9.33 Village of Head of the Harbor

This section presents the jurisdictional annex for the Village of Head of the Harbor.

9.33.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
John Valentine, Direct of Public Safety 65 Maple Avenue, Smithtown, NY 11787 (631)360-7553 publicsafety@smithtowndps.org	Natale Tartamella, Mayor 500 North Country Rd. St. James, NY 11780 (631) 366-2300 ntartamella@optonline.net

9.33.2 Municipal Profile

This section provides a summary of the community.

Population

According to the U.S. Census, the 2010 population for the Village of Head of the Harbor was 1,472.

Location

The Village of Head of the Harbor lies within the Town of Smithtown in the western part of Suffolk County approximately 50 miles east of New York City. The Village is bordered on the north by the Long Island Sound, the west by the Village of Nissequogue, the south by the Hamlet of St. James and the east by the Town of Brookhaven.

Brief History

The Village of Head of the Harbor, originally settled in the 18th century, becoming an incorporated village in the year of 1928. The Village has remained a simple, residential community which is zoned two acres with limited one acre parcels in the area south of Deepwells Historic Estate. The Village is wholly residential, however, due to past or existing zoning regulations and/or granted variances, some non-residential uses include agricultural pursuits, religious organizations and private educational facilities.

Governing Body Format

The Village of Head of the Harbor is governed by a council form of government consisting of 5 elected officials, including four trustees and the Village Mayor. This body will be responsible for the resolution, implementation and update of the All-Hazards Mitigation Plan. The Village provides police services and general administrative services to its residents.

Growth/Development Trends

The Village of Head of the Harbor is essentially residential in character, and very little undeveloped land remains. No future growth or development that would impact hazard mitigation planning is anticipated at this time.

Table 9.33-1. Growth and Development

Property Name	Type (Residential or Commercial)	Number of Structures	Location (address and/or Parcel ID)	Known Hazard Zone*	Description / Status
None at this time					

* Only location-specific hazard zones or vulnerabilities identified.

9.33.3 Natural Hazard Event History Specific to the Municipality

Suffolk 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. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources. For details of events prior to 2008, refer to Volume I, Section 5.0 of this plan.

The Town of Smithtown provides support to the Village pertaining to emergency preparedness and loss documentation. As such, the Town has identified that the following events have resulted in local impacts to the Village of Head of the Harbor. As resources permit, damage amounts have begun to be quantified, but final total damages/losses incurred as a result of each event are unavailable at this time, except as elsewhere indicated within this plan in regards to high-priority mitigation initiatives.

Table 9.33-1. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
June 26-July 4, 2013	Severe Storms and Flooding	DR-4129	No	Refer to above
June 14, 2013	Rain			Refer to above
June 11, 2013	Rain			Refer to above
June 6-8, 2013	Record Heavy Rain			Refer to above
May 25, 2013	High Winds			Refer to above
May 23, 2013	Flash Flooding			Refer to above
May 8, 2013	Flash Flooding			Refer to above
April 12, 2013	High Winds			Refer to above
March 18-19, 2013	Winter Storm			Refer to above
March 6-8, 2013	Winter Storm			Refer to above
February 26-27, 2013	High Winds and Rain			Refer to above
February 18, 2013	High Winds			Refer to above
February 17, 2013	Snowstorm			Refer to above
February 14, 2013	Snowstorm			Refer to above
February 8-9,2013	Severe Winter Storm and Snowstorm	DR-4111	Yes- PA (Public Assistance)	Refer to above
February 2,2013	Snowstorm			Refer to above
January 31, 2013	High Winds and Rain			Refer to above
January 28, 213	Snowstorm			Refer to above
January 25, 2013	Snowstorm			Refer to above

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
January 21, 2013	Winter Storm			Refer to above
January 16, 2013	Winter Storm			Refer to above
December 29, 2012	Snowstorm			Refer to above
December 26-27, 2012	Nor'Easter			Refer to above
December 21, 2012	High Winds and Rain			Refer to above
November 7, 2012	Nor'Easter			Refer to above
October 27-November 8, 2012	Hurricane Sandy	DR-4085	Yes- IA (Individual Assistance) and PA	Refer to Village Hall Backup Power Action Worksheet
Seotenber 18, 2012	Heavy Rain and Wind Event			Refer to above
August 6, 2012	Heavy Rain Event			Refer to above
June 12-13, 2012	Rain Event			Refer to above
June 2, 2012	Rain Event			Refer to above
January 21, 2012	Snow Event			Refer to above
January 16-17, 2012	Snow Event			Refer to above
October 27-29, 2011	Light Snow, Heavy Snow, Rain, and Wind Event			Refer to above
September 7-11, 2011	Remnants of Tropical Storm Lee	EM-3341 DR-4031	No	Refer to above
August 26-September 5, 2011	Hurricane Irene	EM-3328 DR-4020	Yes- IA and PA	Refer to Village Hall Backup Power Action Worksheet
June 23, 2011	Heavy Rain, Flooding Event			Refer to above
April 26-May 8, 2011	Severe Storms, Flooding, Tornado and Straight Line Winds	DR-1993	No	Refer to above
February 25-26, 2011	Wind, Snow, Rain, and Wind Event			Refer to above
February 21, 2011	Wind, Snow, Rain, and Wind Event			Refer to above
February 19, 2011	Wind, Snow, Rain, and Wind Event			Refer to above
January 26-27, 2011	Heavy Snow			Refer to above
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1957	Yes- PA	Refer to above
December 12-14, 2010	Rain, Wind, and Light Snow Event			Refer to above
October 15-16, 2010	Rain and Wind Event			Refer to above
September 29-30, 2010	Rain Event			Refer to above
September 16, 2010	Severe Storms, Tornados and Straight Line Wind	DR-1943	No	Refer to above
June 24, 2010	Severe Weather and QLCS Tornado Event			Refer to above
May 9, 2010	Wind Event			Refer to above
March 13-31, 2010	Severe Storms and Flooding	DR-1899	Yes-PA	Refer to above
March 12-15, 2010	Heavy Snow, Rain, and Wind Event			Refer to above
February 25-27, 2010	Heavy Snow, Rain,			Refer to above

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
	and Wind Event			
February 23-24, 2010	Heavy Snow, Rain, and Wind Event			Refer to above
February 16-17, 2010	Heavy Snow, Rain, and Wind Event			Refer to above
February 10, 2010	Snow and Wind Events			Refer to above
February 6, 2010	Snow and Wind Events			Refer to above
February 2-3, 2010	Snow and Wind Events			Refer to above
January 2-3, 2010	Snow and Wind Events			Refer to above
December 31, 2010	Blizzard, Wind Event, Light Snow Event			Refer to above
December 29, 2010	Blizzard, Wind Event, Light Snow Event			Refer to above
December 19-20, 2010	Blizzard, Wind Event, Light Snow Event			Refer to above
November 12-14, 2009	Severe Storms and Flooding associated with Tropical Depression Ida and Nor'Easter	DR-1869	Yes-PA	Refer to above
August 28-29, 2009	Heavy Rain Associated With Hurricane Danny			Refer to above
August 8-10, 2009	Severe Storms and Flooding	DR-1857	No	Refer to above
July 24, 2009	Heavy Rain			Refer to above
July 21, 2009	Heavy Rain			Refer to above
June 20-21, 2009	Heavy Rain			Refer to above
March 1-2, 2009	Heavy Snow and Wind			Refer to above
February 25-26, 2009	Snow Squall Event			Refer to above
February 21, 2009	Snow Squall Event			Refer to above
February 19, 2009	Snow Squall Event			Refer to above
January 27-28, 2009	Heavy Snow and Ice			Refer to above
December 11-31, 2008	Severe Winter Storm	EM-3299 DR-1827	No	Refer to above
June 14, 2008	Heavy Rain Event			Refer to above
March 7-9, 2008	Snow, Rain, and Wind Event			Refer to above
March 4-5, 2008	Snow, Rain, and Wind Event			Refer to above
March 1, 2008	Snow, Rain, and Wind Event			Refer to above
February 22, 2008	Wind and Snow Events			Refer to above
February 18, 2008	Wind and Snow Events			Refer to above
February 12-13, 2008	Wind, Snow, Ice, and Heavy Rain Events			Refer to above
February 10, 2008	Wind, Snow, Ice, and			Refer to above

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
	Heavy Rain Events			
January 30, 2008	Snow and Wind Event			Refer to above
January 17-18, 2008	Snow and Wind Event			Refer to above
January 13-14, 2008	Snow and Wind Event			Refer to above
January 9, 2008	Snow and Wind Event			Refer to above

EM *Emergency Declaration (FEMA)*
FEMA *Federal Emergency Management Agency*
DR *Major Disaster Declaration (FEMA)*
IA *Individual Assistance*
N/A *Not applicable*
PA *Public Assistance*

9.33.4 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 Village of Head of the Harbor. 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 Village of Head of the Harbor.

Table 9.33-2. Hazard Risk/Vulnerability Risk Ranking

Ranking	Hazard Type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard [a, b, c]		Probability of Occurrence [d]	Risk Ranking Score (Probability x Impact)
1	Nor'easters	100-Year RCV:	$293,791,664	Frequent	54
		500-Year RCV:	$4,115,858,896		
2	Severe Winter Storms	1% of GBS:	$9,632,324	Frequent	51
		5% of GBS:	$48,161,620		
2	Severe Storms	100-Year RCV:	$293,791,664	Frequent	51
		500-Year RCV:	$4,115,858,896		
3	Hurricane	Category 1 SLOSH:	$2,861,570	Frequent	36
		Category 2 SLOSH:	$3,235,338		
		Category 3 SLOSH:	$10,040,330		
		Category 4 SLOSH:	$28,155,350		
3	Coastal Erosion	There are no buildings in the CEHA		Occasional	36
4	Flooding	1% Annual Chance:	$235,267	Frequent	27
		0.2% Annual Chance:	$379,416		
5	Shallow Groundwater	Damage estimate not available		Frequent	18
6	Earthquake	500-Year RCV:	$53,909,841	Rare	16
		2,500-Year RCV:	$48,161,620		
7	Groundwater contamination	Damage estimate not available		Frequent	3
7	Infestation	No measurable impact to property		Rare	3
7	Expansive Soils	Damage estimate not available		Rare	3
8	Drought	Damage estimate not available		Occasional	0
8	Wildfire	Estimated RCV in Interface/Intermix:	$522,785,357	Occasional	0

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 Suffolk 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 and the Tribes within the Town boundary.*
d. *Frequent = Hazard event that occurs more frequently than once in 10 years; Occasional = Hazard event that occurs from once in 10 years to once in 100 years, Rare = Hazard event that occurs from once in 100 years to once in 1,000 years; None = Hazard event that occurs less frequently than once in 1,000 years*
e. *The estimated potential losses for Nor'Easter and Severe Storm are from the HAZUS-MH probabilistic hurricane wind model results. See footnote c.*

CEHA = Coastal Erosion Hazard Area
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 9.33-3. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)	# Polices in 500-Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Village of Head of the Harbor	12	3	$17,188	0	0	2	0	10

Source: FEMA Region 2, 2014

Note (1): Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of January 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 January 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 9.33-4. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event			Potential Loss from 0.2% Flood Event		
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent[2]	Percent Structure Damage	Percent Content Damage	Days to 100-Percent[2]
None identified at this time									

Source: HAZUS-MH 2.1

Other Vulnerabilities Identified by Municipality

In addition to those identified above, the municipality has identified the following vulnerabilities:

- The topography of the Village contains many steep hills and isolated valleys, and the Village is heavily wooded. As such, stormwater and debris management are challenges throughout the Village and are exacerbated by most natural hazards.
- Erosion control and protection of environmental habitats is a priority for the Village, as such they have adopted a Local Waterfront Revitalization Plan and formed a Joint Coastal Commission with a neighboring Village to perform public outreach and environmental planning to protect the shoreline and coastal habitat from natural hazards such as erosion, coastal storms et al.

9.33.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

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

Planning and Regulatory Capability

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

Table 9.33-5. 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	Local, State		Building Code adopted 1976 w/amendments – Village Code Ch 65; NYS Uniform Code
Zoning Ordinance	Y	Local	Village Zoning & Land Development	Zoning & Land Development adopted 1974 w/amendments– Village Code Ch 165
Subdivision Ordinance	Y	Local	Village Zoning	Subdivision of Land adopted 1974 w/amendments– Village Code Ch 143; Village Zoning Code Ch 165
Special Purpose Ordinances	Y	Local		Erosion & Drainage adopted 1989 w/amendments– Village Code Ch 85
Growth Management				
Floodplain Management / Basin Plan				
Stormwater Management Plan/Ordinance	Y	Local		Erosion & Drainage adopted 1989 w/amendments–Village Code Ch 85
Comprehensive Plan / Master Plan				
Capital Improvements Plan				
Site Plan Review Requirements	Y	Local		Village Zoning Code Ch 165, Sec. 165-102 adopted 2006
Habitat Conservation Plan				
Economic Development Plan				
Emergency Response Plan	Y	Local		Adopted and incorporated within the Town of Smithtown Emergency Management Plan
Shoreline Management Plan	Y	Local		Environmental Quality Review adopted 1990–Village Code Ch 81

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.)
Post Disaster Recovery Plan				
Post Disaster Recovery Ordinance				
Real Estate Disclosure req.				
Other (e.g. steep slope ordinance, local waterfront revitalization plan)	Y	Local		Beaches, Dunes, Bluff 1989 Village Code Ch 85. The Villages of Nissequogue and Head of the Harbor have formed a Joint Coastal Commission which administers their jointly adopted LWRP Plan. This commission does public outreach and environmental planning to protect the community from natural hazards and preserve the community's natural habitat
NFIP Flood Damage Protection Ordinance	Y			
NFIP - Freeboard	Y			State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other
NFIP – Cumulative Substantial Damages				
Coastal Erosion Control Districts	Y			The Villages of Nissequogue and Head of the Harbor have formed a Joint Coastal Commission which administers their jointly adopted LWRP Plan. This commission does public outreach and environmental planning to protect the community from natural hazards and preserve the community's natural habitat
				Environmental Quality Review 1990-Village Code Ch 81

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Head of the Harbor.

Table 9.33-6. 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	Y	Building Department; Engineering Contract Entity
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Building Department
Planners or engineers with an understanding of natural hazards	Y	Engineering Contract Entity
NFIP Floodplain Administrator	Y	Chief Building Official, Gerard W. Harris
Surveyor(s)	Y	Available via contract
Personnel skilled or trained in "GIS" applications	Y	Engineering Contract Entity
Scientist familiar with natural hazards in the municipality.	Y	Available via contract
Emergency Manager	Y	The Town of Smithtown Department of Public Safety, and the technical resources they can coordinate from the Town, including but not limited to emergency management, and hazard mitigation planning and engineering are available to the Village
Grant Writer(s)	Y	Contract Entity
Staff with expertise or training in benefit/cost analysis	Y	Village Treasurer and Mayor
Professionals trained in conducting damage assessments	Y	Chief Building Official, Village Engineer

Fiscal Capability

The table below summarizes financial resources available to the Village of Head of the Harbor.

Table 9.33-7. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG)	No
Capital Improvements Project Funding	No
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/homes	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Mitigation grant programs	Yes
Other	FEMA

Community Classifications

The table below summarizes classifications for community program available to the Village of Head of the Harbor.

Table 9.33-8. Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	Not participating	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	8/99	1999
Public Protection	4/9	-
Storm Ready	Not participating	N/A
Firewise	Not participating	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

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

NFIP Floodplain Administrator: Gerard W. Harris, Building Inspector. The approach Smithtown and the Villages take to floodplain management is a team approach. Many personnel across diverse backgrounds assist on ensuring issues within the floodplain are addressed completely.

Program and Compliance History

Village of Head of the Harbor joined the NFIP on August 1, 1983, and is currently an active member of the NFIP. The current effective Flood Insurance Rate Maps are dated September 25, 2009. The communities Flood Damage Prevention Ordinance (FDPO), found at Chapter 97 of the local code, was last updated on September 16, 2009.

As of January 31, 2014 there are 12 policies in force, insuring $4,255,000 of property with total annual insurance premiums of $9,204. Since January 31, 2014, 3 claims have been paid totaling $17,188. As of January 31, 2014 there are no Repetitive Loss or Severe Repetitive Loss properties in the community.

The community is currently in good standing in the NFIP and has no outstanding compliance issues. The current NFIP Floodplain Administrator has no knowledge of when the last CAV was performed. The municipality sees no specific need for a CAV at this time.

Loss History and Mitigation

Since January 31, 2014, 3 claims have been paid totaling $17,188. As of January 31, 2014 there are no Repetitive Loss or Severe Repetitive Loss properties in the community.

For minimal losses, the Village Floodplain Administrator and Building Inspector has the capabilities to perform the damage reports. However, should a significant natural event widely impact the Village, or have other needs beyond current capabilities, the Town of Smithtown Department of Public Safety provide appropriate resources to address the properties of concern.

One property was damaged due to flooding during Hurricane Sandy; it was not Substantially Damaged.

Planning and Regulatory Capabilities

The communities Flood Damage Prevention Ordinance (FDPO) was last updated on September 16, 2009, and is found at Chapter 97 of the local code.

Floodplain management regulations and ordinances meet FEMA and New York State minimum requirements. The Villages of Nissequogue and Head of the Harbor have formed a Joint Coastal Commission that administers their jointly adopted Local Waterfront Revitalization Program Plan. This commission does public outreach and environmental planning to protect the community from natural hazards and preserve the community's' natural habitat.

Administrative and Technical Capabilities

The community FDPO identifies the Building Inspector as the local NFIP Floodplain Administrator, currently Gerard W. Harris, for which floodplain administration is an auxiliary duty.

In addition to the NFIP FPA, the community has supplementary staff for which NFIP is an auxiliary duty; personnel include a contracted professionally licensed Village Engineer and professional grant writer for the Village. The Town of Smithtown makes resources available to the Village as necessary to assist with implementation the floodplain management program.

Duties and responsibilities of the Building Inspector/NFIP Administrator are permit review, damage assessments, record-keeping, and inspections. GIS services are provided, as necessary, by the Town of Smithtown or the Village Engineer.

Lists are maintained of the properties that are damaged, however no tracking has been necessary for property owners interested in mitigation. For minimal losses, the Village Floodplain Administrator / Building Inspector has the capabilities to perform the damage reports. However, should a significant natural event widely impact the Village, or have other needs beyond current capabilities, the Town of Smithtown Department of Public Safety provide appropriate resources to address the properties of concern.

Mr. Harris has received training in many aspects of floodplain administration, code enforcement and other related training regularly in the past. He is adequately trained to fulfill his responsibilities as the municipal floodplain administrator. Should any local training opportunities arise for further training and/or certification, the Village would participate.

Public Education and Outreach

The Villages of Nissequogue and Head of the Harbor have formed a Joint Coastal Commission that administers their jointly adopted Local Waterfront Revitalization Program Plan. This commission does public outreach and environmental planning to protect the community from natural hazards and preserve the community's' natural habitat.

Duties and responsibilities of the Building Inspector/NFIP Administrator are permit review, damage assessments, record-keeping, and inspections. GIS services are provided, as necessary, by the Town of Smithtown or the Village Engineer.

Actions to Strengthen the Program

In order to adequately address flooding concerns within the Village, the floodplain administrator feels additional areas that currently unmapped in the area of Mill Creek and Harbor Hill Road should be studied and mapped by FEMA. The area has limited NFIP policy coverage. Additional training and information regarding floodplain management would be welcomed. The benefit of joining the Community Rating System (CRS) to the Village of Head of the Harbor is low as, from their current

knowledge of the program, it appears to cost more money to join than policy holders would see in a reduction of their premiums.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

It is the intention of this municipality to incorporate hazard mitigation planning and natural hazard risk reduction as an integral component of ongoing municipal operations. The following textual summary and table identify relevant planning mechanisms and programs that have been/will be incorporated into municipal procedures, which may include former mitigation initiatives that have become continuous/on-going programs and may be considered mitigation "capabilities":

- **Floodplain Management/Building Code, Ordinances, and Enforcement-** Develop and/or enhance the current stormwater management system to be in compliance with federal and state regulations such that there will be a net reduction in the flood risk caused by stormwater impacts.
- **Emergency Response Planning**- Adopt an updated Emergency response plan in conjunction with The Town of Smithtown.
- **Emergency Response Planning-** Consider the development of a post-disaster action plan, including a debris management plan.

Table 9.33-9. Planning Mechanisms

Planning Mechanisms	Has Been Utilized	Will Be Utilized
Operating Budget When constructing upcoming budgets, Hazard Mitigation Actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the Hazard Mitigation goals and objectives.		X
Capital Improvement Budget When constructing upcoming budgets, Hazard Mitigation Actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the Hazard Mitigation goals and objectives.		X
Human Resource Manual Employee job descriptions may contain Hazard Mitigation Actions.		
Building and Zoning Ordinances A variety of building and zoning regulations are used to restrict the uses of land and establish building specifications. Prior to land use, zoning changes or development permitting the city will review the hazard mitigation plan and other hazard analysis to ensure consistent and compatible land use.	X	X
Comprehensive Land Use Plan A land use plan is intended to identify land use issues and to make recommendations on how to address these issues. When applicable the city will incorporate Hazard Mitigation Actions in the development and extent of the regulations.		
Grant Applications Data and maps will be used as supporting documentation in grant applications	X	X
Municipal Ordinances When updating municipal ordinances Hazard Mitigation will be a priority.		
Fire Plan The Hazard Mitigation Plan will be used as a resource for the development of future Fire Plans.		
Capital Improvement Planning The municipality will establish a protocol to review current and future projects for		

Planning Mechanisms	Has Been Utilized	Will Be Utilized
hazard vulnerability. The will incorporate hazard resistant construction standards into the design and location of projects.		
Day to Day Operations Incorporate Hazard Mitigation Actions in daily operations and all projects will be a goal of the municipality.		
Local School Service Projects The municipality to work closely with the local school district and assist with community service projects for the service organizations. Several of the municipality's Hazard Mitigation Actions can be implemented as a joint project with the school district.		
Municipal Budget Adopted annually Municipality will look at Mitigation Actions when allocating funding.		X
Economic Development The local economic development group will utilize the identification of hazard areas when assisting new business in finding a location.		

9.33.6 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 2008 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 9.33-10. Past Mitigation Initiative Status

Description	Status	Review Comments
HOH-1: Establish a Capital Improvement program for the village as a mechanism for funding projects, and process for review and update.	In Progress	Carry over – See Table 9.33-11.
HOH-2: Adopt an updated Emergency response plan in conjunction with the Town of Smithtown.	Completed	Not carried over as it is completed.
HOH-3: Maintain National Incident Management System, State Emergency Management System, and Incident Command System training for Village Trustee's	In Progress	Carried over in refined format – See Table 9.33-11.
HOH-4: Increase Public awareness of Hazards through community outreach programs.	Continuous	Carried over in refined format – See Table 9.33-11.
HOH-5: Partner with The Town of Smithtown on their Mitigation projects that impact the Village to leverage resources, and secure multiple tangible benefits for both entities.	Continuous	Carry over– See Table 9.33-11.
HOH-6: Support countywide initiatives identified in Section 9.1 of the Suffolk County Annex.	Continuous	A modified version of this initiative is being carried forward, identifying local participation in specific county-led mitigation programs and initiatives.
HOH-7: Consider the development of a post – disaster action plan, including a debris management plan. This to be incorporated into existing emergency management plans.	Continuous	A modified version of this initiative is being carried forward, identifying willingness to participate in multi-jurisdictional initiatives
HOH-8: Consider participation in incentive-based programs such as, CRS and "Storm-Ready".	Continuous	The Village has included an initiative to support county-led initiatives, which include programs to enhance floodplain management capabilities. The Village will attend a CRS workshop if offered locally.
HOH-9: Develop and/or enhance the current stormwater management system to be in compliance with federal and state regulations such that there will be a net reduction in the flood risk caused by stormwater impacts.	Continuous	Carried over in refined format – See Table 9.33-11.
HOH-10: Continue to support the implementation, monitoring, maintenance and updating of this Plan, as defined in Section 7.0	Continuous	A current capability. This initiative is being removed from the updated mitigation strategy as it refers to activities that are an ongoing and normal part of Village operations. The Village has fully participated in the 2014 update to this plan.
HOH-11: Strive to maintain compliance with	Continuous	A current capability. This initiative is being

Description	Status	Review Comments
and good-standing in the National Flood Insurance program.		removed from the updated mitigation strategy, and identified as a mitigation capability as it refers to activities that are an ongoing and normal part of Village operations. Initiatives that enhance local floodplain management capabilities and participation in the NFIP have been identified in the Village's updated mitigation strategy.
HOH-12: Enforce the seismic design provisions in the Building codes of New York in the planning stage.	Continuous	A current capability. The Village has indicated that it will participate in and support the activities of the county-led multi-jurisdictional seismic safety committee.

Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Village is very small and has limited fiscal resources. Utilizing existing resources and capabilities, their daily operations seek to achieve the objectives of this plan. No major capital projects have been completed recently.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Head of the Harbor identified mitigation initiatives they would like to pursue in the future. 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. Table 9.33-11 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.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.33-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.

Table 9.33-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
HOH-1	Establish a Capital Improvement program for the village as a mechanism for funding projects, and process for review and update	NA	All Hazards	1, 7,14, 15,16	Village Mayor/ Trustee's	Medium	Medium	Village general Fund, bonds, Impact fees	Long-term, DOF	Medium	LPR, SIP, NRP, EAP
HOH-2 (prev. HOH-3)	Maintain National Incident Management System, State Emergency Management System, and Incident Command System training for Village Trustees and other critical Village personnel	NA	All Hazards	1,3,7,13	Village Mayor/ Trustee's	Medium	Low	Village General fund through existing programs, DHS program grant	Short term	High	LRP
HOH-3 (prev. HOH-4)	Use the Joint Coastal Commission, a partnership with the Village of Nissequogue, to increase public awareness of natural hazard and environmental planning	NA	All Hazards	1,3,4, 5, 7, 14	Village Mayor/ Trustee's	Low	Low	Village General fund through existing programs	OG	Medium	EAP
HOH-4 (prev. HOH-5)	Partner with the Town of Smithtown on their Mitigation projects that impact the Village to leverage resources, and secure multiple tangible benefits for both entities.	NA	Flood, Nor'Easter, Hurricane, Severe Weather, Shallow Groundwater, Coastal Erosion	7,15	Village, Town of Smithtown	Range	Range	Village General fund, cost-sharing with Smithtown. Possible FEMA hazard Mitigation Grant Funding depending upon project eligibility.	Long term DOF	High	SIP, NRP
HOH-5 (prev. HOH-6)	As capabilities permit, support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically it is acknowledged that opportunities for multi-jurisdictional partnership may be beneficial to enhance the following: • Natural hazard awareness and personal scale risk reduction/mitigation public education and outreach programs • Post-disaster assessment and recovery capabilities • Debris Management • Outreach to private property owners to improve understanding of damage history and create interest in mitigation activities • Regional, county and local capabilities to manage seismic risk, both pre- and post-disaster • Alignment of Mitigation Initiatives through all levels of Government (effort to build State and Federal level recognition and support of the County and local hazard mitigation planning strategies identified in this plan).										

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	See above.	New and Existing	All Hazards	All objectives	Ten Towns of Suffolk County, in partnership with Suffolk County and Villages	Range	Range	Existing programs and grant funding where applicable	OG	Medium	LPR, EAP
HOH-6 (prev HOH-7)	Support any actions undertaken by the Town of Smithtown concerning post-disaster action plans and debris management plans by continuing to adopt updates to the current emergency management plans.	New and Existing	All Hazards	1,3,7,8,10, 14,15	Village, Town of Smithtown	High	Low	Existing	OG	High	LPR, EAP
HOH-7 (prev. HOH-8)	Participate in any locally-offered educational training opportunities regarding participation in incentive-based programs such as, CRS and "Storm-Ready".	Existing	Flood, Nor'Easter, Hurricane, Severe Weather	1,2,3,7,13	Village	Low	Low	General fund through existing programs	Long Term	Low	EAP
HOH-8 (prev. HOH-9)	Inventory areas of the Village that are subject to repetitive losses from surface, groundwater and/or tidal flooding. Evaluate potential improvements to stormwater management and/or other municipal infrastructure that could mitigate said losses. Perform feasibility studies, develop designs and implement projects as funding becomes available.	Existing	Nor'Easters; Severe Winter Storms; Hurricane; Flooding; Severe Storms; Coastal Erosion; Shallow Groundwater; Expansive Soils	1,2,3,5,10, 11, 14, 15, 16, 17	Village	Range	Range	Un-determined	DOF	Range	LPR, SIP, NRP
HOH -9 (new)	Inventory any private properties which have reported severe repetitive damages from natural hazards, for example coastal erosion, flooding and/or shallow groundwater. Evaluate surrounding existing conditions. Consider the costs and benefits of mitigation measures such as municipal public improvements, acquisition, relocation, and/or	Existing	All Hazards	1,2,3,5,6,14, 15	Village	Range	Range	Un-determined	Medium Term	Medium	SIP, EAP

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	structural retrofits. Develop a list of project proposals, prioritized using methods including FEMA Benefit Cost Analysis										
HOH -10 (new) Sandy HMGP LOI #1905	Head of the Harbor Village Hall Critical Services Back Up Power	Refer to Mitigation Action Worksheet - HeadofHarbor _LOI 1905_032414_LEF.doc									
HOH -11 (new)	Continue to assess and identify erosion-prone areas in need of repair, replenishment and/or retro-fit that are critical to mitigate potential future losses within the Village. Implement solutions as funding becomes available.	Existing	Nor'Easters; Severe Winter Storms; Hurricane; Flooding; Severe Storms; Coastal Erosion	2, 3, 5, 14, 15, 16, 17	Village; possible dependencies on Town of Smithtown, Suffolk County and/or New York State	High	High	Potential grant applications	DOF	High	SIP, NRP
HOH -12 (new)	Assess and prioritize needed flood prevention projects in the following risk/prone areas: Mills Pond, and Head of the Harbor and implement improvements as funding becomes available.	Existing	Nor'Easters Severe Winter Storms, Flood, Hurricane, Severe Weather; Coastal Erosion; Shallow Groundwater	2, 5, 7, 12, 13, 14, 15, 16, 17	Village, Town of Smithtown	High	Range	Un-determined	Long-Term	Medium	NRP
HOH -13 (new)	Inventory and evaluate all existing bridges/culverts under Village jurisdiction: develop project concepts to increase structural stability & drainage capacity of culverts significant to storm water conveyance & supporting critical evacuation and response routes.	Existing	Nor'Easters; Flooding; Shallow Groundwater	2,5,7,12,13, 14,15,16	Village, Town of Smithtown, possible dependencies on Suffolk County and/or New York State	Range	Range	Possible grant application	Long Term OG	Medium	SIP

Notes:
**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:

DPW	*Department of Public Works*
FEMA	*Federal Emergency Management Agency*
FMA	*Flood Mitigation Assistance grant program*
HMA	*Hazard Mitigation Assistance grant program (including FMA, HMGP, PDM)*
HMGP	*Hazard Mitigation Grant Program*
N/A	*Not applicable*
NFIP	*National Flood Insurance Program*
NYSOEM	*New York State Office of Emergency Management*
PDM	*Pre-Disaster Mitigation grant program*
PSEG	*Public Service Electric and Gas (formerly LIPA)*

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.

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

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 (NRP) – 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.*

Table 9.33-12. 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
HOH-1	Establish a Capital Improvement program for the village as a mechanism for funding projects, and process for review and update	0	0	1	1	1	1	0	0	0	1	1	0	0	1	7	Medium
HOH-2 (prev. HOH-3)	Maintain National Incident Management System, State Emergency Management System, and Incident Command System training for Village Trustees and other critical Village personnel	1	1	1	1	1	1	1	0	0	1	1	1	1	0	11	High
HOH-3 (prev. HOH-4)	Use the Joint Coastal Commission, a partnership with the Village of Nissequogue, to increase public awareness of natural hazard and environmental planning	0	0	1	1	1	1	1	0	0	1	1	1	1	1	10	Medium
HOH-4 (prev. HOH-5)	Partner with the Town of Smithtown on their Mitigation projects that impact the Village to leverage resources, and secure multiple tangible benefits for both entities.	1	1	1	1	1	1	0	0	0	1	1	1	1	1	11	High
HOH-5 (prev. HOH-6)	Support all countywide initiatives identified in Section 9.1 of the Suffolk County Annex.	1	1	1	1	1	1	1	0	0	0	1	1	0	0	10	Medium
HOH-6 (prev HOH-7)	Support any actions undertaken by the Town of Smithtown concerning post-disaster action plans and debris management plans by continuing to adopt updates to the current emergency management plans.	0	1	1	1	1	1	1	0	0	1	1	1	1	1	11	High

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
HOH-7 (prev. HOH-8)	Participate in any locally-offered educational training opportunities regarding participation in incentive-based programs such as, CRS and "Storm-Ready".	0	0	0	1	0	1	0	0	0	0	1	1	0	0	4	Low
HOH-8 (prev. HOH-9)	Inventory areas of the Village that are subject to repetitive losses from surface, groundwater and/or tidal flooding. Evaluate potential improvements to stormwater management and/or other municipal infrastructure that could mitigate said losses. Perform feasibility studies, develop designs and implement projects as funding becomes available.	1	1	1	-0	1	1	0	0	0	0	1	0	0	1	7	Ranges High to Low
HOH-9 (new)	Inventory any private properties which have reported severe repetitive damages from natural hazards, for example coastal erosion, flooding and/or shallow groundwater. Evaluate surrounding existing conditions. Consider the costs and benefits of mitigation measures such as municipal public improvements, acquisition, relocation, and/or structural retrofits. Develop a list of project proposals, prioritized using methods including FEMA Benefit Cost Analysis	1	1	1	1	1	1	0	0	0	1	1	1	1	0	10	Medium
HOH-10 (new) Sandy HMGP LOI #1905	Head of the Harbor Village Hall Critical Services Back Up Power	1	0	1	1	1	1	0	1	1	0	1	1	1	1	11	High
HOH-11 (new)	Continue to assess and	1	1	1	1	1	1	0	1	1	0	1	1	1	1	12	High

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
	identify erosion-prone areas in need of repair, replenishment and/or retrofit that are critical to mitigate potential future losses within the Village. Implement solutions as funding becomes available.																
HOH -12 (new)	Assess and prioritize needed flood prevention projects in the following risk/prone areas: Mills Pond, and Head of the Harbor and implement improvements as funding becomes available.	1	1	1	1	1	1	0	0	1	0	1	0	1	0	9	Medium
HOH -13 (new)	Inventory and evaluate all existing bridges/culverts under Village jurisdiction: develop project concepts to increase structural stability & drainage capacity of culverts significant to storm water conveyance & supporting critical evacuation and response routes.	1	1	1	1	1	1	0	0	0	0	1	0	0	1	8	Medium

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

- = Prioritization remained the same as the 2008 HMP.

9.33.7 Future Needs To Better Understand Risk/Vulnerability

The Village has comprehensively identified future needs to better understand their risks and vulnerabilities in the mitigation initiatives described in Table 9.33-11.

In order to adequately address flooding concerns within the Village, the floodplain administrator feels additional areas that currently unmapped in the area of Mill Creek and Harbor Hill Road should be studied and mapped by FEMA. The area has limited NFIP policy coverage.

Also note that the most recent FEMA Flood Insurance Study available for Stony Brook Harbor indicates that a complete study of the coastline within the Harbor has not been completed, and that assumptions are made within the study that tidal activity and/or storm surges would be similar to that on the open coastal areas of the Long Island Sound. Local knowledge does not support this assumption. The Village would benefit if FEMA were to produce a comprehensive study of its coastline within Stony Brook Harbor.

It is also noted that risk assessment and analysis contained elsewhere in this plan may not be reflective of actual potential losses, due to a variety of data collection and/or modeling constraints. The Village will continue to partner with local, State and Federal agencies to support local data collection and greater understanding of the hazards and risks pertaining to the water-bodies within their borders.

9.33.8 Hazard Area Extent and Location

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

9.33.9 Additional Comments

None at this time.

Figure 9.33-1. Village of Head of the Harbor Hazard Area Extent and Location Map

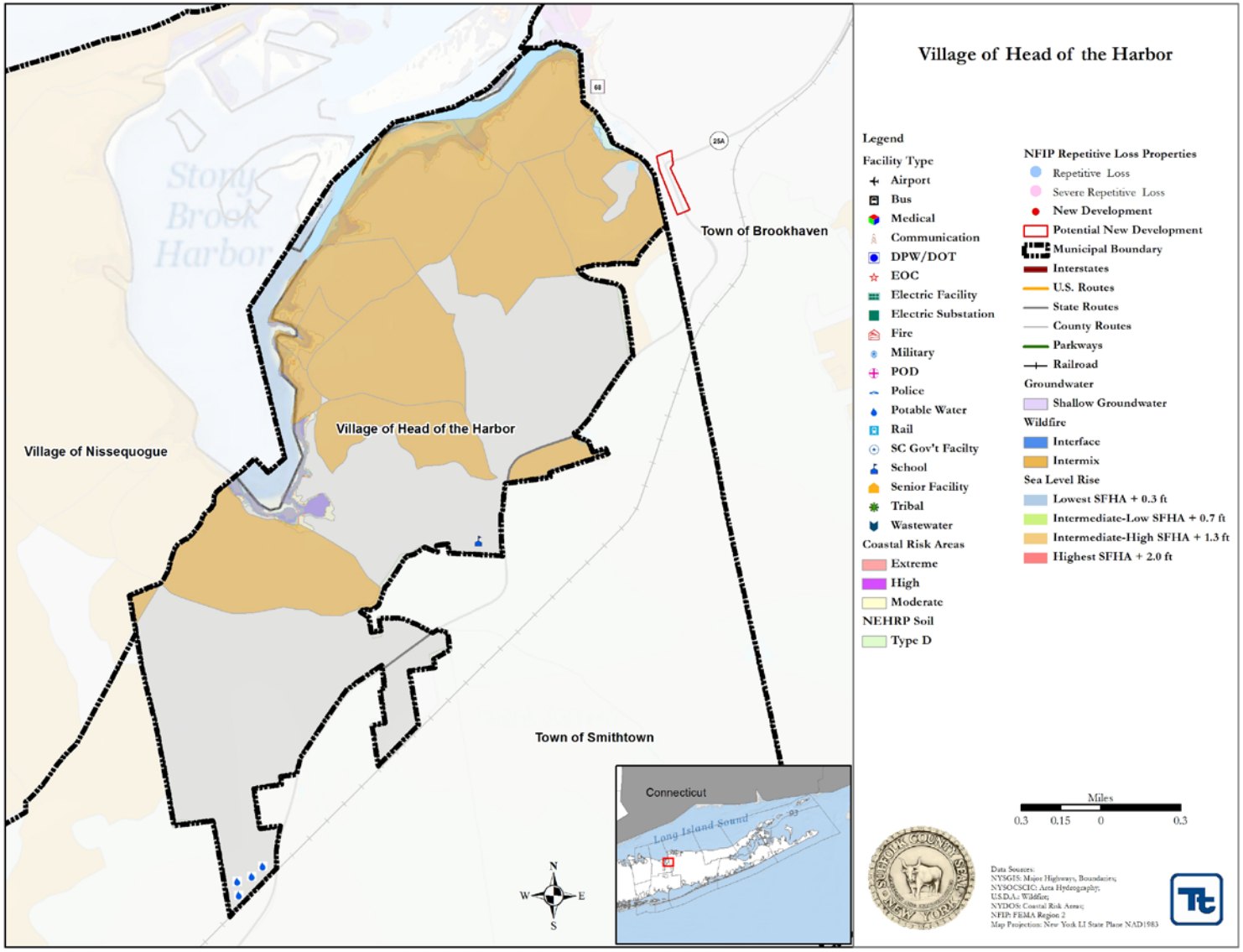
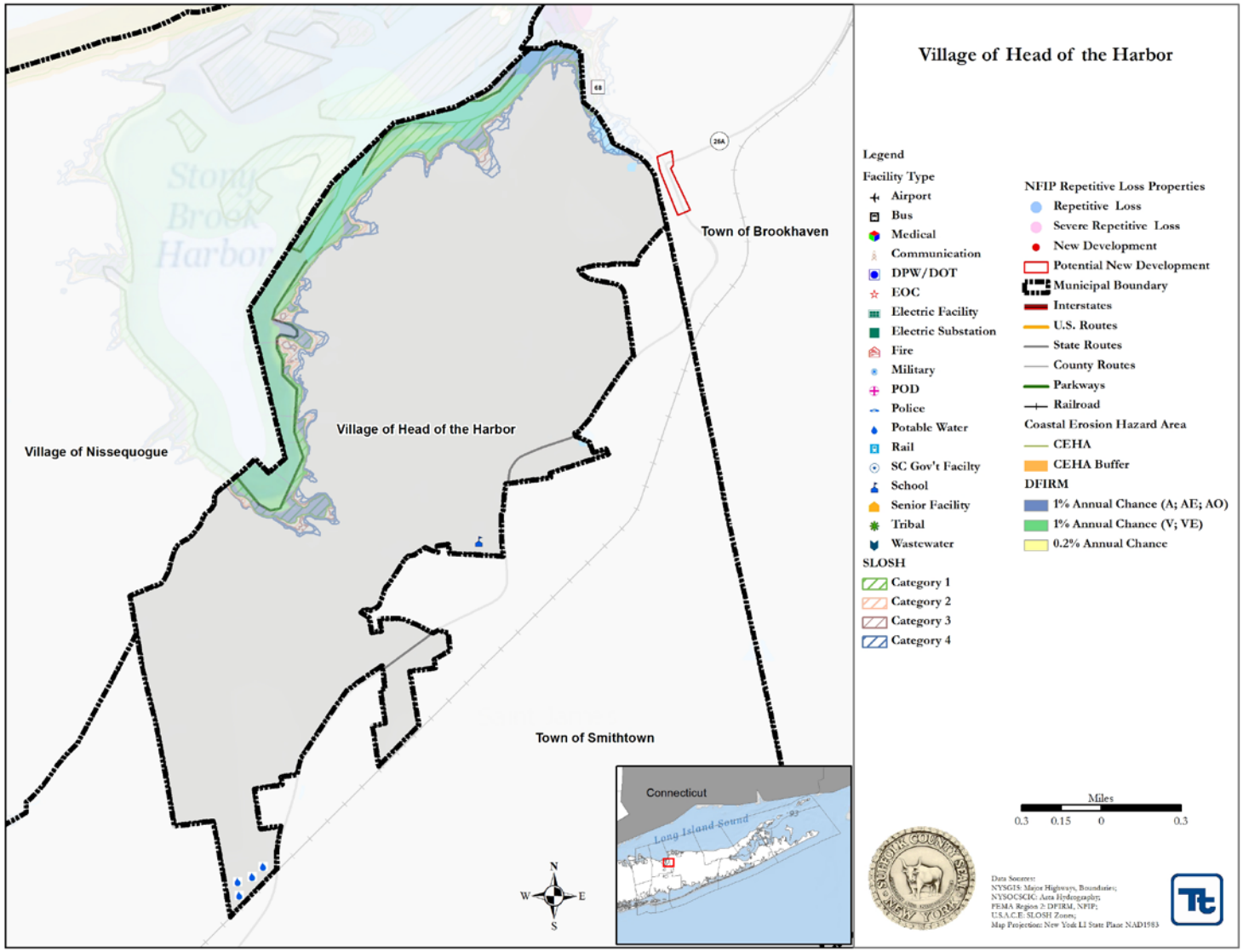


Figure 9.33-2. Village of Head of the Harbor Hazard Area Extent and Location Map



Mitigation Action Worksheet

Please complete one sheet per action/project with as much detail as possible, using the guidance beginning on page 3 and examples provided by FEMA.

Name of Jurisdiction: Village of Head of the Harbor
Number: Sandy HMGP LOI #: 1905, State #2220
Mitigation Action/Initiative: Head of the Harbor Village Hall Critical Services Back Up Power

Assessing the Risk	
Hazard(s) addressed:	Power Failure from all natural hazards incl.: Hurricane, Nor'Easters, Severe Storms, Severe Winter Storm, Wildfire
Specific problem being mitigated:	The site location is Head of the Harbor Village Hall, located at 500 North Country Rd. (Route 25A) St. James, NY 11780; Latitude: 40.886447; Longitude: -73.15905. The project location is within the Incorporated Village of Head of the Harbor, in the Town of Smithtown, Suffolk County, NY. The Tax Map Number for the property is 0801-7.0-4.0-4.006. Natural Hazard to be mitigated: Power failure hazard. Typically a power outage is a cascading effect of a larger natural hazard. The definition of this hazard, provided by the New York State Hazard Mitigation Plan is: "Any interruption or loss of electrical service due to disruption of power transmission caused by accident, sabotage, natural hazards or equipment failure. A significant power failure is defined as any incident of a long duration which would require the involvement of the local and/or state emergency management organizations to coordinate provision of food, water, heating, shelter, etc…" Power outages affecting Head of the Harbor, characterized by heavily wooded areas, are commonly associated with strong wind events and severe storms but were also experienced in August 2003 when a mass power outage swept across the Northeast United States and severely affected the entirety of New York State. Problem: The Village Hall property is the only governmental facility for the Village of Head of the Harbor. During severe storms, Village Hall functions as an information center for the 1500+ village residents. Located in a heavily wooded residential area, village infrastructure is vulnerable to wind and storm damage that affect the above ground power lines. During power outages, many residents rely on Village Hall as a place to turn for heat, sharing resources with neighbors, and retrieving commuters from the nearby train depot. Its central location is also accessible by primary roads for residents to gather for evacuation purposes. Village Hall houses the only police station for our jurisdiction, and the highway department operates out of a separate building on Village Hall property.

	Power outages due to severe storms and other events result in damages including loss of use of all village facilities including the police and highway facilities. Our Village experiences sporadic short-term (1-2 hours) outages throughout the year. Recent long-term outages include Tropical Storm Irene August 26 through August 29, 2013. Superstorm Sandy resulted in loss of power for ten days. Power outages were also experienced during the 2013 blizzard Nemo February 8th – 12th.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. The No Action Alternative is to provide no back up power capacity for the Village Hall facility (which is the current status quo). This is not a viable option because it the Village facility will continue to experience total loss of use during power outage events. Extended power outages, such as those documented in the BCA worksheets, result in severe hindrance to Village government operations, including all Village Hall functions, Justice Court proceedings, and operations of the Police Department, Highway Facility and other agencies with which the Village must communicate/coordinate during power outages and the severe storm events that typically precipitate the power outages. Loss of power hampers emergency response and recovery operations for the Police and Highway departments, and hampers communications capabilities that are critical for coordinating necessary resources within the Village and regionally with partner emergency response agencies at the Town, County, State and Federal levels. Without power, the Village facility is also unable to meet the needs of area residents who depend on Village Hall as a source of information, and a gathering place for warming/cooling and as a place to charge cell phones and the like. The facility's multi-use functions serve to protect the life, health and safety of the public, and these functions are compromised without backup power capacity.

	2. Solar power is one possible feasible alternative. According to the New York State Energy Research and Development Authority's Clean Power Estimator , a 30KW PV system would produce nearly enough power for the facility (falling just short of the facility's annual KwH usage) and would cost $135,122. According to find-solar.org , an additional source of solar estimating calculations, the Village Hall facility would need a 32KW peak DC power system costing between $127,120 and $190,680. Both estimates incorporate standard assumptions and do not take into account any tilt, orientation, other output adjustments, or engineering/installation considerations that would be needed to create a customized cost estimate, but even at this base estimated price this option is clearly not a cost effective means of providing back up power. It is also questionable whether the roof of Village Hall could accommodate an array of this size. An array providing even half of the building's energy demand would still not be cost effective. While solar is generally considered a sound long term investment and a green alternative to grid power, it is not a cost effective option for back up power for this facility at this time.
	3. Fuel cells, such as the Bloom Energy Server, are another alternative. This technology has become popular among commercial entities that have deployed fuel cells for applications including large information technology facilities as a primary energy source. Fuel cells convert hydrogen, natural gas or another fuel into electricity thorough an electrochemical process. While fuel cells are energy efficient and proven effective, their implementation is primarily considered as an alternative to grid power, due largely to the high capital cost and the long cost recovery timeframe. The technology is expensive, at $7 to $8 a watt (as reported by Newsweek in 2010). 22 KW capacity would cost $154,000, and our research shows that this size fuel cell may not be available. Even if it were, it is far too expensive for use as a source of backup power at this time.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Village proposes to procure and install a generator that will power the Village Hall facility and allow for critical operations to continue uninterrupted in the case of a power outage. The proposed generator is a 22 kW diesel fueled unit in an aluminum enclosure with main line circuit breaker, battery, battery rack and cables, charger, block heater and 7 day exerciser. Other specifications and details for installation include: 200 amp automatic smart transfer switch, fuel tank, cement slab installation and electrical installation. The generator will be installed adjacent to the Village Hall facility behind an existing shed. The generator will provide power for essential functions performed by the Village police, Village Hall staff and Highway Department. All forms of communication media – radio, internet, facsimile, email, website posting and text messages – are essential in coordinating

	storm response and recovery activities both internally and externally with emergency services personnel, the Town of Smithtown, the NYS Office of Emergency Management, County emergency services and utility companies. The Highway Department typically operates out of a barn on the Village Hall property. This barn does not have any back up power source, and the requested generator will not power the facility. Instead Highway staff will temporarily relocate to Village Hall and use it as a base of operations to coordinate response and recovery operations during a power failure. The generator will also support: • Functions of the Village Justice Court and allow for uninterrupted, continuity of service to the public; • Central station monitoring system, addressing the concern of unauthorized entrance and/or fire in the facility as a whole, but especially the historical records room; and • Use of the Village Hall facility as a central gathering place for exchange of information with members of the community; and provision of warming, cooling and hot showers during power outages. Status of development process: A qualified Professional Engineer and contractor have inspected the existing electrical demand and wiring within the Village Hall facility, and determined that the proposed generator is sufficient to support essential operations.
Mitigation Action/Project Type	SIP
Objectives Met	2,7,12,13,14,16
Applies to existing structures/infrastructure, future, or not applicable	Existing
Benefits (losses avoided)	Disruptions to critical services provided by Police, Highway, Village Hall staff. Loss of ability to coordinate with outside agencies (e.g. power provider, state, local emergency managers). Additional detailed analysis is needed to quantify losses and prepare a full Benefit Cost Analysis.
Estimated Cost	$29,570
Priority*	High
Plan for Implementation	
Responsible Organization	Village of Head of the Harbor, Margaret O'Keefe, Village Clerk
Local Planning Mechanism	Village of Head of the Harbor
Potential Funding Sources	Hazard Mitigation Grant Program; local cost share

Timeline for Completion	Short (dependent on funding availability)
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

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

Prioritization

Number: Sandy HMGP LOI #: 1905
Mitigation Action/Initiative: Head of the Harbor Village Hall Critical Services Back Up Power

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Necessary to keep critical response facilities operational during power outages
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	The project is supported by the Village
Legal	1	The Village has full legal authority to implement this project.
Fiscal	0	Should funds become available, the Village can fund the local match
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of theVillage equally.
Administrative	0	The Village can maintain the project using existing staff, but may need assistance from contractors relating to generator installation
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within the short term once funding is secured.
Agency Champion	1	Village leadership
Other Community Objectives	1	This project supports the Village's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	11	
Priority (High/Med/Low)	High	