadic power loss for traffic control and debris removal. Robert Place road closure due to wash out and failure of drainage ditch alongside of the road. Damage to



Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
				road culvert on Dell Road. Emergency Protective Measures-\$7,158.63 (Fire Dept., Police, DPW)
October 29, 2011	Severe Storm	DR-4048	Yes	DPW and Police overtime due to widespread power loss for traffic control and debris removal. Damage to municipal facility. Power outage effecting 100% of the town for 5 days. Schools closed for 5 days. Force Labor (Police, Fire and DPW) \$6,831.92. 30 tons of road salt \$2463.76. Standby generator usage \$23,972.76. Contract Brush Removal \$6,212.76. DPW Brush Removal \$12,221.38.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	DPW and Police overtime due to widespread power loss for traffic control and debris removal. Damage to municipal facility. Residents self-evacuated no documentation on number or where to. Sheltering provided by the Red Cross at Hopatcong High School. Unofficial warming stations located at Stanhope Firehouse and Borough Hall. Majority of the town w/o power for 12 days following the storm. Following road were closed due to downed wires and/or trees: Main St, Linden Ave, Brooklyn Rd, Musconetcong Ave, Spring Ln, Highland Ave, Lloyd Ave. Roads were closed on Oct 29th thru Nov 3rd, 2012. Schools closed for 10 days. Falling tree destroyed the radio system at Well #4. The impact also destroyed the variable frequency drive of the pump, the power supply for the base station. The physical building had damage to the roof and the shed located next it. Three private residence were damaged during the storm. Two were repaired. One was 100% loss and was rebuilt. Force Labor (DPW) – Debris Removal \$35,000.00. Fire Department (Equipment and Manpower) \$10,500.00.

### 9.20.4 Hazard Vulnerabilities and Ranking

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

Table 9.20-2. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Dam Failure	Damage estimate not available	Rare	6	Low
Drought	Damage estimate not available	Frequent	30	Medium
Earthquake	100-Year GBS: \$0	Occasional	28	Medium





Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
	500-Year GBS: \$455,982 2,500-Year GBS: \$7,417,681			
Flood	1% Annual Chance: \$2,329,655	Frequent	18	Medium
Geologic	Exposed to Carbonate Rock Areas: \$0	Occasional	12	Low
Hurricane	100-year MRP: \$194,327 500-year MRP: \$1,050,050 Annualized: \$10,106	Frequent	48	High
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Weather	100-Year MRP: \$194,327 500-year MRP: \$1,050,050 Annualized: \$10,106	Frequent	48	High
Severe Winter Weather	1% GBS: \$5,570,980 5% GBS: \$27,854,900	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$655,396	Frequent	24	Medium
Hazardous Materials	Damage estimate not available	Frequent	36	High

Notes:

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

- a. The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- b. High = Total hazard priority risk ranking score of 31 and above  
Medium = Total hazard priority risk ranking of 15-30+  
Low = Total hazard risk ranking below 15
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH 3.0 and the 2011 FEMA DFIRM for the 1-percent annual chance event. For the geologic and wildfire hazards, the improved value and estimated contents of buildings located within the identified hazard zones is provided.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Borough of Stanhope.

Table 9.20-3. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Flood Boundary (3)
Borough of Stanhope	7	2	\$16,257	0	0	0

Source: FEMA, 2014

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of November 31, 2014 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 11/31/2014.

Note (2) Total building and content losses from the claims file provided by FEMA Region 2.

Note (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Note (4) FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.





**Critical Facilities**

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

**Other Vulnerabilities Identified by Municipality**

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

**9.20.5 Capability Assessment**

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education/Outreach and Community classification
- Self-Assessment of Capability
- National Flood Insurance Program
- Community Rating System
- 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 Stanhope.

**Table 9.20-4. Planning and Regulatory Tools**

Tool/Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept./Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<b>Planning Capability</b>				
Master Plan	Yes	Local	Land Use	Re-Examination – May 8, 2006
Capital Improvements Plan	No			
Floodplain Management/Basin Plan	No			
Stormwater Management Plan	Yes 2-5-15	State	Boro Eng.	
Open Space Plan	Yes	Local	Land Use	Part of the Master Plan
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes	Local	OEM	
Emergency Response Plan	Yes	Local	OEM	
Post-Disaster Recovery Plan	No			
Transportation Plan	Yes	Local/County/ State		
Strategic Recovery Planning Report	No			



**Table 9.20-4. Planning and Regulatory Tools**

Tool/Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept./Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Other Plans:	No			
<b>Regulatory Capability</b>				
Building Code	Yes	State/Local		State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Land Use	Chapter 100 of Borough Code
Subdivision Ordinance	Yes	Local	Land Use	Chapter 100 of Borough Code
NFIP Flood Damage Prevention Ordinance	Yes	Federal/State/Local	Construction Official	Chapter 100, Article 21 – Flood Damage Prevention
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Land Use	Chapter 100 of Borough Code
Stormwater Management Ordinance	Yes	Local	Land Use	Chapter 100 of Borough Code
Municipal Separate Storm Sewer System (MS4)	Yes	State	Boro Eng	
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	No	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local	Zoning	Chapter 100 of Borough Code

**Administrative and Technical Capability**

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

**Table 9.20-5. Administrative and Technical Capabilities**

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



**Table 9.20-5. Administrative and Technical Capabilities**

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

**Fiscal Capability**

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

**Table 9.20-6. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG, CDBG-DR)	No
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	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	
Incur debt through private activity bonds	
Withhold public expenditures in hazard-prone areas	
Other Federal or State Funding Programs	
Open Space Acquisition Funding Programs	No
Other	



### Education/Outreach and Community Classifications

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

Table 9.20-7. Education/Outreach and Community Classifications

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

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 Community Rating System (CRS) class applies to flood insurance while the Building Code Effectiveness Grading Schedule (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 1,000 feet of a creditable fire hydrant and is within five road miles of a recognized fire station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

### Self-Assessment of Capability

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







Table 9.20-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and Regulatory Capability	No Limited staff; Few people have numerous roles/responsibilities		
Administrative and Technical Capability	No Limited staff; Few people have numerous roles/responsibilities		
Fiscal Capability	No Limited staff; Few people have numerous roles/responsibilities		
Community Political Capability	No Limited staff; Few people have numerous roles/responsibilities		
Community Resiliency Capability	No Limited staff; Few people have numerous roles/responsibilities		
Capability to Integrate Mitigation into Municipal Processes and Activities	No Limited staff; Few people have numerous roles/responsibilities		

**National Flood Insurance Program**

**NFIP Floodplain Administrator (FPA)**

Thomas Pershouse, Construction Official

**Flood Vulnerability Summary**

The Borough does not maintain lists or inventories of properties that have been damaged by flooding. During Irene, Lee and Sandy, the only type of damage sustained was wind and tree damage only. Substantial Damage estimates were not declared for these events nor does the FPA make Substantial Damage estimates.

**Resources**

The Construction Official is the only person identified in the Flood Damage Prevention Ordinance as the FPA and he does not have other staff to use if needed. Duties of the municipal FPA is minimal due to the lack of structures of in the floodplain. The Borough does not provide any education or outreach to the community regarding flood hazards/risk or flood risk reduction. The FPA stated that there are currently no barriers to running an effective floodplain management program. He would attend a training if needed.

**Compliance History**

The Borough entered the NFIP on November 17, 1982 and is currently in good standing. However, it is unknown as to when the most recent compliance audit was conducted.

**Regulatory**

The Borough's flood damage prevention ordinance meets the minimum set by FEMA and the State of New Jersey. In addition to the ordinance, the Borough reviews all projects for impervious coverage and for stormwater management.







## Community Rating System

The Borough of Stanhope does not participate in the Community Rating System (CRS) program.

## Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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

### Planning

**Land Use Planning:** The Borough has a Joint Land Use Board which reviews all applications for development and consider natural hazard risk areas in their review.

The Borough identified several integration actions (refer to Table 9.20-11). These include when updating the Zoning Ordinance, the Borough will recognize hazard areas as limits on changes to zoning within the municipality. In addition, the Borough will use the HMP update when updating the Comprehensive Master Plan.

**Stanhope Borough Highlands Plan Element 2011:** This Plan articulates the goals and objectives for the Township as they relate to the Highlands Standards and includes the following applicable goals and objectives:

1. To require protective buffers adjacent to Highlands Open Waters of sufficient width and composition to protect the integrity of the water resource from impairment due to proximate land uses and/or development activities.
2. Minimum standards for such buffers should be consistent with those of the NJDEP and the RMP.
3. To require use of Low Impact Development Best Management Practices (see Section K) for any development activity proposed within a Riparian Area to minimize both alteration of natural vegetation and increase in impervious area and to provide for mitigation through restoration of impaired Riparian Areas in the same HUC14 subwatershed.
4. Land disturbance within all Steep Slope Protection Areas should incorporate Low Impact Development (see Section K) techniques to minimize the extent of such disturbance and the potential negative impacts resulting from it.
5. To carefully examine land development applications for potential impacts to Carbonate Rock Areas, whether by direct disturbance, or by indirect means such as introduction of additional stormwater runoff. Stormwater management LID standards that preserve or mimic the natural hydrologic features and characteristics of the land.
6. LID practices that minimize land disturbance during construction activities.
7. LID best management practices where any development application proposes disturbance of a Highlands resource, including but not limited to Steep Slope Protection Areas, Forest Areas, Critical Habitat Areas, Highlands Open Waters and Riparian Areas, and Prime Ground Water Recharge Areas.
8. To require submission of any and all information, technical data, geotechnical studies and/or analyses that may be necessary to locate and determine the extent of affected carbonate rock features during the course of development reviews.

**Environmental Commission:** The Environmental Commission actively protects our natural resources, promotes Open Space, and offers educational programs to our residents. Every year the Environmental Commission co-sponsors a Community Clean-Up Day together with the NJ Clean Communities Program. This



Commission works closely with the Lake Musconetcong Regional Planning Board, the Sussex County Soil Conservation District, the Sussex County Municipal Authority, and the NJ Department of Environmental Protection to ensure our natural resources are protected and preserved.

**Highlands:** Stanhope Borough is located in the New Jersey Highlands Region and is part of the Highlands Area. As such, the Borough is one of 88 municipalities protected by and subject to the provisions of the Highlands Water Protection and Planning Act that protects, enhances and restores Highland's natural resources. The Highlands Act requires that future land use in the Highlands Region be guided by the Regional Master Plan's Land Use Capability Map (LUCM) Series which includes tools to identify and protect the natural, scenic and other resources of the region. In supporting and complying with the Highlands Act, the Borough enacted amendments and updates to local zoning and development ordinances that ensure the protection of important resources and areas. The Highland Act creates three primary zones: a Protection Zone, a Conservation Zone and an Existing community Zone. Protection Zones are areas with the highest quality resources with extreme limitations on allowable development while Conservation Zones have significant agricultural lands and associated woodlands and environmental features with allowable development consisting primarily of agricultural uses. Existing Community Zones consist of areas of concentrated development with limited environmental constraints. These zones are overlaid with existing local zoning maps to identify and address issues of public interest including watershed management, open space preservation, historic preservation, flood protection among others.

### Regulatory and Enforcement (Ordinances)

The Borough has multiple chapters and articles pertaining to the mitigation of hazards. These ordinances include the Flood Damage Prevention Chapter, Stormwater Control Chapter, and an Environmental Impact Statement requirement section included in the Land Use Chapter. The Borough also has a chapter specific to the hazards associated with environmentally sensitive areas.

#### Chapter 100 Article XXI: Flood Damage Prevention

The purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the alternate use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

#### Chapter 100 Article XXVII: Stormwater Control

The purposed of the Stormwater Control chapter is to implement best management practices for stormwater management designed to promote the public health, safety and general welfare the citizens.

#### Chapter-100-38: Environmental Impact Statement



The purpose of this section of the Chapter is to allow the Borough to assess the impact of a proposed development upon the natural environment, particularly with respect to potable water, pollution of all kinds, flooding and waste disposal.

**Highlands:** In addition, the Highlands Water Protection and Planning Act provides additional regulatory control over development within the Borough. While Major Highlands Development projects, as defined by the Highlands Act, still require local approvals, they must first receive a Highlands Resource Applicability Determination and be evaluated for consistency with the provisions of the Highlands Act. Major Highlands Development projects include a variety of projects such as any non-residential development, any residential development that disturbs one or more acres of land, any development that disturbs ¼ acres of more of forest among others. This process identifies any potential Highlands Resources on the site and if found requires adherence to relevant development standards and restrictions.

### Operational and Administration

The Borough has established a Joint land Use Board and Environmental Commission that are responsible for the review of development applications. The Borough has a Zoning officer as well as a planning and zoning board secretary.

### Funding

**Operating Budget:** The Borough's operating budget contains minimal provisions for expected repairs like snow removal and infrastructure repair after a storm or natural disaster.

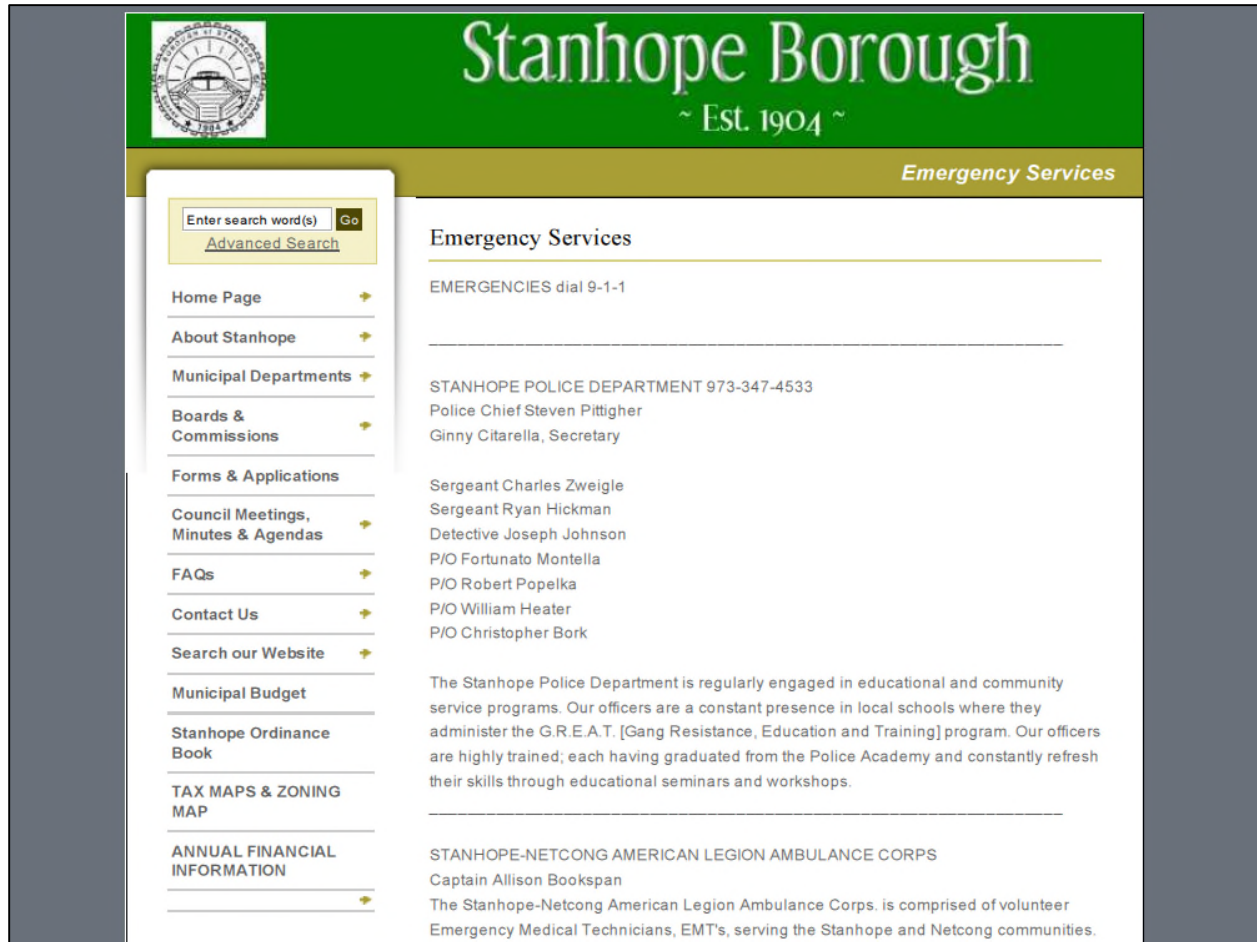
**Grants:** The Borough has received funding from the NJDOT, Sustainable Jersey, The Garden State Preservation Trust Fund, and Clean Communities grant programs for the completion of mitigation and emergency response related projects including roadway and drainage improvements.

### Education and Outreach

The Borough's website's home page posts information regarding upcoming community events and important municipal decisions.



Figure 9.20-1. Screenshot of Township Website with Examples of their Posted Mitigation/Emergency Information



### 9.20.6 Mitigation Strategy and Prioritization

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

#### Past Mitigation Initiative Status

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



Table 9.20-9. Past Mitigation Initiative Status

<u>Initiative Number</u>	<u>2011 Mitigation Action</u>	<u>Responsible Party</u>	<u>Status</u> (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP? or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2015 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Stanhope Borough 1	Backup generator for Lenape Valley Regional High School. Facility is utilized as the primary ARC approved Shelter.	School Board Administrator	No Progress	Due to budget and personnel constraints, this project has not been completed.	Include in 2016 HMP	Purchase and install a backup generator for Lenape Valley Regional High School which is used as the primary ARC shelter in the Borough.
Stanhope Borough 2	Flood proofing and elevation of utilities for the Compact Building on Furnace Street.	Facility Administrator	No Progress	Due to budget and personnel constraints, this project has not been completed.	Include in 2016 HMP	Flood proof and elevate the utilities of the compact building on Furnace Street.
Stanhope Borough 3	Flood-proofing of the Byram Lakes Elementary School.	School Board Administrator	No Progress	This action is for a facility not located within the Borough.	Discontinue	The school is located in Byram Township; therefore, this action will not be included in the 2015 HMP Update.
Stanhope Borough 4	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	OEM Coordinator, in coordination with SCDEM	No Progress	Due to budget and personnel constraints, this project has not been completed.	Include in 2016 HMP	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.



### **Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy**

The Borough has not identified any additional mitigation projects/activities that have been completed since approval of the 2011 Plan.

### **Proposed Hazard Mitigation Initiatives for the Plan Update**

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

Table 9.20-10 summarizes the comprehensive-range of specific mitigation initiatives the Borough would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High,’ ‘Medium,’ or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.20-11 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.





**Table 9.20-10. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Stanhope-1	Purchase and install a backup generator for Lenape Valley Regional High School which is used as the primary ARC shelter in the Borough.	Existing	All	1, 2, 3, 6	Emergency Management	High	High	HMGP with local cost share	Short Term / DOF	High	SIP	PP
Stanhope-2	Flood proof and elevate the utilities of the compact building on Furnace Street.	Existing	Flood, Severe Weather	1, 2, 3, 6	Emergency Management	High	Medium	HMGP with local cost share	Short Term / DOF	Medium	SIP	PP
Stanhope-3	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	N/A	All	All	Borough Administration	High	Low	Municipal Budget	Ongoing	High	EAP	PI
Stanhope-4	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.	Both	All	All	Planning	High	Low	Municipal	Short	High	LPR	PR
Stanhope-5	Develop specific design guidelines and development review procedures for new construction, replacement, relocation and substantial improvement in hazard areas within the Borough.	New and Existing	All	All	Borough Administration	High	Low	Municipal Budget	Ongoing	High	LPR	PR
Stanhope-6	When updating the Zoning Ordinance, the Borough will recognize hazard areas as limits on changes to zoning within the municipality.	N/A	All	All	Borough Administration	High	Low	Municipal Budget	Ongoing	High	LPR	PR
Stanhope-7	Ensure hazard mitigation initiatives are incorporated into the capital improvement plan; budget for some of these projects.	N/A	All	All	Borough Administration	High	Low	Municipal Budget	Ongoing	High	LPR	PR





**Table 9.20-10. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Stanhope-8	Incorporate risk assessment and hazard mitigation initiatives into planning efforts.	N/A	All	All	Borough Administration	High	Low	Municipal Budget	Ongoing	High	LPR	PR

**Notes:**

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

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

Acronyms and Abbreviations:

CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
NJDEP	New Jersey Department of Environmental Protection
NJOEM	New Jersey Office of Emergency Management
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program
RFC	Repetitive Flood Claims Grant Program (discontinued)
SRL	Severe Repetitive Loss Grant Program (discontinued)

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*

DRAFT



Table 9.20-11. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Stanhope-1	Purchase and install a backup generator for Lenape Valley Regional High School which is used as the primary ARC shelter in the Borough.	1	1	1	1	0	0	0	0	1	1	1	1	1	1	10	High
Stanhope-2	Flood proof and elevate the utilities of the compact building on Furnace Street.	1	1	1	1	0	0	-1	0	0	1	0	0	1	0	5	Medium
Stanhope-3	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Stanhope-4	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Stanhope-5	Develop specific design guidelines and development review procedures for new construction, replacement, relocation and substantial improvement in hazard areas within the Borough.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Stanhope-6	When updating the Zoning Ordinance, the Borough will recognize hazard areas as limits on changes to zoning within the municipality.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Stanhope-7	Ensure hazard mitigation initiatives are incorporated into the capital improvement plan; budget for some of these projects.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Stanhope-8	Incorporate risk assessment and hazard mitigation initiatives into planning efforts.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High

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



---

### **9.20.7 Future Needs To Better Understand Risk/Vulnerability**

---

None at this time.

### **9.20.8 Hazard Area Extent and Location**

---

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

### **9.20.9 Additional Comments**

---

None at this time.

DRAFT



Figure 9.20-2. Borough of Stanhope Hazard Area Extent and Location Map 1

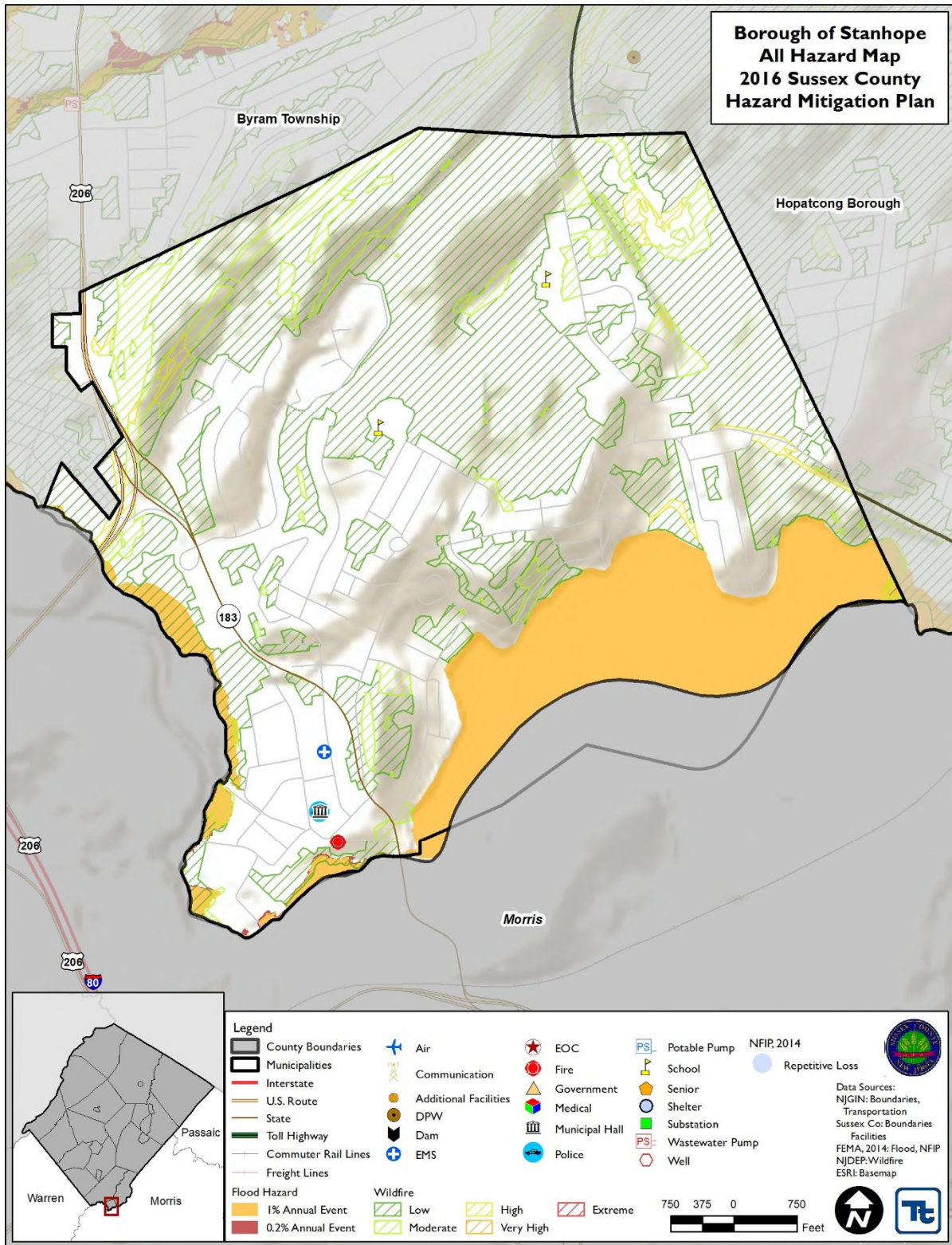
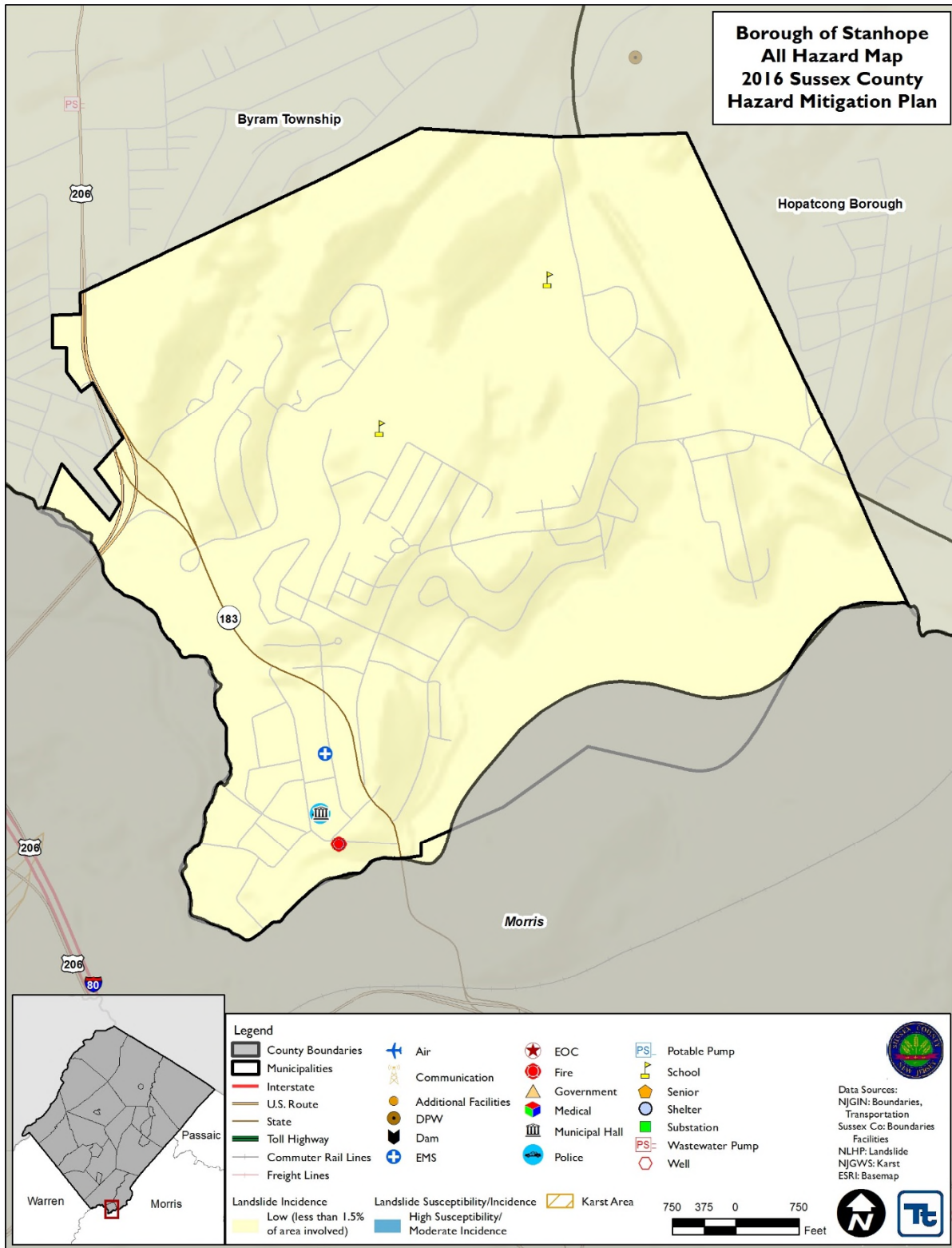






Figure 9.20-3. Borough of Stanhope Hazard Area Extent and Location Map 2





**Action Number:** Stanhope-1

**Mitigation Action/Initiative:** Purchase and install a backup generator for Lenape Valley Regional High School

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	Loss of power in the Borough prevents the High School from functioning properly – it is an identified shelter for the Borough
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<ol style="list-style-type: none"> <li>1. Purchase and install a backup generator for Lenape Valley Regional High</li> <li>2. Purchase portable generator – not feasible for long-term power outages</li> <li>3. Do nothing – current problem continues</li> </ol>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Purchase and install a backup generator for Lenape Valley Regional High School which is used as the primary ARC shelter in the Borough.
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 2, 3, 6
<b>Applies to existing and/or new development; or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority</b>	High
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	Emergency Management
<b>Local Planning Mechanism</b>	Emergency Management
<b>Potential Funding Sources</b>	HMGP with local cost share
<b>Timeline for Completion</b>	Short Term / DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:





**Action Number:** Stanhope-1

**Mitigation Action/Initiative:** Purchase and install a backup generator for Lenape Valley Regional High School

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provide a shelter for residents during an emergency
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All
Timeline	1	Short Term – within five years
Local Champion	1	
Other Community Objectives	1	
Total	10	
<b>Priority (High/Med/Low)</b>	<b>High</b>	



**Action Number:** Stanhope-2

**Mitigation Action/Initiative:** Flood proof and elevate the utilities of the compact building on Furnace Street.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Weather
<b>Specific problem being mitigated:</b>	The Compact Building on Furnace Street has utilities that may be damaged by flooding.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Flood proof and elevate utilities at building on Furnace Street
	2. Rebuild building – too costly
	3. Do nothing – current problem continues
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Flood proof and elevate utilities at building on Furnace Street
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 2, 3, 6
<b>Applies to existing and/or new development; or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Medium
<b>Priority</b>	Medium
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	Emergency Management
<b>Local Planning Mechanism</b>	Emergency Management
<b>Potential Funding Sources</b>	HMGP with local cost share
<b>Timeline for Completion</b>	Short term / DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:



**Action Number:** Stanhope-2

**Mitigation Action/Initiative:** Flood proof and elevate the utilities of the compact building on Furnace Street.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protect building from flood damage
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	-1	Need to obtain grants to pay for upgrades
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	0	
Local Champion	1	
Other Community Objectives	0	
Total	5	
<b>Priority (High/Med/Low)</b>	<b>Medium</b>	