

## 9.15 Town of North Salem

This section presents the jurisdictional annex for the Town of North Salem.

### 9.15.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
Warren Lucas, Supervisor 266 Titicus Road, North Salem, NY 10560 914-669-5110 <a href="mailto:wlucas@northsalemny.org">wlucas@northsalemny.org</a>	Maria Hlushko, Confidential Secretary 266 Titicus Road, North Salem, NY 10560 914-669-5110 <a href="mailto:mhlushko@northsalemny.org">mhlushko@northsalemny.org</a>

### 9.15.2 Municipal Profile

This section provides a summary of the community.

#### Population

According to the U.S. Census, the 2010 population for the Town of North Salem was 5,104, with a population density of 220 persons per square mile. The population slightly decreased from the 2000 census (5,173).

#### Location

The Town of North Salem is situated in the northeastern Westchester County, New York approximately 50 miles north of Manhattan. The town is approximately 22.9 square miles in area and is traversed by the Titicus River. The town is bordered by the town of Somers to the west, the town of Lewisboro to the south, the Town of Ridgefield, Connecticut to the east, and the Town of Southeast in Putnam County to the north.

The Town of North Salem includes the hamlets of Croton Falls, North Salem, Salem Center, and Purdys. The hamlet of Peach Lake is also partially located within North Salem, with the remainder being located within Southeast.

#### Brief History

North Salem was first settled in the early 18<sup>th</sup> century and was primarily an agricultural community in the 18<sup>th</sup> and 19<sup>th</sup> centuries. The Town continues to be primarily a low-density rural community of single-family homes and open space due to strict zoning regulations throughout most of the 20<sup>th</sup> century. Today, most of the town has four-acre zoning. Slow growth results from the relatively small amount of vacant, developable land that meets zoning requirements.

#### Governing Body Format

The Town of North Salem operates under the Town Board form of municipal government. The Town Board is comprised of the Supervisor and four council members who represent the governing and legislative body of the town. Members of the Board are elected for four-year terms, with the Supervisor being elected every two years. Two Board positions and the Supervisor are elected at each biennial election.<sup>i</sup>

#### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2005 and any known or anticipated major development that has been identified in the next five years within the municipality.

**Table 9.15-1. Growth and Development**

Property or Development Name	Type (e.g. Res., Comm.)	Number of Units / Structures	Location (address and/or Parcel IDs)	Known Hazard Zones*	Description / Status
<b>Recent Development</b>					
Bridleside	Residential	64	June Road	None	Completed Summer 2014
<b>Known or Anticipated Development</b>					
None identified at this time.					

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

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

Westchester 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, events that have occurred in the County from 2005 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

**Table 9.15-2. Hazard Event History**

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26 - September 5, 2011	Hurricane Irene	DR-4020	Yes	Excessive rainfall damaged drainage systems. High winds and precipitation generated debris throughout North Salem. NYSEG cut power to the entire town following Irene so cleanup could occur. Downed trees along the Titicus River have reportedly exacerbated flooding conditions in the area and caused erosion damage behind the Croton Falls Fire Department.
September 7-11, 2011	Remnants of Tropical Storm Lee	DR-4031	No	Excessive rainfall damaged drainage systems. Continued damage to the area behind the Croton Falls Fire Department building. Damage and scarring along Crook Brook/Hawley Road with property damage. Flooding in Pietsch Coop. / Peach Lake due to lake levels increasing and overgrown outlet. Residential damage from excessive drainage system overflows on Sunset Ridge.
October 27- November 8, 2012	Hurricane Sandy	DR-4085	Yes	Excessive rainfall damaged drainage systems. Continued damage to the area behind the Croton Falls Fire Department building. Damage and scarring along Crook Brook with property damage. Flooding in Pietsch Coop. / Peach Lake due to lake levels increasing and overgrown outlet. Residential damage from excessive drainage system overflows on Sunset Ridge.

Notes:

EM Emergency Declaration (FEMA)  
 NYSEG New York State Electric and Gas  
 FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

IA Individual Assistance  
 N/A Not applicable  
 PA Public Assistance

### 9.15.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Town of North Salem. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

#### Natural Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the natural hazard risk/vulnerability rankings of potential hazards for Town of North Salem.

**Table 9.15-3. Natural 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>
Earthquake	100-Year GBS: \$0 500-Year GBS: \$806,369 2,500-Year GBS: \$17,192,169	Occasional	24	Medium
Extreme Temperature	Damage estimate not available	Frequent	30	Medium
Flood	1% Annual Chance: \$56,658,608	Frequent	36	High
Severe Storm	100-Year MRP: \$3,829,789 500-year MRP: \$26,942,657 Annualized: \$227,071	Frequent	48	High
Winter Storm	1% GBS: \$16,001,184 5% GBS: \$80,005,921	Frequent	51	High
Wildfire	Estimated Value in the WUI: \$0	Frequent	42	High

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

b. The valuation of general building stock and loss estimates was based on the custom inventory developed for Westchester County and probabilistic modeling results and exposure analysis as discussed in Section 5.

c. The earthquake and hurricane wind hazards were evaluated by Census tract. The Census tracts do not exactly align with municipal boundaries; therefore, a total is reported for each Town inclusive of the Villages.

d. Frequent = Hazard event that is likely to occur within 25 years;

Occasional = Hazard event that is likely to occur within 100 years; and

Rare = Hazard event that is not likely to occur within 100 years

e. The estimated potential losses for Severe Storm are from the HAZUS-MH probabilistic hurricane wind model results. See footnote c.

GBS = General building stock

MRP = Mean return period

RCV = Replacement cost value

#### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the municipality.

**Table 9.15-4. 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)
North Salem (T)	29	10	\$70,831.97	0	0	18

Source: FEMA Region 2, 2014

(1): Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of March 31, 2014. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents the number of claims closed by March 31, 2014.

(2): Information regarding total building and content losses was gathered from the claims file provided by FEMA Region 2.

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

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

**Table 9.15-5. Potential Flood Losses to Critical Facilities**

Name	Municipality	Type	Exposure		Potential Loss from 1% Flood Event		
			1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(2)</sup>
Titicus Dam	North Salem (T)	Dam	X	X	-	-	-
Wild Oaks Park Association Dam	North Salem (T)	Dam	X	X	-	-	-

Source: HAZUS-MH 2.1

Note: x = Facility located within the 0.2-percent annual chance flood boundary.

Please note it is assumed that wells have electrical equipment and openings are three-feet above grade.

- (1) HAZUS-MH 2.1 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore this will be an indication of the maximum downtime (HAZUS-MH 2.1 User Manual).
- (2) In some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type.

### Other Vulnerabilities Identified by Municipality

The Town of North Salem is vulnerable to a variety of hazards. Town staff believe that the effects of winds and ice storms present the highest relative risk to the community. The effects of flooding are believed to be of moderate risk to the community. Other hazards present a low or negligible risk to the community.

### Critical Facilities

None of the Town's critical facilities are located in floodplains. However, most of the facilities do not have generators. The Town has unsuccessfully applied for generator grants in the past. The nursing homes in North Salem have generators.


### Wind & Winter Storms

- North Salem staff are primarily concerned with downed power lines due to an ice storm that could wipe out electricity for several days to a wide area. Many homes could become unheated and become unlivable due to bursting pipes. Downed power lines due to rain, snow, or other wind events are also a concern. Such events typically bring down trees or limbs and can cause loss of electricity to portions of the community.
- The wind load and snow load requirements in the State building code were reportedly reduced several years ago for North Salem. Newer roofs may therefore be more susceptible to wind and snow load damage moving forward.
- The Town would like improved coordination with the local electric utility, NYSEG. Specifically, they would like a way to remain informed about where power lines are dead so the Highway Department may clear roads following a disaster.

## **Flooding**

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The following flood-prone areas have been identified by the Town of North Salem through the Westchester County Stormwater Reconnaissance Plan process (see Section 6 – Capability Assessment for a description of the program; see map at the end of this annex for location of these problem areas) as well as being based on more recent discussions with local officials:

- The Titicus River causes flooding problems from the rear of 311 Titicus Road (the Croton Falls Fire Department) to the intersection of June Road (a county road). Problems occur when rainfall amounts exceed five inches. The county-owned bridge is too small (approximately 20 feet wide) and too low to the stream, causing a backwater condition that floods adjacent properties and exacerbates upstream bank erosion. Three homes are affected by backwater flooding. Water also flows over June Road, causing erosion damage on the downstream side of the road. The numerous downed trees along this stretch of the river reportedly exacerbate the problem by impeding flow and raising water surface elevations. The baseball fields and the Croton Falls Fire Department property also suffer erosion damage from high velocities in this area, as two streams come together and turn behind the fire department. The Fire House is approximately 20 feet above the streambed, and sections of fence at this elevation are barely attached to the ground due to erosion of the bank. The entire area is within and adjacent to the 1% annual chance floodplain. A streambed cleanup and bank armoring project is needed in this area.
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- Emergency Wall at Hawley Road on Crook Brook installed by Westchester County, 2012*
- The Mountain Lakes Camp on Hawley Road has several dams. The dam on Spruce Lake failed during Tropical Storm Floyd in 1999 and almost washed out Hawley Road downstream. One home downstream of Hawley Road had its foundation scoured out to where the bottom of the concrete slab was four feet in the air. Streambank scour along Crook Brook was extensive and continues to be a problem today.
  - The area around Candlewood Lake on Valeria Circle is susceptible to flooding when rainfall exceeds four inches. Drainage from areas upstream along Nash Road pour into the lake, inundating the surrounding area and causing several basements to flood. The lake also silts in due to the rapid water flow being slowed by the standing water in the lake. The affected area is partially within the 1% annual chance floodplain. The Town has done work here dredging the pond and repairing the dam, but upstream improvements are needed. An upstream detention basin may prevent siltation of the lake and additional flooding damages at Valeria Circle.
  - Large storms producing rainfall of four inches or greater continue to cause flooding problems today. Several homes have suffered severe damage out of the seven that are impacted. Another downstream property owner spent personal funds to remove eroded material from wetlands. The County recently spent \$80,000 in 2012 to build an emergency wall to prevent the collapse of Hawley Road into the brook after it was damaged by Hurricane Irene in 2011 (see picture at right). Whatmore's Lake also releases a significant amount of water during storms, exacerbating the problem. The entire area is mapped as 1% annual chance flood zone.
  - The Town is in the process of acquiring the Mountain Lakes property from Westchester County. The Town engineer has estimated the cost of restoring the banks along Crook Brook at \$350,000. The



Town has acquired a grant from NY DEC for \$175,000 and is searching for other sources of funding to mitigate this area.

- Runoff from Sunset Ridge Hill overtakes drainage systems along Westview Avenue, Ridgeway Avenue, Daniel Road, Sunset Drive, Alice Road, and Park Lane. The Town has fixed a portion of the worst areas by rebuilding drainage swales and channels (\$330,000 worth of work in 2011, see picture) and are addressing more areas in 2014. Approximately 15 homes in the area are affected by the drainage problems. Damage begins to occur when rainfall amounts exceed four inches. Home foundations and basements are flooded when rainfall exceeds seven inches. Tropical Storm Floyd in 1999 caused large amounts of dirt to fall down onto the slow lane of Interstate 684. The area is not within a 1% annual chance flood zone. A 2013 engineer's estimate to fix this area was \$2.6 million. The Town has applied for a \$700,000 grant through HMGP to perform fixes in this area.



*Town work to rebuild drainage swales after Irene and Lee in 2011 from Sunset Ridge to Westview Street.*

- Approximately 20% of the homes in North Salem are located in the vicinity of Peach Lake. The lake is partially located in the Town of Southeast, and drains to the north into Southeast. The outlet channel is very flat and drops approximately one foot over four thousand feet before entering the East Branch Reservoir. NYCDEP carved the channel out of a swamp in the 1930's to connect outflow from Peach Lake to the reservoir system, which lowered the historical level of the lake. Many homes were built in this area after the water level was lowered, and as such the homes are relatively low to the lake level particularly in the Pietsch Cooperative on the Southeast side of the lake.

The outlet channel from Peach Lake is very constricted by debris and needs to be cleaned, as maintenance has reportedly not been performed since the 1940's. The "normal" water level in Peach Lake is now approximately one foot above the top of the actual dam because the downstream debris are acting as a dam. Flooding occurs when rainfall exceeds five inches, but minor rain events following a large event can cause repeated incidents until lake levels recede through the debris. Flooding affects approximately 15 residences and a baseball field. Flooding problems occur every other spring at a minimum and most of the affected area is within the 1% annual chance flood zone. Exacerbating the problem is that the Town of Southeast recently replaced a bridge with a 36-inch diameter pipe, further restricting downstream flows. Although the problems (and solutions) are in Southeast, the effects are felt in North Salem. The Town has been coordinating with the Town of Southeast about a potential project to mitigate this issue.

- NYCDEP owns the dam at Titicus Reservoir. Improvements were recently completed that will allow the dam to pass the 0.2% annual chance flood event without overtopping. There are homes downstream that could be inundated in the event of a dam failure.

### 9.15.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

The Town of North Salem has indicated that the community's political leadership is "very willing" to enact policies and programs related to hazard mitigation that reduce hazard vulnerabilities. Town staff believe that the Town's capabilities to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities is high for planning and regulatory capability, moderate for administrative and technical capability, moderate for political capability, moderate for community resiliency capability, and limited for fiscal capability.

#### Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the municipality.

**Table 9.15-6. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, date of adoption, name of plan, explanation of authority, etc.)
Building Code	Y	State	Building	
Zoning Ordinance	Y	Local	Building	Chapter 250
Subdivision Ordinance	Y	Local	Planning Board / Planning	Chapter 200
NFIP Flood Damage Protection Ordinance	Y	Federal, State, Local	Building	Chapter 100
NFIP - Freeboard	Y	Federal, State, Local	Building	NFIP minimum BFE or above for residential construction in Zone AE, BFE+2 for non-residential construction in Zone AE, Grade+3 required in Zone A
NFIP - Cumulative Substantial Damages	Y	Local	Building	"Substantial damage" is also defined as flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of the flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.
Special Purpose Ordinances (e.g. wetlands, critical or sensitive areas)	Y	Local	Building / Planning Board	Chapter 107 Freshwater Wetlands
Growth Management	N			
Floodplain Management / Basin Plan	Y	Federal, State, Local	Building	Chapter 100
Stormwater Management Plan/Ordinance	Y	Local	Building / Planning Board /	Chapter 193

**Table 9.15-6. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, date of adoption, name of plan, explanation of authority, etc.)
			Town Board	
Comprehensive Plan / Master Plan	Y	Local	Comprehensive Plan Committee / Town Board	Completed 2010
Capital Improvements Plan	Y		Town and Highway	Capital Improvement Plan/budget
Site Plan Review Requirements	Y	Local	Planning Board / Building	Chapter A267; other applicable code sections
Habitat Conservation Plan	N			
Economic Development Plan	N			
Emergency Response Plan	Y	Local plan	OEM Coordinator	Separate Manual
Post Disaster Recovery Plan	N			
Post Disaster Recovery Ordinance	N			
Real Estate Disclosure req.	Y			NYS mandate
Other (e.g. steep slope ordinance, local waterfront revitalization plan)	Y	Local	Town Planning Board	Steep Slope ordinance in place Section 250 Zoning Code.
Coastal Erosion Control Districts	N/A			
Shoreline Management Plan	N/A			
Sediment Control	Y	Local	Planning Board / Building	Chapter 193
Mutual Aid Plan	Y	County	Emergency Management Coordinator	Mutual Aid Plan in place for entire County

(1) NYS Subdivision laws provide a general framework, but allow room for local ordinances and interpretation.

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of North Salem.

**Table 9.15-7. Administrative and Technical Capabilities**

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
Planner(s) or Engineer(s) with knowledge of land development and land management practices	N	
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Building / Highway
Planners or engineers with an understanding of natural hazards	N	
NFIP Floodplain Administrator	Y	Building Department - Building Inspector in consultation with Town Engineer



Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
Surveyor(s)	N	
Personnel skilled or trained in “GIS” applications	N	
Scientist familiar with natural hazards in the County.	N	
Emergency Manager	Y	Supervisor / Emergency Management Coordinator
Grant Writer(s)	Y	Supervisor
Staff with expertise or training in benefit/cost analysis	Y	Finance
Professionals trained in conducting damage assessments	Y	Supervisor / Highway / Finance

### Fiscal Capability

The table below summarizes financial resources available to the Town of North Salem.

**Table 9.15-8. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG)	No. HUD is preventing funding to County Administrators
Capital Improvements Project Funding	Yes, Local Bonding - via Capital Budget (5 year plan)
Authority to Levy Taxes for specific purposes	Yes, Local real estate taxes - Limited by 2% TAX CAP
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Yes, but only for recreational uses
Incur debt through general obligation bonds	Yes, Local Bonding
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Don't know – Would not use
Mitigation grant programs	Yes
Other	State Comptroller gave North Salem an excellent financial rating.

### Community Classifications

The table below summarizes classifications for community programs available to the Town of North Salem.

**Table 9.15-9. Community Classifications**

Program	Classification	Date Classified
Community Rating System (CRS)	NP <sup>ii</sup>	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	5/residential; 5/commercial	2008
Public Protection	NP	NP
Storm Ready	NP <sup>iii</sup>	N/A
Firewise	NP <sup>iv</sup>	N/A

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

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class

applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

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

### **National Flood Insurance Program**

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The following section provides details on the National Flood Insurance Program (NFIP) as implemented within the municipality:

#### **NFIP Floodplain Administrator:**

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Mr. Bruce Thompson, Building Inspector, Building Department is the Floodplain Administrator for North Salem, NY.

### **Flood Vulnerability Summary**

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The Town does not maintain lists/inventories of properties that have been damaged by floods, although information is available documenting areas that are prone to flooding. Substantial damage estimates were not made by the Floodplain Administrator during Hurricane Sandy or other events. Currently, there are no residents interested in mitigation (elevation or acquisition) in the Town. The main area for flooding around Peach Lake can be dealt with by lowering the water level to historical levels. One other area of flooding around Titicus River and June Road can be mitigated by installing a new wider and higher bridge on June Road over the Titicus River. The current waterway under June Road is too constrictive and cause the water to back up behind it in severe rains. This is a County bridge.

### **Resources**

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The Floodplain Administrator is the sole person assuming responsibilities of floodplain administration and believe that they are adequately supported and trained to fulfill their responsibilities. The Floodplain Administrator would consider attending continuing education and/or certification training on floodplain management. The Town provides outreach to the community regarding flood hazards/risk, flood risk reduction through NFIP insurance, mitigation, etc. through the form of pamphlets prepared by outside agencies.

### **Compliance History**

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The Floodplain Administrator did not provide information regarding compliance history.

## Regulatory

The Town's floodplain management regulations/ordinances exceed the FEMA and State minimum requirements in some cases but only meet the minimum NFIP standards in others. For example, all non-residential construction and substantial improvement in Zone AE is required to be elevated to the base flood elevation plus two feet, greater than the plus one foot mandated by the State and the plus zero feet mandated by the NFIP. The Town also has a cumulative substantial damage regulation as described in Table 9-15.6 above. However, for residential construction the floodplain management regulations only require elevation of the lowest floor to the BFE or higher. This is consistent with the NFIP but inconsistent with the State mandate of two feet of freeboard. There are additional local ordinances, plans and programs that support floodplain management and meet the NFIP requirements. The community has not considered joining the 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

Upon adoption, this hazard mitigation plan will be made available to applicable Town departments as a planning tool to be used in conjunction with existing documents and regulations. It is expected that revisions to other Town plans and regulations such as the Comprehensive Plan, department annual budgets, and the Town code may reference this plan and its updates. The Supervisor will be responsible for ensuring that the actions identified in this hazard mitigation plan are incorporated into ongoing Town planning activities, and that the information and requirements of this hazard mitigation plan are incorporated into existing planning documents within five years from the date of adoption or when other plans are updated, whichever is sooner. Refer to Table 9.15.10 for a cross-reference of which plans and regulations may be most important for updating relative to this hazard mitigation plan.

**Table 9.15-10. Plans and Regulations to be potentially updated**

Regulation or Plan	Status Relative to Hazard Mitigation Plan	Responsible Party
Comprehensive Plan	The Comprehensive Plan was recently finalized and changes are being made to the Code.	Planning Board / Town Board

The Supervisor will be responsible for assigning appropriate Town officials to update portions of the Comprehensive Plan, Emergency Management Plans and the Town Code to include the provisions from this Plan if it is determined that such updates are appropriate. However, should a general revision be too cumbersome or cost prohibitive, simple addendums to these documents may be added that include the provisions of this hazard mitigation plan.

## Regulatory and Enforcement

Local legislation is used to decrease future flooding risk and to mitigate other hazards. As discussed above, North Salem's code exceeds certain portions of the NFIP and State minimum standards. The Building Department is in charge of enforcing building codes including the NFIP regulations. Utilities are required to be underground in new multifamily developments.

Chapter 193 of the Town code regulates drainage in the community. New developments must demonstrate a zero increase in runoff and the use of erosion controls prior to approval. Drainage considerations are addressed prior to construction as part of the site plan review process. The Highway Department conducts maintenance of drainage systems and clears bridges and culverts of debris to ensure proper conveyance of stormwater as needed. Town staff review the need to install new drainage systems or upsize existing drainage systems as part of review of proposed projects or when flooding damage occurs. For example, improvements were constructed to drainage systems around Lake Hawthorne in 2013 at a cost of approximately \$110,000.

### Operational and Administration

The former highway building is being refurbished for police, court, and courthouse use. New York State requires “Category IV” standard for new critical facilities and renovations to critical facilities. The Police Department renovations are designed to this standard, although the remainder of the former highway garage building not used by the police is not.

The Fire Department provides regular educational programs to children and adults throughout the community. Many of these programs discuss mitigating the effects of natural hazards.

The Highway Department moved into its new headquarters at 250 June Road in Spring 2014. The Highway Department is responsible for maintaining and plowing nearly 70 miles of road in North Salem, and spreads 3000 tons of salt to maintain roadway access each winter.

North Salem staff continuously identifies hazardous/dangerous trees and branches and removes them or encourages the property owner to remove them. North Salem staff also coordinates with NYSEG regarding tree cutting around utility right-of-ways. Significant work was performed in the eastern portion of North Salem in by NYSEG in spring 2014. North Salem staff encourages “power line friendly” tree plantings near power lines that will not grow to interfere with overhead utilities.

### Fiscal

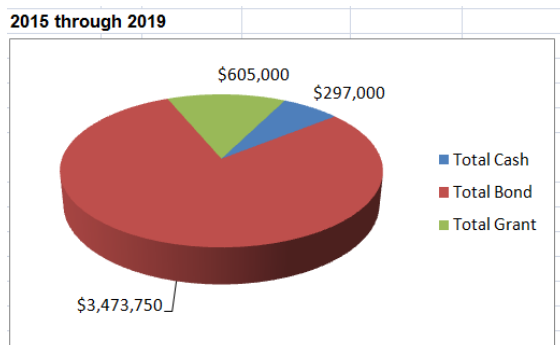


Figure 1 North Salem capital plan from 2015 through 2019.

The Town prioritizes its capital plan, but the Town does not have sufficient funds to complete its entire five-year capital plan (2015-2019). The current Town capital requirements through 2019 require an outlay of \$3.4 million in bonding. The Town does not have the capacity to handle that level of borrowing so capital projects will be postponed or removed from the plan. The chart at left (from the current capital plan) includes successfully receiving approximately \$0.6 million in hazard mitigation grants that were already requested prior to development of the plan.

In summary, the Town believes that it only has sufficient funding to cover critical capital projects. Projects related to hazard mitigation will be added to the capital improvement plan and funded as possible, but grant funding is believed necessary to cost-justify several capital projects listed in Section 9.15.6.

### Education and Outreach

The North Salem Office of Emergency Management has created an emergency information form and encourages residents to fill it out via the Town’s website. The form includes fields for contact information, special needs, pets, etc. that will allow for Town personnel to be better prepared for emergencies. The Town does not currently have an emergency notification system.

The Town of North Salem is in regular communication with North Salem's neighbors with regards to preparedness for emergencies. For example, the Croton Falls Fire Department works closely with the Ridgefield, Connecticut Fire Department during emergencies. The Town of Ridgefield has confirmed that generators can be shared if needed, and via mutual aid agreements North Salem covers areas of Ridgefield that they cannot access when tree damage occurs and blocks roads.

North Salem does not have the staff or resources to develop pamphlets and informational flyers for residents. Town staff believe that such pamphlets should be generated at the County level and distributed to residents by the respective municipalities. North Salem staff routinely distributes literature and pamphlets developed by outside agencies regarding mitigating the effects of a variety of natural hazards. The information is distributed via public locations such as at the Town Hall, Senior Center, schools, and civic organization centers.

All personnel involved in emergency management receive training to better respond to events involving natural hazards. Other first responders also receive training appropriate to their roles and responsibilities, including appropriate response procedures to respond to events involving hazardous materials. The Building Department staff continually attends training regarding building code updates and floodplain regulations. The State will adopt new building and fire codes in 2014. Other town employees also receive training appropriate to their roles and responsibilities.

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#### **9.15.6 Mitigation Strategy and Prioritization**

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

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##### **Past Mitigation Initiative Status**

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The Town of North Salem has no prior mitigation strategy.

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

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The Town of North Salem has not identified any additional mitigation projects/activities that have been completed, are planned, or on-going within the municipality.

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

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The Town of North Salem identified mitigation initiatives they would like to pursue in the future. Some of these initiatives may be previous actions carried forward for this plan. 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. Table 9.15-11 identifies the municipality's updated local mitigation strategy.

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 actions as 'High', 'Medium', or 'Low.' Table 9.15-12 below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.15-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
TNS-1	North Salem Police require a generator backup for the emergency services building.	Existing	All Hazards	1,5	Super.	Medium	Medium	HMA	DOF (Short)	High	SIP	ES
TNS-2	Work with NYSEG to improve coordination following disasters	Existing	All Hazards	5	Super.	Low	Low	N/A	OG	High	EAP	ES
TNS-3	Perform streambed cleanup and bank armoring project from Croton Falls FD to June Road	Existing	Flooding	2	Super.	High	High	HMA	DOF (Short)	Low	SIP	NR
TNS-4	Encourage Westchester County to upsize bridge at June Road	Existing	Flooding	3	Super.	Medium	Low (for North Salem)	N/A	OG	High	SIP	SP
TNS-5	Pursue detention basin upstream of Valeria Circle and Lake Candlewood	Existing	Flooding	2	Super.	Medium	High	HMA	DOF (Short)	Low	SIP	SP
TNS-6	Acquire additional funding to mitigate scour along Crook Brook	Existing	Flooding	2	Super. / Highway	Medium	High	HMA	DOF (Short)	Low	SIP	NR
TNS-7	Repair/replace drainage systems in vicinity of Sunset Ridge Hill	Existing	Flooding	2	Super. / Highway	Medium	High	HMA	OG	High	SIP	SP
TNS-8	Work with Town of Southeast to mitigate flooding in vicinity of Peach Lake	Existing	Flooding	2,4	Super.	Medium	High	HMA	OG	Low	NSP	NR
TNS-9	Modify local codes to be consistent with the state minimum standard (require all new residential construction or substantial improvement to be elevated to BFE +2)	New	Flooding	2	Building Dept. / Planning Board	Low	Low	N/A	Short	Medium	LPR	PR
TNS-10	Secure an emergency notification system to broadcast emergency informational messages to residents	Existing	All Hazards	1	Super.	Low	Medium	N/A	Short	Medium	SIP	ES
TNS-11	Require utilities to be located underground in all new development whenever possible instead of just in new multi-family developments	New	All Hazards	2	Planning Board	Low	Low	N/A	Short	High	LPR	PR
TNS-12	Incorporate hazard mitigation plan information into the Comprehensive Plan under development	New	All Hazards	3	Planning Board	Low	Low	N/A	OG	Medium	EAP	PI
TNS-13	Install and connect a generator at a private school that the Town	Existing	All Hazards	1,5	Supervisor	Medium	Medium	HMA	DOF (Short)	Medium	SIP	ES



Table 9.15-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	uses as a shelter.											
TNS-14	Installation of a generator to power three buildings at the Town Hall campus.	Existing	All Hazards	1,5	Supervisor	Medium	High	HMA	DOF (Short)	Medium	SIP	ES

Notes:

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

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

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
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 in 2015)
SRL	Severe Repetitive Loss Grant Program (discontinued in 2015)

Timeline:

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

Costs:

Where actual project costs have been reasonably estimated:

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

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
Medium	Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
High	Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

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

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

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

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

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.

- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities*

*CRS Category:*

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

Table 9.15-11. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
TNS-1	North Salem Police require a generator backup for the emergency services building.	0	-1	0	1	1	1	-1	0	1	1	1	1	1	0	6	High
TNS-2	Work with NYSEG to improve coordination following disasters	0	-1	0	1	1	1	1	0	1	1	1	1	1	0	8	High
TNS-3	Perform streambed cleanup and bank armoring project from Croton Falls FD to June Road	-1	1	0	1	1	1	-1	1	0	0	-1	1	1	1	6	High
TNS-4	Encourage Westchester County to upsize bridge at June Road	0	1	1	1	0	1	1	0	1	1	-1	0	1	0	7	High
TNS-5	Pursue detention basin upstream of Valeria Circle and Lake Candlewood	0	1	-1	1	1	0	-1	1	0	0	-1	1	1	0	3	Low
TNS-6	Acquire additional funding to mitigate scour along Crook Brook	0	0	-1	1	1	0	0	0	0	0	-1	1	1	0	2	Low
TNS-7	Repair/replace drainage systems in vicinity of Sunset Ridge Hill	0	1	0	1	1	1	0	1	0	1	-1	1	1	0	6	High
TNS-8	Work with Town of Southeast to mitigate flooding in vicinity of Peach Lake	0	1	-1	1	0	0	-1	0	1	0	-1	1	1	0	2	Low
TNS-9	Modify local codes to be consistent with the state minimum standard (require all new residential construction or substantial improvement to be elevated to BFE +2)	0	1	0	1	0	1	1	0	0	1	-1	1	-1	0	4	Medium
TNS-10	Secure an emergency notification system to broadcast emergency informational messages to residents	1	-1	-1	1	0	1	0	0	1	1	1	1	-1	0	4	Medium
TNS-11	Require utilities to be located underground in all new development whenever possible instead of just in new multi-family developments	0	1	0	1	0	1	1	0	0	1	1	1	-1	0	6	High
TNS-12	Incorporate hazard mitigation plan information into the Comprehensive Plan under development	-1	-1	0	1	0	1	1	0	1	1	1	1	-1	0	4	Medium
TNS-13	Install and connect a generator at a private school that the Town uses as a shelter.	1	-1	0	0	1	0	-1	0	1	0	1	1	1	0	4	Medium

Table 9.15-11. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
TNS-14	Installation of a generator to power three buildings at the Town Hall campus.	0	-1	-1	1	1	1	-1	0	1	1	1	1	1	0	5	Medium

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

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

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None at this time.

### **9.15.8 Hazard Area Extent and Location**

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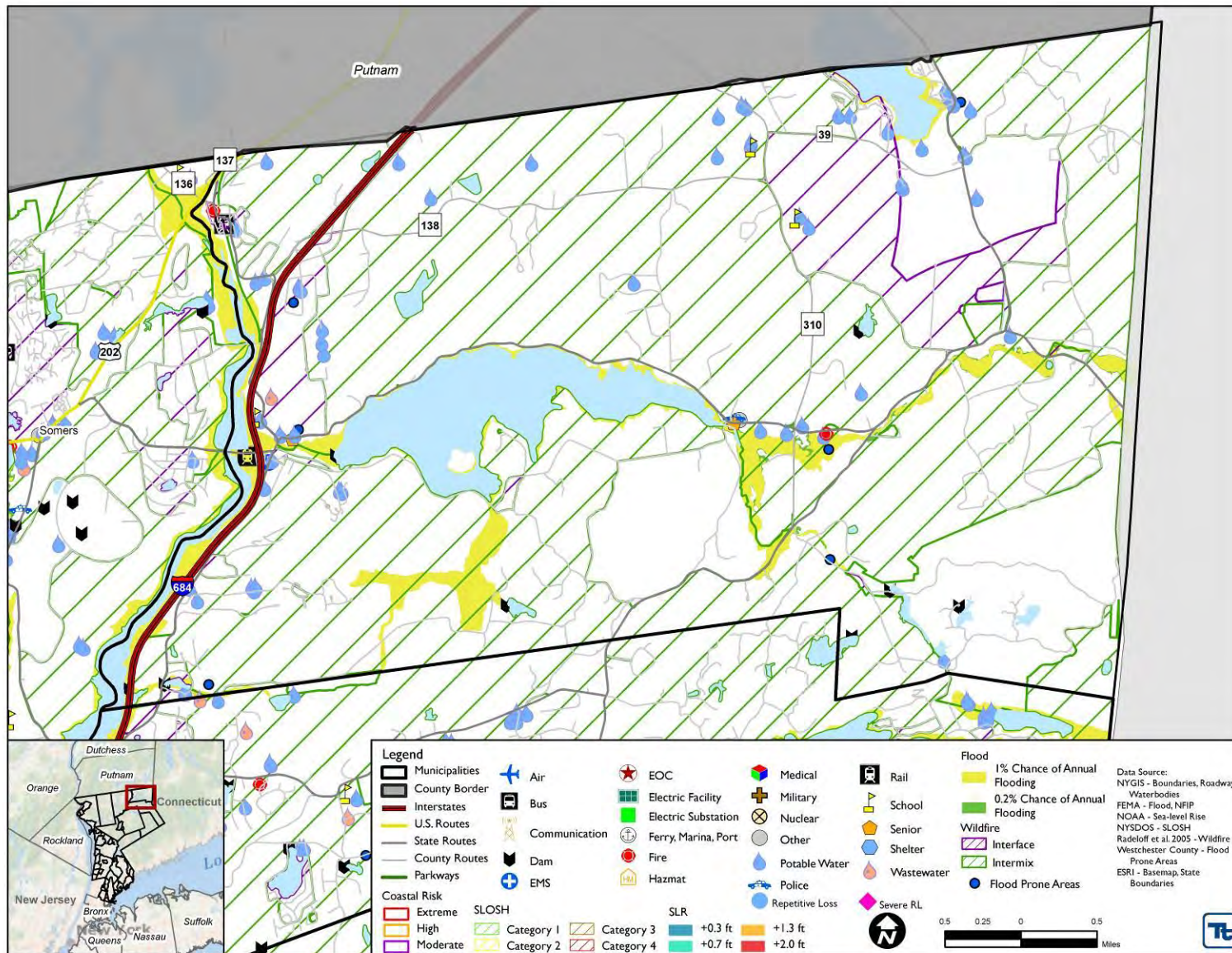
Hazard area extent and location maps have been generated for the Town of North Salem that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of North Salem has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

### **9.15.9 Additional Comments**

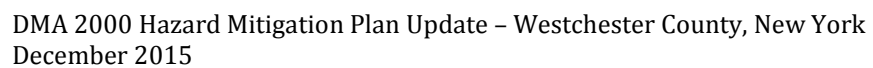
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None at this time.

Figure 9.15-1. Town of North Salem Hazard Area Extent and Location Map







**Name of Jurisdiction:** Town of North Salem, North Salem  
**Action Number:** TNS-1; LOI #1524  
**Action Name:** Police and Emergency Services Generator

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All hazards
<b>Specific problem being mitigated:</b>	Pending Westchester County Hazard Mitigation Plan - To supply backup Power for the emergency services building.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1 No action – emergency services operate at minimum efficiency during outages – not desirable
	2
	3
	.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	The North Salem Police require a generator backup for the emergency services building. We are rebuilding the structure to support category IV zoning criteria for emergency buildings. We are requesting funding to provide backup power so that the structure can continue to provide services during extended power outages.
<b>Mitigation Action/Project Type</b>	SIP
<b>Objectives Met</b>	1,5
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Recent Damages: \$30000 (Medium)
<b>Estimated Cost</b>	\$50000 (Medium)
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Town of North Salem, Warren Lucas, Supervisor
<b>Local Planning Mechanism</b>	The administration of this action will be added to the Supervisor's workplan
<b>Potential Funding Sources</b>	HMGP; Local Match
<b>Timeline for Completion</b>	DOF (Short duration preferred)
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)

Action Number:

TNS-1; LOI #1524

Action Name:

Police and Emergency Services Generator

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	Indirect benefit to life safety
Property Protection	-1	Not a property protection measure
Cost-Effectiveness	0	Estimated costs and benefits are equivalent
Technical	1	Project is technically feasible and a long-term solution
Political	1	Political will to implement project (letter of interest)
Legal	1	Town property
Fiscal	-1	Grant funding necessary to implement project
Environmental	0	No significant environmental benefit or impact
Social	1	Benefits entire community
Administrative	1	Town can administer the project
Multi-Hazard	1	All hazards
Timeline	1	Short duration preferred
Agency Champion	1	The Supervisor is a champion for this project
Other Community Objectives	0	
<b>Total</b>	6	
<b>Priority (High/Med/Low)</b>	High	Relative to other projects for North Salem

**Name of Jurisdiction:** Town of North Salem, North Salem  
**Action Number:** TNS-3; LOI #266  
**Action Name:** Streambed cleanup and bank armoring from Croton Falls FD to June Road

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding
<b>Specific problem being mitigated:</b>	The Titicus Rover has caused severe damage to the Croton Falls Fire Department (CFFD) site at 311 Titicus Road by undermining the hill on which the Fire station stands. The DEP and DEC were onsite after Irene and reviewed the problem and gave suggestions for stream debris removal and bank stabilization and repairs.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1 No action – bank not stabilized – erosion hazard to critical facility – no preferred
	2
	3
	.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	The Town will secure the necessary permits to remove trees and debris from the floodway of the river and perform a bank stabilization project behind the Fire House.
<b>Mitigation Action/Project Type</b>	SIP
<b>Objectives Met</b>	2
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Recent Damages: \$750000 (High)
<b>Estimated Cost</b>	\$750000 (High)
<b>Priority*</b>	Low
Plan for Implementation	
<b>Responsible Organization</b>	Town of North Salem, Warren Lucas, Supervisor
<b>Local Planning Mechanism</b>	The administration of this action will be added to the Supervisor's workplan.
<b>Potential Funding Sources</b>	HMGP; Local Match
<b>Timeline for Completion</b>	DOF (Short duration preferred)
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)

Action Number:

TNS-3; LOI #266

Action Name:

Streambed cleanup and bank armoring from Croton Falls FD to June Road

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	-1	Not a life safety issue
Property Protection	1	Helps to protect a critical facility
Cost-Effectiveness	0	Estimated costs and benefits are equivalent
Technical	1	Project is technically feasible and a long-term solution
Political	1	Political will exists to implement project (letter of interest)
Legal	1	Town property
Fiscal	-1	Grant funding necessary to implement project
Environmental	1	Bank stabilization will eliminate additional erosion into the stream
Social	0	Benefits a critical facility but not a wide neighborhood
Administrative	1	Town will need assistance designing project
Multi-Hazard	-1	Flooding issue
Timeline	1	Short duration preferred
Agency Champion	1	The Supervisor is a champion for this project
Other Community Objectives	1	Protects critical facility
<b>Total</b>	<b>6</b>	
<b>Priority (High/Med/Low)</b>	<b>High</b>	



**Name of Jurisdiction:** Town of North Salem, North Salem  
**Action Number:** TNS-7; LOI #66  
**Action Name:** Sunset Ridge Drainage Systems

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding
<b>Specific problem being mitigated:</b>	<p>The area of North Salem called Sunset Ridge (95 residences) has had concentrated runoff that has flooded basements and caused significant water damage in many of the homes. Approximately 30 homes are affected during storms. This area was built in the 1960's and has extremely steep slopes. Increased rainfall has overwhelmed the outdated design and large sections of the drainage swales need to be upsized.</p> <p>The Town has worked to mitigate the area by targeting the areas most vulnerable to damage. First, the Town mitigated drainage in the vicinity of Westview Cross Road at a cost of \$330,000 in local money. Next, the Town worked to complete the drainage system between Westview Cross Road and 34 Sunset Drive to mitigate the flooding to a number of homes at a cost of \$270,000 in local money.</p> <p>The Town has performed engineering work and surveying in additional areas of the neighborhood (such as Ridgeway Avenue and Westview Avenue) but has not begun drainage upgrades due to lack of funds.</p>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<p>1 No action –homes in this area continue to flood – not preferred by town.</p> <p>2</p> <p>3</p>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	<p>The Town will continue mitigation efforts along Ridgeway Avenue and Westview Avenue to mitigate flooding to a significant number of homes. The Town will line drainage swales with riprap to prevent erosion, install catch basins with appropriate sized piping, and install other appropriate drainage measures as necessary to mitigate the flooding in this area. These efforts are expected to cost approximately \$550,000.</p> <p>Several other sections of drainage system also need to be completed to fully mitigate the potential for residential flood damage. Engineering solutions have not yet been developed for these areas. The estimated cost to complete the remaining areas is approximately \$1.2 million.</p>
<b>Mitigation Action/Project Type</b>	SIP
<b>Objectives Met</b>	2
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Recent Damages: \$200,000 (High)
<b>Estimated Cost</b>	\$1.7 million total (High); \$550,000 for Westview and Ridgeway (High)
<b>Priority*</b>	High
Plan for Implementation	



<b>Responsible Organization</b>	Town of North Salem, Warren Lucas, Supervisor
<b>Local Planning Mechanism</b>	The administration of this action will be added to the Supervisor's workplan
<b>Potential Funding Sources</b>	HMGP; Local Match
<b>Timeline for Completion</b>	This work is ongoing as funding allows. The Town would prefer a grant to complete the work sooner.
<b>Reporting on Progress</b>	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

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

**Action Number:** TNS-7; LOI #66  
**Action Name:** Sunset Ridge Drainage Systems

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	0	Indirect benefit to life safety
<b>Property Protection</b>	1	Protects drainage system and nearby homes
<b>Cost-Effectiveness</b>	0	Estimated costs and benefits are equivalent
<b>Technical</b>	1	Project is technically feasible and a long-term solution
<b>Political</b>	1	Political will exists to implement project (letter of interest)
<b>Legal</b>	1	Town owned property and easements
<b>Fiscal</b>	-1	Grant funding is necessary to expedite this work
<b>Environmental</b>	1	Project will minimize future erosion that carries sediment downstream
<b>Social</b>	0	Benefits one neighborhood
<b>Administrative</b>	1	Town can administrate the project
<b>Multi-Hazard</b>	-1	Flooding
<b>Timeline</b>	1	Ongoing project
<b>Agency Champion</b>	1	The Supervisor is a champion for this project
<b>Other Community Objectives</b>	0	
<b>Total</b>	6	
<b>Priority (High/Med/Low)</b>	High	Relative to other projects for North Salem

**Name of Jurisdiction:** Town of North Salem, North Salem  
**Action Number:** TNS-13; LOI #1686  
**Action Name:** Generator for Private School used as a Town Shelter.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All hazards
<b>Specific problem being mitigated:</b>	The town needs additional heated shelter facilities in case of a storm in cold weather. A private school in Town allows us to use their space as a shelter. They have a Generac 80-KW generator but do not have sufficient funds to hook it up.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1 No action – Town continues to not have sufficient shelter facilities – not preferred
	2
	3
	.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	The Town would work with the property owner to install the appropriate electrical hookups to utilize the generator during emergencies.
<b>Mitigation Action/Project Type</b>	SIP
<b>Objectives Met</b>	1,5
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Recent Damages: \$20000 (Medium)
<b>Estimated Cost</b>	\$19000 (Medium)
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	Town of North Salem, Warren Lucas, Supervisor
<b>Local Planning Mechanism</b>	The administration of this action would be added to the Supervisor's workplan
<b>Potential Funding Sources</b>	HMGP; Local Match
<b>Timeline for Completion</b>	DOF (Short duration preferred)
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)

Action Number:

TNS-13; LOI #1686

Action Name:

Generator for Private School used as a Town Shelter.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Shelter facility for the Town
Property Protection	-1	Not a property protection measure
Cost-Effectiveness	0	Estimated benefits and costs are equivalent
Technical	0	Project is technically feasible but may not be the long-term solution for the Town
Political	1	Political will to implement project (letter of interest)
Legal	0	Project involves property owner separate from Town
Fiscal	-1	Grant funding necessary to implement project
Environmental	0	No significant environmental benefit or impact
Social	1	Benefit to entire community
Administrative	0	Town can administer project with property owner
Multi-Hazard	1	All hazards
Timeline	1	Short duration preferred
Agency Champion	1	The Supervisor is a champion for this project
Other Community Objectives	0	
Total	4	
Priority (High/Med/Low)	Medium	Relative to other actions for North Salem

**Name of Jurisdiction:** Town of North Salem, North Salem  
**Action Number:** TNS-14; LOI #1704  
**Action Name:** Town Hall Campus Generators

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All hazards
<b>Specific problem being mitigated:</b>	The Town Campus buildings are on the end of the NYSE&G electric transmission line in Town and unfortunately are the last buildings that come online. The Town campus has three main buildings none of which are powered with generators. The Town is requesting a grant for the installation of a generator to power all three buildings, including the Town Hall.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1 No action – Town campus operates at minimal efficiency during power outages – not preferred
	2
	3
	.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	The Town would install a generator capable of providing power to the three buildings, allowing Town staff to continue functioning during extended power outages.
<b>Mitigation Action/Project Type</b>	SIP
<b>Objectives Met</b>	1,5
<b>Applies to existing structures/infrastructure, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Recent Damages: \$50000 (Medium)
<b>Estimated Cost</b>	\$125000 (High)
<b>Priority*</b>	
Plan for Implementation	
<b>Responsible Organization</b>	Town of North Salem, Warren Lucas, Supervisor
<b>Local Planning Mechanism</b>	The administration of this action will be added to the Supervisor's workplan
<b>Potential Funding Sources</b>	HMGP; Local Match
<b>Timeline for Completion</b>	DOF (Short duration preferred)
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)

**Action Number:** TNS-14; LOI #1704  
**Action Name:** Town Hall Campus Generators

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	0	Indirect benefit to life safety
<b>Property Protection</b>	-1	Not a property protection measure
<b>Cost-Effectiveness</b>	-1	Estimated costs are greater than the estimated benefits
<b>Technical</b>	1	Project is technically feasible and a long-term solution
<b>Political</b>	1	Political will to implement project (letter of interest)
<b>Legal</b>	1	Town property
<b>Fiscal</b>	-1	Grant funding required to implement project
<b>Environmental</b>	0	No significant environmental benefits or impacts
<b>Social</b>	1	Benefit to entire community
<b>Administrative</b>	1	Town can administer the project
<b>Multi-Hazard</b>	1	All hazards
<b>Timeline</b>	1	Short duration preferred
<b>Agency Champion</b>	1	The Supervisor is a champion for this project
<b>Other Community Objectives</b>	0	
<b>Total</b>	5	
<b>Priority (High/Med/Low)</b>	Medium	Relative to other projects for North Salem

<sup>i</sup> <http://www.northsalemny.org/town-board/town-board-home>

<sup>ii</sup> [https://s3-us-gov-west-1.amazonaws.com/dam-production/uploads/1398878892102-5cbcaa727a635327277d834491210fec/CRS\\_Communities\\_May\\_1\\_2014.pdf](https://s3-us-gov-west-1.amazonaws.com/dam-production/uploads/1398878892102-5cbcaa727a635327277d834491210fec/CRS_Communities_May_1_2014.pdf)

<sup>iii</sup> <http://www.stormready.noaa.gov/com-maps/ny-com.htm>

<sup>iv</sup> [http://submissions.nfpa.org/firewise/fw\\_communities\\_list.php](http://submissions.nfpa.org/firewise/fw_communities_list.php)